

NEW SOUTH WALES 

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## **NEW SOUTH WALES MOTHERS AND BABIES 1996**

**EPIDEMIOLOGY AND SURVEILLANCE BRANCH  
PUBLIC HEALTH DIVISION**

**PATIENT DATA MANAGEMENT UNIT  
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**NSW HEALTH DEPARTMENT**

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# NEW SOUTH WALES MOTHERS AND BABIES

## 1996

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### INTRODUCTION

This report on mothers and babies in NSW combines the annual reports of the NSW Midwives Data Collection and the NSW Birth Defects Register. Information on maternal deaths in NSW is also included.

The report is in a new format, with a full chapter on recent trends, and separate chapters covering Health Area of mother's residence, Aboriginal mothers and babies, mother's country or region of birth, birth defects and individual hospitals in NSW. Information usually included in the annual report of the NSW Birth Defects Register is included as a separate chapter.

Requests for further analyses may be directed to a Public Health Unit or the Epidemiology and Surveillance Branch, NSW Health Department.

### SUMMARY

#### Trends in NSW

The number of births in NSW rose from 87,532 in 1990 to a high of 88,976 in 1992 and then declined to 86,429 in 1996. The number of teenage mothers has decreased from 4,850 (5.6 per cent of all mothers) in 1990 to 4,295 (5.0 per cent) in 1996, while the number of mothers aged 35 years and over increased from 8,974 (10.4 per cent) in 1990 to 12,712 (14.9 per cent) in 1996.

The reported number of confinements among Aboriginal or Torres Strait Islander mothers rose from 1,202 in 1990 (1.4 per cent) to 1,712 (2.0 per cent) in 1996. Part of this increase is likely to be due to an increased willingness of mothers to be identified as Aboriginal or Torres Strait Islander.

Since 1990 there were increasing numbers of confinements among mothers born in Asian countries, particularly China and Vietnam, and Pacific Island countries, and decreasing numbers of confinements among mothers born in European countries.

In 1990-96 there was a marked decrease in the number of mothers with private obstetric care; from 48.6 per cent to 32.2 per cent.

The number of mothers planning to give birth in a birth centre rose from 723 in 1990 to 4,015 in 1996, while the reported number of mothers planning a homebirth decreased from 353 in 1990 to 247 in 1996.

The rate of normal vaginal birth in 1996 was 70.7 per cent, similar to 1990. The caesarean section rate increased from 16.1 to 17.6 per cent, with most of this increase due to an increased rate of emergency caesarean section. The rate of instrumental delivery (forceps and vacuum extraction) decreased from 12.0 to 10.6 per cent.

The rate of low birth weight (less than 2,500 grams) remained stable at about 6.0 per cent between 1990 and 1996 and the rate of prematurity (less than 37 weeks gestation) was also stable at about 6.5 per cent. The perinatal mortality rate decreased from 10.4 to 8.9 per 1,000 with most of the decrease due to a decrease in neonatal deaths.

In the period 1990-94, 54 deaths were reported among pregnant women or women who gave birth less than six weeks previously. Of these, about two thirds were directly or indirectly related to pregnancy or its management and about one third were due to incidental causes not related to the pregnancy.

#### Area Health Services

In 1996, 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 1996, as in previous years, there were large variations between Areas in the age distribution of women giving birth. The proportion of women giving birth at less than 20 years of age varied from 1.1 per cent in the Northern Sydney Area to 14.2 per cent in the Far West Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 8.9 per cent in the Far West Area to 25.8 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 27.9 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 (42.7 per cent). In Central Sydney, the majority of mothers born in non-English speaking countries were born in North East Asia (25.6 per cent) and the Middle East and Africa (23.3 per cent).

The highest rate of normal vaginal birth was among residents of South Western Sydney Area (76.8 per cent), while the highest rate of instrumental delivery was among residents of Northern Sydney Area (16.2 per cent). The caesarean section rate varied from 13.1 per cent among mothers resident in the Macquarie Area to 22.0 per cent in the Northern Sydney Area.

The rate of low birth weight varied from 3.4 per cent in the Southern Area to 6.9 per cent in the Mid North Coast Area. The rate of prematurity varied from 3.4 per cent in the Southern Area to 8.4 per cent in the Far West Area.

The perinatal mortality rate was 8.9 per 1,000 births in 1996. The rate varied from 6.0 per 1,000 in the Southern Area to 22.8 per 1,000 in the Far West Area.

#### Aboriginal and Torres Strait Islander mothers and babies

In 1996, there were 1,724 babies born to Aboriginal/Torres Strait Islander mothers, 2.0 per cent of all babies born in NSW. One quarter of Aboriginal/Torres Strait Islander mothers who gave birth in 1996 lived in the New England or Macquarie Areas and two thirds lived in rural Areas. About one in five Aboriginal/Torres Strait Islander mothers were teenagers and three quarters were aged 20 to 34 years.

In 1996, 88.3 per cent of Aboriginal/Torres Strait Islander mothers were booked into the hospital of birth compared with 98.8 per cent of all mothers in NSW; and 61.0 per cent of Aboriginal/Torres Strait Islander mothers commenced antenatal care before 20 weeks gestation compared with 85.3 per cent of all mothers in NSW.

Over 60 per cent of Aboriginal/Torres Strait Islander mothers reported smoking during pregnancy compared with 21.1 per cent of all mothers.

Following statewide trends the rate of induction of labour among Aboriginal/Torres Strait Islander mothers increased between 1990 and 1996 and the rate of spontaneous onset of labour decreased. However, the rate induction of labour among Aboriginal/Torres Strait Islander mothers in 1996 continued to be substantially lower than the statewide rate: 16.6 per cent compared with 20.5 per cent. Also following statewide trends, the caesarean section rate increased from 13.0 per cent in 1990 to 16.0 per cent in 1996 and the rate of instrumental delivery (forceps or vacuum extraction) decreased from 6.7 to 4.8 per cent.

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 1991, the rate of low birth weight in Aboriginal/Torres Strait Islander babies has been over 10 per cent. This is about one and a half times higher than the rate for NSW overall, which was 5.8 per cent in 1996. The perinatal mortality rate in babies born to Aboriginal/Torres Strait Islander mothers was 17.4 per 1,000 in 1996, about twice the rate of 8.9 per 1,000 for NSW overall.

#### **Maternal country of birth**

Between 1990 and 1996, the number of mothers born in non-English speaking countries rose from 14,469 to 17,333, an increase from 16.7 to 20.3 per cent of all confinements.

Mothers born in Asia showed the largest increase, from 6.8 per cent to 10.5 per cent of confinements. Small increases were observed in the numbers of mothers born in Central and South America and the Pacific Islands, while the number of mothers born in Southern Europe declined by about one-third over the seven year period.

In 1996, the percentage of mothers born in non-English speaking countries was highest in the Central Sydney Area (47.8 per cent), followed by the South Western Sydney and Western Sydney Areas (36.6 and 34.6 per cent respectively).

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

In 1996, 85.3 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 87.6 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 55.6 per cent of mothers born in Melanesia, Micronesia and Polynesia and 65.4 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 (21.1 per cent) and North East Asia (20.3 per cent).

The highest rates of low birth weight were in babies of mothers born in Southern Asian countries (8.5 per cent) and Melanesia, Micronesia and Polynesia (7.5 per cent). The highest rates of prematurity and perinatal mortality were in babies of mothers born Melanesia, Micronesia and Polynesia (8.1 per cent and 16.1 per 1,000).

#### **Birth defects**

About 2,000 infants are born with birth defects each year in NSW, and for about half these infants the malformation is detected after birth. Over the period 1990-96, among stillborn and liveborn infants 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, such as spina bifida, has decreased from 80 in 1992 to 30 in 1996.

In 1996, the number of reported terminations of pregnancy associated with birth defects was 102, less than the 140 to 150 per year since 1992. About half the reported terminations are associated with chromosomal defects, most commonly Down Syndrome, and almost one third with neural tube defects.

Birth defects were more common among premature compared to full term infants; and among male 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. Reporting of births to the NSW Department of Health is a requirement of the Public Health Act, 1991.

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 and Data Services Branch of the NSW Health Department, where they are compiled into the MDC Online System (MDCOS).

MDC data is used to: monitor outcomes of pregnancy and delivery; monitor changes in the demographic profile of mothers; produce information for planning, evaluation and quality assurance of maternal and perinatal health services; provide a database/sampling frame for epidemiological studies on maternal perinatal and infant problems and conditions; provide data on birth defects for incorporation into the NSW Birth Defects Register; and to enable comparisons between States by providing data to the Australian Institute of Health and Welfare National Perinatal Statistics Unit (NPSU) for inclusion in national reports.

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 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 at the 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 NPSU for monitoring of birth defects at a national level. The NPSU is also responsible for ensuring that Australian information on birth defects is provided 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 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.

Several members of the Advisory Committee also sit on an Ethics Working Party, which provides advice to the Committee on ethical issues arising from the development and operation of the Register.

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 Manager, 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 and Data Services 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 fetal 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 detected during pregnancy or at birth, excluding birth injuries and minor anomalies such as skin tags, talipes, birthmarks or clicky hips. Descriptions of some of the birth defects included in this report are shown in Appendix 1 and a list of common exclusions is shown in Appendix 2. From 1994, the following additional conditions were included in the Register: congenital hypothyroidism, cystic fibrosis, phenylketonuria and thalassaemia major.

### Birth weight

The newborn infant's first weight, usually taken within one hour of birth, measured to the nearest five grams.

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

### 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. Included are lumbar, spinal and epidural anaesthetics.

### Episiotomy

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

### Fertility rates

General fertility rate: the number of livebirths per 1,000 women aged 15-49 years.

*Age-specific fertility rate:* the number of livebirths per 1,000 women in the specified age group.

### Gestational age

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

### 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).

### Livebirth

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.

### Neonatal death

The death of a liveborn infant within 28 days of birth.

### 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.

**Prolonged rupture of membranes**

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

**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 it's 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****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" is used where labour is augmented with artificial rupture of membranes as well as oxytocics or prostaglandins.

The "no labour" category is 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**

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 death 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 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 was developed and is maintained by Tim Churches and Peter Brandon 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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<http://www.health.nsw.gov.au>.

# PART 1: TRENDS IN NEW SOUTH WALES

## 1.1 CONFINEMENTS AND BIRTHS BY PLURALITY

There were 86,429 births to 85,302 women reported to the MDC for 1996. There was a slow decrease in the number of births and confinements reported in NSW since 1992 (Table 1).

Of the 85,302 confinements reported in 1996, 1,076 (1.3 per cent) were for twins, 24 for triplets and 1 for quadruplets. The number of babies born of multiple pregnancies decreased from 2,460 in 1994 to 2,228 in 1996, a reduction of 9.4 per cent.

## 1.2 HEALTH AREA OF RESIDENCE

The number of mothers giving birth in most Health Areas remained stable or decreased slightly over the last seven years (Table 2). Moderate increases occurred in the Northern Sydney and New England Areas, and a decrease of more than 20 per cent occurred in the Wentworth Area.

**TABLE 1**

### BIRTHS AND CONFINEMENTS BY PLURALITY, NSW 1990-96

Plurality	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>														
Singleton	85502	98.8	84684	98.7	86661	98.7	85616	98.7	85523	98.6	85155	98.7	84201	98.7
Twins	961	1.1	1067	1.2	1109	1.3	1105	1.3	1185	1.4	1088	1.3	1076	1.3
Triplets	36	0.0	32	0.0	28	0.0	25	0.0	30	0.0	20	0.0	24	0.0
Quadruplets	0	0.0	0	0.0	2	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Quintuplets	0	0.0	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	100.0
<b>Births</b>														
Singleton	85502	97.7	84684	97.4	86661	97.4	85616	97.4	85524	97.2	85155	97.4	84201	97.4
Twins	1922	2.2	2134	2.5	2218	2.5	2210	2.5	2370	2.7	2176	2.5	2152	2.5
Triplets	108	0.1	96	0.1	84	0.1	75	0.1	90	0.1	60	0.1	72	0.1
Quadruplets	0	0.0	0	0.0	8	0.0	0	0.0	0	0.0	0	0.0	4	0.0
Quintuplets	0	0.0	0	0.0	5	0.0	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	87532	100.0	86914	100.0	88976	100.0	87901	100.0	87984	100.0	87391	100.0	86429	100.0

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

**TABLE 2**

### CONFINEMENTS BY HEALTH AREA OF RESIDENCE, NSW 1990-96

Health Area	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney	6968	8.1	6850	8.0	7238	8.2	6716	7.7	6984	8.1	6424	7.4	7046	8.3
Northern Sydney	8193	9.5	8543	10.0	8703	9.9	8657	10.0	8702	10.0	8690	10.1	8677	10.2
Western Sydney	9424	10.9	9618	11.2	10022	11.4	9955	11.5	10019	11.6	10147	11.8	10058	11.8
Wentworth	5014	5.8	4933	5.8	4974	5.7	4866	5.6	4952	5.7	3982	4.6	4186	4.9
South Western														
Sydney	11409	13.2	11497	13.4	11877	13.5	12001	13.8	11961	13.8	11915	13.8	12125	14.2
Central Coast	3566	4.1	3567	4.2	3778	4.3	3806	4.4	3782	4.4	3851	4.5	3712	4.4
Hunter	7286	8.4	7035	8.2	7486	8.5	7375	8.5	7235	8.3	7679	8.9	7353	8.6
Illawarra	4635	5.4	4624	5.4	4563	5.2	4672	5.4	4636	5.3	4458	5.2	4233	5.0
South Eastern														
Sydney	8831	10.2	8851	10.3	8509	9.7	8637	10.0	8604	9.9	9111	10.6	8639	10.1
Northern Rivers	3087	3.6	2992	3.5	3125	3.6	3132	3.6	2879	3.3	2998	3.5	2947	3.5
Mid North Coast	3017	3.5	3024	3.5	3162	3.6	3137	3.6	3068	3.5	2952	3.4	2922	3.4
New England	2813	3.3	2738	3.2	2769	3.2	2686	3.1	2645	3.0	3011	3.5	2822	3.3
Macquarie	1666	1.9	1772	2.1	1742	2.0	1663	1.9	1638	1.9	1686	2.0	1723	2.0
Mid Western	2572	3.0	2491	2.9	2411	2.7	2409	2.8	2430	2.8	2407	2.8	2364	2.8
Far West	736	0.9	691	0.8	678	0.8	627	0.7	595	0.7	602	0.7	563	0.7
Greater Murray	3803	4.4	3689	4.3	3789	4.3	3599	4.1	3726	4.3	3512	4.1	3399	4.0
Southern	2161	2.5	2050	2.4	2186	2.5	2083	2.4	2175	2.5	2101	2.4	1813	2.1
Other/Not stated	1318	1.5	818	1.0	789	0.9	725	0.8	707	0.8	737	0.9	720	0.8
Total	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	100.0

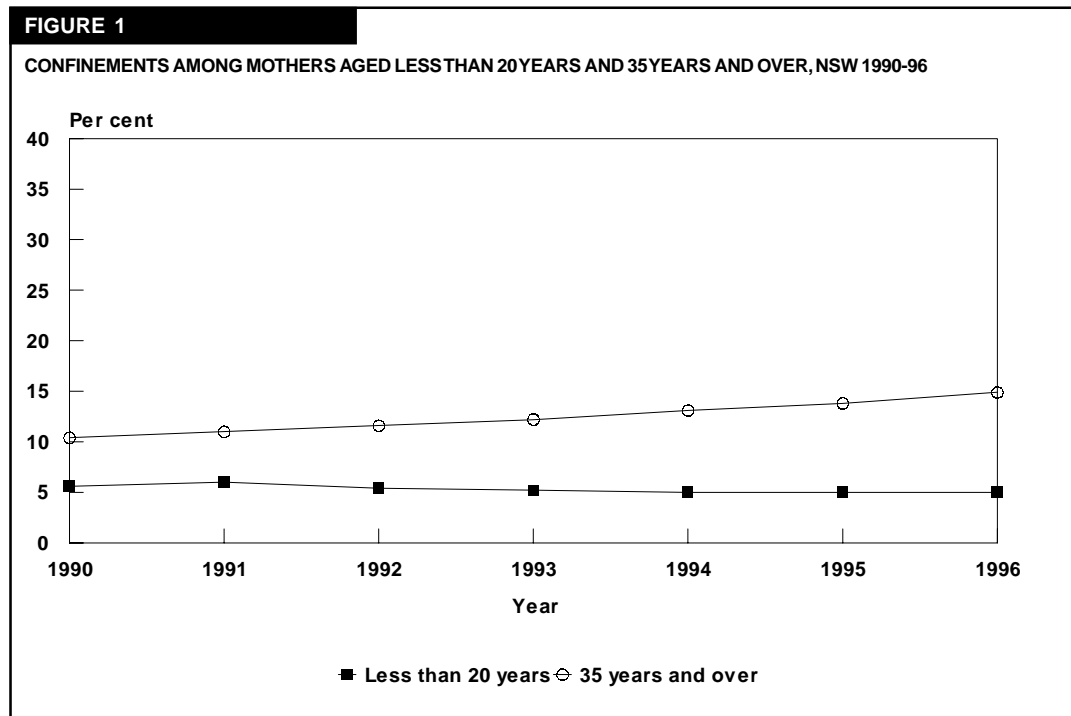
Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

### 1.3 MATERNAL AGE

The number of teenage mothers decreased from 4,850 in 1990 to 4,295 in 1996 (Figure 1, Table 3).

The number of mothers 35 years of age or over giving birth increased from 8,974 in 1990 to 12,712 in 1996, an increase from 10.4 to 14.9 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 4.9 to 8.1 per cent over the seven year period, and the proportion of multiparous mothers aged 35 years or more increased from 13.9 to 19.5 per cent.



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

**TABLE 3**  
CONFINEMENTS BY MATERNAL AGE, NSW 1990-96

Maternal age (years)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
12-19	4850	5.6	5107	6.0	4741	5.4	4493	5.2	4370	5.0	4349	5.0	4295	5.0
20-34	71049	82.1	70685	82.4	72548	82.6	71509	82.4	70892	81.7	69976	81.1	68239	80.0
35+	8974	10.4	9446	11.0	10208	11.6	10566	12.2	11358	13.1	11906	13.8	12712	14.9
Not stated	1626	1.9	545	0.6	304	0.3	178	0.2	118	0.1	32	0.0	56	0.1
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	100.0

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

## 1.4 MATERNAL ABORIGINALITY

The number of Aboriginal or Torres Strait Islander mothers giving birth increased from 1,202 in 1990 (1.4 per cent of all mothers) to 1,739 in 1995 and 1,712 in 1996 (2.0 per cent of all mothers for both years). 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 1990-96, about three-quarters of confinements were to mothers who were born in Australia. Over the seven year period, there were increasing numbers of confinements to

mothers born in Asian countries, particularly China and Vietnam, and Pacific Island countries, and decreasing numbers of confinements to mothers born in European countries (Table 6). Further information on maternal country of birth is shown in Part 4.

## 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 4). About 40 per cent of mothers gave birth for the first time, about 58 per cent gave birth to a second to fifth baby and less than 2 per cent reported more than 5 previous births.

**TABLE 4**

**CONFINEMENTS BY NUMBER OF PREVIOUS PREGNANCIES, NSW 1990-96**

No. previous pregnancies (>20 weeks)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0	33191	38.4	33590	39.2	34901	39.8	34508	39.8	34288	39.5	34459	39.9	34267	40.2
1-4	48313	55.9	49310	57.5	51452	58.6	50670	58.4	50897	58.7	50449	58.5	49692	58.3
5+	1090	1.3	1102	1.3	1200	1.4	1245	1.4	1207	1.4	1256	1.5	1237	1.5
Not stated	3905	4.5	1781	2.1	248	0.3	323	0.4	346	0.4	99	0.1	106	0.1
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	100.0

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

## 1.7 MARITAL STATUS

There were no substantial changes in the marital status of mothers since 1991. 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 5).

**TABLE 5**

**CONFINEMENTS BY MARITAL STATUS, NSW 1990-96**

Marital status	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Married/de facto	72081	83.3	72925	85.0	76617	87.3	75545	87.1	75905	87.5	75864	87.9	75067	88.0
Never married	7910	9.1	9020	10.5	9754	11.1	9683	11.2	9354	10.8	9283	10.8	9021	10.6
Divorced, separated or widowed	1208	1.4	1078	1.3	1084	1.2	1037	1.2	1054	1.2	1022	1.2	1082	1.3
Not stated	5300	6.1	2760	3.2	346	0.4	481	0.6	425	0.5	94	0.1	132	0.2
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	100.0

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

TABLE 6

## CONFINEMENTS BY MATERNAL COUNTRY OF BIRTH, NSW 1990-96\*

Country of birth	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Australia	64926	75.1	63521	74.0	64924	73.9	63471	73.2	63758	73.5	63619	73.8	62301	73.0
United Kingdom	3007	3.5	3603	4.2	3533	4.0	3299	3.8	3086	3.6	2850	3.3	2707	3.2
Lebanon	2425	2.8	2395	2.8	2398	2.7	2334	2.7	2299	2.7	2153	2.5	2042	2.4
China	582	0.7	828	1.0	1052	1.2	1328	1.5	1562	1.8	1649	1.9	1950	2.3
Vietnam	1134	1.3	1208	1.4	1425	1.6	1625	1.9	1658	1.9	1828	2.1	1865	2.2
New Zealand	1859	2.1	1924	2.2	1954	2.2	1859	2.1	1814	2.1	1821	2.1	1790	2.1
Philippines	1167	1.3	1144	1.3	1195	1.4	1309	1.5	1163	1.3	1245	1.4	1266	1.5
Former Yugoslavia	729	0.8	721	0.8	732	0.8	636	0.7	698	0.8	746	0.9	689	0.8
Hong Kong	405	0.5	572	0.7	589	0.7	647	0.7	669	0.8	676	0.8	659	0.8
Fiji	458	0.5	553	0.6	555	0.6	526	0.6	585	0.7	577	0.7	602	0.7
India	339	0.4	390	0.5	460	0.5	475	0.5	555	0.6	587	0.7	576	0.7
Indonesia	260	0.3	309	0.4	343	0.4	314	0.4	313	0.4	312	0.4	381	0.4
Turkey	345	0.4	349	0.4	366	0.4	378	0.4	358	0.4	367	0.4	376	0.4
United States of America	351	0.4	274	0.3	305	0.3	294	0.3	331	0.4	317	0.4	322	0.4
Cambodia	173	0.2	187	0.2	234	0.3	258	0.3	290	0.3	325	0.4	311	0.4
South Africa	230	0.3	254	0.3	303	0.3	241	0.3	271	0.3	263	0.3	310	0.4
Malaysia	306	0.4	362	0.4	338	0.4	357	0.4	309	0.4	299	0.3	308	0.4
Italy	502	0.6	468	0.5	416	0.5	415	0.5	353	0.4	312	0.4	285	0.3
Western Samoa**	-	-	-	-	-	-	-	-	163	0.2	276	0.3	280	0.3
Ireland	148	0.2	222	0.3	245	0.3	207	0.2	269	0.3	274	0.3	276	0.3
Sri Lanka	170	0.2	181	0.2	223	0.3	238	0.3	225	0.3	256	0.3	274	0.3
Tonga**	-	-	-	-	-	-	-	-	224	0.3	272	0.3	263	0.3
South Korea	299	0.3	358	0.4	380	0.4	332	0.4	291	0.3	299	0.3	261	0.3
Egypt	212	0.2	197	0.2	252	0.3	259	0.3	250	0.3	236	0.3	254	0.3
Iraq	88	0.1	87	0.1	105	0.1	146	0.2	147	0.2	164	0.2	234	0.3
Chile	214	0.2	263	0.3	243	0.3	261	0.3	222	0.3	242	0.3	220	0.3
Japan	150	0.2	145	0.2	198	0.2	208	0.2	199	0.2	228	0.3	215	0.3
Germany	231	0.3	255	0.3	225	0.3	181	0.2	224	0.3	176	0.2	208	0.2
Greece	296	0.3	274	0.3	336	0.4	289	0.3	234	0.3	203	0.2	174	0.2
Canada	112	0.1	148	0.2	150	0.2	168	0.2	162	0.2	160	0.2	170	0.2
Thailand	104	0.1	152	0.2	173	0.2	152	0.2	148	0.2	164	0.2	166	0.2
Syria	118	0.1	128	0.1	155	0.2	128	0.1	139	0.2	151	0.2	154	0.2
Portugal	179	0.2	193	0.2	174	0.2	156	0.2	152	0.2	131	0.2	145	0.2
Laos	124	0.1	123	0.1	158	0.2	131	0.2	129	0.1	135	0.2	140	0.2
Pakistan	67	0.1	94	0.1	66	0.1	74	0.1	96	0.1	98	0.1	137	0.2
Iran	109	0.1	141	0.2	171	0.2	139	0.2	159	0.2	158	0.2	134	0.2
Papua New Guinea	113	0.1	109	0.1	131	0.1	133	0.2	120	0.1	115	0.1	130	0.2
Poland	171	0.2	162	0.2	187	0.2	153	0.2	134	0.2	157	0.2	125	0.1
Argentina	84	0.1	76	0.1	89	0.1	93	0.1	91	0.1	91	0.1	117	0.1
Singapore	101	0.1	122	0.1	125	0.1	134	0.2	108	0.1	114	0.1	109	0.1
Uruguay	92	0.1	96	0.1	100	0.1	99	0.1	111	0.1	119	0.1	105	0.1
Other/Not stated	4119	4.8	3195	3.7	2793	3.2	3299	3.8	2669	3.1	2098	2.4	2271	2.7
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	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 1996.

\*\* Information on individual Pacific Island countries available from 1994.



## 1.8 INSURANCE STATUS

There was an marked decrease in the number of mothers reported with private obstetric care over the seven year period. In 1990, approximately equal numbers of mothers were publicly and privately insured. By 1996, private obstetric care was reported for less than one third of mothers (Table 7).

Insurance status	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Private	42046	48.6	41659	48.6	39266	44.7	35832	41.3	33037	38.1	30757	35.7	27579	32.3
Public	41306	47.8	43884	51.2	48465	55.2	50839	58.6	53645	61.8	55485	64.3	57708	67.7
Not stated	3147	3.6	240	0.3	70	0.1	75	0.1	56	0.1	21	0.0	15	0.0
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	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 visit is available from 1994. In that year 11,760 (13.6 per cent) mothers commenced antenatal care at 20 weeks gestation or later. For 1995 and 1996 the figures were similar: 11,395 (13.2 per cent) and 10,972 (12.9 per cent) respectively (Table 8).

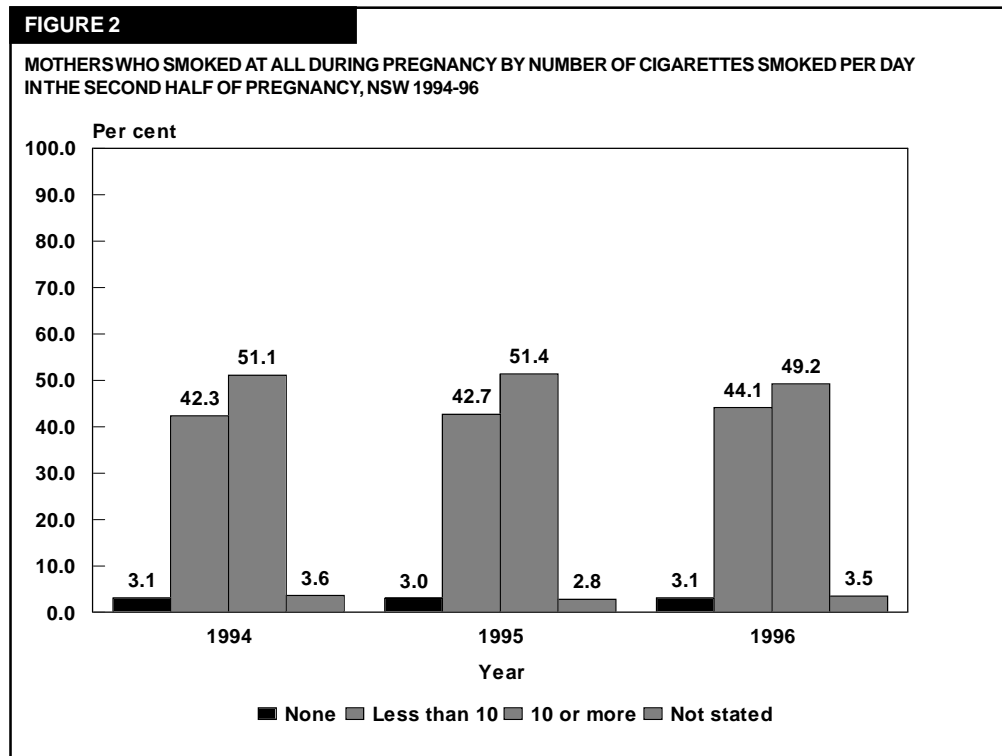
Duration of pregnancy (weeks)	1994		Year 1995		1996	
	No.	%	No.	%	No.	%
0-19	71485	82.4	73331	85.0	72726	85.3
20+	11760	13.6	11395	13.2	10972	12.9
Not stated	3488	4.0	1537	1.8	1604	1.9
TOTAL	86733	100.0	86263	100.0	85302	100.0

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

## 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 1996: in 1994, 19,188 (22.1 per cent) mothers reported smoking in pregnancy, compared to 18,549 (21.5 per cent) in 1995 and 17,957 (21.1 per cent) in 1996.

Of mothers who smoked during pregnancy, only 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).



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

## 1.11 PLACE OF BIRTH

While the majority of mothers plan to give birth in a hospital labour ward, there was a trend towards mothers planning to give birth in birth centres (Table 9, Figure 3).

The number of mothers planning to give birth in a birth centre increased from 723 (0.8 per cent) in 1990 to 4,015 (4.7 per cent) in 1996. The reported number of mothers planning a homebirth in NSW decreased from 353 in 1990 to 247 in 1996.

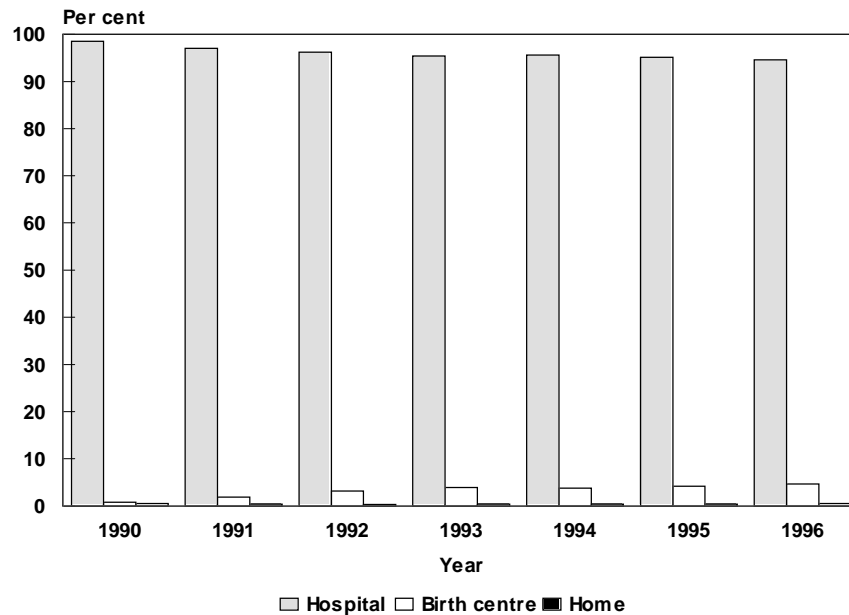
**TABLE 9**  
CONFINEMENTS BY PLACE OF BIRTH, NSW 1990-96

Place of birth	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hospital	85234	98.5	83200	97.0	84472	96.2	82730	95.4	82893	95.6	82074	95.1	80714	94.6
Birth centre	451	0.5	1377	1.6	2160	2.5	2593	3.0	2502	2.9	2741	3.2	2899	3.4
Planned birth centre/hospital admission	272	0.3	230	0.3	573	0.7	811	0.9	750	0.9	881	1.0	1116	1.3
Planned homebirth/hospital admission	303	0.4	273	0.3	253	0.3	218	0.3	172	0.2	179	0.2	192	0.2
Born before arrival	50	0.1	48	0.1	40	0.0	63	0.1	93	0.1	90	0.1	55	0.1
Not stated	189	0.2	253	0.3	257	0.3	251	0.3	298	0.3	297	0.3	324	0.4
TOTAL	86499	100.0	85783	100.0	87801	100.0	86746	100.0	86738	100.0	86263	100.0	85302	100.0

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

**FIGURE 3**

**CONFINEMENTS BY PLANNED PLACE OF BIRTH, NSW 1990-96**



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 18.3 per cent in 1990 to 20.5 per cent in 1996. The rate of spontaneous onset of labour decreased slightly from 72.7 to 70.0 per cent, with over one in five labours being augmented (Table 10). Between 1990 and 1996, the rate of normal vaginal birth remained stable at about 70 per cent (Table 11). The caesarean section rate

increased from 16.1 to 17.6 per cent, with most of this increase due to an increased rate of emergency caesarean section. The rate of instrumental delivery declined from 12.0 to 10.6 per cent, accompanied by a change in the pattern of instrumental delivery: the rate of vacuum extraction rose from 1.7 to 3.9 per cent and the rate of forceps delivery declined from 10.3 to 6.7 per cent.

