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NEW SOUTH WALES
MOTHERS AND BABIES
1997

NSW HEALTH DEPARTMENT

TABLE OF CONTENTS

Introduction	9
Summary	9
Data sources	11
Definitions	12
Explanatory notes	14
Acknowledgements	16
Part 1: Trends in New South Wales	17
1.1 Confinements and births by plurality	17
Table 1: Births and confinements by plurality, NSW 1993-97	17
1.2 Health Area of residence	17
Table 2: Confinements by Health Area of residence, NSW 1993-97	17
1.3 Maternal age	18
Figure 1: Confinements among mothers aged less than 20 years and 35 years and over, NSW 1993-97	18
Table 3: Confinements by maternal age, NSW 1993-97	18
1.4 Maternal Aboriginality	19
1.5 Maternal country of birth	19
Table 4: Confinements by maternal country of birth, NSW 1993-97	19
1.6 Number of previous pregnancies	20
Table 5: Confinements by number of previous pregnancies, NSW 1993-97	20
1.7 Marital status	20
Table 6: Confinements by marital status, NSW 1993-97	20
1.8 Insurance status	20
Table 7: Confinements by insurance status, NSW 1993-97	20
1.9 Duration of pregnancy at first antenatal visit	21
Table 8: Confinements by duration of pregnancy at first antenatal visit, NSW 1994-97	21
1.10 Smoking in pregnancy	21
Figure 2: Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy, NSW 1994-97	21
1.11 Place of birth	22
Table 9: Confinements by place of birth, NSW 1993-97	22
Figure 3: Confinements by planned place of birth, NSW 1993-97	22
1.12 Labour and delivery	23
Table 10: Confinements by onset and augmentation of labour, NSW 1993-97	23
Table 11: Confinements by type of delivery, NSW 1993-97	23
1.13 Baby sex	24
1.14 Gestational age	24
Table 12: Births by gestational age, NSW 1993-97	24
1.15 Birth weight	24
Table 13: Births by birth weight, NSW 1993-97	24
1.16 Apgar score	24
Table 14: Births by apgar score at five minutes, NSW 1993-97	24
1.17 Perinatal outcomes	25
Table 15: Births by perinatal outcome, NSW 1993-97	25
1.18 Maternal Deaths	25
Table 16: Maternal deaths by year, 1990-96	25
Table 17: Maternal deaths by cause, NSW 1994	26

Part 2: Area Health Services **27**

2.1	Confinements	27
2.2	Maternal age	27
	Table 18: Confinements by maternal age and Health Area of residence, NSW 1997	28
2.3	Maternal country of birth	27
	Table 19: Confinements by maternal country of birth and Health Area of residence, NSW 1997	28
2.4	Maternal Aboriginality	27
	Table 20: Confinements by maternal Aboriginality and Health Area of residence, NSW 1997	29
2.5	Place of birth	27
	Table 21: Confinements by place of birth and Health Area of residence, NSW 1997	29
2.6	Labour and delivery	27
	Table 22: Confinements by onset and augmentation of labour and Health Area of residence, NSW 1997	30
	Table 23: Confinements by type of delivery and Health Area of residence, NSW 1997	30
2.7	Birth weight	31
	Table 24: Births by birth weight and Health Area of residence, NSW 1997	31
2.8	Gestational age	31
	Table 25: Births by gestational age and Health Area of residence, NSW 1997	31
2.9	Perinatal outcomes	32
	Table 26: Perinatal outcomes by Health Area of residence, NSW 1997	32

Part 3: Aboriginal and Torres Strait Islander mothers and babies **33**

3.1	Trends in births	33
	Table 27: Aboriginal and Torres Strait Islander mothers and babies by plurality, NSW 1993-97	33
3.2	Previous pregnancies	33
	Table 28: Number of previous pregnancies among Aboriginal and Torres Strait Islander mothers, NSW 1993-97	33
3.3	Maternal age	
	Table 29: Age of Aboriginal and Torres Strait Islander mothers, NSW 1993-97	34
	Figure 4: Age of Aboriginal and Torres Strait Islander mothers, NSW 1993-97	34
3.4	Health Area of residence	35
	Table 30: Health Area of residence of Aboriginal and Torres Strait Islander mothers, NSW 1993-97	35
	Table 31: Health Area of residence of Aboriginal and Torres Strait Islander mothers by age, NSW 1997	35
3.5	Booking status	36
3.6	Duration of pregnancy at first antenatal visit	36
	Table 32: Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers by Health Area of residence, NSW 1997	36
3.7	Smoking in pregnancy	37
	Figure 5: Smoking in the second half of pregnancy among Aboriginal and Torres Strait Islander mothers by Health Area of residence, NSW 1997	37
3.8	Medical conditions and obstetric complications	38
	Table 33: Maternal medical conditions and obstetric complications by Aboriginality, NSW 1997	38

3.9	Labour and delivery	38
	Table 34: Labour onset for Aboriginal and Torres Strait Islander mothers, NSW 1993-97	38
	Table 35: Type of delivery among Aboriginal and Torres Strait Islander mothers, NSW 1993-97	39
3.10	Epidural block	39
	Table 36: Epidural block by Aboriginality, NSW 1997	39
3.11	Episiotomy	39
	Table 37: Episiotomy by Aboriginality, NSW 1997	39
3.12	Birth weight	40
	Table 38: Weight of Aboriginal and Torres Strait Islander babies, NSW 1993-97	40
	Table 39: Weight of Aboriginal and Torres Strait Islander babies by Health Area of residence, NSW 1997	40
3.13	Gestational age	41
	Table 40: Gestational age of Aboriginal and Torres Strait Islander babies, NSW 1993-97	41
	Table 41: Gestational age of Aboriginal and Torres Strait Islander babies by Health Area of residence, NSW 1997	41
3.14	Apgar score	
	Table 42: Apgar score of Aboriginal and Torres Strait Islander babies, NSW 1993-97	42
3.15	Perinatal mortality	42
	Table 43: Perinatal deaths among Aboriginal and Torres Strait Islander babies, NSW 1993-97	42

Part 4: Maternal country of birth 43

4.1	Trends in confinements	43
	Table 44: Confinements and births by country of birth group, NSW 1993-97	43
4.2	Maternal age	44
	Figure 6: Age of mother by country of birth group, NSW 1997	44
	Table 45: Age of mother by country of birth group, NSW 1997	44
4.3	Health Area of residence	45
	Table 46: Health Area of residence by maternal country of birth group, NSW 1997	45
4.4	Booking status	46
4.5	Duration of pregnancy at first antenatal visit	46
	Table 47: Confinements by country of birth group and duration of pregnancy at first antenatal visit, NSW 1997	46
4.6	Smoking in pregnancy	46
	Table 48: Confinements by country of birth group and smoking in pregnancy NSW 1997	46
	Figure 7: Smoking in the second half of pregnancy by country of birth group, NSW 1997	47
4.7	Medical conditions and obstetric complications	48
	Table 49: Maternal medical conditions and obstetric complications by country of birth group, NSW 1997	48
4.8	Labour and delivery	49
	Table 50: Labour onset by country of birth group, NSW 1997	49
	Table 51: Type of delivery by country of birth group, NSW 1997	49
4.9	Epidural block	50
	Figure 8: Confinements by epidural block and maternal country of birth group, NSW 1997	50
4.10	Episiotomy	50
	Figure 9: Episiotomy by maternal country of birth, NSW 1997	50
4.11	Birth weight	51
	Table 52: Birth weight by maternal country of birth group, NSW 1997	51

4.12	Gestational age	51
	Table 53: Gestational age by maternal country of birth group, NSW 1997	51
4.13	Apgar score	52
	Table 54: Births by country of birth group and Apgar score at five minutes, NSW 1997	52
4.14	Perinatal outcomes	52
	Table 55: Perinatal outcomes by country of birth group, NSW 1997	52

Part 5: Neonatal intensive care **53**

5.1	Registrations	53
	Table 56: NICUS Registrations by Health Area of residence, NSW & ACT 1997	53
	Figure 10: Neonatal intensive care registrations by maternal Health Area of residence, NSW & ACT 1997	54
5.2	Maternal characteristics	55
	Table 57: Confinements by Health Area of residence and maternal age, NSW & ACT 1997	55
	Figure 11: Confinements by antenatal corticosteroid administration and gestational age, NSW & ACT 1992-97	56
	Table 58: Confinements by antenatal corticosteroid administration and gestational age, NSW & ACT 1992-97	56
5.3	Transfer, labour and delivery	57
	Figure 12: Place of birth by gestational age, NSW & ACT 1997	57
	Table 59: Births by booking status, transfer status and gestational age, NSW & ACT 1997	58
	Table 60: Births by place of birth (level of obstetric hospital) and gestational age, NSW & ACT 1997	58
	Table 61: Births by booking status, transfer status and birth weight, NSW & ACT 1997	58
	Table 62: Births by place of birth (level of obstetric hospital) and birth weight, NSW & ACT 1997	58
	Table 63: Confinements by onset of labour and gestational age, NSW & ACT 1997	59
	Table 64: Confinements by onset of labour and birth weight, NSW & ACT 1997	59
	Table 65: Births by duration of rupture of membranes and gestational age, NSW & ACT 1997	59
	Table 66: Births by type of delivery and gestational age, NSW & ACT 1997	59
	Table 67: Births by type of delivery and birth weight, NSW & ACT 1997	60
5.4	Infant characteristics	60
	Table 68: Births by gestational age, NSW & ACT 1992-97	60
	Table 69: Births by NICUS registration and gestational age, NSW & ACT 1997	61
	Figure 13: Births by gestational age, NSW & ACT 1997	61
	Table 70: Births by NICUS registration and birth weight, NSW & ACT 1997	62
	Table 71: Births by gender and gestational age, NSW & ACT 1997	62
	Table 72: Births by congenital anomalies and gestational age, NSW & ACT 1997	62
	Table 73: Births by plurality and gestational age, NSW & ACT 1997	63
	Table 74: Births by Apgar score and gestational age, NSW & ACT 1997	63
	Table 75: Births by Apgar score at one and five minutes, NSW & ACT 1992-97	63
	Table 76: Births by assisted ventilation and gestational age, NSW & ACT 1992-97	64
	Figure 14: Births by main indication for assisted ventilation, NSW & ACT 1997	65
	Table 77: Main indication for assisted ventilation of babies by gestational age, NSW & ACT 1997	65
	Table 78: Proven systemic infection by gestational age, NSW & ACT 1997	65
	Table 79: Surfactant administration by gestational age, NSW & ACT 1992-97	66

Table 80: Babies treated for patent ductus arteriosus by gestational age, NSW & ACT 1997	66
Table 81: Babies with necrotising enterocolitis by gestational age, NSW & ACT 1997	66
Table 82: Babies treated with major surgery by gestational age, NSW & ACT 1997	67
Table 83: Babies with intraventricular haemorrhage by gestational age, NSW & ACT 1997	67
Table 84: Babies with retinopathy of prematurity by gestational age, NSW & ACT 1997	67
5.5 Service utilisation	68
Figure 15: Median number of days in hospital, oxygen therapy and assisted ventilation by gestational age, NSW & ACT 1997	68
Figure 16: Total number of days in hospital, oxygen therapy and assisted ventilation by gestational age, NSW & ACT 1997	68
Table 85: Service utilisation indicators of babies by gestational age, NSW & ACT 1997	69
Table 86: Births by home oxygen administration and gestational age, NSW & ACT 1992-97	70
5.6 Survival	71
Table 87: Duration of survival of babies by gestational age, NSW & ACT 1997	70
Table 88: Duration of survival of babies by birth weight, NSW & ACT 1997	71
Table 89: Duration of survival of babies by place of birth and gestational age, NSW & ACT 1997	72
Table 90: Duration of survival of babies by major congenital anomaly and gestational age, NSW & ACT 1997	72
Figure 17: Deaths by post-mortem examination and gestational age, NSW & ACT 1992-97	73
Table 91: Post-mortem examination of babies by gestational age, NSW & ACT 1997	73

Part 6 Birth defects 74

6.1 Birth defects among stillborn and liveborn infants	74
6.1.1 Trends in reported birth defects	74
Table 92: Birth defect cases, NSW 1991-97	74
6.1.2 Birth defects by diagnostic category	74
Table 93: Birth defects among stillbirths and live births by diagnostic category, NSW 1991-97	74
6.1.3 Infant characteristics	76
Table 94: Birth defect cases by gestational age, NSW 1991-97	76
Table 95: Birth defect cases by pregnancy outcome, NSW 1991-97	76
6.1.4 Maternal characteristics	77
Table 96: Birth defect cases by maternal age, NSW 1991-97	77
6.2 Birth defects among terminations of pregnancy, spontaneous abortions and unknown outcomes of pregnancy	77
Table 97: Pregnancies with fetuses affected by birth defects and resulting in spontaneous abortion, termination of pregnancy or unknown outcome, NSW 1991-97	77
Table 98: Birth defects among spontaneous abortions, terminations of pregnancy and unknown outcome of pregnancy by diagnostic category, NSW 1991-97	78
Table 99: Trends in reported terminations of pregnancy associated with birth defects by maternal age, 1991-97	78

6.3	Trends in selected birth defects	79
	Figure 18: Neural tube defects: cases by year and pregnancy outcome, NSW 1991-97	79
	Figure 19: Cleft palate: cases by year and pregnancy outcome, NSW 1991-97	80
	Figure 20: Total cleft lip: cases by year and pregnancy outcome, NSW 1991-97	80
	Figure 21: Hypospadias: cases by year and pregnancy outcome, NSW 1991-97	81
	Figure 22: Limb reduction defects: cases by year and pregnancy outcome, NSW 1991-97	81
	Figure 23: Chromosomal abnormalities: cases by year and pregnancy outcome, NSW 1991-97	82
	Figure 24: Down syndrome: cases by year and pregnancy outcome, NSW 1991-97	82
	Figure 25: Renal agenesis and dysgenesis: cases by year and pregnancy outcome, NSW 1991-97	83
6.4	Birth defects by NSW Health Areas	84
	Table 100: Birth defects in NSW Health Areas, 1991-97	84

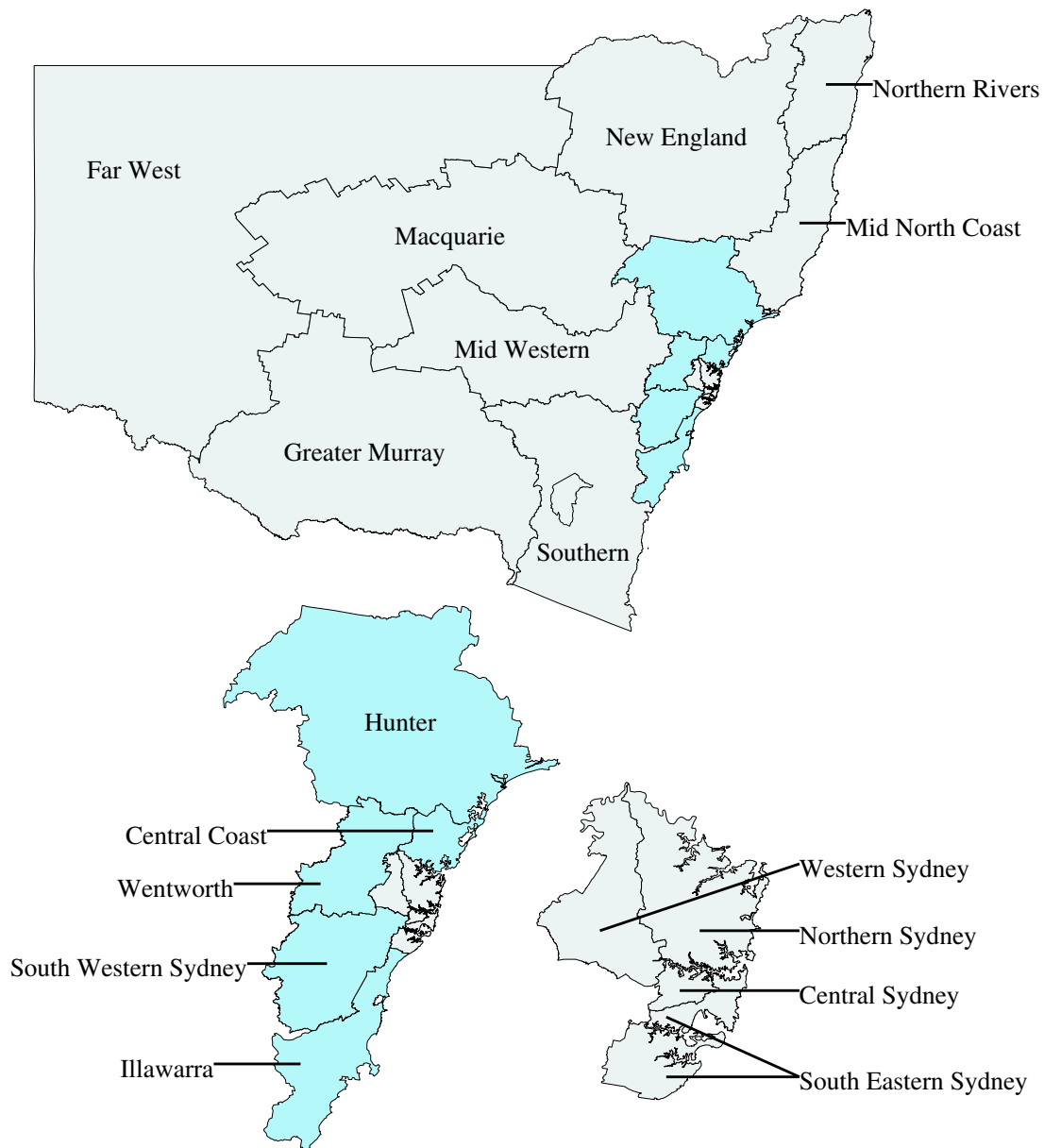
Part 7: NSW hospitals **85**

7.1	Onset and augmentation of labour in selected hospitals	85
	Table 101: Confinements by onset or augmentation of labour and hospital, NSW 1997	85
7.2	Type of delivery in selected hospitals	87
	Table 102: Confinements by type of delivery and hospital, NSW 1997	87
7.3	Epidural block in selected hospitals	89
	Table 103: Confinements by epidural block and hospital, NSW 1997	89
7.4	Episiotomy and third degree tear in selected hospitals	91
	Table 104: Confinements with vaginal deliveries by episiotomy, third degree tear and hospital, NSW 1997	91
7.5	Birth weight in selected hospitals	93
	Table 105: Live births by birth weight and hospital, NSW 1997	93
7.6	Gestational age in selected hospitals	95
	Table 106: Live births by gestational age and hospital, NSW 1997	95
7.7	Baby discharge status in selected hospitals	97
	Table 107: Births by baby discharge status and hospital, NSW 1997	97
7.8	Postnatal length of stay in selected hospitals	99
	Table 108: Average postnatal length of stay in hospital of birth, NSW 1994-96	99

Appendices

Appendix 1:	Description of selected birth defects	100
Appendix 2:	Birth defect exclusion list	101
Appendix 3:	Maternal countries of birth and country of birth groups	102
Appendix 4:	Midwives Data Collection form	103

NSW HEALTH AREAS



NEW SOUTH WALES MOTHERS AND BABIES 1997

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INTRODUCTION

This is the first report on mothers and babies in NSW to combine the annual reports of the NSW Midwives Data Collection, the Neonatal Intensive Care Units' Data Collection and the NSW Birth Defects Register. Information on maternal deaths in NSW was obtained through the work of the NSW Maternal and Perinatal Committee and is also included.

For the first time, the report includes a chapter on infants admitted to a neonatal intensive care unit. The report also includes information on recent trends in the health of mothers and babies, and separate chapters covering Area Health Service of mother's residence, Aboriginal mothers and babies, mother's country or region of birth, birth defects and individual hospitals in NSW.

SUMMARY

Trends in NSW

The number of births in NSW remained stable at about 86,000 to 88,000 between 1993 and 1997. The number of teenage mothers decreased from 4,493 (5.2 per cent of all mothers) in 1993 to 4,291 (4.9 per cent) in 1997; while the number of mothers aged 35 years and over increased from 10,566 in 1993 to 13,465 in 1997, an increase from 12.2 to 15.5 per cent of all confinements.

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 1,456 in 1993 (1.7 per cent of all mothers) to 1,842 in 1997 (2.1 per cent of all mothers). Part of this increase is likely to be due to an increased willingness of mothers to be identified as Aboriginal or Torres Strait Islander.

The trend over recent years towards increasing numbers of confinements to mothers born in Asian countries, particularly China and Vietnam, and Pacific Island countries continued in 1997, accompanied by decreasing numbers of confinements to mothers born in European countries.

The recent trend towards a decrease in the number of mothers with private obstetric care continued in 1997. Thirty-one per cent of mothers were privately insured in 1997 compared with 41.3 per cent in 1993.

The number of mothers planning to give birth in a birth centre rose slightly from 3,404 in 1993 to 3,983 in 1997, while the reported number of mothers planning a homebirth decreased from 281 to 202 over the same period.

The rate of normal vaginal birth has remained stable at about 70 per cent between 1993 and 1997. The caesarean section rate increased from 17.1 to 18.2 per cent and the rate of instrumental delivery declined from 11.1 to 10.3 per cent.

Since 1993, the rate of low birth weight (less than 2,500 grams) was steady at about 6 per cent. The rate was 6.1 per cent in 1997. The rate of premature births (less than 37 weeks gestation) was also stable at 6 to 7 per cent and was 6.8 per cent in 1997. The perinatal mortality rate varied from 8.8 to 9.6 per 1,000. About two-thirds of all perinatal deaths were stillbirths and one third were neonatal deaths.

In the period 1990-96, 80 deaths were reported among pregnant women or women who gave birth less than six weeks previously. In NSW in 1994, of the nine deaths which were classified as directly or indirectly associated with the pregnant state, two were due to hypertensive disease of pregnancy.

Area Health Services

In 1997, the largest numbers of births occurred among mothers resident in the Western Sydney and South Western Sydney Areas. These two Areas contributed over one quarter of the State's births.

In 1997, as in previous years, there were large variations between Areas in the distribution of women giving birth. The proportion of women giving birth at less than 20 years of age varied from 1.0 per cent in the Northern Sydney Area to 11.8 per cent in the Far West Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 10.2 per cent in the Macquarie Area to 26.0 per cent in the Northern Sydney Area.

The proportion of Aboriginal or Torres Strait Islander mothers varied from 0.1 per cent in the Northern Sydney Area to 28.7 per cent in the Far West Area.

The highest proportions of mothers born in non-English speaking countries were in the Central Sydney and South Western Sydney Areas. In South Western Sydney, the majority of mothers born in non-English speaking countries were born in South-East Asia (39.7 per cent). In Central Sydney, the majority of mothers born in non-English speaking countries were born in North East Asia (25.7 per cent) and South-East Asia (22.7 per cent).

The highest rate of normal vaginal birth was among residents of South Western Sydney Area (76.3 per cent), while the highest rate of instrumental delivery was among residents of South Eastern Sydney Area (15.4 per cent). The caesarean section rate varied from 14.0 per cent among mothers resident in the Macquarie Area to 22.8 per cent in the Northern Sydney Area.

The highest rates of low birth weight occurred in the Central Coast and Mid North Coast Areas (both 7.4 per cent) and the lowest rate occurred in the Northern Sydney Area (5.1 per cent). The highest rates of preterm birth were in the Wentworth and Macquarie Areas (both 7.6 per cent). The lowest rate was 4.5 per cent in the Southern Area, which may result from referral of high risk pregnancies to the ACT.

The perinatal mortality rate in 1997 was 9.6 per 1,000 births. The rate varied from 7.0 per 1,000 in the Northern Sydney Area to 18.2 per 1,000 in the Far West Area.

Aboriginal and Torres Strait Islander mothers and babies

In 1997, there were 1,854 babies born to Aboriginal/Torres Strait Islander mothers, 2.1 per cent of all babies born in NSW. One quarter of Aboriginal/Torres Strait Islander mothers who gave birth in 1997 lived in the Far West or Macquarie Areas and about two thirds lived in rural Areas. About one in five Aboriginal/Torres Strait Islander mothers were teenagers.

In 1997, 93.5 per cent of Aboriginal/Torres Strait Islander mothers were booked into the hospital of birth. This is substantially higher than the rate of 88.3 per cent which was reported in 1996, but lower than the 99.4 per cent of non-Aboriginal/Torres Strait Islander mothers who were booked into the hospital of birth in 1997.

In 1997, 62.2 per cent of Aboriginal/Torres Strait Islander mothers commenced antenatal care before 20 weeks gestation compared with 84.8 per cent of non-Aboriginal/Torres Strait Islander mothers.

Following statewide trends, the rate of induction of labour among Aboriginal/Torres Strait Islander mothers increased from 13.3 to 16.9 per cent between 1993 and 1997, while the rate of spontaneous onset of labour decreased from 80.5 to 74.8 per cent. However, the rate of induction of labour among Aboriginal/Torres Strait Islander mothers continued to be lower than the statewide rate, which was 21.7 per cent in 1997. Also following statewide trends, the caesarean section rate increased from 15.7 per cent in 1993 to 16.9 per cent in 1997.

The rate of epidural block and episiotomy were lower among Aboriginal/Torres Strait Islander mothers compared with all NSW mothers. This difference existed for both first-time mothers and mothers having a second or subsequent baby.

Since 1993, the rates of low birth weight (less than 2,500 grams) and prematurity (less than 37 weeks gestation) in Aboriginal/Torres Strait Islander babies has been over 10 per cent. These rates are about one and a half times higher than the rates for NSW overall. The perinatal mortality rate in babies born to Aboriginal/Torres Strait Islander mothers was 20.0 per 1,000 in 1997, about twice the rate of 9.6 per 1,000 for NSW overall.

Maternal country of birth

Between 1993 and 1997, about 20 per cent of mothers were born in non-English speaking countries. The proportion of mothers from Asian countries increased slightly from 9.7 to 10.7 per cent, while the proportion of mothers from southern European countries decreased slightly from 2.1 to 1.7 per cent.

In 1997, the proportion of mothers born in non-English speaking countries was highest in the Central Sydney Area (45.9 per cent), followed by the South Western Sydney and Western Sydney Areas (38.1 and 36.2 per cent respectively).

Births to teenage mothers were less common among mothers born in non-English speaking countries than among mothers born in non-English speaking countries, as was smoking in pregnancy.

In 1997, 84.8 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 86.9 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 55.7 per cent of mothers born in Melanesia, Micronesia and Polynesia and 67.2 per cent of mothers born in the Middle East and Africa.

Mothers born in non-English speaking countries were more likely to have a spontaneous onset of labour than mothers born in English speaking countries and less likely to be induced.

Mothers born in Melanesia, Micronesia and Polynesia and the Middle East and Africa were more likely to have a normal vaginal delivery than mothers in other country of birth groups. The highest caesarean section rates were in mothers born in Southern Asia (22.4 per cent) and Central and South America (20.7 per cent).

The highest rate of low birth weight was in babies of mothers born in Southern Asian countries (8.2 per cent). Babies of mothers born in Central and South America and North East Asia were least likely to be low birth weight.

The highest rate of prematurity was in babies of mothers born in Melanesia, Micronesia and Polynesia (7.9 per cent) and Eastern Europe, Russia, Central Asian and Baltic States (7.8 per cent). Babies of mothers born in North East Asia were least likely to be premature.

Babies of mothers born in Melanesia, Micronesia and Polynesia were far more likely than other country of birth groups to be stillborn or die in the neonatal period, though the total number of perinatal deaths in this group is small.

Neonatal Intensive Care

There were 1,751 infants registered in the Neonatal Intensive Care Units' Data Collection in 1997 representing a registration rate of 18.9 per 1,000 live births. Thirty three (1.9 per cent) infants registered in 1997 were born to Aboriginal/Torres Strait Islander mothers.

The 1,751 infants were born to 1,628 mothers. The age of mothers ranged from 15 to 45 years with a mean age of 28.9 years. Antenatal complications were reported for 85.6 per cent of mothers. The proportion of women receiving antenatal corticosteroids for lung maturation has increased each year since 1992, with 69.7 per cent of mothers receiving steroids in 1997.

Thirty five per cent of infants registered in 1997 were born following a booked tertiary centre birth and 31.8 per cent were born following maternal transfer. Thirty three per cent were transferred to a tertiary centre following birth and 11 per cent were transferred from one tertiary centre to another immediately after birth.

Boys comprised 56.3 per cent of the 1997 cohort and girls 43.7 per cent. Most infants (82.4 per cent) were from a singleton pregnancy, 15.4 per cent were from a twin pregnancy and 2.2 per cent were from a triplet pregnancy.

Seventy four per cent of infants registered during 1997 were preterm (less than 37 weeks gestation), 43.8 per cent were very preterm (less than 32 weeks) and 13.2 per cent were extremely preterm (less than 28 weeks). Nearly one in five (19.3 per cent) infants had a major or minor congenital anomaly.

Infants with major congenital anomalies were excluded from the analysis of mortality and morbidity. The majority of infants registered in 1997 (88.6 per cent) received assisted ventilation (intermittent mandatory ventilation or continuous positive airways pressure ventilation). The main indication for assisted ventilation varied with gestational age: respiratory distress syndrome, immature lung and transient tachypnoea were more common among the preterm groups, whereas meconium aspiration and perinatal asphyxia were more common in term infants.

Proven systemic infection was present in 18.2 per cent of all infants and necrotising enterocolitis in 3.8 per cent. Among babies less than 37 weeks gestation, intraventricular haemorrhage was present in 16.0 per cent, 11.9 per cent of infants were treated for patent ductus arteriosus, and 4.4 per cent had major surgery. Severe grades (Grade 3 or 4) of retinopathy of prematurity were present in 4.5 per cent of infants less than 32 weeks gestation, of whom 57.6 per cent had either cryo or laser therapy to prevent retinal detachment. Surfactant was given to 50.5 per cent of infants; the majority (79.2 per cent) of ventilated infants with a diagnosis of Respiratory Distress Syndrome received surfactant.

Overall, 91.9 per cent of infants without a major congenital anomaly survived to six months of age. Survival improved with gestational age up to 34 weeks after which it decreased slightly. Of the infants who died, most (72.0 per cent) died at less than one week of age and a further 11.0 per cent died at less than 29 days of age. The six-month survival rate for infants born at 22 to 27 weeks gestation was higher for those born in a tertiary centre (70.7 per cent) compared with those born in a non-tertiary centre (66.7 per cent). Among infants born at higher gestational ages the proportion surviving to six months of age was similar for those born in a tertiary centre and those born in a non-tertiary centre.

Birth defects

About 2,000 infants are born with birth defects each year in NSW, and for about half of these infants the malformation is detected after birth. Over the period 1991-97, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genitourinary system. The number of infants born with neural tube defects slowly decreased from 80 in 1992 to 42 in 1997. There was no trend in the number of reported terminations of pregnancy associated with neural tube defects. As terminations of pregnancy were reported on a voluntary basis until 1997, it is likely that these are under-reported to the Register.

Between 1991 and 1997, there was no trend observed in the number of infants born nor the number of terminations of pregnancy for chromosomal abnormalities. Similarly, there was no trend observed in the number of Down syndrome cases, which comprise about half of all cases with chromosomal abnormalities.

In 1997, the number of reported terminations of pregnancy associated with birth defects was 126. Almost half the reported terminations are associated with chromosomal defects, most commonly Down Syndrome, and about one in five with neural tube defects.

Birth defects were more common among premature infants compared to full term infants; and among male infants compared to female infants. The rate of birth defects increases with increasing maternal age, especially after age 35. However, as most babies are born to mothers aged less than 35 years, the majority of babies with birth defects were born to younger mothers.

DATA SOURCES

The New South Wales Midwives Data Collection

The New South Wales Midwives Data Collection (MDC) is a population-based surveillance system covering all births in NSW public and private hospitals, as well as homebirths. It encompasses all livebirths and stillbirths of at least 20 weeks gestation or at least 400 grams birth weight.

The MDC relies on the attending midwife to complete a notification form when a birth occurs. The form, a copy of which is shown at Appendix 4, includes demographic items and items on maternal health, the pregnancy, labour, delivery and perinatal outcomes. Completed forms are sent to the Patient Data Management Unit of the Information Management and Clinical Systems Branch of the NSW Health Department, where they are compiled into the MDC database.

The MDC receives notifications of women whose usual place of residence is outside NSW but who give birth in NSW. However, the MDC does not receive notifications of births outside NSW to women usually resident in NSW.

The Neonatal Intensive Care Units' Data Collection

The Neonatal Intensive Care Units' (NICUS) Data Collection is a statewide audit of infants admitted to neonatal intensive care units in New South Wales (NSW) and the Australian Capital Territory (ACT) during the neonatal period for one of the following reasons:

- ♦ gestational age less than 29 weeks;
- ♦ gestational age less than 32 weeks (since 1/1/94);
- ♦ birth weight less than 1,000 grams;
- ♦ birth weight less than or equal to 1,500 grams (since 1/1/94);
- ♦ mechanical ventilation for four hours or more;
- ♦ continuous positive airways pressure (CPAP) for four hours or more; or
- ♦ major surgery (opening of a body cavity).

In 1997 the ten neonatal intensive Care units in NSW and ACT were situated at the following perinatal centres: John Hunter Children's Hospital - Newcastle, King George V Hospital, Liverpool Health Service (joined 12/10/94), Nepean Hospital, Royal Hospital for Women, Royal North Shore Hospital, The Canberra Hospital - Woden Valley (joined 1/1/95), Westmead Hospital, and at the two paediatric hospitals: Sydney Children's Hospital and Royal Alexandra Hospital for Children.

The neonatal, maternal and perinatal data which comprise the NICUS Data Collection are collected and collated within each neonatal intensive care unit by a designated Clinical Audit Officer. The data are compiled into a database located at the NSW Centre for Perinatal Health Services Research, University of Sydney.

The New South Wales Birth Defects Register

The NSW Birth Defects Register (BDR) is a population-based surveillance system established to monitor birth defects detected during pregnancy or at birth, or diagnosed in infants up to one year of age. The BDR was established in 1990. It is administered by the Epidemiology and Surveillance Branch of the NSW Health Department and located at the NSW Centre for Perinatal Health Services Research, University of Sydney.

The activities of the BDR include: annual publication of information on birth defects in NSW; provision of information to Area Health Services to assist in service planning and monitoring of child health, and investigation of specific issues; provision of information in response to specific requests from the public, health professionals, and other government departments; and provision of data to the AIHW National Perinatal Statistics Unit (NPSU) for monitoring of birth defects at a national level. The NPSU is also responsible for providing Australian information on birth defects to the International Clearinghouse for Birth Defects Monitoring Systems, a Non-Governmental Organisation of the World Health Organisation.

Sources of notifications to the BDR include: The NSW Midwives Data Collection (MDC), specialist paediatric hospitals, cytogenetic laboratories and individual health care providers. The BDR is supported by an Advisory Committee, comprising a panel of clinical experts representing the following specialities: genetics, dysmorphology, neonatology, obstetrics and gynaecology, bioethics and epidemiology; and a community representative from the Association of Genetic Support of Australasia.

Data for research purposes may be provided in two formats: aggregate information similar to that contained in this report, and data concerning individuals with identifying information removed. All requests for data should be submitted in writing to the Director, Epidemiology and Surveillance Branch. Requests for data concerning individuals for sufficiently important research purposes will be referred to the Statewide Health Confidentiality and Ethics Committee. Procedures for release of personal information are described in the Department's Information Privacy: Code of Practice, copies of which are available from the Department's Information and Data Services Branch on (02) 9391 9091 or through the NSW Health Department's World Wide Web site at <http://www.health.nsw.gov.au>.

The NSW Inpatient Statistics Collection

For this report data from the NSW Inpatient Statistics Collection (ISC) was linked to MDC data to produce information on postnatal length of stay in NSW Hospitals.

The ISC covers demographic and episode related data in respect of every inpatient who is separated from any Public, Private, and Repatriation Hospital, Private Day Procedure Centre or Public Nursing Home in NSW. Separation can result from discharge, transfer, death, or change in service category. The ISC is maintained by the NSW Health Department's Information Management and Clinical Systems Branch.

Maternal deaths

Maternal deaths are reported by hospitals to the NSW Health Department's Epidemiology and Surveillance Branch. The NSW Maternal and Perinatal Committee, an advisory committee appointed by the Minister for Health, reviews each death to identify any possible avoidable factors and to determine whether the death was related to pregnancy (or its management) or whether it was incidental.

The information obtained from these reviews assists in the development of policies aimed at improving the health of mothers and newborns in NSW. Information considered by the Committee is confidential.

DEFINITIONS

The following definitions refer to terms used in the text and tables of this report.

Aboriginal and/or Torres Strait Islander

Includes all women who identify themselves to be of Australian Aboriginal and/or Torres Strait Islander heritage.

Amniocentesis

The sampling of the amniotic fluid to help determine foetal maturity or disease, by aspiration of the fluid through the mother's abdomen.

Apgar score

A numerical scoring system routinely administered one and five minutes after birth to evaluate the condition of the baby. The score ranges from 0 to 10 (10 being perfect).

It takes account of five physical signs, each of which is assigned a component score of 0, 1 or 2: heart rate, respiration, muscle tone, reflexes and colour.

Augmentation

Artificial rupture of the membranes or use of oxytocic drugs after spontaneous onset of labour (excludes induced labour).

Birth defect

Any structural defect or chromosomal abnormality detected during pregnancy, at birth, or in the first year of life excluding birth injuries and minor anomalies such as skin tags, talipes, birthmarks or clefty hips.

A list of common exclusions used by the NSW Birth Defects Register is shown in Appendix 1 and descriptions of some of the birth defects included in this report are shown in Appendix 2. From 1994, the following additional conditions were included in the NSW Birth Defects Register: congenital hypothyroidism, cystic fibrosis, phenylketonuria and thalassaemia major.

Birth weight

The newborn infant's first bare weight in grams, obtained soon after birth.

Low birth weight: birth weight less than 2,500 grams.

Very low birth weight: birth weight less than 1,500 grams.

Extremely low birth weight: birth weight less than 1,000 grams.

Caesarean section

Delivery of the fetus through an abdominal incision.

Elective caesarean section: a caesarean section (planned or unplanned) performed before the onset of labour.

Emergency caesarean section: a caesarean section performed after the onset of labour, whether or not the onset of labour was spontaneous.

Confinement

Refers to a woman having given birth. Note: with a multiple pregnancy, one confinement will result in more than one birth.

Congenital anomaly

See Birth defect.

Country of birth

The mother's country of birth.

CVS

Chorionic villus sampling (CVS) is the aspiration of a sample of chorionic tissue for biochemical and chromosome analysis.

Epidural

Injection of analgesic agent outside the dura mater which covers the spinal canal; includes lumbar, spinal and epidural anaesthetics.

Episiotomy

An incision of the perineum and vagina to enlarge the vulval orifice.

Gestational age

The duration of pregnancy in completed weeks from the first day of the last normal menstrual period. Where accurate information on the date of the last menstrual period is not available, a clinical estimate of gestational age may be obtained from ultrasound during the first half of pregnancy or by examination of the newborn infant. The 'best estimate' is used here.

Hepatitis B positive

Mothers who are hepatitis B surface antigen positive.

Induction of labour

Oxytocics/prostaglandins: the initiation of labour by the use of drugs (oral, intravaginal or intravenous) such as oxytocic agents, prostaglandins, or their derivatives (medical induction).

ARM only: the initiation of labour by artificial rupture of membranes (surgical induction).

Oxytocics/prostaglandins and ARM: both medical and surgical induction as defined above (combined medical/surgical induction).

Intraventricular haemorrhage (IVH)

Worst level of intraventricular haemorrhage (IVH) seen on either right or left side by either ultrasound or post-mortem examination.

None: ultrasound/post-mortem shows no haemorrhage

Grade 1: subependymal germinal matrix haemorrhage.

Grade 2: intraventricular haemorrhage with no ventricular dilatation

Grade 3: intraventricular haemorrhage with ventricle distended with blood.

Grade 4: intraparenchymal haemorrhage.

Not examined: by ultrasound or post-mortem.

Live birth

The complete expulsion or extraction from its mother of a baby of at least 400 grams or 20 weeks gestation who, after being born, breathes or shows any evidence of life such as a heartbeat.

Major surgery

Any surgery which requires opening of a body cavity.

Mechanical ventilation

The use of a mechanical ventilator to provide intermittent positive pressure respiration for a baby for four hours or more.

Necrotising enterocolitis (NEC)

Clinically diagnosed: received treatment for NEC (includes suspending feeds, blood cultures and treatment with antibiotics such as clindamycin/gentamycin).

Proven radiologically or at operation: radiological signs include intra-mural or intra-hepatic air, perforation or a 'fixed loop'.

Neonatal death

The death of a live born infant within 28 days of birth.

Neonatal period

The first 28 completed days of life.

Neonatal mortality rate

The number of neonatal deaths per 1,000 live births.

Patent ductus arteriosus (PDA)

Clinical signs of PDA such as typical murmur, active precordium, bounding pulses, cardiomegaly, or pulmonary vascular congestion on X-ray. May be confirmed on ultrasound examination.

Parity

The total number of livebirths and stillbirths of the mother before the pregnancy or birth under consideration.

Perinatal death

A stillbirth or neonatal death.

Perinatal mortality rate

The number of perinatal deaths (stillbirths and neonatal deaths) per 1,000 total births in a year (livebirths and stillbirths combined).

Plurality

The number of fetuses or babies from the pregnancy. On this basis pregnancy may be classified as single or multiple.

Premature infant

An infant born before 37 completed weeks gestation.

Premature labour

The spontaneous onset of labour (regular painful contractions with progressive cervical changes) before 37 completed weeks of gestation.

Prolonged rupture of membranes

The spontaneous rupture of membranes for at least 24 hours before the onset of regular contractions with cervical dilatation.

Retinopathy of prematurity

Worst stage of retinopathy of prematurity (ROP) in either eye during the initial hospital admission.

None seen:	no changes seen
Stage I:	demarcation line present
Stage II:	ridge present
Stage III:	ridge with extra-retinal fibrovascular proliferation
Stage IV:	retinal detachment

Systemic infection in the infant

Clinical or radiological signs of infection together with growth of a known pathogen from a systemic site - does not include tracheal aspirate.

Transfer (NICUS only)

Maternal transfer before birth (prenatal): the transfer of a pregnant woman to a tertiary obstetric hospital.

Neonatal transfer after birth (postnatal): the transfer of an infant from the hospital of birth to a tertiary NICU.

Spontaneous abortion

The spontaneous expulsion of a fetus less than 20 weeks gestation and less than 400 grams birth weight.

Stillbirth

The complete expulsion or extraction from its mother of a product of conception of at least 20 weeks gestation or 400 grams birth weight who did not, at any time after delivery, breathe or show any evidence of life such as a heartbeat.

Termination of pregnancy

A procedure intentionally performed to terminate a pregnancy before 20 completed weeks gestation.

Third degree tear

A perineal laceration or tear, passing through the anal sphincter and involving the anal canal.

EXPLANATORY NOTES

Antenatal complications (NICUS)

These specifically include antepartum haemorrhage, placenta praevia, placenta abruptio, prolonged rupture of membranes, gestational diabetes, threatened preterm labour, hypertensive disease of pregnancy and rhesus isoimmunisation. There is also an open-ended 'other antenatal complications' option. The most common problems specified in this option are cervical incompetence, polyhydramnios, oligohydramnios, chorioamnionitis, threatened miscarriage and problems secondary to multiple pregnancy.

Rates of birth defects

The BDR collects data pertaining to birth defects regardless of the outcome of pregnancy. This includes notifications of livebirths, stillbirths, terminations of pregnancy and spontaneous abortions. Birth defect rates are calculated using births (ie. livebirths and stillbirths) as the denominator, because denominator populations for pregnancies less than 20 weeks gestation are unknown. The numerators are described in the relevant sections.

The source of denominator population data on births is the MDC. The MDC was selected because its definitions are consistent with those applied by the BDR.

Denominator populations compatible with the BDR were derived from the MDC by including only those births which occurred to NSW residents.

Caution should be exercised when comparing the birth defect rates tabled in this document with those reported within the NPSU's Congenital Malformations Australia Report. This report covers birth defects detected during pregnancy and up to one year of age while the Congenital Malformations Australia Report covers birth defects detected during pregnancy and up to 28 days of life.

Variations in data published by the BDR and interstate birth defects registers may be due to differences in coding practices, in categories of birth defects included in each Register and differences in the upper age limit for notification of cases.

Place of residence of mother

The mother's usual residence was the basis for coding to statistical local areas and NSW Health Areas.

Labour

The category "labour - spontaneous with oxytocics/prostaglandins" was used where labour was augmented with artificial rupture of membranes as well as oxytocics or prostaglandins.

Levels of neonatal care

Tertiary

Level 3: Neonatal Intensive Care Unit (NICU) - a unit that provides high-dependency specialist nursing and medical care for all newborn infants including sustained "life support" such as mechanical ventilation and has staff neonatologists and neonatal registrars.

Non-tertiary

Level 2a: Neonatal Care - a unit which can give high-level oxygen, can start mechanical ventilation if necessary and has paediatric house staff.

Level 2b: Neonatal Care - a unit which can give low-level oxygen and has a paediatrician on call.

Level of obstetric hospitals

Level 1: local hospitals (no births), postnatal only.

Level 2: small isolated hospitals, low-risk births only. Staffed by general practitioners and midwives.

Level 3: country district and smaller metropolitan hospitals, care for mothers and infants at low/moderate risk. Full resuscitation and theatre facilities available. Rostered obstetricians, resident medical staff and midwives. Accredited general practitioners/specialist anaesthetist on call. Has level 2b neonatal care.

Level 4: country base/metropolitan district hospitals. Delivery and care for mothers and/or babies with moderate risk factors. Obstetricians and paediatrician available 24 hours a day, seven days a week. Rostered resident medical staff, specialist anaesthetist on call. Has level 2b neonatal care.

Level 5: country base/metropolitan district hospitals, care for mothers and infants known to be at high risk. Able to cope with complications arising from these risk factors. Has level 2a neonatal care.

Level 6: (tertiary) - specialist obstetric hospitals (supra regional). All functions - low, moderate and high-risk births. Has level 3 neonatal intensive care.

No labour

The "no labour" category was used where an elective caesarean section was carried out, i.e. a caesarean section before the onset of spontaneous labour.

Presentation

The "other" category contains presentation types such as transverse or oblique lie, face or brow presentation and compound presentation.

Type of delivery

The "vaginal breech" category covers all forms of vaginal breech delivery, including forceps to the after-coming head.

Maternal medical conditions

MDC: Three tick box categories were listed on the MDC form for existing maternal medical conditions: diabetes mellitus, benign essential hypertension and hepatitis B positive.

Obstetric complications

Eight tick box categories of obstetric complications are listed on the MDC: antepartum haemorrhage (due to placenta praevia, abruptio placentae or other causes), pregnancy induced hypertension, gestational diabetes, prolonged rupture of membranes, threatened premature labour and blood group isoimmunisation.

Patient classification

Two patient classification categories are listed on the MDC form which records mother's insurance status: hospital and private. Patient classification is recorded at the time of delivery.

Perinatal mortality rate

Birth and perinatal death registration data provided by the Australian Bureau of Statistics (ABS) give the most complete ascertainment of perinatal deaths for calculation of rates. However, the definition of a stillbirth or perinatal deaths used by the MDC differs from that of the Australian Bureau of Statistics (ABS). Calculated rates based on MDC data are therefore not comparable with those published by the ABS.

ACKNOWLEDGEMENTS

The New South Wales Midwives Data Collection, depends entirely on the State's midwives who provide information on each birth. We gratefully acknowledge their contribution.

We thank the Directors, Neonatologists and Clinical Audit Officers of the 10 neonatal intensive care units and the liaison officers representing all of the obstetric hospitals in NSW and ACT who have provided maternal and neonatal data to the Neonatal Intensive Care Units' Data Collection. Finally and not least, the families who participated in the study are acknowledged and thanked for their continued patience and support.

We would like to thank all those who have contributed to the NSW Birth Defects Register since its establishment in 1990. The Register is dependent on families, health care institutions and individual health care providers for the supply of information about birth defects. We gratefully acknowledge their support.

We thank health information managers in hospitals throughout NSW for their cooperation and assistance. The staff of the medical record departments at The New Childrens Hospital, The Sydney Children's Hospital and The John Hunter Hospital have also provided much assistance to the NSW Birth Defects Register.

We would also like to express our appreciation to members of the NSW Maternal and Perinatal Committee and the NSW Birth Defects Register Advisory Committee for their advice and support.

This report was generated using HOIST (Health Outcomes Information and Statistical Toolkit) which is developed and maintained by Tim Churches and Devon Indig of the Health Department's Epidemiology and Surveillance Branch. We would like to thank Ms Kim Lim for her assistance with data management.

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This publication may also be accessed through the NSW Health Department's World Wide Web site at:
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PART 1: TRENDS IN NEW SOUTH WALES

1.1 CONFINEMENTS AND BIRTHS BY PLURALITY

There were 88,133 births to 86,920 women reported to the MDC for 1997. A quality assurance program carried out on the 1997 data collection resulted in the largest number of births reported since 1993 (Table 1). Of the 86,920 confinements reported in 1997, 1,147 (1.3 per cent) were for twins, 32 for triplets and one for quadruplets.

TABLE 1
BIRTHS AND CONFINEMENTS BY PLURALITY, NSW 1993-97

Plurality	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
Singleton	85616	98.7	85523	98.6	85155	98.7	84201	98.7	85740	98.6
Twins	1105	1.3	1185	1.4	1088	1.3	1076	1.3	1147	1.3
Triplets	25	0.0	30	0.0	20	0.0	24	0.0	32	0.0
Quadruplets	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0
Births										
Singleton	85616	97.4	85524	97.2	85155	97.4	84201	97.4	85740	97.3
Twins	2210	2.5	2370	2.7	2176	2.5	2152	2.5	2293	2.6
Triplets	75	0.1	90	0.1	60	0.1	72	0.1	96	0.1
Quadruplets	0	0.0	0	0.0	0	0.0	4	0.0	4	0.0
TOTAL	87901	100.0	87984	100.0	87391	100.0	86429	100.0	88133	100.0

Source: NSW Midwives Data Collection, Epidemiology and Surveillance Branch, NSW Health Department.

