

Volume 12, Number S-1
January, 2001

NSW Public
Health *Bulletin Supplement*

NSW HEALTH

ISBN 0 7347 3255 4

State Health Publication No (PH) 010005

**NEW SOUTH WALES
MOTHERS AND BABIES
1999**

NSW HEALTH DEPARTMENT

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State Health Publication No: (PH) 010005

ISBN: 0 7347 3255 4

Suggested citation:

Public Health Division. New South Wales Mothers and Babies 1999. Sydney: NSW Health Department, 2001.

Produced by:

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Further copies of this publication are available from the Public Health Division Web site at:

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NEW SOUTH WALES MOTHERS AND BABIES 1999

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INTRODUCTION

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

From 1 January 1998, the MDC includes data elements necessary for most of the Australian Council on Healthcare Standards–Royal Australian and New Zealand College of Obstetricians and Gynaecologists (ACHS–RANZCOG) clinical indicators for obstetrics. A summary of the indicators for all NSW hospitals combined, and comparative information for participating Australian hospitals, is included in Part 7 of this report.

A study of the quality of reporting of Aboriginality to the MDC is described in Part 8.

SUMMARY

Trends in NSW

There were 87,289 babies born to 85,967 mothers in 1999. The number of births in NSW remained stable at about 86,000 to 88,000 between 1995 and 1999. The number of teenage mothers decreased from 4,349 (5.0 per cent of all mothers) in 1994 to 4,099 (4.8 per cent) in 1999; while the number of mothers aged 35 years and over increased from 11,906 in 1995 to 14,668 in 1999, an increase from 13.8 to 17.1 per cent of all confinements.

The reported number of Aboriginal and Torres Strait Islander mothers giving birth increased from 1,739 in 1995 (2.0 per cent of all mothers) to 2,059 in 1999 (2.4 per cent of all mothers). Part of this increase is likely to be due to an increased willingness of mothers to be identified as Aboriginal or Torres Strait Islander.

Patterns of maternal country of birth have remained fairly stable over the five year period with about one in four mothers born overseas in 1999, most commonly in the United Kingdom (3.1 per cent), China and New Zealand (both 2.3 per cent), and Vietnam (2.1 per cent).

The proportion of mothers planning to give birth in a birth centre reached a peak in 1996 (4.2 per cent) and subsequently fell slightly to 3.9 per cent in 1999, while the reported number of mothers planning a home birth decreased from 269 to 182 over the five year period.

The rate of normal vaginal birth fell slightly from 71.0 per cent in 1995 to 68.6 per cent in 1999. Over the five years, the caesarean section rate increased from 17.4 to 19.7 per cent and the rate of instrumental delivery remained steady at about 10.5 per cent.

Since 1995, the rate of low birthweight (less than 2,500 grams) was steady at about 6 per cent. The rate was 6.3 per cent in 1999.

There was a slight increase in the percentage of babies born prematurely at 32–36 weeks gestation, and a decrease in the percentage born at 42 weeks or more. The overall rate of premature births (less than 37 weeks gestation) rose from 6.3 per cent in 1995 to 7.1 per cent in 1999. There was no change in the proportion of babies who were very premature (less than 32 weeks) or extremely premature (less than 28 weeks).

The perinatal mortality rate varied from 8.8 to 9.6 per 1,000. About two-thirds of all perinatal deaths were stillbirths and one third were neonatal deaths.

In the period 1990–1997, 95 deaths were reported among pregnant women or women who gave birth less than six weeks previously. Sixty-two of these were classified as directly or indirectly associated with the pregnant state.

Area Health Services

In 1999, the largest numbers of births occurred among mothers resident in the Western Sydney and South Western Sydney Health Areas. These two areas contributed about one quarter of the state's births.

In 1999, as in previous years, there were large variations between health areas in the age distribution of women giving birth. The proportion of women giving birth at less than 20 years of age varied from 0.8 per cent in the Northern Sydney Health Area to 14.3 per cent in the Far West Health Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 8.0 per cent in the Far West Health Area to 28.6 per cent in the Northern Sydney Health Area.

The proportion of Aboriginal or Torres Strait Islander mothers varied from 0.1 per cent in the Northern Sydney Health Area to 30.4 per cent in the Far West Health Area.

The highest proportions of mothers born in non-English speaking countries were in the Central Sydney and South Western Sydney Health Areas. In Central Sydney, the majority of mothers born in non-English speaking countries were born in North East Asia and South East Asia (11.3 and 10.4 per cent of all confinements respectively). In South Western Sydney, the majority of mothers born in non-English speaking countries were born in South East Asia (15.5 per cent of all confinements).

The highest rate of normal vaginal birth was among residents of Far West Health Area (77.9 per cent), while the highest rate of instrumental delivery was among residents of Northern Sydney Health Area (15.5 per cent). The caesarean section rate varied from 15.2 per cent among mothers resident in the South Western Sydney Health Area to 25.0 per cent in the Northern Sydney Health Area.

The highest rates of low birthweight occurred in the Far West Health Area (8.9 per cent) and the lowest rate occurred in the Southern Health Area (4.8 per cent). The highest rate of preterm birth was in the Central Coast Health Area (9.5 per cent). The lowest rate was 4.5 per cent in the Southern Health Area, which may result from referral of high risk pregnancies to the ACT.

The perinatal mortality rate in 1999 was 9.2 per 1,000 births. The rate varied from 5.8 per 1,000 in the Illawarra Health Area to 13.6 per 1,000 in the Macquarie Health Area.

Aboriginal and Torres Strait Islander mothers and babies

In 1999, there were 2,078 babies reported to be born to Aboriginal and Torres Strait Islander mothers, 2.4 per cent of all babies born in NSW. About two thirds of Aboriginal and Torres Strait Islander mothers who gave birth in 1999 lived in rural areas. One quarter lived in the New England or Macquarie Health Areas. About one in five Aboriginal and Torres Strait Islander mothers were teenagers. In 1999, 86.4 per cent of Aboriginal and Torres Strait Islander mothers were booked into the hospital of birth. This is lower than the 98.3 per cent of non-Aboriginal or Torres Strait Islander mothers who were booked into the hospital of birth in 1999.

In 1999, 69.2 per cent of Aboriginal and Torres Strait Islander mothers commenced antenatal care before 20 weeks gestation compared with 87.5 per cent of non-Aboriginal and Torres Strait Islander mothers.

Following statewide trends, the rate of induction of labour among Aboriginal or Torres Strait Islander mothers increased from 15.2 to 18.2 per cent between 1995 and 1999, while the rate of spontaneous onset of labour decreased from 77.3 to 73.4 per cent. However, the rate of induction of labour among Aboriginal and Torres Strait Islander mothers (18.2 per cent) continued to be lower than the statewide rate (24.1 per cent) in 1999. Also following statewide trends, the caesarean section rate among Aboriginal and Torres Strait Islander mothers was stable at about 16 per cent between 1995 and 1999.

Since 1995, the rates of low birthweight (less than 2,500 grams) and prematurity (less than 37 weeks gestation) in Aboriginal and Torres Strait Islander babies has been over 10 per cent. These rates are one and a half times to two times higher than the rates for NSW overall. The perinatal mortality rate in babies born to Aboriginal and Torres Strait Islander mothers was 14.0 per 1,000 in 1999, about one and half times the rate of 9.2 per 1,000 for NSW overall.

Maternal country of birth

Between 1995 and 1999, about 20 per cent of mothers were born in non-English speaking countries. The proportion of mothers from Asian countries increased slightly from 9.9 to 10.8 per cent, while the proportion of mothers from Southern European countries decreased slightly from 1.9 to 1.6 per cent.

In 1999, the proportion of mothers born in non-English speaking countries was highest in the Central Sydney Health Area (43.4 per cent), followed by the South Western Sydney and Western Sydney Areas (38.0 and 36.1 per cent respectively).

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

In 1999, 86.2 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 88.1 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 55.0 per cent of mothers born in Melanesia, Micronesia and Polynesia and 70.8 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 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 Central and South America (21.1 per cent).

The highest rate of low birthweight was in babies of mothers born in Southern Asian countries (9.1 per cent). Babies of mothers born in North East Asia and Southern Europe were least likely to be low birthweight.

The highest rate of prematurity was in babies of mothers born in Southern Asian countries (7.5 per cent). Babies of mothers born in North East Asia or the Middle East and Africa were least likely to be premature.

Perinatal mortality rates varied substantially between country of birth groups, from 6.6 per 1,000 among babies of mothers born in Southern Europe to 13.4 per 1,000 in babies of mothers born in Southern Asia.

Neonatal Intensive Care

There were 1,991 infants registered in the Neonatal Intensive Care Units' Data Collection in 1999 representing a registration rate of 21.8 per 1,000 live births. Sixty one (3.1 per cent) infants registered in 1999 were born to Aboriginal and/or Torres Strait Islander mothers.

The 1,991 infants were born to 1,828 mothers, nearly 80 per cent of whom were residents of the Sydney, Central Coast, Hunter and Illawarra Health Areas. The age of mothers ranged from 15 to 48 years with a mean age of 29.4 years. Antenatal complications were reported for 89.8 per cent of mothers. The proportion of women receiving antenatal corticosteroids for lung maturation has increased each year since 1992, with 72.5 per cent of mothers receiving steroids in 1999.

Thirty six per cent of infants registered in 1999 were born following a booked tertiary centre birth and 33.2 per cent were born following maternal transfer. Thirty one per cent were transferred to a tertiary centre following birth and 11 per cent were transferred from one tertiary centre to another immediately after birth.

Nearly three quarters (74.2 per cent) of the infants registered in 1999 were born in a tertiary centre. There is an inverse relationship between gestational age and birth in a tertiary centre.

Boys comprised 56.0 per cent of the 1999 cohort and girls 44.0 per cent. Most infants (80.2 per cent) were from a singleton pregnancy, 17.2 per cent were from a twin pregnancy, 2.6 per cent were from a triplet pregnancy.

Seventy four per cent of infants registered during 1999 were preterm (less than 37 weeks gestation), 42.2 per cent were very preterm (less than 32 weeks gestation) and 14.5 per cent were extremely preterm (less than 28 weeks gestation). Nearly one in five (22.0 per cent) infants had a major or minor congenital anomaly.

Infants with major congenital anomalies were excluded from the analysis of mortality and morbidity. The majority of infants registered in 1999 (87.9 per cent) received assisted ventilation (intermittent mandatory ventilation or continuous positive airways pressure ventilation). The main indication for assisted ventilation varied with gestational age: respiratory distress syndrome, immature lung and transient tachypnoea were more common among preterm groups, whereas meconium aspiration and perinatal asphyxia were more common in term infants.

Proven systemic infection was present in 15.8 per cent of infants, necrotising enterocolitis in 3.2 per cent, and intraventricular haemorrhage in 17.1 per cent; 13.6 per cent of infants were treated for patent ductus arteriosus, and 3.7 per cent had major surgery. Severe grades (Grade 3 or 4) of retinopathy of prematurity were present in 3.8 per cent of infants less than 32 weeks gestation, of whom 67.4 per cent had either cryo or laser therapy to prevent retinal detachment. Surfactant was given to 46.2 per cent of infants; the majority (70.1 per cent) of ventilated infants with a diagnosis of Respiratory Distress Syndrome received surfactant.

Overall, 92.0 per cent of infants without a major congenital anomaly survived to six-months of age. Survival improved with gestational age up to 34 weeks after which it decreased slightly. Of the infants who died, most (67.9 per cent) died at less than one week of age and a further 22.1 per cent died at less than 29 days of age. The six-month survival rate for infants born at 22 to 27 weeks gestation was higher for those born in a tertiary centre (72.4 per cent) compared with those born in a non-tertiary centre (35.0 per cent). Among infants born at higher gestational ages the proportion surviving to six-months of age was similar for those born in a tertiary centre and those born in a non-tertiary centre.

Birth defects

About 2,000 infants are born with birth defects each year in NSW, and for about half of these infants the malformation is detected after birth. In 1993–1999, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genito-urinary system. This is a similar pattern to previous years. In 1998, the overall rate of defects was slightly lower than the previous five years combined (42.1 versus 55.4 per 1,000), due to a decrease in the number of babies with multiple malformations. The proportion of reported cases with three or more malformations fell from 22.3 to 19.0 per cent between 1993 and 1998.

In the period 1993–1997, about 130 terminations of pregnancy per year were reported to the NSW Birth Defects Register. Following the introduction of a requirement to notify birth defects under the NSW Public Health Act 1991 from 1 January 1998, the number of terminations reported rose to 250 in 1998 and 236 in 1999.

Of the total 1,150 terminations of pregnancy reported in 1993–99, 644 (56.0 per cent) were associated with a chromosomal abnormality, the most common of which was Down syndrome, and 277 (24.1 per cent) were associated with a neural tube defect.

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

DATA SOURCES

The New South Wales Midwives Data Collection

The New South Wales Midwives Data Collection (MDC) is a population-based surveillance system covering all births in NSW public and private hospitals, as well as home births. 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 or doctor to complete a notification form when a birth occurs. The form, a copy of which is shown at Appendix 4, includes demographic items and items on maternal health, the pregnancy, labour, delivery and perinatal outcomes. Completed forms are sent to the Patient Data Management Unit of the Information Management and Clinical Systems Branch of the NSW Health Department, where they are compiled into the MDC database.

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

The Neonatal Intensive Care Units' Data Collection

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

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

In 1999 the 10 neonatal intensive care units in NSW and ACT were situated at the following perinatal centres: John Hunter Children's Hospital—Newcastle, King George V Hospital, Liverpool Health Service (joined 12/10/94), Nepean Hospital, Royal Hospital for Women, Royal North Shore Hospital, The Canberra Hospital—Woden Valley (joined 1/1/95), Westmead Hospital, and at the two paediatric hospitals: Sydney Children's Hospital and Royal Alexandra Hospital for Children (The Children's Hospital at Westmead).

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

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 and under NSW Public Health Act 1991 from 1 January 1998 doctors, hospitals and laboratories have been required to notify birth defects detected during pregnancy, at birth, or up to one year of life. The BDR is administered by the Epidemiology and Surveillance Branch of the NSW Health Department.

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

Birth Defects Monitoring Systems, a non-governmental organisation of the World Health Organization.

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

Data for research purposes may be provided in two formats: aggregate information similar to that contained in this report, and data concerning individuals with identifying information removed. All requests for data should be submitted in writing to the Director, Epidemiology and Surveillance Branch. Requests for data concerning individuals for sufficiently important research purposes will be referred to the Statewide Health Confidentiality and Ethics Committee. Procedures for release of personal information are described in the Department's *Information Privacy Code of Practice*, copies of which are available through the NSW Health Department's World Wide Web site at 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. These linked data are also used to provide information on health insurance status and type of delivery from 1998.

The ISC covers demographic and episode related data in respect of every inpatient who is separated from any public, private, and repatriation hospital, private day procedure centre or public nursing home in NSW. Separation can result from discharge, transfer, death, or change in service category. The ISC is maintained by the NSW Health Department's Information Management and Clinical Systems Branch.

Maternal deaths

Maternal and perinatal 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

Aboriginal and/or Torres Strait Islander

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 0–10 (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.