**TABLE 10**

**CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR, NSW 1990-96**

Onset of labour	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	41885	48.4	39563	46.1	40091	45.7	39398	45.4	40745	47.0	40150	46.5	39891	46.8
Spontaneous augmented with ARM	13091	15.1	14202	16.6	14672	16.7	13185	15.2	11585	13.4	11062	12.8	10564	12.4
Spontaneous augmented with oxytocics/prostaglandins*	7894	9.1	8193	9.6	9319	10.6	9071	10.5	8655	10.0	8961	10.4	9222	10.8
Induced - oxytocics/prostaglandins	2206	2.6	2432	2.8	3891	4.4	5171	6.0	5304	6.1	5514	6.4	5644	6.6
Induced - ARM only	1054	1.2	954	1.1	1266	1.4	892	1.0	1637	1.9	1155	1.3	1211	1.4
Induced - ARM+ oxytocics/prostaglandins	11991	13.9	12001	14.0	10717	12.2	10919	12.6	10546	12.2	11071	12.8	10601	12.4
Induced - other**	559	0.6	676	0.8	44	0.1	73	0.1	26	0.0	61	0.1	67	0.1
No labour	7754	9.0	7762	9.0	7634	8.7	7749	8.9	8067	9.3	8231	9.5	8052	9.4
Not stated	65	0.1	0	0.0	167	0.2	288	0.3	173	0.2	58	0.1	50	0.1
<b>TOTAL</b>	<b>86499</b>	<b>100.0</b>	<b>85783</b>	<b>100.0</b>	<b>87801</b>	<b>100.0</b>	<b>86746</b>	<b>100.0</b>	<b>86738</b>	<b>100.0</b>	<b>86263</b>	<b>100.0</b>	<b>85302</b>	<b>100.0</b>

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 1990-96**

Type of delivery	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	60911	70.4	60511	70.5	62099	70.7	60964	70.3	61199	70.6	61215	71.0	60339	70.7
Forceps	7248	8.4	6616	7.7	6451	7.3	5872	6.8	5525	6.4	5043	5.8	4799	5.6
Forceps rotation	1657	1.9	1504	1.8	1350	1.5	1206	1.4	1094	1.3	1040	1.2	925	1.1
Vacuum extraction	1455	1.7	1875	2.2	2243	2.6	2570	3.0	2714	3.1	2943	3.4	3286	3.9
Vaginal breech	1187	1.4	1065	1.2	1117	1.3	985	1.1	924	1.1	918	1.1	874	1.0
Elective caesarean	7754	9.0	7762	9.0	7634	8.7	7749	8.9	8067	9.3	8231	9.5	8052	9.4
Emergency caesarean	6136	7.1	6448	7.5	6753	7.7	7103	8.2	6980	8.0	6818	7.9	6955	8.2
Not stated	151	0.2	2	0.0	154	0.2	297	0.3	235	0.3	55	0.1	72	0.1
<b>TOTAL</b>	<b>86499</b>	<b>100.0</b>	<b>85783</b>	<b>100.0</b>	<b>87801</b>	<b>100.0</b>	<b>86746</b>	<b>100.0</b>	<b>86738</b>	<b>100.0</b>	<b>86263</b>	<b>100.0</b>	<b>85302</b>	<b>100.0</b>

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 1990, with slightly more male babies born than females in each year (Table 12).

**TABLE 12****BABY SEX, NSW 1990-96**

Baby sex	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Female	41963	48.5	41406	48.3	42585	48.5	41987	48.4	41988	48.4	42029	48.7	41246	48.4
Male	44533	51.5	44371	51.7	45123	51.4	44522	51.3	44560	51.4	44205	51.2	43989	51.6
Indeterminate	3	0.0	6	0.0	11	0.0	14	0.0	12	0.0	13	0.0	17	0.0
Not stated	0	0.0	0	0.0	82	0.1	223	0.3	178	0.2	16	0.0	50	0.1
<b>TOTAL</b>	<b>86499</b>	<b>100.0</b>	<b>85783</b>	<b>100.0</b>	<b>87801</b>	<b>100.0</b>	<b>86746</b>	<b>100.0</b>	<b>86738</b>	<b>100.0</b>	<b>86263</b>	<b>100.0</b>	<b>85302</b>	<b>100.0</b>

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

### 1.14 GESTATIONAL AGE

There were no significant changes in the pattern of gestational age since 1990 (Table 13). The rate of premature births (less than 37 weeks gestation) was stable at about 6.5 per cent. There was little change in the proportions of very premature (less than 32 weeks) and extremely premature (less than 28 weeks) babies.

**TABLE 13****BIRTHS BY GESTATIONAL AGE, NSW 1990-96**

Gestational age (weeks)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
20 - 27	536	0.6	529	0.6	542	0.6	518	0.6	506	0.6	484	0.6	531	0.6
28 - 31	599	0.7	665	0.8	636	0.7	647	0.7	611	0.7	570	0.7	574	0.7
32 - 36	4425	5.1	4599	5.3	4699	5.3	4451	5.1	4541	5.2	4471	5.1	4689	5.4
37 - 41	78348	89.5	77720	89.4	80004	89.9	79074	90.0	79445	90.3	79367	90.8	78406	90.7
42 +	3412	3.9	3387	3.9	3038	3.4	3021	3.4	2768	3.1	2480	2.8	2187	2.5
Not stated	212	0.2	14	0.0	57	0.1	190	0.2	113	0.1	19	0.0	42	0.0
<b>TOTAL</b>	<b>87532</b>	<b>100.0</b>	<b>86914</b>	<b>100.0</b>	<b>88976</b>	<b>100.0</b>	<b>87901</b>	<b>100.0</b>	<b>87984</b>	<b>100.0</b>	<b>87391</b>	<b>100.0</b>	<b>86429</b>	<b>100.0</b>

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

## 1.15 BIRTH WEIGHT

There were also no significant changes in the pattern of birth weight since 1990 (Table 14). The rate of low birth weight (less than 2,500 grams) was stable at about 6.0 per cent.

Birth weight (grams)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 500	146	0.2	150	0.2	158	0.2	150	0.2	123	0.1	140	0.2	158	0.2
500 - 999	378	0.4	406	0.5	444	0.5	485	0.6	414	0.5	378	0.4	362	0.4
1000 - 1499	468	0.5	519	0.6	515	0.6	538	0.6	494	0.6	446	0.5	454	0.5
1500 - 1999	956	1.1	1012	1.2	945	1.1	912	1.0	935	1.1	921	1.1	906	1.0
2000 - 2499	3260	3.7	3251	3.7	3212	3.6	3083	3.5	3146	3.6	3206	3.7	3158	3.7
2500 - 2999	13369	15.3	13690	15.8	13319	15.0	13369	15.2	13440	15.3	13314	15.2	13098	15.2
3000 - 3499	32609	37.3	32098	36.9	32708	36.8	32210	36.6	32013	36.4	31879	36.5	31378	36.3
3500 - 3999	26639	30.4	26122	30.1	27476	30.9	26928	30.6	27171	30.9	26835	30.7	26793	31.0
4000 - 4499	8166	9.3	8235	9.5	8616	9.7	8724	9.9	8637	9.8	8644	9.9	8593	9.9
4500 +	1406	1.6	1391	1.6	1510	1.7	1397	1.6	1515	1.7	1592	1.8	1477	1.7
Not stated	135	0.2	40	0.0	73	0.1	105	0.1	96	0.1	36	0.0	52	0.1
TOTAL	87532	100.0	86914	100.0	88976	100.0	87901	100.0	87984	100.0	87391	100.0	86429	100.0

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

## 1.16 APGAR SCORE

In 1996, 2.4 per cent of babies were born with an Apgar score of less than 7 at 5 minutes and 1.1 per cent were born with a score less than 4 (Table 15). These rates are similar to those of previous years.

Apgar score	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	1151	1.3	1197	1.4	1288	1.4	1042	1.2	1008	1.1	993	1.1	989	1.1
5-7	1254	1.4	1262	1.5	1658	1.9	1233	1.4	1149	1.3	1220	1.4	1127	1.3
7+	84944	97.0	84382	97.1	85830	96.5	84552	96.2	83918	95.4	85025	97.3	84153	97.4
Not stated	183	0.2	73	0.1	200	0.2	1074	1.2	1909	2.2	153	0.2	160	0.2
TOTAL	87532	100.0	86914	100.0	88976	100.0	87901	100.0	87984	100.0	87391	100.0	86429	100.0

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

\* Includes stillbirths and livebirths.

## 1.17 PERINATAL OUTCOMES

In the period 1990-96, the number of perinatal deaths reported to the MDC decreased by about ten per cent (Table 16). The decrease was more marked among neonatal deaths than stillbirths. The perinatal mortality rate decreased from 10.4 per 1,000 to 8.9 per 1,000. The vast majority of perinatal deaths occur among planned hospital births. In 1995-96, of the 1,541

perinatal deaths reported to the MDC, 1,502 (97.5 per cent) deaths occurred among planned hospital births, 18 (1.2 per cent) among planned birth centre births, and 5 (0.3 per cent) among planned home births. Over the two year period, the perinatal mortality rate was 9.1 per 1,000 for planned hospital births, 2.4 per 1,000 for planned birth centre births and 9.6 per 1,000 for planned home births.

**TABLE 16**

**BIRTHS BY PERINATAL OUTCOME, NSW 1990-96\***

Year	Liveborn surviving		Stillborn		Neonatal death		Not stated		Total births		Perinatal mortality rate/1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
1990	86618	99.0	590	0.7	323	0.4	1	0.0	87532	100.0	10.4
1991	85844	98.8	694	0.8	366	0.4	10	0.0	86914	100.0	12.2
1992	87789	98.7	567	0.6	336	0.4	284	0.3	88976	100.0	10.1
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

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.

## 1.18 MATERNAL DEATHS

In the period 1990-94, 54 deaths were reported among pregnant women or women who gave birth less than six weeks previously. Of these, 17 (31.5 per cent) women died of incidental causes not related to the pregnancy or its management; 27 (50.0 per cent) deaths were found to be directly due to pregnancy or its management; and 10 (18.5 per cent) deaths were found to result from pre-existing disease or disease which developed during pregnancy (not due to direct obstetric causes), but which may have been aggravated by the physiologic effects of pregnancy (Table 17).

**TABLE 17**

**MATERNAL DEATHS BY YEAR, 1990-94\***

Maternal death classification	1990		1991		Year 1992		1993		1994	
	No.	Rate /100,000	No.	Rate /100,000	No.	Rate /100,000	No.	Rate /100,000	No.	Rate /100,000
Direct	4	4.6	4	4.7	5	5.7	6	6.9	8	9.2
Indirect	6	6.9	1	1.2	1	1.1	1	1.2	1	1.2
Total direct and indirect	10	11.6	5	5.8	6	6.8	7	8.1	9	10.4
Incidental	2	2.3	1	1.2	5	5.7	6	6.9	3	3.5
TOTAL	12	13.9	6	7.0	11	12.5	13	15.0	12	13.8

Source: Epidemiology and Surveillance Branch, NSW Health Department.

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

## PART 2: AREA HEALTH SERVICES

Further 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 1996, the largest numbers of confinements were among mothers resident in the South Western Sydney (12,125, 14.2 per cent) and Western Sydney Areas (10,058, 11.8 per cent). These two Areas contributed over one quarter of the State's births. Seventy-seven per cent of confinements were to mothers resident in the metropolitan Areas (including the Central Coast, Hunter and Illawarra Areas), and 21.7 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 1.1 per cent in the Northern Sydney Area to 14.2 per cent in the Far West Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 8.9 per cent in the Far West Area to 25.8 per cent in the Northern Sydney Area.

### 2.3 MATERNAL COUNTRY OF BIRTH

Eighty per cent of women who gave birth in NSW in 1996 were born in English speaking countries, 10.5 per cent were born in Asian countries and 4.3 per cent were born in the Middle East or Africa (Table 19). In the metropolitan Areas (including Hunter and Illawarra Areas), 25.5 per cent of mothers were born in non-English speaking countries.

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 (42.7 per cent). In Central Sydney, the majority of mothers born in non-English speaking countries were born in North East Asia (25.6 per cent) and the Middle East and Africa (23.3 per cent).

### 2.4 MATERNAL ABORIGINALITY

Two per cent of mothers in 1996 were reported to be Aboriginal and/or Torres Strait Islander (Table 20). The proportion of Aboriginal and/or Torres Strait Islander mothers varied from 0.1 per cent in the Northern Sydney Area to 27.9 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 1996, compared to 4.7 per cent who planned a birth centre birth and 0.3 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 and South Eastern Sydney Areas.

### 2.6 LABOUR AND DELIVERY

In 1996, the onset of labour was spontaneous in 70.0 per cent of confinements (Table 22). Labour was induced in 20.5 per cent of confinements and no labour (elective caesarean section) was reported in 9.4 per cent of confinements.

The rate of spontaneous onset of labour was highest among residents of the Central Sydney Area (77.0 per cent) and the Southern Area (75.1 per cent). The highest rates of induction of labour were among residents of the Far West Area (24.2 per cent) and the Illawarra Area (both 23.9 per cent).

Seventy-one per cent of confinements were by normal vaginal birth, 10.6 per cent were instrumental and 17.6 per cent were by caesarean section (Table 23). The highest rate of normal vaginal birth was among residents of South Western Sydney Area (76.8 per cent), while the highest rate of instrumental delivery was among residents of Northern Sydney Area (16.2 per cent). The caesarean section rate varied from 13.1 per cent among mothers resident in the Macquarie Area to 22.0 per cent in the Northern Sydney Area.

**TABLE 18**

**CONFINEMENTS BY MATERNAL AGE AND HEALTH AREA OF RESIDENCE, NSW 1996**

Health Area	Maternal age (years)																TOTAL No. %	
	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	184	2.6	1016	14.4	2044	29.0	2399	34.0	1187	16.8	210	3.0	3	0.0	3	0.0	7046	100.0
Northern Sydney	97	1.1	584	6.7	2182	25.1	3569	41.1	1902	21.9	325	3.7	13	0.1	5	0.1	8677	100.0
Western Sydney	481	4.8	1975	19.6	3318	33.0	2888	28.7	1180	11.7	199	2.0	1	0.0	16	0.2	10058	100.0
Wentworth	251	6.0	930	22.2	1454	34.7	1045	25.0	445	10.6	59	1.4	0	0.0	2	0.0	4186	100.0
South Western Sydney	665	5.5	2571	21.2	4219	34.8	3201	26.4	1224	10.1	236	1.9	7	0.1	2	0.0	12125	100.0
Central Coast	216	5.8	675	18.2	1282	34.5	1064	28.7	418	11.3	55	1.5	1	0.0	1	0.0	3712	100.0
Hunter	449	6.1	1551	21.1	2612	35.5	1911	26.0	722	9.8	104	1.4	3	0.0	1	0.0	7353	100.0
Illawarra	263	6.2	839	19.8	1452	34.3	1160	27.4	441	10.4	68	1.6	1	0.0	9	0.2	4233	100.0
South Eastern Sydney	157	1.8	1082	12.5	2576	29.8	3123	36.2	1455	16.8	234	2.7	11	0.1	1	0.0	8639	100.0
Northern Rivers	198	6.7	650	22.1	979	33.2	710	24.1	334	11.3	75	2.5	1	0.0	0	0.0	2947	100.0
Mid North Coast	233	8.0	663	22.7	917	31.4	743	25.4	317	10.8	49	1.7	0	0.0	0	0.0	2922	100.0
New England	266	9.4	706	25.0	913	32.4	662	23.5	234	8.3	35	1.2	5	0.2	1	0.0	2822	100.0
Macquarie	155	9.0	424	24.6	532	30.9	445	25.8	148	8.6	16	0.9	1	0.1	2	0.1	1723	100.0
Mid Western	179	7.6	546	23.1	819	34.6	588	24.9	200	8.5	29	1.2	1	0.0	2	0.1	2364	100.0
Far West	80	14.2	144	25.6	167	29.7	122	21.7	45	8.0	5	0.9	0	0.0	0	0.0	563	100.0
Greater Murray	244	7.2	708	20.8	1205	35.5	856	25.2	338	9.9	39	1.1	1	0.0	8	0.2	3399	100.0
Southern	139	7.7	402	22.2	575	31.7	461	25.4	205	11.3	29	1.6	0	0.0	2	0.1	1813	100.0
Other/ Not stated	38	5.3	173	24.0	208	28.9	199	27.6	87	12.1	14	1.9	0	0.0	1	0.1	720	100.0
TOTAL	4295	5.0	15639	18.3	27454	32.2	25146	29.5	10882	12.8	1781	2.1	49	0.1	56	0.1	85302	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 1996\***

Health Area	English speaking		Central & South America		Eastern Europe, Russia, Central Asian & Baltic States		Melanesia & Micronesia & Polynesia		Middle East & Africa		North East Asia		South East Asia		Southern Asia		Southern Europe		Western & Northern Europe		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Central Sydney	3669	52.1	81	1.2	47	0.7	305	4.3	784	11.1	861	12.2	714	10.1	217	3.1	289	4.1	70	1.0	7037
Northern Sydney	6773	78.2	71	0.8	43	0.5	112	1.3	198	2.3	668	7.7	359	4.1	164	1.9	122	1.4	154	1.8	8664	100.0
Western Sydney	6568	65.4	147	1.5	58	0.6	334	3.3	984	9.8	631	6.3	723	7.2	368	3.7	178	1.8	53	0.5	10044	100.0
Wentworth	3850	92.1	21	0.5	10	0.2	37	0.9	48	1.1	19	0.5	77	1.8	40	1.0	51	1.2	28	0.7	4181	100.0
South Western Sydney	7680	63.4	250	2.1	60	0.5	315	2.6	991	8.2	336	2.8	1896	15.6	148	1.2	388	3.2	52	0.4	12116	100.0
Central Coast	3555	95.9	7	0.2	1	0.0	24	0.6	15	0.4	19	0.5	38	1.0	10	0.3	14	0.4	23	0.6	3706	100.0
Hunter	7008	95.3	14	0.2	8	0.1	38	0.5	30	0.4	28	0.4	119	1.6	21	0.3	51	0.7	33	0.4	7350	100.0
Illawarra	3804	90.0	26	0.6	13	0.3	20	0.5	71	1.7	21	0.5	86	2.0	12	0.3	140	3.3	35	0.8	4228	100.0
South Eastern Sydney	6307	73.0	123	1.4	109	1.3	122	1.4	501	5.8	580	6.7	425	4.9	130	1.5	246	2.8	94	1.1	8637	100.0
Northern Rivers	2858	97.0	2	0.1	2	0.1	14	0.5	6	0.2	11	0.4	28	1.0	4	0.1	4	0.1	17	0.6	2946	100.0
Mid North Coast	2835	97.0	3	0.1	3	0.1	9	0.3	7	0.2	7	0.2	25	0.9	17	0.6	5	0.2	11	0.4	2922	100.0
New England	2715	96.2	4	0.1	0	0.0	22	0.8	10	0.4	16	0.6	27	1.0	10	0.4	7	0.2	10	0.4	2821	100.0
Macquarie	1699	98.7	0	0.0	0	0.0	4	0.2	2	0.1	2	0.1	8	0.5	2	0.1	1	0.1	3	0.2	1721	100.0
Mid Western	2307	97.8	2	0.1	1	0.0	9	0.4	7	0.3	7	0.3	14	0.6	6	0.3	6	0.3	1	0.0	2360	100.0
Far West	548	97.3	0	0.0	1	0.2	4	0.7	0	0.0	2	0.4	4	0.7	2	0.4	1	0.2	1	0.2	563	100.0
Greater Murray	3305	97.3	1	0.0	5	0.1	21	0.6	7	0.2	6	0.2	22	0.6	15	0.4	8	0.2	8	0.2	3398	100.0
Southern	1734	95.8	3	0.2	1	0.1	14	0.8	11	0.6	8	0.4	9	0.5	2	0.1	15	0.8	13	0.7	1810	100.0
Other/ Not stated	674	93.9	1	0.1	2	0.3	6	0.8	4	0.6	4	0.6	13	1.8	2	0.3	4	0.6	8	1.1	718	100.0
TOTAL	67889	79.7	756	0.9	364	0.4	1410	1.7	3676	4.3	3226	3.8	4587	5.4	1170	1.4	1530	1.8	614	0.7	85222	100.0

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

\* Excludes 80 mothers for whom country of birth was not stated.



**TABLE 20**

**CONFINEMENTS BY MATERNAL ABORIGINALITY AND HEALTH AREA OF RESIDENCE, NSW 1996**

Health Area	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Central Sydney	64	0.9	6982	99.1	0	0.0	7046	100.0
Northern Sydney	9	0.1	8663	99.8	5	0.1	8677	100.0
Western Sydney	102	1.0	9943	98.9	13	0.1	10058	100.0
Wentworth	41	1.0	4139	98.9	6	0.1	4186	100.0
South Western Sydney	93	0.8	12025	99.2	7	0.1	12125	100.0
Central Coast	27	0.7	3682	99.2	3	0.1	3712	100.0
Hunter	104	1.4	7249	98.6	0	0.0	7353	100.0
Illawarra	100	2.4	4123	97.4	10	0.2	4233	100.0
South Eastern Sydney	36	0.4	8601	99.6	2	0.0	8639	100.0
Northern Rivers	127	4.3	2820	95.7	0	0.0	2947	100.0
Mid North Coast	152	5.2	2770	94.8	0	0.0	2922	100.0
New England	256	9.1	2559	90.7	7	0.2	2822	100.0
Macquarie	170	9.9	1539	89.3	14	0.8	1723	100.0
Mid Western	109	4.6	2237	94.6	18	0.8	2364	100.0
Far West	157	27.9	404	71.8	2	0.4	563	100.0
Greater Murray	116	3.4	3278	96.4	5	0.1	3399	100.0
Southern	39	2.2	1766	97.4	8	0.4	1813	100.0
Other/ Not stated	10	1.4	706	98.1	4	0.6	720	100.0
TOTAL	1712	2.0	83486	97.9	104	0.1	85302	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 1996**

Health Area	Hospital		Birth Centre		Planned birth centre/ hospital admission		Planned homebirth		Planned homebirth/ hospital admission		Born before arrival		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney	6383	90.6	501	7.1	107	1.5	19	0.3	2	0.0	34	0.5	0	0.0	7046	100.0
Northern Sydney	8476	97.7	100	1.2	43	0.5	45	0.5	5	0.1	8	0.1	0	0.0	8677	100.0
Western Sydney	9590	95.3	231	2.3	169	1.7	10	0.1	1	0.0	57	0.6	0	0.0	10058	100.0
Wentworth	4086	97.6	38	0.9	22	0.5	21	0.5	1	0.0	18	0.4	0	0.0	4186	100.0
South Western Sydney	11696	96.5	205	1.7	154	1.3	8	0.1	9	0.1	53	0.4	0	0.0	12125	100.0
Central Coast	3646	98.2	35	0.9	8	0.2	4	0.1	3	0.1	16	0.4	0	0.0	3712	100.0
Hunter	5973	81.2	1099	14.9	243	3.3	4	0.1	3	0.0	31	0.4	0	0.0	7353	100.0
Illawarra	3965	93.7	141	3.3	94	2.2	15	0.4	3	0.1	14	0.3	1	0.0	4233	100.0
South Eastern Sydney	7964	92.2	423	4.9	202	2.3	23	0.3	10	0.1	17	0.2	0	0.0	8639	100.0
Northern Rivers	2850	96.7	54	1.8	10	0.3	18	0.6	2	0.1	13	0.4	0	0.0	2947	100.0
Mid North Coast	2866	98.1	22	0.8	14	0.5	4	0.1	6	0.2	10	0.3	0	0.0	2922	100.0
New England	2767	98.1	21	0.7	20	0.7	0	0.0	3	0.1	11	0.4	0	0.0	2822	100.0
Macquarie	1688	98.0	17	1.0	11	0.6	0	0.0	0	0.0	7	0.4	0	0.0	1723	100.0
Mid Western	2349	99.4	2	0.1	4	0.2	0	0.0	4	0.2	5	0.2	0	0.0	2364	100.0
Far West	558	99.1	1	0.2	0	0.0	0	0.0	0	0.0	4	0.7	0	0.0	563	100.0
Greater Murray	3371	99.2	5	0.1	8	0.2	0	0.0	1	0.0	13	0.4	1	0.0	3399	100.0
Southern	1783	98.3	2	0.1	5	0.3	13	0.7	1	0.1	9	0.5	0	0.0	1813	100.0
Other/ Not stated	703	97.6	2	0.3	2	0.3	8	1.1	1	0.1	4	0.6	0	0.0	720	100.0
TOTAL	80714	94.6	2899	3.4	1116	1.3	192	0.2	55	0.1	324	0.4	2	0.0	85302	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 1996**

Health Area	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented with oxytocics/prostaglandins*		No 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	4047	57.4	338	4.8	1041	14.8	636	9.0	458	6.5	95	1.3	430	6.1	1	0.0	0	0.0	7046	100.0
Northern Sydney	3449	39.7	743	8.6	1400	16.1	1059	12.2	649	7.5	141	1.6	1228	14.2	6	0.1	2	0.0	8677	100.0
Western Sydney	5098	50.7	1032	10.3	1034	10.3	834	8.3	484	4.8	71	0.7	1491	14.8	10	0.1	4	0.0	10058	100.0
Wentworth	2066	49.4	477	11.4	307	7.3	372	8.9	228	5.4	39	0.9	683	16.3	4	0.1	10	0.2	4186	100.0
South Western Sydney	5687	46.9	1721	14.2	1285	10.6	916	7.6	686	5.7	120	1.0	1696	14.0	10	0.1	4	0.0	12125	100.0
Central Coast	1563	42.1	500	13.5	401	10.8	413	11.1	241	6.5	56	1.5	534	14.4	3	0.1	1	0.0	3712	100.0
Hunter	3296	44.8	1073	14.6	538	7.3	729	9.9	469	6.4	245	3.3	986	13.4	15	0.2	2	0.0	7353	100.0
Illawarra	1743	41.2	769	18.2	361	8.5	339	8.0	340	8.0	50	1.2	620	14.6	3	0.1	8	0.2	4233	100.0
South Eastern Sydney	3558	41.2	1090	12.6	1405	16.3	940	10.9	652	7.5	83	1.0	908	10.5	2	0.0	1	0.0	8639	100.0
Northern Rivers	1487	50.5	432	14.7	232	7.9	270	9.2	206	7.0	45	1.5	273	9.3	1	0.0	1	0.0	2947	100.0
Mid North Coast	1403	48.0	429	14.7	217	7.4	310	10.6	189	6.5	29	1.0	340	11.6	4	0.1	1	0.0	2922	100.0
New England	1235	43.8	466	16.5	222	7.9	236	8.4	272	9.6	57	2.0	332	11.8	2	0.1	0	0.0	2822	100.0
Macquarie	871	50.6	257	14.9	139	8.1	120	7.0	90	5.2	26	1.5	220	12.8	0	0.0	0	0.0	1723	100.0
Mid Western	1031	43.6	404	17.1	198	8.4	269	11.4	166	7.0	42	1.8	247	10.4	4	0.2	3	0.1	2364	100.0
Far West	255	45.3	88	15.6	33	5.9	50	8.9	31	5.5	28	5.0	76	13.5	1	0.2	1	0.2	563	100.0
Greater Murray	1781	52.4	390	11.5	194	5.7	327	9.6	306	9.0	64	1.9	326	9.6	1	0.0	10	0.3	3399	100.0
Southern	972	53.6	237	13.1	153	8.4	168	9.3	137	7.6	14	0.8	130	7.2	0	0.0	2	0.1	1813	100.0
Other/ Not stated	349	48.5	118	16.4	62	8.6	64	8.9	40	5.6	6	0.8	81	11.3	0	0.0	0	0.0	720	100.0
TOTAL	39891	46.8	10564	12.4	9222	10.8	8052	9.4	5644	6.6	1211	1.4	10601	12.4	67	0.1	50	0.1	85302	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 1996**

Health Area	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.	%
Central Sydney	4858	68.9	396	5.6	95	1.3	351	5.0	81	1.1	636	9.0	628	8.9	1	0.0	7046	100.0
Northern Sydney	5309	61.2	607	7.0	100	1.2	699	8.1	41	0.5	1059	12.2	854	9.8	8	0.1	8677	100.0
Western Sydney	7143	71.0	814	8.1	186	1.8	161	1.6	118	1.2	834	8.3	791	7.9	11	0.1	10058	100.0
Wentworth	3085	73.7	229	5.5	41	1.0	61	1.5	45	1.1	372	8.9	345	8.2	8	0.2	4186	100.0
South Western Sydney	9306	76.8	515	4.2	79	0.7	400	3.3	159	1.3	916	7.6	749	6.2	1	0.0	12125	100.0
Central Coast	2580	69.5	149	4.0	25	0.7	218	5.9	19	0.5	413	11.1	308	8.3	0	0.0	3712	100.0
Hunter	5275	71.7	340	4.6	59	0.8	241	3.3	75	1.0	729	9.9	634	8.6	0	0.0	7353	100.0
Illawarra	3156	74.6	129	3.0	35	0.8	206	4.9	40	0.9	339	8.0	315	7.4	13	0.3	4233	100.0
South Eastern Sydney	5452	63.1	683	7.9	133	1.5	486	5.6	94	1.1	940	10.9	850	9.8	1	0.0	8639	100.0
Northern Rivers	2198	74.6	110	3.7	28	1.0	54	1.8	25	0.8	270	9.2	261	8.9	1	0.0	2947	100.0
Mid North Coast	2177	74.5	155	5.3	32	1.1	7	0.2	35	1.2	310	10.6	205	7.0	1	0.0	2922	100.0
New England	2121	75.2	101	3.6	9	0.3	111	3.9	28	1.0	236	8.4	214	7.6	2	0.1	2822	100.0
Macquarie	1302	75.6	74	4.3	19	1.1	60	3.5	40	2.3	120	7.0	106	6.2	2	0.1	1723	100.0
Mid Western	1625	68.7	115	4.9	17	0.7	64	2.7	19	0.8	269	11.4	246	10.4	9	0.4	2364	100.0
Far West	397	70.5	38	6.7	7	1.2	7	1.2	10	1.8	50	8.9	54	9.6	0	0.0	563	100.0
Greater Murray	2451	72.1	219	6.4	42	1.2	69	2.0	30	0.9	327	9.6	252	7.4	9	0.3	3399	100.0
Southern	1363	75.2	89	4.9	12	0.7	70	3.9	10	0.6	168	9.3	96	5.3	5	0.3	1813	100.0
Other/ Not stated	541	75.1	36	5.0	6	0.8	21	2.9	5	0.7	64	8.9	47	6.5	0	0.0	720	100.0
TOTAL	60339	70.7	4799	5.6	925	1.1	3286	3.9	874	1.0	8052	9.4	6955	8.2	72	0.1	85302	100.0

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

## 2.7 BIRTH WEIGHT

Overall, 5.8 per cent of births were of low birth weight (less than 2,500 grams). These comprised 0.6 per cent with birth weight less than 1,000 grams, 0.5 per cent in the 1,000-1,499 gram birth weight range, and 4.7 per cent in the 1,500 to 2,499 gram range (Table 24). The highest rates of low birth weight occurred in the Mid North Coast and Macquarie Areas (6.9 and 6.5 per cent respectively). The lowest rate was in the Southern Area (3.4 per cent).

## 2.8 GESTATIONAL AGE

The majority of births (90.7 per cent) were at term and 2.5 per cent were post-term (42-plus weeks gestation). The 6.7 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 5.4 per cent at 32-36 weeks gestation.

The highest rates of preterm birth were in the Far West and Mid North Coast Areas (8.4 and 7.7 per cent respectively), while the lowest rate was 3.4 per cent in the Southern Area (Table 25).