1.2 HEALTH AREA OF RESIDENCE

The number of mothers giving birth in most Health Areas remained fairly stable over the last five years (Table 2). The largest increases occurred in the Western Sydney and South Western Sydney Areas.

TABLE 2
CONFINEMENTS BY AREA HEALTH SERVICE OF RESIDENCE, NSW 1993-97

Health Area	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney	6716	7.7	6984	8.1	6424	7.4	7046	8.3	6657	7.7
Northern Sydney	8657	10.0	8702	10.0	8690	10.1	8677	10.2	8984	10.3
Western Sydney	9955	11.5	10019	11.6	10147	11.8	10058	11.8	10558	12.1
Wentworth	4866	5.6	4952	5.7	3982	4.6	4186	4.9	4831	5.6
South Western Sydney	12001	13.8	11961	13.8	11915	13.8	12125	14.2	12512	14.4
Central Coast	3806	4.4	3782	4.4	3851	4.5	3712	4.4	3790	4.4
Hunter	7375	8.5	7235	8.3	7679	8.9	7353	8.6	7027	8.1
Illawarra	4672	5.4	4636	5.3	4458	5.2	4233	5.0	4435	5.1
South Eastern Sydney	8637	10.0	8604	9.9	9111	10.6	8639	10.1	9148	10.5
Northern Rivers	3132	3.6	2879	3.3	2998	3.5	2947	3.5	2963	3.4
Mid North Coast	3137	3.6	3068	3.5	2952	3.4	2922	3.4	3079	3.5
New England	2686	3.1	2645	3.0	3011	3.5	2822	3.3	2463	2.8
Macquarie	1663	1.9	1638	1.9	1686	2.0	1723	2.0	1595	1.8
Mid Western	2409	2.8	2430	2.8	2407	2.8	2364	2.8	2437	2.8
Far West	627	0.7	595	0.7	602	0.7	563	0.7	600	0.7
Greater Murray	3599	4.1	3726	4.3	3512	4.1	3399	4.0	3357	3.9
Southern	2083	2.4	2175	2.5	2101	2.4	1813	2.1	1775	2.0
Other/Not stated	725	0.8	707	0.8	737	0.9	720	0.8	709	0.8
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

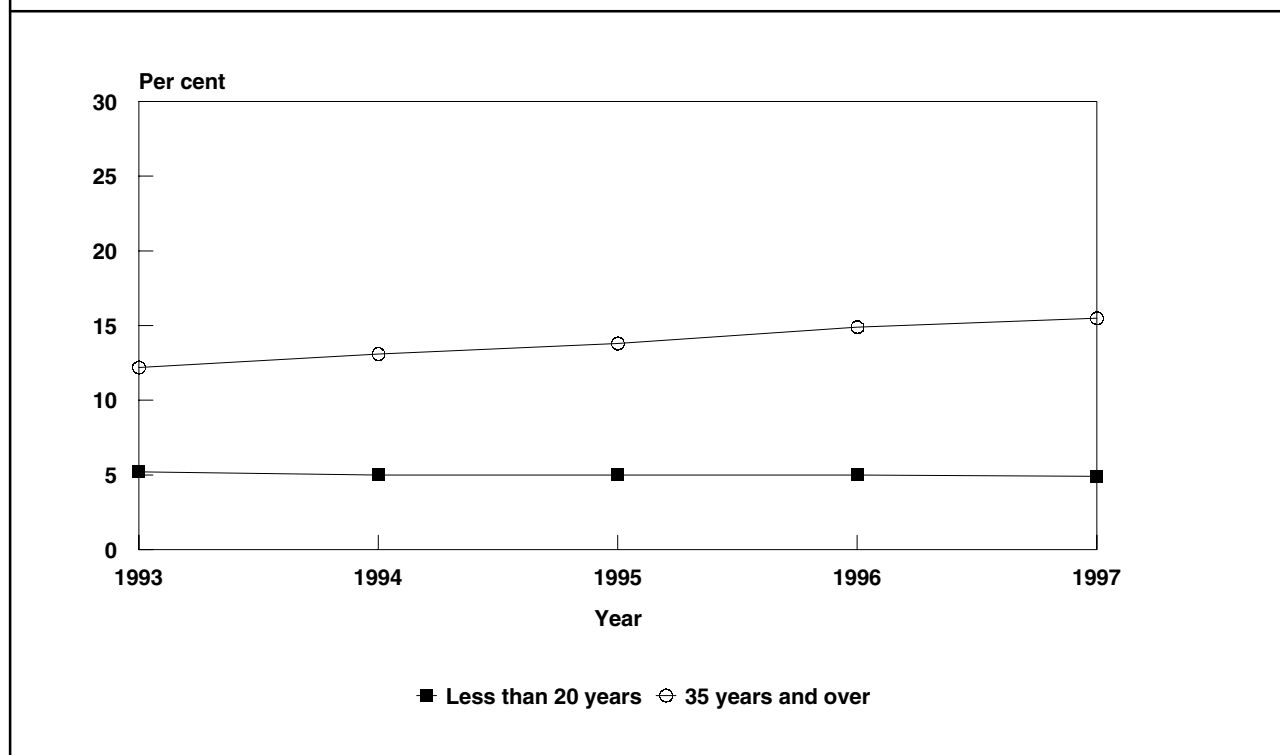
Source: NSW Midwives Data Collection Epidemiology and Surveillance Branch, NSW Health Department.

1.3 MATERNAL AGE

The number of teenage mothers decreased from 4,493 in 1993 to 4,291 in 1997 (Figure 1, Table 3). The number of mothers 35 years of age or over giving birth increased from 10,566 in 1993 to 13,465 in 1997, an increase from 12.2 to 15.5 per cent of all confinements.

The trend towards later childbirth is evident among both primiparous and multiparous mothers: the proportion of mothers aged 35 years or more who gave birth for the first time increased from 6.3 to 8.9 per cent over the five year period, and the proportion of multiparous mothers increased from 16.1 to 20.0 per cent.

FIGURE 1
CONFINEMENTS AMONG MOTHERS AGED LESS THAN 20 YEARS AND 35 YEARS AND OVER, NSW 1993-97



Source: NSW Midwives Data Collection Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 3
CONFINEMENTS BY MATERNAL AGE, NSW 1993-97

Maternal age (years)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
12-19	4493	5.2	4370	5.0	4349	5.0	4295	5.0	4291	4.9
20-34	71509	82.4	70892	81.7	69976	81.1	68239	80.0	69114	79.5
35+	10566	12.2	11358	13.1	11906	13.8	12712	14.9	13465	15.5
Not stated	178	0.2	118	0.1	32	0.0	56	0.1	50	0.1
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection Epidemiology and Surveillance Branch, NSW Health Department.

1.4 MATERNAL ABORIGINALITY

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 1,456 in 1993 (1.7 per cent of all mothers) to 1,842 in 1997 (2.1 per cent of all mothers). Part of this increase is likely to be due to an increased willingness of mothers to be identified as Aboriginal or Torres Strait Islander. Further information on maternal Aboriginality is shown in Part 3.

1.5 MATERNAL COUNTRY OF BIRTH

In the period 1993-97, almost three-quarters of confinements were to mothers who were born in Australia. The trend over recent years towards increasing numbers of confinements to mothers born in Asian countries, particularly China and Vietnam, and Pacific Island countries continued in 1997, accompanied by decreasing numbers of confinements to mothers born in European countries (Table 4). Further information on maternal country of birth is shown in Part 4.

TABLE 4

CONFINEMENTS BY MATERNAL COUNTRY OF BIRTH, NSW 1993-97#

Country of birth	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Australia	63481	73.2	63764	73.5	63623	73.8	62309	73.0	63292	72.8
United Kingdom	3299	3.8	3086	3.6	2850	3.3	2707	3.2	2593	3.0
China	1328	1.5	1562	1.8	1649	1.9	1950	2.3	2111	2.4
Lebanon	2334	2.7	2299	2.7	2153	2.5	2042	2.4	1983	2.3
Vietnam	1625	1.9	1658	1.9	1828	2.1	1865	2.2	1853	2.1
New Zealand	1859	2.1	1814	2.1	1821	2.1	1790	2.1	1826	2.1
Philippines	1309	1.5	1163	1.3	1245	1.4	1266	1.5	1275	1.5
Former Yugoslavia	636	0.7	698	0.8	746	0.9	689	0.8	714	0.8
India	475	0.5	555	0.6	587	0.7	576	0.7	673	0.8
Fiji	526	0.6	585	0.7	577	0.7	602	0.7	603	0.7
Hong Kong	647	0.7	669	0.8	676	0.8	659	0.8	531	0.6
Indonesia	314	0.4	313	0.4	312	0.4	381	0.4	398	0.5
Turkey	378	0.4	358	0.4	367	0.4	376	0.4	364	0.4
South Africa	241	0.3	271	0.3	263	0.3	310	0.4	349	0.4
United States of America	294	0.3	331	0.4	317	0.4	322	0.4	330	0.4
Iraq	146	0.2	147	0.2	164	0.2	234	0.3	326	0.4
Western Samoa##	0	0.0	163	0.2	276	0.3	280	0.3	312	0.4
South Korea	332	0.4	291	0.3	299	0.3	261	0.3	308	0.4
Malaysia	357	0.4	309	0.4	299	0.3	308	0.4	307	0.4
Cambodia	258	0.3	290	0.3	325	0.4	311	0.4	305	0.4
Tonga##	0	0.0	224	0.3	272	0.3	263	0.3	292	0.3
Sri Lanka	238	0.3	225	0.3	256	0.3	274	0.3	279	0.3
Ireland	207	0.2	269	0.3	274	0.3	276	0.3	275	0.3
Italy	415	0.5	353	0.4	312	0.4	285	0.3	272	0.3
Egypt	259	0.3	250	0.3	236	0.3	254	0.3	253	0.3
Japan	208	0.2	199	0.2	228	0.3	215	0.3	226	0.3
Germany	181	0.2	224	0.3	176	0.2	208	0.2	213	0.2
Chile	261	0.3	222	0.3	242	0.3	220	0.3	209	0.2
Pakistan	74	0.1	96	0.1	98	0.1	137	0.2	202	0.2
Thailand	152	0.2	148	0.2	164	0.2	166	0.2	186	0.2
Greece	289	0.3	234	0.3	203	0.2	174	0.2	178	0.2
Canada	168	0.2	162	0.2	160	0.2	170	0.2	155	0.2
Papua New Guinea	133	0.2	120	0.1	115	0.1	130	0.2	150	0.2
Iran	139	0.2	159	0.2	158	0.2	134	0.2	147	0.2
Syria	128	0.1	139	0.2	151	0.2	154	0.2	141	0.2
Laos	131	0.2	129	0.1	135	0.2	140	0.2	133	0.2
Bangladesh	67	0.1	53	0.1	82	0.1	94	0.1	125	0.1
Portugal	156	0.2	152	0.2	131	0.2	145	0.2	121	0.1
Poland	153	0.2	134	0.2	157	0.2	125	0.1	120	0.1
Afghanistan	0	0.0	46	0.1	75	0.1	83	0.1	110	0.1
Cook Islands##	0	0.0	36	0.0	55	0.1	59	0.1	107	0.1
Uruguay	99	0.1	111	0.1	119	0.1	105	0.1	102	0.1
Other/Not stated	3449	4.0	2727	3.1	2087	2.4	2253	2.6	2471	2.8
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection, Epidemiology and Surveillance Branch, NSW Health Department.

Countries of birth for which there were 100 or more confinements in 1997. Australia includes Australian External Territories.

Information on individual Pacific Island countries available from 1994.

1.6 NUMBER OF PREVIOUS PREGNANCIES

In recent years there were no substantial changes in the reported number of previous pregnancies greater than 20 weeks gestation (Table 5). About 40 per cent of mothers gave birth for the first time, about 58 per cent gave birth to a second to fourth baby and less than 2 per cent reported more than 5 previous births.

1.7 MARITAL STATUS

There were no substantial changes in the marital status of mothers since 1993. Almost 90 per cent of mothers were married or in a de facto relationship, about 10 per cent were single and never married and about 1 per cent were divorced, separated or widowed (Table 6).

TABLE 5

CONFINEMENTS BY NUMBER OF PREVIOUS PREGNANCIES, NSW 1993-97

Number of previous pregnancies (>20 weeks gestation)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-3	4508	39.8	34288	39.5	34459	39.9	34267	40.2	34984	40.2
1-4	50670	58.4	50897	58.7	50449	58.5	49692	58.3	50451	58.0
5+	1245	1.4	1207	1.4	1256	1.5	1237	1.5	1267	1.5
Not stated	323	0.4	346	0.4	99	0.1	106	0.1	218	0.3
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 6

CONFINEMENTS BY MARITAL STATUS, NSW 1993-97

Marital status	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Married/de facto	75545	87.1	75905	87.5	75864	87.9	75067	88.0	76593	88.1
Never married	9683	11.2	9354	10.8	9283	10.8	9021	10.6	8991	10.3
Divorced, separated or widowed	1037	1.2	1054	1.2	1022	1.2	1082	1.3	1026	1.2
Not stated	481	0.6	425	0.5	94	0.1	132	0.2	310	0.4
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.8 INSURANCE STATUS

There was a marked decrease in the number of mothers with private obstetric care over the five year period. By 1997, less than one third of mothers had private obstetric care (Table 7).

TABLE 7

CONFINEMENTS BY INSURANCE STATUS, NSW 1993-97

Insurance status	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Public	50839	58.6	53645	61.8	55485	64.3	57708	67.7	60193	69.3
Private	35832	41.3	33037	38.1	30757	35.7	27579	32.3	26645	30.7
Not stated	75	0.1	56	0.1	21	0.0	15	0.0	82	0.1
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.9 DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

Complete information on the duration of pregnancy at first antenatal check is available from 1994. Since that year, the proportion of mothers starting antenatal care at 20-plus weeks gestation has been stable at about 13 per cent (Table 8).

TABLE 8

CONFINEMENTS BY DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT, NSW 1994-97

Duration of pregnancy (weeks)	Year							
	1994#		1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%
0-19	71485	82.4	73331	85.0	72726	85.3	73666	84.8
20+	11760	13.6	11395	13.2	10972	12.9	11549	13.3
Not stated	3488	4.0	1537	1.8	1604	1.9	1705	2.0
TOTAL	86733	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1994 data excludes 5 confinements reported on old MDC forms which did not ask this question.

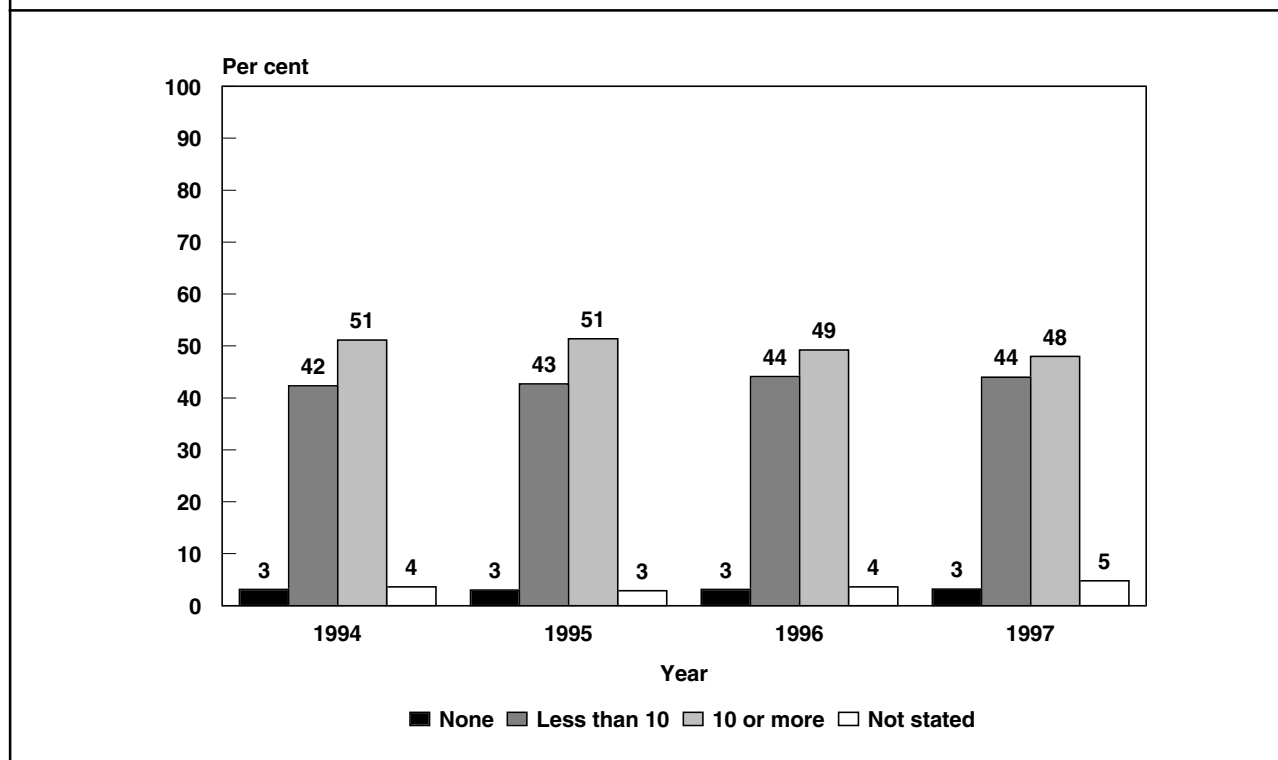
1.10 SMOKING IN PREGNANCY

Complete information on smoking in pregnancy is also available from 1994. The proportion of mothers reporting smoking during pregnancy varied little from 1994 to 1997: in 1994, 19,188 (22.1 per cent) mothers reported smoking in pregnancy, compared to 18,549 (21.5 per cent) in 1995, 17,957 (21.1 per cent) in 1996 and 17,871 (20.6 per cent) in 1997.

Of mothers who smoked during pregnancy, about 3 per cent stopped smoking in the second half of pregnancy and about 50 per cent smoked more than 10 cigarettes per day in the second half of pregnancy (Figure 2).

FIGURE 2

MOTHERS WHO SMOKED AT ALL DURING PREGNANCY BY NUMBER OF CIGARETTES SMOKED IN THE SECOND HALF OF PREGNANCY, NSW 1994-97



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.11 PLACE OF BIRTH

The majority of mothers plan to give birth in a hospital labour ward and about 5 per cent of mothers plan to give birth in a birth centre (Table 9, Figure 3). The reported number of mothers planning a homebirth in NSW decreased from 281 in 1993 to 202 in 1997.

TABLE 9

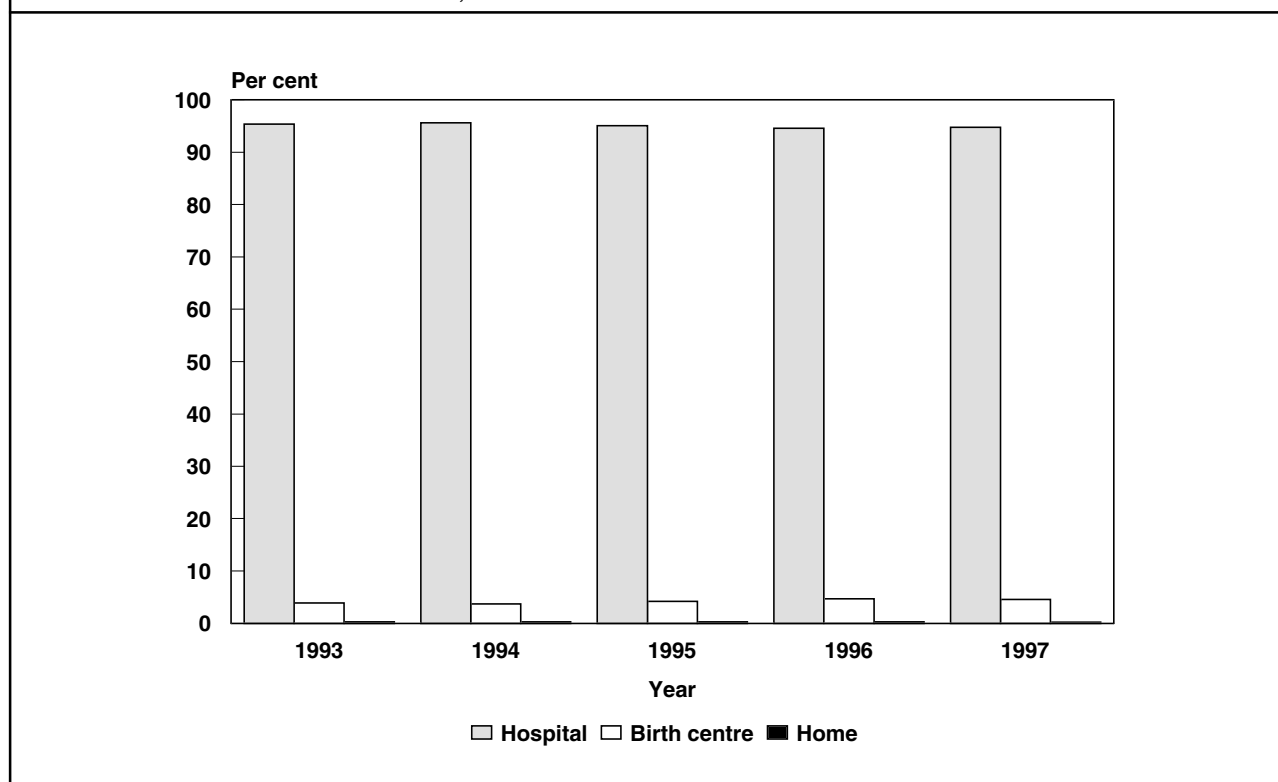
CONFINEMENTS BY PLACE OF BIRTH, NSW 1993-97

Place of birth	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hospital	82730	95.4	82893	95.6	82074	95.1	80714	94.6	82410	94.8
Birth centre	2593	3.0	2502	2.9	2741	3.2	2899	3.4	2795	3.2
Planned birth centre/hospital admission	811	0.9	750	0.9	881	1.0	1116	1.3	1188	1.4
Planned homebirth	218	0.3	172	0.2	179	0.2	192	0.2	159	0.2
Planned homebirth/hospital admission	63	0.1	93	0.1	90	0.1	55	0.1	43	0.0
Born before arrival	251	0.3	298	0.3	297	0.3	324	0.4	297	0.3
Not stated	80	0.1	30	0.0	1	0.0	2	0.0	28	0.0
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

FIGURE 3

CONFINEMENTS BY PLANNED PLACE OF BIRTH, NSW 1993-97



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.12 LABOUR AND DELIVERY

The rate of induction of labour rose from 19.7 per cent in 1993 to 21.8 per cent in 1997. The rate of spontaneous onset of labour decreased slightly from 71.1 to 68.1 per cent (Table 10). About one in 10 labours were augmented with oxytocics or prostaglandins in 1997.

The rate of normal vaginal birth has remained stable at about 70 per cent since 1993 (Table 11). The caesarean section rate increased from 17.1 to 18.2 per cent, with most of this increase due to an increased rate of elective caesarean section. The rate of instrumental delivery declined from 11.1 to 10.3 per cent, accompanied by a change in the pattern of instrumental delivery: the rate of vacuum extraction rose from 3.0 to 4.5 per cent and the rate of forceps delivery declined from 8.2 to 5.8 per cent.

TABLE 10

CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR, NSW 1993-97

Onset of labour	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	39398	45.4	40745	47.0	40150	46.5	39891	46.8	39839	45.8
Spontaneous augmented with ARM	13185	15.2	11585	13.4	11062	12.8	10564	12.4	9764	11.2
Spontaneous augmented with oxytocics/prostaglandins#	9071	10.5	8655	10.0	8961	10.4	9222	10.8	9622	11.1
Induced-ARM only	892	1.0	1637	1.9	1155	1.3	1211	1.4	1238	1.4
Induced-oxytocics/prostaglandins	5171	6.0	5304	6.1	5514	6.4	5644	6.6	5934	6.8
Induced-ARM+oxytocics/prostaglandins	10919	12.6	10546	12.2	11071	12.8	10601	12.4	11722	13.5
Induced - other##	73	0.1	26	0.0	61	0.1	67	0.1	87	0.1
No labour	7749	8.9	8067	9.3	8231	9.5	8052	9.4	8616	9.9
Not stated	288	0.3	173	0.2	58	0.1	50	0.1	98	0.1
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

May include artificial rupture of membranes.

This category includes other forms of induction such as Foley's catheter.

TABLE 11

CONFINEMENTS BY TYPE OF DELIVERY, NSW 1993-97

Type of delivery	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	60964	70.3	61199	70.6	61215	71.0	60339	70.7	61175	70.4
Forceps	5872	6.8	5525	6.4	5043	5.8	4799	5.6	4200	4.8
Forceps rotation	1206	1.4	1094	1.3	1040	1.2	925	1.1	814	0.9
Vacuum extraction	2570	3.0	2714	3.1	2943	3.4	3286	3.9	3919	4.5
Vaginal breech	985	1.1	924	1.1	918	1.1	874	1.0	921	1.1
Elective caesarean	7749	8.9	8067	9.3	8231	9.5	8052	9.4	8616	9.9
Emergency caesarean	7103	8.2	6980	8.0	6818	7.9	6955	8.2	7195	8.3
Not stated	297	0.3	235	0.3	55	0.1	72	0.1	80	0.1
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.13 BABY SEX

There were no significant changes in the pattern of baby sex since 1993. In 1997, 42,307 (48.7 per cent) of babies were female, 44,575 (51.3 per cent) were male and 12 were of indeterminate sex; compared with 1993 where 41,987 (48.4 per cent) of babies were female, 44,522 (51.3 per cent) were male, and 14 were of indeterminate sex.

1.14 GESTATIONAL AGE

There were no substantial changes in the pattern of gestational age since 1993 (Table 12). The rate of premature births (less than 37 weeks gestation) was stable at 6 to 7 per cent and was 6.8 per cent in 1997. There was no change in the proportions of babies who were very premature (less than 32 weeks) or extremely premature (less than 28 weeks).

TABLE 12
BIRTHS BY GESTATIONAL AGE, NSW 1993-97

Gestational age (weeks)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 28	532	0.6	508	0.6	488	0.6	533	0.6	563	0.6
28-31	647	0.7	611	0.7	570	0.7	574	0.7	596	0.7
32-36	4451	5.1	4541	5.2	4471	5.1	4689	5.4	4852	5.5
37-41	79074	90.0	79445	90.3	79367	90.8	78406	90.7	79987	90.8
42+	3021	3.4	2768	3.1	2480	2.8	2187	2.5	2091	2.4
Not stated	176	0.2	111	0.1	15	0.0	40	0.0	44	0.0
TOTAL	87901	100.0	87984	100.0	87391	100.0	86429	100.0	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.15 BIRTH WEIGHT

Since 1993, the rate of low birth weight (less than 2,500 grams) was constant at about 6 per cent (Table 13). The rate was 6.1 per cent in 1997.

1.16 APGAR SCORE

In 1997, 2.5 per cent of babies were born with an Apgar score of less than 7 at 5 minutes and 1.2 per cent were born with a score less than 4 (Table 14). These rates are similar to those of previous years.

TABLE 13
BIRTHS BY BIRTH WEIGHT, NSW 1993-97

Birth weight (grams)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 500	150	0.2	123	0.1	140	0.2	158	0.2	182	0.2
500-999	485	0.6	414	0.5	378	0.4	362	0.4	414	0.5
1000-1499	538	0.6	494	0.6	446	0.5	454	0.5	467	0.5
1500-1999	912	1.0	935	1.1	921	1.1	906	1.0	1033	1.2
2000-2499	3083	3.5	3146	3.6	3206	3.7	3158	3.7	3318	3.8
2500-2999	13369	15.2	13440	15.3	13314	15.2	13098	15.2	13487	15.3
3000-3499	32210	36.6	32013	36.4	31879	36.5	31378	36.3	31863	36.2
3500-3999	26928	30.6	27171	30.9	26835	30.7	26793	31.0	26957	30.6
4000-4499	8724	9.9	8637	9.8	8644	9.9	8593	9.9	8816	10.0
4500+	1397	1.6	1515	1.7	1592	1.8	1477	1.7	1535	1.7
Not stated	105	0.1	96	0.1	36	0.0	52	0.1	61	0.1
TOTAL	87901	100.0	87984	100.0	87391	100.0	86429	100.0	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 14
BIRTHS BY APGAR SCORE AT FIVE MINUTES, NSW 1993-97#

Apgar score	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	1042	1.2	1008	1.1	993	1.1	989	1.1	1065	1.2
5-6	1233	1.4	1149	1.3	1220	1.4	1127	1.3	1116	1.3
7+	84552	96.2	83918	95.4	85025	97.3	84153	97.4	85788	97.3
Not stated	1074	1.2	1909	2.2	153	0.2	160	0.2	164	0.2
TOTAL	87901	100.0	87984	100.0	87391	100.0	86429	100.0	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
Includes stillbirths and live births.

1.17 PERINATAL OUTCOMES

In the period 1993-97 the perinatal mortality rate varied from 8.8 to 9.6 per 1,000 (Table 15). About two-thirds of all perinatal deaths were stillbirths and one third were neonatal deaths.

In 1997, 833 of the 849 perinatal deaths in NSW (98.1 per cent) occurred among planned hospital births; 11 among planned birth

centre births and 5 among babies who were born before arrival. There were no perinatal deaths reported among planned homebirths. The perinatal mortality rate was 10.0 per 1,000 for planned hospital births and 2.8 per 1,000 among planned birth centre births.

TABLE 15
BIRTHS BY PERINATAL OUTCOME, NSW 1993-97#

Year	Liveborn surviving		Stillborn		Perinatal Outcome Neonatal death		Not stated		Total births		Perinatal mortality rate / 1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
1993	86911	98.9	536	0.6	264	0.3	190	0.2	87901	100.0	9.1
1994	86947	98.8	496	0.6	287	0.3	254	0.3	87984	100.0	8.9
1995	86600	99.1	521	0.6	248	0.3	22	0.0	87391	100.0	8.8
1996	85627	99.1	545	0.6	227	0.3	30	0.0	86429	100.0	8.9
1997	87200	98.9	587	0.7	262	0.3	84	0.1	88133	100.0	9.6

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

1.18 MATERNAL DEATHS

In the period 1990-96, 80 deaths were reported among pregnant women or women who gave birth less than six weeks previously. All deaths occurring prior to 1995 were considered and classified by the NSW Maternal and Perinatal Committee (see Data Sources, page 11). In the five year period 1990-94, the maternal death rate was 12.5 per 100,000 for all deaths and 8.5 per 100,000 for direct and indirect deaths combined (Table 16).

Causes of deaths occurring in the period 1991-93 have been compiled and reported at a national level¹. In NSW in 1994, of the nine deaths which were classified as directly or indirectly associated with pregnancy, two were due to hypertensive disease of pregnancy (Table 17).

TABLE 16
MATERNAL DEATHS BY YEAR, NSW 1990-96#

Year	Direct		Indirect		Classification Total Direct & Indirect		Incidental		TOTAL	
	No.	Rate/ 100,000	No.	Rate/ 100,000	No.	Rate/ 100,000	No.	Rate/ 100,000	No.	Rate/ 100,000
1990	4	4.6	6	6.9	10	11.6	2	2.3	12	13.9
1991	4	4.7	1	1.2	5	5.8	1	1.2	6	7.0
1992	5	5.7	1	1.1	6	6.8	5	5.7	11	12.5
1993	6	6.9	1	1.2	7	8.1	6	6.9	13	15.0
1994	8	9.2	1	1.2	9	10.4	3	3.5	12	13.8
TOTAL 1990-94	27	6.2	10	2.3	37	8.5	17	3.9	54	12.5
1995 ##									15	17.4
1996 ##									11	12.9
TOTAL 1990-96									80	13.2

Source: Epidemiology and Surveillance Branch, NSW Health Department

Includes all deaths of women who were pregnant at the time of death, or who died within 42 days of childbirth.

Direct deaths include those resulting from obstetric complications of the pregnant state, including its management.

Indirect deaths include those resulting from preexisting disease or disease which developed during pregnancy and was not due to direct obstetric causes but which may have been aggravated by the physiological effects of pregnancy.

Incidental deaths are those where the pregnancy is unlikely to have contributed significantly to the death.

Classification incomplete for 1995 and 1996.

1. National Health and Medical Research Council (NHMRC). Report on Maternal Deaths in Australia 1991-93. NHMRC 1998.

TABLE 17**MATERNAL DEATHS BY CAUSE, NSW 1994**

Classification#/ Cause		No.
Direct	Severe pre-eclampsia and disseminated intravascular coagulation (DIC)	1
	Postpartum eclampsia	1
	Complications of blood loss following miscarriage	1
	Placental abruption and DIC	1
	Exsanguination following ruptured ectopic pregnancy	1
	Spontaneous uterine rupture and DIC	1
	Pulmonary embolus	1
	Postpartum cardiomyopathy	1
Indirect	Rupture of left renal artery associated with myxoid degeneration of left renal artery	1
Incidental	Subarachnoid and intracerebral haemorrhage following rupture of berry aneurysm	1
	Multiple organ failure of unknown origin	1
	Suicide	1
Total		12

Source: *Epidemiology and Surveillance Branch, NSW Health Department.*

Includes all deaths of women who were pregnant at the time of death, or who died within 42 days of childbirth.

Direct deaths include those resulting from obstetric complications of the pregnant state, including its management.

Indirect deaths include those resulting from preexisting disease or disease which developed during pregnancy and was not due to direct obstetric causes but which may have been aggravated by the physiological effects of pregnancy.

Incidental deaths are those where the pregnancy is unlikely to have contributed significantly to the death.

PART 2: AREA HEALTH SERVICES

Information on the health of Aboriginal and Torres Strait Islander mothers, and mothers born in non-English speaking countries is shown in Parts 3 and 4 respectively.

2.1 CONFINEMENTS

In 1997, the largest number of confinements were among mothers resident in the South Western Sydney (12,512, 14.4 per cent) and Western Sydney Areas (10,558, 12.1 per cent). These two Areas contributed over one quarter of the State's births. Seventy-eight per cent of confinements were to mothers resident in the metropolitan Areas (including the Central Coast, Hunter and Illawarra Areas), and 21.0 per cent were to mothers resident in rural Areas.

2.2 MATERNAL AGE

As in previous years, there were large variations in the distribution of the age of women giving birth throughout the State (Table 18). The proportion of women giving birth at less than 20 years of age varied from 1.0 per cent in the Northern Sydney Area to 11.8 per cent in the Far West Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 10.2 per cent in the Macquarie Area to 26.0 per cent in the Northern Sydney Area.

2.3 MATERNAL COUNTRY OF BIRTH

Seventy-nine per cent of women who gave birth in NSW in 1997 were born in English speaking countries, 10.8 per cent were born in Asian countries and 4.4 per cent were born in the Middle East or Africa (Table 19).

The highest proportions of mothers born in non-English speaking countries were in the Central Sydney and South Western Sydney Areas. In South Western Sydney, the majority of mothers born in non-English speaking countries were born in South-East Asia (39.7 per cent). In Central Sydney, the majority of mothers born in non-English speaking countries were born in North East Asia (25.7 per cent) and South-East Asia (22.7 per cent).

2.4 MATERNAL ABORIGINALITY

Two per cent of mothers in 1997 were reported to be Aboriginal or Torres Strait Islander (Table 20). The proportion of Aboriginal or Torres Strait Islander mothers varied from 0.1 per cent in the Northern Sydney Area to 28.7 per cent in the Far West Area.

2.5 PLACE OF BIRTH

Ninety-five per cent of mothers chose to deliver in a hospital labour ward in 1997, compared to 4.6 per cent who planned a birth centre birth and 0.2 per cent who planned a homebirth (Table 21). Planned birth centre births were most common in the Hunter and Central Sydney Areas, and planned homebirths were most common in the Northern Sydney Area.

2.6 LABOUR AND DELIVERY

In 1997, the onset of labour was spontaneous in 68.1 per cent of confinements (Table 22). Labour was induced in 21.8 per cent of confinements and no labour (elective caesarean section) was reported in 9.9 per cent of confinements.

The rate of spontaneous onset of labour was highest among residents of the Central Sydney Area (75.6 per cent). The highest rate of induction of labour were among residents of the New England Area (25.9 per cent).

Seventy per cent of confinements were by normal vaginal birth, 10.3 per cent were instrumental and 18.2 per cent were by caesarean section (Table 23). The highest rate of normal vaginal birth was among residents of South Western Sydney Area (76.3 per cent), while the highest rate of instrumental delivery was among residents of South Eastern Sydney Area (15.4 per cent). The caesarean section rate varied from 14.0 per cent among mothers resident in the Macquarie Area to 22.8 per cent in the Northern Sydney Area.

TABLE 18

CONFINEMENTS BY MATERNAL AGE AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Maternal age (years)																TOTAL	
	12 - 19		20 - 24		25 - 29		30 - 34		35 - 39		40 - 44		45+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Central Sydney	172	2.6	895	13.4	1929	29.0	2232	33.5	1205	18.1	214	3.2	8	0.1	2	0.0	6757	100.0
Northern Sydney	94	1.0	536	6.0	2279	25.4	3743	41.7	1969	21.9	356	4.0	6	0.1	1	0.0	8984	100.0
Western Sydney	483	4.6	1944	18.4	3605	34.1	3026	28.7	1276	12.1	212	2.0	9	0.1	3	0.0	10558	100.0
Wentworth	285	5.9	900	18.6	1798	37.2	1245	25.8	501	10.4	87	1.8	3	0.1	12	0.2	4831	100.0
South Western																		
Sydney	635	5.1	2543	20.3	4441	35.5	3300	26.4	1384	11.1	199	1.6	6	0.0	4	0.0	12512	100.0
Central Coast	239	6.3	700	18.5	1258	33.2	1069	28.2	462	12.2	58	1.5	4	0.1	0	0.0	3790	100.0
Hunter	422	6.0	1403	20.0	2515	35.8	1880	26.8	694	9.9	101	1.4	3	0.0	9	0.1	7027	100.0
Illawarra	262	5.9	864	19.5	1493	33.7	1270	28.6	485	10.9	54	1.2	4	0.1	3	0.1	4435	100.0
South Eastern																		
Sydney	186	2.0	940	10.3	2751	30.1	3375	36.9	1626	17.8	257	2.8	5	0.1	8	0.1	9148	100.0
Northern Rivers	220	7.4	619	20.9	936	31.6	785	26.5	339	11.4	63	2.1	1	0.0	0	0.0	2963	100.0
Mid North Coast	256	8.3	684	22.2	999	32.4	721	23.4	358	11.6	59	1.9	1	0.0	1	0.0	3079	100.0
New England	239	9.7	601	24.4	807	32.8	552	22.4	235	9.5	27	1.1	2	0.1	0	0.0	2463	100.0
Macquarie	140	8.8	366	22.9	544	34.1	382	23.9	138	8.7	24	1.5	1	0.1	0	0.0	1595	100.0
Mid Western	192	7.9	532	21.8	840	34.5	620	25.4	205	8.4	45	1.8	2	0.1	1	0.0	2437	100.0
Far West	71	11.8	157	26.2	201	33.5	111	18.5	57	9.5	3	0.5	0	0.0	0	0.0	600	100.0
Greater Murray	225	6.7	715	21.3	1142	34.0	889	26.5	341	10.2	35	1.0	5	0.1	5	0.1	3357	100.0
Southern	130	7.3	371	20.9	558	31.4	469	26.4	215	12.1	28	1.6	4	0.2	0	0.0	1775	100.0
Other/Not stated	40	5.6	143	20.2	249	35.1	187	26.4	82	11.6	7	1.0	0	0.0	1	0.1	709	100.0
TOTAL	4291	4.9	14913	17.2	28345	32.6	25856	29.7	11572	13.3	1829	2.1	64	0.1	50	0.1	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 19

CONFINEMENTS BY MATERNAL COUNTRY OF BIRTH AND HEALTH AREA OF RESIDENCE, NSW 1997#

Health Area	Country of birth group																		TOTAL			
	English speaking		Central & South America		Melanesia, Micronesia & Polynesia		Southern Europe		Western & Northern Europe		Eastern Europe, Russia, Central Asian & Baltic States		Middle East & Africa		South East Asia		North East Asia			Southern Asia		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%	
Central Sydney	3574	53.9	62	0.9	287	4.3	258	3.9	53	0.8	43	0.6	640	9.7	694	10.5	784	11.8	235	3.5	6630	100.0
Northern Sydney	6985	77.8	75	0.8	98	1.1	139	1.5	144	1.6	73	0.8	227	2.5	359	4.0	694	7.7	188	2.1	8982	100.0
Western Sydney	6728	63.8	90	0.9	416	3.9	188	1.8	53	0.5	58	0.6	1077	10.2	780	7.4	681	6.5	472	4.5	10543	100.0
Wentworth	4367	91.6	23	0.5	41	0.9	64	1.3	39	0.8	10	0.2	60	1.3	84	1.8	30	0.6	52	1.1	4770	100.0
South Western																						
Sydney	7709	61.7	269	2.2	413	3.3	425	3.4	74	0.6	58	0.5	1110	8.9	1902	15.2	351	2.8	183	1.5	12494	100.0
Central Coast	3650	96.3	9	0.2	21	0.6	7	0.2	18	0.5	3	0.1	15	0.4	48	1.3	11	0.3	8	0.2	3790	100.0
Hunter	6805	97.0	6	0.1	24	0.3	25	0.4	20	0.3	7	0.1	14	0.2	76	1.1	26	0.4	14	0.2	7017	100.0
Illawarra	3977	89.7	32	0.7	26	0.6	123	2.8	36	0.8	12	0.3	89	2.0	85	1.9	39	0.9	15	0.3	4434	100.0
South Eastern																						
Sydney	6656	73.1	103	1.1	131	1.4	238	2.6	107	1.2	115	1.3	519	5.7	422	4.6	658	7.2	159	1.7	9108	100.0
Northern Rivers	2874	97.0	1	0.0	16	0.5	8	0.3	17	0.6	4	0.1	4	0.1	22	0.7	6	0.2	11	0.4	2963	100.0
Mid North Coast	2978	96.7	4	0.1	13	0.4	5	0.2	17	0.6	0	0.0	6	0.2	23	0.7	11	0.4	22	0.7	3079	100.0
New England	2393	97.2	3	0.1	17	0.7	5	0.2	5	0.2	3	0.1	4	0.2	20	0.8	4	0.2	9	0.4	2463	100.0
Macquarie	1566	98.2	1	0.1	4	0.3	2	0.1	5	0.3	0	0.0	4	0.3	9	0.6	2	0.1	1	0.1	1594	100.0
Mid Western	2373	97.4	4	0.2	6	0.2	7	0.3	6	0.2	3	0.1	8	0.3	15	0.6	12	0.5	2	0.1	2436	100.0
Far West	587	97.8	0	0.0	0	0.0	1	0.2	4	0.7	1	0.2	1	0.2	4	0.7	1	0.2	1	0.2	600	100.0
Greater Murray	3248	96.8	4	0.1	25	0.7	7	0.2	12	0.4	1	0.0	7	0.2	20	0.6	5	0.1	25	0.7	3354	100.0
Southern	1699	95.8	1	0.1	11	0.6	12	0.7	14	0.8	1	0.1	6	0.3	22	1.2	5	0.3	3	0.2	1774	100.0
Other/Not stated	658	93.5	0	0.0	12	1.7	2	0.3	3	0.4	1	0.1	2	0.3	14	2.0	5	0.7	7	1.0	704	100.0
TOTAL	68827	79.4	687	0.8	1561	1.8	1516	1.7	627	0.7	393	0.5	3793	4.4	4599	5.3	3325	3.8	1407	1.6	86735	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Excludes 185 mothers for whom country of birth was not stated.

Maternal countries of birth and country of birth groups are shown in Appendix 3.

TABLE 20
CONFINEMENTS BY MATERNAL ABORIGINALITY AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Aboriginality						TOTAL	
	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated			
	No.	%	No.	%	No.	%	No.	%
Central Sydney	70	1.1	6579	98.8	8	0.1	6657	100.0
Northern Sydney	7	0.1	8976	99.9	1	0.0	8984	100.0
Western Sydney	105	1.0	10434	98.8	19	0.2	10558	100.0
Wentworth	47	1.0	4703	97.4	81	1.7	4831	100.0
South Western Sydney	89	0.7	12397	99.1	26	0.2	12512	100.0
Central Coast	37	1.0	3749	98.9	4	0.1	3790	100.0
Hunter	107	1.5	6911	98.3	9	0.1	7027	100.0
Illawarra	125	2.8	4303	97.0	7	0.2	4435	100.0
South Eastern Sydney	36	0.4	9065	99.1	47	0.5	9148	100.0
Northern Rivers	146	4.9	2815	95.0	2	0.1	2963	100.0
Mid North Coast	181	5.9	2896	94.1	2	0.1	3079	100.0
New England	255	10.4	2206	89.6	2	0.1	2463	100.0
Macquarie	202	12.7	1392	87.3	1	0.1	1595	100.0
Mid Western	99	4.1	2337	95.9	1	0.0	2437	100.0
Far West	172	28.7	428	71.3	0	0.0	600	100.0
Greater Murray	100	3.0	3250	96.8	7	0.2	3357	100.0
Southern	51	2.9	1723	97.1	1	0.1	1775	100.0
Other/Not stated	13	1.8	690	97.3	6	0.8	709	100.0
TOTAL	1842	2.1	84854	97.6	224	0.3	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 21
CONFINEMENTS BY PLACE OF BIRTH AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Place of birth														TOTAL	
	Hospital		Birth centre		Planned birth centre/ hospital admission		Planned homebirth		Planned homebirth/ hospital admission		Born before arrival		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney	6031	90.6	458	6.9	131	2.0	6	0.1	1	0.0	29	0.4	1	0.0	6657	100.0
Northern Sydney	8797	97.9	103	1.1	29	0.3	34	0.4	6	0.1	15	0.2	0	0.0	8984	100.0
Western Sydney	9957	94.3	275	2.6	267	2.5	12	0.1	3	0.0	43	0.4	1	0.0	10558	100.0
Wentworth	4689	97.1	47	1.0	57	1.2	18	0.4	3	0.1	15	0.3	2	0.0	4831	100.0
South Western Sydney	12111	96.8	191	1.5	159	1.3	2	0.0	4	0.0	42	0.3	3	0.0	12512	100.0
Central Coast	3734	98.5	29	0.8	12	0.3	6	0.2	0	0.0	9	0.2	0	0.0	3790	100.0
Hunter	5787	82.4	971	13.8	232	3.3	7	0.1	3	0.0	26	0.4	1	0.0	7027	100.0
Illawarra	4172	94.1	168	3.8	56	1.3	12	0.3	1	0.0	12	0.3	14	0.3	4435	100.0
South Eastern Sydney	8471	92.6	465	5.1	168	1.8	18	0.2	7	0.1	13	0.1	6	0.1	9148	100.0
Northern Rivers	2880	97.2	25	0.8	19	0.6	18	0.6	7	0.2	14	0.5	0	0.0	2963	100.0
Mid North Coast	3020	98.1	30	1.0	13	0.4	5	0.2	2	0.1	9	0.3	0	0.0	3079	100.0
New England	2443	99.2	10	0.4	0	0.0	0	0.0	1	0.0	9	0.4	0	0.0	2463	100.0
Macquarie	1553	97.4	9	0.6	21	1.3	0	0.0	1	0.1	11	0.7	0	0.0	1595	100.0
Mid Western	2412	99.0	1	0.0	7	0.3	0	0.0	1	0.0	16	0.7	0	0.0	2437	100.0
Far West	590	98.3	2	0.3	4	0.7	0	0.0	0	0.0	4	0.7	0	0.0	600	100.0
Greater Murray	3333	99.3	2	0.1	7	0.2	0	0.0	1	0.0	14	0.4	0	0.0	3357	100.0
Southern	1733	97.6	6	0.3	6	0.3	13	0.7	2	0.1	15	0.8	0	0.0	1775	100.0
Other/Not stated	697	98.3	3	0.4	0	0.0	8	1.1	0	0.0	1	0.1	0	0.0	709	100.0
TOTAL	82410	94.8	2795	3.2	1188	1.4	159	0.2	43	0.0	297	0.3	28	0.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 22
CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented with oxytocics/prostaglandins#		No labour		Onset of labour Induced-oxytocics/prostaglandins		Induced ARM only		Induced-ARM+ oxytocics/prostaglandins		Induced-other##		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Central Sydney	3618	54.3	327	4.9	1088	16.3	626	9.4	452	6.8	84	1.3	453	6.8	1	0.0	8	0.1	6657
Northern Sydney	3579	39.8	704	7.8	1391	15.5	1179	13.1	540	6.0	141	1.6	1444	16.1	5	0.1	1	0.0	8984	100.0
Western Sydney	5140	48.7	1068	10.1	1078	10.2	943	8.9	546	5.2	68	0.6	1700	16.1	9	0.1	6	0.1	10558	100.0
Wentworth	2228	46.1	593	12.3	419	8.7	432	8.9	283	5.9	55	1.1	800	16.6	3	0.1	18	0.4	4831	100.0
South Western																				
Sydney	5954	47.6	1441	11.5	1281	10.2	997	8.0	732	5.9	114	0.9	1937	15.5	39	0.3	17	0.1	12512	100.0
Central Coast	1614	42.6	408	10.8	422	11.1	415	10.9	290	7.7	72	1.9	566	14.9	3	0.1	0	0.0	3790	100.0
Hunter	3166	45.1	907	12.9	558	7.9	645	9.2	514	7.3	254	3.6	952	13.5	16	0.2	15	0.2	7027	100.0
Illawarra	1854	41.8	735	16.6	393	8.9	396	8.9	348	7.8	47	1.1	652	14.7	3	0.1	7	0.2	4435	100.0
South Eastern																				
Sydney	3662	40.0	1052	11.5	1486	16.2	1079	11.8	712	7.8	102	1.1	1038	11.3	0	0.0	17	0.2	9148	100.0
Northern Rivers	1511	51.0	361	12.2	265	8.9	265	8.9	225	7.6	34	1.1	301	10.2	1	0.0	0	0.0	2963	100.0
Mid North Coast	1420	46.1	420	13.6	254	8.2	341	11.1	204	6.6	29	0.9	404	13.1	3	0.1	4	0.1	3079	100.0
New England	1028	41.7	359	14.6	183	7.4	255	10.4	280	11.4	46	1.9	311	12.6	0	0.0	1	0.0	2463	100.0
Macquarie	770	48.3	231	14.5	146	9.2	122	7.6	89	5.6	33	2.1	203	12.7	1	0.1	0	0.0	1595	100.0
Mid Western	1125	46.2	347	14.2	178	7.3	283	11.6	158	6.5	47	1.9	296	12.1	1	0.0	2	0.1	2437	100.0
Far West	275	45.8	63	10.5	49	8.2	61	10.2	31	5.2	29	4.8	92	15.3	0	0.0	0	0.0	600	100.0
Greater Murray	1655	49.3	391	11.6	238	7.1	318	9.5	343	10.2	58	1.7	353	10.5	0	0.0	1	0.0	3357	100.0
Southern	936	52.7	227	12.8	120	6.8	184	10.4	153	8.6	13	0.7	140	7.9	2	0.1	0	0.0	1775	100.0
Other/Not stated	304	42.9	130	18.3	73	10.3	75	10.6	34	4.8	12	1.7	80	11.3	0	0.0	1	0.1	709	100.0
TOTAL	39839	45.8	9764	11.2	9622	11.1	8616	9.9	5934	6.8	1238	1.4	11722	13.5	87	0.1	98	0.1	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

May include artificial rupture of membranes.