Birth defect

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

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

Birth weight

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

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

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

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

Caesarean section

Delivery of the fetus through an abdominal incision.

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

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

Confinement

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

Country of birth

The mother's country of birth.

CVS

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

Epidural

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

Episiotomy

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

Gestational age

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

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 and surgical induction).

Intraventricular haemorrhage (IVH)

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

| | |
|---------------|---|
| None: | ultrasound–post-mortem shows no haemorrhage |
| Grade 1: | subependymal germinal matrix haemorrhage. |
| Grade 2: | intraventricular haemorrhage with no ventricular dilatation |
| Grade 3: | intraventricular haemorrhage with ventricle distended with blood. |
| Grade 4: | intraparenchymal haemorrhage. |
| Not examined: | No ultrasound or post-mortem examination. |

Live birth

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

Major surgery

Any surgery that requires opening of a body cavity.

Mechanical ventilation

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

Necrotising enterocolitis (NEC)

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

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

Neonatal death

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

Neonatal period

The first 28 completed days of life.

Neonatal mortality rate

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

Patent ductus arteriosus (PDA)

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

Parity

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

Perinatal death

A stillbirth or neonatal death.

Perinatal mortality rate

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

Perineal status

- 1st degree tear: a perineal graze-laceration-tear involving: the fourchette, hymen, labia, skin, vagina or vulva.
- 2nd degree tear: a perineal laceration or tear involving the pelvic floor or perineal muscles or vaginal muscles.
- 3rd degree tear: a perineal laceration-tear involving the anal sphincter or rectovaginal septum.

- 4th degree tear: a third degree perineal laceration or tear which also involves the anal mucosa or rectal mucosa.

Plurality

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

Premature infant

An infant born before 37 completed weeks gestation.

Premature labour

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

Prolonged rupture of membranes

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

Retinopathy of prematurity

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

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

Systemic infection in the infant

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

Transfer (NICUS only)

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

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

Spontaneous abortion

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

Stillbirth

The complete expulsion or extraction from its mother of a product of conception of at least 20 weeks gestation or 400 grams birthweight 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.

EXPLANATORY NOTES

Antenatal complications (NICUS)

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

Rates of birth defects

The BDR collects data pertaining to birth defects regardless of the outcome of pregnancy. This includes notifications of livebirths, stillbirths, terminations of pregnancy and spontaneous abortions. Birth defect rates are calculated using births (that is, 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 that occurred to NSW residents.

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

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

Place of residence of mother

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

Labour

The category 'labour—spontaneous with oxytocics—prostaglandins' was used where labour was augmented with artificial rupture of membranes as well as oxytocics or prostaglandins.

Levels of neonatal care

Tertiary

Level 3: Neonatal Intensive Care Unit (NICU)—a unit that provides high-dependency specialist nursing and medical care for all newborn infants including sustained 'life

support' such as mechanical ventilation and has staff neonatologists and neonatal registrars.

Non-tertiary

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

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

Level of obstetric hospitals

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

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

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

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

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

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

Type of delivery

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

Perinatal mortality rate

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. Birth and perinatal death registration data held by the Australian Bureau of Statistics (ABS) give the most complete ascertainment of perinatal deaths for calculation of rates.

ACKNOWLEDGEMENTS

The NSW Midwives Data Collection, depends entirely on the state's midwives who provide information on each birth. We gratefully acknowledge their contribution.

The production of the NICUS chapter of this report was accomplished by the teamwork of a vast number of individuals and institutions. Their capacity to collect and exchange information, to discuss and reach consensus on a wide range of medical and epidemiological issues, has made this report possible. We thank the directors and clinical audit officers of the 10 neonatal intensive care units and the liaison officers representing all of the obstetric hospitals in NSW and ACT who have provided maternal and neonatal data. Finally, and not least, the families who participated in the audit are acknowledged and thanked for their continued patience and support.

We would like to thank all those who have contributed to the NSW Birth Defects Register since its establishment in 1990. The Register is dependent on families, health care institutions, and individual health care providers, for the supply of information about birth defects. We gratefully acknowledge their support. We thank health information managers in hospitals throughout NSW for their cooperation and assistance. The staff of the medical record departments at The Children's Hospital at Westmead, 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.

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PART 1: TRENDS IN NEW SOUTH WALES

1.1 CONFINEMENTS AND BIRTHS BY PLURALITY

The number of births per year has remained fairly stable over the past five years (Table 1). There were 87,289 births to 85,967 women reported to the MDC for 1999. Of the 85,967 confinements reported in 1999, 1,261 (1.5 per cent) were for twins and 30 for triplets.

TABLE 1

BIRTHS AND CONFINEMENTS BY PLURALITY, NSW 1995–1999

| Plurality | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---------------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Confinements | | | | | | | | | | |
| Singleton | 85155 | 98.7 | 84201 | 98.7 | 85740 | 98.6 | 83869 | 98.6 | 84676 | 98.5 |
| Twins | 1088 | 1.3 | 1076 | 1.3 | 1147 | 1.3 | 1174 | 1.4 | 1261 | 1.5 |
| Triplets | 20 | 0.0 | 24 | 0.0 | 32 | 0.0 | 28 | 0.0 | 30 | 0.0 |
| Quadruplets | 0 | 0.0 | 1 | 0.0 | 1 | 0.0 | 1 | 0.0 | 0 | 0.0 |
| Total | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |
| Births | | | | | | | | | | |
| Singleton | 85155 | 97.4 | 84201 | 97.4 | 85740 | 97.3 | 83869 | 97.2 | 84676 | 97.0 |
| Twins | 2176 | 2.5 | 2152 | 2.5 | 2293 | 2.6 | 2348 | 2.7 | 2523 | 2.9 |
| Triplets | 60 | 0.1 | 72 | 0.1 | 96 | 0.1 | 84 | 0.1 | 90 | 0.1 |
| Quadruplets | 0 | 0.0 | 4 | 0.0 | 4 | 0.0 | 4 | 0.0 | 0 | 0.0 |
| TOTAL | 87391 | 100.0 | 86429 | 100.0 | 88133 | 100.0 | 86305 | 100.0 | 87289 | 100.0 |

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

1.2 HEALTH AREA OF RESIDENCE

The number of mothers giving birth in most health areas remained fairly stable over the last five years (Table 2). The number of mothers giving birth tended to increase in the Sydney metropolitan health areas and to decrease elsewhere. There was a decrease in births reported in the

Greater Murray Health Area in 1998 due to the closure of the obstetric unit at the Mercy Care Centre Albury, in June 1998 and referral of women to Wodonga Hospital in Victoria.

TABLE 2

CONFINEMENTS BY HEALTH AREA OF RESIDENCE, NSW 1995–1999

| Health Area | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|----------------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | 6553 | 7.6 | 6839 | 8.0 | 6657 | 7.7 | 6574 | 7.7 | 6625 | 7.7 |
| Northern Sydney | 8634 | 10.0 | 8552 | 10.0 | 8985 | 10.3 | 8824 | 10.4 | 9242 | 10.8 |
| Western Sydney | 10225 | 11.9 | 10250 | 12.0 | 10559 | 12.1 | 10541 | 12.4 | 10712 | 12.5 |
| Wentworth | 4811 | 5.6 | 4836 | 5.7 | 4827 | 5.6 | 4825 | 5.7 | 4851 | 5.6 |
| South Western Sydney | 12198 | 14.1 | 12034 | 14.1 | 12511 | 14.4 | 12050 | 14.2 | 12219 | 14.2 |
| Central Coast | 3795 | 4.4 | 3677 | 4.3 | 3792 | 4.4 | 3736 | 4.4 | 3665 | 4.3 |
| Hunter | 7105 | 8.2 | 6997 | 8.2 | 7034 | 8.1 | 6875 | 8.1 | 6965 | 8.1 |
| Illawarra | 4522 | 5.2 | 4320 | 5.1 | 4434 | 5.1 | 4350 | 5.1 | 4414 | 5.1 |
| South Eastern Sydney | 8861 | 10.3 | 8706 | 10.2 | 9148 | 10.5 | 9135 | 10.7 | 9427 | 11.0 |
| Northern Rivers | 2994 | 3.5 | 2956 | 3.5 | 2963 | 3.4 | 2941 | 3.5 | 2903 | 3.4 |
| Mid North Coast | 3028 | 3.5 | 3038 | 3.6 | 3073 | 3.5 | 2954 | 3.5 | 2906 | 3.4 |
| New England | 2536 | 2.9 | 2472 | 2.9 | 2463 | 2.8 | 2381 | 2.8 | 2348 | 2.7 |
| Macquarie | 1688 | 2.0 | 1734 | 2.0 | 1595 | 1.8 | 1589 | 1.9 | 1596 | 1.9 |
| Mid Western | 2425 | 2.8 | 2355 | 2.8 | 2437 | 2.8 | 2339 | 2.7 | 2297 | 2.7 |
| Far West | 602 | 0.7 | 568 | 0.7 | 600 | 0.7 | 556 | 0.7 | 533 | 0.6 |
| Greater Murray | 3524 | 4.1 | 3440 | 4.0 | 3357 | 3.9 | 2946 | 3.5 | 2603 | 3.0 |
| Southern | 2023 | 2.3 | 1812 | 2.1 | 1776 | 2.0 | 1782 | 2.1 | 1845 | 2.1 |
| Other–Not stated | 739 | 0.9 | 716 | 0.8 | 709 | 0.8 | 674 | 0.8 | 816 | 0.9 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

1.3 MATERNAL AGE

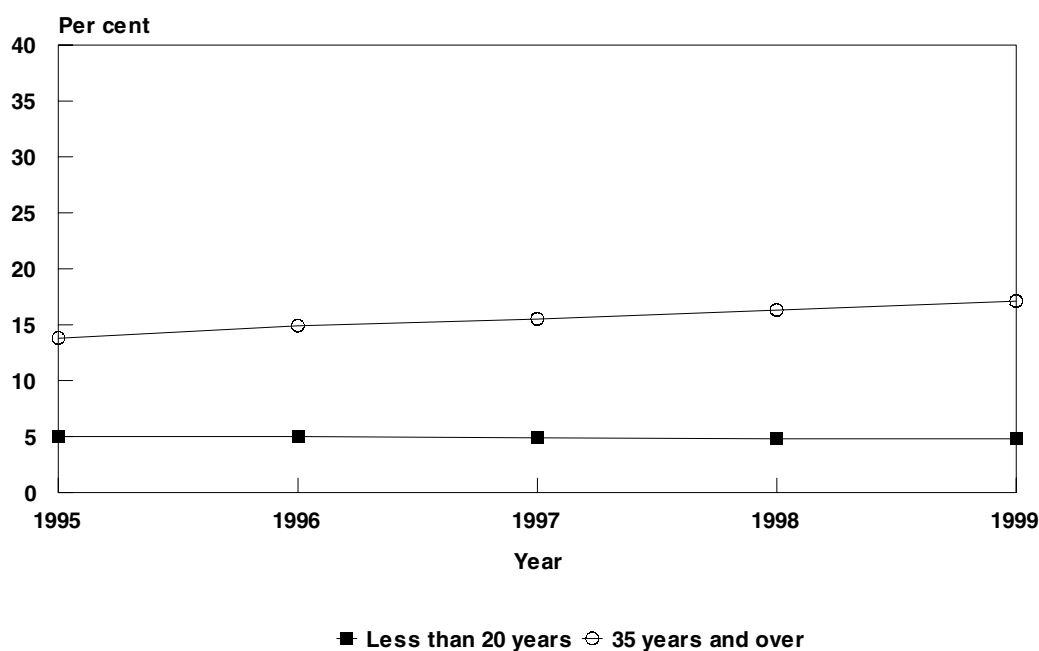
The number of teenage mothers decreased from 4,349 in 1995 to 4,099 in 1999 (Figure 1, Table 3). The mean maternal age rose slightly from 29.1 to 29.6 years over the same period.

The number of mothers 35 years of age or over giving birth increased from 11,906 in 1995 to 14,668 in 1999, an increase from 13.8 to 17.1 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 7.5 to 10.4 per cent over the five year period, and the proportion of multiparous mothers increased from 18.0 to 21.7 per cent.

FIGURE 1

CONFINEMENTS AMONG MOTHERS AGED LESS THAN 20 YEARS AND 35 YEARS AND OVER, NSW 1995–1999



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

TABLE 3

CONFINEMENTS BY MATERNAL AGE, NSW 1995–1999

| Maternal age (years) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|----------------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 12–19 | 4349 | 5.0 | 4295 | 5.0 | 4291 | 4.9 | 4118 | 4.8 | 4099 | 4.8 |
| 20–34 | 69976 | 81.1 | 68239 | 80.0 | 69114 | 79.5 | 67034 | 78.8 | 67171 | 78.1 |
| 35+ | 11906 | 13.8 | 12712 | 14.9 | 13465 | 15.5 | 13839 | 16.3 | 14668 | 17.1 |
| Not stated | 32 | 0.0 | 56 | 0.1 | 50 | 0.1 | 81 | 0.1 | 29 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

1.4 MATERNAL COUNTRY OF BIRTH

In the period 1995–1999, almost three-quarters of confinements were to mothers who were born in Australia. Numbers of confinements to mothers born in European countries continued to decline while confinements to mothers born in Asian and Pacific Island countries increased over the five year period (Table 4). Further information on maternal country of birth is shown in Part 4.