**TABLE 24**

**BIRTHS BY BIRTH WEIGHT AND HEALTH AREA OF RESIDENCE, NSW 1996**

Health Area	Birth weight (grams)																		TOTAL					
	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.	%			
Central Sydney	15	0.2	40	0.6	43	0.6	79	1.1	231	3.2	1209	16.9	2645	36.9	2116	29.6	646	9.0	135	1.9	1	0.0	7160	100.0
Northern Sydney	4	0.0	34	0.4	42	0.5	97	1.1	305	3.5	1150	13.1	3138	35.6	2947	33.5	929	10.6	155	1.8	3	0.0	8804	100.0
Western Sydney	17	0.2	47	0.5	53	0.5	105	1.0	390	3.8	1634	16.1	3771	37.1	3089	30.4	900	8.8	162	1.6	6	0.1	10174	100.0
Wentworth	9	0.2	24	0.6	30	0.7	51	1.2	159	3.8	638	15.0	1475	34.8	1334	31.5	447	10.5	67	1.6	6	0.1	4240	100.0
South Western Sydney	24	0.2	50	0.4	54	0.4	109	0.9	474	3.9	1978	16.1	4713	38.4	3550	28.9	1134	9.2	183	1.5	4	0.0	12273	100.0
Central Coast	7	0.2	12	0.3	27	0.7	42	1.1	147	3.9	555	14.8	1363	36.2	1182	31.4	367	9.8	59	1.6	1	0.0	3762	100.0
Hunter	15	0.2	42	0.6	38	0.5	79	1.1	248	3.3	1062	14.2	2560	34.3	2400	32.2	852	11.4	155	2.1	5	0.1	7456	100.0
Illawarra	5	0.1	14	0.3	25	0.6	48	1.1	164	3.8	615	14.4	1494	34.9	1375	32.1	475	11.1	65	1.5	2	0.0	4282	100.0
South Eastern Sydney	17	0.2	36	0.4	48	0.5	98	1.1	326	3.7	1315	15.0	3266	37.2	2677	30.5	843	9.6	144	1.6	2	0.0	8772	100.0
Northern Rivers	4	0.1	7	0.2	13	0.4	33	1.1	109	3.7	434	14.5	1036	34.7	932	31.2	346	11.6	66	2.2	3	0.1	2983	100.0
Mid North Coast	6	0.2	11	0.4	24	0.8	31	1.0	131	4.4	481	16.3	1049	35.5	880	29.8	292	9.9	51	1.7	0	0.0	2956	100.0
New England	5	0.2	9	0.3	14	0.5	31	1.1	117	4.1	481	16.8	1032	36.0	895	31.2	241	8.4	40	1.4	4	0.1	2869	100.0
Macquarie	4	0.2	5	0.3	9	0.5	27	1.5	68	3.9	257	14.7	596	34.1	562	32.1	187	10.7	32	1.8	3	0.2	1750	100.0
Mid Western	8	0.3	11	0.5	12	0.5	31	1.3	88	3.7	346	14.4	881	36.8	753	31.4	227	9.5	38	1.6	2	0.1	2397	100.0
Far West	6	1.1	4	0.7	2	0.4	2	0.4	22	3.9	112	19.6	205	36.0	173	30.4	38	6.7	5	0.9	1	0.2	570	100.0
Greater Murray	9	0.3	7	0.2	13	0.4	29	0.8	113	3.3	472	13.8	1212	35.3	1094	31.9	413	12.0	68	2.0	1	0.0	3431	100.0
Southern	3	0.2	4	0.2	5	0.3	8	0.4	42	2.3	265	14.5	675	37.0	583	32.0	196	10.8	36	2.0	5	0.3	1822	100.0
Other/ Not stated	0	0.0	5	0.7	2	0.3	6	0.8	24	3.3	94	12.9	267	36.7	251	34.5	60	8.2	16	2.2	3	0.4	728	100.0
TOTAL	158	0.2	362	0.4	454	0.5	906	1.0	3158	3.7	13098	15.2	31378	36.3	26793	31.0	8593	9.9	1477	1.7	52	0.1	86429	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 1996**

Health Area	Gestational age (weeks)												TOTAL	
	20-27		28-31		32-36		37-41		42 +		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Central Sydney	50	0.7	61	0.9	359	5.0	6497	90.7	190	2.7	3	0.0	7160	100.0
Northern Sydney	41	0.5	59	0.7	476	5.4	8009	91.0	218	2.5	1	0.0	8804	100.0
Western Sydney	62	0.6	67	0.7	550	5.4	9156	90.0	330	3.2	9	0.1	10174	100.0
Wentworth	31	0.7	39	0.9	253	6.0	3794	89.5	120	2.8	3	0.1	4240	100.0
South Western Sydney	71	0.6	73	0.6	690	5.6	11228	91.5	208	1.7	3	0.0	12273	100.0
Central Coast	27	0.7	24	0.6	207	5.5	3416	90.8	87	2.3	1	0.0	3762	100.0
Hunter	57	0.8	55	0.7	441	5.9	6715	90.1	187	2.5	1	0.0	7456	100.0
Illawarra	21	0.5	25	0.6	230	5.4	3913	91.4	91	2.1	2	0.0	4282	100.0
South Eastern Sydney	60	0.7	63	0.7	495	5.6	7969	90.8	183	2.1	2	0.0	8772	100.0
Northern Rivers	11	0.4	16	0.5	165	5.5	2667	89.4	124	4.2	0	0.0	2983	100.0
Mid North Coast	15	0.5	31	1.0	181	6.1	2651	89.7	78	2.6	0	0.0	2956	100.0
New England	14	0.5	13	0.5	147	5.1	2631	91.7	62	2.2	2	0.1	2869	100.0
Macquarie	11	0.6	13	0.7	84	4.8	1599	91.4	42	2.4	1	0.1	1750	100.0
Mid Western	19	0.8	10	0.4	120	5.0	2175	90.7	68	2.8	5	0.2	2397	100.0
Far West	9	1.6	4	0.7	35	6.1	514	90.2	6	1.1	2	0.4	570	100.0
Greater Murray	20	0.6	12	0.3	169	4.9	3115	90.8	112	3.3	3	0.1	3431	100.0
Southern	6	0.3	5	0.3	50	2.7	1698	93.2	61	3.3	2	0.1	1822	100.0
Other/ Not stated	6	0.8	4	0.5	37	5.1	659	90.5	20	2.7	2	0.3	728	100.0
TOTAL	531	0.6	574	0.7	4689	5.4	78406	90.7	2187	2.5	42	0.0	86429	100.0

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

## 2.9 PERINATAL OUTCOMES

In 1996, the perinatal mortality rate was 8.9 per 1,000 births in NSW. 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 6.0 per 1,000 in the Southern Area to 22.8 per 1,000 in the Far West Area.

**TABLE 26**

**PERINATAL OUTCOMES BY HEALTH AREA OF RESIDENCE, NSW 1996\***

Health Area	Liveborn surviving		Stillborn		Neonatal death		Not stated		Total births		Perinatal mortality rate/1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
Central Sydney	7095	99.1	38	0.5	27	0.4	0	0.0	7160	100.0	9.1
Northern Sydney	8733	99.2	44	0.5	22	0.2	5	0.1	8804	100.0	7.5
Western Sydney	10083	99.1	67	0.7	24	0.2	0	0.0	10174	100.0	8.9
Wentworth	4190	98.8	29	0.7	15	0.4	6	0.1	4240	100.0	10.4
South Western Sydney	12163	99.1	73	0.6	33	0.3	4	0.0	12273	100.0	8.6
Central Coast	3727	99.1	22	0.6	13	0.3	0	0.0	3762	100.0	9.3
Hunter	7382	99.0	56	0.8	17	0.2	1	0.0	7456	100.0	9.8
Illawarra	4252	99.3	22	0.5	7	0.2	1	0.0	4282	100.0	6.8
South Eastern Sydney	8707	99.3	39	0.4	25	0.3	1	0.0	8772	100.0	7.3
Northern Rivers	2952	99.0	21	0.7	5	0.2	5	0.2	2983	100.0	8.7
Mid North Coast	2921	98.8	24	0.8	11	0.4	0	0.0	2956	100.0	11.8
New England	2838	98.9	22	0.8	8	0.3	1	0.0	2869	100.0	10.5
Macquarie	1729	98.8	15	0.9	5	0.3	1	0.1	1750	100.0	11.4
Mid Western	2365	98.7	25	1.0	5	0.2	2	0.1	2397	100.0	12.5
Far West	557	97.7	12	2.1	1	0.2	0	0.0	570	100.0	22.8
Greater Murray	3401	99.1	23	0.7	7	0.2	0	0.0	3431	100.0	8.7
Southern	1810	99.3	10	0.5	1	0.1	1	0.1	1822	100.0	6.0
Other/ Not stated	722	99.2	3	0.4	1	0.1	2	0.3	728	100.0	-
Total	85627	99.1	545	0.6	227	0.3	30	0.0	86429	100.0	8.9

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 1990 and 1996, the reported number of babies born to Aboriginal/Torres Strait Islander mothers increased from 1,213 to 1,724 (Table 27), an increase from 1.4 to 2.0 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 Aboriginal or Torres Strait Islander. Twin pregnancies were reported for about one per cent of mothers.

**TABLE 27**

**ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES BY PLURALITY, NSW 1990-96**

Plurality	1990		1991		1992		1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>														
Singleton	1191	99.1	1373	99.1	1409	98.7	1443	99.1	1519	99.2	1719	98.8	1700	99.3
Twin	11	0.9	12	0.9	19	1.3	13	0.9	12	0.8	20	1.2	12	0.7
TOTAL	1202	100.0	1385	100.0	1428	100.0	1456	100.0	1531	100.0	1739	100.0	1712	100.0
<b>Births</b>														
Singleton	1191	98.3	1373	98.4	1409	97.4	1443	98.2	1519	98.4	1719	97.7	1700	98.6
Twin	22	1.7	24	1.6	38	2.6	26	1.8	24	1.6	40	2.3	24	1.4
TOTAL	1213	100.0	1397	100.0	1447	100.0	1469	100.0	1543	100.0	1759	100.0	1724	100.0

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

## 3.2 PREVIOUS PREGNANCIES

In 1996, about 30 per cent of Aboriginal/Torres Strait Islander mothers gave birth for the first time, and 60 per cent gave birth to their second to fifth baby. Eight per cent of mothers reported previously giving birth to 5 or more babies (Table 28). This pattern has not changed substantially since 1991.

**TABLE 28**

**NUMBER OF PREVIOUS PREGNANCIES AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1990-96**

No. previous pregnancies (>20 weeks)	1990		1991		1992		1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0	397	33.0	440	31.8	429	30.0	429	29.5	470	30.7	510	29.3	510	29.8
1-4	666	55.4	860	62.1	912	63.9	919	63.1	957	62.5	1094	62.9	1065	62.2
5+	60	5.0	71	5.1	80	5.6	102	7.0	94	6.1	134	7.7	134	7.8
Not stated	79	6.6	14	1.0	7	0.5	6	0.4	10	0.7	1	0.1	3	0.2
TOTAL	1202	100.0	1385	100.0	1428	100.0	1456	100.0	1531	100.0	1739	100.0	1712	100.0

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

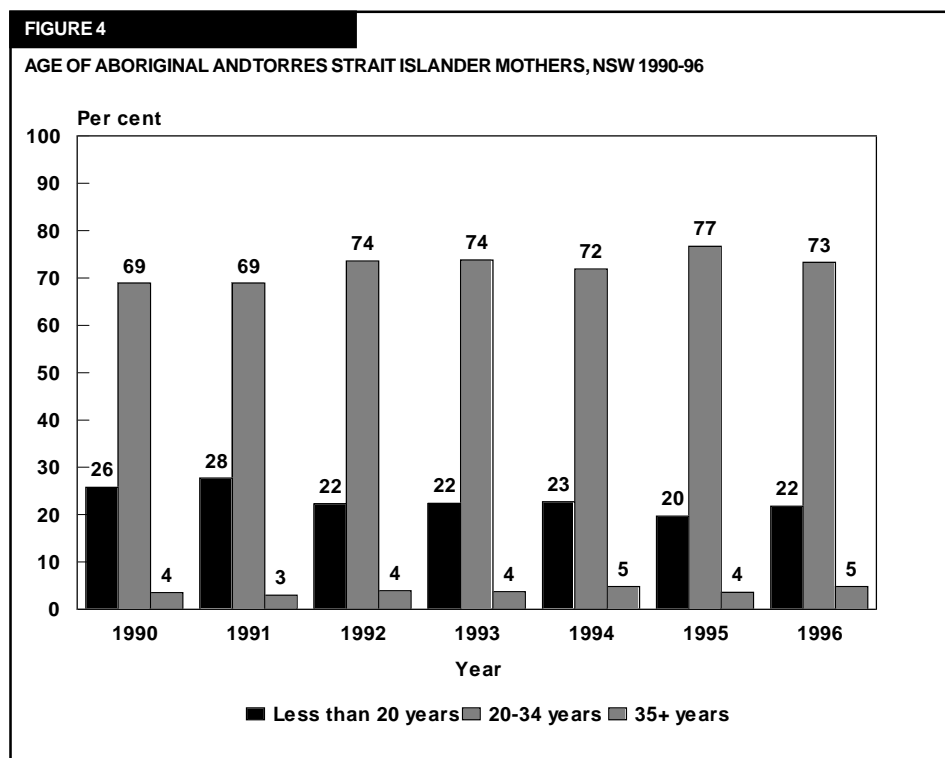
### 3.3 MATERNAL AGE

While the reported number of babies born to Aboriginal/Torres Strait Islander mothers has increased at all ages, including teenagers, the proportion of teenage mothers has decreased from about one quarter to about one fifth of mothers (Table 29, Figure 4).

**TABLE 29**  
**AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1990-96**

Maternal age (years)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 20	310	25.8	384	27.7	318	22.3	326	22.4	348	22.7	342	19.7	374	21.8
20-34	828	68.9	954	68.9	1051	73.6	1074	73.8	1101	71.9	1334	76.7	1255	73.3
35+	42	3.5	42	3.0	56	3.9	54	3.7	74	4.8	63	3.6	83	4.8
Not stated	22	1.8	5	0.4	3	0.2	2	0.1	8	0.5	0	0.0	0	0.0
TOTAL	1202	100.0	1385	100.0	1428	100.0	1456	100.0	1531	100.0	1739	100.0	1712	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 1996 ranged from 9 (0.5 per cent) in the Northern Sydney Area to 256 (15.0 per cent) in the New England Area (Table 30). Since 1990, the reported number of Aboriginal/Torres Strait Islander mothers giving birth increased in all

Health Areas except the Central Sydney, Northern Sydney, South Eastern Sydney and Southern Areas.

In 1996, almost one-third of Aboriginal/Torres Strait Islander mothers in the Far West Area and more than one quarter in the South Western Sydney and New England Areas were teenagers (Table 31).

**TABLE 30**

**HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1990-96**

Health Area	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Central Sydney	86	7.2	87	6.3	98	6.9	81	5.6	98	6.4	51	2.9	64	3.7
Northern Sydney	18	1.5	12	0.9	5	0.4	11	0.8	12	0.8	13	0.7	9	0.5
Western Sydney	69	5.7	76	5.5	110	7.7	107	7.3	110	7.2	120	6.9	102	6.0
Wentworth	25	2.1	23	1.7	42	2.9	28	1.9	31	2.0	24	1.4	41	2.4
South Western Sydney	64	5.3	61	4.4	57	4.0	63	4.3	79	5.2	90	5.2	93	5.4
Central Coast	10	0.8	14	1.0	8	0.6	25	1.7	16	1.0	21	1.2	27	1.6
Hunter	43	3.6	48	3.5	54	3.8	60	4.1	64	4.2	95	5.5	104	6.1
Illawarra	44	3.7	62	4.5	58	4.1	66	4.5	81	5.3	112	6.4	100	5.8
South Eastern Sydney	40	3.3	29	2.1	33	2.3	31	2.1	40	2.6	80	4.6	36	2.1
Northern Rivers	88	7.3	115	8.3	103	7.2	112	7.7	116	7.6	155	8.9	127	7.4
Mid North Coast	104	8.7	128	9.2	157	11.0	133	9.1	142	9.3	149	8.6	152	8.9
New England	179	14.9	223	16.1	198	13.9	208	14.3	192	12.5	214	12.3	256	15.0
Macquarie	102	8.5	148	10.7	141	9.9	148	10.2	145	9.5	149	8.6	170	9.9
Mid Western	62	5.2	68	4.9	73	5.1	90	6.2	103	6.7	108	6.2	109	6.4
Far West	151	12.6	158	11.4	165	11.6	157	10.8	155	10.1	177	10.2	157	9.2
Greater Murray	67	5.6	83	6.0	72	5.0	78	5.4	93	6.1	96	5.5	116	6.8
Southern	41	3.4	43	3.1	37	2.6	50	3.4	44	2.9	71	4.1	39	2.3
Other/ Not stated	9	0.7	7	0.5	17	1.2	8	0.5	10	0.7	14	0.8	10	0.6
TOTAL	1202	100.0	1385	100.0	1428	100.0	1456	100.0	1531	100.0	1739	100.0	1712	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 1996**

Health Area	Under 20		Maternal age (years) 20-plus		No.	TOTAL %
	No.	%	No.	%		
Central Sydney	12	18.8	52	81.3	64	100.0
Northern Sydney*	-	-	-	-	9	100.0
Western Sydney	17	16.7	85	83.3	102	100.0
Wentworth*	-	-	-	-	41	100.0
South Western Sydney	25	26.9	68	73.1	93	100.0
Central Coast*	-	-	-	-	27	100.0
Hunter	21	20.2	83	79.8	104	100.0
Illawarra	19	19.0	81	81.0	100	100.0
South Eastern Sydney	9	25.0	27	75.0	36	100.0
Northern Rivers	20	15.7	107	84.3	127	100.0
Mid North Coast	37	24.3	115	75.7	152	100.0
New England	73	28.5	183	71.5	256	100.0
Macquarie	34	20.0	136	80.0	170	100.0
Mid Western	17	15.6	92	84.4	109	100.0
Far West	50	31.8	107	68.2	157	100.0
Greater Murray	22	19.0	94	81.0	116	100.0
Southern	6	15.4	33	84.6	39	100.0
Other/ Not stated	2	20.0	8	80.0	10	100.0
TOTAL	374	21.8	1338	78.2	1712	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 any group.

### 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) and 1,512 (88.3 per cent) in 1995 and 1996 respectively. This compares with 98.8 per cent of non-Aboriginal/Torres Strait Islander mothers who were booked into the hospital of birth in 1996.

### 3.6 DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

Complete information on the duration of pregnancy at first antenatal visit is available from 1994. In 1994, 965 (63.0 per cent) Aboriginal/Torres Strait Islander mothers commenced

antenatal care before 20 weeks gestation, increasing to 1,162 (66.8 per cent) in 1995 and decreasing slightly to 1,045 (61.0 per cent) in 1996. By comparison, 85.3 per cent of all mothers in NSW commenced antenatal care before 20 weeks gestation in 1996 (Table 8).

In 1996, 47.8 per cent of Aboriginal/Torres Strait Islander mothers in the Far West Area commenced antenatal care at less than 20 weeks gestation, compared with 69.2 per cent in the Hunter Area (Table 32).

**TABLE 32**

**DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY HEALTH AREA OF RESIDENCE, NSW 1996**

Health Area	Duration of pregnancy at first antenatal visit (weeks)							
	0-19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Central Sydney	36	56.3	28	43.8	0	0.0	64	100.0
Northern Sydney	-		-		-		9	100.0
Western Sydney	58	56.9	36	35.3	8	7.8	102	100.0
Wentworth	20	48.8	17	41.5	4	9.8	41	100.0
South Western Sydney	49	52.7	37	39.8	7	7.5	93	100.0
Central Coast	22	81.5	5	18.5	0	0.0	27	100.0
Hunter	72	69.2	28	26.9	4	3.8	104	100.0
Illawarra	69	69.0	29	29.0	2	2.0	100	100.0
South Eastern Sydney	22	61.1	13	36.1	1	2.8	36	100.0
Northern Rivers	80	63.0	24	18.9	23	18.1	127	100.0
Mid North Coast	87	57.2	43	28.3	22	14.5	152	100.0
New England	172	67.2	58	22.7	26	10.2	256	100.0
Macquarie	105	61.8	54	31.8	11	6.5	170	100.0
Mid Western	71	65.1	23	21.1	15	13.8	109	100.0
Far West	75	47.8	51	32.5	31	19.7	157	100.0
Greater Murray	67	57.8	30	25.9	19	16.4	116	100.0
Southern	26	66.7	9	23.1	4	10.3	39	100.0
Other/ Not stated	7	70.0	1	10.0	2	20.0	10	100.0
TOTAL	1045	61.0	488	28.5	179	10.5	1712	100.0

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

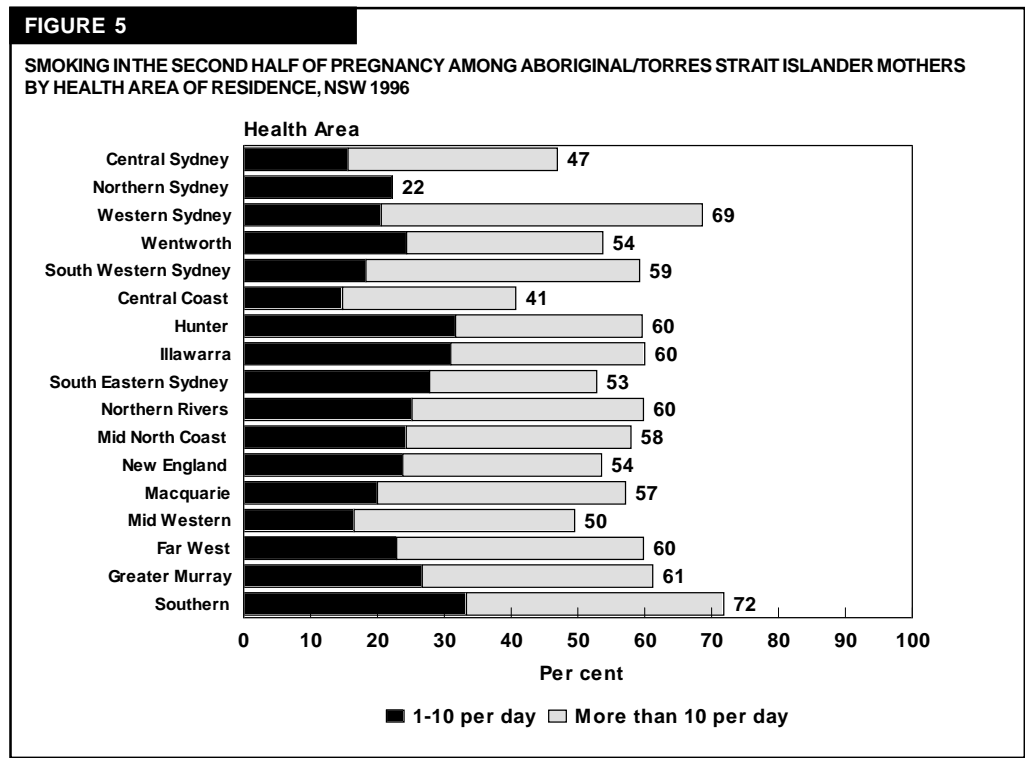
\* Information not shown for Health Areas where the number of mothers is less than 5 in a group.



### 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, increasing to 1,059 (60.9 per cent) in 1995 and 1,051 (61.4 per cent) in 1996. This compares with 21.1 per cent of all NSW mothers who reported smoking at some time during pregnancy (see Section 1.0).

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. In 1996, the proportion of Aboriginal/Torres Strait Islander mothers who smoked in the second half of pregnancy varied from 22.2 per cent in the Northern Sydney Area to 71.8 per cent in the Southern Area (Figure 5).



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

### 3.8 MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS

In 1996, there was a higher rate of retained placenta reported among Aboriginal/Torres Strait Islander mothers than non-Aboriginal/Torres Strait Islander mothers, and similar rates of other reported medical conditions and obstetric complications (Table 33).

**TABLE 33**

**MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY ABORIGINALITY, NSW 1996**

Condition	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	8	0.5	336	0.4	1	1.0	345	0.4
Hepatitis B positive	20	1.2	666	0.8	0	0.0	686	0.8
Antepartum haemorrhage	36	2.1	1594	1.9	2	1.9	1632	1.9
Pregnancy-induced hypertension	116	6.8	5479	6.6	4	3.8	5599	6.6
Gestational diabetes	46	2.7	2485	3.0	2	1.9	2533	3.0
Prelabour rupture of membranes (>24 hrs)	55	3.2	2692	3.2	3	2.9	2750	3.2
Third degree tear	11	0.6	646	0.8	0	0.0	657	0.8
Post-partum haemorrhage (>600mls)	89	5.2	3836	4.6	6	5.8	3931	4.6
Retained placenta	45	2.6	1271	1.5	0	0.0	1316	1.5
Shoulder dystocia	10	0.6	601	0.7	3	2.9	614	0.7
TOTAL CONFINEMENTS	1712	100.0	83486	100.0	104	100.0	85302	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 13.7 to 16.6 per cent between 1990 and 1996, while the rate of spontaneous onset of labour decreased from 79.8 to 76.8 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 substantially lower than the statewide rate, which was 20.5 per cent in 1996.

The rate of normal vaginal birth has remained stable at about 78 per cent since 1990 (Table 35). The caesarean section rate increased from 13.0 per cent in 1990 to 16.0 per cent in 1996, with most of this increase due to an increased rate of emergency caesarean section. The rate of instrumental delivery (forceps or vacuum extraction) decreased from 6.7 to 4.8 per cent. Over the seven year period, the number of vacuum extraction deliveries increased and the number of forceps deliveries decreased. These trends were similar to that of NSW overall (Section 1.12).

**TABLE 34**

**LABOUR ONSET FOR ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1990-96**

Labour onset	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	959	79.8	1129	81.5	1139	79.8	1172	80.5	1183	77.3	1345	77.3	1315	76.8
No labour*	76	6.3	88	6.4	85	6.0	89	6.1	104	6.8	128	7.4	112	6.5
Induced	165	13.7	168	12.1	201	14.1	194	13.3	241	15.7	265	15.2	284	16.6
Not stated	2	0.2	0	0.0	3	0.2	1	0.1	3	0.2	1	0.1	1	0.1
TOTAL	1202	100.0	1385	100.0	1428	100.0	1456	100.0	1531	100.0	1739	100.0	1712	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 1990-96**

Type of delivery	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	946	78.7	1101	79.5	1100	77.0	1117	76.7	1181	77.1	1347	77.5	1327	77.5
Forceps	50	4.2	43	3.1	53	3.7	46	3.2	41	2.7	40	2.3	39	2.3
Forceps rotation	15	1.2	8	0.6	17	1.2	11	0.8	10	0.7	17	1.0	12	0.7
Vacuum extraction	15	1.2	14	1.0	22	1.5	21	1.4	30	2.0	25	1.4	31	1.8
Vaginal breech	16	1.3	27	1.9	21	1.5	27	1.9	23	1.5	25	1.4	28	1.6
Elective caesarean	76	6.3	88	6.4	85	6.0	89	6.1	104	6.8	128	7.4	112	6.5
Emergency caesarean	81	6.7	104	7.5	128	9.0	139	9.5	137	8.9	155	8.9	162	9.5
Not stated	3	0.2	0	0.0	2	0.1	6	0.4	5	0.3	2	0.1	1	0.1
<b>TOTAL</b>	<b>1202</b>	<b>100.0</b>	<b>1385</b>	<b>100.0</b>	<b>1428</b>	<b>100.0</b>	<b>1456</b>	<b>100.0</b>	<b>1531</b>	<b>100.0</b>	<b>1739</b>	<b>100.0</b>	<b>1712</b>	<b>100.0</b>

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

### 3.10 EPIDURAL BLOCK

In 1996, 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 1996, 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 AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1996\***

Parity	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Primigravida	122	23.9	11515	34.1	10	28.6	11647	34.0
Multigravida	93	7.7	7999	16.1	3	4.4	8095	15.9
Not stated	0	0.0	3	14.3	0	0.0	3	13.0
<b>TOTAL</b>	<b>215</b>	<b>12.6</b>	<b>19517</b>	<b>23.4</b>	<b>13</b>	<b>12.5</b>	<b>19745</b>	<b>23.1</b>

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 AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1996\***

Parity	Aboriginal/ Torres Strait Islander		Non-Aboriginal/ Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Primigravida	98	19.2	9123	27.1	7	20.0	9228	26.9
Multigravida	38	3.2	4765	9.6	5	7.4	4808	9.4
Not stated	0	0.0	2	9.5	0	0.0	2	8.7
<b>TOTAL</b>	<b>136</b>	<b>7.9</b>	<b>13890</b>	<b>16.6</b>	<b>12</b>	<b>11.5</b>	<b>14038</b>	<b>16.5</b>

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 1991, the rate of low birth weight (less than 2,500 grams) in Aboriginal/Torres Strait Islander babies has been over 10 per cent (Table 38). This is about one and a half times higher than the rate for NSW overall, which was 5.8 per cent in 1996. The highest rate of low birth weight in Aboriginal/Torres Strait Islander babies since 1990 was 11.7 per cent in 1994. In 1996, the highest rate of low birth weight was in the Wentworth Area (24.4 per cent, Table 39).

**TABLE 38**  
WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1990-96

Birth weight (grams)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1,000	9	0.7	16	1.1	21	1.5	22	1.5	16	1.0	20	1.1	25	1.5
1,000-1,499	5	0.4	19	1.4	12	0.8	23	1.6	22	1.4	19	1.1	15	0.8
1,500-2,499	101	8.3	121	8.7	134	9.3	110	7.5	142	9.2	157	8.9	143	8.3
2,500 plus	1093	90.2	1239	88.8	1277	88.3	1312	89.3	1361	88.2	1562	88.8	1538	89.2
Not stated	4	0.3	1	0.1	3	0.2	3	0.2	2	0.1	1	0.1	3	0.2
TOTAL	1212	100.0	1396	100.0	1447	100.0	1470	100.0	1543	100.0	1759	100.0	1724	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 1996

Health Area	Birth weight (grams)						TOTAL	
	Less than 2,500		2,500+		Not stated		No.	%
	No.	%	No.	%	No.	%		
Central Sydney	6	9.4	58	90.6	0	0.0	64	100.0
Northern Sydney	0	0.0	9	100.0	0	0.0	9	100.0
Western Sydney	12	11.8	90	88.2	0	0.0	102	100.0
Wentworth	10	24.4	31	75.6	0	0.0	41	100.0
South Western Sydney	10	10.8	83	89.2	0	0.0	93	100.0
Central Coast*	-	-	-	-	-	-	27	100.0
Hunter	11	10.5	94	89.5	0	0.0	105	100.0
Illawarra	11	10.9	90	89.1	0	0.0	101	100.0
South Eastern Sydney*	-	-	-	-	-	-	37	100.0
Northern Rivers	18	14.1	109	85.2	1	0.8	128	100.0
Mid North Coast	21	13.8	131	86.2	0	0.0	152	100.0
New England	28	10.9	230	89.1	0	0.0	258	100.0
Macquarie	20	11.6	151	87.8	1	0.6	172	100.0
Mid Western	10	9.0	101	91.0	0	0.0	111	100.0
Far West	11	6.9	147	92.5	1	0.6	159	100.0
Greater Murray	6	5.2	110	94.8	0	0.0	116	100.0
Southern*	-	-	-	-	-	-	39	100.0
Other/ not stated	1	10.0	9	90.0	0	0.0	10	100.0
TOTAL	183	10.6	1538	89.2	3	0.2	1724	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.

### 3.13 GESTATIONAL AGE

Since 1991, the rate of prematurity (less than 37 weeks gestation) in Aboriginal/Torres Strait Islander babies has been over 10 per cent (Table 40). This is about one and a half times higher than the rate of 6.5 per cent for NSW overall. The highest rate of prematurity in Aboriginal/Torres Strait Islander babies was 11.7 per cent in 1994. In 1996, the highest rate of prematurity was in the Wentworth Area (22.0 per cent, Table 41).

**TABLE 40**

**GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1990-96**

Gestational age (weeks)	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
20-27	8	0.7	20	1.4	15	1.0	20	1.4	17	1.1	22	1.3	25	1.5
28-31	12	1.0	20	1.4	20	1.4	24	1.6	22	1.4	19	1.1	17	1.0
32-36	86	7.1	102	7.3	114	7.9	110	7.5	141	9.1	147	8.4	139	8.1
37-41	1063	87.7	1212	86.8	1251	86.5	1263	85.9	1308	84.8	1530	87.0	1508	87.5
42 +	37	3.1	42	3.0	45	3.1	45	3.1	53	3.4	40	2.3	33	1.9
Not stated	6	0.5	0	0.0	2	0.1	8	0.5	2	0.1	1	0.1	2	0.1
TOTAL	1212	100.0	1396	100.0	1447	100.0	1470	100.0	1543	100.0	1759	100.0	1724	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 1996**

Health Area	Less than 37 weeks		Estimated gestational age (weeks)				TOTAL	
	No.	%	No.	%	No.	%	No.	%
Central Sydney	6	9.4	58	90.6	0	0.0	64	100.0
Northern Sydney	0	0.0	9	100.0	0	0.0	9	100.0
Western Sydney	12	11.8	90	88.2	0	0.0	102	100.0
Wentworth	9	22.0	32	78.0	0	0.0	41	100.0
South Western Sydney	13	14.0	80	86.0	0	0.0	93	100.0
Central Coast*	-	-	-	-	-	-	27	100.0
Hunter	12	11.4	93	88.6	0	0.0	105	100.0
Illawarra	7	6.9	94	93.1	0	0.0	101	100.0
South Eastern Sydney*	-	-	-	-	-	-	37	100.0
Northern Rivers	22	17.2	106	82.8	0	0.0	128	100.0
Mid North Coast	13	8.6	139	91.4	0	0.0	152	100.0
New England	25	9.7	232	89.9	1	0.4	258	100.0
Macquarie	13	7.6	159	92.4	0	0.0	172	100.0
Mid Western	14	12.6	97	87.4	0	0.0	111	100.0
Far West	20	12.6	139	87.4	0	0.0	159	100.0
Greater Murray	7	6.0	108	93.1	1	0.9	116	100.0
Southern*	-	-	-	-	-	-	39	100.0
Other/ Not stated	1	10.0	9	90.0	0	0.0	10	100.0
TOTAL	181	10.5	1541	89.4	2	0.1	1724	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 1996, almost 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 over 1990 and is higher than the rate of 2.5 per cent for NSW overall (Section 1.16).