This category includes other forms of induction such as Foley's catheter.

TABLE 23
CONFINEMENTS BY TYPE OF DELIVERY AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Normal vaginal		Forceps		Forceps rotation		Vacuum extraction		Type of delivery Vaginal breech		Elective caesarean		Emergency caesarean		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Central Sydney	4568	68.6	333	5.0	97	1.5	343	5.2	59	0.9	626	9.4	628	9.4	3	0.0	6657
Northern Sydney	5549	61.8	578	6.4	90	1.0	658	7.3	56	0.6	1179	13.1	873	9.7	1	0.0	8984	100.0
Western Sydney	7464	70.7	694	6.6	165	1.6	272	2.6	153	1.4	943	8.9	862	8.2	5	0.0	10558	100.0
Wentworth	3483	72.1	236	4.9	28	0.6	163	3.4	59	1.2	432	8.9	407	8.4	23	0.5	4831	100.0
South Western																		
Sydney	9541	76.3	421	3.4	72	0.6	495	4.0	178	1.4	997	8.0	792	6.3	16	0.1	12512	100.0
Central Coast	2627	69.3	92	2.4	10	0.3	301	7.9	31	0.8	415	10.9	314	8.3	0	0.0	3790	100.0
Hunter	5152	73.3	257	3.7	50	0.7	279	4.0	70	1.0	645	9.2	571	8.1	3	0.0	7027	100.0
Illawarra	3359	75.7	102	2.3	39	0.9	197	4.4	36	0.8	396	8.9	295	6.7	11	0.2	4435	100.0
South Eastern																		
Sydney	5627	61.5	689	7.5	141	1.5	580	6.3	86	0.9	1079	11.8	931	10.2	15	0.2	9148	100.0
Northern Rivers	2213	74.7	104	3.5	25	0.8	66	2.2	31	1.0	265	8.9	259	8.7	0	0.0	2963	100.0
Mid North Coast	2252	73.1	169	5.5	22	0.7	37	1.2	33	1.1	341	11.1	224	7.3	1	0.0	3079	100.0
New England	1804	73.2	75	3.0	3	0.1	95	3.9	27	1.1	255	10.4	204	8.3	0	0.0	2463	100.0
Macquarie	1194	74.9	64	4.0	16	1.0	84	5.3	13	0.8	122	7.6	102	6.4	0	0.0	1595	100.0
Mid Western	1716	70.4	88	3.6	7	0.3	104	4.3	23	0.9	283	11.6	215	8.8	1	0.0	2437	100.0
Far West	440	73.3	30	5.0	3	0.5	10	1.7	8	1.3	61	10.2	48	8.0	0	0.0	600	100.0
Greater Murray	2340	69.7	184	5.5	38	1.1	140	4.2	37	1.1	318	9.5	299	8.9	1	0.0	3357	100.0
Southern	1322	74.5	57	3.2	3	0.2	76	4.3	11	0.6	184	10.4	122	6.9	0	0.0	1775	100.0
Other/Not stated	524	73.9	27	3.8	5	0.7	19	2.7	10	1.4	75	10.6	49	6.9	0	0.0	709	100.0
TOTAL	61175	70.4	4200	4.8	814	0.9	3919	4.5	921	1.1	8616	9.9	7195	8.3	80	0.1	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

2.7 BIRTH WEIGHT

Overall, 6.1 per cent of births were of low birth weight (less than 2,500 grams). These comprised 0.7 per cent with birth weight less than 1,000 grams, 0.5 per cent in the 1,000 to 1,499 gram birth weight range, and 4.9 per cent in the 1,500 to 2,499 gram range (Table 24). The highest rates of low birth weight occurred in the Central Coast and Mid North Coast Areas (both 7.4 per cent) and the lowest rate occurred in the Northern Sydney Area (5.1 per cent).

2.8 GESTATIONAL AGE

The majority of births (90.8 per cent) were at term and 2.4 per cent were post-term (42-plus weeks gestation). The 6.8 per cent of births which were preterm consisted of 0.6 per cent born at 20-27 weeks gestation, 0.7 per cent at 28-31 weeks gestation and 5.5 per cent at 32-36 weeks gestation. The highest rates of preterm birth were in the Wentworth and Macquarie Areas (both 7.6 per cent), while the lowest rate was 4.5 per cent in the Southern Area (Table 25).

TABLE 24

BIRTHS BY BIRTH WEIGHT AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Birth weight (grams)																TOTAL No. %							
	Less than 500		500-999		1000-1499		1500-1999		2000-2499		2500-2999		3000-3499		3500-3999			4000-4499		4500+		Not stated		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	No.
Central Sydney	17	0.3	32	0.5	25	0.4	78	1.2	226	3.4	1058	15.7	2590	38.4	1996	29.6	590	8.8	124	1.8	2	0.0	6738	100.0
Northern Sydney	12	0.1	34	0.4	51	0.6	83	0.9	281	3.1	1191	13.1	3348	36.7	2956	32.4	983	10.8	170	1.9	5	0.1	9114	100.0
Western Sydney	15	0.1	53	0.5	68	0.6	124	1.2	423	3.9	1789	16.7	3906	36.5	3165	29.5	965	9.0	193	1.8	11	0.1	10712	100.0
Wentworth	15	0.3	24	0.5	26	0.5	75	1.5	184	3.7	748	15.2	1723	35.1	1498	30.5	528	10.8	84	1.7	2	0.0	4907	100.0
South Western																								
Sydney	39	0.3	56	0.4	56	0.4	154	1.2	484	3.8	2151	17.0	4750	37.5	3661	28.9	1125	8.9	199	1.6	7	0.1	12682	100.0
Central Coast	8	0.2	25	0.6	24	0.6	57	1.5	173	4.5	562	14.6	1311	34.0	1201	31.1	430	11.1	65	1.7	3	0.1	3859	100.0
Hunter	18	0.3	40	0.6	37	0.5	108	1.5	257	3.6	980	13.7	2456	34.4	2289	32.1	820	11.5	123	1.7	3	0.0	7131	100.0
Illawarra	5	0.1	24	0.5	25	0.6	53	1.2	153	3.4	667	14.9	1547	34.4	1462	32.6	477	10.6	72	1.6	6	0.1	4491	100.0
South Eastern																								
Sydney	12	0.1	36	0.4	50	0.5	105	1.1	376	4.0	1417	15.3	3459	37.2	2785	30.0	886	9.5	156	1.7	6	0.1	9288	100.0
Northern Rivers	9	0.3	16	0.5	12	0.4	34	1.1	125	4.2	434	14.5	989	33.0	971	32.4	335	11.2	70	2.3	4	0.1	2999	100.0
Mid North Coast	6	0.2	11	0.4	27	0.9	40	1.3	146	4.7	482	15.5	1128	36.2	909	29.2	311	10.0	53	1.7	3	0.1	3116	100.0
New England	4	0.2	19	0.8	16	0.6	20	0.8	97	3.9	417	16.7	939	37.7	735	29.5	217	8.7	28	1.1	0	0.0	2492	100.0
Macquarie	7	0.4	11	0.7	6	0.4	20	1.2	57	3.5	243	15.1	575	35.6	481	29.8	174	10.8	40	2.5	0	0.0	1614	100.0
Mid Western	6	0.2	6	0.2	12	0.5	28	1.1	96	3.9	392	15.8	859	34.7	771	31.2	252	10.2	52	2.1	0	0.0	2474	100.0
Far West	2	0.3	3	0.5	2	0.3	10	1.7	26	4.3	114	18.8	229	37.9	168	27.8	45	7.4	6	1.0	0	0.0	605	100.0
Greater Murray	5	0.1	15	0.4	24	0.7	29	0.9	129	3.8	466	13.7	1127	33.1	1129	33.2	412	12.1	64	1.9	5	0.1	3405	100.0
Southern	2	0.1	6	0.3	5	0.3	9	0.5	56	3.1	266	14.9	638	35.7	578	32.3	199	11.1	26	1.5	4	0.2	1789	100.0
Other/Not stated	0	0.0	3	0.4	1	0.1	6	0.8	29	4.0	110	15.3	289	40.3	202	28.2	67	9.3	10	1.4	0	0.0	717	100.0
TOTAL	182	0.2	414	0.5	467	0.5	1033	1.2	3318	3.8	13487	15.3	31863	36.2	26957	30.6	8816	10.0	1535	1.7	61	0.1	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 25

BIRTHS BY GESTATIONAL AGE AND HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Gestational age (weeks)										Not stated		TOTAL	
	Less than 28		28-31		32-36		37-41		42+		No.	%	No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%				
Central Sydney	45	0.7	36	0.5	321	4.8	6163	91.5	168	2.5	5	0.1	6738	100.0
Northern Sydney	51	0.6	54	0.6	458	5.0	8328	91.4	220	2.4	3	0.0	9114	100.0
Western Sydney	63	0.6	73	0.7	580	5.4	9664	90.2	327	3.1	5	0.0	10712	100.0
Wentworth	34	0.7	42	0.9	299	6.1	4405	89.8	124	2.5	3	0.1	4907	100.0
South Western														
Sydney	86	0.7	76	0.6	708	5.6	11535	91.0	271	2.1	6	0.0	12682	100.0
Central Coast	33	0.9	35	0.9	249	6.5	3473	90.0	69	1.8	0	0.0	3859	100.0
Hunter	56	0.8	58	0.8	446	6.3	6421	90.0	148	2.1	2	0.0	7131	100.0
Illawarra	29	0.6	29	0.6	241	5.4	4102	91.3	85	1.9	5	0.1	4491	100.0
South Eastern														
Sydney	43	0.5	63	0.7	543	5.8	8436	90.8	197	2.1	6	0.1	9288	100.0
Northern Rivers	24	0.8	17	0.6	175	5.8	2652	88.4	130	4.3	1	0.0	2999	100.0
Mid North Coast	19	0.6	28	0.9	185	5.9	2777	89.1	105	3.4	2	0.1	3116	100.0
New England	18	0.7	21	0.8	118	4.7	2304	92.5	31	1.2	0	0.0	2492	100.0
Macquarie	15	0.9	12	0.7	95	5.9	1461	90.5	31	1.9	0	0.0	1614	100.0
Mid Western	13	0.5	15	0.6	114	4.6	2283	92.3	49	2.0	0	0.0	2474	100.0
Far West	4	0.7	4	0.7	37	6.1	555	91.7	5	0.8	0	0.0	605	100.0
Greater Murray	20	0.6	25	0.7	176	5.2	3115	91.5	64	1.9	5	0.1	3405	100.0
Southern	8	0.4	7	0.4	66	3.7	1669	93.3	38	2.1	1	0.1	1789	100.0
Other/Not stated	2	0.3	1	0.1	41	5.7	644	89.8	29	4.0	0	0.0	717	100.0
TOTAL	563	0.6	596	0.7	4852	5.5	79987	90.8	2091	2.4	44	0.0	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

2.9 PERINATAL OUTCOMES

The perinatal mortality rate in 1997 was 9.6 per 1,000 births. This rate includes all births and deaths of babies of at least 400 grams birth weight or at least 20 weeks gestation (Table 26). The rate varied from 7.0 per 1,000 in the Northern Sydney Area to 18.2 per 1,000 in the Far West Area.

TABLE 26

PERINATAL OUTCOMES BY HEALTH AREA OF RESIDENCE, NSW 1997#

Health Area	Liveborn surviving		Stillborn		Perinatal outcome Neonatal death		Not stated		Total births		Perinatal mortality rate/1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
Central Sydney	6674	99.1	43	0.6	16	0.2	5	0.1	6738	100.0	8.8
Northern Sydney	9050	99.3	34	0.4	30	0.3	0	0.0	9114	100.0	7.0
Western Sydney	10600	99.0	73	0.7	29	0.3	10	0.1	10712	100.0	9.5
Wentworth	4837	98.6	46	0.9	7	0.1	17	0.3	4907	100.0	10.8
South Western Sydney	12537	98.9	78	0.6	53	0.4	14	0.1	12682	100.0	10.3
Central Coast	3822	99.0	22	0.6	15	0.4	0	0.0	3859	100.0	9.6
Hunter	7051	98.9	53	0.7	24	0.3	3	0.0	7131	100.0	10.8
Illawarra	4455	99.2	27	0.6	9	0.2	0	0.0	4491	100.0	8.0
South Eastern Sydney	9176	98.8	62	0.7	21	0.2	29	0.3	9288	100.0	8.9
Northern Rivers	2953	98.5	25	0.8	17	0.6	4	0.1	2999	100.0	14.0
Mid North Coast	3080	98.8	28	0.9	8	0.3	0	0.0	3116	100.0	11.6
New England	2465	98.9	20	0.8	7	0.3	0	0.0	2492	100.0	10.8
Macquarie	1597	98.9	11	0.7	6	0.4	0	0.0	1614	100.0	10.5
Mid Western	2455	99.2	15	0.6	4	0.2	0	0.0	2474	100.0	7.7
Far West	594	98.2	8	1.3	3	0.5	0	0.0	605	100.0	18.2
Greater Murray	3371	99.0	26	0.8	8	0.2	0	0.0	3405	100.0	10.0
Southern	1774	99.2	13	0.7	2	0.1	0	0.0	1789	100.0	8.4
Other/Not stated	709	98.9	3	0.4	3	0.4	2	0.3	717	100.0	8.4
Total	87200	98.9	587	0.7	262	0.3	84	0.1	88133	100.0	9.6

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Perinatal deaths include deaths reported to the MDC only. As the MDC form is completed at discharge or transfer of the baby, deaths occurring after this time may not be reported to the MDC.

PART 3: ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES

3.1 TRENDS IN BIRTHS

Between 1993 and 1997, the reported number of babies born to Aboriginal/Torres Strait Islander mothers increased from 1,469 to 1,854 (Table 27), an increase from 1.7 to 2.1 per cent of all babies born in NSW. Part of this increase is likely to be due to an increased willingness of mothers to be identified as being of Aboriginal or Torres Strait Islander origin. Twin pregnancies were reported for about one per cent of mothers.

TABLE 27

ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES BY PLURALITY, NSW 1993-97

Plurality	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
Singleton	1443	99.1	1519	99.2	1719	98.8	1700	99.3	1828	99.2
Twins	13	0.9	12	0.8	20	1.2	12	0.7	14	0.8
Total	1456	100.0	1531	100.0	1739	100.0	1712	100.0	1842	100.0
Births										
Singleton	1443	98.2	1519	98.4	1719	97.7	1700	98.6	1828	98.6
Twins	26	1.8	24	1.6	40	2.3	24	1.4	26	1.4
Total	1469	100.0	1543	100.0	1759	100.0	1724	100.0	1854	100.0

Source: NSW Midwives Data Collection, Epidemiology and Surveillance Branch, NSW Health Department.

3.2 PREVIOUS PREGNANCIES

In 1997, 30 per cent of Aboriginal/Torres Strait Islander mothers gave birth for the first time, and 62 per cent gave birth to their second to fourth baby. Eight per cent of mothers reported previously giving birth to 5 or more babies (Table 28). This pattern has not changed substantially since 1993.

TABLE 28

NUMBER OF PREVIOUS PREGNANCIES AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1993-97

No. previous pregnancies (>20 weeks)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	429	29.5	470	30.7	510	29.3	510	29.8	554	30.1
1-4	919	63.1	957	62.5	1094	62.9	1065	62.2	1147	62.3
5+	102	7.0	94	6.1	134	7.7	134	7.8	139	7.5
Not stated	6	0.4	10	0.7	1	0.1	3	0.2	2	0.1
Total	1456	100.0	1531	100.0	1739	100.0	1712	100.0	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

3.3 MATERNAL AGE

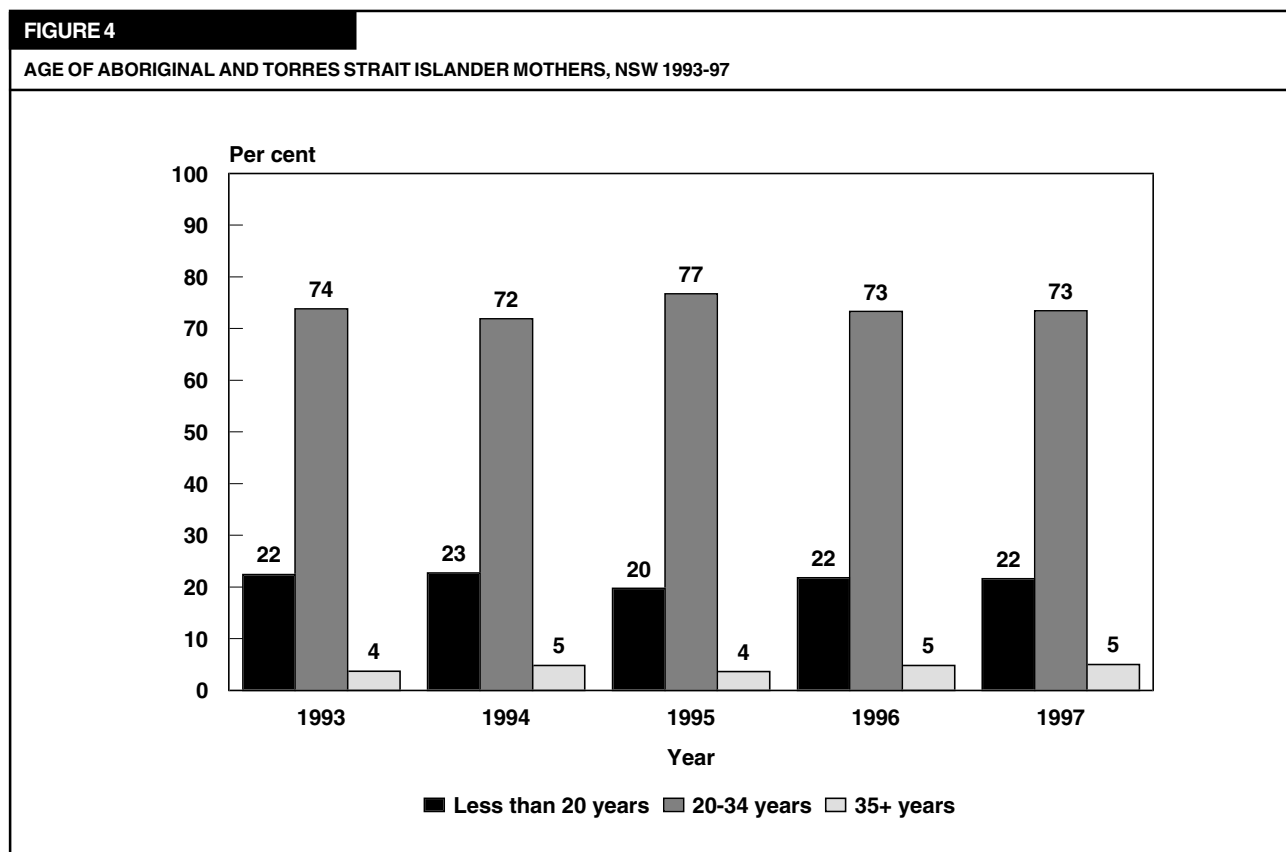
While the reported number of babies born to Aboriginal/Torres Strait Islander mothers has increased at all ages, including teenagers, the proportion of mothers who were teenagers remained stable at about 20 per cent. The proportion of mothers aged 35-plus years increased from 3.7 in 1993 to 5.0 per cent in 1997 (Table 29, Figure 4).

TABLE 29

AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1993-97

Maternal age (years)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
12-19	326	22.4	348	22.7	342	19.7	374	21.8	398	21.6
20-34	1074	73.8	1101	71.9	1334	76.7	1255	73.3	1352	73.4
35+	54	3.7	74	4.8	63	3.6	83	4.8	92	5.0
Not stated	2	0.1	8	0.5	0	0.0	0	0.0	0	0.0
Total	1456	100.0	1531	100.0	1739	100.0	1712	100.0	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

3.4 HEALTH AREA OF RESIDENCE

The number of Aboriginal/Torres Strait Islander mothers who gave birth in 1997 ranged from 7 (0.4 per cent) in the Northern Sydney Area to 255 (13.8 per cent) in the New England Area (Table 30). Since 1993, the reported number of Aboriginal/Torres Strait Islander mothers giving birth increased in all Health Areas

except the Central Sydney, Northern Sydney, Western Sydney and Southern Areas.

In 1997, about one quarter of Aboriginal/Torres Strait Islander mothers in the Western Sydney, Illawarra, New England and Macquarie Areas were teenagers (Table 31).

TABLE 30

HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1993-97

Health Area	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney	81	5.6	98	6.4	51	2.9	64	3.7	70	3.8
Northern Sydney	11	0.8	12	0.8	13	0.7	9	0.5	7	0.4
Western Sydney	107	7.3	110	7.2	120	6.9	102	6.0	105	5.7
Wentworth	28	1.9	31	2.0	24	1.4	41	2.4	47	2.6
South Western Sydney	63	4.3	79	5.2	90	5.2	93	5.4	89	4.8
Central Coast	25	1.7	16	1.0	21	1.2	27	1.6	37	2.0
Hunter	60	4.1	64	4.2	95	5.5	104	6.1	107	5.8
Illawarra	66	4.5	81	5.3	112	6.4	100	5.8	125	6.8
South Eastern Sydney	31	2.1	40	2.6	80	4.6	36	2.1	36	2.0
Northern Rivers	112	7.7	116	7.6	155	8.9	127	7.4	146	7.9
Mid North Coast	133	9.1	142	9.3	149	8.6	152	8.9	181	9.8
New England	208	14.3	192	12.5	214	12.3	256	15.0	255	13.8
Macquarie	148	10.2	145	9.5	149	8.6	170	9.9	202	11.0
Mid Western	90	6.2	103	6.7	108	6.2	109	6.4	99	5.4
Far West	157	10.8	155	10.1	177	10.2	157	9.2	172	9.3
Greater Murray	78	5.4	93	6.1	96	5.5	116	6.8	100	5.4
Southern	50	3.4	44	2.9	71	4.1	39	2.3	51	2.8
Other/Not stated	8	0.5	10	0.7	14	0.8	10	0.6	13	0.7
TOTAL	1456	100.0	1531	100.0	1739	100.0	1712	100.0	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Table 31

HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY AGE, NSW 1997

Health Area	Less than 20		Maternal age (years) 20+		TOTAL	
	No.	%	No.	%	No.	%
Central Sydney	11	15.7	59	84.3	70	100.0
Northern Sydney	0	0.0	7	100.0	7	100.0
Western Sydney	26	24.8	79	75.2	105	100.0
Wentworth	7	14.9	40	85.1	47	100.0
South Western Sydney	19	21.3	70	78.7	89	100.0
Central Coast	10	27.0	27	73.0	37	100.0
Hunter	15	14.0	92	86.0	107	100.0
Illawarra	30	24.0	95	76.0	125	100.0
South Eastern Sydney	7	19.4	29	80.6	36	100.0
Northern Rivers	32	21.9	114	78.1	146	100.0
Mid North Coast	43	23.8	138	76.2	181	100.0
New England	71	27.8	184	72.2	255	100.0
Macquarie	50	24.8	152	75.2	202	100.0
Mid Western	14	14.1	85	85.9	99	100.0
Far West	37	21.5	135	78.5	172	100.0
Greater Murray	16	16.0	84	84.0	100	100.0
Southern	9	17.6	42	82.4	51	100.0
Other / Not stated	1	7.7	12	92.3	13	100.0
TOTAL	398	21.6	1444	78.4	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

3.5 BOOKING STATUS

Complete information on booking status is available from 1994. In 1994, 1,339 (87.5 per cent) Aboriginal/Torres Strait Islander mothers were booked into the hospital of birth, increasing to 1,530 (88.0 per cent) in 1995, 1,512 (88.3 per cent) in 1996 and 1,722 (93.5 per cent) in 1997. This compares with 99.4 per cent of non-Aboriginal/Torres Strait Islander mothers who were booked into the hospital of birth in 1997.

3.6 DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

Complete information on the duration of pregnancy at first antenatal check is available from 1994. In 1994, 965 (63.0 per cent) Aboriginal/Torres Strait Islander mothers commenced antenatal care before 20 weeks gestation, 1,162 (66.8 per cent) in 1995, 1,045 (61.0 per cent) in 1996 and 1,146 (62.2 per cent) in 1997. By comparison, 84.8 per cent of all mothers in NSW commenced antenatal care before 20 weeks gestation in 1997 (Table 8).

In 1997, 50.0 per cent of Aboriginal/Torres Strait Islander mothers in the Far West Area commenced antenatal care at less than 20 weeks gestation, compared with 77.3 per cent in the New England Area.

TABLE 32

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Duration of pregnancy at first antenatal visit (weeks)							
	0-19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Central Sydney	41	58.6	27	38.6	2	2.9	70	100.0
Northern Sydney#	-		-		-		7	100.0
Western Sydney	56	53.3	42	40.0	7	6.7	105	100.0
Wentworth	28	59.6	19	40.4	0	0.0	47	100.0
South Western Sydney	49	55.1	36	40.4	4	4.5	89	100.0
Central Coast	26	70.3	10	27.0	1	2.7	37	100.0
Hunter	67	62.6	33	30.8	7	6.5	107	100.0
Illawarra	82	65.6	35	28.0	8	6.4	125	100.0
South Eastern Sydney	19	52.8	16	44.4	1	2.8	36	100.0
Northern Rivers	78	53.4	46	31.5	22	15.1	146	100.0
Mid North Coast	119	65.7	42	23.2	20	11.0	181	100.0
New England	197	77.3	37	14.5	21	8.2	255	100.0
Macquarie	109	54.0	74	36.6	19	9.4	202	100.0
Mid Western	71	71.7	19	19.2	9	9.1	99	100.0
Far West	86	50.0	61	35.5	25	14.5	172	100.0
Greater Murray	66	66.0	20	20.0	14	14.0	100	100.0
Southern	35	68.6	10	19.6	6	11.8	51	100.0
Other/Not stated	-		-		-		13	100.0
TOTAL	1146	62.2	530	28.8	166	9.0	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Information not shown for Health Areas where the number of mothers is less than 5 in a group.

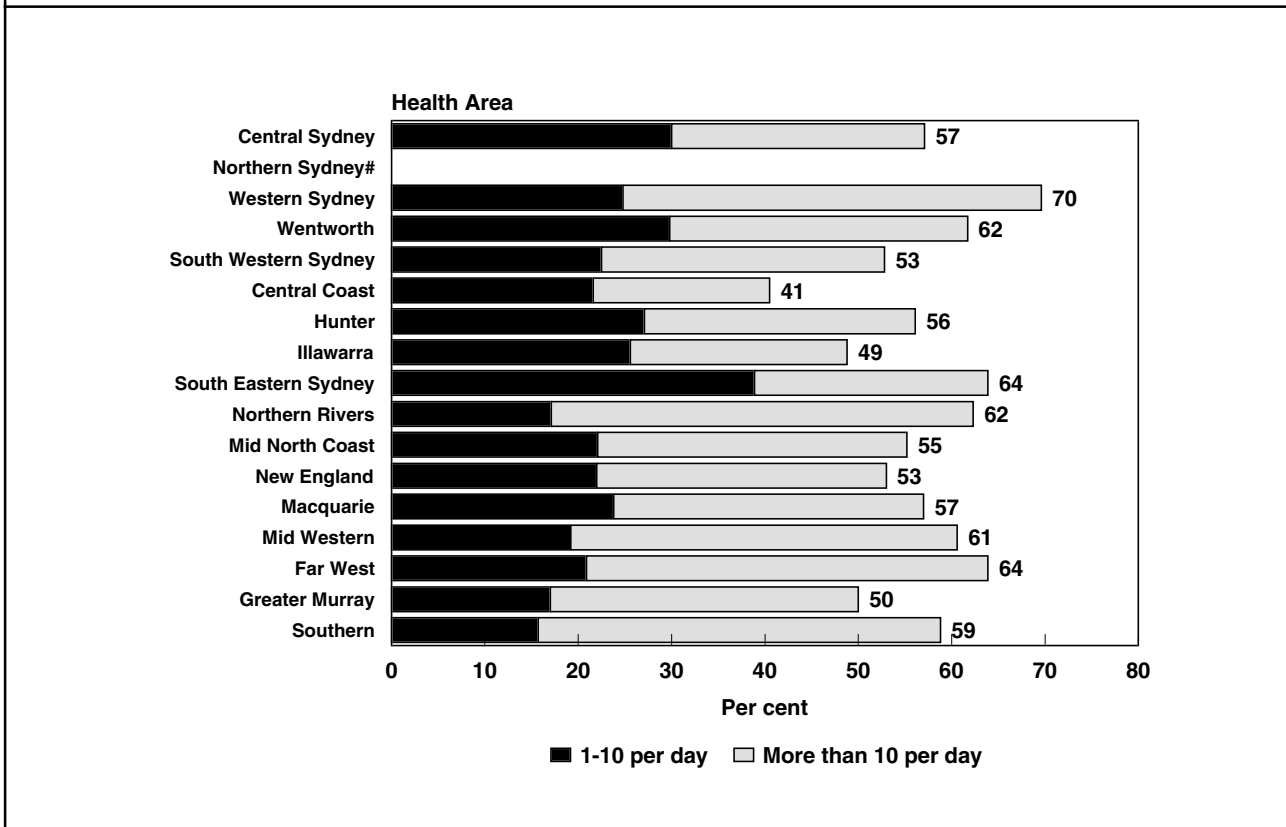
3.7 SMOKING IN PREGNANCY

Complete information on smoking in pregnancy is available from 1994. In 1994, 923 (60.3 per cent) Aboriginal/Torres Strait Islander mothers reported smoking at some time during pregnancy, 1,059 (60.9 per cent) in 1995, 1,051 (61.4 per cent) in 1996 and 1,120 (60.8 per cent) in 1997. This compares with 20.6 per cent of all mothers who reported smoking at some time during pregnancy in 1997 (see Section 1.10).

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. In 1997, the proportion of Aboriginal/Torres Strait Islander mothers who smoked in the second half of pregnancy varied from 23.2 per cent in the Illawarra area to 45.2 per cent in the Northern Rivers Area (Figure 5).

FIGURE 5

SMOKING IN THE SECOND HALF OF PREGNANCY AMONG ABORIGINAL/TORRES STRAIT ISLANDER MOTHERS BY HEALTH AREA OF RESIDENCE, NSW 1997



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
 # Information not shown for Health Areas where the number of mothers is less than 5 in a group.

3.8 MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS

In 1997, there was a higher rate of post partum haemorrhage reported among Aboriginal/Torres Strait Islander mothers than non-Aboriginal/Torres Strait Islander mothers, and slightly higher rates of retained placenta and prelabour rupture of membranes (>24 hours) (Table 33).

TABLE 33

MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY ABORIGINALITY, NSW 1997

Condition	Aboriginality						TOTAL	
	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated			
	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	11	0.6	329	0.4	1	0.4	341	0.4
Antepartum haemorrhage	43	2.3	1506	1.8	4	1.8	1553	1.8
Pregnancy- induced hypertension	109	5.9	5359	6.3	10	4.5	5478	6.3
Gestational diabetes	42	2.3	2712	3.2	7	3.1	2761	3.2
Prelabour rupture of membranes (>24 hrs)	78	4.2	2901	3.4	2	0.9	2981	3.4
Third degree tear	4	0.2	776	0.9	0	0.0	780	0.9
Post partum haemorrhage (>600mls)	116	6.3	4021	4.7	9	4.0	4146	4.8
Retained placenta	52	2.8	1407	1.7	4	1.8	1463	1.7
Shoulder dystocia	18	1.0	729	0.9	1	0.4	748	0.9
TOTAL CONFINEMENTS	1842	100.0	84854	100.0	224	100.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

3.9 LABOUR AND DELIVERY

The rate of induction of labour among Aboriginal/Torres Strait Islander mothers increased from 13.3 to 16.9 per cent between 1993 and 1997, while the rate of spontaneous onset of labour decreased from 80.5 to 74.8 per cent (Table 34). These trends follow the statewide trends (Section 1.12). However, the rate of induction of labour among Aboriginal/Torres Strait Islander mothers continued to be lower than the statewide rate, which was 21.7 per cent in 1997.

The rate of normal vaginal birth has remained stable at about 77 per cent since 1993 (Table 35). The caesarean section rate increased from 15.7 per cent in 1993 to 16.9 per cent in 1997 due to an increased rate of elective caesarean section. The rate of instrumental delivery (forceps or vacuum extraction) decreased from 5.4 to 5.0 per cent. Over the five year period, the number of vacuum extraction deliveries increased and the number of forceps deliveries decreased. These trends were similar to those in NSW overall (Section 1.12).

TABLE 34

LABOUR ONSET FOR ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1993-97

Labour onset	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	1172	80.5	1183	77.3	1345	77.3	1315	76.8	1377	74.8
No labour#	89	6.1	104	6.8	128	7.4	112	6.5	153	8.3
Induced	194	13.3	241	15.7	265	15.2	284	16.6	311	16.9
Not stated	1	0.1	3	0.2	1	0.1	1	0.1	1	0.1
Total	1456	100.0	1531	100.0	1739	100.0	1712	100.0	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
No labour indicates elective caesarean section.

TABLE 35**TYPE OF DELIVERY AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1993-97**

Type of delivery	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	1117	76.7	1181	77.1	1347	77.5	1327	77.5	1423	77.3
Forceps	46	3.2	41	2.7	40	2.3	39	2.3	42	2.3
Forceps rotation	11	0.8	10	0.7	17	1.0	12	0.7	5	0.3
Vacuum extraction	21	1.4	30	2.0	25	1.4	31	1.8	45	2.4
Vaginal breech	27	1.9	23	1.5	25	1.4	28	1.6	15	0.8
Elective caesarean	89	6.1	104	6.8	128	7.4	112	6.5	153	8.3
Emergency caesarean	139	9.5	137	8.9	155	8.9	162	9.5	159	8.6
Not stated	6	0.4	5	0.3	2	0.1	1	0.1	0	0.0
Total	1456	100.0	1531	100.0	1739	100.0	1712	100.0	1842	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

3.10 EPIDURAL BLOCK

In 1997, the rate of epidural block in Aboriginal/Torres Strait Islander mothers was substantially less than in non-Aboriginal/Torres Strait Islander mothers. The rate of epidural block was lower for Aboriginal/Torres Strait Islander mothers, regardless of whether they had given birth previously (Table 36).

3.11 EPISIOTOMY

In 1997, the rate of episiotomy in Aboriginal/Torres Strait Islander mothers was also substantially less than in non-Aboriginal/Torres Strait Islander mothers, regardless of whether they had given birth previously (Table 37). The lower rate of episiotomy was not associated with a higher rate of third degree vaginal tear (see Section 3.8).

TABLE 36**EPIDURAL BLOCK BY ABORIGINALITY, NSW 1997#**

Parity	Aboriginality							
	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Primigravida	134	24.2	11999	34.9	21	24.7	12154	34.7
Multigravida	112	8.7	8716	17.3	25	18.8	8853	17.1
Not stated	0	0.0	19	39.6	0	0.0	19	35.2
TOTAL	246	13.4	20734	24.4	46	20.5	21026	24.2

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Percentages refer to per cent of mothers of given parity.

TABLE 37**EPISIOTOMY BY ABORIGINALITY, NSW 1997#**

Parity	Aboriginality							
	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Primigravida	90	16.2	9052	26.4	7	8.2	9149	26.2
Multigravida	35	2.7	4573	9.1	13	9.8	4621	8.9
Not stated	0	0.0	5	10.4	0	0.0	5	9.3
TOTAL	125	6.8	13630	16.1	20	8.9	13775	15.8

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Percentages refer to per cent of mothers of given parity.

3.12 BIRTH WEIGHT

Since 1993, the rate of low birth weight (less than 2,500 grams) in Aboriginal/Torres Strait Islander babies has been over 10 per cent and was 12.0 per cent in 1997 (Table 38). This is about one and a half times higher than the rate for NSW overall, which was 6.1 per cent in 1997. In 1997, almost one quarter of low birth weight babies were from the New England and Macquarie Areas (Table 39).

TABLE 38

WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1993-97

Birth weight (grams)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1,000	22	1.5	16	1.0	20	1.1	25	1.5	30	1.6
1,000-1,499	23	1.6	22	1.4	19	1.1	15	0.9	18	1.0
1,500-2,499	110	7.5	142	9.2	157	8.9	143	8.3	175	9.4
2,500+	1312	89.3	1361	88.2	1562	88.8	1538	89.2	1631	88.0
Not stated	3	0.2	2	0.1	1	0.1	3	0.2	0	0.0
Total	1470	100.0	1543	100.0	1759	100.0	1724	100.0	1854	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 39

WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES BY HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Birth weight (grams)					
	Less than 2,500		2,500+		TOTAL	
	No.	%	No.	%	No.	%
Central Sydney	10	14.3	60	85.7	70	100.0
Northern Sydney#	-	-	-	-	7	100.0
Western Sydney	13	12.1	94	87.9	107	100.0
Wentworth	8	17.0	39	83.0	47	100.0
South Western Sydney	7	7.9	82	92.1	89	100.0
Central Coast#	-	-	-	-	38	100.0
Hunter	12	11.1	96	88.9	108	100.0
Illawarra	13	10.3	113	89.7	126	100.0
South Eastern Sydney	5	13.5	32	86.5	37	100.0
Northern Rivers	21	14.4	125	85.6	146	100.0
Mid North Coast	24	13.2	158	86.8	182	100.0
New England	32	12.5	224	87.5	256	100.0
Macquarie	23	11.3	180	88.7	203	100.0
Mid Western	11	11.1	88	88.9	99	100.0
Far West	22	12.7	151	87.3	173	100.0
Greater Murray	11	10.8	91	89.2	102	100.0
Southern	7	13.7	44	86.3	51	100.0
Other/Not stated	2	15.4	11	84.6	13	100.0
TOTAL	223	12.0	1631	88.0	1854	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Information not shown for Health Areas where the number of mothers is less than 5 in a group.

3.13 GESTATIONAL AGE

Since 1993, the rate of prematurity (less than 37 weeks gestation) in Aboriginal/Torres Strait Islander babies has been over 10 per cent and was 12.4 per cent in 1997 (Table 40). This is about one and a half times higher than the rate of 6.8 per cent for NSW overall in 1997.

In 1997, the highest rate of prematurity was in the Wentworth Area (19.1 per cent, Table 41), though the number of premature infants is small.

TABLE 40

GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1993-97

Gestational age (weeks)	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 28	22	1.5	17	1.1	22	1.3	26	1.5	29	1.6
28-31	24	1.6	22	1.4	19	1.1	17	1.0	18	1.0
32-36	110	7.5	141	9.1	147	8.4	139	8.1	182	9.8
37-41	1263	85.9	1308	84.8	1530	87.0	1508	87.5	1584	85.4
42+	45	3.1	53	3.4	40	2.3	33	1.9	40	2.2
Not stated	6	0.4	2	0.1	1	0.1	1	0.1	1	0.1
Total	1470	100.0	1543	100.0	1759	100.0	1724	100.0	1854	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 41

GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES BY HEALTH AREA OF RESIDENCE, NSW 1997

Health Area	Gestational age (weeks)								TOTAL	
	Less than 37		37+		Not stated		No.	%		
	No.	%	No.	%	No.	%				
Central Sydney	11	15.7	59	84.3	0	0.0	70	100.0		
Northern Sydney#	-	-	-	-	-	-	7	100.0		
Western Sydney	11	10.3	95	88.8	1	0.9	107	100.0		
Wentworth	9	19.1	38	80.9	0	0.0	47	100.0		
South Western Sydney	8	9.0	81	91.0	0	0.0	89	100.0		
Central Coast	5	13.2	33	86.8	0	0.0	38	100.0		
Hunter	16	14.8	92	85.2	0	0.0	108	100.0		
Illawarra	17	13.5	109	86.5	0	0.0	126	100.0		
South Eastern Sydney	6	16.2	31	83.8	0	0.0	37	100.0		
Northern Rivers	24	16.4	122	83.6	0	0.0	146	100.0		
Mid North Coast	24	13.2	158	86.8	0	0.0	182	100.0		
New England	27	10.5	229	89.5	0	0.0	256	100.0		
Macquarie	22	10.8	181	89.2	0	0.0	203	100.0		
Mid Western	15	15.2	84	84.8	0	0.0	99	100.0		
Far West	20	11.6	153	88.4	0	0.0	173	100.0		
Greater Murray	10	9.8	92	90.2	0	0.0	102	100.0		
Southern#	-	-	-	-	-	-	51	100.0		
Other/Not stated	0	0.0	13	100.0	0	0.0	13	100.0		
TOTAL	229	12.4	1624	87.6	1	0.1	1854	100.0		

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
Information not shown for Health Areas where the number of babies is less than 5 in a group.

3.14 APGAR SCORE

In 1997, about 4 per cent of Aboriginal/Torres Strait Islander babies were born with an Apgar score less than 7 (Table 42). This rate has not changed substantially since 1993 and is higher than the rate of 2.5 per cent for NSW overall (Section 1.16).

TABLE 42											
APGAR SCORE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1993-97											
Apgar score at 5 minutes	1993		1994		Year 1995		1996		1997		
	No.	%	No.	%	No.	%	No.	%	No.	%	
0-4	44	3.0	28	1.8	51	2.9	33	1.9	42	2.3	
5-6	29	2.0	34	2.2	27	1.5	34	2.0	34	1.8	
7+	1375	93.5	1442	93.5	1675	95.2	1652	95.8	1770	95.5	
Not stated	22	1.5	39	2.5	6	0.3	5	0.3	8	0.4	
Total	1470	100.0	1543	100.0	1759	100.0	1724	100.0	1854	100.0	

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

3.15 PERINATAL MORTALITY

Since 1993, the perinatal mortality rate among Aboriginal/Torres Strait Islander babies varied from 14.3 to 25.9 per 1,000 births. The rate of 20.0 per 1,000 in 1997 is more than twice the rate of 9.6 per 1,000 for NSW overall (Table 43).

TABLE 43											
PERINATAL DEATHS AMONG ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1993-97#											
Perinatal deaths	1993		1994		Year 1995		1996		1997		
	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	
Stillbirth	27	18.4	14	9.1	21	11.9	20	11.6	24	12.9	
Neonatal death	11	7.5	8	5.2	13	7.4	10	5.8	13	7.0	
TOTAL	38	25.9	22	14.3	34	19.3	30	17.4	37	20.0	

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Perinatal deaths include deaths reported to the MDC only. As the MDC form is completed at discharge or transfer of the baby, deaths occurring after this time may not be reported to the MDC.

PART 4: MATERNAL COUNTRY OF BIRTH

In this section maternal countries of birth are combined into English-speaking and other regional groups. The country groups and individual countries are listed in Appendix 3. Recent trends in confinements for individual maternal countries of birth are shown in Table 4.

4.1 TRENDS IN CONFINEMENTS

Between 1993 and 1997, about 20 per cent of mothers were born in non-English speaking countries (Table 44). The proportion of mothers from Asian countries increased slightly from 9.7 to 10.7 per cent, while the proportion of mothers from southern European countries decreased slightly from 2.1 to 1.7 per cent.

TABLE 44

CONFINEMENTS AND BIRTHS BY COUNTRY OF BIRTH GROUP, NSW 1993-97

Plurality	1993		1994		Year 1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
English speaking	69690	80.3	69698	80.4	69311	80.3	67889	79.6	68827	79.2
Central & South America	664	0.8	685	0.8	669	0.8	756	0.9	687	0.8
Melanesia, Micronesia & Polynesia	1268	1.5	1182	1.4	1356	1.6	1410	1.7	1561	1.8
Southern Europe	1848	2.1	1771	2.0	1632	1.9	1530	1.8	1516	1.7
Western & Northern Europe	685	0.8	682	0.8	612	0.7	614	0.7	627	0.7
Eastern Europe, Russia, Central Asian & Baltic States	387	0.4	359	0.4	403	0.5	364	0.4	393	0.5
Middle East & Africa	3832	4.4	3786	4.4	3690	4.3	3676	4.3	3793	4.4
South East Asia	4314	5.0	4155	4.8	4462	5.2	4587	5.4	4599	5.3
North East Asia	2587	3.0	2816	3.2	2961	3.4	3226	3.8	3325	3.8
Southern Asia	975	1.1	982	1.1	1102	1.3	1170	1.4	1407	1.6
Other/Not stated	496	0.6	622	0.7	65	0.1	80	0.1	185	0.2
TOTAL	86746	100.0	86738	100.0	86263	100.0	85302	100.0	86920	100.0
Births										
English speaking	70652	80.4	70730	80.4	70255	80.4	68816	79.6	69843	79.2
Central & South America	673	0.8	694	0.8	675	0.8	761	0.9	693	0.8
Melanesia, Micronesia & Polynesia	1286	1.5	1203	1.4	1370	1.6	1431	1.7	1585	1.8
Southern Europe	1872	2.1	1796	2.0	1662	1.9	1559	1.8	1532	1.7
Western & Northern Europe	693	0.8	688	0.8	623	0.7	625	0.7	633	0.7
Eastern Europe, Russia, Central Asian & Baltic States	391	0.4	363	0.4	411	0.5	366	0.4	398	0.5
Middle East & Africa	3885	4.4	3861	4.4	3726	4.3	3722	4.3	3854	4.4
South East Asia	4346	4.9	4181	4.8	4507	5.2	4624	5.4	4636	5.3
North East Asia	2611	3.0	2844	3.2	2976	3.4	3260	3.8	3355	3.8
Southern Asia	981	1.1	995	1.1	1119	1.3	1182	1.4	1416	1.6
Other/Not stated	511	0.6	629	0.7	67	0.1	83	0.1	188	0.2
TOTAL	87901	100.0	87984	100.0	87391	100.0	86429	100.0	88133	100.0

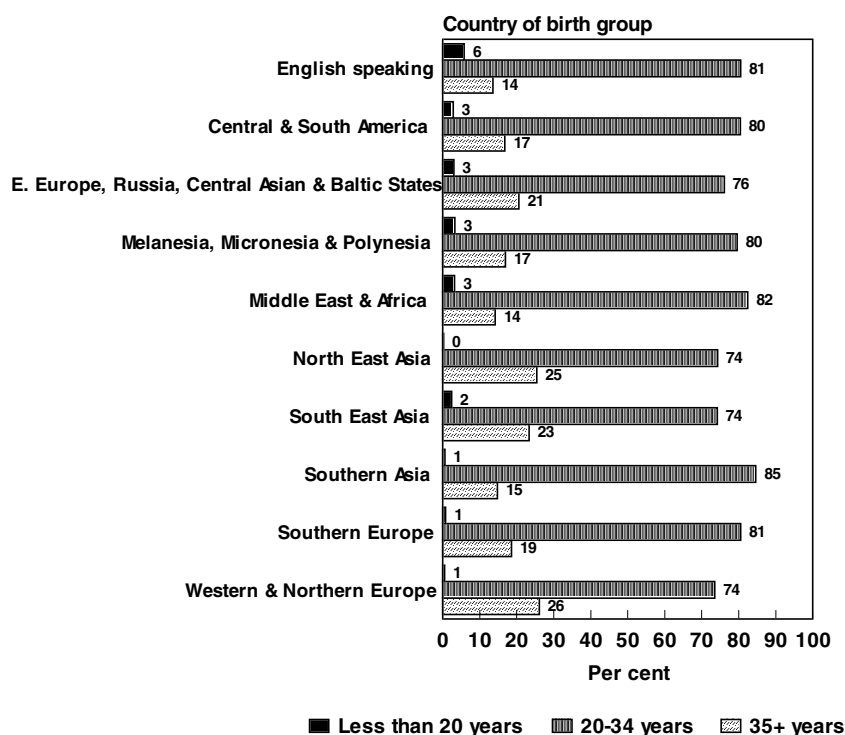
Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.2 MATERNAL AGE

Births to teenage mothers were more common among mothers born in English-speaking countries than non-English speaking countries (Figure 6, Table 45), while the largest proportions of mothers aged 35 years or over were born in North East Asia (28.0 per cent) and Western and Northern Europe (25.2 per cent).