TABLE 4

CONFINEMENTS BY MATERNAL COUNTRY OF BIRTH, NSW 1995–1999*

| Country of birth | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--------------------------|-------|-------|-------|-------|--------------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Australia | 63623 | 73.8 | 62309 | 73.0 | 63292 | 72.8 | 62606 | 73.6 | 62555 | 72.8 |
| United Kingdom | 2850 | 3.3 | 2707 | 3.2 | 2593 | 3.0 | 2471 | 2.9 | 2627 | 3.1 |
| China | 1649 | 1.9 | 1950 | 2.3 | 2111 | 2.4 | 1892 | 2.2 | 2015 | 2.3 |
| New Zealand | 1821 | 2.1 | 1790 | 2.1 | 1826 | 2.1 | 1762 | 2.1 | 1966 | 2.3 |
| Vietnam | 1828 | 2.1 | 1865 | 2.2 | 1853 | 2.1 | 1462 | 1.7 | 1804 | 2.1 |
| Lebanon | 2153 | 2.5 | 2042 | 2.4 | 1983 | 2.3 | 1942 | 2.3 | 1788 | 2.1 |
| Philippines | 1245 | 1.4 | 1266 | 1.5 | 1275 | 1.5 | 1308 | 1.5 | 1319 | 1.5 |
| Former Yugoslavia | 746 | 0.9 | 689 | 0.8 | 714 | 0.8 | 659 | 0.8 | 662 | 0.8 |
| India | 587 | 0.7 | 576 | 0.7 | 673 | 0.8 | 634 | 0.7 | 635 | 0.7 |
| Fiji | 577 | 0.7 | 602 | 0.7 | 603 | 0.7 | 640 | 0.8 | 604 | 0.7 |
| Indonesia | 312 | 0.4 | 381 | 0.4 | 398 | 0.5 | 424 | 0.5 | 460 | 0.5 |
| Iraq | 164 | 0.2 | 234 | 0.3 | 326 | 0.4 | 360 | 0.4 | 414 | 0.5 |
| Hong Kong | 676 | 0.8 | 659 | 0.8 | 531 | 0.6 | 433 | 0.5 | 409 | 0.5 |
| South Africa | 263 | 0.3 | 310 | 0.4 | 349 | 0.4 | 329 | 0.4 | 386 | 0.4 |
| United States of America | 317 | 0.4 | 322 | 0.4 | 330 | 0.4 | 340 | 0.4 | 372 | 0.4 |
| South Korea | 299 | 0.3 | 261 | 0.3 | 308 | 0.4 | 370 | 0.4 | 370 | 0.4 |
| Western Samoa | 276 | 0.3 | 280 | 0.3 | 312 | 0.4 | 349 | 0.4 | 318 | 0.4 |
| Turkey | 367 | 0.4 | 376 | 0.4 | 364 | 0.4 | 340 | 0.4 | 314 | 0.4 |
| Tonga | 272 | 0.3 | 263 | 0.3 | 292 | 0.3 | 312 | 0.4 | 308 | 0.4 |
| Cambodia | 325 | 0.4 | 311 | 0.4 | 305 | 0.4 | 238 | 0.3 | 303 | 0.4 |
| Sri Lanka | 256 | 0.3 | 274 | 0.3 | 279 | 0.3 | 276 | 0.3 | 295 | 0.3 |
| Ireland | 274 | 0.3 | 276 | 0.3 | 275 | 0.3 | 280 | 0.3 | 287 | 0.3 |
| Malaysia | 299 | 0.3 | 308 | 0.4 | 307 | 0.4 | 259 | 0.3 | 286 | 0.3 |
| Japan | 228 | 0.3 | 215 | 0.3 | 226 | 0.3 | 239 | 0.3 | 264 | 0.3 |
| Germany | 176 | 0.2 | 208 | 0.2 | 213 | 0.2 | 187 | 0.2 | 226 | 0.3 |
| Chile | 242 | 0.3 | 220 | 0.3 | 209 | 0.2 | 214 | 0.3 | 224 | 0.3 |
| Italy | 312 | 0.4 | 285 | 0.3 | 272 | 0.3 | 230 | 0.3 | 221 | 0.3 |
| Egypt | 236 | 0.3 | 254 | 0.3 | 253 | 0.3 | 202 | 0.2 | 218 | 0.3 |
| Thailand | 164 | 0.2 | 166 | 0.2 | 186 | 0.2 | 194 | 0.2 | 207 | 0.2 |
| Pakistan | 98 | 0.1 | 137 | 0.2 | 202 | 0.2 | 200 | 0.2 | 192 | 0.2 |
| Canada | 160 | 0.2 | 170 | 0.2 | 155 | 0.2 | 177 | 0.2 | 185 | 0.2 |
| Syria | 151 | 0.2 | 154 | 0.2 | 141 | 0.2 | 143 | 0.2 | 145 | 0.2 |
| Iran | 158 | 0.2 | 134 | 0.2 | 147 | 0.2 | 139 | 0.2 | 140 | 0.2 |
| Papua New Guinea | 115 | 0.1 | 130 | 0.2 | 150 | 0.2 | 131 | 0.2 | 136 | 0.2 |
| Bangladesh | 82 | 0.1 | 94 | 0.1 | 125 | 0.1 | 140 | 0.2 | 134 | 0.2 |
| Poland | 157 | 0.2 | 125 | 0.1 | 120 | 0.1 | 100 | 0.1 | 123 | 0.1 |
| Portugal | 131 | 0.2 | 145 | 0.2 | 121 | 0.1 | 136 | 0.2 | 120 | 0.1 |
| Afghanistan | 75 | 0.1 | 83 | 0.1 | 110 | 0.1 | 85 | 0.1 | 120 | 0.1 |
| Laos | 135 | 0.2 | 140 | 0.2 | 133 | 0.2 | 126 | 0.1 | 118 | 0.1 |
| Greece | 203 | 0.2 | 174 | 0.2 | 178 | 0.2 | 140 | 0.2 | 109 | 0.1 |
| France | 98 | 0.1 | 93 | 0.1 | 85 | 0.1 | 114 | 0.1 | 108 | 0.1 |
| Netherlands | 96 | 0.1 | 84 | 0.1 | 94 | 0.1 | 92 | 0.1 | 102 | 0.1 |
| Singapore | 114 | 0.1 | 109 | 0.1 | 89 | 0.1 | 102 | 0.1 | 101 | 0.1 |
| Other—Not stated | 1953 | 2.3 | 2131 | 2.5 | 2412 | 2.8 | 2295 | 2.7 | 2277 | 2.6 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

Countries of birth for which there were 100 or more confinements in 1999.

1.5 MATERNAL ABORIGINALITY

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 1,739 in 1995 (2.0 per cent of all mothers) to 2,059 in 1999 (2.4 per cent of all mothers) (Table 5). 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 and reporting of Aboriginality are shown in Parts 3 and 8 respectively.

TABLE 5

CONFINEMENTS BY MATERNAL ABORIGINALITY, NSW 1995–1999

| Aboriginality | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Aboriginal and Torres Strait Islander | 1739 | 2.0 | 1712 | 2.0 | 1842 | 2.1 | 2043 | 2.4 | 2059 | 2.4 |
| Non-Aboriginal or Torres Strait Islander | 84450 | 97.9 | 83486 | 97.9 | 84854 | 97.6 | 82787 | 97.3 | 83899 | 97.6 |
| Not stated | 74 | 0.1 | 104 | 0.1 | 224 | 0.3 | 242 | 0.3 | 9 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 85967 |

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

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 6). About 40 per cent of mothers gave birth for the first time, about 58 per cent gave birth to a second to fourth baby and less than two per cent reported more than five previous births.

TABLE 6

CONFINEMENTS BY NUMBER OF PREVIOUS PREGNANCIES, NSW 1995–1999

| Number of previous pregnancies (>20 weeks gestation) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 0 | 34459 | 39.9 | 34267 | 40.2 | 34984 | 40.2 | 34376 | 40.4 | 35311 | 41.1 |
| 1–4 | 50449 | 58.5 | 49692 | 58.3 | 50451 | 58.0 | 49462 | 58.1 | 49432 | 57.5 |
| 5+ | 1256 | 1.5 | 1237 | 1.5 | 1267 | 1.5 | 1184 | 1.4 | 1206 | 1.4 |
| Not stated | 99 | 0.1 | 106 | 0.1 | 218 | 0.3 | 50 | 0.1 | 18 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

1.7 DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

Since 1995, the proportion of mothers starting antenatal care at 20-plus weeks gestation has been stable at about 13 per cent (Table 7).

| TABLE 7 | | | | | | | | | | |
|--|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| CONFINEMENTS BY DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT, NSW 1995–1999 | | | | | | | | | | |
| Duration of pregnancy (weeks) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 0–19 | 73331 | 85.0 | 72726 | 85.3 | 73666 | 84.8 | 72257 | 84.9 | 74077 | 87.1 |
| 20-plus | 11395 | 13.2 | 10972 | 12.9 | 11549 | 13.3 | 11410 | 13.4 | 10979 | 12.9 |
| Not stated | 1537 | 1.8 | 1604 | 1.9 | 1705 | 2.0 | 1405 | 1.7 | 911 | 1.1 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 95967 | 100.0 |

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

1.8 SMOKING IN PREGNANCY

The proportion of mothers reporting any smoking during pregnancy declined slightly between 1995 and 1999: in 1995, 18,549 (21.5 per cent) mothers reported smoking in pregnancy, compared to, 17,957 (21.1 per cent) in 1996, 17,871 (20.6 per cent) in 1997, 16,859 (19.8 per cent) in 1998, and 16,302 (19.0 per cent) in 1999.

Of mothers who smoked during pregnancy, about four per cent stopped smoking in the second half of pregnancy and about half smoked more than 10 cigarettes per day in the second half of pregnancy (Table 8).

| TABLE 8 | | | | | | | | | | |
|---|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| MOTHERS WHO SMOKED AT ALL DURING PREGNANCY BY NUMBER OF CIGARETTES SMOKED IN THE SECOND HALF OF PREGNANCY, NSW 1995–1999 | | | | | | | | | | |
| Cigarettes smoked in the second half of pregnancy | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| None | 556 | 3.0 | 556 | 3.1 | 570 | 3.2 | 690 | 4.1 | 739 | 4.5 |
| More than ten per day | 9542 | 51.4 | 8842 | 49.2 | 8574 | 48.0 | 8171 | 48.5 | 7966 | 48.9 |
| 1–10 per day | 7928 | 42.7 | 7925 | 44.1 | 7872 | 44.0 | 7634 | 45.3 | 7303 | 44.8 |
| Smoked, amount not stated | 511 | 2.8 | 623 | 3.5 | 833 | 4.7 | 358 | 2.1 | 294 | 1.8 |
| Not stated | 12 | 0.1 | 11 | 0.1 | 22 | 0.1 | 6 | 0.0 | 0 | 0.0 |
| TOTAL | 18549 | 100.0 | 17957 | 100.0 | 17871 | 100.0 | 16859 | 100.0 | 16302 | 100.0 |

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

1.9 PLACE OF BIRTH

The majority of mothers plan to give birth in a hospital labour ward, and about four per cent of mothers plan to give birth in a birth centre (Table 9, Figure 2). The reported number of mothers planning a home birth in NSW fell from 269 in 1995 to 182 in 1999.

TABLE 9

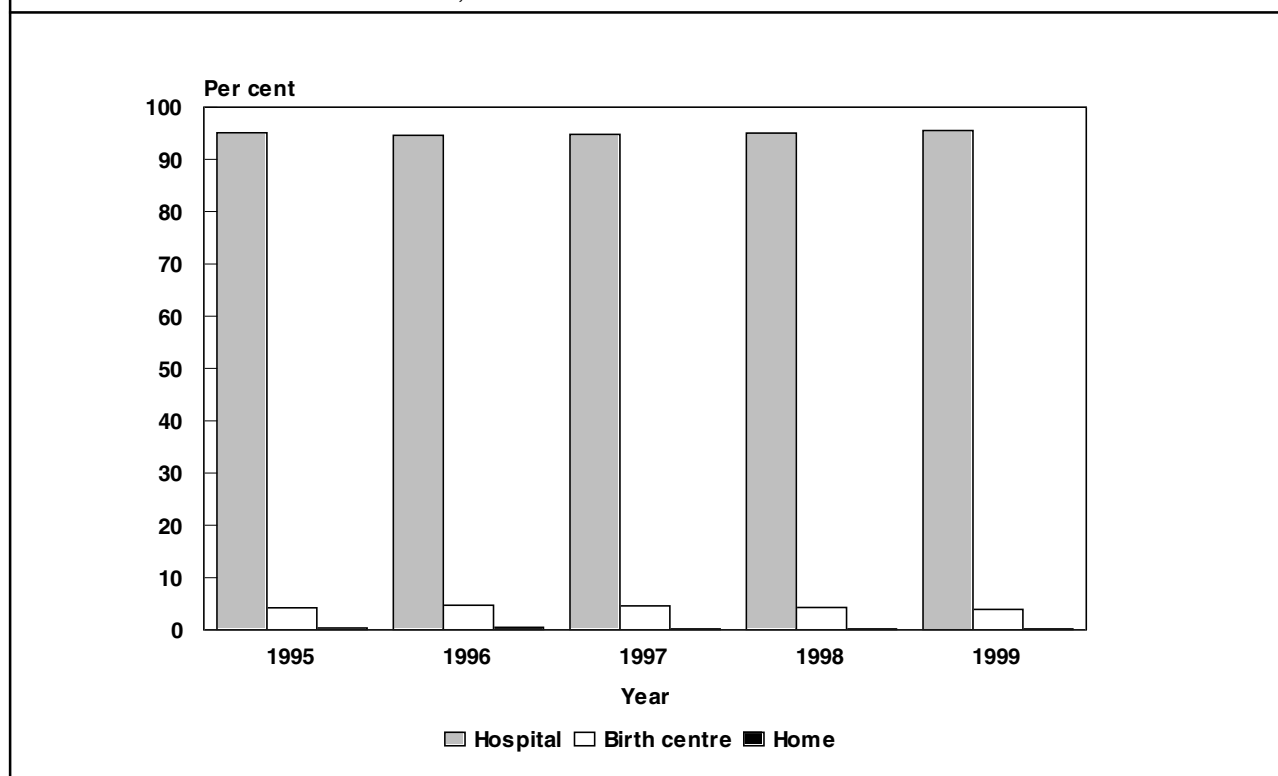
CONFINEMENTS BY PLACE OF BIRTH, NSW 1995–1999

| Place of birth | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Hospital | 82074 | 95.1 | 80714 | 94.6 | 82410 | 94.8 | 80835 | 95.0 | 82103 | 95.5 |
| Birth centre | 2741 | 3.2 | 2899 | 3.4 | 2795 | 3.2 | 2514 | 3.0 | 2249 | 2.6 |
| Planned birth centre–hospital admission | 881 | 1.0 | 1116 | 1.3 | 1188 | 1.4 | 1154 | 1.4 | 1070 | 1.2 |
| Planned home birth | 179 | 0.2 | 192 | 0.2 | 159 | 0.2 | 147 | 0.2 | 139 | 0.2 |
| Planned home birth–hospital admission | 90 | 0.1 | 55 | 0.1 | 43 | 0.0 | 55 | 0.1 | 43 | 0.1 |
| Born before arrival | 297 | 0.3 | 324 | 0.4 | 297 | 0.3 | 366 | 0.4 | 363 | 1.4 |
| Not stated | 1 | 0.0 | 2 | 0.0 | 28 | 0.0 | 1 | 0.0 | 0 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

FIGURE 2

CONFINEMENTS BY PLANNED PLACE OF BIRTH, NSW 1995–1999



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

1.10 LABOUR AND DELIVERY

The rate of induction of labour rose from 20.6 per cent in 1995 to 24.0 per cent in 1999. About one in 10 labours were augmented with oxytocics or prostaglandins in 1999. The rate of spontaneous onset of labour fell from 70.0 to 65.4 per cent (Table 10).

The rate of normal vaginal birth has decreased slightly from 71.0 per cent in 1995 to 68.6 per cent in 1999 (Table 11). The caesarean section rate increased from 17.4 to 19.7

per cent. The rate of instrumental delivery remained steady at about 10.5 per cent, accompanied by a change in the pattern of instrumental delivery: the rate of vacuum extraction rose from 3.4 to 6.0 per cent and the rate of forceps delivery declined from 7.1 to 4.9 per cent.

While operative and instrumental deliveries continue to be more common among privately than publicly insured mothers, the changing pattern in type of delivery is evident in both groups (Table 12).