<b>TABLE 42</b>														
<b>APGAR SCORE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1990-96</b>														
Apgar score at 5 minutes	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	23	1.9	35	2.5	37	2.6	44	3.0	28	1.8	51	2.9	33	1.9
5-7	22	1.8	37	2.7	29	2.0	29	2.0	34	2.2	27	1.5	34	2.0
7+	1164	96.0	1319	94.5	1372	94.8	1375	93.5	1442	93.5	1675	95.2	1652	95.8
Not stated	3	0.2	5	0.4	9	0.6	22	1.5	39	2.5	6	0.3	5	0.3
TOTAL	1212	100.0	1396	100.0	1447	100.0	1470	100.0	1543	100.0	1759	100.0	1724	100.0

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

### 3.15 PERINATAL MORTALITY

Since 1990, the perinatal mortality rate among Aboriginal/Torres Strait Islander babies varied from 11.6 to 25.9 per 1,000 births (Table 43). The rate of 17.4 per 1,000 in 1996 is about twice the rate of 8.9 per 1,000 for NSW overall.

<b>TABLE 43</b>														
<b>PERINATAL DEATHS AMONG ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1990-96*</b>														
Perinatal deaths	1990		1991		1992		1993		1994		1995		1996	
	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000
Stillbirth	9	7.4	26	18.6	20	13.8	27	18.4	14	9.1	21	11.9	20	11.6
Neonatal death	5	4.1	8	5.7	8	5.5	11	7.5	8	5.2	13	7.4	10	5.8
TOTAL PERINATAL DEATH	14	11.6	34	24.4	28	19.4	38	25.9	22	14.3	34	19.3	30	17.4

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 6.

### 4.1 TRENDS IN CONFINEMENTS

Between 1990 and 1996, the number of mothers born in non-English speaking countries rose from 14,469 to 17,333, an

increase from 16.7 to 20.3 per cent of all confinements (Table 44). The largest increase was for mothers born in Asia, rising from 6.8 per cent to 10.5 per cent of confinements.

Small increases were observed in the numbers of mothers born in Central and South America and the Pacific Islands, while the number of mothers born in Southern Europe declined by about one-third over the seven year period.

**TABLE 44**

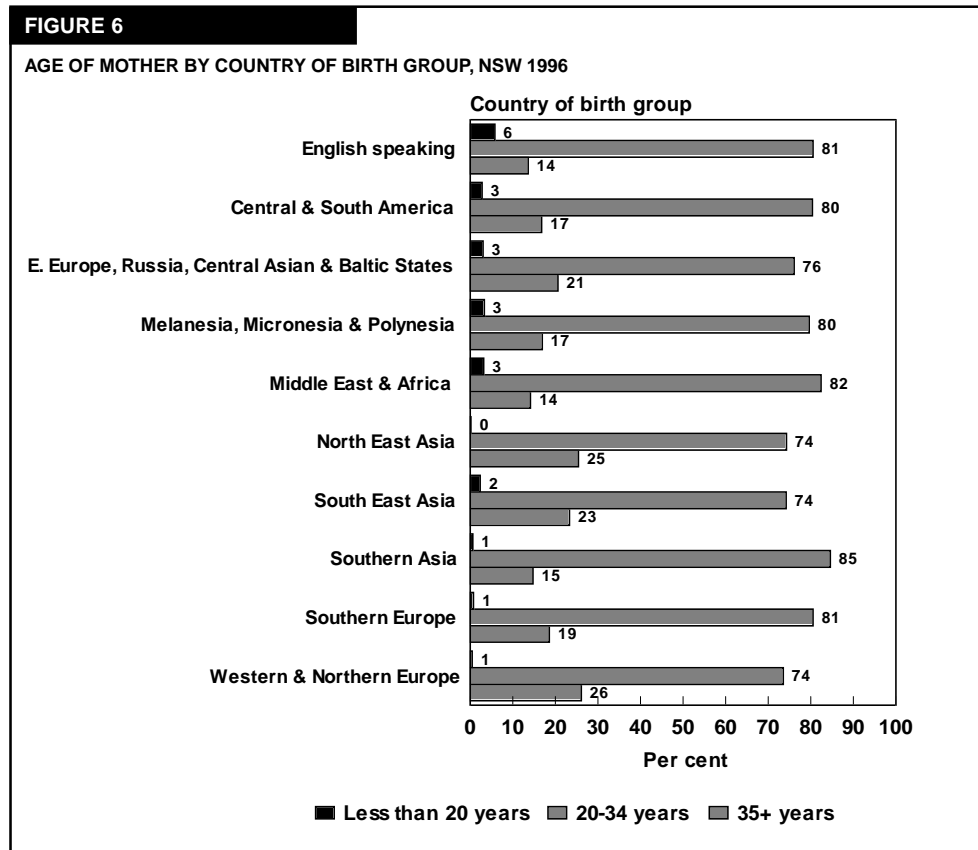
**CONFINEMENTS AND BIRTHS BY COUNTRY OF BIRTH GROUP, NSW 1990-96**

Country of birth group	1990		1991		1992		Year 1993		1994		1995		1996	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>														
English speaking	70868	81.9	70064	81.7	71512	81.4	69690	80.3	69698	80.4	69311	80.3	67889	79.6
Central and South America	542	0.6	622	0.7	593	0.7	664	0.8	685	0.8	669	0.8	756	0.9
Eastern Europe, Russia, Central Asian and Baltic States	318	0.4	373	0.4	374	0.4	387	0.4	359	0.4	403	0.5	364	0.4
Melanesia, Micronesia and Polynesia	1123	1.3	1291	1.5	1352	1.5	1268	1.5	1182	1.4	1356	1.6	1410	1.7
Middle East and Africa	3754	4.3	3738	4.4	3904	4.4	3832	4.4	3786	4.4	3690	4.3	3676	4.3
North East Asia	1469	1.7	1981	2.3	2270	2.6	2587	3.0	2816	3.2	2961	3.4	3226	3.8
South East Asia	3395	3.9	3632	4.2	4016	4.6	4314	5.0	4155	4.8	4462	5.2	4587	5.4
Southern Asia	1011	1.2	768	0.9	903	1.0	975	1.1	982	1.1	1102	1.3	1170	1.4
Southern Europe	2163	2.5	2042	2.4	2036	2.3	1848	2.1	1771	2.0	1632	1.9	1530	1.8
Western and Northern Europe	694	0.8	739	0.9	742	0.8	685	0.8	682	0.8	612	0.7	614	0.7
Not stated	1162	1.3	533	0.6	99	0.1	496	0.6	622	0.7	65	0.1	80	0.1
<b>TOTAL</b>	<b>86499</b>	<b>100.0</b>	<b>85783</b>	<b>100.0</b>	<b>87801</b>	<b>100.0</b>	<b>86746</b>	<b>100.0</b>	<b>86738</b>	<b>100.0</b>	<b>86263</b>	<b>100.0</b>	<b>85302</b>	<b>100.0</b>
<b>Births</b>														
English speaking	71751	82.0	71018	81.7	72516	81.5	70652	80.4	70730	80.4	70255	80.4	68816	79.6
Central and South America	548	0.6	629	0.7	596	0.7	673	0.8	694	0.8	675	0.8	761	0.9
Eastern Europe, Russia, Central Asian and Baltic States	324	0.4	379	0.4	378	0.4	391	0.4	363	0.4	411	0.5	366	0.4
Melanesia, Micronesia and Polynesia	1134	1.3	1306	1.5	1357	1.5	1286	1.5	1203	1.4	1370	1.6	1431	1.7
Middle East and Africa	3788	4.3	3789	4.4	3947	4.4	3885	4.4	3861	4.4	3726	4.3	3722	4.3
North East Asia	1480	1.7	2000	2.3	2284	2.6	2611	3.0	2844	3.2	2976	3.4	3260	3.8
South East Asia	3419	3.9	3665	4.2	4056	4.6	4346	4.9	4181	4.8	4507	5.2	4624	5.4
Southern Asia	1022	1.2	775	0.9	910	1.0	981	1.1	995	1.1	1119	1.3	1182	1.4
Southern Europe	2187	2.5	2066	2.4	2069	2.3	1872	2.1	1796	2.0	1662	1.9	1559	1.8
Western and Northern Europe	705	0.8	745	0.9	756	0.8	693	0.8	688	0.8	623	0.7	625	0.7
Not stated	1174	1.3	542	0.6	107	0.1	511	0.6	629	0.7	67	0.1	83	0.1
<b>TOTAL</b>	<b>87532</b>	<b>100.0</b>	<b>86914</b>	<b>100.0</b>	<b>88976</b>	<b>100.0</b>	<b>87901</b>	<b>100.0</b>	<b>87984</b>	<b>100.0</b>	<b>87391</b>	<b>100.0</b>	<b>86429</b>	<b>100.0</b>

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 Western and Northern Europe (26.1 per cent) and North East Asia (25.4 per cent).



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

**TABLE 45**  
**AGE OF MOTHER BY COUNTRY OF BIRTH GROUP, NSW 1996**

Country of birth group	Less than 20		20-34		Maternal age (years) 35-plus		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	3959	5.8	54671	80.5	9221	13.6	38	0.1	67889	100.0
Central and South America	21	2.8	608	80.4	127	16.8	0	0.0	756	100.0
Eastern Europe, Russia, Central Asian and Baltic States	11	3.0	277	76.1	75	20.6	1	0.3	364	100.0
Melanesia, Micronesia and Polynesia	47	3.3	1123	79.6	238	16.9	2	0.1	1410	100.0
Middle East and Africa	118	3.2	3030	82.4	523	14.2	5	0.1	3676	100.0
North East Asia	5	0.2	2396	74.3	820	25.4	5	0.2	3226	100.0
South East Asia	112	2.4	3402	74.2	1071	23.3	2	0.0	4587	100.0
Southern Asia	7	0.6	990	84.6	173	14.8	0	0.0	1170	100.0
Southern Europe	12	0.8	1231	80.5	285	18.6	2	0.1	1530	100.0
Western and Northern Europe	3	0.5	451	73.5	160	26.1	0	0.0	614	100.0
Not stated	0	0.0	60	75.0	19	23.8	1	1.3	80	100.0
TOTAL	4295	5.0	68239	80.0	12712	14.9	56	0.1	85302	100.0

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



### 4.3 HEALTH AREA OF RESIDENCE

In 1996, the percentage of mothers born in non-English speaking countries was highest in the Central Sydney Area (47.8 per cent), followed by the South Western Sydney and Western Sydney Areas (36.6 and 34.6 per cent respectively). Over 5 per cent of mothers were born in South East Asian countries, 40.4 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, over half of whom 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 1996\***

Health Area	English speaking		Central & South America		Eastern Europe, Russia, Central Asian & Baltic States		Melanesia Micronesia & Polynesia		Middle East & Africa		North East Asia		South East Asia		Southern Asia		Southern Europe		Western & Northern Europe		Not stated		TOTAL		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Central Sydney	3558	52.7	76	1.1	46	0.7	284	4.2	750	11.1	823	12.2	673	10.0	204	3.0	263	3.9	69	1.0	9	0.1	6755	100.0	
Northern Sydney	6928	78.4	71	0.8	43	0.5	113	1.3	198	2.2	668	7.6	358	4.1	164	1.9	123	1.4	153	1.7	14	0.2	8833	100.0	
Western Sydney	6263	64.7	139	1.4	57	0.6	332	3.4	957	9.9	607	6.3	732	7.6	355	3.7	178	1.8	49	0.5	14	0.1	9683	100.0	
Wentworth South	3607	92.0	19	0.5	10	0.3	36	0.9	44	1.1	19	0.5	71	1.8	36	0.9	48	1.2	27	0.7	5	0.1	3922	100.0	
Western Sydney	7600	63.6	244	2.0	59	0.5	307	2.6	971	8.1	330	2.8	1852	15.5	141	1.2	382	3.2	52	0.4	9	0.1	11947	100.0	
Central Coast	3262	95.6	7	0.2	-	-	23	0.7	14	0.4	19	0.6	38	1.1	9	0.3	13	0.4	21	0.6	-	-	3412	100.0	
Hunter	6971	95.2	14	0.2	8	0.1	39	0.5	30	0.4	29	0.4	120	1.6	22	0.3	51	0.7	33	0.5	3	0.0	7320	100.0	
Illawarra South	3913	90.1	26	0.6	13	0.3	21	0.5	71	1.6	21	0.5	86	2.0	12	0.3	140	3.2	37	0.9	5	0.1	4345	100.0	
Eastern Sydney	6327	73.1	121	1.4	109	1.3	121	1.4	501	5.8	580	6.7	423	4.9	130	1.5	246	2.8	93	1.1	2	0.0	8653	100.0	
Northern Rivers	2803	96.9	-	-	-	-	14	0.5	6	0.2	11	0.4	28	1.0	-	-	-	-	17	0.6	1	0.0	2892	100.0	
Mid North Coast	2823	97.0	-	-	-	-	9	0.3	7	0.2	7	0.2	24	0.8	17	0.6	5	0.2	11	0.4	0	0.0	2909	100.0	
New England	2962	91.9	11	0.3	-	-	36	1.1	35	1.1	49	1.5	72	2.2	21	0.7	23	0.7	12	0.4	-	-	3223	100.0	
Macquarie	1811	98.4	-	-	-	-	-	-	-	-	-	-	10	0.5	-	-	-	-	-	2	0.1	-	-	1841	100.0
Mid Western	2449	94.0	8	0.3	-	-	24	0.9	30	1.2	15	0.6	34	1.3	18	0.7	20	0.8	-	-	4	0.2	2605	100.0	
Far West	799	89.1	7	0.8	-	-	6	0.7	29	3.2	22	2.5	16	1.8	12	1.3	-	-	-	-	0	0.0	897	100.0	
Greater Murray	3399	96.4	-	-	6	0.2	21	0.6	14	0.4	12	0.3	28	0.8	18	0.5	10	0.3	13	0.4	1	0.0	3526	100.0	
Southern	1740	95.7	-	-	-	-	14	0.8	11	0.6	8	0.4	9	0.5	-	-	15	0.8	13	0.7	3	0.2	1819	100.0	
Other/ not stated	674	93.6	1	0.1	2	0.3	6	0.8	4	0.6	4	0.6	13	1.8	2	0.3	4	0.6	8	1.1	2	0.3	720	100.0	
<b>TOTAL</b>	<b>67889</b>	<b>79.6</b>	<b>756</b>	<b>0.9</b>	<b>364</b>	<b>0.4</b>	<b>1410</b>	<b>1.7</b>	<b>3676</b>	<b>4.3</b>	<b>3226</b>	<b>3.8</b>	<b>4587</b>	<b>5.4</b>	<b>1170</b>	<b>1.4</b>	<b>1530</b>	<b>1.8</b>	<b>614</b>	<b>0.7</b>	<b>80</b>	<b>0.1</b>	<b>85302</b>	<b>100.0</b>	

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 1996, 98.6 per cent of all mothers were booked at the hospital of birth. The lowest rate (97.4 per cent) was in mothers born in Melanesia, Micronesia and Polynesia. This compared with 98.5 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 1996, 85.3 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 87.6 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 55.6 per cent of mothers born in Melanesia, Micronesia and Polynesia and 65.4 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 1996**

Country of birth group	0-19		Duration of pregnancy at first antenatal visit (weeks)				TOTAL	
	No.	%	No.	%	Not stated		No.	%
English speaking	59446	87.6	7052	10.4	1391	2.0	67889	100.0
Central and South America	638	84.4	113	14.9	5	0.7	756	100.0
Eastern Europe, Russia, Central Asian and Baltic States	288	79.1	73	20.1	3	0.8	364	100.0
Melanesia, Micronesia and Polynesia	784	55.6	587	41.6	39	2.8	1410	100.0
Middle East and Africa	2403	65.4	1231	33.5	42	1.1	3676	100.0
North East Asia	2527	78.3	663	20.6	36	1.1	3226	100.0
South East Asia	3791	82.6	749	16.3	47	1.0	4587	100.0
Southern Asia	950	81.2	212	18.1	8	0.7	1170	100.0
Southern Europe	1315	85.9	198	12.9	17	1.1	1530	100.0
Western and Northern Europe	533	86.8	72	11.7	9	1.5	614	100.0
Not stated	51	63.8	22	27.5	7	8.8	80	100.0
Total	72726	85.3	10972	12.9	1604	1.9	85302	100.0

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

#### 4.6 SMOKING IN PREGNANCY

In 1996, 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 eight 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**

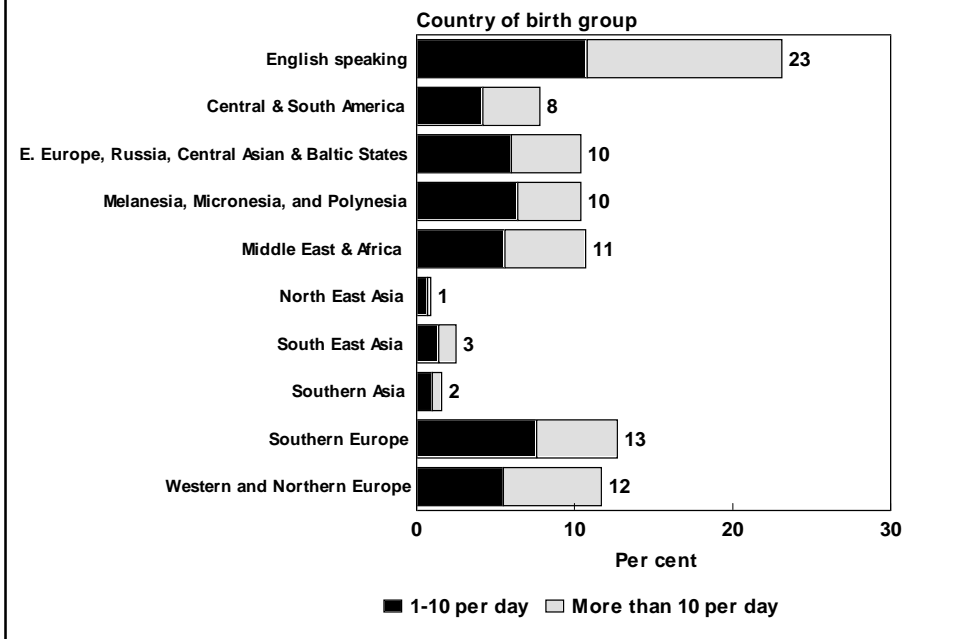
**CONFINEMENTS BY COUNTRY OF BIRTH GROUP AND SMOKING IN PREGNANCY, NSW 1996**

Country of birth group	No		Smoking in pregnancy				TOTAL	
	No.	%	No.	%	Not stated		No.	%
English speaking	50971	75.1	16770	24.7	148	0.2	67889	100.0
Central and South America	683	90.3	73	9.7	0	0.0	756	100.0
Eastern Europe, Russia, Central Asian and Baltic States	320	87.9	42	11.5	2	0.5	364	100.0
Melanesia, Micronesia and Polynesia	1249	88.6	159	11.3	2	0.1	1410	100.0
Middle East and Africa	3253	88.5	417	11.3	6	0.2	3676	100.0
North East Asia	3189	98.9	34	1.1	3	0.1	3226	100.0
South East Asia	4450	97.0	128	2.8	9	0.2	4587	100.0
Southern Asia	1141	97.5	26	2.2	3	0.3	1170	100.0
Southern Europe	1318	86.1	211	13.8	1	0.1	1530	100.0
Western and Northern Europe	532	86.6	80	13.0	2	0.3	614	100.0
Not stated	61	76.3	17	21.3	2	2.5	80	100.0
TOTAL	67167	78.7	17957	21.1	178	0.2	85302	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 1996**



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

## 4.7 MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS

In 1996, almost one per cent of mothers born in Melanesia, Micronesia and Polynesia were reported to have diabetes mellitus, over twice the rate for all mothers in NSW. The rate of gestational diabetes in mothers born in South East Asian and Southern Asian countries was over 7 per cent, also more than twice the rate for all mothers in NSW. These three groups of mothers had the highest rates of hepatitis B positivity. Mothers born in Southern Asian countries also had the highest rates of prelabour rupture of membranes (greater than 24 hours) and third degree tear (Table 49).

**TABLE 49**

**MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY COUNTRY OF BIRTH GROUP, NSW 1996\***

Condition	English speaking		Central & South America		Eastern Europe, Russia, Central Asian & Baltic States		Melanesia Micronesia & Polynesia		Middle East & Africa		North East Asia		South East Asia		Southern Asia		Southern Europe		Western & Northern Europe		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	244	0.4	3	0.4	0	0.0	12	0.9	14	0.4	19	0.6	32	0.7	8	0.7	9	0.6	2	0.3	2	2.5	345	0.4
Hepatitis B positive	150	0.2	0	0.0	4	1.1	52	3.7	40	1.1	171	5.3	247	5.4	8	0.7	12	0.8	1	0.2	1	1.3	686	0.8
Antepartum haemorrhage	1341	2.0	12	1.6	2	0.5	21	1.5	48	1.3	65	2.0	80	1.7	24	2.1	22	1.4	14	2.3	3	3.8	1632	1.9
Pregnancy induced hypertension	4684	6.9	38	5.0	22	6.0	121	8.6	160	4.4	131	4.1	251	5.5	72	6.2	76	5.0	39	6.4	5	6.3	5599	6.6
Gestational diabetes	1444	2.1	28	3.7	19	5.2	78	5.5	200	5.4	267	8.3	326	7.1	85	7.3	67	4.4	18	2.9	1	1.3	2533	3.0
Prelabour rupture of membranes (>24 hrs)	1961	2.9	33	4.4	21	5.8	56	4.0	152	4.1	185	5.7	190	4.1	77	6.6	51	3.3	17	2.8	7	8.8	2750	3.2
Third degree tear	454	0.7	6	0.8	2	0.5	12	0.9	19	0.5	58	1.8	64	1.4	26	2.2	13	0.8	3	0.5	0	0.0	657	0.8
Post-partum haemorrhage (>600 mls)	2951	4.3	36	4.8	22	6.0	108	7.7	160	4.4	216	6.7	289	6.3	53	4.5	65	4.2	29	4.7	2	2.5	3931	4.6
Retained placenta	1028	1.5	7	0.9	7	1.9	27	1.9	49	1.3	63	2.0	64	1.4	20	1.7	34	2.2	16	2.6	1	1.3	1316	1.5
Shoulder dystocia	490	0.7	7	0.9	5	1.4	9	0.6	21	0.6	21	0.7	32	0.7	8	0.7	17	1.1	3	0.5	1	1.3	614	0.7

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 (21.1 per cent) and North East Asia (20.3 per cent).

**TABLE 50**

**LABOUR ONSET BY COUNTRY OF BIRTH GROUP, NSW 1996**

Country of birth group	Spontaneous		No labour		Onset of labour Induced		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	46151	68.0	6583	9.7	15108	22.3	47	0.1	67889	100.0
Central and South America	554	73.3	81	10.7	119	15.7	2	0.3	756	100.0
Eastern Europe, Russia, Central Asian and Baltic States	282	77.5	26	7.1	56	15.4	0	0.0	364	100.0
Melanesia, Micronesia and Polynesia	1066	75.6	109	7.7	235	16.7	0	0.0	1410	100.0
Middle East and Africa	2877	78.3	264	7.2	534	14.5	1	0.0	3676	100.0
North East Asia	2546	78.9	303	9.4	377	11.7	0	0.0	3226	100.0
South East Asia	3677	80.2	386	8.4	524	11.4	0	0.0	4587	100.0
Southern Asia	883	75.5	98	8.4	189	16.2	0	0.0	1170	100.0
Southern Europe	1118	73.1	150	9.8	262	17.1	0	0.0	1530	100.0
Western and Northern Europe	460	74.9	46	7.5	108	17.6	0	0.0	614	100.0
Not stated	63	78.8	6	7.5	11	13.8	0	0.0	80	100.0
TOTAL	9677	70.0	8052	9.4	17523	20.5	50	0.1	85302	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 1996**

Country of birth group	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.	%
English speaking	48115	70.9	3783	5.6	714	1.1	2532	3.7	690	1.0	6583	9.7	5420	8.0	52	0.1	67889	100.0
Central and South America	505	66.8	43	5.7	16	2.1	36	4.8	8	1.1	81	10.7	66	8.7	1	0.1	756	100.0
Eastern Europe, Russia, Central Asian and Baltic States	258	70.9	24	6.6	6	1.6	18	4.9	5	1.4	26	7.1	26	7.1	1	0.3	364	100.0
Melanesia, Micronesia and Polynesia	1055	74.8	51	3.6	5	0.4	37	2.6	19	1.3	109	7.7	131	9.3	3	0.2	1410	100.0
Middle East and Africa	2866	78.0	142	3.9	22	0.6	104	2.8	40	1.1	264	7.2	232	6.3	6	0.2	3676	100.0
North East Asia	2004	62.1	279	8.6	50	1.5	211	6.5	24	0.7	303	9.4	353	10.9	2	0.1	3226	100.0
South East Asia	3210	70.0	281	6.1	55	1.2	203	4.4	59	1.3	386	8.4	390	8.5	3	0.1	4587	100.0
Southern Asia	771	65.9	86	7.4	20	1.7	39	3.3	6	0.5	98	8.4	149	12.7	1	0.1	1170	100.0
Southern Europe	1058	69.2	82	5.4	26	1.7	66	4.3	15	1.0	150	9.8	132	8.6	1	0.1	1530	100.0
Western and Northern Europe	437	71.2	26	4.2	11	1.8	36	5.9	6	1.0	46	7.5	52	8.5	0	0.0	614	100.0
Not stated	60	75.0	2	2.5	0	0.0	4	5.0	2	2.5	6	7.5	4	5.0	2	2.5	80	100.0
TOTAL	60339	70.7	4799	5.6	925	1.1	3286	3.9	874	1.0	8052	9.4	6955	8.2	72	0.1	85302	100.0

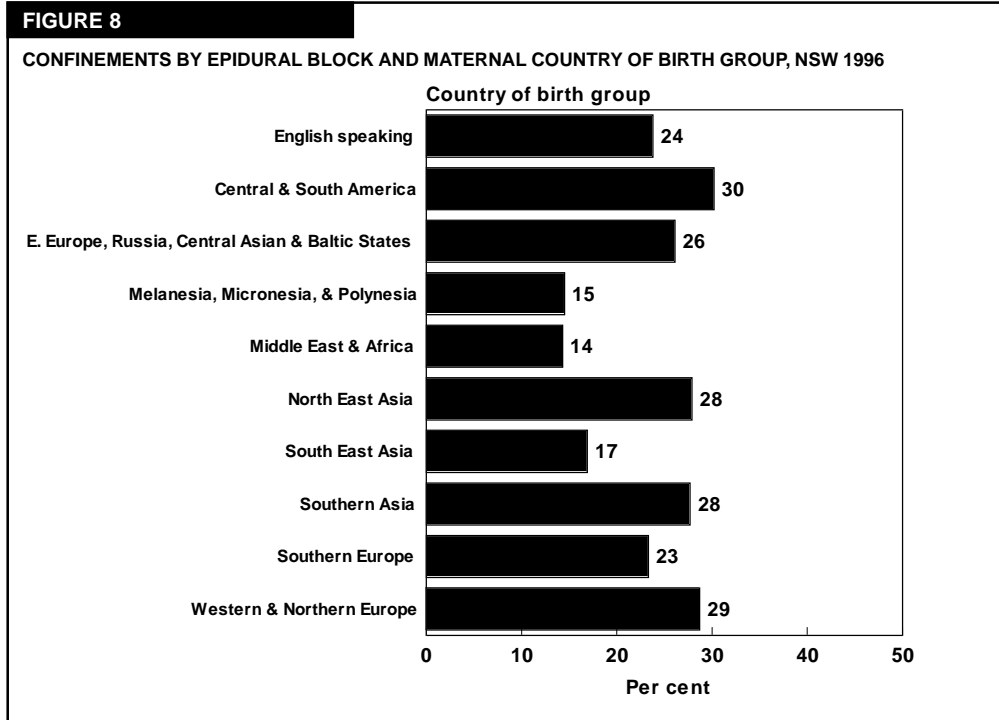
Source: NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department.

#### 4.9 EPIDURAL BLOCK

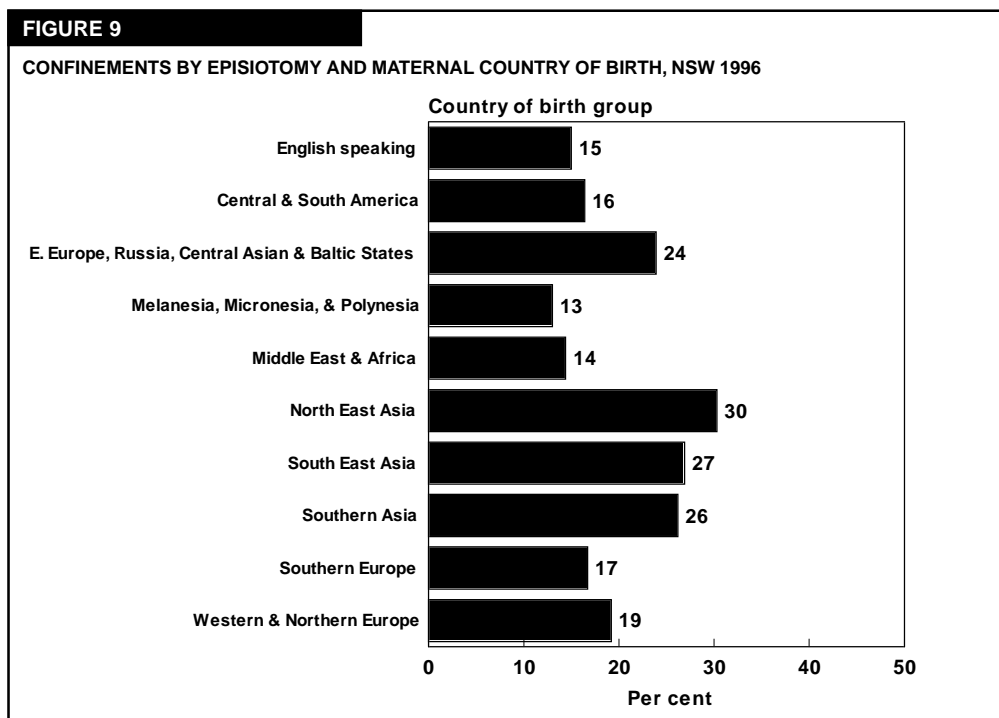
In 1996, the rate of epidural block was 23.1 per cent in NSW. The highest rate was in mothers born in Central and South America (30.2 per cent), and the lowest was in mothers from the Middle East and Africa (14.3 per cent, Figure 8).

#### 4.10 EPISTOTOMY

In 1996, the rate of episiotomy was 16.5 per cent in NSW. The highest rate was in mothers born in North East Asia (30.3 per cent) and the lowest rate was in mothers born in Melanesia, Micronesia and Polynesia (13.0 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 1996 was 5.8 per cent in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asian countries (8.5 per cent) and Melanesia, Micronesia and Polynesia (7.5 per cent, Table 52). Babies of mothers born in Eastern Europe, Russia, the Central Asian and Baltic States were least likely to be low birth weight.

## 4.12 GESTATIONAL AGE

The rate of prematurity (less than 37 weeks gestation) in 1996 was 6.7 per cent in NSW. The highest rate of prematurity was in babies of mothers born Melanesia, Micronesia and Polynesia (8.1 per cent). Babies of mothers born in North East Asia or the Middle East and Africa were least likely to be premature (Table 53).

**TABLE 52**

**BIRTH WEIGHT BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1996**

Country of birth group	Less than 2500 grams		Birth weight (grams)				TOTAL	
	No.	%	2500 + grams No.	%	Not stated No.	%	No.	%
English speaking	4045	5.9	64728	94.1	43	0.1	68816	100.0
Central and South America	35	4.6	726	95.4	0	0.0	761	100.0
Eastern Europe, Russia, Central Asian and Baltic States	16	4.4	350	95.6	0	0.0	366	100.0
Melanesia, Micronesia and Polynesia	107	7.5	1323	92.5	1	0.1	1431	100.0
Middle East and Africa	167	4.5	3555	95.5	0	0.0	3722	100.0
North East Asia	172	5.3	3086	94.7	2	0.1	3260	100.0
South East Asia	271	5.9	4350	94.1	3	0.1	4624	100.0
Southern Asia	101	8.5	1080	91.4	1	0.1	1182	100.0
Southern Europe	82	5.3	1477	94.7	0	0.0	1559	100.0
Western and Northern Europe	28	4.5	596	95.4	1	0.2	625	100.0
Not stated	14	16.9	68	81.9	1	1.2	83	100.0
<b>TOTAL</b>	<b>5038</b>	<b>5.8</b>	<b>81339</b>	<b>94.1</b>	<b>52</b>	<b>0.1</b>	<b>86429</b>	<b>100.0</b>

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

**TABLE 53**

**GESTATIONAL AGE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1996**

Country of birth group	Less than 37 weeks		Gestational (weeks)				TOTAL	
	No.	%	37 + weeks No.	%	Not stated No.	%	No.	%
English speaking	4706	6.8	64079	93.1	31	0.0	68816	100.0
Central and South America	43	5.7	718	94.3	0	0.0	761	100.0
Eastern Europe, Russia, Central Asian and Baltic States	25	6.8	341	93.2	0	0.0	366	100.0
Melanesia, Micronesia and Polynesia	116	8.1	1313	91.8	2	0.1	1431	100.0
Middle East and Africa	198	5.3	3519	94.5	5	0.1	3722	100.0
North East Asia	171	5.2	3089	94.8	0	0.0	3260	100.0
South East Asia	309	6.7	4313	93.3	2	0.0	4624	100.0
Southern Asia	80	6.8	1102	93.2	0	0.0	1182	100.0
Southern Europe	95	6.1	1464	93.9	0	0.0	1559	100.0
Western and Northern Europe	36	5.8	589	94.2	0	0.0	625	100.0
Not stated	15	18.1	66	79.5	2	2.4	83	100.0
<b>TOTAL</b>	<b>5794</b>	<b>6.7</b>	<b>80593</b>	<b>93.2</b>	<b>42</b>	<b>0.0</b>	<b>86429</b>	<b>100.0</b>

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

## 4.13 APGAR SCORE

In 1996, 2.4 per cent of all babies (including stillborn babies) had an Apgar score of 7 or less at five minutes and 1.1 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 (3.6 per cent).