FIGURE 6

AGE OF MOTHER BY COUNTRY OF BIRTH GROUP, NSW 1997



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 45

AGE OF MOTHER BY COUNTRY OF BIRTH GROUP, NSW 1997

Country of birth group	12-19		Maternal age (years)				Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	3920	5.7	55138	80.1	9728	14.1	41	0.1	68827	100.0
Central & South America	17	2.5	539	78.5	131	19.1	0	0.0	687	100.0
Melanesia, Micronesia & Polynesia	48	3.1	1242	79.6	271	17.4	0	0.0	1561	100.0
Southern Europe	23	1.5	1201	79.2	292	19.3	0	0.0	1516	100.0
Western & Northern Europe	5	0.8	464	74.0	158	25.2	0	0.0	627	100.0
Eastern Europe, Russia, Central Asian & Baltic States	10	2.5	309	78.6	74	18.8	0	0.0	393	100.0
Middle East & Africa	123	3.2	3082	81.3	585	15.4	3	0.1	3793	100.0
South East Asia	114	2.5	3435	74.7	1049	22.8	1	0.0	4599	100.0
North East Asia	9	0.3	2385	71.7	930	28.0	1	0.0	3325	100.0
Southern Asia	13	0.9	1179	83.8	215	15.3	0	0.0	1407	100.0
Other / Not stated	9	4.9	140	75.7	32	17.3	4	2.2	185	100.0
TOTAL	4291	4.9	69114	79.5	13465	15.5	50	0.1	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.3 HEALTH AREA OF RESIDENCE

In 1997, the proportion of mothers born in non-English speaking countries was highest in the Central Sydney Area (45.9 per cent), followed by the South Western Sydney and Western Sydney Areas (38.1 and 36.2 per cent respectively). Over 5 per cent of mothers were born in South East Asian countries, 41.4 per cent of whom were resident in the South Western Sydney Area. Four per cent

of mothers were born in Middle Eastern or African countries and over half of these mothers were resident in the South Western or Western Sydney Areas. A further 3.8 per cent of mothers were born in North East Asian countries, the majority living in the Central Sydney, Northern Sydney or Western Sydney Areas (Table 46).

TABLE 46

HEALTH AREA OF RESIDENCE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1997#

Health Area	Country of birth group																		TOTAL					
	English speaking		Central & South America		Melanesia & Micronesia & Polynesia		Southern Europe		Western & Northern Europe		Eastern Europe, Russia, Central Asian & Baltic States		Middle East & Africa		South East Asia		North East Asia			Southern Asia		Other/ Not stated		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%	No.	%	No.
Central Sydney	3574	53.7	62	0.9	287	4.3	258	3.9	53	0.8	43	0.6	640	9.6	694	10.4	784	11.8	235	3.5	27	0.4	6657	100.0
Northern Sydney	6985	77.7	75	0.8	98	1.1	139	1.5	144	1.6	73	0.8	227	2.5	359	4.0	694	7.7	188	2.1	2	0.0	8984	100.0
Western Sydney	6728	63.7	90	0.9	416	3.9	188	1.8	53	0.5	58	0.5	1077	10.2	780	7.4	681	6.5	472	4.5	15	0.1	10558	100.0
Wentworth	4367	90.4	23	0.5	41	0.8	64	1.3	39	0.8	10	0.2	60	1.2	84	1.7	30	0.6	52	1.1	61	1.3	4831	100.0
South Western Sydney	7709	61.6	269	2.1	413	3.3	425	3.4	74	0.6	58	0.5	1110	8.9	1902	15.2	351	2.8	183	1.5	18	0.1	12512	100.0
Central Coast	3650	96.3	9	0.2	21	0.6	7	0.2	18	0.5	-	-	15	0.4	48	1.3	11	0.3	8	0.2	-	-	3790	100.0
Hunter	6805	96.8	6	0.1	24	0.3	25	0.4	20	0.3	7	0.1	14	0.2	76	1.1	26	0.4	14	0.2	10	0.1	7027	100.0
Illawarra	3977	89.7	32	0.7	26	0.6	123	2.8	36	0.8	12	0.3	89	2.0	85	1.9	39	0.9	15	0.3	1	0.0	4435	100.0
South Eastern Sydney	6656	72.8	103	1.1	131	1.4	238	2.6	107	1.2	115	1.3	519	5.7	422	4.6	658	7.2	159	1.7	40	0.4	9148	100.0
Northern Rivers	2874	97.0	-	-	16	0.5	8	0.3	17	0.6	-	-	-	-	22	0.7	6	0.2	11	0.4	0	0.0	2963	100.0
Mid North Coast	2978	96.7	-	-	13	0.4	5	0.2	17	0.6	-	-	6	0.2	23	0.7	11	0.4	22	0.7	-	-	3079	100.0
New England	2393	97.2	-	-	17	0.7	5	0.2	5	0.2	-	-	-	-	20	0.8	-	-	9	0.4	0	0.0	2463	100.0
Macquarie	1566	98.2	-	-	-	-	-	-	5	0.3	-	-	-	-	9	0.6	-	-	-	-	-	-	1595	100.0
Mid Western	2373	97.4	-	-	6	0.2	7	0.3	6	0.2	-	-	8	0.3	15	0.6	12	0.5	-	-	1	0.0	2437	100.0
Far West	587	97.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	100.0
Greater Murray	3248	96.8	-	-	25	0.7	7	0.2	12	0.4	-	-	7	0.2	20	0.6	5	0.1	25	0.7	3	0.1	3357	100.0
Southern	1699	95.7	-	-	11	0.6	12	0.7	14	0.8	-	-	6	0.3	22	1.2	5	0.3	-	-	1	0.1	1775	100.0
Other/Not stated	658	92.8	-	-	-	-	2	0.3	-	-	1	0.1	-	-	14	2.0	5	0.7	7	1.0	5	0.7	709	100.0
TOTAL	68827	79.2	687	0.8	1561	1.8	1516	1.7	627	0.7	393	0.5	3793	4.4	4599	5.3	3325	3.8	1407	1.6	185	0.2	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
Data not shown for country of birth groups with less than five in a group.

4.4 BOOKING STATUS

In 1997, 99.3 per cent of all mothers were booked at the hospital of birth. The lowest rate (97.7 per cent) was in mothers born in Melanesia, Micronesia and Polynesia. This compared with 99.3 per cent of mothers born in English speaking countries and over 99 per cent of mothers in other country of birth groups.

4.5 DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

In 1997, 84.8 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 86.9 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 55.7 per cent of mothers born in Melanesia, Micronesia and Polynesia and 67.2 per cent of mothers born in the Middle East and Africa (Table 47).

TABLE 47

CONFINEMENTS BY COUNTRY OF BIRTH GROUP AND DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT, NSW 1997

Country of birth group	Duration of pregnancy at first antenatal visit (weeks)						TOTAL	
	0-19		20+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%
English speaking	59794	86.9	7616	11.1	1417	2.1	68827	100.0
Central & South America	583	84.9	91	13.2	13	1.9	687	100.0
Melanesia, Micronesia & Polynesia	869	55.7	639	40.9	53	3.4	1561	100.0
Southern Europe	1295	85.4	200	13.2	21	1.4	1516	100.0
Western & Northern Europe	556	88.7	58	9.3	13	2.1	627	100.0
Eastern Europe, Russia, Central Asian & Baltic States	321	81.7	67	17.0	5	1.3	393	100.0
Middle East & Africa	2548	67.2	1195	31.5	50	1.3	3793	100.0
South East Asia	3749	81.5	803	17.5	47	1.0	4599	100.0
North East Asia	2675	80.5	611	18.4	39	1.2	3325	100.0
Southern Asia	1149	81.7	246	17.5	12	0.9	1407	100.0
Other/Not stated	127	68.6	23	12.4	35	18.9	185	100.0
TOTAL	73666	84.8	11549	13.3	1705	2.0	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.6 SMOKING IN PREGNANCY

In 1997, smoking at any time during pregnancy was far more common among mothers born in English speaking countries than mothers born in non-English speaking countries (Table 48). About one in four mothers born in English speaking countries smoked at some time during pregnancy, compared with one in six or fewer mothers born in non-English speaking countries.

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby and was also more common in mothers born in English speaking countries than in mothers born in non-English speaking countries (Figure 7).

TABLE 48

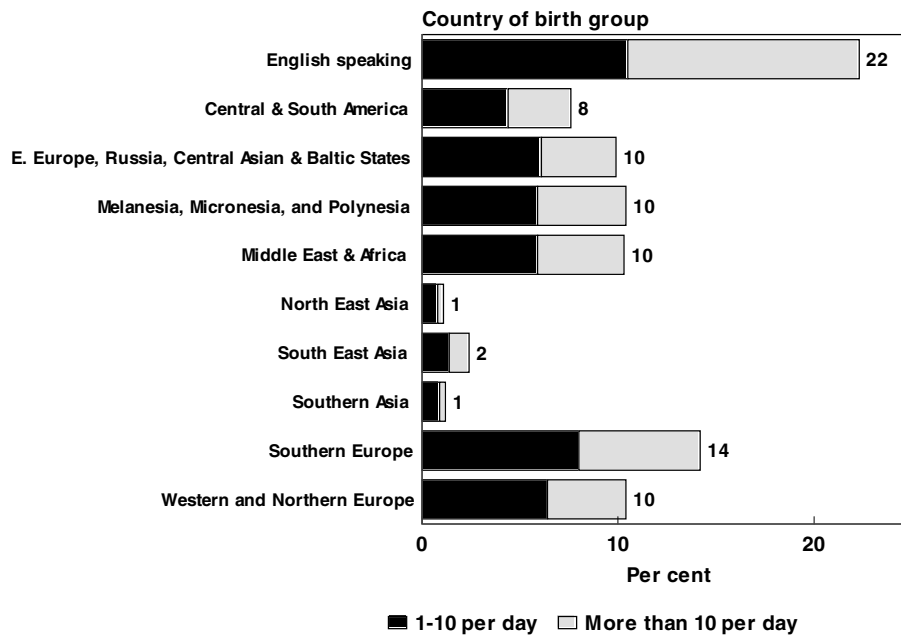
CONFINEMENTS BY COUNTRY OF BIRTH GROUP AND SMOKING IN PREGNANCY, NSW 1997

Country of birth group	Smoking in pregnancy						TOTAL	
	No		Yes		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%
English speaking	52034	75.6	16648	24.2	145	0.2	68827	100.0
Central & South America	621	90.4	62	9.0	4	0.6	687	100.0
Melanesia, Micronesia & Polynesia	1385	88.7	175	11.2	1	0.1	1561	100.0
Southern Europe	1286	84.8	228	15.0	2	0.1	1516	100.0
Western & Northern Europe	549	87.6	78	12.4	0	0.0	627	100.0
Eastern Europe, Russia, Central Asian & Baltic States	351	89.3	42	10.7	0	0.0	393	100.0
Middle East & Africa	3376	89.0	417	11.0	0	0.0	3793	100.0
South East Asia	4459	97.0	136	3.0	4	0.1	4599	100.0
North East Asia	3275	98.5	44	1.3	6	0.2	3325	100.0
Southern Asia	1389	98.7	18	1.3	0	0.0	1407	100.0
Other/Not stated	148	80.0	23	12.4	14	7.6	185	100.0
TOTAL	68873	79.2	17871	20.6	176	0.2	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

FIGURE 7

SMOKING IN THE SECOND HALF OF PREGNANCY BY COUNTRY OF BIRTH GROUP, NSW 1997



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.7 MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS

In 1997, 0.8 per cent of mothers born in Melanesia, Micronesia and Polynesia were reported to have diabetes mellitus, twice the rate for all mothers in NSW. The rates of gestational diabetes in mothers born in Asian countries and Melanesia, Micronesia and Polynesia were over 7 per cent, more than twice the rate for all mothers in NSW. Post partum haemorrhage was most common among mothers born in Melanesia, Micronesia and Polynesia (Table 49).

TABLE 49

MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY COUNTRY OF BIRTH GROUP, NSW 1997#

Condition	Country of birth group																TOTAL							
	English speaking		Central & South America		Melanesia, Micronesia & Polynesia		Southern Europe		Western & Northern Europe		Eastern Europe, Russia, Central Asian & Baltic States		Middle East & Africa		South East Asia			North East Asia		Southern Asia		Other/ Not stated		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%	No.	%	No.	%	No.
Diabetes mellitus	255	0.4	1	0.1	13	0.8	3	0.2	1	0.2	2	0.5	19	0.5	18	0.4	15	0.5	12	0.9	2	1.1	341	0.4
Antepartum haemorrhage	1274	1.9	12	1.7	25	1.6	19	1.3	8	1.3	5	1.3	37	1.0	89	1.9	67	2.0	15	1.1	2	1.1	1553	1.8
Pregnancy-induced hypertension	4594	6.7	53	7.7	114	7.3	91	6.0	27	4.3	18	4.6	155	4.1	221	4.8	119	3.6	78	5.5	8	4.3	5478	6.3
Gestational diabetes	1488	2.2	31	4.5	119	7.6	58	3.8	16	2.6	14	3.6	219	5.8	365	7.9	324	9.7	123	8.7	4	2.2	2761	3.2
Prelabour rupture of membranes (>24 hrs)	2119	3.1	30	4.4	68	4.4	67	4.4	26	4.1	27	6.9	145	3.8	218	4.7	193	5.8	78	5.5	10	5.4	2981	3.4
Third degree tear	516	0.7	2	0.3	13	0.8	13	0.9	6	1.0	5	1.3	30	0.8	88	1.9	74	2.2	32	2.3	1	0.5	780	0.9
Post partum haemorrhage (>600 mls)	3123	4.5	43	6.3	135	8.6	60	4.0	25	4.0	24	6.1	140	3.7	309	6.7	224	6.7	53	3.8	10	5.4	4146	4.8
Retained placenta	1142	1.7	11	1.6	37	2.4	32	2.1	14	2.2	8	2.0	48	1.3	82	1.8	66	2.0	16	1.1	7	3.8	1463	1.7
Shoulder dystocia	610	0.9	2	0.3	10	0.6	15	1.0	4	0.6	3	0.8	33	0.9	39	0.8	24	0.7	7	0.5	1	0.5	748	0.9

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Percentages refer to per cent of total confinements for each country of birth group. Total confinements are shown in Table 44.

4.8 LABOUR AND DELIVERY

Mothers born in non-English speaking countries were more likely to have a spontaneous onset of labour than mothers born in English speaking countries and less likely to be induced (Table 50).

Mothers born in Melanesia, Micronesia and Polynesia and the Middle East and Africa were more likely to have a normal vaginal delivery than mothers in other country of birth groups (Table 51). The highest caesarean section rates were in mothers born in Southern Asia (22.4 per cent) and Central and South America (20.7 per cent).

TABLE 50

LABOUR ONSET BY COUNTRY OF BIRTH GROUP, NSW 1997

Country of birth group	Spontaneous		No labour#		Onset of labour Induced		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	45546	66.2	6997	10.2	16209	23.6	75	0.1	68827	100.0
Central & South America	476	69.3	88	12.8	122	17.8	1	0.1	687	100.0
Melanesia, Micronesia & Polynesia	1179	75.5	121	7.8	260	16.7	1	0.1	1561	100.0
Southern Europe	1046	69.0	172	11.3	298	19.7	0	0.0	1516	100.0
Western & Northern Europe	442	70.5	49	7.8	136	21.7	0	0.0	627	100.0
Eastern Europe, Russia, Central Asian & Baltic States	292	74.3	34	8.7	67	17.0	0	0.0	393	100.0
Middle East & Africa	2911	76.7	281	7.4	597	15.7	4	0.1	3793	100.0
South East Asia	3690	80.2	343	7.5	562	12.2	4	0.1	4599	100.0
North East Asia	2507	75.4	352	10.6	464	14.0	2	0.1	3325	100.0
Southern Asia	1016	72.2	157	11.2	234	16.6	0	0.0	1407	100.0
Other/Not stated	120	64.9	22	11.9	32	17.3	11	5.9	185	100.0
TOTAL	59225	68.1	8616	9.9	18981	21.8	98	0.1	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

No labour indicates elective caesarean section

TABLE 51

TYPE OF DELIVERY BY COUNTRY OF BIRTH GROUP, NSW 1997

Country of birth group	Normal vaginal		Forceps		Forceps rotation		Vacuum extraction		Vaginal breech		Elective caesarean		Emergency caesarean		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	48389	70.3	3280	4.8	648	0.9	3079	4.5	701	1.0	6997	10.2	5677	8.2	56	0.1	68827	100.0
Central & South America	468	68.1	25	3.6	4	0.6	42	6.1	6	0.9	88	12.8	54	7.9	0	0.0	687	100.0
Melanesia, Micronesia & Polynesia	1184	75.8	51	3.3	8	0.5	51	3.3	15	1.0	121	7.8	129	8.3	2	0.1	1561	100.0
Southern Europe	1072	70.7	64	4.2	11	0.7	60	4.0	23	1.5	172	11.3	114	7.5	0	0.0	1516	100.0
Western & Northern Europe	432	68.9	28	4.5	9	1.4	41	6.5	6	1.0	49	7.8	62	9.9	0	0.0	627	100.0
Eastern Europe, Russia, Central Asian & Baltic States	285	72.5	19	4.8	3	0.8	32	8.1	3	0.8	34	8.7	17	4.3	0	0.0	393	100.0
Middle East & Africa	2952	77.8	142	3.7	23	0.6	100	2.6	63	1.7	281	7.4	229	6.0	3	0.1	3793	100.0
South East Asia	3261	70.9	237	5.2	43	0.9	216	4.7	58	1.3	343	7.5	437	9.5	4	0.1	4599	100.0
North East Asia	2129	64.0	243	7.3	45	1.4	221	6.6	30	0.9	352	10.6	301	9.1	4	0.1	3325	100.0
Southern Asia	885	62.9	105	7.5	19	1.4	68	4.8	15	1.1	157	11.2	158	11.2	0	0.0	1407	100.0
Other/Not stated	118	63.8	6	3.2	1	0.5	9	4.9	1	0.5	22	11.9	17	9.2	11	5.9	185	100.0
TOTAL	61175	70.4	4200	4.8	814	0.9	3919	4.5	921	1.1	8616	9.9	7195	8.3	80	0.1	86920	100.0

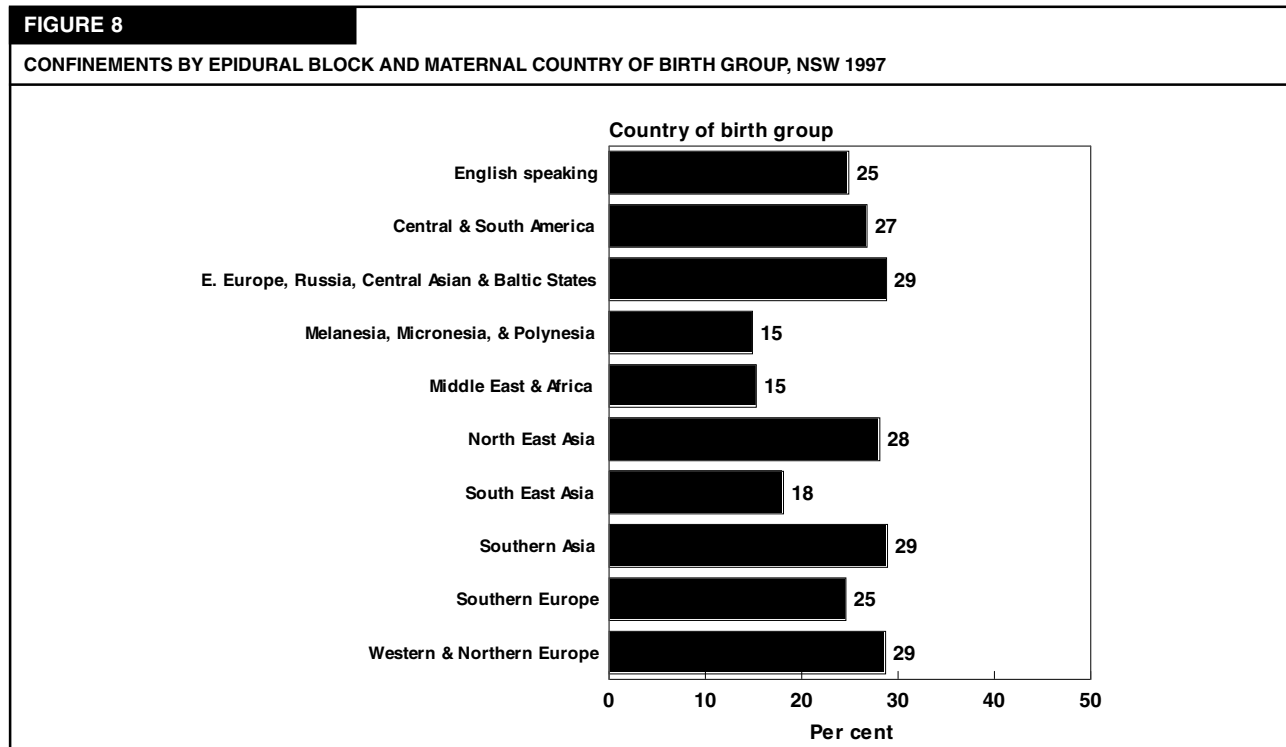
Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.9 EPIDURAL BLOCK

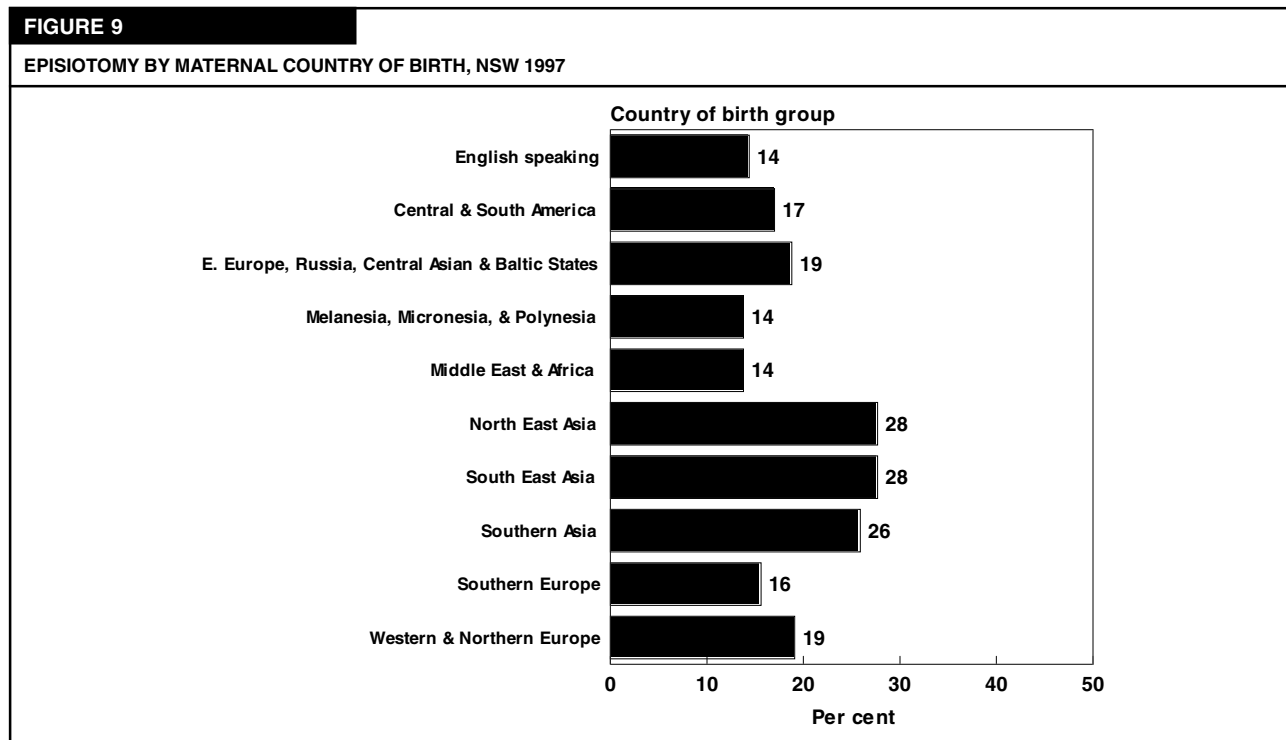
In 1997, the rate of epidural block was 24.2 per cent in NSW. The highest rate was in mothers born in Southern Asia (28.9 per cent), and the lowest was in mothers born in the Melanesia, Micronesia, and Polynesia (14.9 per cent, Figure 8).

4.10 EPISIOTOMY

In 1997, the rate of episiotomy was 15.8 per cent in NSW. The highest rates were in mothers born in North East and South East Asia (both 27.7 per cent) and the lowest rates were in mothers born in Melanesia, Micronesia and Polynesia, and the Middle East and Africa (both 13.8 per cent, Figure 9).



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.



Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.11 BIRTH WEIGHT

The rate of low birth weight (less than 2,500 grams) in 1997 was 6.1 per cent in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asian countries (8.2 per cent) (Table 52). Babies of mothers born in Central and South America and North East Asia were least likely to be low birth weight.

4.12 GESTATIONAL AGE

The rate of prematurity (less than 37 weeks gestation) in 1997 was 6.8 per cent in NSW. The highest rates of prematurity was in babies of mothers born Melanesia, Micronesia and Polynesia (7.9 per cent) and Eastern Europe, Russia, Central Asian & Baltic States (7.8 per cent). Babies of mothers born in Southern Europe were least likely to be premature (Table 53).

TABLE 52

BIRTH WEIGHT BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1997

Country of birth group	Birth weight (grams)						TOTAL	
	Less than 2,500		2,500+		Not stated		No.	%
	No.	%	No.	%	No.	%		
English speaking	4317	6.2	65478	93.8	48	0.1	69843	100.0
Central & South America	24	3.5	668	96.4	1	0.1	693	100.0
Melanesia, Micronesia & Polynesia	111	7.0	1472	92.9	2	0.1	1585	100.0
Southern Europe	83	5.4	1449	94.6	0	0.0	1532	100.0
Western & Northern Europe	36	5.7	597	94.3	0	0.0	633	100.0
Eastern Europe, Russia, Central Asian & Baltic States	28	7.0	370	93.0	0	0.0	398	100.0
Middle East & Africa	209	5.4	3641	94.5	4	0.1	3854	100.0
South East Asia	311	6.7	4324	93.3	1	0.0	4636	100.0
North East Asia	166	4.9	3187	95.0	2	0.1	3355	100.0
Southern Asia	116	8.2	1299	91.7	1	0.1	1416	100.0
Other/Not stated	13	6.9	173	92.0	2	1.1	188	100.0
TOTAL	5414	6.1	82658	93.8	61	0.1	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 53

GESTATIONAL AGE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1997

Country of birth group	Gestational age (weeks)						TOTAL	
	Less than 37		37+		Not stated		No.	%
	No.	%	No.	%	No.	%		
English speaking	4896	7.0	64911	92.9	36	0.1	69843	100.0
Central & South America	35	5.1	658	94.9	0	0.0	693	100.0
Melanesia, Micronesia & Polynesia	126	7.9	1458	92.0	1	0.1	1585	100.0
Southern Europe	77	5.0	1455	95.0	0	0.0	1532	100.0
Western & Northern Europe	34	5.4	598	94.5	1	0.2	633	100.0
Eastern Europe, Russia, Central Asian & Baltic States	31	7.8	367	92.2	0	0.0	398	100.0
Middle East & Africa	223	5.8	3630	94.2	1	0.0	3854	100.0
South East Asia	312	6.7	4323	93.2	1	0.0	4636	100.0
North East Asia	170	5.1	3184	94.9	1	0.0	3355	100.0
Southern Asia	90	6.4	1326	93.6	0	0.0	1416	100.0
Other/Not stated	17	9.0	168	89.4	3	1.6	188	100.0
TOTAL	6011	6.8	82078	93.1	44	0.0	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

4.13 APGAR SCORE

In 1997, 2.5 per cent of all babies (including stillborn babies) had an Apgar score of 7 or less at five minutes and 1.2 per cent had a score of less than 4 (Table 54). Low Apgar scores were most common among babies of mothers born in Melanesia, Micronesia and Polynesia (3.1 per cent).

4.14 PERINATAL OUTCOMES

In 1997, 99 per cent of babies born in NSW and reported to the MDC were born alive and survived until discharge from the hospital of birth (Table 55). Babies of mothers born in Melanesia, Micronesia and Polynesia were far more likely than other country of birth groups to be stillborn or die in the neonatal period, though the total number of perinatal deaths in this group is small.

TABLE 54

BIRTHS BY COUNTRY OF BIRTH GROUP AND APGAR SCORE AT FIVE MINUTES, NSW 1997#

Country of birth group	0-4		5-6		Apgar score 7+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	852	1.2	902	1.3	67955	97.3	134	0.2	69843	100.0
Central & South America	6	0.9	11	1.6	675	97.4	1	0.1	693	100.0
Melanesia, Micronesia & Polynesia	31	2.0	18	1.1	1531	96.6	5	0.3	1585	100.0
Southern Europe	20	1.3	18	1.2	1492	97.4	2	0.1	1532	100.0
Western & Northern Europe	7	1.1	4	0.6	620	97.9	2	0.3	633	100.0
Eastern Europe, Russia, Central Asian & Baltic States	5	1.3	4	1.0	388	97.5	1	0.3	398	100.0
Middle East & Africa	48	1.2	39	1.0	3760	97.6	7	0.2	3854	100.0
South East Asia	47	1.0	62	1.3	4519	97.5	8	0.2	4636	100.0
North East Asia	28	0.8	35	1.0	3291	98.1	1	0.0	3355	100.0
Southern Asia	18	1.3	21	1.5	1375	97.1	2	0.1	1416	100.0
Other/Not stated	3	1.6	2	1.1	182	96.8	1	0.5	188	100.0
TOTAL	1065	1.2	1116	1.3	85788	97.3	164	0.2	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
Births include stillbirths.

TABLE 55

PERINATAL OUTCOMES BY COUNTRY OF BIRTH GROUP, NSW 1997#

Country of birth group	Liveborn surviving		Stillborn		Perinatal outcome Neonatal death		Not stated		Total births		Perinatal mortality rate/1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
English speaking	69098	98.9	482	0.7	202	0.3	61	0.1	69843	100.0	9.8
Central & South America	688	99.3	-	-	-	-	-	-	693	100.0	-
Melanesia, Micronesia & Polynesia	1559	98.4	17	1.1	7	0.4	2	0.1	1585	100.0	15.1
Southern Europe	1513	98.8	10	0.7	6	0.4	3	0.2	1532	100.0	10.4
Western & Northern Europe	627	99.1	-	-	-	-	-	-	633	100.0	-
Eastern Europe, Russia, Central Asian & Baltic States	395	99.2	-	-	-	-	-	-	398	100.0	-
Middle East & Africa	3811	98.9	23	0.6	16	0.4	4	0.1	3854	100.0	10.1
South East Asia	4600	99.2	20	0.4	12	0.3	4	0.1	4636	100.0	6.9
North East Asia	3328	99.2	14	0.4	11	0.3	2	0.1	3355	100.0	7.5
Southern Asia	1401	98.9	11	0.8	4	0.3	0	0.0	1416	100.0	10.6
Other/Not stated	180	95.7	-	-	-	-	-	-	188	100.0	-
TOTAL	87200	98.9	587	0.7	262	0.3	84	0.1	88133	100.0	9.6

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.
Perinatal deaths include deaths reported to the MDC only. As the MDC form is completed at discharge or transfer of the baby, deaths occurring after this time may not be reported to the MDC. Perinatal mortality not reported for country of birth groups with less than 5 perinatal deaths.

PART 5: NEONATAL INTENSIVE CARE

Information on infants admitted to a neonatal intensive care unit was obtained from the Neonatal Intensive Care Units' (NICUS) Data Collection, which is described in Part 1 under Data Sources.

5.1 REGISTRATIONS

There were 1,751 infants registered in NICUS in 1997. The most common reasons for registration of an infant were assisted ventilation for four hours or more (67.6 per cent) and gestational age less than 29 weeks (18.6 per cent). Infants generally met more than one of the registration criteria.

The NICUS registration rate in 1997 was 18.9 per 1,000 live births, which was slightly more than the rate for 1992-94 of 17.9 per 1,000 live births. The ACT joined NICUS in 1995. Table 56 and Figure 10 show the registration rate according to the mothers' Health Area of residence. The relatively low registration rates from the Health Areas adjoining the New South Wales border reflect the fact that some infants are preferentially referred interstate. The registration rate in Health Areas with low numbers of births should be interpreted with caution. The proportion of mothers in each Health Area has remained constant since 1992.

Thirty-three of the 1,751 infants (1.9 per cent) registered in NICUS were born to Aboriginal or Torres Strait Islander mothers. There were 1,909 live births to Aboriginal or Torres Strait Islander women recorded by the NSW and ACT Midwives Data Collections for 1997. The registration rate for these infants was 17.3 per 1,000 live births and has remained constant since 1992. Thirty one of the 1,628 mothers (1.9 per cent) were Aboriginal or Torres Strait Islander, of whom nine (29.0 per cent) were residents of the Far West, New England, and Macquarie Health Areas. Nine of the 329 mothers (2.7 per cent) of infants less than 29 weeks and/or less than 1,000 grams were Aboriginal or Torres Strait Islander.

TABLE 56

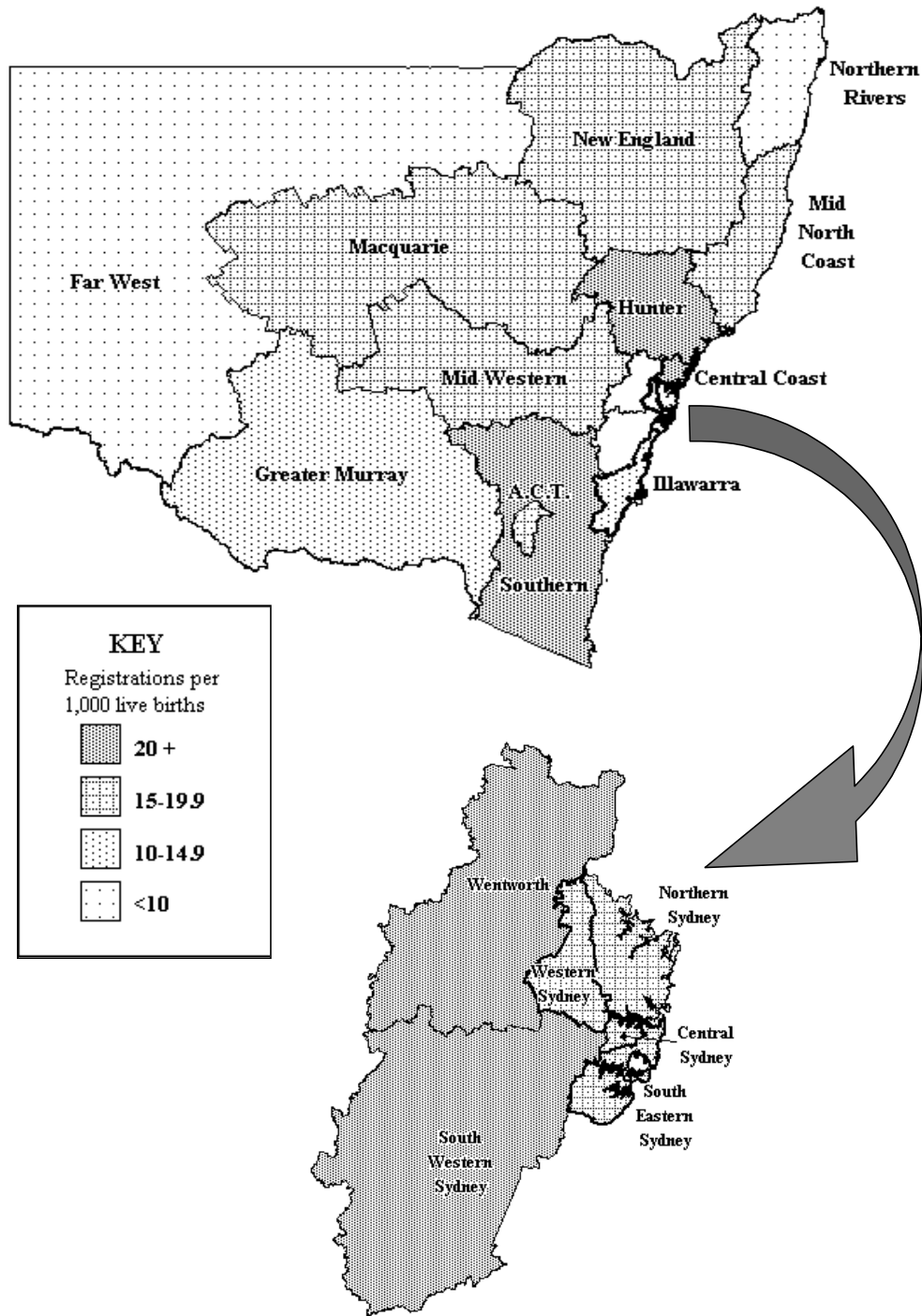
NICUS REGISTRATIONS BY HEALTH AREA OF RESIDENCE, NSW & ACT 1997

Health Area	Total NICUS registrants		Total NSW & ACT live births No.	Registrants per 1,000 live births
	No.	%		
Central Sydney	109	6.2	6754	16.1
Northern Sydney	158	9.0	9090	17.4
South Eastern Sydney	171	9.8	9329	18.3
South Western Sydney	232	13.2	10849	21.4
Wentworth	122	7.0	4558	26.8
Western Sydney	254	14.5	12880	19.7
Central Coast	90	5.1	3908	23.0
Hunter	152	8.7	7123	21.3
Illawarra	65	3.7	4483	14.5
Far West	5	0.3	593	8.4
Greater Murray	46	2.6	3420	13.5
Macquarie	32	1.8	1621	19.7
Mid North Coast	62	3.5	3120	19.9
Mid Western	46	2.6	2485	18.5
New England	43	2.5	2481	17.3
Northern Rivers	9	0.5	2976	3.0
Southern	71	4.1	2286	31.1
ACT	71	4.1	4277	16.6
Interstate	2	0.2	597	3.4
Overseas	11	0.6	42	261.9
Not stated	0	0.0	11	0.0
TOTAL	1751	100.0	92883	18.9

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 1997. Epidemiology and Surveillance Branch, NSW Health Department. ACT Maternal/Perinatal Data Collection, 1996.

FIGURE 10

NEONATAL INTENSIVE CARE REGISTRATIONS BY MATERNAL HEALTH AREA OF RESIDENCE, NSW & ACT 1997



Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 1997. Epidemiology and Surveillance Branch, NSW Health Department. ACT Maternal/Perinatal Data Collection, 1996.

5.2 MATERNAL CHARACTERISTICS

There were 1,628 mothers of the 1,751 infants registered in NICUS during 1997. Nearly eighty per cent of the mothers were residents of the Sydney, Central Coast, Hunter and Illawarra Health Areas. The distribution of the mothers' Health Area of residence for infants less than 29 weeks and/or less than 1,000 grams was similar to those for the whole group. Of the 329 mothers of infants in this group just over half (54.7 per cent) were residents of either the South Western Sydney, Western Sydney, Hunter, South Eastern Sydney, and Northern Sydney Health Areas.

The age of mothers of NICUS infants ranged from 15 to 45 years with a mean age of 28.9 years. The mean maternal age was similar across all gestational age groups and has remained constant since 1992. The proportion of mothers aged 35 years or more has increased from 13.7 per cent in 1992 to 19.2 per cent in 1997. There were 6.8 per cent of mothers aged less than 20 years (Table 57). The highest proportion of teenage mothers occurred in Far West, Macquarie, New England, Southern and Greater Murray Health Areas.

There were 1,393 mothers (85.6 per cent) who had an antenatal complication. The most common antenatal complications were threatened preterm labour (693/1,628, 42.6 per cent), fetal distress (316/1,628, 19.4 per cent), antepartum haemorrhage (284/1,628, 17.4 per cent) and hypertensive disease of pregnancy (273/1,628, 16.8 per cent). Antenatal complications were more frequent in the less than 28 week (100 per cent), 28-31 week (99.6 per cent) and 32-36 week (96.1 per cent) gestational age groups compared with term babies. Even so, 52.8 per cent (225/426) of mothers giving birth at 37-41 weeks gestation had an antenatal complication.

In 1997, 90.3 per cent of mothers of infants born at less than 28 weeks received corticosteroids (Figure 11, Table 58). Over three quarters (83.0 per cent) of mothers of 28 - 31 week gestation infants received antenatal corticosteroids. The overall proportion of mothers receiving antenatal corticosteroids has increased from 45.0 per cent in 1992 to 69.7 per cent in 1997.

TABLE 57

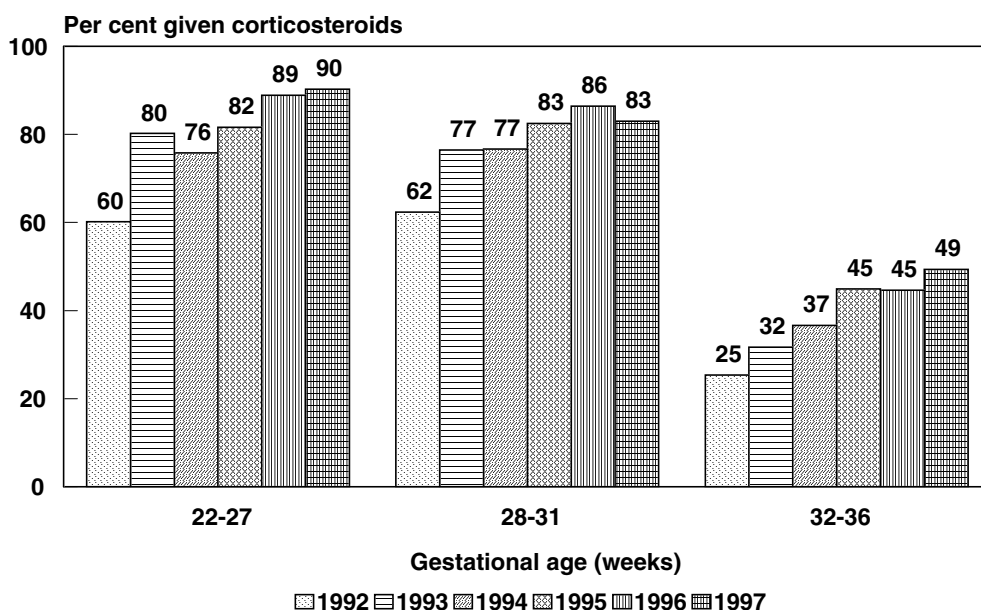
CONFINEMENTS BY HEALTH AREA OF RESIDENCE AND MATERNAL AGE, NSW & ACT 1997

Health Area	Maternal age (years)						TOTAL	
	Less than 20		20-34		35+			
	No.	%	No.	%	No.	%	No.	%
Central Sydney	3	2.9	65	62.5	36	34.6	104	100.0
Northern Sydney	3	2.1	94	66.7	44	31.2	141	100.0
South Eastern Sydney	4	2.5	107	66.5	50	31.1	161	100.0
South Western Sydney	18	8.1	175	78.8	29	13.1	222	100.0
Wentworth	9	8.0	87	77.0	17	15.0	113	100.0
Western Sydney	16	6.8	181	76.7	39	16.5	236	100.0
Central Coast	8	9.8	62	75.6	12	14.6	82	100.0
Hunter	9	6.3	111	77.6	23	16.1	143	100.0
Illawarra	5	8.5	44	74.6	10	16.9	59	100.0
Far West	2	40.0	3	60.0	0	0.0	5	100.0
Greater Murray	4	10.0	29	72.5	7	17.5	40	100.0
Macquarie	7	23.3	20	66.7	3	10.0	30	100.0
Mid North Coast	1	1.7	47	81.0	10	17.2	58	100.0
Mid Western	4	9.5	33	78.6	5	11.9	42	100.0
New England	6	15.8	29	76.3	3	7.9	38	100.0
Northern Rivers	0	0.0	7	77.8	2	22.2	9	100.0
Southern	7	10.8	49	75.4	9	13.8	65	100.0
ACT	4	6.0	51	76.1	12	17.9	67	100.0
Other	1	7.7	10	76.9	2	15.4	13	100.0
TOTAL	111	6.8	1204	74.0	313	19.2	1628	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

FIGURE 11

CONFINEMENTS BY ANTENATAL CORTICOSTEROID ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 1992-97



Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS October, 1994. Canberra Hospital joined NICUS in January, 1995. From January 1994, all infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS.

TABLE 58

CONFINEMENTS BY ANTENATAL CORTICOSTEROID ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 1992-97#

Year	Corticosteroid administration	Gestational age (weeks)						TOTAL	
		22-27		28-31		32-36		No.	%
		No.	%	No.	%	No.	%	No.	%
1992	No	82	39.8	129	37.6	346	74.6	557	55.0
	Yes	124	60.2	214	62.4	118	25.4	456	45.0
	TOTAL	206	100.0	343	100.0	464	100.0	1013	100.0
1993	No	36	19.8	88	23.5	306	68.3	430	42.8
	Yes	146	80.2	286	76.5	142	31.7	574	57.2
	TOTAL	182	100.0	374	100.0	448	100.0	1004	100.0
1994	No	46	24.2	105	23.3	291	63.4	442	40.2
	Yes	144	75.8	346	76.7	168	36.6	658	59.8
	TOTAL	190	100.0	451	100.0	459	100.0	1100	100.0
1995	No	37	18.4	80	17.5	264	55.1	381	33.5
	Yes	164	81.6	376	82.5	215	44.9	755	66.5
	TOTAL	201	100.0	456	100.0	479	100.0	1136	100.0
1996	No	23	11.1	64	13.8	291	55.4	378	31.6
	Yes	185	88.9	400	86.2	234	44.6	819	68.4
	TOTAL	208	100.0	464	100.0	525	100.0	1197	100.0
1997	No	20	9.7	79	17.0	258	50.6	357	30.3
	Yes	186	90.3	385	83.0	252	49.4	823	69.7
	TOTAL	206	100.0	464	100.0	510	100.0	1180	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS in October 1994. Canberra Hospital joined NICUS in January 1995. From January 1994, all infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS.

5.3 TRANSFER, LABOUR AND DELIVERY

The transfer status of infants by gestational age is shown in Table 59. Infants are admitted to a neonatal intensive care unit after:

- ♦ birth which has been booked to occur in a tertiary centre or;
- ♦ birth in a tertiary centre following maternal transfer prior to the infant's birth or;
- ♦ birth in a non-tertiary centre followed by infant transfer to a tertiary centre.

Thirty five per cent of all births were booked at a tertiary centre, ranging from 40.6 per cent for the 28-31 week gestational age group to 22.7 per cent for the 42-plus week gestational age group (Table 59). Maternal transfer was most common at gestations less than 32 weeks. The rate of maternal transfer was highest for infants born before 28 weeks gestation (62.5 per cent) and for those born at 28-31 weeks gestation (48.8 per cent). The overall rate of maternal transfer was 31.8 per cent.

Thirty three per cent of infants were transferred to a tertiary centre following their birth. There were 11.1 per cent of infants transferred from one tertiary centre to another within 4 hours of commencing assisted ventilation or for major surgery. Transfer following birth was more common in the higher gestational age groups.

The inverse relationship between gestational age and the proportion of births in a tertiary centre is shown in Figure 12 and Table 60. The proportion of infants born in a tertiary centre increased from 61.3 per cent in 1992 to 72.2 per cent 1997. In 1997, 91.1 per cent of infants less than 32 weeks gestation were born in a tertiary centre compared with 70.9 per cent of 32-36 week gestation infants and 42.8 per cent of term infants.

The pattern of transfer status (Table 61) and place of birth (Table 62) by birth weight is similar to that of gestational age, with the majority (92.6 per cent) of the very low birth weight infants (less than 1,500 gms) born in a tertiary centre.

Spontaneous onset of labour was more common among mothers of infants less than 28 weeks gestation (Table 63). Augmentation and induction of labour was most common in term and post-term births.