TABLE 10

CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR, NSW 1995–1999

| Onset of labour | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Spontaneous | 40150 | 46.5 | 39891 | 46.8 | 39839 | 45.8 | 39281 | 46.2 | 39706 | 46.2 |
| Spontaneous augmented with ARM | 11062 | 12.8 | 10564 | 12.4 | 9764 | 11.2 | 7997 | 9.4 | 7844 | 9.1 |
| Spontaneous augmented with oxytocics–prostaglandins | 8961 | 10.4 | 9222 | 10.8 | 9622 | 11.1 | 8411 | 9.9 | 8657 | 10.1 |
| No labour | 8231 | 9.5 | 8052 | 9.4 | 8616 | 9.9 | 8800 | 10.3 | 9147 | 10.6 |
| Induced—oxytocics–prostaglandins | 5514 | 6.4 | 5644 | 6.6 | 5934 | 6.8 | 7893 | 9.3 | 7626 | 8.9 |
| Induced—ARM only | 1155 | 1.3 | 1211 | 1.4 | 1238 | 1.4 | 1462 | 1.7 | 1305 | 1.5 |
| Induced—ARM+oxytocics–prostaglandins | 11071 | 12.8 | 10601 | 12.4 | 11722 | 13.5 | 11069 | 13.0 | 11527 | 13.4 |
| Induced—other [#] | 61 | 0.1 | 67 | 0.1 | 87 | 0.1 | 138 | 0.2 | 154 | 0.2 |
| Not stated | 58 | 0.1 | 50 | 0.1 | 98 | 0.1 | 21 | 0.0 | 1 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

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

TABLE 11

CONFINEMENTS BY TYPE OF DELIVERY, NSW 1995–1999

| Type of delivery | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Normal vaginal | 61215 | 71.0 | 60339 | 70.7 | 61175 | 70.4 | 59097 | 69.5 | 58951 | 68.6 |
| Forceps | 6083 | 7.1 | 5724 | 6.7 | 5014 | 5.8 | 4478 | 5.3 | 4190 | 4.9 |
| Vacuum extraction | 2943 | 3.4 | 3286 | 3.9 | 3919 | 4.5 | 4453 | 5.2 | 5152 | 6.0 |
| Vaginal breech | 918 | 1.1 | 874 | 1.0 | 921 | 1.1 | 805 | 0.9 | 762 | 0.9 |
| Elective caesarean section | 8231 | 9.5 | 8052 | 9.4 | 8616 | 9.9 | 8800 | 10.3 | 9147 | 10.6 |
| Emergency caesarean section [#] | 6818 | 7.9 | 6955 | 8.2 | 7195 | 8.3 | 7416 | 8.7 | 7765 | 9.0 |
| Not stated | 55 | 0.1 | 72 | 0.1 | 80 | 0.1 | 23 | 0.0 | 0 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |

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

Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

TABLE 12**CONFINEMENTS BY HEALTH INSURANCE STATUS AND TYPE OF DELIVERY, NSW 1995–1998**

| Insurance status–type of delivery | Year | | | | | | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1995 | | 1996 | | 1997 | | 1998 | |
| | No. | % | No. | % | No. | % | No. | % |
| Public | | | | | | | | |
| Normal vaginal | 42004 | 75.7 | 43495 | 75.4 | 45183 | 75.1 | 43988 | 73.8 |
| Emergency caesarean section [#] | 4133 | 7.4 | 4472 | 7.7 | 4610 | 7.7 | 4987 | 8.4 |
| Elective caesarean section | 4184 | 7.5 | 4408 | 7.6 | 4684 | 7.8 | 5030 | 8.4 |
| Vacuum extraction | 1528 | 2.8 | 1587 | 2.8 | 2295 | 3.8 | 2644 | 4.4 |
| Forceps | 2970 | 5.4 | 3019 | 5.2 | 2643 | 4.4 | 2358 | 4.0 |
| Vaginal breech | 630 | 1.1 | 680 | 1.2 | 733 | 1.2 | 615 | 1.0 |
| Not stated | 36 | 0.1 | 47 | 0.1 | 45 | 0.1 | 13 | 0.0 |
| TOTAL | 55485 | 100.0 | 57708 | 100.0 | 60193 | 100.0 | 59635 | 100.0 |
| Private | | | | | | | | |
| Normal vaginal | 19194 | 62.4 | 16834 | 61.0 | 15929 | 59.8 | 13727 | 58.4 |
| Emergency caesarean section [#] | 2685 | 8.7 | 2482 | 9.0 | 2581 | 9.7 | 2268 | 9.6 |
| Elective caesarean section | 4046 | 13.2 | 3642 | 13.2 | 3927 | 14.7 | 3635 | 15.5 |
| Vacuum extraction | 1415 | 4.6 | 1697 | 6.2 | 1621 | 6.1 | 1703 | 7.2 |
| Forceps | 3112 | 10.1 | 2705 | 9.8 | 2368 | 8.9 | 2028 | 8.6 |
| Vaginal breech | 288 | 0.9 | 194 | 0.7 | 185 | 0.7 | 150 | 0.6 |
| Not stated | 17 | 0.1 | 25 | 0.1 | 34 | 0.1 | 10 | 0.0 |
| TOTAL | 30757 | 100.0 | 27579 | 100.0 | 26645 | 100.0 | 23521 | 100.0 |
| TOTAL^{##} | | | | | | | | |
| Normal vaginal | 61215 | 71.0 | 60339 | 70.7 | 61175 | 70.4 | 59097 | 69.5 |
| Emergency caesarean section [#] | 6818 | 7.9 | 6955 | 8.2 | 7195 | 8.3 | 7416 | 8.7 |
| Elective caesarean section | 8231 | 9.5 | 8052 | 9.4 | 8616 | 9.9 | 8800 | 10.3 |
| Vacuum extraction | 2943 | 3.4 | 3286 | 3.9 | 3919 | 4.5 | 4453 | 5.2 |
| Forceps | 6083 | 7.1 | 5724 | 6.7 | 5014 | 5.8 | 4478 | 5.3 |
| Vaginal breech | 918 | 1.1 | 874 | 1.0 | 921 | 1.1 | 805 | 0.9 |
| Not stated | 55 | 0.1 | 72 | 0.1 | 80 | 0.1 | 23 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 |

Source: 1995–1997: NSW Midwives Data Collection (HOIST). 1998: Linked data of the NSW Midwives Data Collection and NSW Inpatient Statistics Collection. Epidemiology and Surveillance Branch, NSW Health Department.

Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

Total includes confinements where type of health insurance was not stated.

1.11 PAIN RELIEF

Information on pain relief was collected by the MDC from 1998. In 1999 almost one half (49.3 per cent) of all mothers used nitrous oxide for pain relief, 28.3 per cent had an epidural anaesthetic, 26.5 per cent had intra-muscular narcotics, and no pain relief was reported for 13.3 per cent of mothers (Table 13).

TABLE 13**CONFINEMENTS BY TYPE OF PAIN RELIEF, NSW 1998–1999**

| Type of pain relief [#] | Year | | | |
|----------------------------------|--------------|--------------|--------------|--------------|
| | 1998 | | 1999 | |
| | No. | % | No. | % |
| Epidural | 22917 | 26.9 | 24289 | 28.3 |
| General anaesthetic | 5004 | 5.9 | 4735 | 5.5 |
| IM Narcotics | 22274 | 26.2 | 22800 | 26.5 |
| Nitrous Oxide | 41273 | 48.5 | 42361 | 49.3 |
| Spinal | 3314 | 3.9 | 4179 | 4.9 |
| Nil | 12656 | 14.9 | 11468 | 13.3 |
| TOTAL CONFINEMENTS | 85072 | 100.0 | 85967 | 100.0 |

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

More than one type of pain relief may be used.

1.12 BABY SEX

There were no significant changes in the pattern of baby sex since 1995, with slightly more male babies born than females in each year. In 1999, 44,805 (51.3 per cent) of babies were male, 42,473 (48.7 per cent) were female, 10 were of indeterminate sex, and the sex was not reported for one baby. This compares with babies born in 1995, when 44,759 (51.2 per cent) were male, 42,599 (48.7 per cent) were female, 16 were of indeterminate sex, and the sex was not reported for 17 babies.

1.13 GESTATIONAL AGE

Since 1995 there has been a slight increase in the percentage of babies born at 32–36 weeks gestation, and a decrease in the percentage born at 42 weeks or more (Table 14). The overall rate of premature births (less than 37 weeks gestation) rose from 6.3 per cent in 1995 to 7.1 per cent in 1999. There was no change in the proportion of babies who were very premature (less than 32 weeks) or extremely premature (less than 28 weeks).

TABLE 14

BIRTHS BY GESTATIONAL AGE, NSW 1995–1999

| Gestational age (weeks) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|-------------------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 20–27 | 484 | 0.6 | 531 | 0.6 | 562 | 0.6 | 588 | 0.7 | 585 | 0.7 |
| 28–31 | 570 | 0.7 | 574 | 0.7 | 596 | 0.7 | 607 | 0.7 | 625 | 0.7 |
| 32–36 | 4471 | 5.1 | 4689 | 5.4 | 4852 | 5.5 | 4758 | 5.5 | 5026 | 5.8 |
| 37–41 | 79367 | 90.8 | 78406 | 90.7 | 79987 | 90.8 | 78463 | 90.9 | 79114 | 90.6 |
| 42+ | 2480 | 2.8 | 2187 | 2.5 | 2091 | 2.4 | 1871 | 2.2 | 1932 | 2.2 |
| Not stated | 19 | 0.0 | 42 | 0.0 | 45 | 0.1 | 18 | 0.0 | 7 | 0.0 |
| TOTAL | 87391 | 100.0 | 86429 | 100.0 | 88133 | 100.0 | 86305 | 100.0 | 87289 | 100.0 |

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

1.14 BIRTHWEIGHT

Since 1995, the rate of low birthweight (less than 2,500 grams) was constant at about six per cent (Table 15). The rate was 6.3 per cent in 1999.

TABLE 15

BIRTHS BY BIRTHWEIGHT, NSW 1995–1999

| Birthweight (grams) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---------------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Less than 500 | 140 | 0.2 | 158 | 0.2 | 182 | 0.2 | 190 | 0.2 | 212 | 0.2 |
| 500–999 | 378 | 0.4 | 362 | 0.4 | 414 | 0.5 | 398 | 0.5 | 391 | 0.4 |
| 1000–1499 | 446 | 0.5 | 454 | 0.5 | 467 | 0.5 | 481 | 0.6 | 509 | 0.6 |
| 1500–1999 | 921 | 1.1 | 906 | 1.0 | 1033 | 1.2 | 1017 | 1.2 | 1076 | 1.2 |
| 2000–2499 | 3206 | 3.7 | 3158 | 3.7 | 3318 | 3.8 | 3147 | 3.6 | 3353 | 3.8 |
| 2500–2999 | 13314 | 15.2 | 13098 | 15.2 | 13487 | 15.3 | 12810 | 14.8 | 12942 | 14.8 |
| 3000–3499 | 31879 | 36.5 | 31378 | 36.3 | 31863 | 36.2 | 30974 | 35.9 | 30978 | 35.5 |
| 3500–3999 | 26835 | 30.7 | 26793 | 31.0 | 26957 | 30.6 | 26818 | 31.1 | 27173 | 31.1 |
| 4000–4499 | 8644 | 9.9 | 8593 | 9.9 | 8816 | 10.0 | 8807 | 10.2 | 9002 | 10.3 |
| 4500+ | 1592 | 1.8 | 1477 | 1.7 | 1535 | 1.7 | 1597 | 1.9 | 1629 | 1.9 |
| Not stated | 36 | 0.0 | 52 | 0.1 | 61 | 0.1 | 66 | 0.1 | 24 | 0.0 |
| TOTAL | 87391 | 100.0 | 86429 | 100.0 | 88133 | 100.0 | 86305 | 100.0 | 87289 | 100.0 |

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

1.15 APGAR SCORE

In 1999, 2.4 per cent of babies were born with an Apgar score of less than seven at five minutes and 1.1 per cent were born with a score less than four (Table 16). These rates are similar to those of previous years.

TABLE 16

BIRTHS BY APGAR SCORE AT FIVE MINUTES, NSW 1995–1999[#]

| Apgar score | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|-------------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 0–4 | 993 | 1.1 | 989 | 1.1 | 1065 | 1.2 | 1001 | 1.2 | 996 | 1.1 |
| 5–7 | 1220 | 1.4 | 1127 | 1.3 | 1116 | 1.3 | 990 | 1.1 | 1098 | 1.3 |
| 7+ | 85025 | 97.3 | 84153 | 97.4 | 85788 | 97.3 | 84114 | 97.5 | 85028 | 97.4 |
| Not stated | 153 | 0.2 | 160 | 0.2 | 164 | 0.2 | 200 | 0.2 | 167 | 0.2 |
| TOTAL | 87391 | 100.0 | 86429 | 100.0 | 88133 | 100.0 | 86305 | 100.0 | 87289 | 100.0 |

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

Includes stillbirths and live births.

1.16 PERINATAL OUTCOMES

In the period 1995–1999 the perinatal mortality rate varied from 8.8 to 9.4 per 1,000 (Table 17). In 1998, about two-thirds of all perinatal deaths were stillbirths and one quarter were neonatal deaths.

In 1999, of the 804 perinatal deaths in NSW, 791 (98.4 per cent) were reported among planned hospital births, seven (0.9 per cent) among planned birth centre births, one among planned home births, and five were among babies born before arrival at hospital.

TABLE 17

BIRTHS BY PERINATAL OUTCOME, NSW 1995–1999[#]

| Year | Liveborn surviving | | Stillborn | | Perinatal Outcome Neonatal death | | Not stated | | Total births | | Perinatal mortality rate/1,000 births |
|------|--------------------|------|-----------|-----|----------------------------------|-----|------------|-----|--------------|-------|---------------------------------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | |
| 1995 | 86600 | 99.1 | 521 | 0.6 | 248 | 0.3 | 22 | 0.0 | 87391 | 100.0 | 8.8 |
| 1996 | 85627 | 99.1 | 545 | 0.6 | 227 | 0.3 | 30 | 0.0 | 86429 | 100.0 | 8.9 |
| 1997 | 87200 | 98.9 | 587 | 0.7 | 262 | 0.3 | 84 | 0.1 | 88133 | 100.0 | 9.6 |
| 1998 | 85376 | 98.9 | 595 | 0.7 | 216 | 0.3 | 118 | 0.1 | 86305 | 100.0 | 9.4 |
| 1999 | 86468 | 99.1 | 533 | 0.6 | 271 | 0.3 | 17 | 0.0 | 87289 | 100.0 | 9.2 |

Source: NSW Midwives Data Collection (HOIST). 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.

1.17 MATERNAL DEATHS

In the period 1990–1997, 95 deaths were reported among pregnant women or women who gave birth less than six weeks previously. Of these, 33 (34.7 per cent) died of incidental causes not related to the pregnancy or its management; 47 (49.5 per cent) deaths were found to be directly due to pregnancy or its management; and 15 (15.8 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 18).