## 4.14 PERINATAL OUTCOMES

In 1996, over 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 1996\***

Country of birth group	0-4		5-7		Apgar score 7-plus		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	807	1.2	927	1.3	66952	97.3	130	0.2	68816	100.0
Central and South America	9	1.2	7	0.9	742	97.5	3	0.4	761	100.0
Eastern Europe, Russia, Central Asian and Baltic States	3	0.8	5	1.4	358	97.8	0	0.0	366	100.0
Melanesia, Micronesia and Polynesia	30	2.1	22	1.5	1375	96.1	4	0.3	1431	100.0
Middle East and Africa	40	1.1	36	1.0	3643	97.9	3	0.1	3722	100.0
North East Asia	25	0.8	29	0.9	3205	98.3	1	0.0	3260	100.0
South East Asia	48	1.0	58	1.3	4509	97.5	9	0.2	4624	100.0
Southern Asia	12	1.0	20	1.7	1148	97.1	2	0.2	1182	100.0
Southern Europe	7	0.4	18	1.2	1531	98.2	3	0.2	1559	100.0
Western and Northern Europe	7	1.1	4	0.6	613	98.1	1	0.2	625	100.0
Not stated	1	1.2	1	1.2	77	92.8	4	4.8	83	100.0
TOTAL	989	1.1	1127	1.3	84153	97.4	160	0.2	86429	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 1996\***

Country of birth group	Liveborn surviving		Stillborn		Neonatal death		Not stated		Total births		Perinatal mortality rate / 1,000 births**
	No.	%	No.	%	No.	%	No.	%	No.	%	
English speaking	68157	99.0	456	0.7	176	0.3	27	0.0	68816	100.0	9.2
Central and South America	754	99.1	5	0.7	2	0.3	0	0.0	761	100.0	9.2
Eastern Europe, Russia, Central Asian and Baltic States	364	99.5	—	—	—	—	—	—	366	100.0	—
Melanesia, Micronesia and Polynesia	1408	98.4	18	1.3	5	0.3	0	0.0	1431	100.0	16.1
Middle East and Africa	3695	99.3	13	0.3	14	0.4	0	0.0	3722	100.0	7.3
North East Asia	3239	99.4	14	0.4	7	0.2	0	0.0	3260	100.0	6.4
South East Asia	4585	99.2	24	0.5	13	0.3	2	0.0	4624	100.0	8.0
Southern Asia	1173	99.2	6	0.5	3	0.3	0	0.0	1182	100.0	7.6
Southern Europe	1554	99.7	2	0.1	3	0.2	0	0.0	1559	100.0	3.2
Western and Northern Europe	617	98.7	5	0.8	3	0.5	0	0.0	625	100.0	12.8
Not stated	81	97.6	1	1.2	0	0.0	1	1.2	83	100.0	—
TOTAL	85627	99.1	545	0.6	227	0.3	30	0.0	86429	100.0	8.9

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 rate not calculated for country of birth groups with less than 5 perinatal deaths.



# PART 5: BIRTH DEFECTS

## 5.1 BIRTH DEFECTS AMONG STILLBORN AND LIVEBORN INFANTS

A birth defect is any structural defect detected during pregnancy or in the first year of life, excluding birth injuries and minor anomalies such as skin tags, positional talipes, birthmarks or clikky hips.

The NSW Birth Defects Register collects information on birth defects and four medical conditions: cystic fibrosis, phenylketonuria, congenital hypothyroidism and thalassaemia major. More information on the Register is included in the Data Sources section of this report and descriptions of some common birth defects which are included in this chapter are shown in Appendix 1. A list of conditions excluded from the Register is shown in Appendix 2.

This section reports on all conditions reported to the Register which were detected during pregnancy or in the first year of life for 1990-95 and conditions detected during pregnancy or at birth for 1996. Denominator births for the calculation of rates were obtained from the NSW Midwives Data Collection.

### 5.1.1 TRENDS IN REPORTED BIRTH DEFECTS

The reported number of infants with birth defects rose from about 1,600 in 1991 and 1992 to about 2,000 per year from 1992 to 1995 (Table 56). In 1996, 1,042 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.

**TABLE 56**

**BIRTH DEFECT CASES, NSW 1990-96**

Year	Birth defect cases	Births	Rate/1,000 births
1990	1659	86092	19.3
1991	1632	86004	19.0
1992	2142	88119	24.3
1993	2142	87167	24.6
1994	1989	87231	22.8
1995	1947	86650	22.5
1996	1042	85701	12.2

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

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported.

### 5.1.2 BIRTH DEFECTS BY DIAGNOSTIC CATEGORY

The most common categories of birth defects for stillbirths and liveborn infants are presented in Table 57. Birth defects are classified using the British Paediatric Association (BPA) Classification of Diseases<sup>1</sup> 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 1990-96, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genitourinary system. Since 1992, there was a decrease in the reported number of infants with neural tube defects, such as anencephaly and spina bifida. This is described in more detail in Section 5.3.

**TABLE 57**

**BIRTH DEFECTS AMONG STILLBIRTHS AND LIVEBORN INFANTS BY DIAGNOSTIC CATEGORY, NSW 1990-96**

Diagnostic category <sup>1</sup>	No. defects			Rate per 1,000 births				
	1990-94	1995	1996	1990-96	1990-94	1995	1996	1990-96
<b>Defects of nervous system</b>	<b>1018</b>	<b>183</b>	<b>91</b>	<b>1292</b>	<b>2.3</b>	<b>2.1</b>	<b>1.1</b>	<b>2.1</b>
Anencephaly	77	5	10	92	0.2	0.1	0.1	0.2
Spina Bifida	228	30	17	275	0.5	0.3	0.2	0.5
Encephalocoele	44	10	4	58	0.1	0.1	0.0	0.1
Microcephaly	132	34	14	180	0.3	0.4	0.2	0.3
Congenital hydrocephalus	236	35	21	292	0.5	0.4	0.2	0.5
Other nervous system defects	301	69	25	395	0.7	0.8	0.3	0.7
<b>Defects of eye</b>	<b>379</b>	<b>82</b>	<b>21</b>	<b>482</b>	<b>0.9</b>	<b>0.9</b>	<b>0.2</b>	<b>0.8</b>
Anophthalmos/ microphthalmos	77	17	0	94	0.2	0.2	0.0	0.2
Buphthalmos/ congenital glaucoma	39	9	0	48	0.1	0.1	0.0	0.1
Congenital cataract	81	20	4	105	0.2	0.2	0.0	0.2
Other eye defects	182	36	17	235	0.4	0.4	0.2	0.4
<b>Defects of ear, face and neck</b>	<b>228</b>	<b>27</b>	<b>21</b>	<b>276</b>	<b>0.5</b>	<b>0.3</b>	<b>0.2</b>	<b>0.5</b>
Absence/ stricture auditory canal	37	8	8	53	0.1	0.1	0.1	0.1
Absent auricle	9	3	1	13	0.0	0.0	0.0	0.0
Defects of face and neck	40	6	3	49	0.1	0.1	0.0	0.1
Other ear defects	142	10	9	161	0.3	0.1	0.1	0.3
<b>Defects of cardiovascular system</b>	<b>5098</b>	<b>976</b>	<b>452</b>	<b>6526</b>	<b>11.7</b>	<b>11.3</b>	<b>5.3</b>	<b>10.7</b>
Transposition of great vessels	194	46	22	262	0.4	0.5	0.3	0.4
Tetralogy of Fallot	137	29	13	179	0.3	0.3	0.2	0.3
Ventricular septal defect	1040	182	91	1313	2.4	2.1	1.1	2.2
Atrial septal defect	963	194	71	1228	2.2	2.2	0.8	2.0
Heart valve defects	788	140	76	1004	1.8	1.6	0.9	1.7

<sup>1</sup> 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 57 (cont)

## BIRTH DEFECTS AMONG STILLBIRTHS AND LIVEBORN INFANTS BY DIAGNOSTIC CATEGORY, NSW 1990-96

Diagnostic category	No. defects			Rate per 1,000 births				
	1990-94	1995	1996	1990-96	1990-94	1995	1996	1990-96
<b>Defects of cardiovascular system (cont.)</b>								
Patent ductus arteriosus > 37 weeks	687	126	56	869	1.6	1.5	0.7	1.4
Coarctation of aorta	177	30	12	219	0.4	0.3	0.1	0.4
Other defects of aorta	105	18	7	130	0.2	0.2	0.1	0.2
Defects of pulmonary artery	143	27	12	182	0.3	0.3	0.1	0.3
Other cardiovascular defects	864	184	92	1140	2.0	2.1	1.1	1.9
<b>Defects of respiratory system</b>	<b>293</b>	<b>36</b>	<b>28</b>	<b>357</b>	<b>0.7</b>	<b>0.4</b>	<b>0.3</b>	<b>0.6</b>
Defects of nose	73	10	8	91	0.2	0.1	0.1	0.1
Defects of larynx, trachea and bronchus	88	8	5	101	0.2	0.1	0.1	0.2
Defects of lung	129	18	15	162	0.3	0.2	0.2	0.3
Other respiratory defects	3	0	0	3	0.0	0.0	0.0	0.0
<b>Defects of gastrointestinal system</b>	<b>1723</b>	<b>374</b>	<b>214</b>	<b>2311</b>	<b>4.0</b>	<b>4.3</b>	<b>2.5</b>	<b>3.8</b>
Cleft palate only	374	102	55	531	0.9	1.2	0.6	0.9
Cleft lip only	166	40	37	243	0.4	0.5	0.4	0.4
Cleft palate and cleft lip	255	59	34	348	0.6	0.7	0.4	0.6
Oesophageal atresia only	18	2	1	21	0.0	0.0	0.0	0.0
Oesophageal atresia with TOF	92	7	10	109	0.2	0.1	0.1	0.2
Tracheo-oesophageal fistula (TOF) only	38	5	4	47	0.1	0.1	0.0	0.1
Atresia/stenosis of small intestine	129	22	11	162	0.3	0.3	0.1	0.3
Atresia/stenosis of anus	142	41	21	204	0.3	0.5	0.2	0.3
Other gastrointestinal defects	509	96	41	646	1.2	1.1	0.5	1.1
<b>Defects of genitourinary system</b>	<b>3244</b>	<b>765</b>	<b>387</b>	<b>4396</b>	<b>7.5</b>	<b>8.8</b>	<b>4.5</b>	<b>7.2</b>
Defects of female genitals	92	16	5	113	0.2	0.2	0.1	0.2
Undescended testis	405	90	31	526	0.9	1.0	0.4	0.9
Hypospadias	1048	224	138	1410	2.4	2.6	1.6	2.3
Epispadias	18	2	7	27	0.0	0.0	0.1	0.0
Chordee	258	46	23	327	0.6	0.5	0.3	0.5
Indeterminate sex/ ambiguous genitalia	54	18	16	88	0.1	0.2	0.2	0.1
Renal agenesis/ dysgenesis	155	23	22	200	0.4	0.3	0.3	0.3
Obstructive defects of renal pelvis and ureter	547	191	85	823	1.3	2.2	1.0	1.4
Other genitourinary system defects	667	155	60	882	1.5	1.8	0.7	1.5
<b>Defects of musculoskeletal system</b>	<b>4046</b>	<b>822</b>	<b>469</b>	<b>5337</b>	<b>9.3</b>	<b>9.5</b>	<b>5.5</b>	<b>8.8</b>
Congenital dislocation of the hips	932	186	107	1225	2.1	2.1	1.2	2.0
Talipes equinovarus	231	61	19	311	0.5	0.7	0.2	0.5
Polydactyly	435	100	63	598	1.0	1.2	0.7	1.0
Syndactyly	186	37	13	236	0.4	0.4	0.2	0.4
Reduction deformities of limbs	364	58	51	473	0.8	0.7	0.6	0.8
Craniosynostosis	497	82	4	583	1.1	0.9	0.0	1.0
Diaphragmatic hernia	121	23	21	165	0.3	0.3	0.2	0.3
Exomphalos	67	15	18	100	0.2	0.2	0.2	0.2
Gastroschisis	70	18	10	98	0.2	0.2	0.1	0.2
Other musculoskeletal defects	1143	242	163	1548	2.6	2.8	1.9	2.5
<b>Defects of the integumentary system</b>	<b>214</b>	<b>63</b>	<b>41</b>	<b>318</b>	<b>0.5</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>
Cystic hygroma	41	4	9	54	0.1	0.0	0.1	0.1
<b>Chromosomal defects</b>	<b>876</b>	<b>176</b>	<b>119</b>	<b>1171</b>	<b>2.0</b>	<b>2.0</b>	<b>1.4</b>	<b>1.9</b>
Trisomy 21	520	113	79	712	1.2	1.3	0.9	1.2
Trisomy 13	23	5	4	32	0.1	0.1	0.0	0.1
Trisomy 18	95	24	10	129	0.2	0.3	0.1	0.2
Turner syndrome	43	4	5	52	0.1	0.0	0.1	0.1
Other chromosomal defects	195	30	21	246	0.4	0.3	0.2	0.4
<b>Situs inversus</b>	<b>20</b>	<b>3</b>	<b>4</b>	<b>27</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Congenital malformation syndromes</b>	<b>198</b>	<b>42</b>	<b>16</b>	<b>256</b>	<b>0.5</b>	<b>0.5</b>	<b>0.2</b>	<b>0.4</b>
<b>Congenital congenital rubella syndrome</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Congenital cytomegalovirus infection</b>	<b>12</b>	<b>0</b>	<b>2</b>	<b>14</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Congenital toxoplasmosis</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Non-immune hydrops foetalis</b>	<b>69</b>	<b>14</b>	<b>13</b>	<b>96</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Other and unspecified birth defects</b>	<b>283</b>	<b>125</b>	<b>16</b>	<b>424</b>	<b>0.7</b>	<b>1.4</b>	<b>0.2</b>	<b>0.7</b>
TOTAL	17750	3693	1903	23346	40.8	42.6	22.2	38.4

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

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported.

### 5.1.3 INFANT CHARACTERISTICS

In the period 1990-96, a single defect was reported in 64.1 per cent of infants, 2 defects in 16.8 per cent, 3 defects in 7.3 per cent, and 4 or more defects in 11.8 per cent of cases. The sex was reported as male in 59.5 per cent, female in 39.9 per cent and indeterminate in 0.3 per cent of infants.

Birth defects were more common in preterm and post-term infants than infants born at term (Table 58). Birth defects were also more common in infants born of a multiple pregnancy than a singleton pregnancy: in 1990-96 2.0 per cent of singleton babies, 3.0 per cent of twins and 2.3 per cent of triplets were born with a birth defect.

In 1990-96, the perinatal mortality rate among infants born with a birth defect was 97.0 per 1,000 – that is, almost 10 per cent of infants born with birth defects died in the perinatal period, with stillbirths contributing to about half the perinatal deaths (Table 59). 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 8.9 per 1,000 in 1996 (Section 1.17).

**TABLE 58**

**BIRTH DEFECT CASES BY GESTATIONAL AGE, NSW 1990-96**

Gestational age (weeks)	Year								
	1990-1994		1995		1996		1990-96		Rate/1,000
	No	%	No	%	No	%	No	%	
20 - 27	336	3.5	57	2.9	57	5.5	450	3.6	125.2
28 - 31	297	3.1	49	2.5	29	2.8	375	3.0	88.1
32 - 36	1109	11.6	219	11.2	120	11.5	1448	11.5	45.8
37 - 41	7291	76.2	1512	77.7	805	77.3	9608	76.5	17.6
42 +	315	3.3	52	2.7	27	2.6	394	3.1	19.6
Not stated	216	2.3	58	3.0	4	0.4	278	2.2	-
TOTAL	9564	100.0	1947	100.0	1042	100.0	12553	100.0	20.7

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

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported. Postneonatal mortality was recorded from 1993.

**TABLE 59**

**BIRTH DEFECT CASES BY PREGNANCY OUTCOME, NSW 1990-96**

Perinatal outcome	Year								
	1990-94		1995		1996		1990-96		
	No.	%	No.	%	No.	%	No	%	
Stillbirth (>20 weeks)	437	4.6	71	3.6	78	7.5	586	4.7	
Liveborn/ neonatal death	501	5.2	77	4.0	54	5.2	632	5.0	
Liveborn/ postneonatal death	35	0.4	20	1.0	9	0.9	64	0.5	
Liveborn surviving	8591	89.8	1779	91.4	901	86.5	11271	89.8	
TOTAL	9564	100.0	1947	100.0	1042	100.0	12553	100.0	

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

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported. Postneonatal mortality was recorded from 1993.

## 5.1.4 MATERNAL CHARACTERISTICS

After maternal age of 20 years, the incidence of birth defects increased with increasing maternal age (Table 60). While the rate of birth defects is higher in older women, the majority of births occur in younger women: in 1990-96, 81.7 per cent of babies with birth defects were born to women aged less than 35 years.

Over 1990-96, 191 babies of Aboriginal and/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 20.7 per 1,000 for all babies in NSW.

**TABLE 60**

**BIRTH DEFECT CASES BY MATERNAL AGE, NSW 1990-96**

Maternal age (years)	1990-1994		1995		1996		1990-96		Rate/1,000
	No	%	No	%	No	%	No	%	
Under 20	527	5.5	94	4.8	55	5.3	676	5.4	21.1
20 - 24	1761	18.4	323	16.6	165	15.8	2249	17.9	18.9
25 - 29	2956	30.9	541	27.8	307	29.5	3804	30.3	18.7
30 - 34	2659	27.8	552	28.4	314	30.1	3525	28.1	20.3
35 - 39	1034	10.8	243	12.5	158	15.2	1435	11.4	22.1
40 - 44	205	2.1	53	2.7	38	3.6	296	2.4	28.7
45 +	16	0.2	6	0.3	1	0.1	23	0.2	53.2
Not stated	406	4.2	135	6.9	4	0.4	545	4.3	-
TOTAL	9564	100.0	1947	100.0	1042	100.0	12553	100.0	20.7

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

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported.

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

In the period 1990-96, on average over 100 terminations of pregnancy per year were reported to the Register (Table 61). About half of these terminations of pregnancy were associated with a chromosomal abnormality, the most common of which was Down syndrome (Table 62). The second most common group of diagnoses was neural tube defects, which were associated with 25.5 per cent of reported terminations of

pregnancy. The number of reported terminations of pregnancy associated with birth defects has remained stable at about 140-150 per year since 1992 when the statewide notification system was introduced. In 1995 and 1996, the largest number of terminations were carried out in women aged 30-34 years (Table 63).

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 the Appendix 1.

**TABLE 61**

**PREGNANCIES WITH FOETUSES AFFECTED BY BIRTH DEFECTS AND RESULTING IN SPONTANEOUS ABORTION, TERMINATION OF PREGNANCY OR UNKNOWN OUTCOME, NSW 1990-96**

Pregnancy outcome	Year			
	1990-94 No.	1995 No.	1996 No.	1990-96 No.
Spontaneous abortion	146	42	62	250
Termination of Pregnancy less than 20 weeks gestation	532	155	102	789
Unknown outcome	268	166	0	434
TOTAL	946	363	164	1473

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

<b>TABLE 62</b>												
<b>BIRTH DEFECTS AMONG SPONTANEOUS ABORTIONS, TERMINATIONS OF PREGNANCY AND UNKNOWN OUTCOME OF PREGNANCY BY DIAGNOSTIC CATEGORY, NSW 1990-96</b>												
Diagnostic category	Year											
	1990-94			1995			1996			1990-96		
	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	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome
<b>Defects of nervous system</b>	12	160	4	7	57	7	0	51	19	268	11	
Neural tube defects	7	121	1	5	42	2	0	38	12	201	3	
Other nervous system defects	5	39	3	2	15	5	0	13	7	67	8	
<b>Defects of eye</b>	1	1	0	0	0	1	0	2	1	3	1	
<b>Defects of ear, face and neck</b>	0	1	0	0	2	1	0	1	0	4	1	
<b>Defects of cardiovascular system</b>	1	20	9	0	24	17	0	16	1	60	26	
<b>Defects of respiratory system</b>	0	6	0	0	2	1	0	2	0	10	1	
<b>Defects of gastrointestinal system</b>	1	22	6	1	16	6	1	9	3	47	12	
<b>Defects of genitourinary system</b>	2	52	6	4	25	8	0	11	6	88	14	
<b>Defects of musculoskeletal system</b>	10	120	13	3	61	8	3	25	16	206	21	
<b>Defects of integumentary system</b>	7	59	16	3	14	12	0	14	10	87	28	
<b>Chromosomal defects</b>	141	356	248	36	75	130	61	45	238	476	378	
Trisomy 21	13	146	116	4	27	44	4	17	21	190	160	
Trisomy 13	4	17	14	3	8	9	2	2	9	27	23	
Trisomy 18	8	53	34	6	13	19	3	10	17	76	53	
Turner Syndrome	25	30	19	3	7	11	5	4	33	41	30	
Other chromosomal defects	91	110	65	20	20	47	47	12	158	142	112	
<b>Congenital malformation syndromes</b>	0	5	0	0	6	1	0	2	0	13	1	
<b>Non-immune hydrops foetalis</b>	0	15	5	0	3	0	0	8	0	26	5	
<b>Other and unspecified birth defects</b>	0	15	5	0	4	10	0	1	0	20	15	
<b>TOTAL</b>	175	832	312	54	289	202	65	187	294	1308	514	

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

<b>TABLE 63</b>																
<b>TRENDS IN REPORTED TERMINATIONS OF PREGNANCY ASSOCIATED WITH BIRTH DEFECTS BY MATERNAL AGE, 1990-96</b>																
Maternal age (years)	Year															
	1990		1991		1992		1993		1994		1995		1996		1990-96	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
15 - 19	0	0.0	0	0.0	6	4.0	4	2.9	5	3.6	6	3.9	2	2.0	23	2.9
20 - 24	2	6.5	2	2.7	11	7.3	15	10.7	26	18.8	19	12.3	16	15.7	91	11.5
25 - 29	1	3.2	12	16.4	36	24.0	29	20.7	18	13.0	29	18.7	21	20.6	146	18.5
30 - 34	5	16.1	11	15.1	24	16.0	28	20.0	18	13.0	38	24.5	24	23.5	148	18.8
35 - 39	12	38.7	28	38.4	43	28.7	37	26.4	26	18.8	30	19.4	22	21.6	198	25.1
40 - 44	9	29.0	18	24.7	24	16.0	16	11.4	10	7.2	14	9.0	8	7.8	99	12.5
45 +	2	6.5	1	1.4	3	2.0	1	0.7	1	0.7	0	0.0	0	0.0	8	1.0
Not stated	0	0.0	1	1.4	3	2.0	10	7.1	34	24.6	19	12.3	9	8.8	76	9.6
<b>TOTAL</b>	31	100.0	73	100.0	150	100.0	140	100.0	138	100.0	155	100.0	102	100.0	789	100.0

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

### 5.3 TRENDS IN SELECTED BIRTH DEFECTS

Trends in a selection of common birth defects are shown in Figures 10 to 18. For 1990-95, malformations reported up to one year of age are included and for 1996 malformations reported during pregnancy or at birth are included.

The reported number of cases of neural tube defects increased from 1990 to 1992 (Figure 10) following improved reporting of birth defects associated with terminations of pregnancy. The number of infants born with neural tube defects has decreased from 80 in 1992 to 30 in 1996. The number of reported terminations of pregnancy increased from 32 in 1992 and 1993 to 40 in 1994 and dropped to 35 in 1996. As terminations of pregnancy are reported on a voluntary basis, it is likely that these are under-reported to the Register.

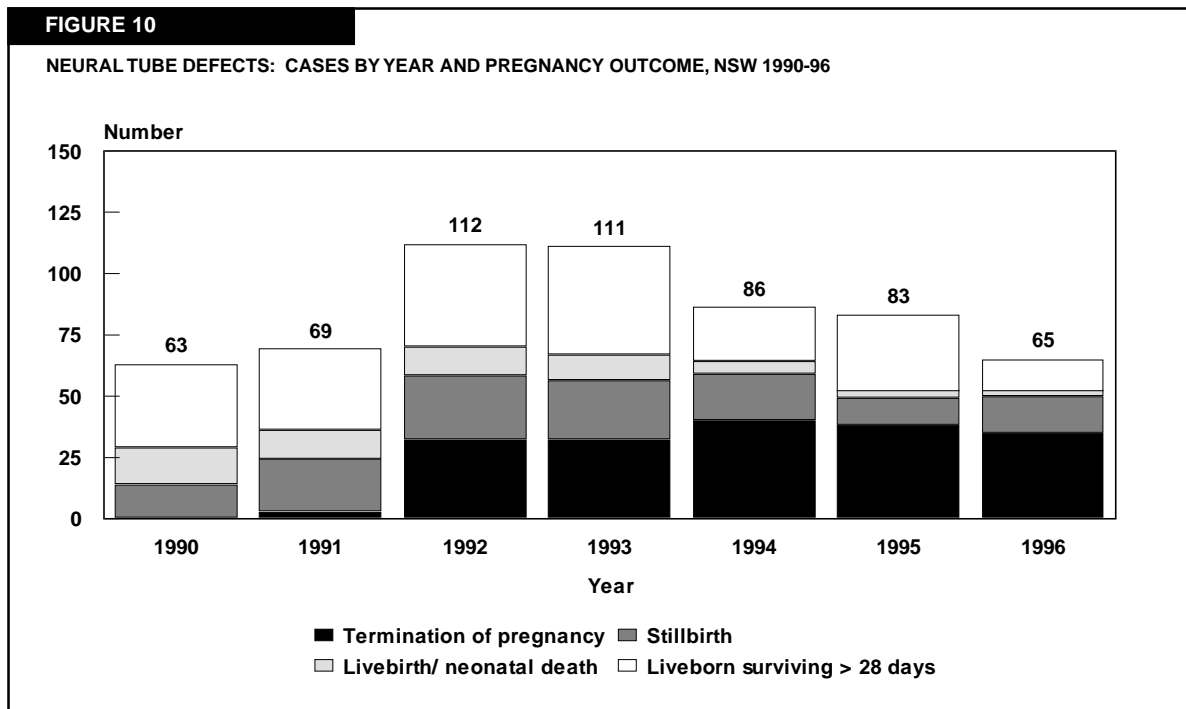
Over the period 1990-96, the number of cases of total cleft lip (including cases of cleft lip and cleft palate) ranged from 75 to 101 per year, and from 50 to 91 per year for isolated cleft palate

(Figures 11 and 12). 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 139 to 238 per year (Figure 13), and cases of limb reduction defects varied from 36 to 63 per year (Figure 14).

From 1992 to 1994, there were about 260 cases with chromosomal abnormalities reported each year (Figure 15). The lower number of cases reported for 1996 is probably due to diagnosis of some cases after birth. Down syndrome cases comprise about half of all cases with chromosomal abnormalities (Figure 16).

The number of cases reported with renal agenesis and dysgenesis has remained fairly stable at about 60 per year from 1991 to 1995 (Figure 17).

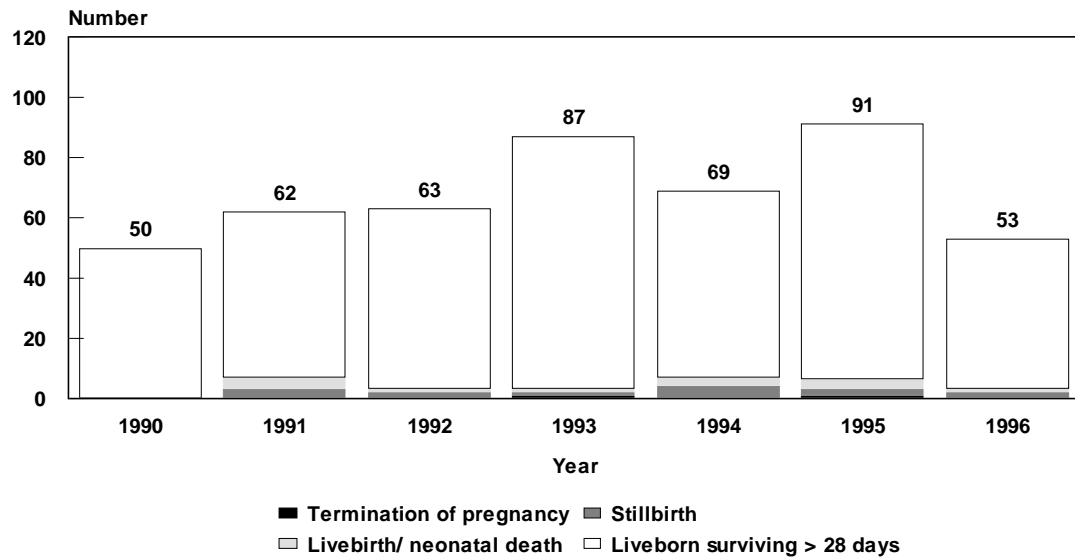


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are included.

**FIGURE 11**

**CLEFT PALATE: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**

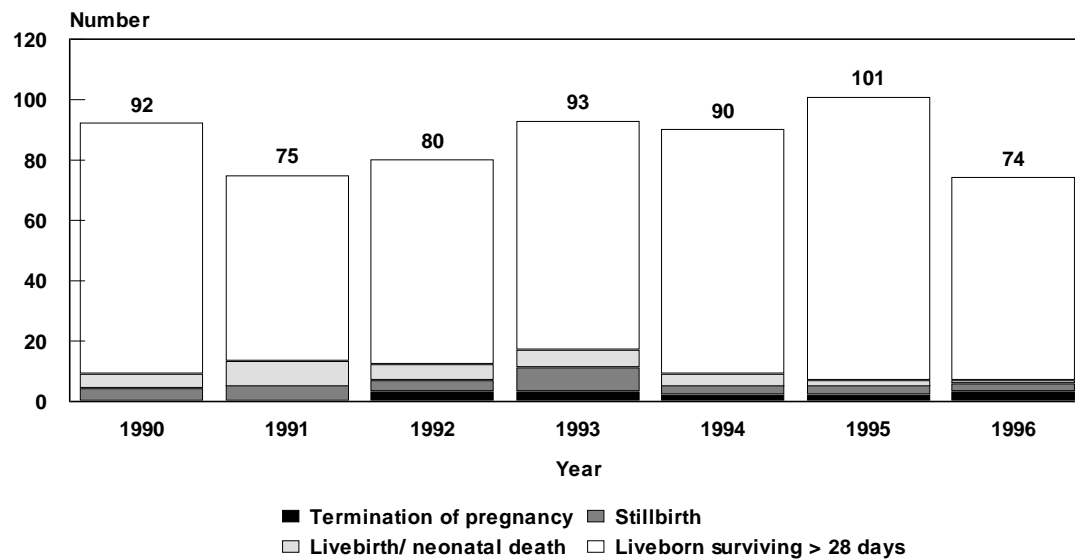


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Note: Includes cases of isolated cleft palate only. For 1990-95, cases reported during pregnancy and up to one year of life are included. For 1996, cases reported during pregnancy or at birth are included.