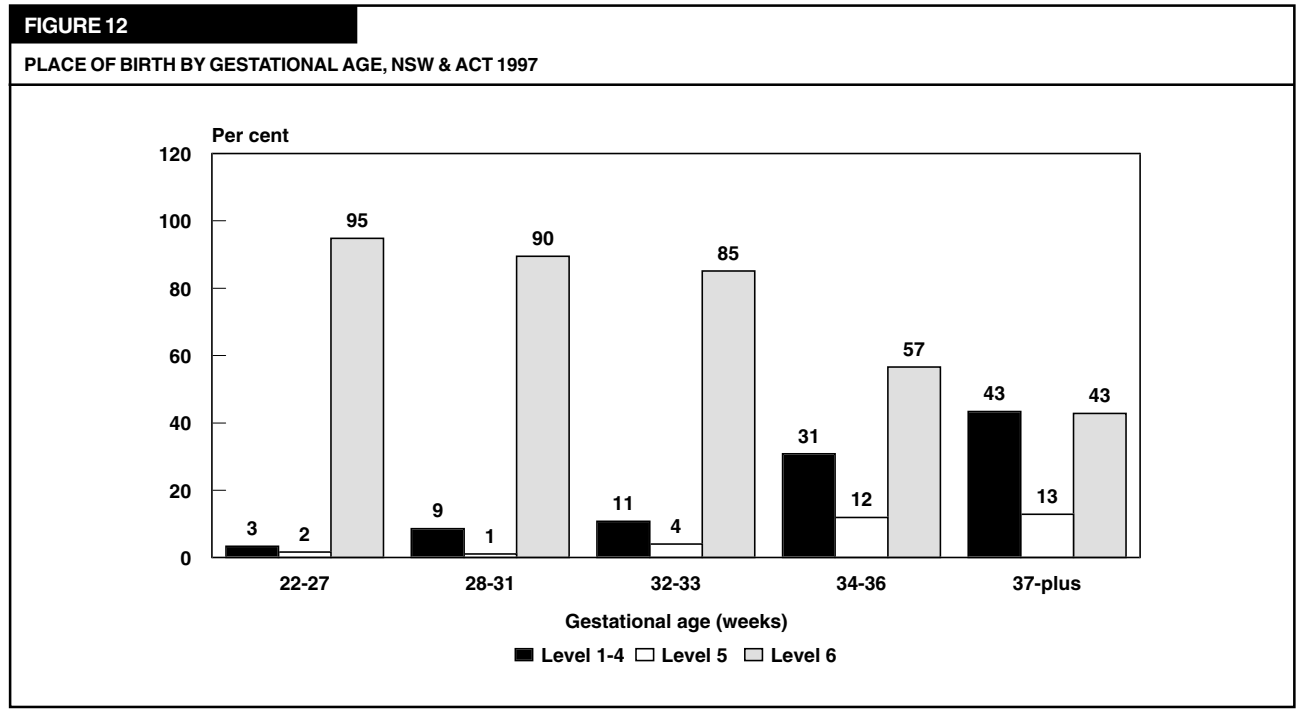
The overall proportion of mothers who gave birth after no labour (elective caesarean section) increased from 27.5 per cent in 1992 to 33.2 per cent in 1997. Spontaneous onset of labour occurred in just over half of all infants less than 2,500 grams birth weight (Table 64).

As would be expected, augmentation or induction of labour were most common in mothers of infants with a birth weight of 2,500 grams or more.

Prolonged rupture of membranes (greater than 24 hours) was more common at lower gestations, affecting about one in three infants born at less than 28 weeks gestation (Table 65).

The most common type of delivery was caesarean section (53.1 per cent in 1992, 50.0 per cent in 1997), followed by normal vaginal delivery (33.8 per cent in 1992, 38.2 per cent in 1997) and vaginal breech delivery (6.0 per cent in 1992, 6.9 per cent in 1997) (Tables 66 and 67). The high rate of caesarean section and breech delivery in the NICUS cohort is related to the high proportion of preterm births.

The rate of caesarean section in term and post-term births was 36.1 per cent, almost double the rate for all births in NSW and the ACT in 1997.



Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 59**BIRTHS BY BOOKING STATUS, TRANSFER STATUS AND GESTATIONAL AGE, NSW & ACT 1997**

Booking status and transfer status	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Booked at tertiary hosp	75	32.3	217	40.6	216	40.4	105	24.6	5	22.7	618	35.3
Transfer before birth	145	62.5	261	48.8	134	25.0	16	3.7	0	0.0	556	31.8
Transfer after birth	12	5.2	57	10.7	185	34.6	306	71.7	17	77.3	577	33.0
TOTAL	232	100.0	535	100.0	535	100.0	427	100.0	22	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 60**BIRTHS BY PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) AND GESTATIONAL AGE, NSW & ACT 1997#**

Place of birth	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-33		34-36		37+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Level 0	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0	1	0.1
Level 1-4	8	3.4	46	8.6	27	10.8	88	30.8	195	43.4	364	20.8
Level 5	4	1.7	6	1.1	10	4.0	34	11.9	58	12.9	112	6.4
Level 6	220	94.8	479	89.5	212	85.1	162	56.6	192	42.8	1265	72.2
Planned home birth	0	0.0	0	0.0	0	0.0	0	0.0	3	0.7	3	0.2
Born before arrival	0	0.0	3	0.6	0	0.0	2	0.7	1	0.2	6	0.3
TOTAL	232	100.0	535	100.0	249	100.0	286	100.0	449	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

33/56 (58.9%) infants not born at a level 6 hospital were 30-31 weeks gestation.

TABLE 61**BIRTHS BY BOOKING STATUS, TRANSFER STATUS AND BIRTH WEIGHT, NSW & ACT 1997**

Booking status and transfer status	Birth weight (grams)								TOTAL	
	Less than 1,000		1,000-1,499		1,500-2,499		2,500+		No.	%
	No.	%	No.	%	No.	%	No.	%		
Booked at tertiary hosp	86	34.1	175	41.2	230	44.0	127	23.0	618	35.3
Transfer before birth	154	61.1	207	48.7	165	31.5	30	5.4	556	31.8
Transfer after birth	12	4.8	43	10.1	128	24.5	394	71.5	577	33.0
TOTAL	252	100.0	425	100.0	523	100.0	551	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 62**BIRTHS BY PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) AND BIRTH WEIGHT, NSW & ACT 1997**

Place of birth	Birth weight (grams)								TOTAL	
	Less than 1,000		1,000-1,499		1,500-2,499		2,500+		No.	%
	No.	%	No.	%	No.	%	No.	%		
Level 0	0	0.0	1	0.2	0	0.0	0	0.0	1	0.1
Level 1-4	8	3.2	33	7.8	73	14.0	250	45.4	364	20.8
Level 5	4	1.6	5	1.2	32	6.1	71	12.9	112	6.4
Level 6	240	95.2	382	89.9	417	79.7	226	41.0	1265	72.2
Planned home birth	0	0.0	0	0.0	0	0.0	3	0.5	3	0.2
Born before arrival	0	0.0	4	0.9	1	0.2	1	0.2	6	0.3
TOTAL	252	100.0	425	100.0	523	100.0	551	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 63**CONFINEMENTS BY ONSET OF LABOUR AND GESTATIONAL AGE, NSW & ACT 1997**

Onset of labour	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Spontaneous	156	75.7	246	53.0	240	47.1	198	46.5	9	40.9	849	52.1
Augmented	6	2.9	17	3.7	30	5.9	58	13.6	4	18.2	115	7.1
Induced	0	0.0	5	1.1	25	4.9	88	20.7	6	27.3	124	7.6
No labour	44	21.4	196	42.2	215	42.2	82	19.2	3	13.6	540	33.2
TOTAL	206	100.0	464	100.0	510	100.0	426	100.0	22	100.0	1628	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 64**CONFINEMENTS BY ONSET OF LABOUR AND BIRTH WEIGHT, NSW & ACT 1997**

Onset of labour	Birth weight (grams)								TOTAL	
	Less than 1,000		1,000-1,499		1,500-2,499		2,500+		No.	%
	No.	%	No.	%	No.	%	No.	%		
Spontaneous	123	55.9	189	51.5	271	55.1	266	48.5	849	52.1
Augmented	4	1.8	21	5.7	23	4.7	67	12.2	115	7.1
Induced	0	0.0	6	1.6	22	4.5	96	17.5	124	7.6
No labour	93	42.3	151	41.1	176	35.8	120	21.9	540	33.2
TOTAL	220	100.0	367	100.0	492	100.0	549	100.0	1628	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 65**BIRTHS BY DURATION OF RUPTURE OF MEMBRANES AND GESTATIONAL AGE, NSW & ACT 1997**

Duration of rupture of membranes	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Less than 24 hours	147	63.4	388	72.5	466	87.1	404	94.6	22	100.0	1427	81.5
24 hours-7 days	53	22.8	92	17.2	50	9.3	20	4.7	0	0.0	215	12.3
8+ days	32	13.8	55	10.3	19	3.6	3	0.7	0	0.0	109	6.2
TOTAL	232	100.0	535	100.0	535	100.0	427	100.0	22	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 66**BIRTHS BY TYPE OF DELIVERY AND GESTATIONAL AGE, NSW & ACT 1997**

Type of delivery	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Normal vaginal	93	40.1	168	31.4	179	33.5	220	51.5	9	40.9	669	38.2
Forceps	3	1.3	9	1.7	11	2.1	17	4.0	1	4.5	41	2.3
Forceps rotation	0	0.0	0	0.0	4	0.7	5	1.2	1	4.5	10	0.6
Vacuum extraction	0	0.0	1	0.2	10	1.9	23	5.4	1	4.5	35	2.0
Vaginal breech	45	19.4	50	9.3	15	2.8	10	2.3	0	0.0	120	6.9
Elective Caesarean	45	19.4	222	41.5	224	41.9	85	19.9	2	9.1	578	33.0
Emergency Caesarean	46	19.8	85	15.9	92	17.2	67	15.7	8	36.4	298	17.0
TOTAL	232	100.0	535	100.0	535	100.0	427	100.0	22	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 67**BIRTHS BY TYPE OF DELIVERY AND BIRTH WEIGHT, NSW & ACT 1997**

Type of delivery	Birth weight (grams)									
	Less than 1,000		1,000-1,499		1,500-2,499		2,500+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	73	29.0	129	30.4	199	38.0	268	48.6	669	38.2
Forceps	4	1.6	3	0.7	15	2.9	19	3.4	41	2.3
Forceps rotation	0	0.0	0	0.0	4	0.8	6	1.1	10	0.6
Vacuum extraction	0	0.0	0	0.0	9	1.7	26	4.7	35	2.0
Vaginal breech	42	16.7	41	9.6	27	5.2	10	1.8	120	6.9
Elective Caesarean	100	39.7	174	40.9	182	34.8	122	22.1	578	33.0
Emergency Caesarean	33	13.1	78	18.4	87	16.6	100	18.1	298	17.0
TOTAL	252	100.0	425	100.0	523	100.0	551	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

5.4 INFANT CHARACTERISTICS

Nearly three quarters of the infants (74.4 per cent) were preterm (less than 37 weeks gestation), 43.8 per cent were very preterm (less than 32 weeks gestation) and 13.2 per cent were extremely preterm (less than 28 weeks gestation) (Figure 13, Table 68). Almost all liveborn infants less than 31 weeks gestation were admitted to a NICU, about half at 31-32 weeks gestation, and one-fifth at 33-34 weeks gestation (Table 69).

Sixty-eight per cent of infants were low birth weight (less than 2,500 gms), 38.7 per cent were very low birth weight (less than 1,500 gms) and 14.4 per cent were extremely low birth weight (less than 1,000 gms) (Table 70).

Overall, 56.3 per cent of infants were male. The higher proportion of males in the 32-36 week, 37-41 week and 42 plus week age groups was statistically significant (Table 71).

The overall proportion of the infants who had a major congenital anomaly decreased from 20.9 per cent in 1992 to 16.7 per cent in 1997. Congenital anomalies were more common among term infants (37 or more weeks gestational age), of whom 42.8 per cent had a major congenital anomaly and 2.7 per cent had a minor congenital anomaly (Table 72).

The overall proportion of infants born following a multiple pregnancy has remained constant since 1992. In 1997 most of the infants (82.4 per cent) were from a singleton pregnancy, 15.4 per cent were from a twin pregnancy and 2.2 per cent were from a triplet pregnancy. Infants born as a result of a multiple gestation were more likely to be preterm, with 26.3 per cent of infants under 32 weeks gestation being from a multiple gestation pregnancy (Table 73). Multiple births represented 2.8 per cent of all NSW and ACT births in 1997. The higher than expected rate of multiple births among the 1997 NICUS cohort reflects the high proportion of multiple pregnancies resulting in preterm birth.

Table 74 shows the median, 25th and 75th percentiles for one and five minute Apgar scores by gestational age. For infants greater than 27 weeks gestation the median one minute Apgar score was 7 and the median five minute score was 9. The proportion of infants with a one minute Apgar score of 0-4 has decreased from 38.7 per cent in 1992 to 25.9 per cent in 1997. Similarly the proportion of infants with a five minute Apgar score of 0-4 decreased from 10.8 per cent in 1992 to 6.9 per cent in 1997 (Table 75).

continued on p.64

TABLE 68**BIRTHS BY GESTATIONAL AGE, NSW & ACT 1992-97#**

Gestational age (weeks)	Year											
	1992		1993		1994		1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
22-27	237	14.9	199	12.9	214	13.1	230	13.3	237	13.3	232	13.2
28-31	395	24.8	419	27.2	511	31.3	513	29.6	528	29.6	535	30.6
32-36	478	30.1	463	30.0	476	29.1	506	29.2	552	30.9	535	30.6
37-41	441	27.7	431	28.0	418	25.6	461	26.6	461	25.8	427	24.4
42+	39	2.5	29	1.9	16	1.0	24	1.4	8	0.4	22	1.3
TOTAL	1590	100.0	1541	100.0	1635	100.0	1734	100.0	1786	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS from October 1994. Canberra Hospital joined NICUS in January 1995.

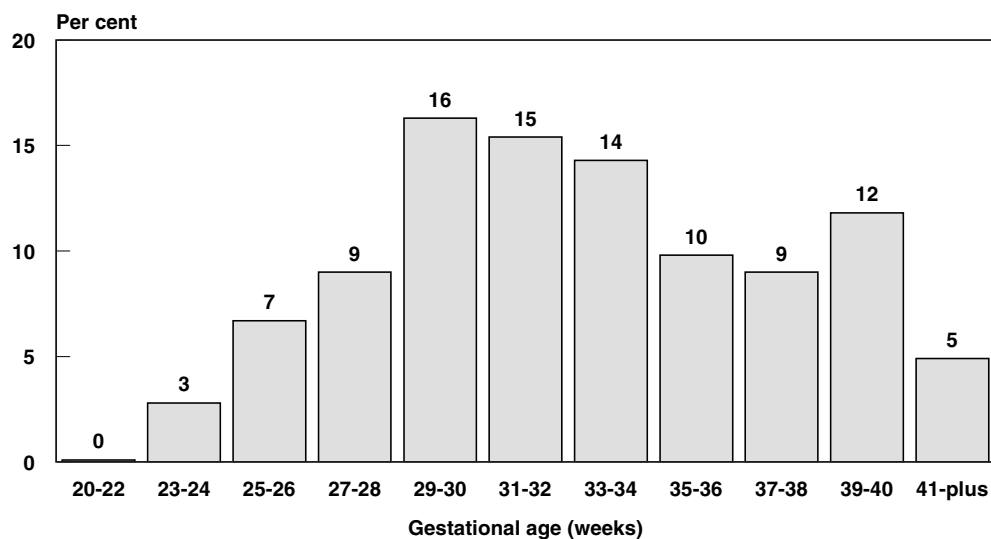
From January 1994, infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS.

TABLE 69**BIRTHS BY NICUS REGISTRATION AND GESTATIONAL AGE, NSW & ACT 1997#**

Gestational age (weeks)	NSW & ACT			NICUS Rate per 1,000 live births	% of cohort
	Stillbirths No.	Live births No.	Registrations No.		
Less than 21	52	0	0	0.0	0.0
21-22	92	38	1	26.3	0.1
23-24	65	89	49	550.6	2.8
25-26	41	126	117	928.6	6.7
27-28	39	174	158	908.0	9.0
29-30	25	293	285	973.7	16.3
31-32	34	473	269	568.7	15.4
33-34	44	1203	251	208.6	14.3
35-36	61	3523	172	48.8	9.8
37-38	60	18457	158	8.6	9.0
39-40	87	52233	206	3.9	11.7
41-42	20	15406	85	5.5	4.8
43-44	1	90	0	0.0	0.0
Not stated	4	84	0	0.0	0.0
TOTAL	625	92212	1751	19.0	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research, 1997. NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department, 1997. ACT Maternal/Perinatal Data Collection, 1996.

Excludes 84 babies reported to the MDC in 1997 for whom the birth outcome was not known.

FIGURE 13**BIRTHS BY GESTATIONAL AGE, NSW & ACT 1997**

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 70**BIRTHS BY NICUS REGISTRATION AND BIRTH WEIGHT, NSW & ACT 1997**

Birth weight (grams)	NSW & ACT		Registrations No.	NICUS Rate per 1,000 live births	% of cohort
	Stillbirths No.	Live births# No.			
Less than 400	76	29	2	69.0	0.0
400-499	62	27	3	111.1	0.0
500-599	45	50	19	380.0	0.1
600-699	34	56	42	750.0	0.6
700-799	24	66	58	878.8	2.2
800-899	23	55	48	872.7	2.7
900-999	9	84	80	952.4	3.9
1,000-1,249	19	207	202	975.8	3.7
1,250-1,499	15	258	223	864.3	5.3
1,500-1,749	26	382	161	421.5	7.3
1,750-1,999	31	659	137	207.9	9.0
2,000-2,499	66	3433	225	65.5	9.0
2,500-2,999	52	14052	178	12.7	6.4
3,000-3,499	67	33407	191	5.7	7.8
3,500-3,999	29	28449	123	4.3	6.5
4,000+	13	10951	59	5.4	4.0
Not stated	34	47	0	0.0	0.0
TOTAL	625	92212	1751	19.0	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research, 1997. NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department, 1997. ACT Maternal/Perinatal Data Collection, 1996.

Excludes 84 babies reported to the MDC in 1997 for whom the birth outcome was not known.

TABLE 71**BIRTHS BY GENDER AND GESTATIONAL AGE, NSW & ACT 1997**

Sex	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Male	115	49.6	293	54.8	313	58.5	253	59.3	12	54.5	986	56.3
Female	117	50.4	242	45.2	222	41.5	174	40.7	10	45.5	765	43.7
TOTAL	232	100.0	535	100.0	535	100.0	427	100.0	22	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 72**BIRTHS BY CONGENITAL ANOMALIES AND GESTATIONAL AGE, NSW & ACT 1997**

Congenital anomaly	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
None	220	94.8	503	94.0	445	83.2	227	53.2	18	81.8	1413	80.7
Minor	7	3.0	11	2.1	16	3.0	11	2.6	1	4.5	46	2.6
Major	5	2.2	21	3.9	74	13.8	189	44.3	3	13.6	292	16.7
TOTAL	232	100.0	535	100.0	535	100.0	427	100.0	22	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 73**BIRTHS BY PLURALITY AND GESTATIONAL AGE, NSW & ACT 1997**

Plurality	Gestational age (weeks)										TOTAL	
	22-27		28-31		32-36		37-41		42+			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Singleton	175	75.4	390	72.9	438	81.9	417	97.7	22	100.0	1442	82.4
Twins	54	23.3	124	23.2	82	15.3	10	2.3	0	0.0	270	15.4
Triplets	3	1.3	21	3.9	15	2.8	0	0.0	0	0.0	39	2.2
TOTAL	232	100.0	535	100.0	535	100.0	427	100.0	22	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 74**BIRTHS BY APGAR SCORE AND GESTATIONAL AGE, NSW & ACT 1997**

Apgar Score	Gestational age (weeks)							
	22-27		28-31		32-36		37+	
	Median (25%,75%)		Median (25%,75%)		Median (25%,75%)		Median (25%,75%)	
One-minute Apgar	5	(3,7)	7	(5,8)	7	(5,8)	7	(3,9)
Five-minute Apgar	8	(6,9)	9	(8,9)	9	(7,9)	9	(6,9)

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 75**BIRTHS BY APGAR SCORE AT ONE AND FIVE MINUTES, NSW & ACT 1992-97#**

Apgar Score	Year											
	1992		1993		1994		1995		1996		1997	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One minute												
0-4	615	38.7	576	37.4	546	33.4	604	34.8	533	29.8	453	25.9
5-7	572	36.0	546	35.4	624	38.2	566	32.6	654	36.6	644	36.8
7+	393	24.7	412	26.7	459	28.1	550	31.7	586	32.8	644	36.8
Not stated	10	0.6	7	0.5	6	0.4	14	0.8	13	0.7	10	0.6
TOTAL	1590	100.0	1541	100.0	1635	100.0	1734	100.0	1786	100.0	1751	100.0
Five minutes												
0-4	172	10.8	135	8.8	118	7.2	140	8.1	150	8.4	121	6.9
5-7	510	32.1	505	32.8	474	29.0	502	29.0	453	25.4	414	23.6
7+	897	56.4	895	58.1	1,036	63.4	1077	62.1	1170	65.5	1207	68.9
Not stated	11	0.7	6	0.4	7	0.4	15	0.9	13	0.7	9	0.5
TOTAL	1590	100.0	1541	100.0	1635	100.0	1734	100.0	1786	100.0	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS October, 1994. Canberra Hospital joined NICUS in January, 1995.

From January 1994, infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS.

continued from p.60

Infants with major congenital anomalies (n=292) were excluded from the analysis of morbidity and mortality. The majority of infants (n=1,292; 88.6 per cent) in the 1997 NICUS cohort received assisted ventilation (intermittent mandatory ventilation and/or continuous positive airways pressure). The proportion of registered infants who required assisted ventilation decreased in 1994 because all infants less than 32 weeks gestation and/or less than 1,500 grams admitted to a neonatal intensive care unit were included in NICUS (Table 76).

The main indication for ventilation for most infants was Respiratory Distress Syndrome (Figure 14). Main indications for assisted ventilation varied with gestational age.

Respiratory distress syndrome, immature lung and transient tachypnoea were more common in the preterm groups, whereas perinatal asphyxia, meconium aspiration and pulmonary hypertension were more common in term infants (Table 77).

Proven systemic infection decreased from 22.9 per cent in 1992 to 18.2 per cent of infants in 1997. Infection was most common among infants less than 28 weeks gestation (48.5 per cent) (Table 78).

The overall proportion of ventilated infants who received surfactant has increased from 33.8 per cent in 1992 to 50.5 per cent in 1997. In 1997, the majority (72.3 per cent) of ventilated infants with a diagnosis of Respiratory Distress Syndrome received surfactant (Table 79). Nearly two thirds (62.0 per cent) of the infants who received surfactant were less than 32 weeks gestational age.

Overall, the incidence of treated patent ductus arteriosus (PDA) decreased from 18.7 per cent in 1993 to 11.9 per cent in 1997. In 1997, 96.5 per cent of the infants treated for PDA were less than 32 weeks gestation (Table 80). The majority of infants with a PDA requiring treatment received indomethacin (10.6 per cent). Surgical treatment of PDA was predominantly performed on infants less than 28 weeks gestation (1.3 per cent). Some infants (1.0 per cent) were treated with both indomethacin and surgery.

Overall, the incidence of necrotising enterocolitis (NEC) decreased from 9.7 per cent in 1992 to 3.8 per cent in 1997 (Table 81). The diagnosis of NEC was made radiologically or at surgery in 60.7 per cent of infants and clinically in the remainder. NEC was more common at the lower gestational age groups and 75.0 per cent of the infants with NEC were born at less than 32 weeks gestation.

The incidence of major surgery decreased from 7.6 per cent in 1992 to 4.4 per cent in 1997. In 1997, 69.0 per cent of the infants who required major surgery were less than 32 weeks gestation. The most common surgical procedures among these infants were for patent ductus arteriosus and necrotising enterocolitis (Table 82).

continued on p.67

TABLE 76
BIRTHS BY ASSISTED VENTILATION AND GESTATIONAL AGE, NSW & ACT 1992-97#

Year/ assisted ventilation	Gestational age (weeks)										
	22-27		28-31		32-36		37+		TOTAL		
	No.	%	No.	%	No.	%	No.	%	No.	%	
1992	No	3	1.3	4	1.1	2	0.5	1	0.4	10	0.8
	Yes	225	98.7	369	98.9	398	99.5	255	99.6	1247	99.2
	TOTAL	228	100.0	373	100.0	400	100.0	256	100.0	1257	100.0
1993	No	0	0.0	10	2.6	1	0.3	8	3.1	19	1.5
	Yes	191	100.0	380	97.4	396	99.7	253	96.9	1220	98.5
	TOTAL	191	100.0	390	100.0	397	100.0	261	100.0	1239	100.0
1994	No	3	1.5	112	23.0	56	13.6	6	2.5	177	13.2
	Yes	203	98.5	374	77.0	355	86.4	231	97.5	1163	86.8
	TOTAL	206	100.0	486	100.0	411	100.0	237	100.0	1340	100.0
1995	No	0	0.0	104	21.3	51	11.8	7	2.6	162	11.5
	Yes	220	100.0	385	78.7	381	88.2	266	97.4	1252	88.5
	TOTAL	220	100.0	489	100.0	432	100.0	273	100.0	1414	100.0
1996	No	1	0.4	117	23.4	48	10.2	6	2.2	172	11.7
	Yes	227	99.6	384	76.6	424	89.8	267	97.8	1302	88.3
	TOTAL	228	100.0	501	100.0	472	100.0	273	100.0	1474	100.0
1997	No	0	0.0	101	19.6	57	12.4	9	3.5	167	11.4
	Yes	227	100.0	413	80.4	404	87.6	248	96.5	1292	88.6
	TOTAL	227	100.0	514	100.0	461	100.0	257	100.0	1459	100.0

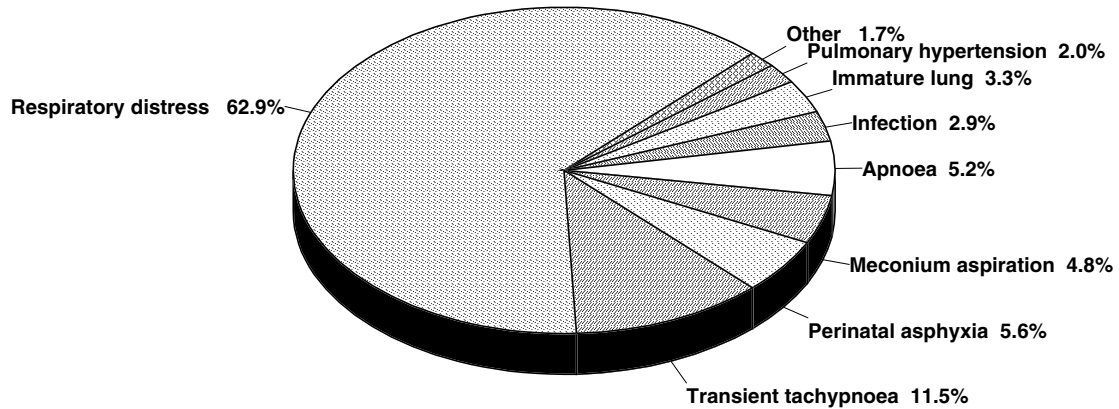
Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS in October 1994. Canberra Hospital joined NICUS in January 1995.

From January 1994, all infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS. Babies with major congenital abnormalities excluded.

FIGURE 14

BIRTHS BY MAIN INDICATION FOR ASSISTED VENTILATION, NSW & ACT 1997



Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies or not ventilated excluded.

TABLE 77

MAIN INDICATION FOR ASSISTED VENTILATION OF BABIES BY GESTATIONAL AGE, NSW & ACT 1997#

Indication	Gestational age (weeks)								TOTAL	
	22-27		28-31		32-36		37+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%
Respiratory distress syndrome	188	82.8	308	74.6	268	66.3	49	19.8	813	62.9
Transient tachypnoea of newborn	1	0.4	50	12.1	76	18.8	22	8.9	149	11.5
Meconium aspiration	0	0.0	1	0.2	2	0.5	59	23.8	62	4.8
Infection	3	1.3	5	1.2	9	2.2	21	8.5	38	2.9
Perinatal asphyxia	2	0.9	5	1.2	14	3.5	51	20.6	72	5.6
Immature lung	25	11.0	18	4.4	0	0.0	0	0.0	43	3.3
Apnoea	7	3.1	22	5.3	21	5.2	17	6.9	67	5.2
Pulmonary hypertension	0	0.0	2	0.5	4	1.0	20	8.1	26	2.0
Congenital anomaly	1	0.4	2	0.5	2	0.5	3	1.2	8	0.6
Cardiac disorder	0	0.0	0	0.0	0	0.0	1	0.4	1	0.1
Peri surgery	0	0.0	0	0.0	5	1.2	2	0.8	7	0.5
Other	0	0.0	0	0.0	3	0.7	3	1.2	6	0.5
TOTAL	227	100.0	413	100.0	404	100.0	248	100.0	1292	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded. Babies not ventilated excluded.

TABLE 78

PROVEN SYSTEMIC INFECTION BY GESTATIONAL AGE, NSW & ACT 1997#

Infection	Gestational age (weeks)								TOTAL	
	22-27		28-31		32-36		37+		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%
No	117	51.5	409	79.6	429	93.1	239	93.0	1194	81.8
Yes	110	48.5	105	20.4	32	6.9	18	7.0	265	18.2
TOTAL	227	100.0	514	100.0	461	100.0	257	100.0	1459	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded.

TABLE 79**SURFACTANT ADMINISTRATION BY GESTATIONAL AGE, NSW & ACT 1992-97#**

Year	Surfactant administration	Gestational age (weeks)								TOTAL	
		22-27		28-31		32-36		37+			
		No.	%	No.	%	No.	%	No.	%	No.	%
1992	No	95	42.2	225	61.0	281	70.6	225	88.2	826	66.2
	Yes	130	57.8	144	39.0	117	29.4	30	11.8	421	33.8
	TOTAL	225	100.0	369	100.0	398	100.0	255	100.0	1247	100.0
1993	No	93	48.7	216	56.8	233	58.8	215	85.0	757	62.0
	Yes	98	51.3	164	43.2	163	41.2	38	15.0	463	38.0
	TOTAL	191	100.0	380	100.0	396	100.0	253	100.0	1220	100.0
1994	No	71	35.0	180	48.1	197	55.5	177	76.6	625	53.7
	Yes	132	65.0	194	51.9	158	44.5	54	23.4	538	46.3
	TOTAL	203	100.0	374	100.0	355	100.0	231	100.0	1163	100.0
1995	No	58	26.4	176	45.7	204	53.5	210	78.9	648	51.8
	Yes	162	73.6	209	54.3	177	46.5	56	21.1	604	48.2
	TOTAL	220	100.0	385	100.0	381	100.0	266	100.0	1252	100.0
1996	No	46	20.3	149	38.8	226	53.3	208	77.9	629	48.3
	Yes	181	79.7	235	61.2	198	46.7	59	22.1	673	51.7
	TOTAL	227	100.0	384	100.0	424	100.0	267	100.0	1302	100.0
1997	No	60	26.4	175	42.4	217	53.7	187	75.4	639	49.5
	Yes	167	73.6	238	57.6	187	46.3	61	24.6	653	50.5
	TOTAL	227	100.0	413	100.0	404	100.0	248	100.0	1292	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS October, 1994. Canberra Hospital joined NICUS in January, 1995. From January 1994, all infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS. Babies with major congenital malformations and babies not ventilated excluded.

TABLE 80**BABIES TREATED FOR PATENT DUCTUS ARTERIOSUS (PDA) BY GESTATIONAL AGE, NSW & ACT 1997#**

PDA/Treatment for PDA	Gestational age (weeks)								TOTAL	
	22-27		28-31		32-36		37+			
	No.	%	No.	%	No.	%	No.	%	No.	%
No treated PDA	142	62.6	461	89.7	456	98.9	1059	88.1		
Indomethacin only	70	30.8	53	10.3	4	0.9	127	10.6		
Surgery only	3	1.3	0	0.0	1	0.2	4	0.3		
Indomethacin & surgery	12	5.3	0	0.0	0	0.0	12	1.0		
TOTAL	227	100.0	514	100.0	461	100.0	1202	100.0		

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Babies with major congenital anomalies excluded.

TABLE 81**BABIES WITH NECROTISING ENTEROCOLITIS (NEC) BY GESTATIONAL AGE, NSW & ACT 1997#**

NEC/Treatment for NEC	Gestational age (weeks)								TOTAL	
	22-27		28-31		32-36		37+			
	No.	%	No.	%	No.	%	No.	%	No.	%
No NEC	204	89.9	495	96.3	448	97.2	256	99.6	1403	96.2
Clinical diagnosis	8	3.5	7	1.4	6	1.3	1	0.4	22	1.5
X-ray diagnosis	7	3.1	8	1.6	4	0.9	0	0.0	19	1.3
Surgery for NEC	8	3.5	4	0.8	3	0.7	0	0.0	15	1.0
TOTAL	227	100.0	514	100.0	461	100.0	257	100.0	1459	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Babies with major congenital anomalies excluded.

continued from p.64

The overall incidence of intraventricular haemorrhage (IVH) among preterm infants (less than 37 weeks gestational age) decreased from 17.0 per cent in 1992 to 16.0 per cent in 1997. In 1997, IVH was most common among less than 28 week gestation infants (37.9 per cent) and 20.9 per cent of these infants had severe IVH (grade 3 or 4). The incidence of severe IVH has remained constant since 1992. Of the surviving infants born before 32 weeks gestation, 96.9 per cent had a head ultrasound examination to detect IVH (Table 83).

The overall proportion of infants with severe grades (Grade 3 or Grade 4) of retinopathy of prematurity (ROP) decreased from 7.5 per cent in 1992 to 4.5 per cent in 1997. In 1997, all infants with severe grades of ROP were less than 32 weeks gestation and 57.6 per cent of the infants less than 28 weeks gestation received either cryo or laser therapy. Importantly, 19.6 per cent of surviving infants 28-31 weeks gestational age did not have an eye examination recorded (Table 84).

TABLE 82

BABIES TREATED WITH MAJOR SURGERY BY GESTATIONAL AGE, NSW & ACT 1997#

Major Surgery	Gestational age (weeks)								TOTAL	
	22-27		28-31		32-36		37+		No.	%
	No.	%	No.	%	No.	%	No.	%		
No	200	88.1	502	97.7	447	97.0	246	95.7	1395	95.6
Yes	27	11.9	12	2.3	14	3.0	11	4.3	64	4.4
TOTAL	227	100.0	514	100.0	461	100.0	257	100.0	1459	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded.

TABLE 83

BABIES WITH INTRAVENTRICULAR HAEMORRHAGE BY GESTATIONAL AGE, NSW & ACT 1997#

Head ultrasound	Gestational age (weeks)								TOTAL	
	22-27		28-31		32-36		No.	%	No.	%
	No.	%	No.	%	No.	%				
No IVH	116	51.1	408	79.4	268	58.1	792	65.9		
Grade 1	44	19.4	56	10.9	20	4.3	120	10.0		
Grade 2	24	10.6	10	1.9	4	0.9	38	3.2		
Grade 3	6	2.6	6	1.2	2	0.4	14	1.2		
Grade 4	12	5.3	7	1.4	0	0.0	19	1.6		
Not examined & lived	0	0.0	23	4.5	164	35.6	187	15.6		
Not examined & died	25	11.0	4	0.8	3	0.7	32	2.7		
TOTAL	227	100.0	514	100.0	461	100.0	1202	100.0		

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded.

TABLE 84

BABIES WITH RETINOPATHY OF PREMATURITY BY GESTATIONAL AGE, NSW & ACT 1997#

Retinopathy of prematurity (ROP)	Gestational age (weeks)						TOTAL	
	22-27		28-31		No.	%	No.	%
	No.	%	No.	%				
No ROP	71	31.3	326	63.4	397	53.6		
Grade 1	29	12.8	39	7.6	68	9.2		
Grade 2	37	16.3	27	5.3	64	8.6		
Grade 3	26	11.5	4	0.8	30	4.0		
Grade 4	2	0.9	1	0.2	3	0.4		
Treated with cryotherapy/laser	17	7.5	2	0.4	19	2.6		
Not examined & lived	0	0.0	101	19.6	101	13.6		
Not examined & died	62	27.3	16	3.1	78	10.5		
TOTAL	227	100.0	514	100.0	741	100.0		

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded.

5.5 SERVICE UTILISATION

Indicators of service utilisation collected as part of NICUS include length of stay in tertiary and non-tertiary centres, the days on assisted ventilation and days in oxygen (Figures 15 and 16, and Table 85). On an individual basis, infants born at the less than 28 weeks gestation consumed most resources. However, as a group those born at 28-31 weeks gestation consumed more bed days than any other group due to their higher numbers. In 1997, the total cohort used 53,033 bed days in a tertiary centre in NSW (1992-97) and the ACT (1995-97) (range 46,091 in 1993 to 54,840 in 1995); as well as 15,072 in a non-tertiary centre (level

2 neonatal unit) in NSW and the ACT (14,287 in 1992 to 16,255 in 1994). Even when these infants leave the neonatal intensive care unit, they still require substantial resources.

In 1997, NICUS registrants used 16,566 days of assisted ventilation (range 15,282 in 1993 to 17,599 in 1992) and 26,590 days of oxygen therapy (range 22,526 in 1992 to 26,895 in 1996). The overall proportion of infants going home on supplemental oxygen has remained constant (2.1 per cent in 1992 to 4.4 per cent in 1996). However the proportion of infants less than 28 weeks gestation requiring home oxygen decreased from a high of 16.2 per cent in 1996 to 9.7 per cent in 1997 (Table 86).

FIGURE 15

MEDIAN NUMBER OF DAYS IN HOSPITAL, OXYGEN THERAPY AND ASSISTED VENTILATION BY GESTATIONAL AGE, NSW & ACT 1997

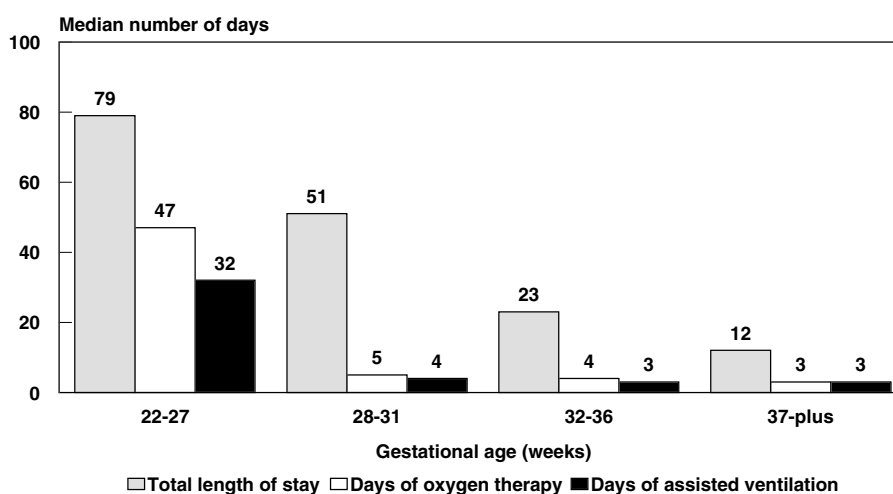
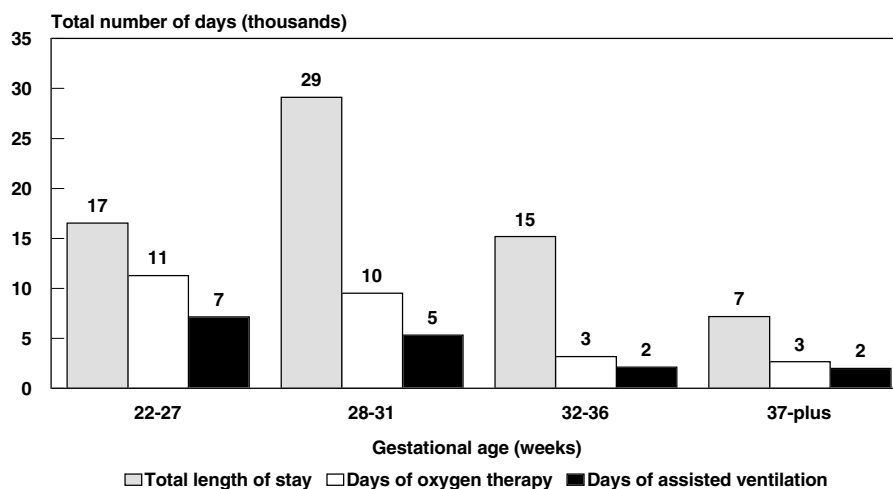


FIGURE 16

TOTAL NUMBER OF DAYS IN HOSPITAL, OXYGEN THERAPY AND ASSISTED VENTILATION BY GESTATIONAL AGE, NSW & ACT 1997



Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 85**SERVICE UTILISATION INDICATORS OF BABIES BY GESTATIONAL AGE, NSW & ACT 1997**

Indicators	Gestational age (weeks)				TOTAL
	22-27	28-31	32-36	37+	
Non tertiary hospital stay (days)					
Minimum	0	0	0	0	0
Maximum	96	81	193	144	193
Sum	1686	7949	4367	1070	15072
Median	0	11	0	0	0
25%percentile	0	0	0	0	0
75%percentile	9	28	13	2	14
Tertiary hospital stay (days)					
Minimum	1	1	1	1	1
Maximum	195	401	189	113	401
Sum	14839	21212	10856	6126	53033
Median	71	34	15	9	19
25% percentile	28	18	8	6	9
75% percentile	92	55	26	17	42
Total hospital stay (days)					
Minimum	1	1	1	1	1
Maximum	195	401	366	164	401
Sum	16525	29161	15223	7196	68105
Median	79	51	23	12	30
25% percentile	41	38	15	8	13
75% percentile	101	65	33	18	57
Mechanical ventilation (days)					
Minimum	0	0	0	0	0
Maximum	108	267	39	81	267
Sum	4142	3063	1504	1901	10610
Median	10	2	2	3	3
25% percentile	3	0	0	1	1
75% percentile	30	5	4	5	5
Continuous positive airway pressure (days)					
Minimum	0	0	0	0	0
Maximum	55	70	27	6	70
Sum	2984	2258	607	107	5956
Median	10	1	0	0	0
25% percentile	0	0	0	0	0
75% percentile	23	4	1	0	2
Assisted ventilation (days)					
Minimum	1	0	0	0	0
Maximum	134	267	66	81	267
Sum	7126	5321	2111	2008	16566
Median	32	4	3	3	3
25% percentile	5	1	1	2	2
75% percentile	47	11	5	5	8
Oxygen therapy (days)					
Minimum	0	0	0	0	0
Maximum	195	401	157	77	401
Sum	11268	9503	3167	2652	26590
Median	47	5	4	3	4
25% percentile	8	1	1	1	1
75% percentile	76	23	6	7	13

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

TABLE 86**BIRTHS BY HOME OXYGEN ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 1992-97#**

Year	Home oxygen	Gestational age (weeks)								TOTAL	
		22-27		28-31		32-36		37+			
		No.	%	No.	%	No.	%	No.	%	No.	%
1992	No	211	92.5	368	98.7	397	99.3	255	99.6	1231	97.9
	Yes	17	7.5	5	1.3	3	0.8	1	0.4	26	2.1
	TOTAL	228	100.0	373	100.0	400	100.0	256	100.0	1257	100.0
1993	No	165	86.4	369	94.6	397	100.0	261	100.0	1192	96.2
	Yes	26	13.6	21	5.4	0	0.0	0	0.0	47	3.8
	TOTAL	191	100.0	390	100.0	397	100.0	261	100.0	1239	100.0
1994	No	178	86.4	469	96.5	409	99.5	233	98.3	1289	96.2
	Yes	28	13.6	17	3.5	2	0.5	4	1.7	51	3.8
	TOTAL	206	100.0	486	100.0	411	100.0	237	100.0	1340	100.0
1995	No	185	84.1	469	95.9	430	99.5	272	99.6	1356	95.9
	Yes	35	15.9	20	4.1	2	0.5	1	0.4	58	4.1
	TOTAL	220	100.0	489	100.0	432	100.0	273	100.0	1414	100.0
1996	No	191	83.8	482	96.2	469	99.4	267	97.8	1409	95.6
	Yes	37	16.2	19	3.8	3	0.6	6	2.2	65	4.4
	TOTAL	228	100.0	501	100.0	472	100.0	273	100.0	1474	100.0
1997	No	205	90.3	496	96.5	458	99.6	254	98.8	1413	96.9
	Yes	22	9.7	18	3.5	2	0.4	3	1.2	45	3.1
	TOTAL	227	100.0	514	100.0	460	100.0	257	100.0	1458	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Liverpool Health Service joined NICUS October, 1994. Canberra Hospital joined NICUS in January, 1995. From January 1994, all infants less than 32 weeks gestation and/or less than or equal to 1500 grams birth weight and admitted to a NICU were included in NICUS. Babies with major congenital anomalies excluded.

TABLE 87**DURATION OF SURVIVAL OF BABIES BY GESTATIONAL AGE, NSW & ACT 1997#**

Gestational age (weeks)	Alive at six months		Age at death (days)						TOTAL	
	No.	%	0-7		8-28		28+		No.	%
			No.	%	No.	%	No.	%		
22	0	0.0	1	100.0	0	0.0	0	0.0	1	0.1
23	2	20.0	3	30.0	2	20.0	3	30.0	10	0.7
24	23	60.5	12	31.6	0	0.0	3	7.9	38	2.6
25	33	68.8	12	25.0	1	2.1	2	4.2	48	3.3
26	45	68.2	13	19.7	5	7.6	3	4.5	66	4.5
27	57	89.1	6	9.4	0	0.0	1	1.6	64	4.4
28	84	93.3	5	5.6	0	0.0	1	1.1	90	6.2
29	110	90.9	8	6.6	2	1.7	1	0.8	121	8.3
30	150	97.4	2	1.3	0	0.0	2	1.3	154	10.6
31	149	100.0	0	0.0	0	0.0	0	0.0	149	10.2
32	102	99.0	1	1.0	0	0.0	0	0.0	103	7.1
33	125	99.2	1	0.8	0	0.0	0	0.0	126	8.6
34	102	99.0	1	1.0	0	0.0	0	0.0	103	7.1
35	49	94.2	2	3.8	0	0.0	1	1.9	52	3.6
36	74	96.1	3	3.9	0	0.0	0	0.0	77	5.3
37	28	87.5	2	6.3	1	3.1	1	3.1	32	2.2
38	50	98.0	1	2.0	0	0.0	0	0.0	51	3.5
39	31	88.6	4	11.4	0	0.0	0	0.0	35	2.4
40	70	94.6	2	2.7	1	1.4	1	1.4	74	5.1
41	41	89.1	4	8.7	0	0.0	1	2.2	46	3.2
42	16	84.2	2	10.5	1	5.3	0	0.0	19	1.3
TOTAL	1341	91.9	85	5.8	13	0.9	20	1.4	1459	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Babies with major congenital anomalies excluded.

5.6 SURVIVAL

Infants with a major congenital anomaly were excluded from the analysis of survival with the exception of data reported in Table 90.

The six-month survival rate for all infants without a major congenital anomaly in the 1997 cohort was 91.9 per cent (range 87.8 per cent in 1992 to 91.2 per cent in 1996). In 1997, survival of infants born at less than 25 weeks gestation was 52.1 per cent (range: 37.1 per cent in 1995 and 1996 to 54.8 per cent in 1993). In 1997, there was a trend for survival to improve with gestational age up to 34 weeks after which it decreased slightly. The survival rate (91.8 per cent) of term registrants was similar to that of preterm infants (91.9 per cent). In 1997, amongst infants who died, 72.0 per cent of deaths occurred during the first week of life (range 64.0 per cent in 1995 to 75.5 in 1994) with a further 11.0 per cent occurring during the first month of life (Table 87).

The six-month survival rate improved with increasing birth weight, ranging from 58.5 per cent for infants in the 600-699 group to 91.1 per cent for the 900-999 gram group and 96.7 per cent for 1,250-1,499 gram infants. Six-month survival continued to improve with increasing birth weight to a maximum of 99.2 per cent for infants of 1,750-1,999 grams birth weight and then decreased slightly (Table 88).

The majority of infants registered in NICUS were born at a tertiary centre. Although gestational age is the most important risk factor for mortality, disease severity is also important. At each gestational age those with severe disease are more likely to be transferred to a neonatal intensive care unit.

In 1997, the six-month survival rate for infants born at 22 to 27 weeks was greater for those born in a tertiary centre (70.7 per cent) compared with those born in a non tertiary centre (66.7 per cent). This trend was also evident for those born between 1992-96. Place of birth did not affect survival for infants in the other gestational age groups (Table 89).

The six-month survival rate for all male infants (93.3 per cent) was similar to that for all female infants (90.2 per cent). The survival rate for males was slightly less than that for females in the 28-31 weeks gestation group (95.3 per cent vs 96.6 per cent), and slightly higher in the less than 28 weeks (71.4 per cent vs 69.6 per cent), 32-36 weeks (98.9 per cent vs 96.9 per cent), 37-41 weeks (96.4 per cent vs 86.9 per cent) and 42-plus weeks (90.0 per cent vs 77.8 per cent).

The six-month survival rate was 91.9 per cent (n=1,172) for singleton infants and 92.0 per cent (n=287) for multiple gestation infants. Plurality did not influence survival in the less than 28 weeks, 28-31 weeks and 32-36 weeks gestational age groups. There were only four infants born of a multiple pregnancy in the 37-41 weeks group and none in the 42-plus weeks group. The survival rate for infants in the less than 28 week gestation group was similar for infants born of a singleton (119/171; 69.6 per cent) and multiple pregnancy (41/56; 73.2 per cent).

There were 292 (16.7 per cent) infants registered who had a major congenital anomaly (Table 90). The incidence of congenital anomalies increased with gestational age. As expected survival was generally lower (82.9 per cent) in the presence of a major congenital anomaly.

Post-mortem examinations were performed on 44 of the 118 infants (37.3 per cent) who died in the 1997 cohort (Figure 17 and Table 91). Post-mortem examinations were most commonly not requested for infants less than 28 weeks gestation (31/67; 46.3 per cent). The highest rate of refusal was in 32-36 weeks gestation group (4/9; 44.4 per cent) and the highest rate of post-mortem examination was in the 28-31 week and the 37-plus week gestation group (57.1 per cent).