TABLE 18

MATERNAL DEATHS BY YEAR, NSW 1990–1999*

| Year | Direct | | Indirect | | Classification Total Direct & Indirect | | Incidental | | TOTAL | |
|--------|--------|------------------|----------|------------------|---|------------------|------------|------------------|-------|------------------|
| | No. | Rate/ 100,000 | No. | Rate/ 100,000 | No. | Rate/ 100,000 | No. | Rate/ 100,000 | No. | Rate/ 100,000 |
| 1990 | 4 | 4.6 | 6 | 6.9 | 10 | 11.6 | 2 | 2.3 | 12 | 13.9 |
| 1991 | 4 | 4.7 | 1 | 1.2 | 5 | 5.8 | 1 | 1.2 | 6 | 7.0 |
| 1992 | 5 | 5.7 | 1 | 1.1 | 6 | 6.8 | 5 | 5.7 | 11 | 12.5 |
| 1993 | 6 | 6.9 | 1 | 1.2 | 7 | 8.1 | 6 | 6.9 | 13 | 15.0 |
| 1994 | 8 | 9.2 | 1 | 1.2 | 9 | 10.4 | 3 | 3.5 | 12 | 13.8 |
| 1995 | 7 | 8.1 | 2 | 2.3 | 9 | 10.4 | 6 | 7.0 | 15 | 17.4 |
| 1996 | 6 | 7.0 | 1 | 1.2 | 7 | 8.2 | 5 | 5.9 | 12 | 14.1 |
| 1997 | 7 | 8.1 | 2 | 2.3 | 9 | 10.5 | 5 | 5.8 | 14 | 16.1 |
| 1998** | | | | | | | | | 12 | 14.1 |
| 1999** | | | | | | | | | 12 | 14.0 |

Source: NSW Maternal and Perinatal Committee.

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

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

Indirect deaths include those resulting from preexisting disease or disease which developed during pregnancy and was not due to direct obstetric causes but which may have been aggravated by the physiological effects of pregnancy.¹

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

** Classification incomplete for 1998 and 1999.

TABLE 19

MATERNAL DEATHS BY CAUSE, NSW 1997

| Classification | Cause | No. |
|----------------|--|-----|
| Incidental | Cardiac arrhythmia | 1 |
| Incidental | Haemoptysis following pneumonia | 1 |
| Incidental | Multiple injuries following motor vehicle accident | 1 |
| Incidental | Sotalol overdose and hypertrophic obstructive cardiomyopathy | 1 |
| Incidental | Overdose of multiple drugs and alcohol | 1 |
| Indirect | Suicide by hanging | 1 |
| Indirect | Subarachnoid haemorrhage | 1 |
| Direct | Pulmonary embolus | 2 |
| Direct | Suicide by hanging following post partum depression | 1 |
| Direct | Amniotic fluid embolism | 1 |
| Direct | Puerperal cardiomyopathy | 1 |
| Direct | Cardiac failure following pregnancy induced hypertension | 2 |
| TOTAL | | 14 |

Source: NSW Maternal and Perinatal Committee.

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

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

Indirect deaths include those resulting from preexisting disease or disease which developed during pregnancy and was not due to direct obstetric causes but which may have been aggravated by the physiological effects of pregnancy.¹

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

Reference

1. National Health and Medical Research Council. *Report on Maternal Deaths in Australia 1991–93—Report of the Maternal Mortality Working Party*. Canberra: NHMRC, 1998.

PART 2: AREA HEALTH SERVICES

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

2.1 CONFINEMENTS

Continuing the pattern of recent years, the largest numbers of confinements in 1999 were among mothers resident in the South Western Sydney (12,219, 14.2 per cent) and Western Sydney Health Areas (10,712, 12.5 per cent). These two health areas contributed about one quarter of the state's births. Seventy-nine per cent of confinements were to mothers resident in the metropolitan Health Areas (including the Central Coast, Hunter and Illawarra Health Areas), and 19.8 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 20). The proportion of women giving birth at less than 20 years of age varied from 0.8 per cent in the Northern Sydney Health Area to 14.3 per cent in the Far West Health Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 8.0 per cent in the Far West Health Area to 28.6 per cent in the Northern Sydney Health Area.

2.3 MATERNAL COUNTRY OF BIRTH

Eighty per cent of women who gave birth in NSW in 1999 were born in English speaking countries, 10.8 per cent were born in Asian countries and 4.2 per cent were born in the Middle East or Africa (Table 21).

The highest proportions of mothers born in non-English speaking countries were in the Central Sydney and South Western Sydney Health Areas. In Central Sydney, the majority of mothers born in non-English speaking countries were born in North East Asia (11.3 per cent) and South East Asia (10.4 per cent). In South Western Sydney, the majority of mothers born in non-English speaking countries were born in South East Asia (15.5 per cent).

2.4 MATERNAL ABORIGINALITY

In 1999, 2.4 per cent of mothers were reported to be Aboriginal or Torres Strait Islander (Table 22). The proportion of Aboriginal or Torres Strait Islander mothers varied from 0.1 per cent in the Northern Sydney Area to 30.4 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 1999, compared to 3.9 per cent who planned a birth centre birth and 0.2 per cent who planned a homebirth (Table 23). Planned birth centre births were most common in the Hunter and Central Sydney

Health Areas, and planned home births were most common in the Northern Rivers Health Area.

2.6 LABOUR AND DELIVERY

In 1999, the onset of labour was spontaneous in 65.4 per cent of confinements (Table 24). Labour was induced in 24.0 per cent of confinements and no labour (elective caesarean section) was reported in 10.6 per cent of confinements.

The rate of spontaneous onset of labour was highest among residents of the Far West Health Area (75.1 per cent). The highest rate of induction of labour was among residents of the New England Health Area (29.4 per cent).

Almost seventy per cent of confinements were by normal vaginal birth, 10.9 per cent were instrumental and 19.7 per cent were by caesarean section (Table 25). The highest rate of normal vaginal birth was among residents of Far West Health Area (77.9 per cent), while the highest rate of instrumental delivery was among residents of Northern Sydney Health Area (15.5 per cent). The caesarean section rate varied from 15.2 per cent among mothers resident in the South Western Sydney Health Area to 25.0 per cent in the Northern Sydney Health Area.

TABLE 20

CONFINEMENTS BY MATERNAL AGE AND HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Maternal age (years) | | | | | | | | | | | | | | | | TOTAL | |
|----------------------|----------------------|------|-------|------|-------|------|-------|------|-------|------|-------|-----|-----|-----|------------|-----|-------|-------|
| | 12-19 | | 20-24 | | 25-29 | | 30-34 | | 35-39 | | 40-44 | | 45+ | | Not stated | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Central Sydney | 149 | 2.2 | 768 | 11.6 | 1858 | 28.0 | 2194 | 33.1 | 1366 | 20.6 | 275 | 4.2 | 14 | 0.2 | 1 | 0.0 | 6625 | 100.0 |
| Northern Sydney | 77 | 0.8 | 486 | 5.3 | 2248 | 24.3 | 3787 | 41.0 | 2239 | 24.2 | 387 | 4.2 | 18 | 0.2 | 0 | 0.0 | 9242 | 100.0 |
| Western Sydney | 482 | 4.5 | 1839 | 17.2 | 3566 | 33.3 | 3189 | 29.8 | 1386 | 12.9 | 246 | 2.3 | 4 | 0.0 | 0 | 0.0 | 10712 | 100.0 |
| Wentworth | 278 | 5.7 | 902 | 18.6 | 1732 | 35.7 | 1320 | 27.2 | 519 | 10.7 | 96 | 2.0 | 4 | 0.1 | 0 | 0.0 | 4851 | 100.0 |
| South Western Sydney | 587 | 4.8 | 2389 | 19.6 | 4362 | 35.7 | 3270 | 26.8 | 1345 | 11.0 | 250 | 2.0 | 15 | 0.1 | 1 | 0.0 | 12219 | 100.0 |
| Central Coast | 196 | 5.3 | 637 | 17.4 | 1259 | 34.4 | 1041 | 28.4 | 451 | 12.3 | 80 | 2.2 | 1 | 0.0 | 0 | 0.0 | 3665 | 100.0 |
| Hunter | 445 | 6.4 | 1384 | 19.9 | 2452 | 35.2 | 1796 | 25.8 | 763 | 11.0 | 119 | 1.7 | 6 | 0.1 | 0 | 0.0 | 6965 | 100.0 |
| Illawarra | 274 | 6.2 | 814 | 18.4 | 1492 | 33.8 | 1219 | 27.6 | 527 | 11.9 | 79 | 1.8 | 6 | 0.1 | 2 | 0.0 | 4413 | 100.0 |
| South Eastern Sydney | 172 | 1.8 | 892 | 9.5 | 2779 | 29.5 | 3463 | 36.7 | 1783 | 18.9 | 325 | 3.4 | 13 | 0.1 | 1 | 0.0 | 9428 | 100.0 |
| Northern Rivers | 181 | 6.2 | 597 | 20.6 | 903 | 31.1 | 746 | 25.7 | 376 | 13.0 | 74 | 2.5 | 5 | 0.2 | 21 | 0.7 | 2903 | 100.0 |
| Mid North Coast | 248 | 8.5 | 588 | 20.2 | 952 | 32.8 | 669 | 23.0 | 373 | 12.8 | 72 | 2.5 | 3 | 0.1 | 1 | 0.0 | 2906 | 100.0 |
| New England | 219 | 9.3 | 525 | 22.4 | 775 | 33.0 | 542 | 23.1 | 238 | 10.1 | 46 | 2.0 | 3 | 0.1 | 0 | 0.0 | 2348 | 100.0 |
| Macquarie | 134 | 8.4 | 330 | 20.7 | 519 | 32.5 | 431 | 27.0 | 158 | 9.9 | 23 | 1.4 | 1 | 0.1 | 0 | 0.0 | 1596 | 100.0 |
| Mid Western | 198 | 8.6 | 459 | 20.0 | 772 | 33.6 | 623 | 27.1 | 213 | 9.3 | 31 | 1.3 | 1 | 0.0 | 0 | 0.0 | 2297 | 100.0 |
| Far West | 76 | 14.3 | 128 | 24.0 | 189 | 35.5 | 97 | 18.2 | 39 | 7.3 | 4 | 0.8 | 0 | 0.0 | 0 | 0.0 | 533 | 100.0 |
| Greater Murray | 186 | 7.1 | 516 | 19.8 | 901 | 34.6 | 676 | 26.0 | 287 | 11.0 | 36 | 1.4 | 1 | 0.0 | 0 | 0.0 | 2603 | 100.0 |
| Southern | 157 | 8.5 | 368 | 19.9 | 633 | 34.3 | 435 | 23.6 | 214 | 11.6 | 35 | 1.9 | 2 | 0.1 | 1 | 0.1 | 1845 | 100.0 |
| Other-Not stated | 40 | 4.9 | 168 | 20.6 | 286 | 35.0 | 205 | 25.1 | 95 | 11.6 | 21 | 2.6 | 0 | 0.0 | 1 | 0.1 | 816 | 100.0 |
| TOTAL | 4099 | 4.8 | 13790 | 16.0 | 27678 | 32.2 | 25703 | 29.9 | 12372 | 14.4 | 2199 | 2.6 | 97 | 0.1 | 29 | 0.0 | 85967 | 100.0 |

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

TABLE 21

CONFINEMENTS BY MATERNAL COUNTRY OF BIRTH AND HEALTH AREA OF RESIDENCE, NSW 1999*

| Health Area | Country of birth group | | | | | | | | | | | | | | | | | | TOTAL | | | |
|----------------------|------------------------|------|-------------------------|-----|-----------------------------------|-----|-----------------|-----|---------------------------|-----|---|-----|----------------------|-----|-----------------|------|-----------------|------|---------------|-----|-------|-------|
| | English speaking | | Central & South America | | Melanesia, Micronesia & Polynesia | | Southern Europe | | Western & Northern Europe | | Eastern Europe, Russia, Central Asian & Baltic States | | Middle East & Africa | | South East Asia | | North East Asia | | Southern Asia | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Central Sydney | 3749 | 56.6 | 86 | 1.3 | 247 | 3.7 | 201 | 3.0 | 76 | 1.1 | 42 | 0.6 | 578 | 8.7 | 687 | 10.4 | 746 | 11.3 | 211 | 3.2 | 6623 | 100.0 |
| Northern Sydney | 7288 | 78.9 | 79 | 0.9 | 82 | 0.9 | 115 | 1.2 | 189 | 2.0 | 73 | 0.8 | 230 | 2.5 | 346 | 3.7 | 644 | 7.0 | 195 | 2.1 | 9241 | 100.0 |
| Western Sydney | 6841 | 63.9 | 96 | 0.9 | 449 | 4.2 | 182 | 1.7 | 52 | 0.5 | 64 | 0.6 | 991 | 9.3 | 828 | 7.7 | 704 | 6.6 | 504 | 4.7 | 10711 | 100.0 |
| Wentworth | 4402 | 90.7 | 32 | 0.7 | 49 | 1.0 | 58 | 1.2 | 33 | 0.7 | 13 | 0.3 | 69 | 1.4 | 106 | 2.2 | 26 | 0.5 | 63 | 1.3 | 4851 | 100.0 |
| South Western Sydney | 7570 | 62.0 | 233 | 1.9 | 419 | 3.4 | 357 | 2.9 | 55 | 0.5 | 72 | 0.6 | 1111 | 9.1 | 1892 | 15.5 | 328 | 2.7 | 181 | 1.5 | 12218 | 100.0 |
| Central Coast | 3539 | 96.6 | 12 | 0.3 | 21 | 0.6 | 8 | 0.2 | 19 | 0.5 | 3 | 0.1 | 10 | 0.3 | 32 | 0.9 | 13 | 0.4 | 8 | 0.2 | 3665 | 100.0 |
| Hunter | 6731 | 96.7 | 10 | 0.1 | 26 | 0.4 | 37 | 0.5 | 19 | 0.3 | 6 | 0.1 | 16 | 0.2 | 87 | 1.2 | 19 | 0.3 | 13 | 0.2 | 6964 | 100.0 |
| Illawarra | 4047 | 91.7 | 19 | 0.4 | 27 | 0.6 | 103 | 2.3 | 32 | 0.7 | 9 | 0.2 | 61 | 1.4 | 74 | 1.7 | 28 | 0.6 | 12 | 0.3 | 4412 | 100.0 |
| South Eastern Sydney | 6948 | 73.7 | 134 | 1.4 | 138 | 1.5 | 244 | 2.6 | 118 | 1.3 | 122 | 1.3 | 468 | 5.0 | 466 | 4.9 | 640 | 6.8 | 150 | 1.6 | 9428 | 100.0 |
| Northern Rivers | 2788 | 96.1 | 4 | 0.1 | 13 | 0.4 | 3 | 0.1 | 27 | 0.9 | 2 | 0.1 | 10 | 0.3 | 34 | 1.2 | 15 | 0.5 | 6 | 0.2 | 2902 | 100.0 |
| Mid North Coast | 2802 | 96.5 | 7 | 0.2 | 11 | 0.4 | 1 | 0.0 | 14 | 0.5 | 3 | 0.1 | 7 | 0.2 | 35 | 1.2 | 10 | 0.3 | 14 | 0.5 | 2904 | 100.0 |
| New England | 2289 | 97.5 | 2 | 0.1 | 6 | 0.3 | 2 | 0.1 | 14 | 0.6 | 2 | 0.1 | 5 | 0.2 | 13 | 0.6 | 10 | 0.4 | 5 | 0.2 | 2348 | 100.0 |
| Macquarie | 1565 | 98.1 | 1 | 0.1 | 5 | 0.3 | 1 | 0.1 | 5 | 0.3 | 2 | 0.1 | 5 | 0.3 | 8 | 0.5 | 4 | 0.3 | 0 | 0.0 | 1596 | 100.0 |
| Mid Western | 2241 | 97.6 | 1 | 0.0 | 9 | 0.4 | 7 | 0.3 | 10 | 0.4 | 4 | 0.2 | 1 | 0.0 | 14 | 0.6 | 8 | 0.3 | 2 | 0.1 | 2297 | 100.0 |
| Far West | 526 | 98.7 | 0 | 0.0 | 1 | 0.2 | 1 | 0.2 | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 | 3 | 0.6 | 1 | 0.2 | 0 | 0.0 | 533 | 100.0 |
| Greater Murray | 2513 | 96.5 | 3 | 0.1 | 18 | 0.7 | 6 | 0.2 | 7 | 0.3 | 1 | 0.0 | 8 | 0.3 | 9 | 0.3 | 12 | 0.5 | 26 | 1.0 | 2603 | 100.0 |
| Southern | 1773 | 96.1 | 2 | 0.1 | 12 | 0.7 | 8 | 0.4 | 11 | 0.6 | 2 | 0.1 | 5 | 0.3 | 16 | 0.9 | 9 | 0.5 | 6 | 0.3 | 1844 | 100.0 |
| Other-Not stated | 769 | 94.4 | 4 | 0.5 | 7 | 0.9 | 3 | 0.4 | 8 | 1.0 | 1 | 0.1 | 4 | 0.5 | 9 | 1.1 | 8 | 1.0 | 2 | 0.2 | 815 | 100.0 |
| TOTAL | 68381 | 79.6 | 725 | 0.8 | 1540 | 1.8 | 1337 | 1.6 | 690 | 0.8 | 421 | 0.5 | 3579 | 4.2 | 4659 | 5.4 | 3225 | 3.8 | 1398 | 1.6 | 85955 | 100.0 |

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

Excludes 12 mothers for whom country of birth was not stated. Maternal countries of birth and country of birth groups are shown in Appendix 3.