**FIGURE 12**

**TOTAL CLEFT LIP: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**

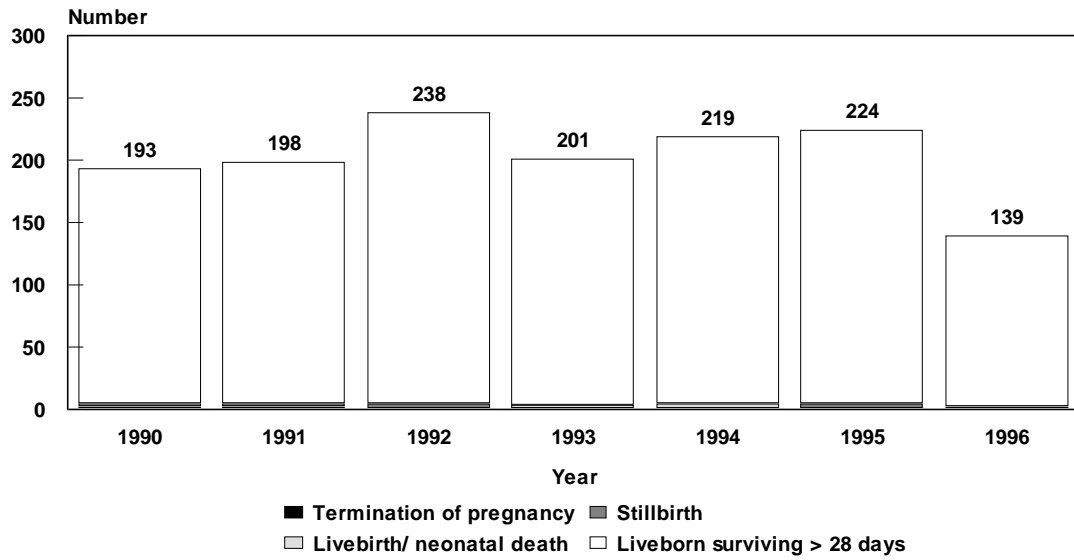


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department

Note: Includes cases of isolated cleft lip and combined cleft lip/cleft palate. For 1990-95 cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are included.

**FIGURE 13**

**HYPOSPADIAS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**

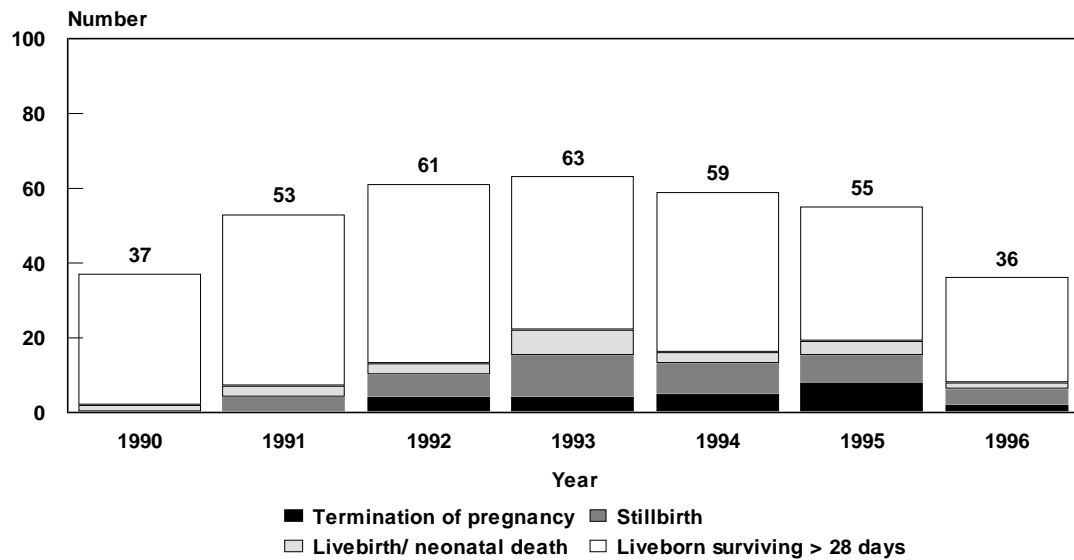


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are included.

**FIGURE 14**

**LIMB REDUCTION DEFECTS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**



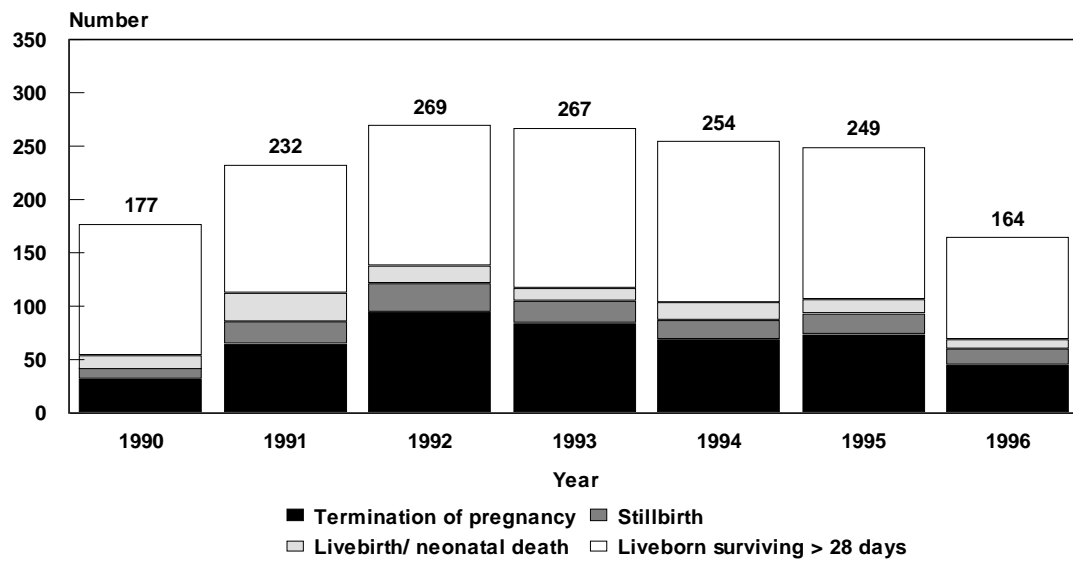
Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are included.



**FIGURE 15**

**CHROMOSOMAL ABNORMALITIES: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**

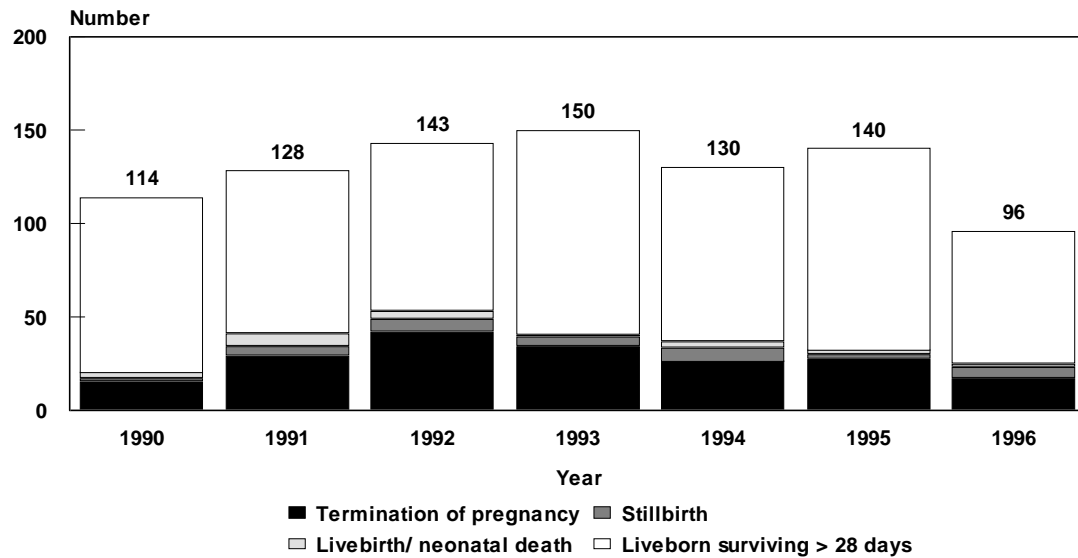


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported.

**FIGURE 16**

**DOWN SYNDROME: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**

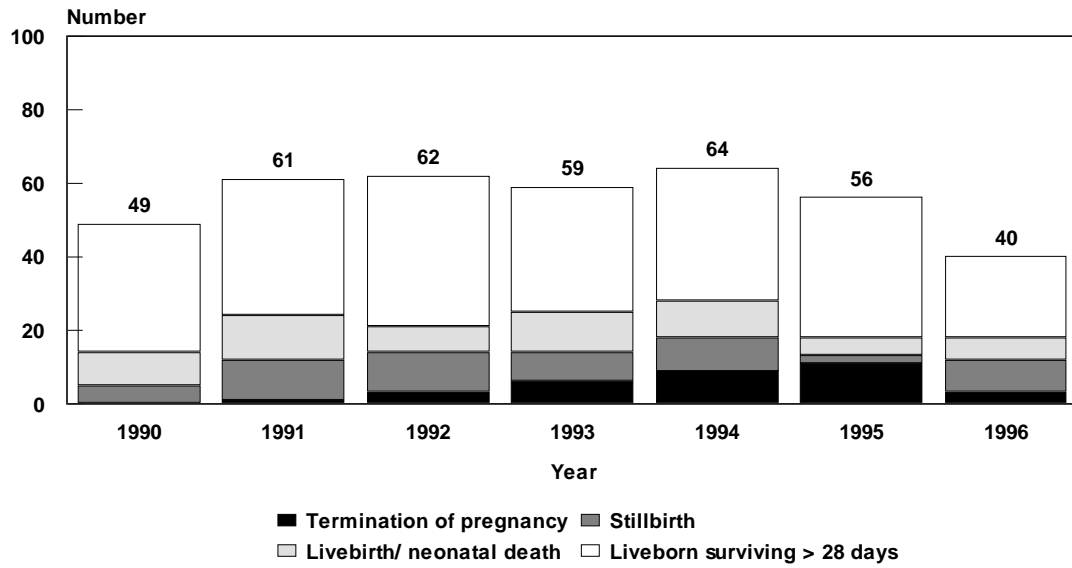


Source: NSW Birth Defects Register, Epidemiology and Surveillance Branch, NSW Health Department.

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are reported.

**FIGURE 17**

**RENAL AGENESIS AND DYSGENESIS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1990-96**



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

Note: For 1990-95, cases reported during pregnancy and up to one year of age are included. For 1996, cases reported during pregnancy or at birth are included. 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.

### 5.3 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 64. For 1990-95, birth defects detected up to one year of age are reported and for 1996 birth defects detected at birth are reported. These rates include birth defects reported among livebirths, stillbirths and terminations of pregnancy. The denominator population includes livebirths and stillbirths among NSW residents as reported to the NSW Midwives Data Collection. The rate of birth defects increases with increasing maternal age (Table 60). 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 Register.

Over the period 1990-96 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.

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 64**  
**BIRTH DEFECTS IN NSW HEALTH AREAS, 1990-96 (a)**

Health Area	1990-94			1995			1996			1990-96			
	No.	Crude rate per 1,000	Stand-ardised rate per 1,000	No.	Crude rate per 1,000	Stand-ardised rate per 1,000	No.	Crude rate per 1,000	Stand-ardised rate per 1,000	No.	Crude rate per 1,000	Stand-ardised rate per 1,000	99% confidence interval
Central Sydney	878	24.9	24.4	120	18.5	16.3	75	10.5	10.5	1073	22.0	21.4	19.6-23.2
Northern Sydney	1035	23.8	22.3	239	27.1	25.7	127	14.4	14.3	1401	22.9	21.6	19.9-23.5
Western Sydney	1200	24.2	23.9	240	23.4	22.1	144	14.2	14.3	1584	22.6	22.2	20.7-23.7
Wentworth	425	17.0	16.8	108	26.7	26.4	52	12.3	12.5	585	17.5	17.4	15.6-19.4
South Western Sydney	1297	21.8	21.7	295	24.4	23.5	160	13.0	13.1	1752	20.9	20.7	19.4-22.1
Central Coast	495	26.4	26.7	97	24.9	25.0	52	13.8	14.2	644	24.4	24.6	22.2-27.3
Hunter	868	23.5	23.3	181	23.3	22.4	73	9.8	10.1	1122	21.5	21.3	19.6-23.0
Illawarra	512	21.8	22.2	104	23.0	22.7	62	14.5	14.8	678	21.0	21.3	19.2-23.5
South Eastern Sydney	1094	24.8	24.1	222	24.0	21.6	136	15.5	16.0	1452	23.4	22.6	21.0-24.3
Northern Rivers	284	18.5	18.9	43	14.2	14.6	45	15.1	15.3	372	17.4	17.8	15.5-20.4
Mid North Coast	363	23.2	23.2	72	24.0	24.8	44	14.9	15.2	479	22.2	22.3	19.7-25.2
New England	292	21.1	21.5	57	18.7	19.3	45	15.7	16.3	394	20.0	20.4	17.8-23.3
Macquarie	219	25.5	26.0	44	25.9	25.4	22	12.6	13.7	285	23.7	24.1	20.4-28.2
Mid Western	273	21.9	22.2	53	21.7	21.1	28	11.7	12.1	354	20.4	20.6	17.8-23.7
Far West	51	15.2	15.5	10	16.4	12.0	8	14.0	13.4	69	15.2	14.5	9.7-20.6
Greater Murray	408	21.6	22.1	78	21.9	21.9	39	11.4	12.0	525	20.3	20.7	18.4-23.2
Southern	250	23.3	23.4	61	28.7	23.8	21	11.5	12.5	332	22.6	22.1	19.0-25.6
TOTAL NSW	9944	22.9	22.6	2024	23.4	22.2	1133	13.2	13.2	13101	21.6	21.2	20.7-21.7

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

(a) Cases include terminations of pregnancy, stillbirths and livebirths where the place of residence is known. For 1990-95, birth defects detected up to one year of age are reported and for 1996 birth defects detected at birth are reported.

# PART 6: NSW HOSPITALS

## 6.1 ONSET OR AUGMENTATION OF LABOUR IN SELECTED HOSPITALS

Table 65 shows onset or augmentation of labour for individual hospitals where the number of reported confinements exceeded 200 in 1996, totals for all hospitals within each Health Area and the NSW total.

**TABLE 65**

**CONFINEMENTS BY ONSET OR AUGMENTATION OF LABOUR AND HOSPITAL, NSW 1996\***

Health Area/ hospital	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		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Central Sydney</b>																				
King George V#	3161	64.4	0	0.0	774	15.8	475	9.7	287	5.8	124	2.5	89	1.8	1	0.0	0	0.0	4911	100.0
NSW Masonic	108	36.1	24	8.0	18	6.0	58	19.4	28	9.4	62	20.7	1	0.3	0	0.0	0	0.0	299	100.0
ALL HOSPITALS	3311	62.9	27	0.5	798	15.2	534	10.1	318	6.0	188	3.6	90	1.7	1	0.0	0	0.0	5267	100.0
<b>Northern Sydney</b>																				
Hornsby	380	36.0	115	10.9	209	19.8	103	9.7	55	5.2	190	18.0	5	0.5	0	0.0	0	0.0	1057	100.0
Manly	352	39.0	113	12.5	116	12.8	72	8.0	65	7.2	145	16.1	40	4.4	0	0.0	0	0.0	903	100.0
Mona Vale	337	45.2	88	11.8	99	13.3	50	6.7	46	6.2	120	16.1	5	0.7	0	0.0	0	0.0	745	100.0
Royal North Shore#	1034	43.3	0	0.0	480	20.1	407	17.1	174	7.3	256	10.7	30	1.3	5	0.2	0	0.0	2386	100.0
Ryde	383	54.1	66	9.3	72	10.2	55	7.8	71	10.0	57	8.1	3	0.4	1	0.1	0	0.0	708	100.0
Mater, North Sydney	611	33.2	184	10.0	278	15.1	274	14.9	173	9.4	267	14.5	52	2.8	0	0.0	2	0.1	1841	100.0
Sydney Adventist	716	29.6	308	12.7	361	14.9	326	13.5	168	6.9	516	21.3	25	1.0	1	0.0	0	0.0	2421	100.0
ALL HOSPITALS	3813	37.9	874	8.7	1615	16.1	1287	12.8	752	7.5	1551	15.4	160	1.6	7	0.1	2	0.0	10061	100.0
<b>Western Sydney</b>																				
Auburn	904	55.0	197	12.0	181	11.0	115	7.0	68	4.1	160	9.7	16	1.0	2	0.1	1	0.1	1644	100.0
Blacktown	1183	47.1	411	16.3	207	8.2	152	6.0	127	5.1	422	16.8	9	0.4	3	0.1	0	0.0	2514	100.0
Westmead	2592	61.1	121	2.9	448	10.6	370	8.7	171	4.0	510	12.0	17	0.4	11	0.3	0	0.0	4240	100.0
The Hills Private	451	36.9	217	17.8	119	9.7	126	10.3	43	3.5	247	20.2	19	1.6	0	0.0	0	0.0	1222	100.0
ALL HOSPITALS	5130	53.3	946	9.8	955	9.9	763	7.9	409	4.3	1339	13.9	61	0.6	16	0.2	1	0.0	9620	100.0
<b>Wentworth</b>																				
Blue Mountains	335	71.3	44	9.4	30	6.4	22	4.7	22	4.7	11	2.3	6	1.3	0	0.0	0	0.0	470	100.0
Hawkesbury	341	50.0	82	12.0	50	7.3	68	10.0	22	3.2	100	14.7	8	1.2	0	0.0	11	1.6	682	100.0
Nepean	1433	48.6	269	9.1	224	7.6	256	8.7	158	5.4	589	20.0	17	0.6	1	0.0	1	0.0	2948	100.0
Jamison Private	366	39.3	176	18.9	55	5.9	79	8.5	73	7.8	162	17.4	19	2.0	1	0.1	1	0.1	932	100.0
ALL HOSPITALS	2475	49.2	571	11.3	359	7.1	425	8.4	275	5.5	862	17.1	50	1.0	2	0.0	13	0.3	5032	100.0
<b>South Western Sydney</b>																				
Camden	452	48.5	167	17.9	81	8.7	53	5.7	52	5.6	120	12.9	7	0.8	0	0.0	0	0.0	932	100.0
Fairfield	1151	50.3	340	14.9	225	9.8	171	7.5	88	3.8	305	13.3	6	0.3	1	0.0	2	0.1	2289	100.0
Liverpool	1325	48.6	377	13.8	329	12.1	113	4.1	194	7.1	360	13.2	26	1.0	4	0.1	1	0.0	2729	100.0
Campbelltown	667	31.7	516	24.5	195	9.3	159	7.6	94	4.5	445	21.2	27	1.3	1	0.0	0	0.0	2104	100.0
Bankstown/Lidcombe	1297	64.5	95	4.7	222	11.0	138	6.9	136	6.8	121	6.0	2	0.1	1	0.0	0	0.0	2012	100.0
Bankstown Private	231	29.6	83	10.6	129	16.5	104	13.3	68	8.7	151	19.4	13	1.7	0	0.0	1	0.1	780	100.0
Bowral	287	50.2	90	15.7	26	4.5	42	7.3	40	7.0	61	10.7	26	4.5	0	0.0	0	0.0	572	100.0
ALL HOSPITALS	5410	47.4	1668	14.6	1207	10.6	780	6.8	672	5.9	1563	13.7	107	0.9	7	0.1	4	0.0	11418	100.0
<b>Central Coast</b>																				
Gosford	1207	47.2	362	14.2	262	10.2	215	8.4	169	6.6	311	12.2	30	1.2	2	0.1	0	0.0	2558	100.0
North Gosford Private	237	31.1	98	12.8	92	12.1	117	15.3	46	6.0	154	20.2	17	2.2	1	0.1	1	0.1	763	100.0
ALL HOSPITALS	1444	43.5	460	13.9	354	10.7	332	10.0	215	6.5	465	14.0	47	1.4	3	0.1	1	0.0	3321	100.0
<b>Hunter</b>																				
Maitland	521	48.1	106	9.8	86	7.9	122	11.3	67	6.2	160	14.8	20	1.8	1	0.1	0	0.0	1083	100.0
Muswellbrook	122	55.2	18	8.1	18	8.1	12	5.4	21	9.5	27	12.2	3	1.4	0	0.0	0	0.0	221	100.0
Belmont	296	43.7	52	7.7	54	8.0	68	10.0	39	5.8	150	22.2	18	2.7	0	0.0	0	0.0	677	100.0
Singleton	146	61.6	20	8.4	14	5.9	23	9.7	23	9.7	10	4.2	1	0.4	0	0.0	0	0.0	237	100.0
John Hunter	1601	45.7	606	17.3	245	7.0	313	8.9	205	5.9	381	10.9	137	3.9	14	0.4	2	0.1	3504	100.0
Christo Road Private	299	31.1	180	18.7	66	6.9	124	12.9	68	7.1	177	18.4	46	4.8	2	0.2	0	0.0	962	100.0
ALL HOSPITALS	3191	44.5	1063	14.8	502	7.0	752	10.5	449	6.3	943	13.2	249	3.5	17	0.2	2	0.0	7168	100.0
<b>Illawarra</b>																				
Shoalhaven	439	48.7	131	14.5	72	8.0	59	6.5	90	10.0	95	10.5	7	0.8	1	0.1	7	0.8	901	100.0
Shellharbour	294	50.0	71	12.1	33	5.6	39	6.6	56	9.5	82	13.9	12	2.0	1	0.2	0	0.0	588	100.0
Illawarra Regional	889	36.5	554	22.8	231	9.5	146	6.0	178	7.3	402	16.5	31	1.3	1	0.0	2	0.1	2434	100.0
ALL HOSPITALS	1665	40.9	781	19.2	345	8.5	304	7.5	329	8.1	587	14.4	52	1.3	3	0.1	9	0.2	4075	100.0

TABLE 65 (CONT)

## CONFINEMENTS BY ONSET OR AUGMENTATION OF LABOUR AND HOSPITAL, NSW 1996\*

Health Area/ hospital	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		TOTAL		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>South Eastern Sydney</b>																					
St. Margaret's Private	457	32.9	198	14.3	176	12.7	232	16.7	111	8.0	192	13.8	22	1.6	1	0.1	0	0.0	1389	100.0	
Royal Hospital for Women	1499	41.1	517	14.2	615	16.9	326	8.9	424	11.6	234	6.4	32	0.9	0	0.0	0	0.0	3647	100.0	
St. George	881	40.8	369	17.1	351	16.3	178	8.2	126	5.8	243	11.3	10	0.5	0	0.0	0	0.0	2158	100.0	
Sutherland	499	53.4	72	7.7	125	13.4	108	11.6	46	4.9	80	8.6	3	0.3	0	0.0	1	0.1	934	100.0	
Hurstville Community	390	34.0	110	9.6	240	20.9	136	11.9	35	3.1	225	19.6	11	1.0	0	0.0	0	0.0	1147	100.0	
Kareena Private	216	31.2	91	13.1	114	16.5	103	14.9	20	2.9	138	19.9	10	1.4	1	0.1	0	0.0	693	100.0	
St. George Private	209	40.4	59	11.4	51	9.9	79	15.3	58	11.2	54	10.4	7	1.4	0	0.0	0	0.0	517	100.0	
ALL HOSPITALS	4152	39.6	1416	13.5	1672	15.9	1162	11.1	820	7.8	1166	11.1	95	0.9	2	0.0	1	0.0	10486	100.0	
<b>Northern Rivers</b>																					
Grafton Base	138	32.3	69	16.2	23	5.4	52	12.2	57	13.3	78	18.3	10	2.3	0	0.0	0	0.0	427	100.0	
Lismore Base	738	54.4	169	12.5	121	8.9	104	7.7	93	6.9	106	7.8	24	1.8	1	0.1	0	0.0	1356	100.0	
Murwillumbah	210	47.0	47	10.5	56	12.5	47	10.5	45	10.1	39	8.7	3	0.7	0	0.0	0	0.0	447	100.0	
Tweed Heads	260	39.1	160	24.1	73	11.0	67	10.1	19	2.9	83	12.5	3	0.5	0	0.0	0	0.0	665	100.0	
ALL HOSPITALS	1641	49.5	512	15.4	279	8.4	300	9.0	218	6.6	317	9.6	47	1.4	1	0.0	0	0.0	3315	100.0	
<b>Mid North Coast</b>																					
Coffs Harbour	325	44.5	83	11.4	53	7.3	107	14.7	44	6.0	116	15.9	1	0.1	1	0.1	0	0.0	730	100.0	
Kempsey	165	52.9	54	17.3	19	6.1	25	8.0	23	7.4	23	7.4	3	1.0	0	0.0	0	0.0	312	100.0	
Port Macquarie Base	351	51.3	99	14.5	65	9.5	64	9.4	54	7.9	48	7.0	3	0.4	0	0.0	0	0.0	684	100.0	
Manning River Base	357	48.8	121	16.6	55	7.5	51	7.0	37	5.1	96	13.1	13	1.8	1	0.1	0	0.0	731	100.0	
ALL HOSPITALS	1419	48.3	436	14.8	221	7.5	296	10.1	191	6.5	344	11.7	26	0.9	2	0.1	2	0.1	2937	100.0	
<b>New England</b>																					
Armidale	200	39.1	97	19.0	57	11.2	16	3.1	61	11.9	72	14.1	8	1.6	0	0.0	0	0.0	511	100.0	
Inverell	111	47.8	30	12.9	15	6.5	23	9.9	34	14.7	19	8.2	0	0.0	0	0.0	0	0.0	232	100.0	
Moree	140	48.8	48	16.7	24	8.4	15	5.2	28	9.8	30	10.5	2	0.7					287	100.0	
Tamworth Base	232	35.8	130	20.1	50	7.7	91	14.0	48	7.4	74	11.4	23	3.5	0	0.0	0	0.0	648	100.0	
ALL HOSPITALS	1072	42.9	422	16.9	198	7.9	207	8.3	260	10.4	282	11.3	55	2.2	0	0.0	0	0.0	2496	100.0	
<b>Macquarie</b>																					
Dubbo Base	577	45.5	171	13.5	128	10.1	101	8.0	67	5.3	202	15.9	23	1.8	0	0.0	0	0.0	1269	100.0	
Mudgee	173	59.5	42	14.4	18	6.2	13	4.5	21	7.2	21	7.2	3	1.0	0	0.0	0	0.0	291	100.0	
ALL HOSPITALS	929	50.6	271	14.8	155	8.4	118	6.4	95	5.2	241	13.1	26	1.4	0	0.0	0	0.0	1835	100.0	
<b>Mid Western</b>																					
Bathurst Base	293	55.0	54	10.1	29	5.4	57	10.7	60	11.3	34	6.4	6	1.1	0	0.0	0	0.0	533	100.0	
Lithgow	104	40.2	42	16.2	39	15.1	47	18.1	15	5.8	9	3.5	2	0.8	1	0.4	0	0.0	259	100.0	
Orange Base	249	30.2	211	25.6	78	9.5	70	8.5	23	2.8	168	20.4	22	2.7	3	0.4	0	0.0	824	100.0	
Parkes	149	64.2	29	12.5	13	5.6	19	8.2	17	7.3	4	1.7	1	0.4	0	0.0	0	0.0	232	100.0	
ALL HOSPITALS	972	43.0	391	17.3	190	8.4	258	11.4	160	7.1	239	10.6	43	1.9	4	0.2	3	0.1	2260	100.0	
<b>Far West</b>																					
Broken Hill Base	125	42.5	50	17.0	13	4.4	30	10.2	11	3.7	40	13.6	24	8.2	1	0.3	0	0.0	294	100.0	
ALL HOSPITALS	182	47.9	64	16.8	15	3.9	34	8.9	18	4.7	42	11.1	24	6.3	1	0.3	0	0.0	380	100.0	
<b>Greater Murray</b>																					
Mercy Care Centre, Albury	429	56.4	72	9.5	34	4.5	75	9.9	41	5.4	79	10.4	29	3.8	1	0.1	0	0.0	760	100.0	
Griffith Base	228	44.1	92	17.8	29	5.6	58	11.2	58	11.2	43	8.3	9	1.7					517	100.0	
Wagga Wagga Base	466	51.4	82	9.1	61	6.7	90	9.9	92	10.2	109	12.0	6	0.7	0	0.0	0	0.0	906	100.0	
Calvary, Wagga Wagga	243	48.5	32	6.4	44	8.8	57	11.4	50	10.0	63	12.6	6	1.2	0	0.0	6	1.2	501	100.0	
ALL HOSPITALS	1915	52.7	411	11.3	206	5.7	345	9.5	326	9.0	350	9.6	67	1.8	1	0.0	10	0.3	3631	100.0	
<b>Southern</b>																					
Bega	79	34.8	31	13.7	18	7.9	31	13.7	33	14.5	35	15.4	0	0.0	0	0.0	0	0.0	227	100.0	
Cooma	128	62.1	28	13.6	13	6.3	10	4.9	11	5.3	13	6.3	3	1.5	0	0.0	0	0.0	206	100.0	
Goulburn Base	188	53.6	56	16.0	48	13.7	35	10.0	16	4.6	8	2.3	0	0.0	0	0.0	0	0.0	351	100.0	
Queanbeyan	228	60.5	45	11.9	22	5.8	24	6.4	31	8.2	19	5.0	6	1.6	0	0.0	2	0.5	377	100.0	
ALL HOSPITALS	983	54.6	242	13.4	149	8.3	154	8.6	136	7.6	122	6.8	12	0.7	0	0.0	2	0.1	1800	100.0	
TOTAL NSW	39891	46.8	10564	12.4	9222	10.8	8052	9.4	5644	6.6	1211	1.410601	12.4	67	0.1	50	0.1	85302	100.0		

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

\* Hospitals with more than 200 confinements in 1996 are identified individually. All hospitals include all public and private hospitals.

\*\* For King George V Hospital, 239 (4.9 per cent) confinements in this category are 'augmented - unspecified'.

# King George V and Royal North Shore Hospitals supply data electronically and report augmentation by oxytocin/prostaglandin only.

## 6.2 TYPE OF DELIVERY IN SELECTED HOSPITALS

Table 66 shows type of delivery for individual hospitals where the number of reported confinements exceeded 200 in 1996, totals for all hospitals within each Health Area and the NSW total.