TABLE 88

DURATION OF SURVIVAL OF BABIES BY BIRTH WEIGHT, NSW & ACT 1997#

Birth weight (grams)	Alive at six months		Age at death (days)				TOTAL			
	No.	%	No. 0-7	%	No. 8-28	%	No. 28+	%	No.	%
Less than 400	0	0.0	1	50.0	1	50.0	0	0.0	2	0.1
400-499	0	0.0	1	33.3	1	33.3	1	33.3	3	0.2
500-599	5	29.4	7	41.2	3	17.6	2	11.8	17	1.2
600-699	24	58.5	13	31.7	1	2.4	3	7.3	41	2.8
700-799	40	70.2	12	21.1	1	1.8	4	7.0	57	3.9
800-899	35	77.8	8	17.8	1	2.2	1	2.2	45	3.1
900-999	72	91.1	4	5.1	1	1.3	2	2.5	79	5.4
1,000-1,249	183	94.3	9	4.6	1	0.5	1	0.5	194	13.3
1,250-1,499	205	96.7	5	2.4	0	0.0	2	0.9	212	14.5
1,500-1,749	149	97.4	4	2.6	0	0.0	0	0.0	153	10.5
1,750-1,999	118	99.2	1	0.8	0	0.0	0	0.0	119	8.2
2,000-2,499	179	97.8	3	1.6	0	0.0	1	0.5	183	12.5
2,500-2,999	116	96.7	3	2.5	0	0.0	1	0.8	120	8.2
3,000-3,499	110	92.4	5	4.2	3	2.5	1	0.8	119	8.2
3,500-3,999	69	88.5	8	10.3	0	0.0	1	1.3	78	5.3
4,000+	36	97.3	1	2.7	0	0.0	0	0.0	37	2.5
TOTAL	1341	91.9	85	5.8	13	0.9	20	1.4	1459	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded.

TABLE 89**DURATION OF SURVIVAL OF BABIES BY PLACE OF BIRTH AND GESTATIONAL AGE, NSW & ACT 1997#**

Gestational age (weeks)	Place of birth	Alive at six months		0-7		Age at death (days)				TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
22-27	Non tertiary	8	66.7	4	33.3	0	0.0	0	0.0	12	5.3
	Tertiary	152	70.7	43	20.0	8	3.7	12	5.6	215	94.7
	Sub-total	160	70.5	47	20.7	8	3.5	12	5.3	227	100.0
28-31	Non tertiary	47	94.0	3	6.0	0	0.0	0	0.0	50	9.8
	Tertiary	443	96.1	12	2.6	2	0.4	4	0.9	461	90.2
	Sub-total	490	95.9	15	2.9	2	0.4	4	0.8	511	100.0
32-36	Non tertiary	135	97.8	2	1.4	0	0.0	1	0.7	138	30.0
	Tertiary	316	98.1	6	1.9	0	0.0	0	0.0	322	70.0
	Sub-total	451	98.0	8	1.7	0	0.0	1	0.2	460	100.0
37-41	Non tertiary	136	93.8	6	4.1	1	0.7	2	1.4	145	61.2
	Tertiary	83	90.2	7	7.6	1	1.1	1	1.1	92	38.8
	Sub-total	219	92.4	13	5.5	2	0.8	3	1.3	237	100.0
42+	Non tertiary	9	75.0	2	16.7	1	8.3	0	0.0	12	66.7
	Tertiary	6	100.0	0	0.0	0	0.0	0	0.0	6	33.3
	Sub-total	15	83.3	2	11.1	1	5.6	0	0.0	18	100.0
	TOTAL	1335	91.9	85	5.8	13	0.9	20	1.4	1453	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

Babies with major congenital anomalies excluded. Babies born before arrival excluded.

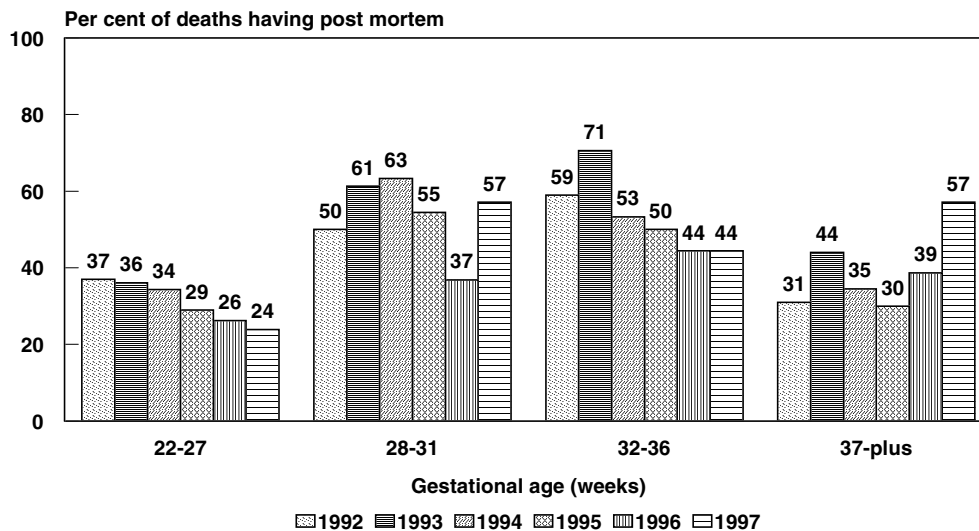
TABLE 90**DURATION OF SURVIVAL OF BABIES BY MAJOR CONGENITAL ANOMALY AND GESTATIONAL AGE, NSW & ACT 1997**

Gestational age (weeks)	Major congenital anomaly	Alive at six months		0-7		Age at death (days)				TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
22-27	No	160	70.5	47	20.7	8	3.5	12	5.3	227	97.8
	Yes	3	60.0	1	20.0	0	0.0	1	20.0	5	2.2
	Sub-total	163	70.3	48	20.7	8	3.4	13	5.6	232	100.0
28-31	No	493	95.9	15	2.9	2	0.4	4	0.8	514	96.1
	Yes	15	71.4	4	19.0	2	9.5	0	0.0	21	3.9
	Sub-total	508	95.0	19	3.6	4	0.7	4	0.7	535	100.0
32-36	No	452	98.0	8	1.7	0	0.0	1	0.2	461	86.2
	Yes	61	82.4	9	12.2	4	5.4	0	0.0	74	13.8
	Sub-total	513	95.9	17	3.2	4	0.7	1	0.2	535	100.0
37-41	No	220	92.4	13	5.5	2	0.8	3	1.3	238	55.7
	Yes	160	84.7	17	9.0	9	4.8	3	1.6	189	44.3
	Sub-total	380	89.0	30	7.0	11	2.6	6	1.4	427	100.0
42+	No	16	84.2	2	10.5	1	5.3	0	0.0	19	86.4
	Yes	3	100.0	0	0.0	0	0.0	0	0.0	3	13.6
	Sub-total	19	86.4	2	9.1	1	4.5	0	0.0	22	100.0
TOTAL		1583	90.4	116	6.6	28	1.6	24	1.4	1751	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.

FIGURE 17

DEATHS BY POST-MORTEM EXAMINATION AND GESTATIONAL AGE, NSW & ACT 1992-97#



Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Infants with major congenital anomalies excluded.

TABLE 91

POST-MORTEM EXAMINATION OF BABIES BY GESTATIONAL AGE, NSW & ACT 1997#

Post-mortem	22-27		28-31		32-36		37+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Not requested	31	46.3	4	19.0	1	11.1	4	19.0	40	33.9
Refused	20	29.9	5	23.8	4	44.4	5	23.8	34	28.8
Done	16	23.9	12	57.1	4	44.4	12	57.1	44	37.3
TOTAL	67	100.0	21	100.0	9	100.0	21	100.0	118	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
Babies with major congenital anomalies excluded.

PART 6: BIRTH DEFECTS

6.1 BIRTH DEFECTS AMONG STILLBORN AND LIVEBORN INFANTS

A birth defect is any structural defect detected during pregnancy or at birth, excluding birth injuries and minor anomalies such as skin tags, talipes, birthmarks or clefty hips. A list of common exclusions is shown in Appendix 1. Descriptions of some common birth defects which are included in this chapter are shown in Appendix 2. Information on the NSW Birth Defects Register is included in the Data Sources section of the report.

This section reports on birth defects detected during pregnancy or in the first year of life for 1991-96 and birth defects detected during pregnancy or at birth for 1997.

6.1.1 TRENDS IN REPORTED BIRTH DEFECTS

The reported number of infants with birth defects rose from about 1,600 in 1991 to about 2,100 per year in 1992 and 1993, and then slowly decreased to 1,880 in 1996 (Table 92). In 1997, 1,109 cases of birth defects detected during pregnancy or at birth were reported. The improved reporting from 1992 followed the introduction of a notification system for individual health care providers in that year, and improved reporting from cytogenetic laboratories and paediatric referral hospitals.

6.1.2 BIRTH DEFECTS BY DIAGNOSTIC CATEGORY

The most common categories of birth defects for births of more than 20 weeks gestation or with a birth weight greater than 400 grams are presented in Table 93. Birth defects are classified using

TABLE 92

BIRTH DEFECT CASES, NSW 1991-97#

Year	Birth defect cases	Births	Rate/1,000births
1991	1632	86084	19.0
1992	2142	88179	24.3
1993	2142	87167	24.6
1994	1989	87270	22.8
1995	1947	86650	22.5
1996	1880	85701	21.9
1997	1109	87416	12.7

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

the British Paediatric Association (BPA) Classification of Diseases², which is primarily organised by body system. For infants with more than one defect, each defect is counted separately. The number of birth defects reported therefore exceeds the number of affected infants.

Over the period 1991-97, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genitourinary system. In 1996, the rate of defects of the musculoskeletal system was lower than the previous five years (8.8 versus 9.7 per 1,000), as was the rate of congenital malformation syndromes (0.3 versus 0.5 per 1,000).

TABLE 93

BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1991-97#

Diagnostic category	No. defects			Rate/1,000 births				
	1991-95	1996	1997	1991-97	1991-95	1996	1997	1991-97
Defects of nervous system								
Anencephaly	64	12	10	86	0.1	0.1	0.1	0.1
Spina bifida	220	26	26	272	0.5	0.3	0.3	0.4
Encephalocele	46	7	6	59	0.1	0.1	0.1	0.1
Microcephaly	146	33	13	192	0.3	0.4	0.1	0.3
Congenital hydrocephalus	223	30	21	274	0.5	0.4	0.2	0.5
Other nervous system defects	333	77	47	457	0.8	0.9	0.5	0.8
Total	1032	185	123	1340	2.4	2.2	1.4	2.2
Defects of eye								
Anophthalmos/ microphthalmos	86	10	10	106	0.2	0.1	0.1	0.2
Buphthalmos/ congenital glaucoma	36	5	0	41	0.1	0.1	0.0	0.1
Congenital cataract	87	18	6	111	0.2	0.2	0.1	0.2
Other eye defects	186	41	13	240	0.4	0.5	0.1	0.4
Total	395	74	29	498	0.9	0.9	0.3	0.8
Defects of ear, face and neck								
Absence/ stricture auditory canal	38	10	9	57	0.1	0.1	0.1	0.1
Absence auricle	9	1	1	11	0.0	0.0	0.0	0.0
Other ear defects	123	19	21	163	0.3	0.2	0.2	0.3
Defects of face and neck	40	8	7	55	0.1	0.1	0.1	0.1
Total	210	38	38	286	0.5	0.4	0.4	0.5
Defects of cardiovascular system								
Transposition of great vessels	212	41	23	276	0.5	0.5	0.3	0.5
Tetralogy of Fallot	148	35	13	196	0.3	0.4	0.1	0.3
Ventricular septal defect	1034	206	110	1350	2.4	2.4	1.3	2.2
Atrial septal defect	1039	199	100	1338	2.4	2.3	1.1	2.2
Heart valve defects	819	159	71	1049	1.9	1.9	0.8	1.7

2. British Paediatric Association Classification of Diseases (a perinatal supplement compatible with the ninth revision of the WHO International Classification of Diseases). British Paediatric Association, London, 1979.

TABLE 93 (CONT)
BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1991-97#

Diagnostic category	No. defects				Rate/1,000 births			
	1991-95	1996	1997	1991-97	1991-95	1996	1997	1991-97
Defects of cardiovascular system (cont.)								
Patent ductus arteriosus > 37 weeks	700	108	61	869	1.6	1.3	0.7	1.4
Coarctation of aorta	179	33	12	224	0.4	0.4	0.1	0.4
Other defects of aorta	102	15	4	121	0.2	0.2	0.0	0.2
Defects of pulmonary artery	143	30	6	179	0.3	0.4	0.1	0.3
Other cardiovascular defects	910	177	72	1159	2.1	2.1	0.8	1.9
Total	5286	1003	472	6761	12.1	11.7	5.4	11.1
Defects of respiratory system								
Defects of nose	77	13	11	101	0.2	0.2	0.1	0.2
Defects of larynx, trachea and bronchus	82	11	2	95	0.2	0.1	0.0	0.2
Defects of lung	120	20	11	151	0.3	0.2	0.1	0.2
Other respiratory defects	3	1	0	4	0.0	0.0	0.0	0.0
Total	282	45	24	351	0.6	0.5	0.3	0.6
Defects of gastrointestinal system								
Cleft palate only	411	77	53	541	0.9	0.9	0.6	0.9
Cleft lip only	160	42	26	228	0.4	0.5	0.3	0.4
Cleft palate and cleft lip	268	42	47	357	0.6	0.5	0.5	0.6
Other gastrointestinal defects	504	106	37	647	1.2	1.2	0.4	1.1
Oesophageal atresia only	16	1	1	18	0.0	0.0	0.0	0.0
Tracheo-oesophageal fistula (TOF) only	37	5	4	46	0.1	0.1	0.0	0.1
Oesophageal atresia with TOF	83	18	10	111	0.2	0.2	0.1	0.2
Atresia/stenosis of small intestine	131	27	18	176	0.3	0.3	0.2	0.3
Atresia/stenosis of anus	158	30	20	208	0.4	0.4	0.2	0.3
Total	1768	348	216	2332	4.1	4.1	2.5	3.8
Defects of genitourinary system								
Defects of female genitals	92	8	6	106	0.2	0.1	0.1	0.2
Undescended testis	458	87	31	576	1.1	1.0	0.4	0.9
Hypospadias	1079	190	121	1390	2.5	2.2	1.4	2.3
Epispadias	19	8	5	32	0.0	0.1	0.1	0.1
Chordee	264	39	18	321	0.6	0.5	0.2	0.5
Indeterminate sex/ ambiguous genitalia	59	17	9	85	0.1	0.2	0.1	0.1
Renal agenesis/ dysgenesis	146	35	28	209	0.3	0.4	0.3	0.3
Obstructive defects of renal pelvis and ureter	663	169	66	898	1.5	2.0	0.8	1.5
Other genitourinary system defects	719	141	71	931	1.7	1.6	0.8	1.5
Total	3499	694	355	4548	8.0	8.1	4.1	7.5
Defects of musculoskeletal system								
Congenital dislocation of the hips	929	142	122	1193	2.1	1.7	1.4	2.0
Talipes equinovarus	277	59	32	368	0.6	0.7	0.4	0.6
Polydactyly	470	84	88	642	1.1	1.0	1.0	1.1
Syndactyly	185	13	24	222	0.4	0.2	0.3	0.4
Reduction deformities of limbs	377	61	64	502	0.9	0.7	0.7	0.8
Craniosynostosis	505	81	7	593	1.2	0.9	0.1	1.0
Diaphragmatic hernia	119	30	18	167	0.3	0.4	0.2	0.3
Exomphalos	69	20	9	98	0.2	0.2	0.1	0.2
Gastroschisis	77	12	19	108	0.2	0.1	0.2	0.2
Other musculoskeletal defects	1222	248	172	1642	2.8	2.9	2.0	2.7
Total	4230	750	555	5535	9.7	8.8	6.3	9.1
Defects of the integumentary system								
Cystic hygroma	272	76	55	403	0.6	0.9	0.6	0.7
Chromosomal defects	43	12	11	66	0.1	0.1	0.1	0.1
Trisomy 21	534	112	89	735	1.2	1.3	1.0	1.2
Trisomy 13	24	5	4	33	0.1	0.1	0.0	0.1
Trisomy 18	104	12	13	129	0.2	0.1	0.1	0.2
Other chromosomal defects	203	48	20	271	0.5	0.6	0.2	0.4
Turner syndrome	39	7	4	50	0.1	0.1	0.0	0.1
Total	904	184	130	1218	2.1	2.1	1.5	2.0
Situs inversus	20	5	1	26	0.0	0.1	0.0	0.0
Congenital malformation syndromes	197	29	21	247	0.5	0.3	0.2	0.4
Congenital rubella syndrome	4	2	0	6	0.0	0.0	0.0	0.0
Congenital cytomegalovirus infection	11	3	1	15	0.0	0.0	0.0	0.0
Congenital toxoplasmosis	3	0	0	3	0.0	0.0	0.0	0.0
Non-immune hydrops foetalis	77	26	20	123	0.2	0.3	0.2	0.2
Other and unspecified birth defects	385	119	18	522	0.9	1.4	0.2	0.9
TOTAL	18618	3593	2069	24280	42.8	41.9	23.7	39.9

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

6.1.3 INFANT CHARACTERISTICS

In the period 1991-97, a single defect was reported in 63.3 per cent of infants, two defects in 17.1 per cent, three defects in 7.5 per cent, and four or more defects in 12.0 per cent of cases. The sex was reported as male in 59.7 per cent, female in 39.7 per cent and indeterminate in 0.4 per cent of infants.

Birth defects were more common in preterm and post-term infants than infants born at term (Table 94). Birth defects were also more common in infants born of a multiple pregnancy than a

singleton pregnancy: in 1991-97, 2.0 per cent of singleton, 3.1 per cent of twins and 2.3 per cent of triplets were born with a birth defect.

Almost 10 per cent of infants born with birth defects died in the perinatal period, with stillbirths contributing almost half the perinatal deaths (Table 95). These figures comprise all birth defect cases, including those where the cause of death may not be directly related to the birth defect(s). By comparison, the perinatal mortality rate among all births reported to the NSW Midwives Data Collection was 9.6 per 1,000 in 1997 (Section 1.17).

TABLE 94

BIRTH DEFECT CASES BY GESTATIONAL AGE, NSW 1991-97#

Gestational age (weeks)	1991-95		1996		Year 1997		1991-97		Rate/1,000
	No.	%	No.	%	No.	%	No.	%	
20 - 27	351	3.6	82	4.4	78	7.0	511	4.0	140.7
28 - 31	296	3.0	57	3.0	28	2.5	381	3.0	89.5
32 - 36	1132	11.5	223	11.9	123	11.1	1478	11.5	46.2
37 - 41	7505	76.2	1392	74.0	854	77.0	9751	75.9	17.8
42 +	304	3.1	49	2.6	24	2.2	377	2.9	20.1
Not stated	264	2.7	77	4.1	2	0.2	343	2.7	-
TOTAL	9852	100.0	1880	100.0	1109	100.0	12841	100.0	21.1

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

TABLE 95

BIRTH DEFECT CASES BY PREGNANCY OUTCOME, NSW 1991-97#

Pregnancy outcome	1991-95		1996		Year 1997		1991-97	
	No.	%	No.	%	No.	%	No.	%
Stillbirth	443	4.5	106	5.6	89	8.0	638	5.0
Live born/ neonatal death	477	4.8	74	3.9	73	6.6	624	4.9
Live born/ postneonatal death	55	0.6	22	1.2	5	0.5	82	0.6
Live born surviving	8877	90.1	1678	89.3	942	84.9	11497	89.5
TOTAL	9852	100.0	1880	100.0	1109	100.0	12841	100.0

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported. Postneonatal mortality was recorded from 1993.

6.1.4 MATERNAL CHARACTERISTICS

After maternal age of 20 years, the incidence of birth defects increased with increasing maternal age (Table 96). While the rate of birth defects is higher in older women, the majority of births occur in younger women: in 1991-97 80.5 per cent of babies with birth defects were born to women aged less than 35 years.

Over 1991-97, 202 babies of Aboriginal or Torres Strait Islander mothers were reported to have birth defects. The rate of birth defects among these babies was 18.2 per 1,000 compared with 21.4 per cent for non-Aboriginal mothers.

TABLE 96

BIRTH DEFECT CASES BY MATERNAL AGE, NSW 1993-97#

Maternal age (years)	1991-95		1996		1997		1991-97		Rate/1,000
	No.	%	No.	%	No.	%	No.	%	
Under 20	533	5.4	81	4.3	70	6.3	684	5.3	21.7
20 - 24	1772	18.0	285	15.2	209	18.8	2266	17.6	19.4
25 - 29	2946	29.9	537	28.6	329	29.7	3812	29.7	19.0
30 - 34	2748	27.9	525	27.9	296	26.7	3569	27.8	20.1
35 - 39	1106	11.2	255	13.6	166	15.0	1527	11.9	22.1
40 - 44	219	2.2	54	2.9	34	3.1	307	2.4	28.0
45+	22	0.2	1	0.1	3	0.3	26	0.2	59.9
Not stated	506	5.1	142	7.6	2	0.2	650	5.1	-
TOTAL	9852	100.0	1880	100.0	1109	100.0	12841	100.0	21.1

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

6.2 BIRTH DEFECTS AMONG TERMINATIONS OF PREGNANCY, SPONTANEOUS ABORTIONS AND UNKNOWN OUTCOMES OF PREGNANCY

In the period 1991-97, about 125 terminations of pregnancy per year were reported to the NSW Birth Defects Register (Table 97). Over half of these terminations of pregnancy were associated with a chromosomal abnormality, the most common of which was Down syndrome (Table 98). The second most common group of diagnoses was neural tube defects, which were associated with 25.6 per cent of reported terminations of pregnancy. In 1991-97, 53.6 per cent of terminations were reported in women aged less than 35 years (Table 99).

For spontaneous abortions, cytogenetic analysis is only carried out in cases of habitual abortion and the numbers presented therefore underestimate the number of spontaneous abortions which occur due to birth defects. Descriptions of some diagnostic terms used here are included in Appendix 2.

TABLE 97

PREGNANCIES WITH FETUSES AFFECTED BY BIRTH DEFECTS AND RESULTING IN SPONTANEOUS ABORTION, TERMINATION OF PREGNANCY OR UNKNOWN OUTCOME, NSW 1991-97

Pregnancy outcome	Year			
	1991-95 No.	1996 No.	1997 No.	1991-97 No.
Spontaneous abortion	185	63	73	321
Termination of pregnancy less than 20 weeks gestation	656	106	126	888
Unknown outcome	433	167	0	600
TOTAL	1274	336	199	1809

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 98

BIRTH DEFECTS AMONG SPONTANEOUS ABORTIONS, TERMINATIONS OF PREGNANCY AND UNKNOWN OUTCOME OF PREGNANCY BY DIAGNOSTIC CATEGORY, NSW 1991-97

Diagnostic category	1991-95			Year 1996			1997			1991-97		
	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Defects of nervous system												
Neural tube defects	12	163	3	1	40	4	0	24	13	227	7	
Other nervous system defects	7	54	8	0	13	3	1	10	8	77	11	
Total	19	217	11	1	53	7	1	34	21	304	18	
Defects of eye	1	1	1	0	2	0	0	0	1	3	1	
Defects of ear, face and neck	0	3	1	0	1	0	0	2	0	6	1	
Defects of cardiovascular system	1	44	26	0	17	15	1	35	2	96	41	
Defects of respiratory system	0	8	1	0	2	2	0	7	0	17	3	
Defects of gastrointestinal system	2	38	12	1	9	1	0	10	3	57	13	
Defects of genitourinary system	6	77	14	0	11	6	2	38	8	126	20	
Defects of musculoskeletal system	12	180	21	3	24	7	0	65	15	269	28	
Defects of integumentary system	10	69	28	0	15	7	2	11	12	95	35	
Chromosomal defects												
Trisomy 21	17	158	159	4	20	63	8	26	29	204	222	
Trisomy 13	7	23	23	2	2	8	3	1	12	26	31	
Trisomy 18	13	62	53	3	10	21	4	10	20	82	74	
Turner syndrome	26	36	30	5	4	11	8	5	39	45	41	
Other chromosomal defects	111	121	112	47	12	45	48	12	206	145	157	
Total	174	400	377	61	48	148	71	54	306	502	525	
Situs inversus	0	0	0	0	0	0	0	1	0	1	0	
Congenital malformation syndromes	0	11	1	0	2	0	0	7	0	20	1	
Non-immune hydrops foetalis	0	18	5	0	8	2	2	10	2	36	7	
Other and unspecified birth defects	0	19	15	0	1	5	0	6	0	26	20	
TOTAL	225	1085	513	66	193	200	79	280	370	1558	713	

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

TABLE 99

TRENDS IN REPORTED TERMINATIONS OF PREGNANCY ASSOCIATED WITH BIRTH DEFECTS BY MATERNAL AGE, 1991-97

Year	Maternal age (years)																TOTAL	
	15 - 19		20 - 24		25 - 29		30 - 34		35 - 39		40 - 44		45 +		Not stated			
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%		
1991	0	0.0	2	2.7	12	16.4	11	15.1	28	38.4	18	24.7	1	1.4	1	1.4	73	100.0
1992	6	4.0	11	7.3	36	24.0	24	16.0	43	28.7	24	16.0	3	2.0	3	2.0	150	100.0
1993	4	2.9	15	10.7	29	20.7	28	20.0	37	26.4	16	11.4	1	0.7	10	7.1	140	100.0
1994	5	3.6	26	18.8	18	13.0	18	13.0	26	18.8	10	7.2	1	0.7	34	24.6	138	100.0
1995	6	3.9	19	12.3	29	18.7	38	24.5	30	19.4	14	9.0	0	0.0	19	12.3	155	100.0
1996	3	2.8	16	15.1	21	19.8	24	22.6	22	20.8	10	9.4	0	0.0	10	9.4	106	100.0
1997	2	1.6	13	10.3	32	25.4	28	22.2	22	17.5	10	7.9	1	0.8	18	14.3	126	100.0
1991-97	26	2.9	102	11.5	177	19.9	171	19.3	208	23.4	102	11.5	7	0.8	95	10.7	888	100.0

Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

6.3 TRENDS IN SELECTED BIRTH DEFECTS

Trends in a selection of common birth defects are shown in Figures 18 to 25. For 1991-96, malformations reported up to one year of age are included and for 1997 malformations reported during pregnancy or at birth are included.

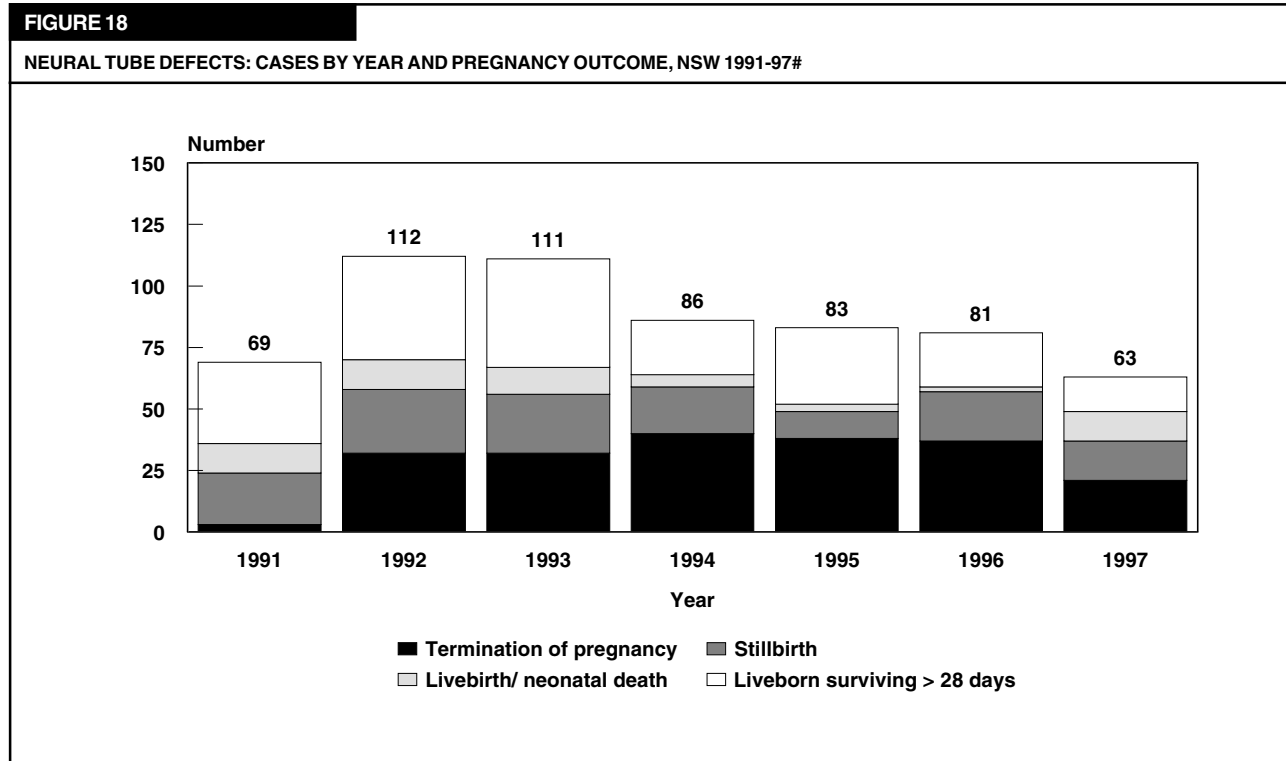
The reported number of cases of neural tube defects increased from 1991 to 1992 (Figure 18) following improved reporting of birth defects associated with terminations of pregnancy. The number of infants born with neural tube defects slowly decreased from 80 in 1992 to 79 in 1993, 46 in 1994, 45 in 1995, 44 in 1996 and 42 in 1997. The number of reported terminations of pregnancy increased from 32 in 1992 and 1993 to 40 in 1994 and dropped to 21 in 1997. As terminations of pregnancy were reported on a voluntary basis until 1997, it is likely that these are under-reported to the Register.

Over the period 1991-97, the number of cases of isolated cleft palate ranged from 47 to 91 per year and from 73 to 101 per year for total cleft lip (including cases of cleft lip and cleft palate)(Figures 19 and 20). The small number of terminations of pregnancy reported were among cases with either neural tube defects, chromosomal abnormalities or multiple abnormalities in addition to the cleft lip and/or cleft palate.

The number of reported cases of hypospadias varied from 121 to 238 per year (Figure 21), and cases of limb reduction defects varied from 44 to 63 per year (Figure 22).

Between 1991 and 1996, the total number of cases of chromosomal abnormalities varied from 232 to 269, and the number of infants born with chromosomal abnormalities varied from 168 to 185 (Figure 23). There was a slight decrease in the total number of cases reported per year over the period. There was no trend observed in the number of Down syndrome cases, which comprise about half of all cases with chromosomal abnormalities (Figure 24). In 1997, reporting is restricted to abnormalities detected during pregnancy or at birth and this accounts for the relatively fewer cases of chromosomal abnormalities reported.

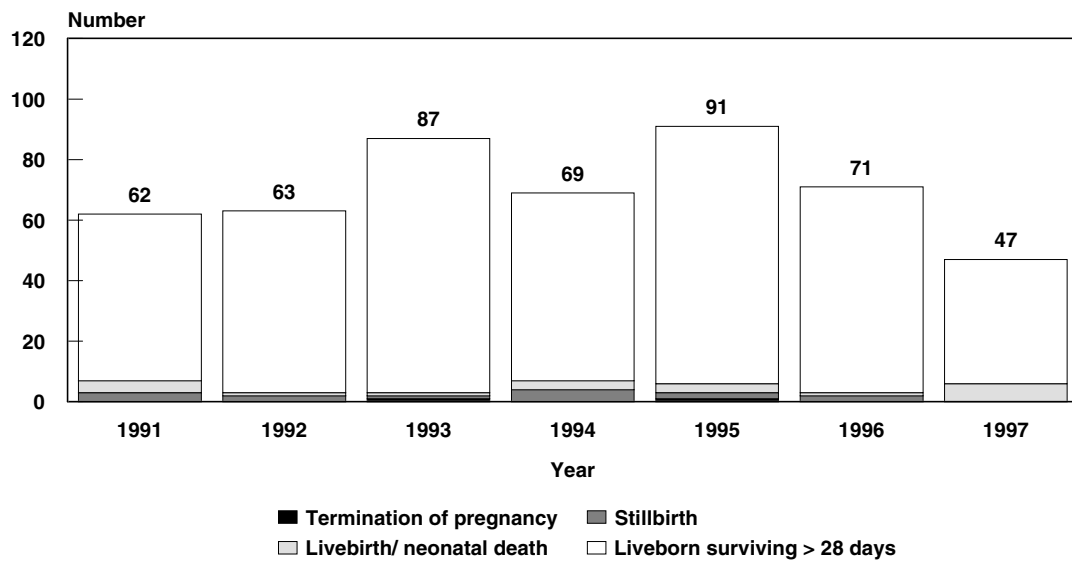
The number of cases reported with renal agenesis and dysgenesis has remained fairly stable at about 56 to 66 per year (Figure 25).



Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.
 # For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 19

CLEFT PALATE: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#

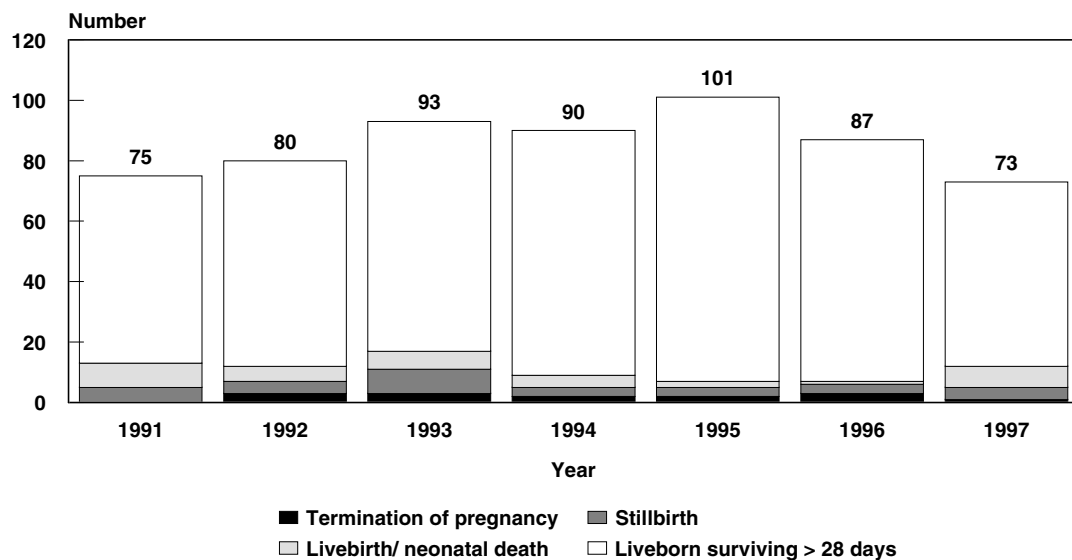


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Includes cases of isolated cleft palate only. For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 20

TOTAL CLEFT LIP: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#

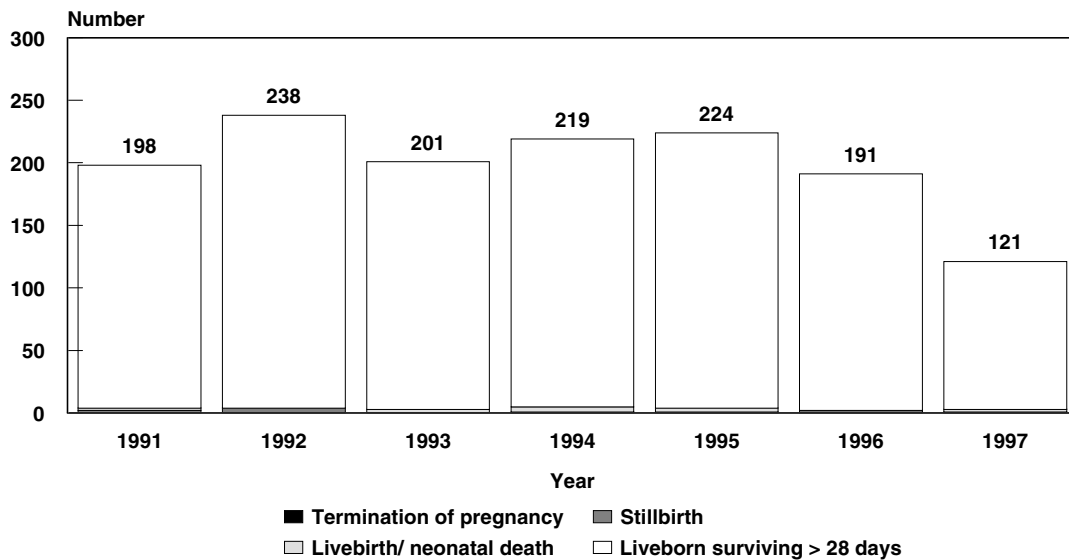


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Includes cases of isolated cleft lip and combined cleft lip/cleft palate. For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 21

HYPOSPADIAS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#

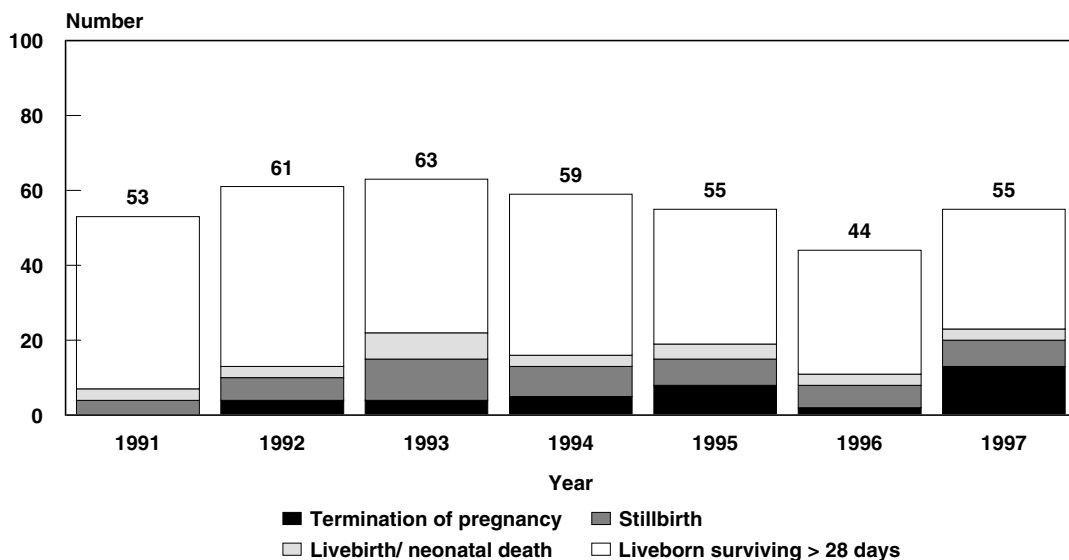


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 22

LIMB REDUCTION DEFECTS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#

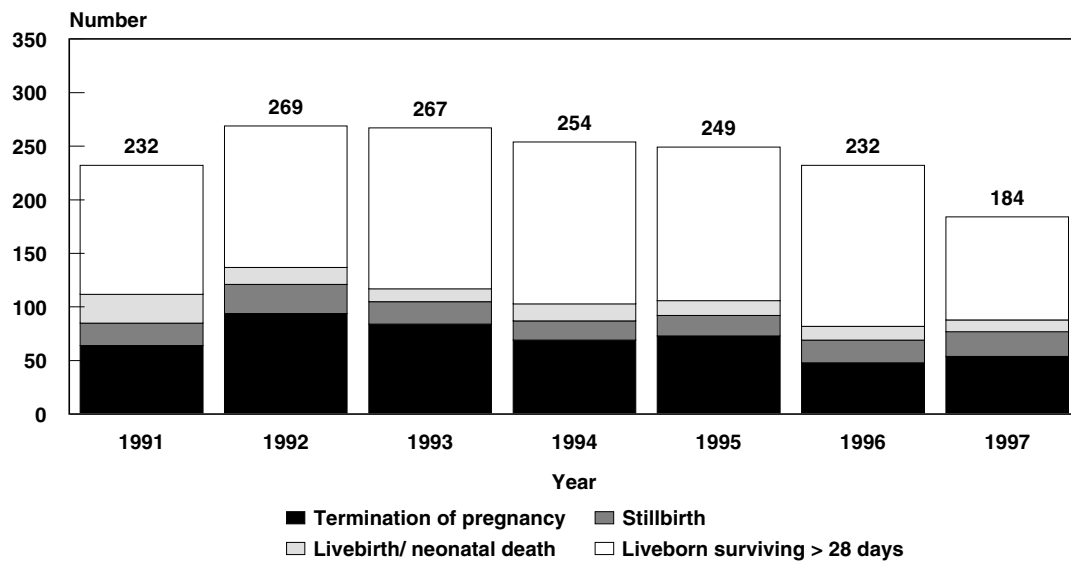


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 23

CHROMOSOMAL ABNORMALITIES: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#

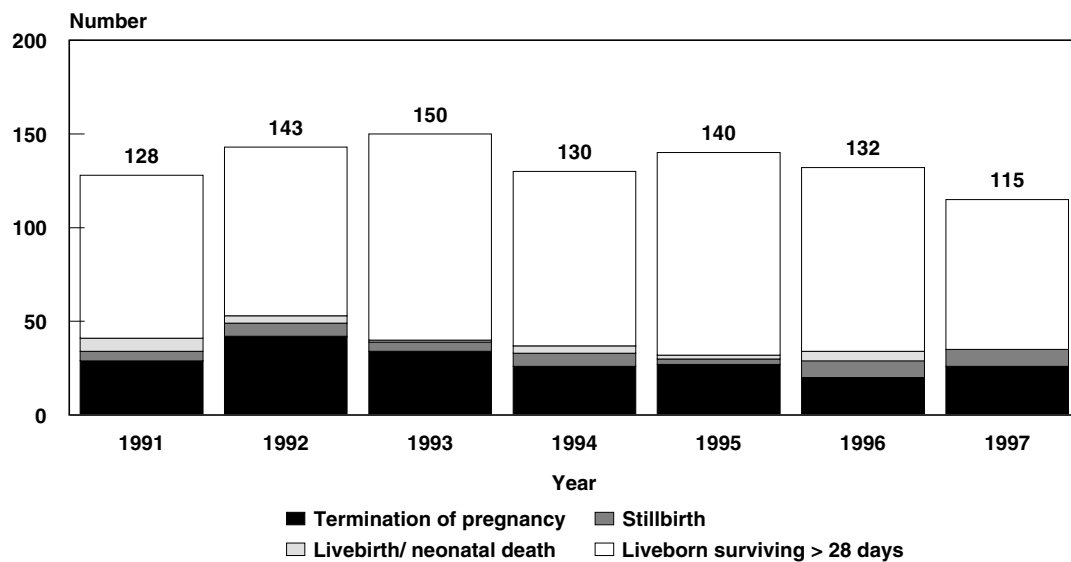


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 24

DOWN SYNDROME: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#

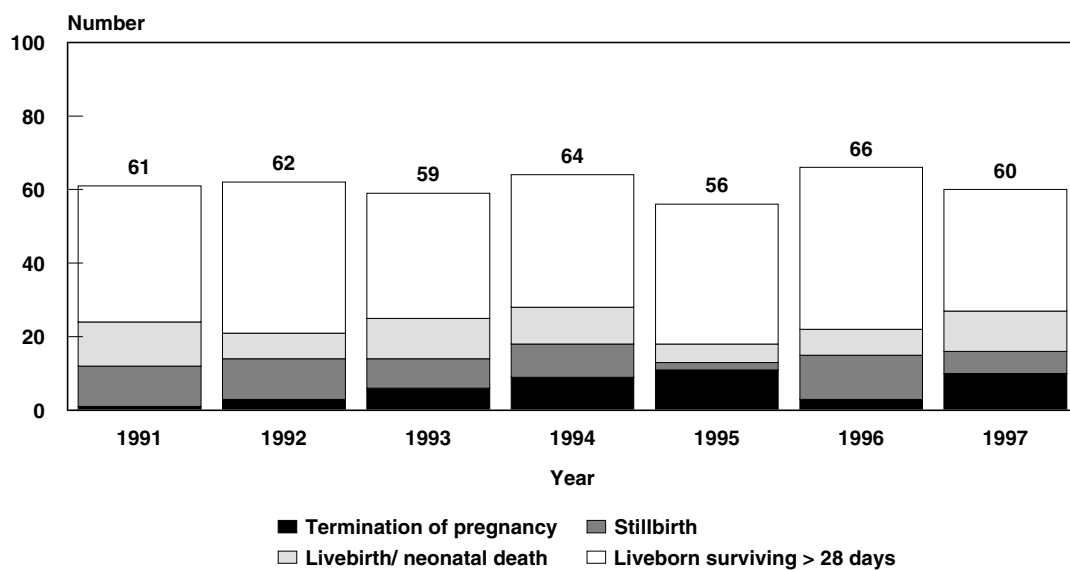


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

FIGURE 25

RENAL AGENESIS AND DYSGENESIS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1991-97#



Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Includes cystic renal disease and excludes obstructive defects of the renal pelvis, abnormally shaped kidney, double/triple kidney, ectopic kidney and enlarged kidney without dysplasia. For 1991-96, cases reported during pregnancy and up to one year of age are included. For 1997, cases reported during pregnancy or at birth are reported.

6.4 BIRTH DEFECTS BY NSW HEALTH AREAS

Crude rates of reported birth defects for NSW Health Areas and rates standardised for maternal age are shown in Table 100. For 1991-96, birth defects detected up to one year of age are reported and for 1997 birth defects detected during pregnancy or at birth are reported. The denominator population includes livebirths and stillbirths among NSW residents as reported to the MDC. The rate of birth defects increases with increasing maternal age (Table 96). In order to allow direct comparison of geographic areas, rates have been standardised to the maternal age distribution of births in NSW in 1991.

Information shown in these tables reflects the reporting practices of the various Areas, and numbers may not be complete, particularly for earlier years. In interpreting birth defect rates among NSW Areas it should also be noted that infants with birth defects who are born to mothers resident in areas close to interstate borders may be transferred interstate for care and therefore may not be reported to the BDR.

Over the period 1991-97 standardised rates of reported birth defects were lowest in the Far West Area and highest in the Central Coast Area. Further examination of information on birth defects reported among residents of Central Coast Area showed that the higher reported rate of birth defects was not localised and was not due to a higher rate of a specific defect within the Area. The higher rate is most likely due to better overall reporting of birth defects in the Central Coast Area. The difference in rates between the Central Coast and the remainder of NSW is gradually decreasing, associated with improvements in statewide reporting.

Birth defect rates may vary markedly from year to year for some areas where the numbers of reported birth defects are small. For these areas, small variations in numbers of birth defect cases may result in a marked variation in the birth defect rate. The wide confidence intervals for some areas reflect this variability.

TABLE 100

BIRTH DEFECTS IN NSW HEALTH AREAS, 1991-97#

Health Areas	1991-95			1996			Year			1997			1991-97 Standardised rate per 1,000 births	99% confidence intervals
	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births		
Central Sydney	856	24.7	23.8	136	19.0	17.9	79	11.7	10.7	1071	22.1	21.2	19.5-23.1	
Northern Sydney	1073	24.4	23.0	202	22.9	21.0	133	14.6	14.9	1408	22.8	21.6	19.8-23.5	
Western Sydney	1252	24.8	24.2	246	24.2	23.3	128	11.9	12.1	1626	22.8	22.2	20.8-23.7	
Wentworth	453	18.8	18.4	105	24.8	23.4	93	19.0	18.9	651	19.6	19.2	17.2-21.2	
South Western Sydney	1379	23.0	22.6	277	22.6	20.7	164	12.9	13.3	1820	21.4	20.9	19.6-22.2	
Central Coast	500	26.2	26.3	77	20.5	20.7	70	18.1	18.4	647	24.3	24.4	22.0-27.0	
Hunter	947	25.4	24.9	161	21.6	21.0	84	11.8	11.8	1192	23.0	22.4	20.7-24.2	
Illawarra	517	22.2	22.3	102	23.8	22.6	48	10.7	10.7	667	20.8	20.7	18.6-22.9	
South Eastern Sydney	1130	25.5	24.2	222	25.3	24.6	126	13.6	13.3	1478	23.7	22.6	21.0-24.4	
Northern Rivers	272	17.8	18.2	56	18.8	18.7	68	22.7	23.2	396	18.6	18.9	16.6-21.6	
Mid North Coast	366	23.5	23.6	62	21.0	20.5	51	16.4	17.2	479	22.1	22.2	19.6-25.0	
New England	293	20.9	21.2	57	19.9	20.4	31	12.4	12.9	381	19.6	20.0	17.4-22.8	
Macquarie	232	27.0	26.9	44	25.1	26.3	22	13.6	14.2	298	24.9	25.0	21.3-29.2	
Mid Western	289	23.4	23.3	43	17.9	17.2	23	9.3	9.3	355	20.6	20.4	17.6-23.4	
Far West	55	17.0	16.0	10	17.5	18.3	17	28.1	29.0	82	18.6	18.1	12.8-24.7	
Greater Murray	401	21.6	22.0	63	18.4	18.4	55	16.2	15.7	519	20.4	20.7	18.4-23.2	
Southern	269	25.2	24.1	40	22.0	20.1	24	13.4	13.8	333	23.3	22.3	19.2-25.8	
TOTAL NSW	10284	23.6	23.0	1903	22.2	21.0	1216	13.9	13.9	13403	22.0	21.4	21.0-21.9	

Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

Cases include terminations of pregnancy, stillbirths and livebirths where the place of residence is known. For 1991-96, birth defects detected up to one year of age are reported and for 1997 birth defects detected at birth are reported.

PART 7: NSW HOSPITALS

7.1 ONSET AND AUGMENTATION OF LABOUR IN SELECTED HOSPITALS

Table 101 gives onset or augmentation of labour for individual hospitals where the number of reported deliveries exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW Total.

Rates of augmentation and induction of labour depend on many factors, including rates of maternal medical conditions and obstetric complications. Caution should therefore be exercised in interpreting differences in the rates of interventions between hospitals.