TABLE 22**CONFINEMENTS BY MATERNAL ABORIGINALITY AND HEALTH AREA OF RESIDENCE, NSW 1999**

| Health Area | Aboriginal Torres Strait Islander | | Aboriginality Non-Aboriginal Torres Strait Islander | | Not stated | | TOTAL | |
|----------------------|---|------|--|------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| | Central Sydney | 61 | 0.9 | 6564 | 99.1 | 0 | 0.0 | 6625 |
| Northern Sydney | 9 | 0.1 | 9233 | 99.9 | 0 | 0.0 | 9242 | 100.0 |
| Western Sydney | 139 | 1.3 | 10573 | 98.7 | 0 | 0.0 | 10712 | 100.0 |
| Wentworth | 74 | 1.5 | 4777 | 98.5 | 0 | 0.0 | 4851 | 100.0 |
| South Western Sydney | 91 | 0.7 | 12128 | 99.3 | 0 | 0.0 | 12219 | 100.0 |
| Central Coast | 50 | 1.4 | 3614 | 98.6 | 1 | 0.0 | 3665 | 100.0 |
| Hunter | 98 | 1.4 | 6867 | 98.6 | 0 | 0.0 | 6965 | 100.0 |
| Illawarra | 104 | 2.4 | 4309 | 97.6 | 0 | 0.0 | 4413 | 100.0 |
| South Eastern Sydney | 45 | 0.5 | 9383 | 99.5 | 0 | 0.0 | 9428 | 100.0 |
| Northern Rivers | 162 | 5.6 | 2738 | 94.3 | 3 | 0.1 | 2903 | 100.0 |
| Mid North Coast | 230 | 7.9 | 2674 | 92.0 | 2 | 0.1 | 2906 | 100.0 |
| New England | 273 | 11.6 | 2075 | 88.4 | 0 | 0.0 | 2348 | 100.0 |
| Macquarie | 230 | 14.4 | 1365 | 85.5 | 1 | 0.1 | 1596 | 100.0 |
| Mid Western | 123 | 5.4 | 2174 | 94.6 | 0 | 0.0 | 2297 | 100.0 |
| Far West | 162 | 30.4 | 371 | 69.6 | 0 | 0.0 | 533 | 100.0 |
| Greater Murray | 116 | 4.5 | 2487 | 95.5 | 0 | 0.0 | 2603 | 100.0 |
| Southern | 68 | 3.7 | 1775 | 96.2 | 2 | 0.1 | 1845 | 100.0 |
| Other-Not stated | 24 | 2.9 | 792 | 97.1 | 0 | 0.0 | 816 | 100.0 |
| TOTAL | 2059 | 2.4 | 83899 | 97.6 | 9 | 0.0 | 85967 | 100.0 |

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

TABLE 23**CONFINEMENTS BY PLACE OF BIRTH AND HEALTH AREA OF RESIDENCE, NSW 1999**

| Health Area | Hospital | | Birth centre | | Planned birth centre hospital admission | | Place of birth | | | | Born before arrival | | TOTAL | |
|----------------------|----------------|------|--------------|------|---|-----|--------------------|---------------------------------------|---------------------|-----|---------------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | Planned home birth | Planned home birth hospital admission | Born before arrival | No. | % | No. | % | |
| | Central Sydney | 5964 | 90.0 | 432 | 6.5 | 195 | 2.9 | 9 | 0.1 | 1 | 0.0 | 24 | 0.4 | 6625 |
| Northern Sydney | 9074 | 98.2 | 105 | 1.1 | 33 | 0.4 | 11 | 0.1 | 3 | 0.0 | 16 | 0.2 | 9242 | 100.0 |
| Western Sydney | 10157 | 94.8 | 253 | 2.4 | 238 | 2.2 | 5 | 0.0 | 5 | 0.0 | 54 | 0.5 | 10712 | 100.0 |
| Wentworth | 4748 | 97.9 | 38 | 0.8 | 36 | 0.7 | 8 | 0.2 | 4 | 0.1 | 17 | 0.4 | 4851 | 100.0 |
| South Western Sydney | 11997 | 98.2 | 115 | 0.9 | 41 | 0.3 | 7 | 0.1 | 3 | 0.0 | 56 | 0.5 | 12219 | 100.0 |
| Central Coast | 3624 | 98.9 | 15 | 0.4 | 5 | 0.1 | 5 | 0.1 | 0 | 0.0 | 16 | 0.4 | 3665 | 100.0 |
| Hunter | 5997 | 86.1 | 768 | 11.0 | 171 | 2.5 | 2 | 0.0 | 2 | 0.0 | 25 | 0.4 | 6965 | 100.0 |
| Illawarra | 4323 | 98.0 | 14 | 0.3 | 41 | 0.9 | 15 | 0.3 | 2 | 0.0 | 18 | 0.4 | 4413 | 100.0 |
| South Eastern Sydney | 8704 | 92.3 | 449 | 4.8 | 222 | 2.4 | 7 | 0.1 | 4 | 0.0 | 42 | 0.4 | 9428 | 100.0 |
| Northern Rivers | 2811 | 96.8 | 11 | 0.4 | 11 | 0.4 | 36 | 1.2 | 14 | 0.5 | 20 | 0.7 | 2903 | 100.0 |
| Mid North Coast | 2818 | 97.0 | 24 | 0.8 | 32 | 1.1 | 14 | 0.5 | 3 | 0.1 | 15 | 0.5 | 2906 | 100.0 |
| New England | 2335 | 99.4 | 3 | 0.1 | 5 | 0.2 | 0 | 0.0 | 1 | 0.0 | 4 | 0.2 | 2348 | 100.0 |
| Macquarie | 1578 | 98.9 | 3 | 0.2 | 7 | 0.4 | 1 | 0.1 | 0 | 0.0 | 7 | 0.4 | 1596 | 100.0 |
| Mid Western | 2253 | 98.1 | 4 | 0.2 | 23 | 1.0 | 2 | 0.1 | 1 | 0.0 | 14 | 0.6 | 2297 | 100.0 |
| Far West | 524 | 98.3 | 0 | 0.0 | 1 | 0.2 | 1 | 0.2 | 0 | 0.0 | 7 | 1.3 | 533 | 100.0 |
| Greater Murray | 2584 | 99.3 | 3 | 0.1 | 1 | 0.0 | 1 | 0.0 | 0 | 0.0 | 14 | 0.5 | 2603 | 100.0 |
| Southern | 1814 | 98.3 | 6 | 0.3 | 4 | 0.2 | 13 | 0.7 | 0 | 0.0 | 8 | 0.4 | 1845 | 100.0 |
| Other-Not stated | 798 | 97.8 | 6 | 0.7 | 4 | 0.5 | 2 | 0.2 | 0 | 0.0 | 6 | 0.7 | 816 | 100.0 |
| TOTAL | 82103 | 95.5 | 2249 | 2.6 | 1070 | 1.2 | 139 | 0.2 | 43 | 0.1 | 363 | 0.4 | 85967 | 100.0 |

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

TABLE 24

CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR AND HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Spontaneous | | Spontaneous augmented with ARM | | Spontaneous augmented with oxytocics prostaglandins | | No labour | | Onset of labour Induced-oxytocics prostaglandins | | Induced ARM only | | Induced-ARM+ oxytocics prostaglandins | | Induced-other# | | Not stated | | TOTAL | |
|----------------------|----------------|------|--------------------------------|------|---|------|-----------|------|--|------|------------------|-----|---------------------------------------|------|----------------|-----|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| | Central Sydney | 3299 | 49.8 | 303 | 4.6 | 957 | 14.4 | 662 | 10.0 | 952 | 14.4 | 59 | 0.9 | 384 | 5.8 | 9 | 0.1 | 0 | 0.0 | 6625 |
| Northern Sydney | 3427 | 37.1 | 777 | 8.4 | 1248 | 13.5 | 1340 | 14.5 | 747 | 8.1 | 189 | 2.0 | 1503 | 16.3 | 11 | 0.1 | 0 | 0.0 | 9242 | 100.0 |
| Western Sydney | 5317 | 49.6 | 847 | 7.9 | 1100 | 10.3 | 989 | 9.2 | 585 | 5.5 | 59 | 0.6 | 1797 | 16.8 | 18 | 0.2 | 0 | 0.0 | 10712 | 100.0 |
| Wentworth | 2433 | 50.2 | 384 | 7.9 | 344 | 7.1 | 526 | 10.8 | 351 | 7.2 | 49 | 1.0 | 752 | 15.5 | 12 | 0.2 | 0 | 0.0 | 4851 | 100.0 |
| South Western Sydney | 5947 | 48.7 | 1170 | 9.6 | 1166 | 9.5 | 1043 | 8.5 | 979 | 8.0 | 129 | 1.1 | 1731 | 14.2 | 54 | 0.4 | 0 | 0.0 | 12219 | 100.0 |
| Central Coast | 1508 | 41.1 | 451 | 12.3 | 439 | 12.0 | 393 | 10.7 | 275 | 7.5 | 87 | 2.4 | 510 | 13.9 | 2 | 0.1 | 0 | 0.0 | 3665 | 100.0 |
| Hunter | 4050 | 58.1 | 260 | 3.7 | 262 | 3.8 | 688 | 9.9 | 642 | 9.2 | 216 | 3.1 | 843 | 12.1 | 4 | 0.1 | 0 | 0.0 | 6965 | 100.0 |
| Illawarra | 1994 | 45.2 | 449 | 10.2 | 397 | 9.0 | 414 | 9.4 | 355 | 8.0 | 70 | 1.6 | 715 | 16.2 | 19 | 0.4 | 0 | 0.0 | 4413 | 100.0 |
| South Eastern Sydney | 3529 | 37.4 | 1100 | 11.7 | 1369 | 14.5 | 1151 | 12.2 | 900 | 9.5 | 128 | 1.4 | 1245 | 13.2 | 6 | 0.1 | 0 | 0.0 | 9428 | 100.0 |
| Northern Rivers | 1425 | 49.1 | 319 | 11.0 | 263 | 9.1 | 289 | 10.0 | 261 | 9.0 | 47 | 1.6 | 298 | 10.3 | 0 | 0.0 | 1 | 0.0 | 2903 | 100.0 |
| Mid North Coast | 1352 | 46.5 | 303 | 10.4 | 240 | 8.3 | 335 | 11.5 | 259 | 8.9 | 36 | 1.2 | 377 | 13.0 | 4 | 0.1 | 0 | 0.0 | 2906 | 100.0 |
| New England | 855 | 36.4 | 356 | 15.2 | 190 | 8.1 | 257 | 10.9 | 316 | 13.5 | 50 | 2.1 | 324 | 13.8 | 0 | 0.0 | 0 | 0.0 | 2348 | 100.0 |
| Macquarie | 741 | 46.4 | 197 | 12.3 | 123 | 7.7 | 168 | 10.5 | 126 | 7.9 | 42 | 2.6 | 195 | 12.2 | 4 | 0.3 | 0 | 0.0 | 1596 | 100.0 |
| Mid Western | 981 | 42.7 | 340 | 14.8 | 153 | 6.7 | 283 | 12.3 | 207 | 9.0 | 51 | 2.2 | 280 | 12.2 | 2 | 0.1 | 0 | 0.0 | 2297 | 100.0 |
| Far West | 289 | 54.2 | 61 | 11.4 | 50 | 9.4 | 43 | 8.1 | 33 | 6.2 | 8 | 1.5 | 48 | 9.0 | 1 | 0.2 | 0 | 0.0 | 533 | 100.0 |
| Greater Murray | 1234 | 47.4 | 245 | 9.4 | 139 | 5.3 | 293 | 11.3 | 389 | 14.9 | 56 | 2.2 | 240 | 9.2 | 7 | 0.3 | 0 | 0.0 | 2603 | 100.0 |
| Southern | 952 | 51.6 | 195 | 10.6 | 128 | 6.9 | 200 | 10.8 | 188 | 10.2 | 22 | 1.2 | 160 | 8.7 | 0 | 0.0 | 0 | 0.0 | 1845 | 100.0 |
| Other-Not stated | 373 | 45.7 | 87 | 10.7 | 89 | 10.9 | 73 | 8.9 | 61 | 7.5 | 7 | 0.9 | 125 | 15.3 | 1 | 0.1 | 0 | 0.0 | 816 | 100.0 |
| TOTAL | 39706 | 46.2 | 7844 | 9.1 | 8657 | 10.1 | 9147 | 10.6 | 7626 | 8.9 | 1305 | 1.5 | 11527 | 13.4 | 154 | 0.2 | 1 | 0.0 | 85967 | 100.0 |