TABLE 66 CONFINEMENTS BY TYPE OF DELIVERY AND HOSPITAL, NSW 1996*																		
Health Area/ hospital	Normal vaginal		Forceps		Forceps rotation		Vacuum extraction		Elective caesarean		Emergency caesarean		Vaginal breech		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Central Sydney</b>																		
King George V	3402	69.3	218	4.4	89	1.8	211	4.3	475	9.7	457	9.3	58	1.2	1	0.0	4911	100.0
NSW Masonic	150	50.2	37	12.4	2	0.7	16	5.4	58	19.4	35	11.7	1	0.3	0	0.0	299	100.0
ALL HOSPITALS	3599	68.3	258	4.9	92	1.7	228	4.3	534	10.1	496	9.4	59	1.1	1	0.0	5267	100.0
<b>Northern Sydney</b>																		
Hornsby	738	69.8	56	5.3	7	0.7	64	6.1	103	9.7	83	7.9	5	0.5	1	0.1	1057	100.0
Manly	617	68.3	65	7.2	9	1.0	36	4.0	72	8.0	100	11.1	3	0.3	1	0.1	903	100.0
Mona Vale	518	69.5	49	6.6	11	1.5	34	4.6	50	6.7	67	9.0	15	2.0	1	0.1	745	100.0
Royal North Shore	1297	54.4	171	7.2	22	0.9	179	7.5	407	17.1	303	12.7	7	0.3	0	0.0	2386	100.0
Ryde	531	75.0	33	4.7	6	0.8	22	3.1	55	7.8	58	8.2	3	0.4	0	0.0	708	100.0
Mater, North Sydney	903	49.0	115	6.2	18	1.0	343	18.6	274	14.9	177	9.6	8	0.4	3	0.2	1841	100.0
Sydney Adventist	1455	60.1	261	10.8	36	1.5	135	5.6	326	13.5	196	8.1	12	0.5	0	0.0	2421	100.0
ALL HOSPITALS	6059	60.2	750	7.5	109	1.1	813	8.1	1287	12.8	984	9.8	53	0.5	6	0.1	10061	100.0
<b>Western Sydney</b>																		
Auburn	1277	77.7	90	5.5	8	0.5	15	0.9	115	7.0	113	6.9	14	0.9	12	0.7	1644	100.0
Blacktown	1941	77.2	179	7.1	23	0.9	11	0.4	152	6.0	194	7.7	14	0.6	0	0.0	2514	100.0
Westmead	2896	68.3	359	8.5	127	3.0	53	1.3	370	8.7	335	7.9	100	2.4	0	0.0	4240	100.0
The Hills Private	773	63.3	163	13.3	35	2.9	9	0.7	126	10.3	109	8.9	7	0.6	0	0.0	1222	100.0
ALL HOSPITALS	6887	71.6	791	8.2	193	2.0	88	0.9	763	7.9	751	7.8	135	1.4	12	0.1	9620	100.0
<b>Wentworth</b>																		
Blue Mountains	382	81.3	6	1.3	0	0.0	24	5.1	22	4.7	32	6.8	4	0.9	0	0.0	470	100.0
Hawkesbury	497	72.9	42	6.2	6	0.9	5	0.7	68	10.0	49	7.2	7	1.0	8	1.2	682	100.0
Nepean	2200	74.6	157	5.3	22	0.7	33	1.1	256	8.7	242	8.2	38	1.3	0	0.0	2948	100.0
Jamison Private	661	70.9	67	7.2	18	1.9	8	0.9	79	8.5	91	9.8	8	0.9	0	0.0	932	100.0
ALL HOSPITALS	3740	74.3	272	5.4	46	0.9	70	1.4	425	8.4	414	8.2	57	1.1	8	0.2	5032	100.0
<b>South Western Sydney</b>																		
Camden	778	83.5	26	2.8	3	0.3	17	1.8	53	5.7	46	4.9	9	1.0	0	0.0	932	100.0
Fairfield	1795	78.4	56	2.4	6	0.3	101	4.4	171	7.5	129	5.6	31	1.4	0	0.0	2289	100.0
Liverpool	2196	80.5	97	3.6	5	0.2	117	4.3	113	4.1	155	5.7	46	1.7	0	0.0	2729	100.0
Campbelltown	1687	80.2	45	2.1	3	0.1	60	2.9	159	7.6	124	5.9	26	1.2	0	0.0	2104	100.0
Bankstown/Lidcombe	1650	82.0	52	2.6	0	0.0	39	1.9	138	6.9	104	5.2	29	1.4	0	0.0	2012	100.0
Bankstown Private	467	59.9	61	7.8	9	1.2	71	9.1	104	13.3	64	8.2	4	0.5	0	0.0	780	100.0
Bowral	427	74.7	48	8.4	23	4.0	0	0.0	42	7.3	28	4.9	4	0.7	0	0.0	572	100.0
ALL HOSPITALS	9000	78.8	385	3.4	49	0.4	405	3.5	780	6.8	650	5.7	149	1.3	0	0.0	11418	100.0
<b>Central Coast</b>																		
Gosford	1882	73.6	56	2.2	16	0.6	155	6.1	215	8.4	220	8.6	14	0.5	0	0.0	2558	100.0
North Gosford Private	470	61.6	60	7.9	7	0.9	48	6.3	117	15.3	59	7.7	2	0.3	0	0.0	763	100.0
ALL HOSPITALS	2352	70.8	116	3.5	23	0.7	203	6.1	332	10.0	279	8.4	16	0.5	0	0.0	3321	100.0
<b>Hunter</b>																		
Maitland	799	73.8	23	2.1	2	0.2	34	3.1	122	11.3	88	8.1	15	1.4	0	0.0	1083	100.0
Muswellbrook	178	80.5	1	0.5	0	0.0	11	5.0	12	5.4	18	8.1	1	0.5	0	0.0	221	100.0
Belmont	519	76.7	30	4.4	3	0.4	5	0.7	68	10.0	48	7.1	4	0.6	0	0.0	677	100.0
Singleton	181	76.4	7	3.0	1	0.4	13	5.5	23	9.7	11	4.6	1	0.4	0	0.0	237	100.0
John Hunter	2493	71.1	161	4.6	35	1.0	116	3.3	313	8.9	335	9.6	51	1.5	0	0.0	3504	100.0
Christo Road Private	603	62.7	82	8.5	13	1.4	45	4.7	124	12.9	91	9.5	4	0.4	0	0.0	962	100.0
ALL HOSPITALS	5102	71.2	326	4.5	57	0.8	238	3.3	752	10.5	615	8.6	78	1.1	0	0.0	7168	100.0
<b>Illawarra</b>																		
Shoalhaven	723	80.2	25	2.8	7	0.8	1	0.1	59	6.5	71	7.9	9	1.0	6	0.7	901	100.0
Shellharbour	479	81.5	10	1.7	1	0.2	21	3.6	39	6.6	33	5.6	5	0.9	0	0.0	588	100.0
Illawarra Regional	1790	73.5	73	3.0	22	0.9	183	7.5	146	6.0	188	7.7	24	1.0	8	0.3	2434	100.0
ALL HOSPITALS	3070	75.3	112	2.7	32	0.8	207	5.1	304	7.5	298	7.3	38	0.9	14	0.3	4075	100.0

**TABLE 66 (CONT)**
**CONFINEMENTS BY TYPE OF DELIVERY AND HOSPITAL, NSW 1996\***

Health Area/ hospital	Normal vaginal		Forceps		Forceps rotation		Vacuum extraction		Elective caesarean		Emergency caesarean		Vaginal breech		Not stated		TOTAL		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>South Eastern Sydney</b>																			
St. Margaret's Private	769	55.4	97	7.0	20	1.4	152	10.9	232	16.7	108	7.8	9	0.6	2	0.1	1389	100.0	
Royal Hospital for Women	2349	64.4	184	5.0	62	1.7	279	7.7	326	8.9	390	10.7	57	1.6	0	0.0	3647	100.0	
St. George	1485	68.8	155	7.2	11	0.5	89	4.1	178	8.2	229	10.6	11	0.5	0	0.0	2158	100.0	
Sutherland	663	71.0	66	7.1	15	1.6	7	0.7	108	11.6	64	6.9	11	1.2	0	0.0	934	100.0	
Hurstville Community	663	57.8	205	17.9	16	1.4	9	0.8	136	11.9	113	9.9	5	0.4	0	0.0	1147	100.0	
Kareena Private	356	51.4	109	15.7	25	3.6	16	2.3	103	14.9	79	11.4	5	0.7	0	0.0	693	100.0	
St. George Private	275	53.2	65	12.6	8	1.5	27	5.2	79	15.3	62	12.0	1	0.2	0	0.0	517	100.0	
ALL HOSPITALS	6561	62.6	881	8.4	157	1.5	579	5.5	1162	11.1	1045	10.0	99	0.9	2	0.0	10486	100.0	
<b>Northern Rivers</b>																			
Grafton Base	256	60.0	42	9.8	4	0.9	14	3.3	52	12.2	54	12.6	4	0.9	1	0.2	427	100.0	
Lismore Base	1015	74.9	44	3.2	19	1.4	11	0.8	104	7.7	148	10.9	15	1.1	0	0.0	1356	100.0	
Murwillumbah	334	74.7	10	2.2	0	0.0	9	2.0	47	10.5	39	8.7	8	1.8	0	0.0	447	100.0	
Tweed Heads	485	72.9	30	4.5	6	0.9	27	4.1	67	10.1	47	7.1	3	0.5	0	0.0	665	100.0	
ALL HOSPITALS	2474	74.6	130	3.9	29	0.9	63	1.9	300	9.0	288	8.7	30	0.9	1	0.0	3315	100.0	
<b>Mid North Coast</b>																			
Coffs Harbour	518	71.0	27	3.7	14	1.9	0	0.0	107	14.7	58	7.9	6	0.8	0	0.0	730	100.0	
Kempsey	253	81.1	14	4.5	0	0.0	1	0.3	25	8.0	15	4.8	4	1.3	0	0.0	312	100.0	
Port Macquarie Base	472	69.0	72	10.5	6	0.9	0	0.0	64	9.4	62	9.1	8	1.2	0	0.0	684	100.0	
Manning River Base	589	80.6	20	2.7	12	1.6	0	0.0	51	7.0	48	6.6	11	1.5	0	0.0	731	100.0	
ALL HOSPITALS	2204	75.0	157	5.3	35	1.2	6	0.2	296	10.1	204	6.9	34	1.2	1	0.0	2937	100.0	
<b>New England</b>																			
Armidale	425	83.2	4	0.8	0	0.0	34	6.7	16	3.1	20	3.9	12	2.3	0	0.0	511	100.0	
Inverell	173	74.6	17	7.3	0	0.0	5	2.2	23	9.9	13	5.6	1	0.4	0	0.0	232	100.0	
Moree	237	82.6	4	1.4	0	0.0	11	3.8	15	5.2	18	6.3	2	0.7	0	0.0	287	100.0	
Tamworth Base	435	67.1	24	3.7	3	0.5	24	3.7	91	14.0	66	10.2	5	0.8	0	0.0	648	100.0	
ALL HOSPITALS	1881	75.4	81	3.2	5	0.2	111	4.4	207	8.3	187	7.5	22	0.9	2	0.1	2496	100.0	
<b>Macquarie</b>																			
Dubbo Base	940	74.1	62	4.9	19	1.5	22	1.7	101	8.0	99	7.8	25	2.0	1	0.1	1269	100.0	
Mudgee	220	75.6	7	2.4	2	0.7	29	10.0	13	4.5	15	5.2	5	1.7	0	0.0	291	100.0	
ALL HOSPITALS	1400	76.3	77	4.2	21	1.1	65	3.5	118	6.4	116	6.3	36	2.0	2	0.1	1835	100.0	
<b>Mid Western</b>																			
Bathurst Base	351	65.9	31	5.8	7	1.3	9	1.7	57	10.7	75	14.1	3	0.6	0	0.0	533	100.0	
Lithgow	168	64.9	10	3.9	0	0.0	2	0.8	47	18.1	28	10.8	4	1.5	0	0.0	259	100.0	
Orange Base	587	71.2	50	6.1	10	1.2	22	2.7	70	8.5	79	9.6	6	0.7	0	0.0	824	100.0	
Parkes	177	76.3	2	0.9	0	0.0	6	2.6	19	8.2	28	12.1	0	0.0	0	0.0	232	100.0	
ALL HOSPITALS	1554	68.8	114	5.0	17	0.8	62	2.7	258	11.4	231	10.2	15	0.7	9	0.4	2260	100.0	
<b>Far West</b>																			
Broken Hill Base	191	65.0	32	10.9	4	1.4	1	0.3	30	10.2	31	10.5	5	1.7	0	0.0	294	100.0	
ALL HOSPITALS	267	70.3	33	8.7	4	1.1	2	0.5	34	8.9	35	9.2	5	1.3	0	0.0	380	100.0	
<b>Greater Murray</b>																			
Mercy Care Centre, Albury	592	77.9	25	3.3	10	1.3	3	0.4	75	9.9	45	5.9	10	1.3	0	0.0	760	100.0	
Griffith Base	373	72.1	11	2.1	0	0.0	18	3.5	58	11.2	53	10.3	4	0.8	0	0.0	517	100.0	
Wagga Wagga Base	657	72.5	70	7.7	17	1.9	0	0.0	90	9.9	58	6.4	14	1.5	0	0.0	906	100.0	
Calvary, Wagga Wagga	304	60.7	72	14.4	14	2.8	10	2.0	57	11.4	36	7.2	2	0.4	6	1.2	501	100.0	
ALL HOSPITALS	2630	72.4	229	6.3	47	1.3	72	2.0	345	9.5	263	7.2	36	1.0	9	0.2	3631	100.0	
<b>Southern</b>																			
Bega	155	68.3	7	3.1	0	0.0	18	7.9	31	13.7	14	6.2	2	0.9	0	0.0	227	100.0	
Cooma	162	78.6	8	3.9	0	0.0	11	5.3	10	4.9	15	7.3	0	0.0	0	0.0	206	100.0	
Goulburn Base	259	73.8	34	9.7	1	0.3	1	0.3	35	10.0	19	5.4	2	0.6	0	0.0	351	100.0	
Queanbeyan	300	79.6	15	4.0	2	0.5	13	3.4	24	6.4	18	4.8	0	0.0	5	1.3	377	100.0	
ALL HOSPITALS	1366	75.9	87	4.8	9	0.5	73	4.1	154	8.6	99	5.5	7	0.4	5	0.3	1800	100.0	
TOTAL NSW	60339	70.7	4799	5.6	925	1.1	3286	3.9	874	1.0	8052	9.4	6955	8.2	72	0.1	85302	100.0	

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

\* Hospitals with more than 200 confinements in 1996 are identified individually. All hospitals include all public and private hospitals.

## 6.3 EPIDURAL BLOCK IN SELECTED HOSPITALS

Table 67 shows the rates of epidural block for individual hospitals where the number of reported confinements exceeded 200 in 1996, totals for all hospitals within each Health Area and the NSW total.

<b>TABLE 67</b>							
<b>CONFINEMENTS BY EPIDURAL BLOCK AND HOSPITAL, NSW 1996*</b>							
Health Area/ hospital	No		Epidural Yes		TOTAL		
	No.	%	No.	%	No.	%	
<b>Central Sydney</b>							
King George V	3337	67.9	1574	32.1	4911	100.0	
NSW Masonic	200	66.9	99	33.1	299	100.0	
ALL HOSPITALS	3589	68.1	1678	31.9	5267	100.0	
<b>Northern Sydney</b>							
Hornsby	731	69.2	326	30.8	1057	100.0	
Manly	653	72.3	250	27.7	903	100.0	
Mona Vale	577	77.4	168	22.6	745	100.0	
Royal North Shore	1312	55.0	1074	45.0	2386	100.0	
Ryde	615	86.9	93	13.1	708	100.0	
Mater, North Sydney	755	41.0	1086	59.0	1841	100.0	
Sydney Adventist	1575	65.1	846	34.9	2421	100.0	
ALL HOSPITALS	6218	61.8	3843	38.2	10061	100.0	
<b>Western Sydney</b>							
Auburn	1485	90.3	159	9.7	1644	100.0	
Blacktown	2174	86.5	340	13.5	2514	100.0	
Westmead	2506	59.1	1734	40.9	4240	100.0	
The Hills Private	822	67.3	400	32.7	1222	100.0	
ALL HOSPITALS	6987	72.6	2633	27.4	9620	100.0	
<b>Wentworth</b>							
Blue Mountains	426	90.6	44	9.4	470	100.0	
Hawkesbury	618	90.6	64	9.4	682	100.0	
Nepean	2557	86.7	391	13.3	2948	100.0	
Jamison Private	770	82.6	162	17.4	932	100.0	
ALL HOSPITALS	4371	86.9	661	13.1	5032	100.0	
<b>South Western Sydney</b>							
Camden	824	88.4	108	11.6	932	100.0	
Fairfield	2207	96.4	82	3.6	2289	100.0	
Liverpool	2390	87.6	339	12.4	2729	100.0	
Campbelltown	1935	92.0	169	8.0	2104	100.0	
Bankstown/Lidcombe	1905	94.7	107	5.3	2012	100.0	
Bankstown Private	631	80.9	149	19.1	780	100.0	
Bowral	469	82.0	103	18.0	572	100.0	
ALL HOSPITALS	10361	90.7	1057	9.3	11418	100.0	
<b>Central Coast</b>							
Gosford	1968	76.9	590	23.1	2558	100.0	
North Gosford Private	454	59.5	309	40.5	763	100.0	
ALL HOSPITALS	2422	72.9	899	27.1	3321	100.0	
<b>Hunter</b>							
Maitland	977	90.2	106	9.8	1083	100.0	
Muswellbrook	210	95.0	11	5.0	221	100.0	
Belmont	635	93.8	42	6.2	677	100.0	
Singleton	223	94.1	14	5.9	237	100.0	
John Hunter	2776	79.2	728	20.8	3504	100.0	
Christo Road Private	765	79.5	197	20.5	962	100.0	
ALL HOSPITALS	6001	83.7	1167	16.3	7168	100.0	
<b>Illawarra</b>							
Shoalhaven	760	84.4	141	15.6	901	100.0	
Shellharbour	578	98.3	10	1.7	588	100.0	
Illawarra Regional	2097	86.2	337	13.8	2434	100.0	
ALL HOSPITALS	3555	87.2	520	12.8	4075	100.0	



TABLE 67 (CONT)

## CONFINEMENTS BY EPIDURAL BLOCK AND HOSPITAL, NSW 1996\*

Health Area/ hospital	No		Epidural Yes		TOTAL	
	No.	%	No.	%	No.	%
<b>South Eastern Sydney</b>						
St. Margaret's Private	594	42.8	795	57.2	1389	100.0
Royal Hospital for Women	2292	62.8	1355	37.2	3647	100.0
St. George	1563	72.4	595	27.6	2158	100.0
Sutherland	566	60.6	368	39.4	934	100.0
Hurstville Community	512	44.6	635	55.4	1147	100.0
Kareena Private	255	36.8	438	63.2	693	100.0
St. George Private	305	59.0	212	41.0	517	100.0
ALL HOSPITALS	6088	58.1	4398	41.9	10486	100.0
<b>Northern Rivers</b>						
Grafton Base	314	73.5	113	26.5	427	100.0
Lismore Base	951	70.1	405	29.9	1356	100.0
Murwillumbah	412	92.2	35	7.8	447	100.0
Tweed Heads	536	80.6	129	19.4	665	100.0
ALL HOSPITALS	2609	78.7	706	21.3	3315	100.0
<b>Mid North Coast</b>						
Coffs Harbour	623	85.3	107	14.7	730	100.0
Kempsey	270	86.5	42	13.5	312	100.0
Port Macquarie Base	546	79.8	138	20.2	684	100.0
Manning River Base	628	85.9	103	14.1	731	100.0
ALL HOSPITALS	2491	84.8	446	15.2	2937	100.0
<b>New England</b>						
Armidale	505	98.8	6	1.2	511	100.0
Inverell	219	94.4	13	5.6	232	100.0
Moree	246	85.7	41	14.3	287	100.0
Tamworth Base	540	83.3	108	16.7	648	100.0
ALL HOSPITALS	2264	90.7	232	9.3	2496	100.0
<b>Macquarie</b>						
Dubbo Base	1012	79.7	257	20.3	1269	100.0
Mudgee	272	93.5	19	6.5	291	100.0
ALL HOSPITALS	1555	84.7	280	15.3	1835	100.0
<b>Mid Western</b>						
Bathurst Base	480	90.1	53	9.9	533	100.0
Lithgow	202	78.0	57	22.0	259	100.0
Orange Base	692	84.0	132	16.0	824	100.0
Parkes	219	94.4	13	5.6	232	100.0
ALL HOSPITALS	1972	87.3	288	12.7	2260	100.0
<b>Far West</b>						
Broken Hill Base	251	85.4	43	14.6	294	100.0
ALL HOSPITALS	333	87.6	47	12.4	380	100.0
<b>Greater Murray</b>						
Mercy Care						
Centre, Albury	624	82.1	136	17.9	760	100.0
Griffith Base	465	89.9	52	10.1	517	100.0
Wagga Wagga Base	684	75.5	222	24.5	906	100.0
Calvary, Wagga Wagga	322	64.3	179	35.7	501	100.0
ALL HOSPITALS	2973	81.9	658	18.1	3631	100.0
<b>Southern</b>						
Bega	188	82.8	39	17.2	227	100.0
Cooma	174	84.5	32	15.5	206	100.0
Goulburn Base	318	90.6	33	9.4	351	100.0
Queanbeyan	318	84.4	59	15.6	377	100.0
ALL HOSPITALS	1569	87.2	231	12.8	1800	100.0
TOTAL NSW	65557	76.9	19745	23.1	85302	100.0

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

\* Hospitals with more than 200 confinements in 1996 are identified individually. All hospitals include all public and private hospitals.

## 6.4 EPISIOTOMY AND THIRD DEGREE TEAR IN SELECTED HOSPITALS

Table 68 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 1996, totals for all hospitals within each Health Area and the NSW total.

<b>TABLE 68</b>												
<b>CONFINEMENTS WITH VAGINAL DELIVERIES BY EPISIOTOMY, THIRD DEGREE AND HOSPITAL, NSW 1996*</b>												
Health Area/ hospital	Episiotomy				Third degree tear				TOTAL**			
	No.	No	%	No.	%	No.	No	%	No.	%		
<b>Central Sydney</b>												
King George V	3367		84.6	611	15.4	3918		98.5	60	1.5	3978	100.0
NSW Masonic	146		70.9	60	29.1	205		99.5	1	0.5	206	100.0
ALL HOSPITALS	3558		84.0	678	16.0	4175		98.6	61	1.4	4236	100.0
<b>Northern Sydney</b>												
Hornsby	655		75.3	215	24.7	854		98.2	16	1.8	870	100.0
Manly	621		85.1	109	14.9	726		99.5	4	0.5	730	100.0
Mona Vale	527		84.1	100	15.9	625		99.7	2	0.3	627	100.0
Royal North Shore	1045		62.4	631	37.6	1623		96.8	53	3.2	1676	100.0
Ryde	513		86.2	82	13.8	585		98.3	10	1.7	595	100.0
Mater, North Sydney	878		63.3	509	36.7	1371		98.8	16	1.2	1387	100.0
Sydney Adventist	1255		66.1	644	33.9	1893		99.7	6	0.3	1899	100.0
ALL HOSPITALS	5494		70.6	2290	29.4	7677		98.6	107	1.4	7784	100.0
<b>Western Sydney</b>												
Auburn	1147		81.7	257	18.3	1399		99.6	5	0.4	1404	100.0
Blacktown	1704		78.6	464	21.4	2146		99.0	22	1.0	2168	100.0
Westmead	2464		69.7	1071	30.3	3500		99.0	35	1.0	3535	100.0
The Hills Private	664		67.3	323	32.7	987		100.0	0	0.0	987	100.0
ALL HOSPITALS	5979		73.9	2115	26.1	8032		99.2	62	0.8	8094	100.0
<b>Wentworth</b>												
Blue Mountains	383		92.1	33	7.9	411		98.8	5	1.2	416	100.0
Hawkesbury	481		86.4	76	13.6	553		99.3	4	0.7	557	100.0
Nepean	2170		88.6	280	11.4	2422		98.9	28	1.1	2450	100.0
Jamison Private	565		74.1	197	25.9	758		99.5	4	0.5	762	100.0
ALL HOSPITALS	3599		86.0	586	14.0	4144		99.0	41	1.0	4185	100.0
<b>South Western Sydney</b>												
Camden	698		83.8	135	16.2	825		99.0	8	1.0	833	100.0
Fairfield	1519		76.4	470	23.6	1976		99.3	13	0.7	1989	100.0
Liverpool	1849		75.1	612	24.9	2430		98.7	31	1.3	2461	100.0
Campbelltown	1293		71.0	528	29.0	1816		99.7	5	0.3	1821	100.0
Bankstown/Lidcombe	1438		81.2	332	18.8	1752		99.0	18	1.0	1770	100.0
Bankstown Private	383		62.6	229	37.4	601		98.2	11	1.8	612	100.0
Bowral	405		80.7	97	19.3	501		99.8	1	0.2	502	100.0
ALL HOSPITALS	7585		75.9	2403	24.1	9901		99.1	87	0.9	9988	100.0
<b>Central Coast</b>												
Gosford	1973		92.9	150	7.1	2109		99.3	14	0.7	2123	100.0
North Gosford Private	410		69.8	177	30.2	581		99.0	6	1.0	587	100.0
ALL HOSPITALS	2383		87.9	327	12.1	2690		99.3	20	0.7	2710	100.0
<b>Hunter</b>												
Maitland	758		86.8	115	13.2	862		98.7	11	1.3	873	100.0
Muswellbrook	187		97.9	4	2.1	191		100.0	0	0.0	191	100.0
Belmont	489		87.2	72	12.8	554		98.8	7	1.2	561	100.0
Singleton	184		90.6	19	9.4	195		96.1	8	3.9	203	100.0
John Hunter	2458		86.1	398	13.9	2815		98.6	41	1.4	2856	100.0
Christo Road Private	573		76.7	174	23.3	733		98.1	14	1.9	747	100.0
ALL HOSPITALS	4963		85.6	838	14.4	5716		98.5	85	1.5	5801	100.0
<b>Illawarra</b>												
Shoalhaven	729		95.3	36	4.7	758		99.1	7	0.9	765	100.0
Shellharbour	472		91.5	44	8.5	515		99.8	1	0.2	516	100.0
Illawarra Regional	1575		75.3	517	24.7	2082		99.5	10	0.5	2092	100.0
ALL HOSPITALS	2846		82.3	613	17.7	3441		99.5	18	0.5	3459	100.0

TABLE 68 (CONT)

## CONFINEMENTS WITH VAGINAL DELIVERIES BY EPISIOTOMY, THIRD DEGREE AND HOSPITAL, NSW 1996\*

Health Area/ hospital	Episiotomy				Third degree tear				TOTAL**				
	No.	No	%	No.	Yes	%	No.	No	%	No.	%		
<b>South Eastern Sydney</b>													
St. Margaret's Private	706		67.4	341		32.6	1044		99.7	3	0.3	1047	100.0
Royal Hospital for Women	2248		76.7	683		23.3	2900		98.9	31	1.1	2931	100.0
St. George	1445		82.5	306		17.5	1725		98.5	26	1.5	1751	100.0
Sutherland	652		85.6	110		14.4	757		99.3	5	0.7	762	100.0
Hurstville Community	659		73.4	239		26.6	897		99.9	1	0.1	898	100.0
Kareena Private	335		65.6	176		34.4	504		98.6	7	1.4	511	100.0
St. George Private	292		77.7	84		22.3	373		99.2	3	0.8	376	100.0
ALL HOSPITALS	6338		76.6	1939		23.4	8201		99.1	76	0.9	8277	100.0
<b>Northern Rivers</b>													
Grafton Base	244		76.3	76		23.8	317		99.1	3	0.9	320	100.0
Lismore Base	948		85.9	156		14.1	1096		99.3	8	0.7	1104	100.0
Murwillumbah	286		79.2	75		20.8	361		100.0	0	0.0	361	100.0
Tweed Heads	500		90.7	51		9.3	546		99.1	5	0.9	551	100.0
ALL HOSPITALS	2347		86.1	379		13.9	2708		99.3	18	0.7	2726	100.0
<b>Mid North Coast</b>													
Coffs Harbour	488		86.4	77		13.6	564		99.8	1	0.2	565	100.0
Kempsey	234		86.0	38		14.0	272		100.0	0	0.0	272	100.0
Port Macquarie Base	457		81.9	101		18.1	552		98.9	6	1.1	558	100.0
Manning River Base	598		94.6	34		5.4	629		99.5	3	0.5	632	100.0
ALL HOSPITALS	2139		87.8	297		12.2	2423		99.5	13	0.5	2436	100.0
<b>New England</b>													
Armidale	387		81.5	88		18.5	472		99.4	3	0.6	475	100.0
Inverell	168		85.7	28		14.3	196		100.0	0	0.0	196	100.0
Moree	231		90.9	23		9.1	254		100.0	0	0.0	254	100.0
Tamworth Base	435		88.6	56		11.4	487		99.2	4	0.8	491	100.0
ALL HOSPITALS	1783		84.9	317		15.1	2090		99.5	10	0.5	2100	100.0
<b>Macquarie</b>													
Dubbo Base	827		77.4	241		22.6	1058		99.1	10	0.9	1068	100.0
Mudgee	216		82.1	47		17.9	261		99.2	2	0.8	263	100.0
ALL HOSPITALS	1276		79.8	323		20.2	1587		99.2	12	0.8	1599	100.0
<b>Mid Western</b>													
Bathurst Base	363		90.5	38		9.5	398		99.3	3	0.7	401	100.0
Lithgow	146		79.3	38		20.7	184		100.0	0	0.0	184	100.0
Orange Base	559		82.8	116		17.2	666		98.7	9	1.3	675	100.0
Parke	176		95.1	9		4.9	184		99.5	1	0.5	185	100.0
ALL HOSPITALS	1511		85.8	251		14.2	1746		99.1	16	0.9	1762	100.0
<b>Far West</b>													
Broken Hill Base	214		91.8	19		8.2	232		99.6	1	0.4	233	100.0
ALL HOSPITALS	286		92.0	25		8.0	309		99.4	2	0.6	311	100.0
<b>Greater Murray</b>													
Mercy Care Centre, Albury	586		91.6	54		8.4	635		99.2	5	0.8	640	100.0
Griffith Base	374		92.1	32		7.9	405		99.8	1	0.2	406	100.0
Wagga Wagga Base	681		89.8	77		10.2	754		99.5	4	0.5	758	100.0
Calvary, Wagga Wagga	304		75.6	98		24.4	398		99.0	4	1.0	402	100.0
ALL HOSPITALS	2609		86.6	405		13.4	2997		99.4	17	0.6	3014	100.0
<b>Southern</b>													
Bega	151		83.0	31		17.0	179		98.4	3	1.6	182	100.0
Cooma	166		91.7	15		8.3	179		98.9	2	1.1	181	100.0
Goulburn Base	236		79.5	61		20.5	295		99.3	2	0.7	297	100.0
Queanbeyan	305		92.4	25		7.6	327		99.1	3	0.9	330	100.0
ALL HOSPITALS	1304		84.6	238		15.4	1530		99.2	12	0.8	1542	100.0
TOTAL NSW	56199		80.0	14024		20.0	69566		99.1	657	0.9	70223	100.0

Source: NSW midwives Data Collection, Epidemiology and Surveillance Branch, NSW health Department.

\* Hospitals with more than 200 confinements in 1996 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.

## 6.5 BIRTH WEIGHT IN SELECTED HOSPITALS

Table 69 shows the birth weight among liveborn babies for individual hospitals where the number of reported confinements exceeded 200 in 1996, totals for all hospitals within each Health Area and the NSW total.