TABLE 101

CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Onset and augmentation of labour																TOTAL				
	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented oxytocics/prostagl.##		No labour		Induced-oxytocics/prostagl.		Induced-ARM only		Induced-ARM+oxytocics/prostagl.		Induced-other###		Not stated		No.	%	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
Central Sydney																					
King George V*	3011	62.3	0	0.0	891	18.4	484	10.0	279	5.8	72	1.5	92	1.9	1	0.0	0	0.0	4830	100.0	
NSW Private	103	36.1	29	10.2	25	8.8	49	17.2	28	9.8	4	1.4	47	16.5	0	0.0	0	0.0	285	100.0	
ALL HOSPITALS	3114	60.9	29	0.6	916	17.9	533	10.4	307	6.0	76	1.5	139	2.7	1	0.0	0	0.0	5115	100.0	
Northern Sydney																					
Royal North Shore*	1102	43.0	0	0.0	496	19.3	402	15.7	164	6.4	22	0.9	374	14.6	4	0.2	0	0.0	2564	100.0	
Hornsby	337	33.5	117	11.6	172	17.1	117	11.6	47	4.7	16	1.6	199	19.8	0	0.0	0	0.0	1005	100.0	
Manly	339	39.7	102	12.0	111	13.0	86	10.1	56	6.6	21	2.5	137	16.1	1	0.1	0	0.0	853	100.0	
Mona Vale	379	47.2	64	8.0	85	10.6	59	7.3	64	8.0	7	0.9	145	18.1	0	0.0	0	0.0	803	100.0	
Ryde	399	54.5	51	7.0	61	8.3	89	12.2	63	8.6	6	0.8	63	8.6	0	0.0	0	0.0	732	100.0	
Mater, North Sydney	554	31.9	187	10.8	228	13.1	287	16.5	110	6.3	60	3.5	309	17.8	0	0.0	0	0.0	1735	100.0	
Sydney Adventist	749	28.7	350	13.4	405	15.5	379	14.5	142	5.4	18	0.7	566	21.7	0	0.0	0	0.0	2609	100.0	
ALL HOSPITALS	3859	37.5	871	8.5	1558	15.1	1419	13.8	646	6.3	150	1.5	1793	17.4	5	0.0	0	0.0	10301	100.0	
Western Sydney																					
Auburn	906	56.4	172	10.7	154	9.6	94	5.9	75	4.7	6	0.4	198	12.3	1	0.1	0	0.0	1606	100.0	
Blacktown	1114	43.4	438	17.1	205	8.0	186	7.3	159	6.2	13	0.5	448	17.5	2	0.1	0	0.0	2565	100.0	
Westmead	2504	59.6	111	2.6	448	10.7	349	8.3	163	3.9	18	0.4	599	14.3	9	0.2	0	0.0	4201	100.0	
The Hills Private	465	35.2	161	12.2	147	11.1	172	13.0	55	4.2	22	1.7	298	22.5	2	0.2	0	0.0	1322	100.0	
ALL HOSPITALS	4989	51.5	882	9.1	954	9.8	801	8.3	452	4.7	59	0.6	1543	15.9	14	0.1	0	0.0	9694	100.0	
Wentworth																					
Blue Mountains	311	63.6	39	8.0	45	9.2	34	7.0	44	9.0	2	0.4	13	2.7	0	0.0	1	0.2	489	100.0	
Nepean	1337	46.5	338	11.8	232	8.1	253	8.8	153	5.3	13	0.5	545	19.0	0	0.0	2	0.1	2873	100.0	
Jamison Private	339	36.0	191	20.3	71	7.5	88	9.4	73	7.8	27	2.9	150	15.9	2	0.2	0	0.0	941	100.0	
Hawkesbury	424	47.1	102	11.3	93	10.3	88	9.8	39	4.3	12	1.3	125	13.9	0	0.0	17	1.9	900	100.0	
ALL HOSPITALS	2411	46.3	670	12.9	441	8.5	463	8.9	309	5.9	54	1.0	833	16.0	2	0.0	20	0.4	5203	100.0	
South Western Sydney																					
Camden	430	45.9	178	19.0	70	7.5	55	5.9	47	5.0	15	1.6	140	15.0	0	0.0	1	0.1	936	100.0	
Fairfield	1077	49.5	279	12.8	233	10.7	142	6.5	120	5.5	11	0.5	309	14.2	4	0.2	2	0.1	2177	100.0	
Liverpool	1798	55.0	213	6.5	362	11.1	170	5.2	224	6.9	23	0.7	446	13.6	32	1.0	1	0.0	3269	100.0	
Campbelltown	620	29.8	475	22.8	183	8.8	210	10.1	105	5.0	18	0.9	469	22.5	0	0.0	1	0.0	2081	100.0	
Bankstown/Lidcombe	1314	59.2	129	5.8	255	11.5	130	5.9	126	5.7	5	0.2	259	11.7	1	0.0	0	0.0	2219	100.0	
Bankstown Private	228	28.5	82	10.2	97	12.1	116	14.5	69	8.6	4	0.5	185	23.1	0	0.0	20	2.5	801	100.0	
Bowral	341	55.4	75	12.2	19	3.1	53	8.6	34	5.5	28	4.6	65	10.6	0	0.0	0	0.0	615	100.0	
ALL HOSPITALS	5808	48.0	1431	11.8	1219	10.1	876	7.2	725	6.0	104	0.9	1873	15.5	37	0.3	25	0.2	12098	100.0	
Central Coast																					
Gosford	1216	46.0	288	10.9	302	11.4	219	8.3	236	8.9	48	1.8	331	12.5	2	0.1	0	0.0	2642	100.0	
North Gosford Private	230	30.0	90	11.7	97	12.7	127	16.6	44	5.7	15	2.0	163	21.3	0	0.0	0	0.0	766	100.0	
Other Area hospitals	46	70.8	9	13.8	4	6.2	1	1.5	1	1.5	0	0.0	4	6.2	0	0.0	0	0.0	65	100.0	
ALL HOSPITALS	1492	43.0	387	11.1	403	11.6	347	10.0	281	8.1	63	1.8	498	14.3	2	0.1	0	0.0	3473	100.0	
Hunter																					
Maitland	556	44.0	135	10.7	155	12.3	133	10.5	59	4.7	24	1.9	192	15.2	2	0.2	8	0.6	1264	100.0	
Muswellbrook	131	54.4	32	13.3	8	3.3	16	6.6	29	12.0	3	1.2	22	9.1	0	0.0	0	0.0	241	100.0	
Belmont	292	45.5	57	8.9	50	7.8	49	7.6	28	4.4	17	2.6	148	23.1	1	0.2	0	0.0	642	100.0	
John Hunter	1669	48.4	443	12.8	243	7.0	270	7.8	256	7.4	169	4.9	381	11.0	11	0.3	8	0.2	3450	100.0	
Christo Road Private	286	29.5	191	19.7	70	7.2	120	12.4	82	8.4	36	3.7	182	18.7	4	0.4	0	0.0	971	100.0	
Other Area hospitals	311	46.8	74	11.1	36	5.4	102	15.4	61	9.2	20	3.0	60	9.0	0	0.0	0	0.0	664	100.0	
ALL HOSPITALS	3245	44.9	932	12.9	562	7.8	690	9.5	515	7.1	269	3.7	985	13.6	18	0.2	16	0.2	7232	100.0	
Illawarra																					
Shoalhaven	424	48.3	118	13.4	65	7.4	69	7.9	109	12.4	10	1.1	83	9.5	0	0.0	0	0.0	878	100.0	
Shellharbour	287	54.6	74	14.1	42	8.0	37	7.0	41	7.8	3	0.6	42	8.0	0	0.0	0	0.0	526	100.0	
Illawarra Regional	1001	37.9	508	19.3	241	9.1	190	7.2	176	6.7	31	1.2	481	18.2	2	0.1	8	0.3	2638	100.0	
Other Area hospitals	49	32.2	20	13.2	8	5.3	53	34.9	9	5.9	1	0.7	12	7.9	0	0.0	0	0.0	152	100.0	
ALL HOSPITALS	1761	42.0	720	17.2	356	8.5	349	8.3	335	8.0	45	1.1	618	14.7	2	0.0	8	0.2	4194	100.0	

TABLE 101 (CONT)

CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Onset and augmentation of labour																TOTAL			
	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented oxytocics/prostagl.##		No labour		Induced-oxytocics/prostagl.		Induced-ARM only		Induced-ARM+oxytocics/prostagl.		Induced-other###			Not stated		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.	%	No.
South Eastern Sydney																				
St. Margaret's Private	317	31.5	136	13.5	113	11.2	186	18.5	55	5.5	33	3.3	164	16.3	0	0.0	3	0.3	1007	100.0
Royal Hospital for Women	1484	39.4	504	13.4	666	17.7	384	10.2	407	10.8	28	0.7	284	7.5	0	0.0	5	0.1	3762	100.0
St. George	1011	41.0	386	15.7	367	14.9	228	9.2	198	8.0	22	0.9	246	10.0	0	0.0	8	0.3	2466	100.0
Sutherland	468	47.3	70	7.1	166	16.8	85	8.6	48	4.8	8	0.8	145	14.6	0	0.0	0	0.0	990	100.0
Hurstville Community	327	33.6	76	7.8	147	15.1	169	17.4	38	3.9	15	1.5	200	20.6	0	0.0	1	0.1	973	100.0
Kareena Private	208	28.8	67	9.3	111	15.4	133	18.4	29	4.0	8	1.1	166	23.0	0	0.0	0	0.0	722	100.0
St. George Private	309	35.1	88	10.0	156	17.7	137	15.6	85	9.7	11	1.3	94	10.7	0	0.0	0	0.0	880	100.0
Other Area hospitals	52	37.4	8	5.8	14	10.1	27	19.4	5	3.6	3	2.2	24	17.3	1	0.7	5	3.6	139	100.0
ALL HOSPITALS	4176	38.2	1335	12.2	1740	15.9	1349	12.3	865	7.9	128	1.2	1323	12.1	1	0.0	22	0.2	10939	100.0
Northern Rivers																				
Grafton Base	172	36.4	61	12.9	34	7.2	53	11.2	71	15.0	4	0.8	77	16.3	0	0.0	0	0.0	472	100.0
Lismore Base	647	50.2	159	12.3	140	10.9	114	8.8	86	6.7	18	1.4	125	9.7	0	0.0	0	0.0	1289	100.0
Murwillumbah	246	51.3	33	6.9	58	12.1	37	7.7	58	12.1	2	0.4	46	9.6	0	0.0	0	0.0	480	100.0
Tweed Heads	246	37.5	151	23.0	78	11.9	62	9.5	22	3.4	9	1.4	88	13.4	0	0.0	0	0.0	656	100.0
Other Area hospitals	336	76.4	44	10.0	10	2.3	30	6.8	4	0.9	7	1.6	8	1.8	1	0.2	0	0.0	440	100.0
ALL HOSPITALS	1647	49.4	448	13.4	320	9.6	296	8.9	241	7.2	40	1.2	344	10.3	1	0.0	0	0.0	3337	100.0
Mid North Coast																				
Coffs Harbour	345	43.2	59	7.4	66	8.3	123	15.4	60	7.5	2	0.3	141	17.7	1	0.1	1	0.1	798	100.0
Kempsey	107	39.2	66	24.2	20	7.3	21	7.7	24	8.8	3	1.1	32	11.7	0	0.0	0	0.0	273	100.0
Port Macquarie Base	347	48.0	115	15.9	71	9.8	63	8.7	59	8.2	2	0.3	64	8.9	1	0.1	1	0.1	723	100.0
Manning Base	335	47.2	115	16.2	67	9.4	60	8.5	23	3.2	11	1.5	98	13.8	0	0.0	1	0.1	710	100.0
Other Area hospitals	229	48.8	62	13.2	26	5.5	56	11.9	38	8.1	5	1.1	53	11.3	0	0.0	0	0.0	469	100.0
ALL HOSPITALS	1363	45.8	417	14.0	250	8.4	323	10.9	204	6.9	23	0.8	388	13.1	2	0.1	3	0.1	2973	100.0
New England																				
Armidale	170	33.7	90	17.8	63	12.5	27	5.3	73	14.5	7	1.4	75	14.9	0	0.0	0	0.0	505	100.0
Gunnedah	98	43.4	29	12.8	6	2.7	29	12.8	30	13.3	1	0.4	32	14.2	0	0.0	1	0.4	226	100.0
Inverell	129	54.2	34	14.3	18	7.6	20	8.4	24	10.1	3	1.3	10	4.2	0	0.0	0	0.0	238	100.0
Moree	137	54.6	26	10.4	16	6.4	7	2.8	23	9.2	1	0.4	41	16.3	0	0.0	0	0.0	251	100.0
Tamworth Base	234	35.3	126	19.0	39	5.9	85	12.8	66	10.0	19	2.9	94	14.2	0	0.0	0	0.0	663	100.0
Other Area hospitals	288	44.7	77	11.9	46	7.1	78	12.1	72	11.2	14	2.2	70	10.9	0	0.0	0	0.0	645	100.0
ALL HOSPITALS	1056	41.8	382	15.1	188	7.4	246	9.7	288	11.4	45	1.8	322	12.7	0	0.0	1	0.0	2528	100.0
Macquarie																				
Dubbo Base	573	45.2	154	12.1	130	10.2	97	7.6	70	5.5	35	2.8	210	16.5	0	0.0	0	0.0	1269	100.0
Mudgee	116	51.6	34	15.1	26	11.6	19	8.4	19	8.4	2	0.9	9	4.0	0	0.0	0	0.0	225	100.0
Other Area hospitals	137	66.5	45	21.8	5	2.4	10	4.9	6	2.9	0	0.0	3	1.5	0	0.0	0	0.0	206	100.0
ALL HOSPITALS	826	48.6	233	13.7	161	9.5	126	7.4	95	5.6	37	2.2	222	13.1	0	0.0	0	0.0	1700	100.0
Mid Western																				
Bathurst Base	298	55.7	52	9.7	22	4.1	66	12.3	48	9.0	4	0.7	44	8.2	1	0.2	0	0.0	535	100.0
Cowra	100	48.1	35	16.8	6	2.9	16	7.7	5	2.4	23	11.1	23	11.1	0	0.0	0	0.0	208	100.0
Lithgow	107	46.7	35	15.3	21	9.2	37	16.2	12	5.2	1	0.4	16	7.0	0	0.0	0	0.0	229	100.0
Orange Base	279	33.2	184	21.9	84	10.0	77	9.2	20	2.4	18	2.1	175	20.8	1	0.1	2	0.2	840	100.0
Parke	159	73.6	12	5.6	4	1.9	10	4.6	21	9.7	2	0.9	8	3.7	0	0.0	0	0.0	216	100.0
Other Area hospitals	117	41.3	24	8.5	22	7.8	58	20.5	48	17.0	0	0.0	14	4.9	0	0.0	0	0.0	283	100.0
ALL HOSPITALS	1060	45.9	342	14.8	159	6.9	264	11.4	154	6.7	48	2.1	280	12.1	2	0.1	2	0.1	2311	100.0
Far West																				
Broken Hill Base	134	42.8	32	10.2	24	7.7	31	9.9	14	4.5	23	7.3	55	17.6	0	0.0	0	0.0	313	100.0
Other Area hospitals	49	76.6	7	10.9	5	7.8	2	3.1	0	0.0	0	0.0	1	1.6	0	0.0	0	0.0	64	100.0
ALL HOSPITALS	183	48.5	39	10.3	29	7.7	33	8.8	14	3.7	23	6.1	56	14.9	0	0.0	0	0.0	377	100.0
Greater Murray																				
Mercy Care Centre, Albury	379	55.3	99	14.5	38	5.5	55	8.0	24	3.5	27	3.9	63	9.2	0	0.0	0	0.0	685	100.0
Griffith Base	243	46.3	62	11.8	32	6.1	62	11.8	63	12.0	6	1.1	57	10.9	0	0.0	0	0.0	525	100.0
Wagga Wagga Base	428	48.1	87	9.8	72	8.1	91	10.2	86	9.7	9	1.0	117	13.1	0	0.0	0	0.0	890	100.0
Calvary, Wagga Wagga	191	42.8	34	7.6	31	7.0	57	12.8	70	15.7	12	2.7	51	11.4	0	0.0	0	0.0	446	100.0
Other Area hospitals	507	52.6	126	13.1	71	7.4	68	7.1	107	11.1	7	0.7	76	7.9	0	0.0	1	0.1	963	100.0
ALL HOSPITALS	1748	49.8	408	11.6	244	7.0	333	9.5	350	10.0	61	1.7	364	10.4	0	0.0	1	0.0	3509	100.0
Southern																				
Bega	88	42.1	32	15.3	17	8.1	20	9.6	27	12.9	0	0.0	25	12.0	0	0.0	0	0.0	209	100.0
Goulburn Base	171	47.5	46	12.8	45	12.5	56	15.6	25	6.9	0	0.0	17	4.7	0	0.0	0	0.0	360	100.0
Queanbeyan	213	56.2	46	12.1	22	5.8	37	9.8	40	10.6	2	0.5	19	5.0	0	0.0	0	0.0	379	100.0
Other Area hospitals	473	57.1	110	13.3	38	4.6	55	6.6	61	7.4	11	1.3	80	9.7	0	0.0	0	0.0	828	100.0
ALL HOSPITALS	945	53.2	234	13.2	122	6.9	168	9.5	153	8.6	13	0.7	141	7.9	0	0.0	0	0.0	1776	100.0
TOTAL NSW	39839	45.8	9764	11.2	9622	11.1	8616	9.9	5934	6.8	1238	1.4	11722	13.5	87	0.1	98	0.1	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

May include artificial rupture of membranes.

This category includes other forms of induction such as Foley's catheter.

7.2 TYPE OF DELIVERY IN SELECTED HOSPITALS

Table 102 gives type of delivery for individual hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW Total.

Rates of instrumental and operative delivery depend on many factors, including rates of maternal medical conditions and obstetric complications. Caution should therefore be exercised in interpreting differences in the rates of interventions between hospitals.

TABLE 102

CONFINEMENTS BY TYPE OF DELIVERY AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Normal vaginal		Forceps		Forceps rotation		Vacuum extraction		Type of delivery Vaginal breech		Elective caesarean		Emergency caesarean		Not stated		TOTAL			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Central Sydney																				
King George V	3337	69.1	206	4.3	72	1.5	198	4.1	59	1.2	484	10.0	474	9.8	0	0.0	0	0.0	4830	100.0
NSW Private	159	55.8	30	10.5	5	1.8	9	3.2	1	0.4	49	17.2	32	11.2	0	0.0	0	0.0	285	100.0
ALL HOSPITALS	3496	68.3	236	4.6	77	1.5	207	4.0	60	1.2	533	10.4	506	9.9	0	0.0	0	0.0	5115	100.0
Northern Sydney																				
Hornsby	708	70.4	41	4.1	2	0.2	43	4.3	6	0.6	117	11.6	88	8.8	0	0.0	0	0.0	1005	100.0
Manly	572	67.1	40	4.7	7	0.8	45	5.3	5	0.6	86	10.1	98	11.5	0	0.0	0	0.0	853	100.0
Mona Vale	590	73.5	46	5.7	3	0.4	44	5.5	5	0.6	59	7.3	56	7.0	0	0.0	0	0.0	803	100.0
Royal North Shore	1417	55.3	181	7.1	23	0.9	212	8.3	16	0.6	402	15.7	313	12.2	0	0.0	0	0.0	2564	100.0
Ryde	547	74.7	36	4.9	4	0.5	9	1.2	4	0.5	89	12.2	43	5.9	0	0.0	0	0.0	732	100.0
Mater, North Sydney	918	52.9	79	4.6	15	0.9	271	15.6	6	0.3	287	16.5	159	9.2	0	0.0	0	0.0	1735	100.0
Sydney Adventist	1583	60.7	236	9.0	38	1.5	120	4.6	12	0.5	379	14.5	241	9.2	0	0.0	0	0.0	2609	100.0
ALL HOSPITALS	6335	61.5	659	6.4	92	0.9	744	7.2	54	0.5	1419	13.8	998	9.7	0	0.0	0	0.0	10301	100.0
Western Sydney																				
Auburn	1309	81.5	68	4.2	14	0.9	15	0.9	31	1.9	94	5.9	74	4.6	1	0.1	0	0.0	1606	100.0
Blacktown	1871	72.9	162	6.3	25	1.0	81	3.2	26	1.0	186	7.3	213	8.3	1	0.0	0	0.0	2565	100.0
Westmead	2852	67.9	297	7.1	126	3.0	87	2.1	92	2.2	349	8.3	398	9.5	0	0.0	0	0.0	4201	100.0
The Hills Private	826	62.5	150	11.3	27	2.0	25	1.9	12	0.9	172	13.0	110	8.3	0	0.0	0	0.0	1322	100.0
ALL HOSPITALS	6858	70.7	677	7.0	192	2.0	208	2.1	161	1.7	801	8.3	795	8.2	2	0.0	0	0.0	9694	100.0
Wentworth																				
Blue Mountains	366	74.8	10	2.0	0	0.0	27	5.5	4	0.8	34	7.0	47	9.6	1	0.2	0	0.0	489	100.0
Nepean	2157	75.1	85	3.0	15	0.5	98	3.4	59	2.1	253	8.8	205	7.1	1	0.0	0	0.0	2873	100.0
Jamison Private	629	66.8	74	7.9	8	0.9	14	1.5	7	0.7	88	9.4	121	12.9	0	0.0	0	0.0	941	100.0
Hawkesbury	614	68.2	61	6.8	5	0.6	37	4.1	6	0.7	88	9.8	66	7.3	23	2.6	0	0.0	900	100.0
ALL HOSPITALS	3766	72.4	230	4.4	28	0.5	176	3.4	76	1.5	463	8.9	439	8.4	25	0.5	0	0.0	5203	100.0
South Western Sydney																				
Camden	767	81.9	24	2.6	4	0.4	16	1.7	6	0.6	55	5.9	64	6.8	0	0.0	0	0.0	936	100.0
Fairfield	1783	81.9	48	2.2	2	0.1	75	3.4	32	1.5	142	6.5	94	4.3	1	0.0	0	0.0	2177	100.0
Liverpool	2584	79.0	65	2.0	12	0.4	180	5.5	69	2.1	170	5.2	188	5.8	1	0.0	0	0.0	3269	100.0
Campbelltown	1585	76.2	37	1.8	2	0.1	88	4.2	23	1.1	210	10.1	135	6.5	1	0.0	0	0.0	2081	100.0
Bankstown/ Lidcombe	1813	81.7	59	2.7	9	0.4	66	3.0	19	0.9	130	5.9	123	5.5	0	0.0	0	0.0	2219	100.0
Bankstown Private	469	58.6	50	6.2	6	0.7	78	9.7	5	0.6	116	14.5	61	7.6	16	2.0	0	0.0	801	100.0
Bowral	437	71.1	57	9.3	4	0.7	17	2.8	9	1.5	53	8.6	37	6.0	1	0.2	0	0.0	615	100.0
ALL HOSPITALS	9438	78.0	340	2.8	39	0.3	520	4.3	163	1.3	876	7.2	702	5.8	20	0.2	0	0.0	12098	100.0
Central Coast																				
Gosford	1927	72.9	42	1.6	3	0.1	234	8.9	20	0.8	219	8.3	197	7.5	0	0.0	0	0.0	2642	100.0
North Gosford																				
Private	456	59.5	35	4.6	2	0.3	64	8.4	9	1.2	127	16.6	73	9.5	0	0.0	0	0.0	766	100.0
Other Area hospitals	61	93.8	1	1.5	0	0.0	0	0.0	0	0.0	1	1.5	2	3.1	0	0.0	0	0.0	65	100.0
ALL HOSPITALS	2444	70.4	78	2.2	5	0.1	298	8.6	29	0.8	347	10.0	272	7.8	0	0.0	0	0.0	3473	100.0
Hunter																				
Maitland	946	74.8	26	2.1	5	0.4	37	2.9	15	1.2	133	10.5	100	7.9	2	0.2	0	0.0	1264	100.0
Muswellbrook	199	82.6	0	0.0	0	0.0	10	4.1	1	0.4	16	6.6	15	6.2	0	0.0	0	0.0	241	100.0
Belmont	509	79.3	19	3.0	4	0.6	8	1.2	4	0.6	49	7.6	49	7.6	0	0.0	0	0.0	642	100.0
John Hunter	2545	73.8	130	3.8	19	0.6	137	4.0	47	1.4	270	7.8	302	8.8	0	0.0	0	0.0	3450	100.0
Christo Road Private	591	60.9	78	8.0	23	2.4	58	6.0	4	0.4	120	12.4	97	10.0	0	0.0	0	0.0	971	100.0
Other Area hospitals	470	70.8	19	2.9	1	0.2	31	4.7	5	0.8	102	15.4	35	5.3	1	0.2	0	0.0	664	100.0
ALL HOSPITALS	5260	72.7	272	3.8	52	0.7	281	3.9	76	1.1	690	9.5	598	8.3	3	0.0	0	0.0	7232	100.0
Illawarra																				
Shoalhaven	698	79.5	26	3.0	17	1.9	0	0.0	8	0.9	69	7.9	60	6.8	0	0.0	0	0.0	878	100.0
Shellharbour	430	81.7	7	1.3	0	0.0	22	4.2	2	0.4	37	7.0	28	5.3	0	0.0	0	0.0	526	100.0
Illawarra Regional	2006	76.0	47	1.8	17	0.6	168	6.4	22	0.8	190	7.2	177	6.7	11	0.4	0	0.0	2638	100.0
Other Area hospitals	90	59.2	4	2.6	0	0.0	1	0.7	0	0.0	53	34.9	4	2.6	0	0.0	0	0.0	152	100.0
ALL HOSPITALS	3224	76.9	84	2.0	34	0.8	191	4.6	32	0.8	349	8.3	269	6.4	11	0.3	0	0.0	4194	100.0

TABLE 102 (CONT)

CONFINEMENTS BY TYPE OF DELIVERY AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Normal vaginal		Forceps		Forceps rotation		Vacuum extraction		Type of delivery Vaginal breech		Elective caesarean		Emergency caesarean		Not stated		TOTAL		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
South Eastern Sydney																			
St. Margaret's Private	549	54.5	54	5.4	13	1.3	95	9.4	3	0.3	186	18.5	107	10.6	0	0.0	1007	100.0	
Royal Hospital for Women	2362	62.8	212	5.6	73	1.9	319	8.5	56	1.5	384	10.2	356	9.5	0	0.0	3762	100.0	
St. George	1664	67.5	144	5.8	16	0.6	136	5.5	15	0.6	228	9.2	254	10.3	9	0.4	2466	100.0	
Sutherland	709	71.6	63	6.4	13	1.3	30	3.0	12	1.2	85	8.6	78	7.9	0	0.0	990	100.0	
Hurstville Community	516	53.0	139	14.3	18	1.8	4	0.4	3	0.3	169	17.4	124	12.7	0	0.0	973	100.0	
Kareena Private	342	47.4	102	14.1	23	3.2	32	4.4	4	0.6	133	18.4	86	11.9	0	0.0	722	100.0	
St. George Private	431	49.0	134	15.2	16	1.8	43	4.9	3	0.3	137	15.6	116	13.2	0	0.0	880	100.0	
Other Area hospitals	78	56.1	2	1.4	1	0.7	16	11.5	0	0.0	27	19.4	8	5.8	7	5.0	139	100.0	
ALL HOSPITALS	6651	60.8	850	7.8	173	1.6	675	6.2	96	0.9	1349	12.3	1129	10.3	16	0.1	10939	100.0	
Northern Rivers																			
Grafton Base	306	64.8	32	6.8	3	0.6	21	4.4	4	0.8	53	11.2	53	11.2	0	0.0	472	100.0	
Lismore Base	918	71.2	46	3.6	20	1.6	28	2.2	18	1.4	114	8.8	145	11.2	0	0.0	1289	100.0	
Murwillumbah	367	76.5	8	1.7	0	0.0	8	1.7	9	1.9	37	7.7	51	10.6	0	0.0	480	100.0	
Tweed Heads	500	76.2	19	2.9	6	0.9	19	2.9	6	0.9	62	9.5	44	6.7	0	0.0	656	100.0	
Other Area hospitals	399	90.7	11	2.5	0	0.0	0	0.0	0	0.0	30	6.8	0	0.0	0	0.0	440	100.0	
ALL HOSPITALS	2490	74.6	116	3.5	29	0.9	76	2.3	37	1.1	296	8.9	293	8.8	0	0.0	3337	100.0	
Mid North Coast																			
Coffs Harbour	549	68.8	44	5.5	5	0.6	2	0.3	7	0.9	123	15.4	67	8.4	1	0.1	798	100.0	
Kempsey	221	81.0	12	4.4	0	0.0	3	1.1	1	0.4	21	7.7	15	5.5	0	0.0	273	100.0	
Port Macquarie Base	521	72.1	56	7.7	3	0.4	17	2.4	5	0.7	63	8.7	58	8.0	0	0.0	723	100.0	
Manning Base	554	78.0	21	3.0	9	1.3	4	0.6	9	1.3	60	8.5	53	7.5	0	0.0	710	100.0	
Other Area hospitals	353	75.3	26	5.5	5	1.1	6	1.3	6	1.3	56	11.9	17	3.6	0	0.0	469	100.0	
ALL HOSPITALS	2198	73.9	159	5.3	22	0.7	32	1.1	28	0.9	323	10.9	210	7.1	1	0.0	2973	100.0	
New England																			
Armidale	424	84.0	3	0.6	0	0.0	16	3.2	10	2.0	27	5.3	25	5.0	0	0.0	505	100.0	
Gunnedah	165	73.0	4	1.8	0	0.0	10	4.4	2	0.9	29	12.8	16	7.1	0	0.0	226	100.0	
Inverell	178	74.8	14	5.9	1	0.4	1	0.4	2	0.8	20	8.4	22	9.2	0	0.0	238	100.0	
Moree	191	76.1	11	4.4	0	0.0	17	6.8	1	0.4	7	2.8	24	9.6	0	0.0	251	100.0	
Tamworth Base	444	67.0	20	3.0	2	0.3	36	5.4	4	0.6	85	12.8	72	10.9	0	0.0	663	100.0	
Other Area hospitals	467	72.4	28	4.3	0	0.0	19	2.9	4	0.6	78	12.1	49	7.6	0	0.0	645	100.0	
ALL HOSPITALS	1869	73.9	80	3.2	3	0.1	99	3.9	23	0.9	246	9.7	208	8.2	0	0.0	2528	100.0	
Macquarie																			
Dubbo Base	928	73.1	55	4.3	18	1.4	60	4.7	11	0.9	97	7.6	100	7.9	0	0.0	1269	100.0	
Mudgee	166	73.8	8	3.6	0	0.0	20	8.9	2	0.9	19	8.4	10	4.4	0	0.0	225	100.0	
Other Area hospitals	181	87.9	5	2.4	0	0.0	9	4.4	0	0.0	10	4.9	1	0.5	0	0.0	206	100.0	
ALL HOSPITALS	1275	75.0	68	4.0	18	1.1	89	5.2	13	0.8	126	7.4	111	6.5	0	0.0	1700	100.0	
Mid Western																			
Bathurst Base	372	69.5	26	4.9	1	0.2	14	2.6	1	0.2	66	12.3	54	10.1	1	0.2	535	100.0	
Cowra	168	80.8	0	0.0	0	0.0	14	6.7	1	0.5	16	7.7	9	4.3	0	0.0	208	100.0	
Lithgow	160	69.9	2	0.9	0	0.0	4	1.7	1	0.4	37	16.2	25	10.9	0	0.0	229	100.0	
Orange Base	594	70.7	41	4.9	5	0.6	37	4.4	12	1.4	77	9.2	74	8.8	0	0.0	840	100.0	
Parkes	167	77.3	4	1.9	0	0.0	12	5.6	2	0.9	10	4.6	21	9.7	0	0.0	216	100.0	
Other Area hospitals	185	65.4	9	3.2	0	0.0	13	4.6	3	1.1	58	20.5	15	5.3	0	0.0	283	100.0	
ALL HOSPITALS	1646	71.2	82	3.5	6	0.3	94	4.1	20	0.9	264	11.4	198	8.6	1	0.0	2311	100.0	
Far West																			
Broken Hill Base	223	71.2	21	6.7	2	0.6	0	0.0	5	1.6	31	9.9	31	9.9	0	0.0	313	100.0	
Other Area hospitals	58	90.6	2	3.1	0	0.0	0	0.0	1	1.6	2	3.1	1	1.6	0	0.0	64	100.0	
ALL HOSPITALS	281	74.5	23	6.1	2	0.5	0	0.0	6	1.6	33	8.8	32	8.5	0	0.0	377	100.0	
Greater Murray																			
Mercy Care																			
Centre, Albury	531	77.5	35	5.1	10	1.5	5	0.7	8	1.2	55	8.0	41	6.0	0	0.0	685	100.0	
Griffith Base	352	67.0	7	1.3	0	0.0	33	6.3	7	1.3	62	11.8	63	12.0	1	0.2	525	100.0	
Wagga Wagga Base	613	68.9	54	6.1	13	1.5	25	2.8	16	1.8	91	10.2	78	8.8	0	0.0	890	100.0	
Calvary, Wagga																			
Wagga	229	51.3	47	10.5	14	3.1	52	11.7	1	0.2	57	12.8	46	10.3	0	0.0	446	100.0	
Other Area hospitals	718	74.6	48	5.0	3	0.3	39	4.0	7	0.7	68	7.1	80	8.3	0	0.0	963	100.0	
ALL HOSPITALS	2443	69.6	191	5.4	40	1.1	154	4.4	39	1.1	333	9.5	308	8.8	1	0.0	3509	100.0	
Southern																			
Bega	142	67.9	1	0.5	0	0.0	25	12.0	1	0.5	20	9.6	20	9.6	0	0.0	209	100.0	
Goulburn Base	256	71.1	19	5.3	0	0.0	4	1.1	2	0.6	56	15.6	23	6.4	0	0.0	360	100.0	
Queanbeyan	296	78.1	8	2.1	0	0.0	11	2.9	1	0.3	37	9.8	26	6.9	0	0.0	379	100.0	
Other Area hospitals	648	78.3	27	3.3	2	0.2	35	4.2	3	0.4	55	6.6	58	7.0	0	0.0	828	100.0	
ALL HOSPITALS	1342	75.6	55	3.1	2	0.1	75	4.2	7	0.4	168	9.5	127	7.2	0	0.0	1776	100.0	
TOTAL NSW	61175	70.4	4200	4.8	814	0.9	3919	4.5	921	1.1	8616	9.9	7195	8.3	80	0.1	86920	100.0	

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department

Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

7.3 EPIDURAL BLOCK IN SELECTED HOSPITALS

Table 103 shows the rates of epidural block for individual hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW Total.

TABLE 103								
CONFINEMENTS BY EPIDURAL BLOCK AND HOSPITAL, NSW 1997#								
Health Area/ Hospital	No		Epidural block		Yes		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Central Sydney								
King George V	3160	65.4	1670	34.6	4830	100.0		
NSW Private	190	66.7	95	33.3	285	100.0		
ALL HOSPITALS	3350	65.5	1765	34.5	5115	100.0		
Northern Sydney								
Hornsby	704	70.0	301	30.0	1005	100.0		
Manly	586	68.7	267	31.3	853	100.0		
Mona Vale	618	77.0	185	23.0	803	100.0		
Royal North Shore	1458	56.9	1106	43.1	2564	100.0		
Ryde	645	88.1	87	11.9	732	100.0		
Mater, North Sydney	714	41.2	1021	58.8	1735	100.0		
Sydney Adventist	1560	59.8	1049	40.2	2609	100.0		
ALL HOSPITALS	6285	61.0	4016	39.0	10301	100.0		
Western Sydney								
Auburn	1448	90.2	158	9.8	1606	100.0		
Blacktown	2098	81.8	467	18.2	2565	100.0		
Westmead	2464	58.7	1737	41.3	4201	100.0		
The Hills Private	851	64.4	471	35.6	1322	100.0		
ALL HOSPITALS	6861	70.8	2833	29.2	9694	100.0		
Wentworth								
Blue Mountains	408	83.4	81	16.6	489	100.0		
Nepean	2480	86.3	393	13.7	2873	100.0		
Jamison Private	736	78.2	205	21.8	941	100.0		
Hawkesbury	813	90.3	87	9.7	900	100.0		
ALL HOSPITALS	4437	85.3	766	14.7	5203	100.0		
South Western Sydney								
Camden	845	90.3	91	9.7	936	100.0		
Fairfield	2140	98.3	37	1.7	2177	100.0		
Liverpool	2771	84.8	498	15.2	3269	100.0		
Campbelltown	1928	92.6	153	7.4	2081	100.0		
Bankstown/Lidcombe	2032	91.6	187	8.4	2219	100.0		
Bankstown Private	647	80.8	154	19.2	801	100.0		
Bowral	512	83.3	103	16.7	615	100.0		
ALL HOSPITALS	10875	89.9	1223	10.1	12098	100.0		
Central Coast								
Gosford	2070	78.3	572	21.7	2642	100.0		
North Gosford Private	427	55.7	339	44.3	766	100.0		
Other Area hospitals	60	92.3	5	7.7	65	100.0		
ALL HOSPITALS	2557	73.6	916	26.4	3473	100.0		
Hunter								
Maitland	1146	90.7	118	9.3	1264	100.0		
Muswellbrook	238	98.8	3	1.2	241	100.0		
Belmont	620	96.6	22	3.4	642	100.0		
John Hunter	2750	79.7	700	20.3	3450	100.0		
Christo Road Private	724	74.6	247	25.4	971	100.0		
Other Area hospitals	589	88.7	75	11.3	664	100.0		
ALL HOSPITALS	6067	83.9	1165	16.1	7232	100.0		
Illawarra								
Shoalhaven	738	84.1	140	15.9	878	100.0		
Shellharbour	515	97.9	11	2.1	526	100.0		
Illawarra Regional	2249	85.3	389	14.7	2638	100.0		
Other Area hospitals	114	75.0	38	25.0	152	100.0		
ALL HOSPITALS	3616	86.2	578	13.8	4194	100.0		

TABLE 103 (CONT)
CONFINEMENTS BY EPIDURAL BLOCK AND HOSPITAL, NSW 1997#

Health Area/ Hospital	No		Epidural block		TOTAL	
	No.	%	No.	%	No.	%
South Eastern Sydney						
St. Margaret's Private	404	40.1	603	59.9	1007	100.0
Royal Hospital for Women	2247	59.7	1515	40.3	3762	100.0
St. George	1769	71.7	697	28.3	2466	100.0
Sutherland	624	63.0	366	37.0	990	100.0
Hurstville Community	388	39.9	585	60.1	973	100.0
Kareena Private	245	33.9	477	66.1	722	100.0
St. George Private	417	47.4	463	52.6	880	100.0
Other Area hospitals	69	49.6	70	50.4	139	100.0
ALL HOSPITALS	6163	56.3	4776	43.7	10939	100.0
Northern Rivers						
Grafton Base	366	77.5	106	22.5	472	100.0
Lismore Base	864	67.0	425	33.0	1289	100.0
Murwillumbah	451	94.0	29	6.0	480	100.0
Tweed Heads	513	78.2	143	21.8	656	100.0
Other Area hospitals	420	95.5	20	4.5	440	100.0
ALL HOSPITALS	2614	78.3	723	21.7	3337	100.0
Mid North Coast						
Coffs Harbour	665	83.3	133	16.7	798	100.0
Kempsey	242	88.6	31	11.4	273	100.0
Port Macquarie Base	563	77.9	160	22.1	723	100.0
Manning Base	613	86.3	97	13.7	710	100.0
Other Area hospitals	406	86.6	63	13.4	469	100.0
ALL HOSPITALS	2489	83.7	484	16.3	2973	100.0
New England						
Armidale	502	99.4	3	0.6	505	100.0
Gunnedah	211	93.4	15	6.6	226	100.0
Inverell	216	90.8	22	9.2	238	100.0
Moree	223	88.8	28	11.2	251	100.0
Tamworth Base	521	78.6	142	21.4	663	100.0
Other Area hospitals	586	90.9	59	9.1	645	100.0
ALL HOSPITALS	2259	89.4	269	10.6	2528	100.0
Macquarie						
Dubbo Base	1001	78.9	268	21.1	1269	100.0
Mudgee	211	93.8	14	6.2	225	100.0
Other Area hospitals	198	96.1	8	3.9	206	100.0
ALL HOSPITALS	1410	82.9	290	17.1	1700	100.0
Mid Western						
Bathurst Base	489	91.4	46	8.6	535	100.0
Cowra	202	97.1	6	2.9	208	100.0
Lithgow	188	82.1	41	17.9	229	100.0
Orange Base	724	86.2	116	13.8	840	100.0
Parkes	196	90.7	20	9.3	216	100.0
Other Area hospitals	242	85.5	41	14.5	283	100.0
ALL HOSPITALS	2041	88.3	270	11.7	2311	100.0
Far West						
Broken Hill Base	255	81.5	58	18.5	313	100.0
Other Area hospitals	63	98.4	1	1.6	64	100.0
ALL HOSPITALS	318	84.4	59	15.6	377	100.0
Greater Murray						
Mercy Care Centre, Albury	561	81.9	124	18.1	685	100.0
Griffith Base	470	89.5	55	10.5	525	100.0
Wagga Wagga Base	659	74.0	231	26.0	890	100.0
Calvary, Wagga Wagga	270	60.5	176	39.5	446	100.0
Other Area hospitals	881	91.5	82	8.5	963	100.0
ALL HOSPITALS	2841	81.0	668	19.0	3509	100.0
Southern						
Bega	175	83.7	34	16.3	209	100.0
Goulburn Base	299	83.1	61	16.9	360	100.0
Queanbeyan	324	85.5	55	14.5	379	100.0
Other Area hospitals	753	90.9	75	9.1	828	100.0
ALL HOSPITALS	1551	87.3	225	12.7	1776	100.0
TOTAL NSW	65894	75.8	21026	24.2	86920	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department

Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

7.4 EPISIOTOMY AND THIRD DEGREE TEAR IN SELECTED HOSPITALS

Table 104 shows the rates of episiotomy and third degree tears among confinements with vaginal delivery for individual hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW total.

TABLE 104

CONFINEMENTS WITH VAGINAL DELIVERIES BY EPISIOTOMY, THIRD DEGREE TEAR AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Episiotomy					Third degree tear					TOTAL##			
	No.	No	%	No.	Yes	%	No.	No	%	No.	Yes	%	No.	%
Central Sydney														
King George V	3373		87.1	499		12.9	3798		98.1	74		1.9	3872	100.0
NSW Private	144		70.6	60		29.4	203		99.5	1		0.5	204	100.0
ALL HOSPITALS	3517		86.3	559		13.7	4001		98.2	75		1.8	4076	100.0
Northern Sydney														
Hornsby	630		78.8	170		21.3	785		98.1	15		1.9	800	100.0
Manly	565		84.5	104		15.5	666		99.6	3		0.4	669	100.0
Mona Vale	608		88.4	80		11.6	685		99.6	3		0.4	688	100.0
Royal North Shore	1157		62.6	692		37.4	1761		95.2	88		4.8	1849	100.0
Ryde	507		84.5	93		15.5	591		98.5	9		1.5	600	100.0
Mater, North Sydney	846		65.6	443		34.4	1280		99.3	9		0.7	1289	100.0
Sydney Adventist	1275		64.1	714		35.9	1980		99.5	9		0.5	1989	100.0
ALL HOSPITALS	5588		70.9	2296		29.1	7748		98.3	136		1.7	7884	100.0
Western Sydney														
Auburn	1232		85.7	205		14.3	1429		99.4	8		0.6	1437	100.0
Blacktown	1623		75.0	542		25.0	2122		98.0	43		2.0	2165	100.0
Westmead	2497		72.3	957		27.7	3418		99.0	36		1.0	3454	100.0
The Hills Private	683		65.7	357		34.3	1037		99.7	3		0.3	1040	100.0
ALL HOSPITALS	6035		74.5	2061		25.5	8006		98.9	90		1.1	8096	100.0
Wentworth														
Blue Mountains	383		94.1	24		5.9	400		98.3	7		1.7	407	100.0
Nepean	2159		89.4	255		10.6	2384		98.8	30		1.2	2414	100.0
Jamison Private	516		70.5	216		29.5	728		99.5	4		0.5	732	100.0
Hawkesbury	624		86.3	99		13.7	718		99.3	5		0.7	723	100.0
ALL HOSPITALS	3682		86.1	594		13.9	4230		98.9	46		1.1	4276	100.0
South Western Sydney														
Camden	667		81.6	150		18.4	813		99.5	4		0.5	817	100.0
Fairfield	1524		78.6	416		21.4	1930		99.5	10		0.5	1940	100.0
Liverpool	2056		70.7	854		29.3	2862		98.4	48		1.6	2910	100.0
Campbelltown	1292		74.5	443		25.5	1726		99.5	9		0.5	1735	100.0
Bankstown/Lidcombe	1495		76.0	471		24.0	1932		98.3	34		1.7	1966	100.0
Bankstown Private	374		61.5	234		38.5	599		98.5	9		1.5	608	100.0
Bowral	430		82.1	94		17.9	523		99.8	1		0.2	524	100.0
ALL HOSPITALS	7838		74.6	2662		25.4	10385		98.9	115		1.1	10500	100.0
Central Coast														
Gosford	2136		96.0	90		4.0	2207		99.1	19		0.9	2226	100.0
North Gosford Private	446		78.8	120		21.2	562		99.3	4		0.7	566	100.0
Other Area hospitals	61		98.4	1		1.6	62		100.0	0		0.0	62	100.0
ALL HOSPITALS	2643		92.6	211		7.4	2831		99.2	23		0.8	2854	100.0
Hunter														
Maitland	940		91.4	89		8.6	1015		98.6	14		1.4	1029	100.0
Muswellbrook	205		97.6	5		2.4	208		99.0	2		1.0	210	100.0
Belmont	489		89.9	55		10.1	539		99.1	5		0.9	544	100.0
John Hunter	2565		89.1	313		10.9	2854		99.2	24		0.8	2878	100.0
Christo Road Private	568		75.3	186		24.7	735		97.5	19		2.5	754	100.0
Other Area hospitals	478		90.9	48		9.1	520		98.9	6		1.1	526	100.0
ALL HOSPITALS	5245		88.3	696		11.7	5871		98.8	70		1.2	5941	100.0
Illawarra														
Shoalhaven	694		92.7	55		7.3	748		99.9	1		0.1	749	100.0
Shellharbour	427		92.6	34		7.4	458		99.3	3		0.7	461	100.0
Illawarra Regional	1736		76.8	524		23.2	2243		99.2	17		0.8	2260	100.0
Other Area hospitals	88		92.6	7		7.4	95		100.0	0		0.0	95	100.0
ALL HOSPITALS	2945		82.6	620		17.4	3544		99.4	21		0.6	3565	100.0

TABLE 104 (CONT)
CONFINEMENTS WITH VAGINAL DELIVERIES BY EPISIOTOMY, THIRD DEGREE TEAR AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Episiotomy				Third degree tear				TOTAL##				
	No.	No	%	No.	Yes	%	No.	No	%	No.	%		
South Eastern Sydney													
St. Margaret's Private	484		67.8	230		32.2	714		100.0	0	0.0	714	100.0
Royal Hospital for Women	2324		76.9	698		23.1	2982		98.7	40	1.3	3022	100.0
St. George	1676		84.9	299		15.1	1950		98.7	25	1.3	1975	100.0
Sutherland	698		84.4	129		15.6	818		98.9	9	1.1	827	100.0
Hurstville Community	451		66.3	229		33.7	678		99.7	2	0.3	680	100.0
Kareena Private	305		60.6	198		39.4	494		98.2	9	1.8	503	100.0
St. George Private	476		75.9	151		24.1	622		99.2	5	0.8	627	100.0
Other Area hospitals	79		81.4	18		18.6	97		100.0	0	0.0	97	100.0
ALL HOSPITALS	6493		76.9	1952		23.1	8355		98.9	90	1.1	8445	100.0
Northern Rivers													
Grafton Base	295		80.6	71		19.4	365		99.7	1	0.3	366	100.0
Lismore Base	887		86.1	143		13.9	1023		99.3	7	0.7	1030	100.0
Murwillumbah	331		84.4	61		15.6	391		99.7	1	0.3	392	100.0
Tweed Heads	498		90.5	52		9.5	544		98.9	6	1.1	550	100.0
Other Area hospitals	391		95.4	19		4.6	409		99.8	1	0.2	410	100.0
ALL HOSPITALS	2402		87.4	346		12.6	2732		99.4	16	0.6	2748	100.0
Mid North Coast													
Coffs Harbour	544		89.6	63		10.4	603		99.3	4	0.7	607	100.0
Kempsey	211		89.0	26		11.0	233		98.3	4	1.7	237	100.0
Port Macquarie Base	492		81.7	110		18.3	593		98.5	9	1.5	602	100.0
Manning Base	555		93.0	42		7.0	594		99.5	3	0.5	597	100.0
Other Area hospitals	337		85.1	59		14.9	395		99.7	1	0.3	396	100.0
ALL HOSPITALS	2139		87.7	300		12.3	2418		99.1	21	0.9	2439	100.0
New England													
Armidale	364		80.4	89		19.6	448		98.9	5	1.1	453	100.0
Gunnedah	142		78.5	39		21.5	180		99.4	1	0.6	181	100.0
Inverell	165		84.2	31		15.8	195		99.5	1	0.5	196	100.0
Moree	195		88.6	25		11.4	218		99.1	2	0.9	220	100.0
Tamworth Base	444		87.7	62		12.3	502		99.2	4	0.8	506	100.0
Other Area hospitals	443		85.5	75		14.5	510		98.5	8	1.5	518	100.0
ALL HOSPITALS	1753		84.5	321		15.5	2053		99.0	21	1.0	2074	100.0
Macquarie													
Dubbo Base	861		80.3	211		19.7	1058		98.7	14	1.3	1072	100.0
Mudgee	152		77.6	44		22.4	195		99.5	1	0.5	196	100.0
Other Area hospitals	171		87.7	24		12.3	194		99.5	1	0.5	195	100.0
ALL HOSPITALS	1184		80.9	279		19.1	1447		98.9	16	1.1	1463	100.0
Mid Western													
Bathurst Base	375		90.6	39		9.4	413		99.8	1	0.2	414	100.0
Cowra	171		93.4	12		6.6	183		100.0	0	0.0	183	100.0
Lithgow	142		85.0	25		15.0	167		100.0	0	0.0	167	100.0
Orange Base	577		83.7	112		16.3	680		98.7	9	1.3	689	100.0
Parkes	174		94.1	11		5.9	185		100.0	0	0.0	185	100.0
Other Area hospitals	182		86.7	28		13.3	210		100.0	0	0.0	210	100.0
ALL HOSPITALS	1621		87.7	227		12.3	1838		99.5	10	0.5	1848	100.0
Far West													
Broken Hill Base	247		98.4	4		1.6	250		99.6	1	0.4	251	100.0
Other Area hospitals	55		90.2	6		9.8	61		100.0	0	0.0	61	100.0
ALL HOSPITALS	302		96.8	10		3.2	311		99.7	1	0.3	312	100.0
Greater Murray													
Mercy Care Centre, Albury	521		88.5	68		11.5	584		99.2	5	0.8	589	100.0
Griffith Base	372		93.2	27		6.8	399		100.0	0	0.0	399	100.0
Wagga Wagga Base	648		89.9	73		10.1	713		98.9	8	1.1	721	100.0
Calvary, Wagga Wagga	271		79.0	72		21.0	343		100.0	0	0.0	343	100.0
Other Area hospitals	679		83.3	136		16.7	811		99.5	4	0.5	815	100.0
ALL HOSPITALS	2491		86.9	376		13.1	2850		99.4	17	0.6	2867	100.0
Southern													
Bega	140		82.8	29		17.2	169		100.0	0	0.0	169	100.0
Goulburn Base	193		68.7	88		31.3	277		98.6	4	1.4	281	100.0
Queanbeyan	287		90.8	29		9.2	315		99.7	1	0.3	316	100.0
Other Area hospitals	633		88.5	82		11.5	712		99.6	3	0.4	715	100.0
ALL HOSPITALS	1253		84.6	228		15.4	1473		99.5	8	0.5	1481	100.0
TOTAL NSW	57290		80.7	13739		19.3	70252		98.9	777	1.1	71029	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department

Hospitals with more than 200 total deliveries are identified individually. All hospitals include all public and private hospitals.