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

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

TABLE 25

CONFINEMENTS BY TYPE OF DELIVERY AND HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Normal vaginal | | Forceps | | Vacuum extraction | | Type of delivery Vaginal breech | | Elective caesarean section | | Emergency caesarean section# | | TOTAL | |
|----------------------|----------------|------|---------|-----|-------------------|-----|---------------------------------|-----|----------------------------|------|------------------------------|------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| | Central Sydney | 4361 | 65.8 | 329 | 5.0 | 524 | 7.9 | 59 | 0.9 | 662 | 10.0 | 690 | 10.4 | 6625 |
| Northern Sydney | 5458 | 59.1 | 577 | 6.2 | 851 | 9.2 | 42 | 0.5 | 1340 | 14.5 | 974 | 10.5 | 9242 | 100.0 |
| Western Sydney | 7512 | 70.1 | 734 | 6.9 | 462 | 4.3 | 111 | 1.0 | 989 | 9.2 | 904 | 8.4 | 10712 | 100.0 |
| Wentworth | 3407 | 70.2 | 226 | 4.7 | 189 | 3.9 | 43 | 0.9 | 526 | 10.8 | 460 | 9.5 | 4851 | 100.0 |
| South Western Sydney | 9059 | 74.1 | 374 | 3.1 | 765 | 6.3 | 163 | 1.3 | 1043 | 8.5 | 815 | 6.7 | 12219 | 100.0 |
| Central Coast | 2466 | 67.3 | 104 | 2.8 | 325 | 8.9 | 32 | 0.9 | 393 | 10.7 | 345 | 9.4 | 3665 | 100.0 |
| Hunter | 5002 | 71.8 | 176 | 2.5 | 420 | 6.0 | 55 | 0.8 | 688 | 9.9 | 624 | 9.0 | 6965 | 100.0 |
| Illawarra | 3203 | 72.6 | 141 | 3.2 | 301 | 6.8 | 41 | 0.9 | 414 | 9.4 | 313 | 7.1 | 4413 | 100.0 |
| South Eastern Sydney | 5697 | 60.4 | 719 | 7.6 | 683 | 7.2 | 77 | 0.8 | 1151 | 12.2 | 1101 | 11.7 | 9428 | 100.0 |
| Northern Rivers | 2130 | 73.4 | 121 | 4.2 | 56 | 1.9 | 20 | 0.7 | 289 | 10.0 | 287 | 9.9 | 2903 | 100.0 |
| Mid North Coast | 2105 | 72.4 | 149 | 5.1 | 42 | 1.4 | 28 | 1.0 | 335 | 11.5 | 247 | 8.5 | 2906 | 100.0 |
| New England | 1700 | 72.4 | 80 | 3.4 | 109 | 4.6 | 15 | 0.6 | 257 | 10.9 | 187 | 8.0 | 2348 | 100.0 |
| Macquarie | 1182 | 74.1 | 73 | 4.6 | 46 | 2.9 | 11 | 0.7 | 168 | 10.5 | 116 | 7.3 | 1596 | 100.0 |
| Mid Western | 1603 | 69.8 | 105 | 4.6 | 63 | 2.7 | 20 | 0.9 | 283 | 12.3 | 223 | 9.7 | 2297 | 100.0 |
| Far West | 415 | 77.9 | 20 | 3.8 | 9 | 1.7 | 6 | 1.1 | 43 | 8.1 | 40 | 7.5 | 533 | 100.0 |
| Greater Murray | 1736 | 66.7 | 162 | 6.2 | 168 | 6.5 | 20 | 0.8 | 293 | 11.3 | 224 | 8.6 | 2603 | 100.0 |
| Southern | 1333 | 72.2 | 54 | 2.9 | 107 | 5.8 | 11 | 0.6 | 200 | 10.8 | 140 | 7.6 | 1845 | 100.0 |
| Other-Not stated | 582 | 71.3 | 46 | 5.6 | 32 | 3.9 | 8 | 1.0 | 73 | 8.9 | 75 | 9.2 | 816 | 100.0 |
| TOTAL | 58951 | 68.6 | 4190 | 4.9 | 5152 | 6.0 | 762 | 0.9 | 9147 | 10.6 | 7765 | 9.0 | 85967 | 100.0 |

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

Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

2.7 BIRTHWEIGHT

In 1999, 6.3 per cent of births were low birthweight (less than 2,500 grams). These comprised 0.6 per cent of birthweight less than 1,000 grams, 0.6 per cent in the 1,000 to 1,499 gram range, and 5.1 per cent in the 1,500 to 2,499 gram range (Table 26). The highest rate of low birthweight was in the Far West Health Area (8.9 per cent) and the lowest rate was in the Southern Health Area (4.8 per cent).

2.8 GESTATIONAL AGE

The majority of births (90.6 per cent) were at term and 2.2 per cent were post-term (42-plus weeks). The 7.1 per cent of preterm births comprised 0.7 per cent born at 20–27 weeks, 0.7 per cent at 28–31 weeks and 5.8 per cent at 32–36 weeks. The highest rate of preterm birth was in the Central Coast Health Area (9.5 per cent), while the lowest rate was 4.5 per cent in the Southern Health Area (Table 27).

TABLE 26

BIRTHS BY BIRTHWEIGHT AND HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Birthweight (grams) | | | | | | | | | | | | | | | | | | TOTAL No. % | | | | | |
|------------------|---------------------|-----|---------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|------|-----------|------|-----------|------|-----------|------|----------------|-------|----|------------|-------|-------|
| | Less than 500 | | 500–999 | | 1000–1499 | | 1500–1999 | | 2000–2499 | | 2500–2999 | | 3000–3499 | | 3500–3999 | | 4000–4499 | | | 4500+ | | Not stated | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | No. | % | No. | % | No. |
| Central Sydney | 16 | 0.2 | 29 | 0.4 | 42 | 0.6 | 77 | 1.1 | 232 | 3.5 | 1003 | 14.9 | 2543 | 37.9 | 2038 | 30.4 | 621 | 9.3 | 110 | 1.6 | 2 | 0.0 | 6713 | 100.0 |
| Northern Sydney | 18 | 0.2 | 41 | 0.4 | 45 | 0.5 | 105 | 1.1 | 310 | 3.3 | 1236 | 13.1 | 3293 | 34.9 | 3076 | 32.6 | 1116 | 11.8 | 185 | 2.0 | 2 | 0.0 | 9427 | 100.0 |
| Western Sydney | 24 | 0.2 | 52 | 0.5 | 50 | 0.5 | 136 | 1.3 | 391 | 3.6 | 1688 | 15.5 | 3915 | 36.1 | 3292 | 30.3 | 1109 | 10.2 | 201 | 1.9 | 1 | 0.0 | 10859 | 100.0 |
| Wentworth | 6 | 0.1 | 29 | 0.6 | 29 | 0.6 | 64 | 1.3 | 178 | 3.6 | 726 | 14.8 | 1681 | 34.2 | 1580 | 32.2 | 519 | 10.6 | 99 | 2.0 | 0 | 0.0 | 4911 | 100.0 |
| South Western | | | | | | | | | | | | | | | | | | | | | | | | |
| Sydney | 32 | 0.3 | 61 | 0.5 | 72 | 0.6 | 155 | 1.2 | 530 | 4.3 | 2028 | 16.3 | 4459 | 35.9 | 3727 | 30.0 | 1146 | 9.2 | 207 | 1.7 | 3 | 0.0 | 12420 | 100.0 |
| Central Coast | 13 | 0.3 | 15 | 0.4 | 29 | 0.8 | 55 | 1.5 | 175 | 4.7 | 499 | 13.4 | 1250 | 33.5 | 1166 | 31.3 | 425 | 11.4 | 101 | 2.7 | 1 | 0.0 | 3729 | 100.0 |
| Hunter | 23 | 0.3 | 43 | 0.6 | 65 | 0.9 | 97 | 1.4 | 302 | 4.3 | 940 | 13.3 | 2338 | 33.0 | 2307 | 32.6 | 820 | 11.6 | 149 | 2.1 | 1 | 0.0 | 7085 | 100.0 |
| Illawarra | 6 | 0.1 | 19 | 0.4 | 29 | 0.6 | 63 | 1.4 | 169 | 3.8 | 656 | 14.6 | 1582 | 35.3 | 1409 | 31.4 | 470 | 10.5 | 81 | 1.8 | 1 | 0.0 | 4485 | 100.0 |
| South Eastern | | | | | | | | | | | | | | | | | | | | | | | | |
| Sydney | 32 | 0.3 | 38 | 0.4 | 60 | 0.6 | 110 | 1.1 | 338 | 3.5 | 1401 | 14.6 | 3570 | 37.3 | 2951 | 30.8 | 921 | 9.6 | 155 | 1.6 | 2 | 0.0 | 9578 | 100.0 |
| Northern Rivers | 7 | 0.2 | 6 | 0.2 | 11 | 0.4 | 33 | 1.1 | 104 | 3.5 | 415 | 14.1 | 999 | 34.0 | 968 | 32.9 | 339 | 11.5 | 51 | 1.7 | 5 | 0.2 | 2938 | 100.0 |
| Mid North Coast | 6 | 0.2 | 9 | 0.3 | 25 | 0.8 | 50 | 1.7 | 129 | 4.4 | 470 | 15.9 | 1005 | 34.1 | 880 | 29.8 | 314 | 10.6 | 60 | 2.0 | 1 | 0.0 | 2949 | 100.0 |
| New England | 6 | 0.3 | 3 | 0.1 | 17 | 0.7 | 26 | 1.1 | 99 | 4.2 | 414 | 17.4 | 847 | 35.7 | 726 | 30.6 | 202 | 8.5 | 32 | 1.3 | 1 | 0.0 | 2373 | 100.0 |
| Macquarie | 6 | 0.4 | 7 | 0.4 | 5 | 0.3 | 16 | 1.0 | 63 | 3.9 | 244 | 15.1 | 566 | 35.1 | 502 | 31.1 | 168 | 10.4 | 36 | 2.2 | 0 | 0.0 | 1613 | 100.0 |
| Mid Western | 4 | 0.2 | 17 | 0.7 | 11 | 0.5 | 29 | 1.2 | 93 | 4.0 | 337 | 14.4 | 853 | 36.5 | 696 | 29.8 | 262 | 11.2 | 33 | 1.4 | 0 | 0.0 | 2335 | 100.0 |
| Far West | 1 | 0.2 | 4 | 0.7 | 3 | 0.6 | 7 | 1.3 | 33 | 6.1 | 93 | 17.3 | 209 | 38.8 | 140 | 26.0 | 41 | 7.6 | 7 | 1.3 | 0 | 0.0 | 538 | 100.0 |
| Greater Murray | 7 | 0.3 | 10 | 0.4 | 8 | 0.3 | 24 | 0.9 | 109 | 4.1 | 403 | 15.2 | 908 | 34.2 | 847 | 31.9 | 268 | 10.1 | 67 | 2.5 | 1 | 0.0 | 2652 | 100.0 |
| Southern | 4 | 0.2 | 6 | 0.3 | 3 | 0.2 | 11 | 0.6 | 66 | 3.5 | 281 | 15.1 | 673 | 36.1 | 603 | 32.4 | 170 | 9.1 | 43 | 2.3 | 3 | 0.2 | 1863 | 100.0 |
| Other–Not stated | 1 | 0.1 | 2 | 0.2 | 5 | 0.6 | 18 | 2.2 | 32 | 3.9 | 108 | 13.2 | 287 | 35.0 | 265 | 32.3 | 91 | 11.1 | 12 | 1.5 | 0 | 0.0 | 821 | 100.0 |
| TOTAL | 212 | 0.2 | 391 | 0.4 | 509 | 0.6 | 1076 | 1.2 | 3353 | 3.8 | 12942 | 14.8 | 30978 | 35.5 | 27173 | 31.1 | 9002 | 10.3 | 1629 | 1.9 | 24 | 0.0 | 87289 | 100.0 |

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

TABLE 27

BIRTHS BY GESTATIONAL AGE AND HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Gestational age (weeks) | | | | | | | | | | Not stated | | TOTAL | |
|------------------|-------------------------|-----|-------|-----|-------|-----|-------|------|------|-----|------------|-----|-------|-------|
| | 20–27 | | 28–31 | | 32–36 | | 37–41 | | 42+ | | No. | % | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | 45 | 0.7 | 53 | 0.8 | 372 | 5.5 | 6117 | 91.1 | 126 | 1.9 | 0 | 0.0 | 6713 | 100.0 |
| Northern Sydney | 58 | 0.6 | 55 | 0.6 | 483 | 5.1 | 8621 | 91.5 | 209 | 2.2 | 1 | 0.0 | 9427 | 100.0 |
| Western Sydney | 69 | 0.6 | 61 | 0.6 | 607 | 5.6 | 9826 | 90.5 | 296 | 2.7 | 0 | 0.0 | 10859 | 100.0 |
| Wentworth | 32 | 0.7 | 34 | 0.7 | 277 | 5.6 | 4423 | 90.1 | 145 | 3.0 | 0 | 0.0 | 4911 | 100.0 |
| South Western | | | | | | | | | | | | | | |
| Sydney | 86 | 0.7 | 95 | 0.8 | 756 | 6.1 | 11222 | 90.4 | 259 | 2.1 | 2 | 0.0 | 12420 | 100.0 |
| Central Coast | 29 | 0.8 | 33 | 0.9 | 292 | 7.8 | 3311 | 88.8 | 64 | 1.7 | 0 | 0.0 | 3729 | 100.0 |
| Hunter | 67 | 0.9 | 79 | 1.1 | 484 | 6.8 | 6262 | 88.4 | 193 | 2.7 | 0 | 0.0 | 7085 | 100.0 |
| Illawarra | 20 | 0.4 | 39 | 0.9 | 245 | 5.5 | 4100 | 91.4 | 81 | 1.8 | 0 | 0.0 | 4485 | 100.0 |
| South Eastern | | | | | | | | | | | | | | |
| Sydney | 69 | 0.7 | 71 | 0.7 | 534 | 5.6 | 8793 | 91.8 | 110 | 1.1 | 1 | 0.0 | 9578 | 100.0 |
| Northern Rivers | 16 | 0.5 | 10 | 0.3 | 156 | 5.3 | 2617 | 89.1 | 136 | 4.6 | 3 | 0.1 | 2938 | 100.0 |
| Mid North Coast | 19 | 0.6 | 28 | 0.9 | 164 | 5.6 | 2660 | 90.2 | 78 | 2.6 | 0 | 0.0 | 2949 | 100.0 |
| New England | 7 | 0.3 | 11 | 0.5 | 131 | 5.5 | 2191 | 92.3 | 33 | 1.4 | 0 | 0.0 | 2373 | 100.0 |
| Macquarie | 9 | 0.6 | 13 | 0.8 | 89 | 5.5 | 1488 | 92.3 | 14 | 0.9 | 0 | 0.0 | 1613 | 100.0 |
| Mid Western | 22 | 0.9 | 18 | 0.8 | 125 | 5.4 | 2115 | 90.6 | 55 | 2.4 | 0 | 0.0 | 2335 | 100.0 |
| Far West | 6 | 1.1 | 3 | 0.6 | 39 | 7.2 | 481 | 89.4 | 9 | 1.7 | 0 | 0.0 | 538 | 100.0 |
| Greater Murray | 16 | 0.6 | 14 | 0.5 | 145 | 5.5 | 2429 | 91.6 | 48 | 1.8 | 0 | 0.0 | 2652 | 100.0 |
| Southern | 10 | 0.5 | 3 | 0.2 | 71 | 3.8 | 1734 | 93.1 | 45 | 2.4 | 0 | 0.0 | 1863 | 100.0 |
| Other–Not stated | 5 | 0.6 | 5 | 0.6 | 56 | 6.8 | 724 | 88.2 | 31 | 3.8 | 0 | 0.0 | 821 | 100.0 |
| TOTAL | 585 | 0.7 | 625 | 0.7 | 5026 | 5.8 | 79114 | 90.6 | 1932 | 2.2 | 7 | 0.0 | 87289 | 100.0 |

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

2.9 PERINATAL OUTCOMES

The perinatal mortality rate in 1999 was 9.2 per 1,000 births. This rate includes all births and deaths of babies of at least 400 grams birthweight or at least 20 weeks gestation (Table 28). The rate varied from 5.8 per 1,000 in the Illawarra Health Area to 13.6 per 1,000 in the Macquarie Health Area.