**TABLE 69**

**LIVE BIRTHS BY BABY BIRTHWEIGHT AND HOSPITAL, NSW 1996\***

Health Area/ hospital	Birth weight (grams)										TOTAL	
	Less than 1,000		1,000-1,499		1,500-2,499		2,500-plus		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Central Sydney</b>												
King George V	54	1.1	80	1.6	293	5.9	4544	91.4	0	0.0	4971	100.0
NSW Masonic	1	0.3	0	0.0	9	3.0	290	96.7	0	0.0	300	100.0
ALL HOSPITALS	55	1.0	80	1.5	306	5.7	4888	91.7	0	0.0	5329	100.0
<b>Northern Sydney</b>												
Hornsby	0	0.0	1	0.1	44	4.1	1020	95.8	0	0.0	1065	100.0
Manly	1	0.1	0	0.0	30	3.3	868	96.4	1	0.1	900	100.0
Mona Vale	0	0.0	1	0.1	28	3.7	721	96.1	0	0.0	750	100.0
Royal North Shore	35	1.4	38	1.6	177	7.3	2172	89.7	0	0.0	2422	100.0
Ryde	0	0.0	0	0.0	26	3.7	684	96.3	0	0.0	710	100.0
Mater, North Sydney	3	0.2	4	0.2	69	3.7	1793	95.9	0	0.0	1869	100.0
Sydney Adventist	1	0.0	0	0.0	66	2.7	2372	97.2	1	0.0	2440	100.0
ALL HOSPITALS	40	0.4	44	0.4	440	4.3	9630	94.8	2	0.0	10156	100.0
<b>Western Sydney</b>												
Auburn	1	0.1	2	0.1	49	3.0	1590	96.7	2	0.1	1644	100.0
Blacktown	3	0.1	1	0.0	110	4.4	2411	95.5	0	0.0	2525	100.0
Westmead	48	1.1	66	1.5	318	7.4	3846	89.9	0	0.0	4278	100.0
The Hills Private	0	0.0	0	0.0	37	3.0	1195	97.0	0	0.0	1232	100.0
ALL HOSPITALS	52	0.5	69	0.7	514	5.3	9042	93.4	2	0.0	9679	100.0
<b>Wentworth</b>												
Blue Mountains	0	0.0	1	0.2	12	2.5	461	97.3	0	0.0	474	100.0
Hawkesbury	0	0.0	2	0.3	24	3.5	654	95.9	2	0.3	682	100.0
Nepean	17	0.6	27	0.9	191	6.5	2717	92.0	1	0.0	2953	100.0
Jamison Private	0	0.0	0	0.0	25	2.7	911	97.3	0	0.0	936	100.0
ALL HOSPITALS	17	0.3	30	0.6	252	5.0	4743	94.0	3	0.1	5045	100.0
<b>South Western Sydney</b>												
Camden	1	0.1	0	0.0	24	2.6	911	97.3	0	0.0	936	100.0
Fairfield	0	0.0	2	0.1	82	3.6	2219	96.4	0	0.0	2303	100.0
Liverpool	18	0.7	19	0.7	166	6.0	2541	92.6	0	0.0	2744	100.0
Campbelltown	3	0.1	3	0.1	91	4.3	2019	95.4	1	0.0	2117	100.0
Bankstown/Lidcombe	7	0.3	3	0.1	88	4.3	1926	95.2	0	0.0	2024	100.0
Bankstown Private	1	0.1	0	0.0	34	4.3	752	95.6	0	0.0	787	100.0
Bowral	0	0.0	0	0.0	13	2.3	558	97.6	1	0.2	572	100.0
ALL HOSPITALS	30	0.3	27	0.2	498	4.3	10926	95.1	2	0.0	11483	100.0
<b>Central Coast</b>												
Gosford	2	0.1	3	0.1	120	4.7	2445	95.1	0	0.0	2570	100.0
North Gosford Private	1	0.1	0	0.0	22	2.9	743	97.0	0	0.0	766	100.0
ALL HOSPITALS	3	0.1	3	0.1	142	4.3	3188	95.6	0	0.0	3336	100.0
<b>Hunter</b>												
Maitland	0	0.0	0	0.0	42	3.9	1046	96.1	0	0.0	1088	100.0
Muswellbrook	0	0.0	0	0.0	5	2.3	215	97.7	0	0.0	220	100.0
Belmont	0	0.0	0	0.0	24	3.5	654	96.5	0	0.0	678	100.0
Singleton	0	0.0	0	0.0	2	0.8	235	99.2	0	0.0	237	100.0
John Hunter	38	1.1	61	1.7	243	6.8	3208	90.4	0	0.0	3550	100.0
Christo Road Private	0	0.0	0	0.0	35	3.6	935	96.4	0	0.0	970	100.0
ALL HOSPITALS	38	0.5	62	0.9	358	5.0	6769	93.7	0	0.0	7227	100.0
<b>Illawarra</b>												
Shoalhaven	0	0.0	0	0.0	49	5.4	858	94.6	0	0.0	907	100.0
Shellharbour	0	0.0	0	0.0	7	1.2	584	98.8	0	0.0	591	100.0
Illawarra Regional	2	0.1	10	0.4	127	5.2	2307	94.2	2	0.1	2448	100.0
ALL HOSPITALS	2	0.0	10	0.2	186	4.5	3898	95.1	2	0.0	4098	100.0

TABLE 69 (CONT)

## LIVE BIRTHS BY BABY BIRTHWEIGHT AND HOSPITAL, NSW 1996\*

Health Area/ hospital	Birth weight (grams)		1,000-1,499		1,500-2,499		2,500-plus		TOTAL		No.	%
	Less than 1,000 No.	%	No.	%	No.	%	No.	%	No.	%		
<b>South Eastern Sydney</b>												
St. Margaret's Private	1	0.1	1	0.1	40	2.8	1365	97.0	0	0.0	1407	100.0
Royal Hospital for Women	24	0.6	49	1.3	214	5.8	3410	92.2	0	0.0	3697	100.0
St. George	0	0.0	3	0.1	100	4.6	2072	95.3	0	0.0	2175	100.0
Sutherland	3	0.3	1	0.1	42	4.5	893	95.1	0	0.0	939	100.0
Hurstville Community	0	0.0	1	0.1	47	4.0	1115	95.9	0	0.0	1163	100.0
Kareena Private	0	0.0	0	0.0	29	4.1	673	95.9	0	0.0	702	100.0
St. George Private	0	0.0	0	0.0	15	2.9	504	97.1	0	0.0	519	100.0
ALL HOSPITALS	28	0.3	55	0.5	488	4.6	10032	94.6	0	0.0	10603	100.0
<b>Northern Rivers</b>												
Grafton Base	1	0.2	1	0.2	18	4.2	410	95.3	0	0.0	430	100.0
Lismore Base	3	0.2	3	0.2	78	5.7	1275	93.8	0	0.0	1359	100.0
Murwillumbah	0	0.0	0	0.0	9	2.0	442	98.0	0	0.0	451	100.0
Tweed Heads	1	0.1	3	0.4	33	4.9	633	94.5	0	0.0	670	100.0
ALL HOSPITALS	5	0.2	7	0.2	150	4.5	3168	95.1	0	0.0	3330	100.0
<b>Mid North Coast</b>												
Coffs Harbour	1	0.1	0	0.0	35	4.8	693	95.1	0	0.0	729	100.0
Kempsey	1	0.3	1	0.3	16	5.2	292	94.2	0	0.0	310	100.0
Port Macquarie Base	1	0.1	0	0.0	45	6.6	641	93.3	0	0.0	687	100.0
Manning River Base	2	0.3	2	0.3	33	4.5	700	95.0	0	0.0	737	100.0
ALL HOSPITALS	5	0.2	3	0.1	138	4.7	2796	95.0	1	0.0	2943	100.0
<b>New England</b>												
Armidale	2	0.4	0	0.0	34	6.6	481	93.0	0	0.0	517	100.0
Inverell	0	0.0	0	0.0	9	3.9	222	95.7	1	0.4	232	100.0
Moree	0	0.0	1	0.3	9	3.1	277	96.5	0	0.0	287	100.0
Tamworth Base	0	0.0	2	0.3	33	5.0	622	94.7	0	0.0	657	100.0
ALL HOSPITALS	4	0.2	4	0.2	108	4.3	2392	95.3	3	0.1	2511	100.0
<b>Macquarie</b>												
Dubbo Base	2	0.2	4	0.3	66	5.2	1206	94.2	2	0.2	1280	100.0
Mudgee	0	0.0	1	0.3	2	0.7	289	99.0	0	0.0	292	100.0
ALL HOSPITALS	2	0.1	5	0.3	73	4.0	1765	95.6	2	0.1	1847	100.0
<b>Mid Western</b>												
Bathurst Base	1	0.2	0	0.0	33	6.2	502	93.7	0	0.0	536	100.0
Lithgow	0	0.0	1	0.4	13	5.1	243	94.6	0	0.0	257	100.0
Orange Base	0	0.0	3	0.4	54	6.5	771	93.1	0	0.0	828	100.0
Parke	0	0.0	0	0.0	5	2.2	226	97.8	0	0.0	231	100.0
ALL HOSPITALS	1	0.0	4	0.2	112	4.9	2148	94.8	2	0.1	2267	100.0
<b>Far West</b>												
Broken Hill Base	1	0.3	0	0.0	13	4.4	279	95.2	0	0.0	293	100.0
ALL HOSPITALS	1	0.3	0	0.0	18	4.8	357	94.7	1	0.3	377	100.0
<b>Greater Murray</b>												
Mercy Care Centre, Albury	0	0.0	3	0.4	36	4.7	724	94.9	0	0.0	763	100.0
Griffith Base	1	0.2	2	0.4	13	2.5	502	96.9	0	0.0	518	100.0
Wagga Wagga Base	3	0.3	2	0.2	62	6.8	840	92.6	0	0.0	907	100.0
Calvary, Wagga Wagga	1	0.2	0	0.0	14	2.8	488	97.0	0	0.0	503	100.0
ALL HOSPITALS	5	0.1	7	0.2	145	4.0	3481	95.7	1	0.0	3639	100.0
<b>Southern</b>												
Bega	0	0.0	1	0.4	8	3.5	218	96.0	0	0.0	227	100.0
Cooma	0	0.0	1	0.5	4	1.9	201	97.6	0	0.0	206	100.0
Goulburn Base	0	0.0	0	0.0	11	3.2	337	96.8	0	0.0	348	100.0
Queanbeyan	0	0.0	0	0.0	7	1.9	365	96.6	6	1.6	378	100.0
ALL HOSPITALS	0	0.0	2	0.1	38	2.1	1750	97.4	6	0.3	1796	100.0
TOTAL NSW	288	0.3	412	0.5	3968	4.6	81157	94.5	29	0.0	85854	100.0

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

\* Hospitals with more than 200 total confinements in 1996 are identified individually. All hospitals include all public and private hospitals.

## 6.6 GESTATIONAL AGE IN SELECTED HOSPITALS

Table 70 shows the gestational age among live born babies for individual hospitals where the number of reported confinements exceeded 200 in 1996, totals for all hospitals within each Health Area and the NSW total.

TABLE 70 LIVE BIRTHS BY GESTATIONAL AGE AND HOSPITAL, NSW 1996*												
Health Area/ hospital	20-31		32-33		Gestational age (weeks)				Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Central Sydney</b>												
King George V	146	2.9	76	1.5	253	5.1	4496	90.4	0	0.0	4971	100.0
NSW Masonic	1	0.3	0	0.0	11	3.7	288	96.0	0	0.0	300	100.0
ALL HOSPITALS	147	2.8	76	1.4	266	5.0	4840	90.8	0	0.0	5329	100.0
<b>Northern Sydney</b>												
Hornsby	1	0.1	2	0.2	41	3.8	1021	95.9	0	0.0	1065	100.0
Manly	1	0.1	0	0.0	36	4.0	863	95.9	0	0.0	900	100.0
Mona Vale	1	0.1	1	0.1	38	5.1	710	94.7	0	0.0	750	100.0
Royal North Shore	93	3.8	54	2.2	125	5.2	2150	88.8	0	0.0	2422	100.0
Ryde	2	0.3	0	0.0	28	3.9	680	95.8	0	0.0	710	100.0
Mater, North Sydney	4	0.2	6	0.3	84	4.5	1775	95.0	0	0.0	1869	100.0
Sydney Adventist	2	0.1	4	0.2	103	4.2	2330	95.5	1	0.0	2440	100.0
ALL HOSPITALS	104	1.0	67	0.7	455	4.5	9529	93.8	1	0.0	10156	100.0
<b>Western Sydney</b>												
Auburn	3	0.2	4	0.2	60	3.6	1571	95.6	6	0.4	1644	100.0
Blacktown	5	0.2	4	0.2	115	4.6	2401	95.1	0	0.0	2525	100.0
Westmead	130	3.0	88	2.1	245	5.7	3808	89.0	7	0.2	4278	100.0
The Hills Private	0	0.0	1	0.1	47	3.8	1184	96.1	0	0.0	1232	100.0
ALL HOSPITALS	138	1.4	97	1.0	467	4.8	8964	92.6	13	0.1	9679	100.0
<b>Wentworth</b>												
Blue Mountains	0	0.0	0	0.0	9	1.9	464	97.9	1	0.2	474	100.0
Hawkesbury	2	0.3	1	0.1	29	4.3	648	95.0	2	0.3	682	100.0
Nepean	53	1.8	29	1.0	193	6.5	2678	90.7	0	0.0	2953	100.0
Jamison Private	0	0.0	1	0.1	29	3.1	906	96.8	0	0.0	936	100.0
ALL HOSPITALS	55	1.1	31	0.6	260	5.2	4696	93.1	3	0.1	5045	100.0
<b>South Western Sydney</b>												
Camden	1	0.1	0	0.0	26	2.8	909	97.1	0	0.0	936	100.0
Fairfield	2	0.1	2	0.1	99	4.3	2199	95.5	1	0.0	2303	100.0
Liverpool	42	1.5	29	1.1	141	5.1	2532	92.3	0	0.0	2744	100.0
Campbelltown	5	0.2	18	0.9	127	6.0	1967	92.9	0	0.0	2117	100.0
Bankstown/Lidcombe	9	0.4	9	0.4	99	4.9	1907	94.2	0	0.0	2024	100.0
Bowral	0	0.0	0	0.0	10	1.7	562	98.3	0	0.0	572	100.0
Bankstown Private	1	0.1	2	0.3	42	5.3	742	94.3	0	0.0	787	100.0
ALL HOSPITALS	60	0.5	60	0.5	544	4.7	10818	94.2	1	0.0	11483	100.0
<b>Central Coast</b>												
Gosford	5	0.2	8	0.3	117	4.6	2440	94.9	0	0.0	25701	100.0
North Gosford Private	1	0.1	2	0.3	19	2.5	744	97.1	0	0.0	766	100.0
ALL HOSPITALS	6	0.2	10	0.3	36	4.1	3184	95.4	0	0.0	3336	100.0
<b>Hunter</b>												
Maitland	1	0.1	3	0.3	55	5.1	1028	94.5	1	0.1	1088	100.0
Musswellbrook	0	0.0	0	0.0	6	2.7	214	97.3	0	0.0	220	100.0
Belmont	0	0.0	0	0.0	39	5.8	639	94.2	0	0.0	678	100.0
Singleton	0	0.0	0	0.0	2	0.8	235	99.2	0	0.0	237	100.0
John Hunter	119	3.4	79	2.2	207	5.8	3145	88.6	0	0.0	3550	100.0
Christo Road Private	0	0.0	5	0.5	60	6.2	905	93.3	0	0.0	970	100.0
ALL HOSPITALS	121	1.7	87	1.2	384	5.3	6634	91.8	1	0.0	7227	100.0
<b>Illawarra</b>												
Shoalhaven	2	0.2	6	0.7	37	4.1	860	94.8	2	0.2	907	100.0
Shellharbour	0	0.0	1	0.2	2	0.3	588	99.5	0	0.0	591	100.0
Illawarra Regional	8	0.3	20	0.8	143	5.8	2277	93.0	0	0.0	2448	100.0
ALL HOSPITALS	10	0.2	27	0.7	183	4.5	3876	94.6	2	0.0	4098	100.0

**TABLE 70 (CONT)**
**LIVE BIRTHS BY GESTATIONAL AGE AND HOSPITAL, NSW 1996\***

Health Area/ hospital	20-31		32-33		Gestational age (weeks)				Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>South Eastern Sydney</b>												
St. Margaret's Private	3	0.2	1	0.1	44	3.1	1358	96.5	1	0.1	1407	100.0
Royal Hospital for Women	100	2.7	51	1.4	180	4.9	3366	91.0	0	0.0	3697	100.0
St. George	3	0.1	15	0.7	121	5.6	2036	93.6	0	0.0	2175	100.0
Sutherland	2	0.2	4	0.4	47	5.0	884	94.1	2	0.2	939	100.0
Hurstville Community	0	0.0	10	0.9	50	4.3	1103	94.8	0	0.0	1163	100.0
Kareena Private	1	0.1	5	0.7	37	5.3	659	93.9	0	0.0	702	100.0
St. George Private	0	0.0	0	0.0	24	4.6	495	95.4	0	0.0	519	100.0
ALL HOSPITALS	109	1.0	87	0.8	503	4.7	9901	93.4	3	0.0	10603	100.0
<b>Northern Rivers</b>												
Grafton Base	1	0.2	2	0.5	22	5.1	405	94.2	0	0.0	430	100.0
Lismore Base	8	0.6	12	0.9	79	5.8	1260	92.7	0	0.0	1359	100.0
Murwillumbah	0	0.0	0	0.0	19	4.2	432	95.8	0	0.0	451	100.0
Tweed Heads	4	0.6	5	0.7	32	4.8	629	93.9	0	0.0	670	100.0
ALL HOSPITALS	13	0.4	20	0.6	157	4.7	3140	94.3	0	0.0	3330	100.0
<b>Mid North Coast</b>												
Coffs Harbour	1	0.1	1	0.1	43	5.9	684	93.8	0	0.0	729	100.0
Kempsey	2	0.6	0	0.0	15	4.8	293	94.5	0	0.0	310	100.0
Port Macquarie Base	2	0.3	3	0.4	40	5.8	642	93.4	0	0.0	687	100.0
Manning River Base	5	0.7	1	0.1	40	5.4	690	93.6	1	0.1	737	100.0
ALL HOSPITALS	10	0.3	5	0.2	150	5.1	2777	94.4	1	0.0	2943	100.0
<b>New England</b>												
Armidale	1	0.2	2	0.4	16	3.1	498	96.3	0	0.0	517	100.0
Inverell	1	0.4	0	0.0	6	2.6	224	96.6	1	0.4	232	100.0
Moree	1	0.3	0	0.0	13	4.5	273	95.1	0	0.0	287	100.0
Tamworth Base	0	0.0	0	0.0	47	7.2	610	92.8	0	0.0	657	100.0
ALL HOSPITALS	5	0.2	2	0.1	95	3.8	2408	95.9	1	0.0	2511	100.0
<b>Macquarie</b>												
Dubbo Base	6	0.5	7	0.5	60	4.7	1207	94.3	0	0.0	1280	100.0
Mudgee	2	0.7	0	0.0	3	1.0	287	98.3	0	0.0	292	100.0
ALL HOSPITALS	8	0.4	8	0.4	66	3.6	1764	95.5	1	0.1	1847	100.0
<b>Mid Western</b>												
Bathurst Base	1	0.2	0	0.0	31	5.8	504	94.0	0	0.0	536	100.0
Lithgow	1	0.4	0	0.0	10	3.9	246	95.7	0	0.0	257	100.0
Orange Base	2	0.2	12	1.4	38	4.6	776	93.7	0	0.0	828	100.0
Parke	0	0.0	0	0.0	4	1.7	227	98.3	0	0.0	231	100.0
ALL HOSPITALS	4	0.2	15	0.7	93	4.1	2151	94.9	4	0.2	2267	100.0
<b>Far West</b>												
Broken Hill Base	1	0.3	1	0.3	15	5.1	276	94.2	0	0.0	293	100.0
ALL HOSPITALS	1	0.3	1	0.3	20	5.3	353	93.6	2	0.5	377	100.0
<b>Greater Murray</b>												
Mercy Care Centre, Albury	3	0.4	6	0.8	30	3.9	724	94.9	0	0.0	763	100.0
Griffith Base	4	0.8	1	0.2	18	3.5	495	95.6	0	0.0	518	100.0
Wagga Wagga Base	4	0.4	11	1.2	54	6.0	838	92.4	0	0.0	907	100.0
Calvary, Wagga Wagga	1	0.2	4	0.8	22	4.4	475	94.4	1	0.2	503	100.0
ALL HOSPITALS	12	0.3	23	0.6	149	4.1	3452	94.9	3	0.1	3639	100.0
<b>Southern</b>												
Bega	0	0.0	1	0.4	8	3.5	218	96.0	0	0.0	227	100.0
Cooma	1	0.5	0	0.0	3	1.5	202	98.1	0	0.0	206	100.0
Goulburn Base	0	0.0	0	0.0	4	1.1	344	98.9	0	0.0	348	100.0
Queanbeyan	0	0.0	0	0.0	4	1.1	370	97.9	4	1.1	378	100.0
ALL HOSPITALS	1	0.1	1	0.1	33	1.8	1757	97.8	4	0.2	1796	100.0
<b>TOTAL NSW</b>	<b>804</b>	<b>0.9</b>	<b>617</b>	<b>0.7</b>	<b>3963</b>	<b>4.6</b>	<b>80430</b>	<b>93.7</b>	<b>40</b>	<b>0.0</b>	<b>85854</b>	<b>100.0</b>

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

\* Hospitals with more than 200 confinements in 1996 are identified individually. All hospitals include all public and private hospitals.

## 6.7 BABY DISCHARGE STATUS IN SELECTED HOSPITALS

Table 71 shows the discharge status of babies born in hospitals where the number of reported confinements exceeded 200 in 1996, totals for all hospitals within each Health Area and the NSW total.

<b>TABLE 71</b>												
<b>BIRTHS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 1996*</b>												
Health Area/ hospital	Discharged		Transferred		Discharge status				Not stated		TOTAL	
	No.	%	No.	%	Stillborn No.	%	Neonata death No.	%	No.	%	No.	%
<b>Central Sydney</b>												
King George V	4708	93.8	231	4.6	46	0.9	32	0.6	2	0.0	5019	100.0
NSW Masonic	295	98.0	5	1.7	1	0.3	0	0.0	0	0.0	301	100.0
ALL HOSPITALS	5059	94.1	238	4.4	47	0.9	32	0.6	2	0.0	5378	100.0
<b>Northern Sydney</b>												
Hornsby	1053	98.4	11	1.0	5	0.5	1	0.1	0	0.0	1070	100.0
Manly	851	93.9	48	5.3	4	0.4	1	0.1	2	0.2	906	100.0
Mona Vale	739	97.8	11	1.5	6	0.8	0	0.0	0	0.0	756	100.0
Royal North Shore	2307	94.7	97	4.0	15	0.6	18	0.7	0	0.0	2437	100.0
Ryde	700	98.0	10	1.4	4	0.6	0	0.0	0	0.0	714	100.0
Mater, North Sydney	1822	97.1	43	2.3	7	0.4	4	0.2	1	0.1	1877	100.0
Sydney Adventist	2431	99.4	7	0.3	6	0.2	2	0.1	0	0.0	2446	100.0
ALL HOSPITALS	9903	97.0	227	2.2	47	0.5	26	0.3	3	0.0	10206	100.0
<b>Western Sydney</b>												
Auburn	1624	98.1	18	1.1	10	0.6	2	0.1	1	0.1	1655	100.0
Blacktown	2492	98.3	30	1.2	11	0.4	3	0.1	0	0.0	2536	100.0
Westmead	4016	92.8	232	5.4	49	1.1	30	0.7	0	0.0	4327	100.0
The Hills Private	1222	98.8	10	0.8	5	0.4	0	0.0	0	0.0	1237	100.0
ALL HOSPITALS	9354	95.9	290	3.0	75	0.8	35	0.4	1	0.0	9755	100.0
<b>Wentworth</b>												
Blue Mountains	458	96.4	16	3.4	1	0.2	0	0.0	0	0.0	475	100.0
Hawkesbury	667	97.2	15	2.2	1	0.1	0	0.0	3	0.4	686	100.0
Nepean	2852	95.5	89	3.0	31	1.0	12	0.4	1	0.0	2985	100.0
Jamison Private	928	98.4	8	0.8	6	0.6	0	0.0	1	0.1	943	100.0
ALL HOSPITALS	4905	96.4	128	2.5	39	0.8	12	0.2	5	0.1	5089	100.0
<b>South Western Sydney</b>												
Camden	902	96.2	32	3.4	2	0.2	2	0.2	0	0.0	938	100.0
Fairfield	2273	98.2	27	1.2	11	0.5	3	0.1	0	0.0	2314	100.0
Liverpool	2674	96.7	60	2.2	21	0.8	10	0.4	0	0.0	2765	100.0
Campbelltown	1868	87.8	246	11.6	10	0.5	3	0.1	1	0.0	2128	100.0
Bankstown/Lidcombe	2002	98.5	15	0.7	9	0.4	7	0.3	0	0.0	2033	100.0
Bankstown Private	779	98.9	7	0.9	1	0.1	1	0.1	0	0.0	788	100.0
Bowral	527	91.5	44	7.6	4	0.7	1	0.2	0	0.0	576	100.0
ALL HOSPITALS	11025	95.5	431	3.7	58	0.5	27	0.2	1	0.0	11542	100.0
<b>Central Coast</b>												
Gosford	2539	98.2	27	1.0	16	0.6	4	0.2	0	0.0	2586	100.0
North Gosford Private	758	98.6	7	0.9	3	0.4	1	0.1	0	0.0	769	100.0
ALL HOSPITALS	3297	98.3	34	1.0	19	0.6	5	0.1	0	0.0	3355	100.0
<b>Hunter</b>												
Maitland	980	89.4	108	9.9	8	0.7	0	0.0	0	0.0	1096	100.0
Muswellbrook	207	93.7	13	5.9	1	0.5	0	0.0	0	0.0	221	100.0
Belmont	617	90.5	61	8.9	4	0.6	0	0.0	0	0.0	682	100.0
Singleton	234	98.7	3	1.3	0	0.0	0	0.0	0	0.0	237	100.0
John Hunter	3119	86.9	411	11.5	39	1.1	20	0.6	0	0.0	3589	100.0
Christo Road Private	946	97.3	24	2.5	2	0.2	0	0.0	0	0.0	972	100.0
ALL HOSPITALS	6569	90.2	636	8.7	55	0.8	22	0.3	1	0.0	7283	100.0
<b>Illawarra</b>												
Shoalhaven	738	80.7	169	18.5	7	0.8	0	0.0	0	0.0	914	100.0
Shellharbour	571	96.6	19	3.2	0	0.0	1	0.2	0	0.0	591	100.0
Illawarra Regional	1469	59.7	975	39.6	12	0.5	4	0.2	0	0.0	2460	100.0
ALL HOSPITALS	2927	71.1	1166	28.3	19	0.5	5	0.1	0	0.0	4117	100.0



TABLE 71 (CONT)

## BIRTHS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 1996\*

Health Area/ hospital	Discharged		Transferred		Discharge status				Not stated		TOTAL	
	No.	%	No.	%	Stillborn No.	%	Neonata deathl No.	%	No.	%	No.	%
<b>South Eastern Sydney</b>												
St. Margaret's Private	1373	97.5	31	2.2	1	0.1	3	0.2	0	0.0	1408	100.0
Royal Hospital for Women	3491	93.7	195	5.2	30	0.8	11	0.3	0	0.0	3727	100.0
St. George	2142	98.1	33	1.5	9	0.4	0	0.0	0	0.0	2184	100.0
Sutherland	927	98.5	8	0.9	2	0.2	4	0.4	0	0.0	941	100.0
Hurstville Community	1154	99.1	9	0.8	2	0.2	0	0.0	0	0.0	1165	100.0
Kareena Private	697	99.0	5	0.7	2	0.3	0	0.0	0	0.0	704	100.0
St. George Private	518	99.0	1	0.2	4	0.8	0	0.0	0	0.0	523	100.0
ALL HOSPITALS	10302	96.7	283	2.7	50	0.5	18	0.2	0	0.0	10653	100.0
<b>Northern Rivers</b>												
Grafton Base	406	94.2	23	5.3	1	0.2	1	0.2	0	0.0	431	100.0
Lismore Base	985	71.7	371	27.0	15	1.1	3	0.2	0	0.0	1374	100.0
Murwillumbah	430	94.7	21	4.6	3	0.7	0	0.0	0	0.0	454	100.0
Tweed Heads	660	98.4	10	1.5	1	0.1	0	0.0	0	0.0	671	100.0
ALL HOSPITALS	2888	86.2	438	13.1	20	0.6	4	0.1	0	0.0	3350	100.0
<b>Mid North Coast</b>												
Coffs Harbour	681	92.3	47	6.4	9	1.2	1	0.1	0	0.0	738	100.0
Kempsey	303	96.8	7	2.2	3	1.0	0	0.0	0	0.0	313	100.0
Port Macquarie Base	579	83.5	107	15.4	6	0.9	1	0.1	0	0.0	693	100.0
Manning River Base	715	96.5	18	2.4	4	0.5	4	0.5	0	0.0	741	100.0
ALL HOSPITALS	2729	92.0	207	7.0	24	0.8	7	0.2	0	0.0	2967	100.0
<b>New England</b>												
Armidale	491	94.2	25	4.8	4	0.8	1	0.2	0	0.0	521	100.0
Inverell	223	94.5	7	3.0	4	1.7	2	0.8	0	0.0	236	100.0
Moree	280	96.9	7	2.4	2	0.7	0	0.0	0	0.0	289	100.0
Tamworth Base	554	83.8	103	15.6	4	0.6	0	0.0	0	0.0	661	100.0
ALL HOSPITALS	2337	92.4	168	6.6	17	0.7	6	0.2	1	0.0	2529	100.0
<b>Macquarie</b>												
Dubbo Base	881	68.2	396	30.7	10	0.8	3	0.2	1	0.1	1291	100.0
Mudgee	284	96.9	8	2.7	1	0.3	0	0.0	0	0.0	293	100.0
ALL HOSPITALS	1422	76.5	422	22.7	12	0.6	3	0.2	1	0.1	1860	100.0
<b>Mid Western</b>												
Bathurst Base	457	84.6	78	14.4	4	0.7	1	0.2	0	0.0	540	100.0
Lithgow	252	96.2	5	1.9	2	0.8	0	0.0	3	1.1	262	100.0
Orange Base	602	72.0	226	27.0	8	1.0	0	0.0	0	0.0	836	100.0
Parkes	211	90.6	20	8.6	2	0.9	0	0.0	0	0.0	233	100.0
ALL HOSPITALS	1924	84.1	342	14.9	18	0.8	1	0.0	3	0.1	2288	100.0
<b>Far West</b>												
Broken Hill Base	286	95.7	6	2.0	6	2.0	1	0.3	0	0.0	299	100.0
ALL HOSPITALS	362	94.0	14	3.6	8	2.1	1	0.3	0	0.0	385	100.0
<b>Greater Murray</b>												
Mercy Care Centre, Albury	717	93.6	46	6.0	3	0.4	0	0.0	0	0.0	766	100.0
Griffith Base	462	88.5	55	10.5	4	0.8	1	0.2	0	0.0	522	100.0
Wagga Wagga Base	787	85.8	116	12.6	10	1.1	4	0.4	0	0.0	917	100.0
Calvary, Wagga Wagga	487	95.7	16	3.1	6	1.2	0	0.0	0	0.0	509	100.0
ALL HOSPITALS	3362	91.8	271	7.4	24	0.7	6	0.2	0	0.0	3663	100.0
<b>Southern</b>												
Bega	219	95.2	8	3.5	3	1.3	0	0.0	0	0.0	230	100.0
Cooma	200	97.1	6	2.9	0	0.0	0	0.0	0	0.0	206	100.0
Goulburn Base	332	94.3	16	4.5	4	1.1	0	0.0	0	0.0	352	100.0
Queanbeyan	365	96.6	13	3.4	0	0.0	0	0.0	0	0.0	378	100.0
ALL HOSPITALS	1733	96.0	63	3.5	10	0.6	0	0.0	0	0.0	1806	100.0
TOTAL NSW	80286	92.9	5358	6.2	545	0.6	210	0.2	30	0.0	86429	100.0

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

\* Hospitals with more than 200 confinements in 1996 are identified individually. All hospitals include all public and private hospitals.

## 6.8 POSTNATAL LENGTH OF STAY IN SELECTED HOSPITALS

Table 72 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 1996, totals for all hospitals within each Health Area and the NSW total.

<b>TABLE 72</b>					
<b>AVERAGE POSTNATAL LENGTH OF STAY IN HOSPITAL OF BIRTH, NSW 1994-95*</b>					
<b>Health Area/ Hospital</b>	<b>Average postnatal length of stay (days)</b>		<b>Health Area/ Hospital</b>	<b>Average postnatal length of stay (days)</b>	
	<b>1994</b>	<b>1995</b>		<b>1994</b>	<b>1995</b>
<b>Central Sydney</b>			<b>South Eastern Sydney</b>		
King George V	4.2	4.0	St. Margaret's Private	6.6	6.0
NSW Masonic	6.1	5.7	Royal Hospital for Women	4.4	4.5
ALL HOSPITALS	4.2	4.0	St. George	4.6	4.1
<b>Northern Sydney</b>			Sutherland	5.2	4.5
Hornsby	4.8	4.4	Hurstville Community	6.4	6.2
Manly	4.5	4.3	Kareena Private	6.4	6.2
Mona Vale	4.6	4.3	ALL HOSPITALS	5.2	5.0
Royal North Shore	4.5	4.3	<b>Northern Rivers</b>		
Ryde	4.2	4.0	Grafton Base	4.4	4.4
Mater, North Sydney	5.7	5.6	Lismore Base	3.5	3.8
Sydney Adventist	6.0	6.2	Murwillumbah	4.7	4.2
ALL HOSPITALS	5.1	4.9	Tweed Heads	3.7	3.1
<b>Western Sydney</b>			ALL HOSPITALS	3.9	3.8
Auburn	3.5	3.6	<b>Mid North Coast</b>		
Blacktown	3.4	3.3	Coffs Harbour	4.6	4.5
Westmead	4.2	3.9	Kempsey	4.4	4.6
The Hills Private	5.7	5.8	Port Macquarie Base	—	3.9
ALL HOSPITALS	4.1	3.9	Manning River Base	4.6	4.3
<b>Wentworth</b>			ALL HOSPITALS	4.4	4.4
Blue Mountains	4.4	3.5	<b>New England</b>		
Hawkesbury	3.4	3.7	Armidale	5.5	5.1
Nepean	3.5	3.5	Inverell	4.1	3.7
Jamison Private	5.2	5.3	Moree	4.3	4.1
ALL HOSPITALS	3.9	3.7	Tamworth Base	3.3	3.7
<b>South Western Sydney</b>			ALL HOSPITALS	4.2	4.3
Camden	4.0	3.7	<b>Macquarie</b>		
Fairfield	3.2	3.1	Dubbo Base	4.7	3.3
Liverpool	3.3	3.1	Mudgee	3.8	3.6
Campbelltown	3.2	3.0	ALL HOSPITALS	4.3	3.3
Bankstown/Lidcombe	3.2	3.0	<b>Mid Western</b>		
Bankstown Private	5.2	5.3	Bathurst Base	4.1	4.2
Bowral	3.5	3.7	Lithgow	4.6	4.1
ALL HOSPITALS	3.4	3.2	Orange Base	3.5	3.3
<b>Central Coast</b>			Parke	4.6	4.5
Gosford	3.8	3.6	ALL HOSPITALS	4.1	3.9
North Gosford Private	6.4	6.1	<b>Far West</b>		
ALL HOSPITALS	4.3	4.2	Broken Hill Base	5.3	4.4
<b>Hunter</b>			ALL HOSPITALS	4.8	4.1
Maitland	3.7	3.5	<b>Greater Murray</b>		
Muswellbrook	4.1	3.9	Mercy Care Centre, Albury	4.6	4.6
Belmont	3.8	3.6	Griffith Base	4.1	4.0
Singleton	4.1		Wagga Wagga Base	4.4	4.0
John Hunter	3.8	3.8	Calvary, Wagga Wagga	6.0	5.9
Christo Road Private	5.4	5.7	ALL HOSPITALS	4.7	4.5
ALL HOSPITALS	3.9	4.0	<b>Southern</b>		
<b>Illawarra</b>			Bega	5.4	4.4
Shoalhaven	3.1	2.9	Cooma	4.2	3.8
Shellharbour	3.6	3.5	Goulburn Base	4.4	4.1
Illawarra Regional	2.6	2.5	Queanbeyan	3.9	3.4
ALL HOSPITALS	3.0	2.9	ALL HOSPITALS	4.4	4.0
			ALL NSW HOSPITALS	4.2	4.1

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

\* Hospitals with more than 200 confinements in 1996 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, p12).

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

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

Australia  
Christmas Island  
Norfolk Island  
New Zealand  
England  
Scotland  
Wales  
Northern Ireland  
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  
Honduras  
Mexico  
Nicaragua  
Panama  
Antigua and Barbuda  
Bahamas  
Barbados  
Cayman Islands  
Cuba  
Grenada  
Jamaica  
Netherlands Antilles  
St Kitts-Nevis  
St Lucia  
St Vincent and the  
Grenadines

**Eastern Europe, Russia,  
Central Asian and  
Baltic States**

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

**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

**Southern Europe**

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

**Middle East and Africa**

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  
Central African Republic  
Gambia  
Ghana  
Guinea  
Liberia  
Mali  
Nigeria  
Zaire  
Angola  
Botswana  
Djibouti  
Ethiopia  
Kenya  
Malawi  
Mauritius  
Mozambique  
Namibia  
Reunion  
Rwanda  
Seychelles  
Somalia  
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  
India  
Nepal  
Pakistan  
Sri Lanka

**Western and Northern  
Europe**

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