Total refers to the sum of yes' and no' for episiotomy or third degree tear.

7.5 BIRTH WEIGHT IN SELECTED HOSPITALS

Table 105 shows the birth weight among live born babies for individual hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW total.

TABLE 105												
LIVE BIRTHS BY BIRTH WEIGHT AND HOSPITAL, NSW 1997#												
Health Area/ Hospital	Less than 1,000		1,000- 1,499		Birth weight (grams)				Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney												
King George V	46	0.9	69	1.4	336	6.9	4449	90.8	0	0.0	4900	100.0
NSW Private	0	0.0	0	0.0	4	1.4	281	98.6	0	0.0	285	100.0
ALL HOSPITALS	46	0.9	69	1.3	340	6.6	4730	91.2	0	0.0	5185	100.0
Northern Sydney												
Hornsby	0	0.0	0	0.0	38	3.8	968	96.1	1	0.1	1007	100.0
Manly	0	0.0	1	0.1	24	2.8	830	97.1	0	0.0	855	100.0
Mona Vale	3	0.4	1	0.1	32	4.0	773	95.4	1	0.1	810	100.0
Royal North Shore	31	1.2	45	1.7	153	5.9	2374	91.2	0	0.0	2603	100.0
Ryde	0	0.0	1	0.1	22	3.0	713	96.7	1	0.1	737	100.0
Mater, North Sydney	0	0.0	0	0.0	51	2.9	1705	97.1	0	0.0	1756	100.0
Sydney Adventist	1	0.0	1	0.0	86	3.3	2551	96.7	0	0.0	2639	100.0
ALL HOSPITALS	35	0.3	49	0.5	406	3.9	9914	95.3	3	0.0	10407	100.0
Western Sydney												
Auburn	3	0.2	2	0.1	73	4.5	1537	95.1	1	0.1	1616	100.0
Blacktown	5	0.2	2	0.1	122	4.8	2439	95.0	0	0.0	2568	100.0
Westmead	52	1.2	66	1.5	283	6.6	3857	90.6	1	0.0	4259	100.0
The Hills Private	1	0.1	0	0.0	52	3.9	1285	96.0	0	0.0	1338	100.0
ALL HOSPITALS	61	0.6	70	0.7	530	5.4	9118	93.2	2	0.0	9781	100.0
Wentworth												
Blue Mountains	0	0.0	0	0.0	14	2.8	478	97.2	0	0.0	492	100.0
Nepean	20	0.7	39	1.4	227	7.9	2597	90.1	0	0.0	2883	100.0
Jamison Private	0	0.0	0	0.0	16	1.7	937	98.3	0	0.0	953	100.0
Hawkesbury	1	0.1	0	0.0	36	4.1	845	95.7	1	0.1	883	100.0
ALL HOSPITALS	21	0.4	39	0.7	293	5.6	4857	93.2	1	0.0	5211	100.0
South Western Sydney												
Camden	0	0.0	1	0.1	17	1.8	918	98.1	0	0.0	936	100.0
Fairfield	1	0.0	1	0.0	76	3.5	2105	96.4	1	0.0	2184	100.0
Liverpool	46	1.4	36	1.1	228	6.9	2981	90.6	1	0.0	3292	100.0
Campbelltown	6	0.3	1	0.0	117	5.6	1978	94.0	2	0.1	2104	100.0
Bankstown/Lidcombe	1	0.0	2	0.1	91	4.1	2134	95.8	0	0.0	2228	100.0
Bankstown Private	0	0.0	0	0.0	18	2.3	767	97.5	2	0.3	787	100.0
Bowral	0	0.0	0	0.0	18	2.9	607	97.1	0	0.0	625	100.0
ALL HOSPITALS	54	0.4	41	0.3	565	4.6	11490	94.5	6	0.0	12156	100.0
Central Coast												
Gosford	6	0.2	2	0.1	122	4.6	2522	95.1	0	0.0	2652	100.0
North Gosford Private	2	0.3	0	0.0	35	4.5	746	95.3	0	0.0	783	100.0
Other Area hospitals	0	0.0	0	0.0	4	6.2	61	93.8	0	0.0	65	100.0
ALL HOSPITALS	8	0.2	2	0.1	161	4.6	3329	95.1	0	0.0	3500	100.0
Hunter												
Maitland	2	0.2	1	0.1	55	4.3	1210	95.4	0	0.0	1268	100.0
Muswellbrook	0	0.0	0	0.0	6	2.5	236	97.5	0	0.0	242	100.0
Belmont	0	0.0	1	0.2	28	4.4	614	95.5	0	0.0	643	100.0
John Hunter	45	1.3	58	1.7	280	8.0	3115	89.1	0	0.0	3498	100.0
Christo Road Private	0	0.0	2	0.2	45	4.6	935	95.2	0	0.0	982	100.0
Other Area hospitals	0	0.0	0	0.0	15	2.3	648	97.7	0	0.0	663	100.0
ALL HOSPITALS	47	0.6	62	0.8	429	5.9	6758	92.6	0	0.0	7296	100.0
Illawarra												
Shoalhaven	3	0.3	1	0.1	42	4.7	841	94.8	0	0.0	887	100.0
Shellharbour	0	0.0	1	0.2	6	1.1	519	98.7	0	0.0	526	100.0
Illawarra Regional	3	0.1	8	0.3	129	4.9	2503	94.5	6	0.2	2649	100.0
Other Area hospitals	0	0.0	0	0.0	4	2.6	148	97.4	0	0.0	152	100.0
ALL HOSPITALS	6	0.1	10	0.2	181	4.3	4011	95.2	6	0.1	4214	100.0

TABLE 105 (CONT)
LIVE BIRTHS BY BIRTH WEIGHT AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Birth weight (grams)										TOTAL	
	Less than 1,000		1,000- 1,499		1,500- 2,499		2,500+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%		
South Eastern Sydney												
St. Margaret's Private	0	0.0	0	0.0	36	3.5	983	96.4	1	0.1	1020	100.0
Royal Hospital for Women	21	0.6	48	1.3	228	6.0	3500	92.2	1	0.0	3798	100.0
St. George	2	0.1	3	0.1	106	4.4	2318	95.4	2	0.1	2431	100.0
Sutherland	2	0.2	0	0.0	48	4.8	942	95.0	0	0.0	992	100.0
Hurstville Community	0	0.0	1	0.1	33	3.4	949	96.5	0	0.0	983	100.0
Kareena Private	1	0.1	0	0.0	18	2.5	708	97.4	0	0.0	727	100.0
St. George Private	0	0.0	0	0.0	36	4.0	853	96.0	0	0.0	889	100.0
Other Area hospitals	0	0.0	0	0.0	7	4.9	135	95.1	0	0.0	142	100.0
ALL HOSPITALS	26	0.2	52	0.5	512	4.7	10388	94.6	4	0.0	10982	100.0
Northern Rivers												
Grafton Base	1	0.2	1	0.2	22	4.7	448	94.9	0	0.0	472	100.0
Lismore Base	9	0.7	6	0.5	87	6.7	1192	92.1	0	0.0	1294	100.0
Murwillumbah	1	0.2	0	0.0	16	3.3	469	96.5	0	0.0	486	100.0
Tweed Heads	3	0.5	1	0.2	36	5.4	621	93.9	0	0.0	661	100.0
Other Area hospitals	0	0.0	0	0.0	9	2.1	429	97.9	0	0.0	438	100.0
ALL HOSPITALS	14	0.4	8	0.2	170	5.1	3159	94.3	0	0.0	3351	100.0
Mid North Coast												
Coffs Harbour	4	0.5	5	0.6	31	3.9	759	95.0	0	0.0	799	100.0
Kempsey	0	0.0	0	0.0	12	4.5	257	95.5	0	0.0	269	100.0
Port Macquarie Base	0	0.0	1	0.1	40	5.5	685	94.4	0	0.0	726	100.0
Manning Base	0	0.0	0	0.0	43	6.0	671	94.0	0	0.0	714	100.0
Other Area hospitals	0	0.0	1	0.2	12	2.6	452	97.0	1	0.2	466	100.0
ALL HOSPITALS	4	0.1	7	0.2	138	4.6	2824	95.0	1	0.0	2974	100.0
New England												
Armidale	1	0.2	0	0.0	18	3.6	487	96.2	0	0.0	506	100.0
Gunnedah	1	0.4	0	0.0	7	3.1	218	96.5	0	0.0	226	100.0
Inverell	0	0.0	0	0.0	18	7.5	221	92.5	0	0.0	239	100.0
Moree	0	0.0	0	0.0	5	2.0	245	98.0	0	0.0	250	100.0
Tamworth Base	2	0.3	1	0.2	27	4.1	631	95.5	0	0.0	661	100.0
Other Area hospitals	2	0.3	2	0.3	15	2.3	631	97.1	0	0.0	650	100.0
ALL HOSPITALS	6	0.2	3	0.1	90	3.6	2433	96.1	0	0.0	2532	100.0
Macquarie												
Dubbo Base	3	0.2	2	0.2	69	5.4	1203	94.2	0	0.0	1277	100.0
Mudgee	0	0.0	0	0.0	2	0.9	223	99.1	0	0.0	225	100.0
Other Area hospitals	0	0.0	0	0.0	5	2.4	201	97.6	0	0.0	206	100.0
ALL HOSPITALS	3	0.2	2	0.1	76	4.4	1627	95.3	0	0.0	1708	100.0
Mid Western												
Bathurst Base	0	0.0	1	0.2	16	3.0	521	96.8	0	0.0	538	100.0
Cowra	0	0.0	0	0.0	3	1.4	205	96.6	0	0.0	208	100.0
Lithgow	0	0.0	0	0.0	10	4.3	220	95.7	0	0.0	230	100.0
Orange Base	1	0.1	1	0.1	62	7.3	789	92.5	0	0.0	853	100.0
Parkes	0	0.0	0	0.0	6	2.8	210	97.2	0	0.0	216	100.0
Other Area hospitals	1	0.4	0	0.0	4	1.4	278	98.2	0	0.0	283	100.0
ALL HOSPITALS	2	0.1	2	0.1	101	4.3	2223	95.5	0	0.0	2328	100.0
Far West												
Broken Hill Base	0	0.0	0	0.0	11	3.5	299	96.5	0	0.0	310	100.0
Other Area hospitals	0	0.0	1	1.6	5	7.9	57	90.5	0	0.0	63	100.0
ALL HOSPITALS	0	0.0	1	0.3	16	4.3	356	95.4	0	0.0	373	100.0
Greater Murray												
Mercy Care Centre, Albury	1	0.1	3	0.4	25	3.6	660	95.8	0	0.0	689	100.0
Griffith Base	1	0.2	5	1.0	20	3.8	495	94.8	1	0.2	522	100.0
Wagga Wagga Base	1	0.1	6	0.7	72	7.9	828	91.3	0	0.0	907	100.0
Calvary, Wagga Wagga	1	0.2	2	0.4	15	3.3	433	96.0	0	0.0	451	100.0
Other Area hospitals	0	0.0	0	0.0	23	2.4	936	97.4	2	0.2	961	100.0
ALL HOSPITALS	14	0.1	16	0.5	155	4.4	3352	95.0	3	0.1	3530	100.0
Southern												
Bega	0	0.0	0	0.0	10	4.7	201	95.3	0	0.0	211	100.0
Goulburn Base	0	0.0	0	0.0	18	5.0	344	95.0	0	0.0	362	100.0
Queanbeyan	0	0.0	0	0.0	17	4.5	361	95.0	2	0.5	380	100.0
Other Area hospitals	1	0.1	1	0.1	14	1.7	810	98.1	0	0.0	826	100.0
ALL HOSPITALS	1	0.1	1	0.1	59	3.3	1716	96.5	2	0.1	1779	100.0
TOTAL NSW	338	0.4	434	0.5	4222	4.8	82438	94.3	30	0.0	87462	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Hospitals with more than 200 total deliveries in 1997 are identified individually. All hospitals include all public and private hospitals.

7.6 GESTATIONAL AGE IN SELECTED HOSPITALS

Table 106 shows the gestational age among live born babies for individual hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW total.

TABLE 106

LIVE BIRTHS BY GESTATIONAL AGE AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Gestational age (weeks)										TOTAL	
	Less than 32		32-33		34-36		37+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney												
King George V	133	2.7	98	2.0	236	4.8	4433	90.5	0	0.0	4900	100.0
NSW Private	0	0.0	0	0.0	6	2.1	279	97.9	0	0.0	285	100.0
ALL HOSPITALS	133	2.6	98	1.9	242	4.7	4712	90.9	0	0.0	5185	100.0
Northern Sydney												
Hornsby	2	0.2	0	0.0	48	4.8	957	95.0	0	0.0	1007	100.0
Manly	0	0.0	2	0.2	26	3.0	827	96.7	0	0.0	855	100.0
Mona Vale	3	0.4	4	0.5	36	4.4	766	94.6	1	0.1	810	100.0
Royal North Shore	82	3.2	59	2.3	129	5.0	2333	89.6	0	0.0	2603	100.0
Ryde	0	0.0	1	0.1	18	2.4	717	97.3	1	0.1	737	100.0
Mater, North Sydney	0	0.0	7	0.4	78	4.4	1671	95.2	0	0.0	1756	100.0
Sydney Adventist	1	0.0	2	0.1	110	4.2	2526	95.7	0	0.0	2639	100.0
ALL HOSPITALS	88	0.8	75	0.7	445	4.3	9797	94.1	2	0.0	10407	100.0
Western Sydney												
Auburn	6	0.4	7	0.4	49	3.0	1554	96.2	0	0.0	1616	100.0
Blacktown	7	0.3	8	0.3	119	4.6	2434	94.8	0	0.0	2568	100.0
Westmead	113	2.7	77	1.8	220	5.2	3848	90.3	1	0.0	4259	100.0
The Hills Private	2	0.1	10	0.7	51	3.8	1275	95.3	0	0.0	1338	100.0
ALL HOSPITALS	128	1.3	102	1.0	439	4.5	9111	93.1	1	0.0	9781	100.0
Wentworth												
Blue Mountains	1	0.2	1	0.2	12	2.4	477	97.0	1	0.2	492	100.0
Nepean	65	2.3	66	2.3	174	6.0	2578	89.4	0	0.0	2883	100.0
Jamison Private	1	0.1	0	0.0	28	2.9	924	97.0	0	0.0	953	100.0
Hawkesbury	3	0.3	1	0.1	49	5.5	827	93.7	3	0.3	883	100.0
ALL HOSPITALS	70	1.3	68	1.3	263	5.0	4806	92.2	4	0.1	5211	100.0
South Western Sydney												
Camden	2	0.2	1	0.1	16	1.7	917	98.0	0	0.0	936	100.0
Fairfield	3	0.1	8	0.4	82	3.8	2090	95.7	1	0.0	2184	100.0
Liverpool	85	2.6	52	1.6	200	6.1	2955	89.8	0	0.0	3292	100.0
Campbelltown	10	0.5	10	0.5	137	6.5	1947	92.5	0	0.0	2104	100.0
Bankstown/Lidcombe	3	0.1	4	0.2	82	3.7	2138	96.0	1	0.0	2228	100.0
Bankstown Private	0	0.0	0	0.0	28	3.6	755	95.9	4	0.5	787	100.0
Bowral	1	0.2	0	0.0	22	3.5	601	96.2	1	0.2	625	100.0
ALL HOSPITALS	104	0.9	75	0.6	567	4.7	11403	93.8	7	0.1	12156	100.0
Central Coast												
Gosford	9	0.3	11	0.4	125	4.7	2507	94.5	0	0.0	2652	100.0
North Gosford Private	2	0.3	3	0.4	39	5.0	739	94.4	0	0.0	783	100.0
Other Area hospitals	0	0.0	0	0.0	2	3.1	63	96.9	0	0.0	65	100.0
ALL HOSPITALS	11	0.3	14	0.4	166	4.7	3309	94.5	0	0.0	3500	100.0
Hunter												
Maitland	3	0.2	5	0.4	61	4.8	1198	94.5	1	0.1	1268	100.0
Muswellbrook	0	0.0	1	0.4	6	2.5	235	97.1	0	0.0	242	100.0
Belmont	1	0.2	0	0.0	25	3.9	617	96.0	0	0.0	643	100.0
John Hunter	131	3.7	99	2.8	221	6.3	3046	87.1	1	0.0	3498	100.0
Christo Road Private	0	0.0	6	0.6	73	7.4	903	92.0	0	0.0	982	100.0
Other Area hospitals	1	0.2	0	0.0	6	0.9	656	98.9	0	0.0	663	100.0
ALL HOSPITALS	136	1.9	111	1.5	392	5.4	6655	91.2	2	0.0	7296	100.0
Illawarra												
Shoalhaven	4	0.5	0	0.0	62	7.0	821	92.6	0	0.0	887	100.0
Shellharbour	1	0.2	1	0.2	3	0.6	521	99.0	0	0.0	526	100.0
Illawarra Regional	9	0.3	16	0.6	126	4.8	2493	94.1	5	0.2	2649	100.0
Other Area hospitals	0	0.0	0	0.0	4	2.6	148	97.4	0	0.0	152	100.0
ALL HOSPITALS	14	0.3	17	0.4	195	4.6	3983	94.5	5	0.1	4214	100.0

TABLE 106 (CONT)
LIVE BIRTHS BY GESTATIONAL AGE AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Gestational age (weeks)										TOTAL	
	Less than 32		32-33		34-36		37+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
South Eastern Sydney												
St. Margaret's Private	0	0.0	2	0.2	29	2.8	986	96.7	3	0.3	1020	100.0
Royal Hospital for Women	73	1.9	48	1.3	193	5.1	3482	91.7	2	0.1	3798	100.0
St. George	7	0.3	5	0.2	104	4.3	2313	95.1	2	0.1	2431	100.0
Sutherland	5	0.5	5	0.5	49	4.9	933	94.1	0	0.0	992	100.0
Hurstville Community	0	0.0	5	0.5	47	4.8	931	94.7	0	0.0	983	100.0
Kareena Private	1	0.1	2	0.3	46	6.3	678	93.3	0	0.0	727	100.0
St. George Private	0	0.0	6	0.7	49	5.5	833	93.7	1	0.1	889	100.0
Other Area hospitals	0	0.0	0	0.0	13	9.2	127	89.4	2	1.4	142	100.0
ALL HOSPITALS	86	0.8	73	0.7	530	4.8	10283	93.6	10	0.1	10982	100.0
Northern Rivers												
Grafton Base	3	0.6	1	0.2	31	6.6	436	92.4	1	0.2	472	100.0
Lismore Base	16	1.2	18	1.4	75	5.8	1185	91.6	0	0.0	1294	100.0
Murwillumbah	1	0.2	0	0.0	19	3.9	466	95.9	0	0.0	486	100.0
Tweed Heads	4	0.6	3	0.5	26	3.9	628	95.0	0	0.0	661	100.0
Other Area hospitals	0	0.0	1	0.2	4	0.9	433	98.9	0	0.0	438	100.0
ALL HOSPITALS	24	0.7	23	0.7	155	4.6	3148	93.9	1	0.0	3351	100.0
Mid North Coast												
Coffs Harbour	9	1.1	2	0.3	32	4.0	756	94.6	0	0.0	799	100.0
Kempsey	0	0.0	1	0.4	13	4.8	255	94.8	0	0.0	269	100.0
Port Macquarie Base	1	0.1	3	0.4	39	5.4	683	94.1	0	0.0	726	100.0
Manning Base	0	0.0	1	0.1	35	4.9	678	95.0	0	0.0	714	100.0
Other Area hospitals	1	0.2	0	0.0	12	2.6	452	97.0	1	0.2	466	100.0
ALL HOSPITALS	11	0.4	7	0.2	131	4.4	2824	95.0	1	0.0	2974	100.0
New England												
Armidale	1	0.2	1	0.2	18	3.6	486	96.0	0	0.0	506	100.0
Gunnedah	1	0.4	0	0.0	1	0.4	224	99.1	0	0.0	226	100.0
Inverell	1	0.4	0	0.0	6	2.5	232	97.1	0	0.0	239	100.0
Moree	0	0.0	0	0.0	4	1.6	246	98.4	0	0.0	250	100.0
Tamworth Base	2	0.3	4	0.6	46	7.0	609	92.1	0	0.0	661	100.0
Other Area hospitals	4	0.6	0	0.0	13	2.0	633	97.4	0	0.0	650	100.0
ALL HOSPITALS	9	0.4	5	0.2	88	3.5	2430	96.0	0	0.0	2532	100.0
Macquarie												
Dubbo Base	6	0.5	8	0.6	73	5.7	1190	93.2	0	0.0	1277	100.0
Mudgee	0	0.0	0	0.0	5	2.2	220	97.8	0	0.0	225	100.0
Other Area hospitals	0	0.0	0	0.0	4	1.9	202	98.1	0	0.0	206	100.0
ALL HOSPITALS	6	0.4	8	0.5	82	4.8	1612	94.4	0	0.0	1708	100.0
Mid Western												
Bathurst Base	0	0.0	0	0.0	22	4.1	516	95.9	0	0.0	538	100.0
Cowra	0	0.0	0	0.0	0	0.0	208	100.0	0	0.0	208	100.0
Lithgow	1	0.4	0	0.0	6	2.6	223	97.0	0	0.0	230	100.0
Orange Base	5	0.6	8	0.9	51	6.0	789	92.5	0	0.0	853	100.0
Parke	0	0.0	0	0.0	2	0.9	214	99.1	0	0.0	216	100.0
Other Area hospitals	1	0.4	1	0.4	5	1.8	276	97.5	0	0.0	283	100.0
ALL HOSPITALS	7	0.3	9	0.4	86	3.7	2226	95.6	0	0.0	2328	100.0
Far West												
Broken Hill Base	1	0.3	0	0.0	18	5.8	291	93.9	0	0.0	310	100.0
Other Area hospitals	1	1.6	0	0.0	0	0.0	62	98.4	0	0.0	63	100.0
ALL HOSPITALS	2	0.5	0	0.0	18	4.8	353	94.6	0	0.0	373	100.0
Greater Murray												
Mercy Care Centre, Albury	2	0.3	0	0.0	35	5.1	652	94.6	0	0.0	689	100.0
Griffith Base	8	1.5	1	0.2	13	2.5	499	95.6	1	0.2	522	100.0
Wagga Wagga Base	7	0.8	11	1.2	72	7.9	817	90.1	0	0.0	907	100.0
Calvary, Wagga Wagga	1	0.2	3	0.7	26	5.8	421	93.3	0	0.0	451	100.0
Other Area hospitals	1	0.1	0	0.0	16	1.7	940	97.8	4	0.4	961	100.0
ALL HOSPITALS	19	0.5	15	0.4	162	4.6	3329	94.3	5	0.1	3530	100.0
Southern												
Bega	0	0.0	0	0.0	6	2.8	205	97.2	0	0.0	211	100.0
Goulburn Base	0	0.0	0	0.0	21	5.8	341	94.2	0	0.0	362	100.0
Queanbeyan	0	0.0	1	0.3	7	1.8	372	97.9	0	0.0	380	100.0
Other Area hospitals	4	0.5	0	0.0	22	2.7	799	96.7	1	0.1	826	100.0
ALL HOSPITALS	4	0.2	1	0.1	56	3.1	1717	96.5	1	0.1	1779	100.0
TOTAL NSW	852	1.0	701	0.8	4021	4.6	81848	93.6	40	0.0	87462	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department

Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

7.7 BABY DISCHARGE STATUS IN SELECTED HOSPITALS

Table 107 shows the discharge status of babies born in hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW total.

TABLE 107												
BIRTHS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 1997#												
Health Area/ Hospital	Discharged		Stillborn		Baby discharge status Neonatal death		Transferred		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney												
King George V	4636	93.7	47	1.0	22	0.4	242	4.9	0	0.0	4947	100.0
NSW Private	280	97.9	1	0.3	0	0.0	5	1.7	0	0.0	286	100.0
ALL HOSPITALS	4916	93.9	48	0.9	22	0.4	247	4.7	0	0.0	5233	100.0
Northern Sydney												
Hornsby	997	98.6	4	0.4	1	0.1	9	0.9	0	0.0	1011	100.0
Manly	804	93.6	4	0.5	0	0.0	51	5.9	0	0.0	859	100.0
Mona Vale	794	97.7	3	0.4	4	0.5	12	1.5	0	0.0	813	100.0
Royal North Shore	2262	86.4	15	0.6	18	0.7	323	12.3	0	0.0	2618	100.0
Ryde	724	98.0	2	0.3	1	0.1	12	1.6	0	0.0	739	100.0
Mater, North Sydney	1688	95.8	6	0.3	0	0.0	68	3.9	0	0.0	1762	100.0
Sydney Adventist	2625	99.1	11	0.4	1	0.0	13	0.5	0	0.0	2650	100.0
ALL HOSPITALS	9894	94.7	45	0.4	25	0.2	488	4.7	0	0.0	10452	100.0
Western Sydney												
Auburn	1600	98.6	7	0.4	6	0.4	10	0.6	0	0.0	1623	100.0
Blacktown	2515	97.1	22	0.8	5	0.2	48	1.9	0	0.0	2590	100.0
Westmead	4076	95.0	33	0.8	28	0.7	155	3.6	0	0.0	4292	100.0
The Hills Private	1329	98.7	8	0.6	1	0.1	8	0.6	0	0.0	1346	100.0
ALL HOSPITALS	9520	96.6	70	0.7	40	0.4	221	2.2	0	0.0	9851	100.0
Wentworth												
Blue Mountains	479	96.8	3	0.6	0	0.0	13	2.6	0	0.0	495	100.0
Nepean	2774	95.0	37	1.3	11	0.4	98	3.4	0	0.0	2920	100.0
Jamison Private	941	98.0	7	0.7	0	0.0	12	1.3	0	0.0	960	100.0
Hawkesbury	867	95.0	7	0.8	0	0.0	16	1.8	23	2.5	913	100.0
ALL HOSPITALS	5061	95.7	54	1.0	11	0.2	139	2.6	23	0.4	5288	100.0
South Western Sydney												
Camden	910	97.2	0	0.0	1	0.1	25	2.7	0	0.0	936	100.0
Fairfield	2164	98.5	12	0.5	1	0.0	19	0.9	0	0.0	2196	100.0
Liverpool	3153	94.9	31	0.9	29	0.9	110	3.3	0	0.0	3323	100.0
Campbelltown	1868	88.4	10	0.5	8	0.4	228	10.8	0	0.0	2114	100.0
Bankstown/Lidcombe	2210	98.7	10	0.4	1	0.0	17	0.8	0	0.0	2238	100.0
Bankstown Private	770	95.1	7	0.9	0	0.0	17	2.1	16	2.0	810	100.0
Bowral	530	84.7	1	0.2	0	0.0	95	15.2	0	0.0	626	100.0
ALL HOSPITALS	11605	94.8	71	0.6	40	0.3	511	4.2	16	0.1	12243	100.0
Central Coast												
Gosford	2613	97.9	17	0.6	7	0.3	32	1.2	0	0.0	2669	100.0
North Gosford Private	775	98.9	1	0.1	3	0.4	5	0.6	0	0.0	784	100.0
Other Area hospitals	64	98.5	0	0.0	0	0.0	1	1.5	0	0.0	65	100.0
ALL HOSPITALS	3452	98.1	18	0.5	10	0.3	38	1.1	0	0.0	3518	100.0
Hunter												
Maitland	1169	91.5	6	0.5	2	0.2	97	7.6	3	0.2	1277	100.0
Muswellbrook	236	97.5	0	0.0	0	0.0	6	2.5	0	0.0	242	100.0
Belmont	603	93.2	4	0.6	0	0.0	40	6.2	0	0.0	647	100.0
John Hunter	3082	87.2	37	1.0	25	0.7	391	11.1	0	0.0	3535	100.0
Christo Road Private	949	95.9	8	0.8	2	0.2	31	3.1	0	0.0	990	100.0
Other Area hospitals	655	98.5	2	0.3	0	0.0	8	1.2	0	0.0	665	100.0
ALL HOSPITALS	6694	91.0	57	0.8	29	0.4	573	7.8	3	0.0	7356	100.0
Illawarra												
Shoalhaven	725	81.4	4	0.4	1	0.1	161	18.1	0	0.0	891	100.0
Shellharbour	513	97.5	0	0.0	0	0.0	13	2.5	0	0.0	526	100.0
Illawarra Regional	1864	69.9	19	0.7	4	0.1	781	29.3	0	0.0	2668	100.0
Other Area hospitals	152	100.0	0	0.0	0	0.0	0	0.0	0	0.0	152	100.0
ALL HOSPITALS	3254	76.8	23	0.5	5	0.1	955	22.5	0	0.0	4237	100.0

TABLE 107 (CONT)

BIRTHS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 1997#

Health Area/ Hospital	Baby discharge status										TOTAL	
	Discharged		Stillborn		Neonatal death		Transferred		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
South Eastern Sydney												
St. Margaret's Private	998	97.6	3	0.3	0	0.0	22	2.2	0	0.0	1023	100.0
Royal Hospital for Women	3570	93.2	30	0.8	16	0.4	212	5.5	3	0.1	3831	100.0
St. George	2397	96.5	19	0.8	4	0.2	30	1.2	34	1.4	2484	100.0
Sutherland	978	97.7	9	0.9	1	0.1	13	1.3	0	0.0	1001	100.0
Hurstville Community	973	98.7	3	0.3	0	0.0	10	1.0	0	0.0	986	100.0
Kareena Private	719	98.6	2	0.3	1	0.1	7	1.0	0	0.0	729	100.0
St. George Private	876	98.4	1	0.1	0	0.0	13	1.5	0	0.0	890	100.0
Other Area hospitals	139	97.9	0	0.0	0	0.0	3	2.1	0	0.0	142	100.0
ALL HOSPITALS	10650	96.1	67	0.6	22	0.2	310	2.8	37	0.3	11086	100.0
Northern Rivers												
Grafton Base	437	92.0	3	0.6	1	0.2	34	7.2	0	0.0	475	100.0
Lismore Base	933	71.2	17	1.3	10	0.8	351	26.8	0	0.0	1311	100.0
Murwillumbah	467	95.7	2	0.4	1	0.2	18	3.7	0	0.0	488	100.0
Tweed Heads	651	97.7	5	0.8	4	0.6	6	0.9	0	0.0	666	100.0
Other Area hospitals	421	95.7	2	0.5	0	0.0	17	3.9	0	0.0	440	100.0
ALL HOSPITALS	2909	86.1	29	0.9	16	0.5	426	12.6	0	0.0	3380	100.0
Mid North Coast												
Coffs Harbour	733	90.9	7	0.9	4	0.5	62	7.7	0	0.0	806	100.0
Kempsey	261	95.6	4	1.5	0	0.0	8	2.9	0	0.0	273	100.0
Port Macquarie Base	619	84.6	6	0.8	1	0.1	106	14.5	0	0.0	732	100.0
Manning Base	692	96.2	5	0.7	0	0.0	22	3.1	0	0.0	719	100.0
Other Area hospitals	448	95.1	5	1.1	0	0.0	18	3.8	0	0.0	471	100.0
ALL HOSPITALS	2753	91.7	27	0.9	5	0.2	216	7.2	0	0.0	3001	100.0
New England												
Armidale	473	92.6	5	1.0	2	0.4	31	6.1	0	0.0	511	100.0
Gunnedah	201	88.9	0	0.0	1	0.4	24	10.6	0	0.0	226	100.0
Inverell	221	91.7	2	0.8	0	0.0	18	7.5	0	0.0	241	100.0
Moree	235	93.6	1	0.4	0	0.0	15	6.0	0	0.0	251	100.0
Tamworth Base	582	87.0	8	1.2	3	0.4	76	11.4	0	0.0	669	100.0
Other Area hospitals	627	96.3	1	0.2	1	0.2	22	3.4	0	0.0	651	100.0
ALL HOSPITALS	2339	91.8	17	0.7	7	0.3	186	7.3	0	0.0	2549	100.0
Macquarie												
Dubbo Base	865	67.2	10	0.8	6	0.5	406	31.5	0	0.0	1287	100.0
Mudgee	216	95.2	2	0.9	0	0.0	9	4.0	0	0.0	227	100.0
Other Area hospitals	184	89.3	0	0.0	0	0.0	22	10.7	0	0.0	206	100.0
ALL HOSPITALS	1265	73.5	12	0.7	6	0.3	437	25.4	0	0.0	1720	100.0
Mid Western												
Bathurst Base	456	84.4	2	0.4	0	0.0	82	15.2	0	0.0	540	100.0
Cowra	206	99.0	0	0.0	0	0.0	2	1.0	0	0.0	208	100.0
Lithgow	224	97.4	0	0.0	0	0.0	6	2.6	0	0.0	230	100.0
Orange Base	649	75.4	8	0.9	1	0.1	203	23.6	0	0.0	861	100.0
Parkes	199	91.7	1	0.5	0	0.0	17	7.8	0	0.0	217	100.0
Other Area hospitals	262	91.9	2	0.7	1	0.4	20	7.0	0	0.0	285	100.0
ALL HOSPITALS	1996	85.3	13	0.6	2	0.1	330	14.1	0	0.0	2341	100.0
Far West												
Broken Hill Base	302	96.2	4	1.3	1	0.3	7	2.2	0	0.0	314	100.0
Other Area hospitals	57	89.1	1	1.6	0	0.0	6	9.4	0	0.0	64	100.0
ALL HOSPITALS	359	95.0	5	1.3	1	0.3	13	3.4	0	0.0	378	100.0
Greater Murray												
Mercy Care Centre, Albury	670	97.0	2	0.3	2	0.3	17	2.5	0	0.0	691	100.0
Griffith Base	472	89.1	8	1.3	2	0.4	48	9.1	0	0.0	530	100.0
Wagga Wagga Base	789	86.2	8	0.9	2	0.2	116	12.7	0	0.0	915	100.0
Calvary, Wagga Wagga	439	96.7	3	0.7	0	0.0	12	2.6	0	0.0	454	100.0
Other Area hospitals	921	95.5	3	0.3	0	0.0	40	4.1	0	0.0	964	100.0
ALL HOSPITALS	3291	92.6	24	0.7	6	0.2	233	6.6	0	0.0	3554	100.0
Southern												
Bega	203	95.8	1	0.5	0	0.0	8	3.8	0	0.0	212	100.0
Goulburn Base	340	93.2	3	0.8	0	0.0	22	6.0	0	0.0	365	100.0
Queanbeyan	366	96.3	0	0.0	0	0.0	14	3.7	0	0.0	380	100.0
Other Area hospitals	792	95.5	3	0.4	1	0.1	33	4.0	0	0.0	829	100.0
ALL HOSPITALS	1701	95.2	7	0.4	1	0.1	77	4.3	0	0.0	1786	100.0
TOTAL NSW	81811	92.8	587	0.7	248	0.3	5403	6.1	84	0.1	88133	100.0

Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department

Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

7.8 POSTNATAL LENGTH OF STAY IN SELECTED HOSPITALS

Table 108 shows the mother's postnatal length of stay in the hospital of birth for individual hospitals where the number of reported confinements exceeded 200 in 1997, totals for all hospitals within each Health Area and the NSW total.

TABLE 108							
AVERAGE POSTNATAL LENGTH OF STAY IN HOSPITAL OF BIRTH, NSW 1994-96#							
Health Area/ Hospital	Average postnatal length of stay (days)			Health Area/ Hospital	Average postnatal length of stay (days)		
	1994	1995	1996		1994	1995	1996
Central Sydney				Illawarra			
King George V	4.2	4.1	3.7	Shoalhaven	3.1	2.9	2.7
NSW Private	6.1	5.8	5.4	Shellharbour	3.6	3.5	3.8
Other Area hospitals	3.5	3.5	3.1	Illawarra Regional	2.6	2.5	2.4
ALL HOSPITALS	4.2	4.1	3.8	Other Area hospitals	4.0	4.7	4.7
Northern Sydney				ALL HOSPITALS			
Hornsby	4.8	4.4	4.1	3.0	2.9	2.7	
Manly	4.5	4.3	3.9	Northern Rivers			
Mona Vale	4.6	4.3	4.2	Grafton Base	4.4	4.4	4.8
Royal North Shore	4.5	4.3	4.3	Lismore Base	3.5	3.8	3.3
Ryde	4.2	4.0	4.3	Murwillumbah	4.6	4.2	4.0
Mater, North Sydney	5.7	5.6	5.3	Tweed Heads	3.7	3.1	3.4
Sydney Adventist	6.0	6.2	5.9	Other Area hospitals	4.0	3.6	3.6
ALL HOSPITALS	5.1	4.9	4.8	ALL HOSPITALS	3.9	3.8	3.6
Western Sydney				Mid North Coast			
Auburn	3.5	3.6	3.4	Coffs Harbour	4.6	4.5	4.4
Blacktown	3.4	3.3	3.3	Kempsey	4.4	4.7	4.6
Westmead	4.2	3.9	3.5	Port Macquarie Base	3.9	3.9	3.9
The Hills Private	5.7	5.8	5.8	Manning Base	4.6	4.3	4.3
ALL HOSPITALS	4.1	3.9	3.7	Other Area hospitals	4.1	4.7	4.4
Wentworth				ALL HOSPITALS			
Blue Mountains	4.4	3.5	3.6	4.4	4.4	4.3	
Nepean	3.5	3.5	3.4	New England			
Jamison Private	5.2	5.3	5.3	Armidale	5.5	5.1	5.1
Other Area hospitals	3.4	3.7	3.5	Gunnedah	4.2	3.7	3.7
ALL HOSPITALS	3.9	3.7	3.7	Inverell	4.1	3.7	3.6
South Western Sydney				Moree			
Camden	4.0	3.7	3.4	Tamworth Base	3.3	3.7	3.5
Fairfield	3.2	3.1	3.0	Other Area hospitals	4.4	4.8	4.9
Liverpool	3.3	3.1	3.1	ALL HOSPITALS	4.2	4.3	4.2
Campbelltown	3.2	3.0	2.8	Macquarie			
Bankstown/Lidcombe	3.2	3.0	3.0	Dubbo Base	4.7	3.3	3.2
Bankstown Private	5.2	5.3	5.0	Mudgee	3.8	3.6	3.6
Bowral	3.5	3.7	3.2	Other Area hospitals	3.8	3.4	3.2
ALL HOSPITALS	3.4	3.2	3.2	ALL HOSPITALS	4.3	3.3	3.3
Central Coast				Mid Western			
Gosford	3.8	3.7	3.5	Bathurst Base	4.1	4.2	3.7
North Gosford Private	6.4	6.1	6.2	Cowra	5.3	4.9	4.6
ALL HOSPITALS	4.3	4.2	4.1	Lithgow	4.6	4.1	5.3
Hunter				Orange Base			
Maitland	3.7	3.5	3.2	3.5	3.4	3.1	
Muswellbrook	4.1	3.9	3.9	Parkes	4.6	4.5	4.2
Belmont	3.8	3.6	3.3	Other Area hospitals	4.2	4.1	4.7
John Hunter	3.8	3.9	3.7	ALL HOSPITALS	4.1	4.0	3.9
Christo Road Private	5.4	5.7	5.7	Far West			
Other Area hospitals	4.2	4.6	4.4	Broken Hill Base	5.3	4.3	4.1
ALL HOSPITALS	3.9	4.0	3.9	Other Area hospitals	3.3	3.2	3.8
South Eastern Sydney				ALL HOSPITALS			
St. Margaret's Private	6.6	6.0	5.8	4.7	4.0	4.1	
Royal Hospital for Women	4.4	4.6	4.2	Greater Murray			
St. George	4.6	4.1	3.8	Mercy Care Centre, Albury	4.6	4.6	4.3
Sutherland	5.2	4.5	4.1	Griffith Base	4.1	4.1	3.6
Hurstville Community	6.4	6.2	6.5	Wagga Wagga Base	4.4	4.0	3.7
Kareena Private	6.4	6.3	6.4	Calvary, Wagga Wagga	6.0	5.9	6.3
St. George Private	-	8.0	6.2	Other Area hospitals	4.8	4.6	4.5
ALL HOSPITALS	5.2	5.0	4.8	ALL HOSPITALS	4.7	4.5	4.4
				Southern			
				Bega	5.4	4.4	4.2
				Goulburn Base	4.4	4.1	3.6
				Queanbeyan	3.9	3.4	3.2
				Other Area hospitals	4.3	4.2	4.1
				ALL HOSPITALS	4.4	4.0	3.8
				ALL NSW HOSPITALS	4.2	4.1	4.0

Source: NSW Midwives Data Collection and NSW Inpatient Statistics Collection. Epidemiology and Surveillance Branch, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

APPENDIX 1

DESCRIPTION OF SELECTED BIRTH DEFECTS

The following include descriptions of some of the birth defects included in this report:

<i>Anencephaly</i>	Absence of the cranial vault, with the brain tissue completely missing or markedly reduced.
<i>Spina bifida</i>	Defective closure of the bony encasement of the spinal cord, through which the spinal cord may protrude.
<i>Encephalocele</i>	Protrusion of brain through a congenital opening in the skull
<i>Hydrocephalus</i>	Dilatation of the cerebral ventricles accompanied by an accumulation of cerebral fluid within the skull.
<i>Buphthalmos</i>	Enlargement and distension of the fibrous coats of the eye.
<i>Hypospadias</i>	The opening of the urethra lies on the underside of the penis or on the perineum.
<i>Epispadias</i>	Absence of the upper wall of the urethra. The opening of the urethra lies on the dorsum of the penis in males, and anterior to or onto the clitoris in females.
<i>Chordee</i>	Downward bowing of the penis.
<i>Talipes equinovarus</i>	A deformity of the foot in which the heel is elevated and turned outward.
<i>Polydactyly</i>	Presence of additional fingers or toes on hands or feet.
<i>Syndactyly</i>	Attachment of adjacent fingers or toes on hands or feet.
<i>Craniosynostosis</i>	Premature closure of the sutures of the skull.
<i>Exomphalos</i>	Herniation of the abdominal contents into the umbilical cord.
<i>Gastroschisis</i>	A defect in the abdominal wall not involving the umbilicus and through which the abdominal contents herniate.
<i>Cystic hygroma</i>	A sac, cyst or bursa distended with fluid.

APPENDIX 2

BIRTH DEFECT EXCLUSION LIST

The following is a general list of minor defects and non-structural disorders which are excluded from the NSW Birth Defects Register. For further details, please contact the NSW Birth Defects Register (see Further Information, p16).

Abnormal palmar creases	Minor toe/foot anomalies
Accessory nipples	Muscular dystrophies & myopathies
Balanced chromosomal translocation (unless occurring with structural defects)	Oesophageal reflux
Birthmarks (single, < 4 cms. diameter)	Patent ductus arteriosus (less than 37 weeks gestation)
Bronchopulmonary dysplasia	Phenylketonuria (PKU)*
Cerebral palsy	Pilonidal sinus
Clicky hips	Sacral dimples
Congenital hypothyroidism*	Single umbilical artery (unless occurring with structural defects)
Congenital infections (unless occurring with structural defects)	Skin tag
Congenital neoplasms/tumours (exception : cystic hygroma)	Strabismus
Cystic fibrosis*	Talipes (exception: those requiring surgery)
Developmental disability	Thalassaemia major*
Deviated nasal septum	Tongue tie
Fetal alcohol syndrome*	Undescended testes (exception: those requiring surgery)
Galactosaemia	Webbing of 2nd & 3rd toes
Glucose-6-phosphate dehydrogenase (G6PD) deficiency	Wide sutures
Haemophilia	
Heart murmurs (functional)	
Hernia (epigastric, hiatus, inguinal, umbilical)	
Hydrocele (testis)	
Hydrops fetalis due to isoimmunisation	
Hypoplastic lung (less than 37 weeks gestation)	
Imperforate hymen	
Inborn errors of metabolism	
Intrauterine growth retardation	
Low birthweight	
Meconium ileus	
Minor ear anomalies	
Minor finger/hand anomalies	

* Congenital hypothyroidism, cystic fibrosis, phenylketonuria, fetal alcohol syndrome and Thalassaemia major were notifiable from 1994.

APPENDIX 3**MATERNAL COUNTRIES OF BIRTH AND COUNTRY OF BIRTH GROUPS****English speaking**

Australia
Christmas Island
Cocos (Keeling) Islands
Norfolk Island
New Zealand
United Kingdom
Channel Islands
Isle of Man
Ireland
Bermuda
Canada
United States of America
South Africa

Central and South America

Argentina
Bolivia
Brazil
Chile
Colombia
Ecuador
Falkland Islands
French Guiana
Guyana
Paraguay
Peru
Surinam
Uruguay
Venezuela
Belize
Costa Rica
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama
Antigua and Barbuda
Bahamas
Barbados
Cayman Islands
Cuba
Grenada
Guadeloupe
Jamaica
Netherlands Antilles
Puerto Rico
St Kitts-Nevis
St Lucia
St Vincent and the Grenadines
Trinidad and Tobago
Turks and Caicos Islands

Eastern Europe, Russia, Central Asian and Baltic States

Bulgaria
Czechoslovakia
Hungary
Poland
Romania
Armenia
Azerbaijan
Belarus (formerly Byelorussia)
Estonia
Georgia
Kazakhstan
Kyrgyzstan (formerly Kirghizia)
Latvia
Lithuania
Moldova (formerly Moldavia)
Russian Federation
Ukraine
Uzbekistan

Melanesia, Micronesia and Polynesia

New Caledonia
Papua New Guinea
Solomon Islands
Vanuatu
Guam
Kiribati
Nauru
Cook Islands
Fiji
French Polynesia (including Tahiti)
Niue
American Samoa
Western Samoa
Tokelau
Tonga
Tuvalu
Wallis and Fortuna

Middle East and Africa

Bahrain
Gaza Strip
Iran
Iraq
Israel
Jordan
Kuwait
Lebanon

Qatar
Saudi Arabia
Syria
Turkey
United Arab Emirates
West Bank
Yemen
Algeria
Egypt
Libya
Mauritania
Morocco
Sudan
Tunisia
Cameroon
Central African Republic
Congo
Cote d'Ivoire
Gambia
Ghana
Guinea-Bissau
Liberia
Mali
Nigeria
Senegal
Sierra Leone
Zaire
Angola
Botswana
Djibouti
Ethiopia
Kenya
Malawi
Mauritius
Mozambique
Namibia
Reunion
Rwanda
Seychelles
Somalia
Swaziland
Tanzania
Uganda
Zambia
Zimbabwe

North East Asia

China (excluding Taiwan)
Hong Kong
Japan
North Korea
South Korea
Macau
Mongolia
Taiwan

South East Asia

Brunei
Cambodia
Indonesia
Laos
Malaysia
Burma (Myanmar)
Philippines
Singapore
Thailand
Vietnam

Southern Asia

Afghanistan
Bangladesh
Bhutan
India
Maldives
Nepal
Pakistan
Sri Lanka

Southern Europe

Albania
Andorra
Cyprus
Gibraltar
Greece
Italy
Malta
Portugal
Spain
Former Yugoslavia (not otherwise defined)
Croatia
Slovenia

Western and Northern Europe

Austria
Belgium
France
Germany (United)
Luxembourg
Netherlands
Switzerland
Denmark
Faeroe Islands
Finland
Iceland
Norway
Sweden