TABLE 28

PERINATAL OUTCOMES BY HEALTH AREA OF RESIDENCE, NSW 1999[#]

| Health Area | Liveborn surviving | | Stillborn | | Perinatal outcome Neonatal death | | Not stated | | Total births | | Perinatal mortality rate/1,000 births |
|----------------------|--------------------|------|-----------|-----|-------------------------------------|-----|------------|-----|--------------|-------|---------------------------------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | |
| Central Sydney | 6645 | 99.0 | 43 | 0.6 | 25 | 0.4 | 0 | 0.0 | 6713 | 100.0 | 10.1 |
| Northern Sydney | 9354 | 99.2 | 42 | 0.4 | 31 | 0.3 | 0 | 0.0 | 9427 | 100.0 | 7.7 |
| Western Sydney | 10765 | 99.1 | 59 | 0.5 | 34 | 0.3 | 1 | 0.0 | 10859 | 100.0 | 8.6 |
| Wentworth | 4873 | 99.2 | 25 | 0.5 | 13 | 0.3 | 0 | 0.0 | 4911 | 100.0 | 7.7 |
| South Western Sydney | 12291 | 99.0 | 85 | 0.7 | 44 | 0.4 | 0 | 0.0 | 12420 | 100.0 | 10.4 |
| Central Coast | 3698 | 99.2 | 18 | 0.5 | 13 | 0.3 | 0 | 0.0 | 3729 | 100.0 | 8.3 |
| Hunter | 7007 | 98.9 | 48 | 0.7 | 30 | 0.4 | 0 | 0.0 | 7085 | 100.0 | 11.0 |
| Illawarra | 4459 | 99.4 | 22 | 0.5 | 4 | 0.1 | 0 | 0.0 | 4485 | 100.0 | 5.8 |
| South Eastern Sydney | 9486 | 99.0 | 59 | 0.6 | 33 | 0.3 | 0 | 0.0 | 9578 | 100.0 | 9.6 |
| Northern Rivers | 2905 | 98.9 | 22 | 0.7 | 8 | 0.3 | 3 | 0.1 | 2938 | 100.0 | 10.2 |
| Mid North Coast | 2914 | 98.8 | 23 | 0.8 | 4 | 0.1 | 8 | 0.3 | 2949 | 100.0 | 9.2 |
| New England | 2349 | 99.0 | 15 | 0.6 | 9 | 0.4 | 0 | 0.0 | 2373 | 100.0 | 10.1 |
| Macquarie | 1591 | 98.6 | 19 | 1.2 | 3 | 0.2 | 0 | 0.0 | 1613 | 100.0 | 13.6 |
| Mid Western | 2311 | 99.0 | 18 | 0.8 | 6 | 0.3 | 0 | 0.0 | 2335 | 100.0 | 10.3 |
| Far West | 532 | 98.9 | 4 | 0.7 | 2 | 0.4 | 0 | 0.0 | 538 | 100.0 | 11.2 |
| Greater Murray | 2629 | 99.1 | 17 | 0.6 | 6 | 0.2 | 0 | 0.0 | 2652 | 100.0 | 8.7 |
| Southern | 1845 | 99.0 | 8 | 0.4 | 5 | 0.3 | 5 | 0.3 | 1863 | 100.0 | 7.0 |
| Other-Not stated | 814 | 99.1 | 6 | 0.7 | 1 | 0.1 | 0 | 0.0 | 821 | 100.0 | 8.5 |
| Total | 86468 | 99.1 | 533 | 0.6 | 271 | 0.3 | 17 | 0.0 | 87289 | 100.0 | 9.2 |

Source: NSW Midwives Data Collection (HOIST), 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

Maternal Aboriginality is under-reported on the MDC. The extent of under-reporting is described in detail in Part 8 of this report. Reporting was assessed by comparing maternal Aboriginality as reported to the MDC with information on birth registrations reported to the NSW Registry of Birth Deaths and Marriages. Using capture-recapture methods, an estimate of the total number of Aboriginal mothers was obtained and compared with the number of Aboriginal mothers reported to the MDC. In summary, it was found that the percentage of the estimated total number of Aboriginal mothers reported to the MDC rose from 58.7 to 64.8 per cent over the five year period 1994–1998. Reporting was better in rural hospitals than urban hospitals: it is estimated that in 1998 47.0 per cent of births to Aboriginal mothers in urban hospitals were

correctly reported as Aboriginal compared to 85.6 per cent in rural hospitals, though there was a trend towards improved reporting in both urban and rural hospitals over the five year period.

This chapter describes the health of Aboriginal and Torres Strait Islander mothers and babies as reported to the MDC. In interpreting the information, it is important to note that a substantial number of Aboriginal births are not reported to the MDC, particularly in urban areas.

Between 1995 and 1999, the reported number of babies born to Aboriginal and Torres Strait Islander mothers increased from 1,759 to 2,078 (Table 29), an increase from 2.0 to 2.4 per cent of all babies born in NSW. Multiple pregnancies (twins, triplets etc.) were reported for about one per cent of mothers.

TABLE 29

ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES BY PLURALITY, NSW 1995–1999

| Plurality | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Confinements | | | | | | | | | | |
| Singleton | 1719 | 98.8 | 1700 | 99.3 | 1828 | 99.2 | 2017 | 98.7 | 2040 | 99.1 |
| Multiple | 20 | 1.2 | 12 | 0.7 | 14 | 0.8 | 26 | 1.3 | 19 | 0.9 |
| TOTAL | 1739 | 100.0 | 1712 | 100.0 | 1842 | 100.0 | 2043 | 100.0 | 2059 | 100.0 |
| Births | | | | | | | | | | |
| Singleton | 1719 | 97.7 | 1700 | 98.6 | 1828 | 98.6 | 2017 | 97.5 | 2040 | 98.2 |
| Multiple | 40 | 2.3 | 24 | 1.4 | 26 | 1.4 | 51 | 2.5 | 38 | 1.8 |
| TOTAL | 1759 | 100.0 | 1724 | 100.0 | 1854 | 100.0 | 2068 | 100.0 | 2078 | 100.0 |

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

3.2 PREVIOUS PREGNANCIES

In 1999, about 30 per cent of Aboriginal/Torres Strait Islander mothers gave birth for the first time, and 63 per cent gave birth to their second to fourth baby (Table 30). Seven per cent of mothers had given birth to five or more babies. This pattern has not changed substantially since 1995.

TABLE 30

NUMBER OF PREVIOUS PREGNANCIES AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1995–1999

| No. previous pregnancies (>20 weeks) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--------------------------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 0 | 510 | 29.3 | 510 | 29.8 | 554 | 30.1 | 599 | 29.3 | 613 | 29.8 |
| 1-4 | 1094 | 62.9 | 1065 | 62.2 | 1147 | 62.3 | 1280 | 62.7 | 1301 | 63.2 |
| 5+ | 134 | 7.7 | 134 | 7.8 | 139 | 7.5 | 161 | 7.9 | 144 | 7.0 |
| Not stated | 1 | 0.1 | 3 | 0.2 | 2 | 0.1 | 3 | 0.1 | 1 | 0.0 |
| TOTAL | 1739 | 100.0 | 1712 | 100.0 | 1842 | 100.0 | 2043 | 100.0 | 2059 | 100.0 |

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

3.3 MATERNAL AGE

The reported number of babies born to Aboriginal and Torres Strait Islander mothers has increased at all ages. About one in five Aboriginal and Torres Strait Islander mothers were teenagers in 1999. Following statewide trends, the number of mothers giving birth at 35 years of age or more has increased over the last five years. The proportion of mothers aged 35-plus years increased from 3.6 in 1995 to 6.0 per cent in 1999 (Table 31, Figure 3).

TABLE 31

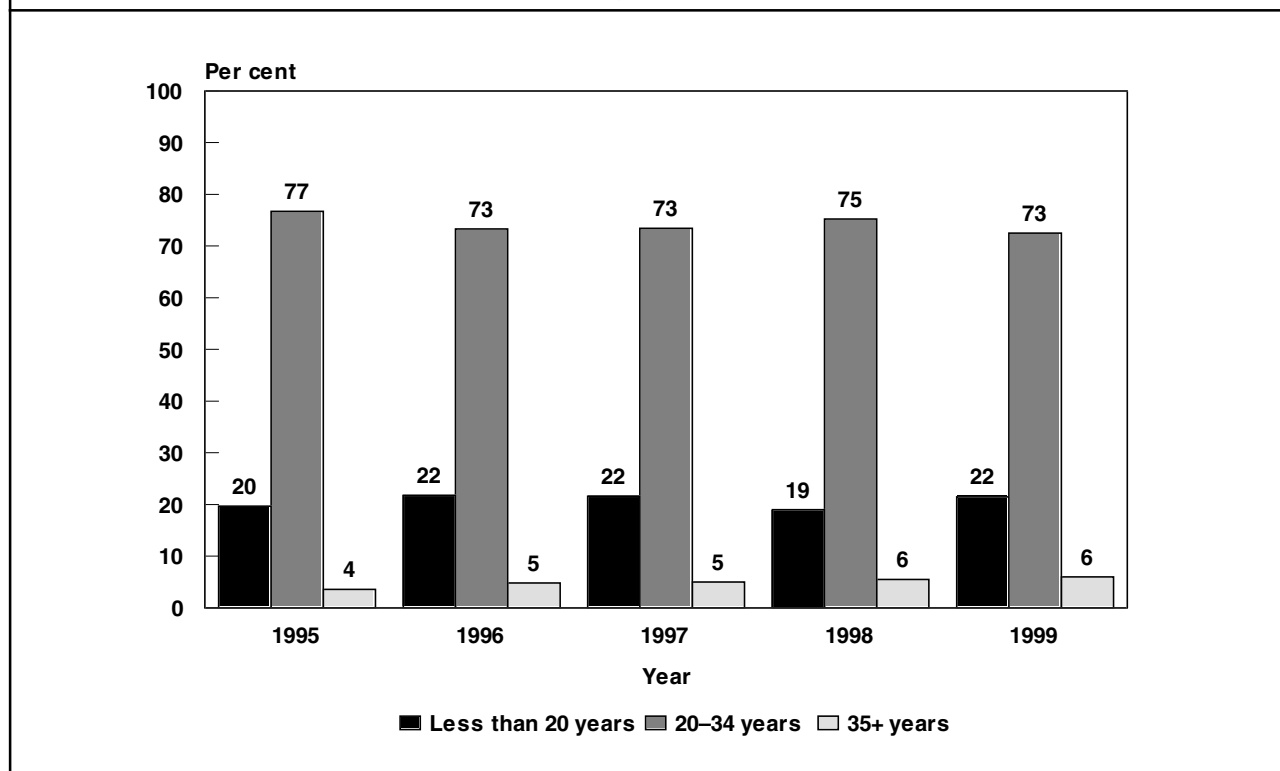
AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1995–1999

| Maternal age (years) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|----------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 12-19 | 342 | 19.7 | 374 | 21.8 | 398 | 21.6 | 398 | 19.0 | 443 | 21.5 |
| 20-34 | 1334 | 76.7 | 1255 | 73.3 | 1352 | 73.4 | 1536 | 75.2 | 1492 | 72.5 |
| 35+ | 63 | 3.6 | 83 | 4.8 | 92 | 5.0 | 113 | 5.5 | 124 | 6.0 |
| Not stated | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 0.2 | 5 | 0.2 |
| TOTAL | 1739 | 100.0 | 1712 | 100.0 | 1842 | 100.0 | 2043 | 100.0 | 2059 | 100.0 |

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

FIGURE 3

AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1995–1999



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

3.4 HEALTH AREA OF RESIDENCE

The reported number of Aboriginal and Torres Strait Islander mothers who gave birth in 1999 ranged from nine (0.4 per cent) in the Northern Sydney Area to 273 (13.3 per cent) in the New England Area (Table 32).

In 1999, over one quarter of Aboriginal and Torres Strait Islander mothers in the Mid North Coast, Far West and Southern Areas were teenagers (Table 33).

TABLE 32

HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1995–1999

| Health Area | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|----------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | 89 | 5.1 | 66 | 3.9 | 70 | 3.8 | 71 | 3.5 | 61 | 3.0 |
| Northern Sydney | 12 | 0.7 | 9 | 0.5 | 7 | 0.4 | 10 | 0.5 | 9 | 0.4 |
| Western Sydney | 124 | 7.1 | 108 | 6.3 | 105 | 5.7 | 172 | 8.4 | 139 | 6.8 |
| Wentworth | 38 | 2.2 | 43 | 2.5 | 47 | 2.6 | 77 | 3.8 | 74 | 3.6 |
| South Western Sydney | 90 | 5.2 | 93 | 5.4 | 89 | 4.8 | 108 | 5.3 | 91 | 4.4 |
| Central Coast | 21 | 1.2 | 27 | 1.6 | 37 | 2.0 | 42 | 2.1 | 50 | 2.4 |
| Hunter | 82 | 4.7 | 100 | 5.8 | 107 | 5.8 | 103 | 5.0 | 98 | 4.8 |
| Illawarra | 112 | 6.4 | 101 | 5.9 | 125 | 6.8 | 119 | 5.8 | 104 | 5.1 |
| South Eastern Sydney | 42 | 2.4 | 30 | 1.8 | 36 | 2.0 | 47 | 2.3 | 45 | 2.2 |
| Northern Rivers | 153 | 8.8 | 132 | 7.7 | 146 | 7.9 | 161 | 7.9 | 162 | 7.9 |
| Mid North Coast | 153 | 8.8 | 157 | 9.2 | 181 | 9.8 | 167 | 8.2 | 230 | 11.2 |
| New England | 209 | 12.0 | 238 | 13.9 | 255 | 13.8 | 267 | 13.1 | 273 | 13.3 |
| Macquarie | 148 | 8.5 | 171 | 10.0 | 202 | 11.0 | 212 | 10.4 | 230 | 11.2 |
| Mid Western | 109 | 6.3 | 111 | 6.5 | 99 | 5.4 | 113 | 5.5 | 123 | 6.0 |
| Far West | 177 | 10.2 | 157 | 9.2 | 172 | 9.3 | 169 | 8.3 | 162 | 7.9 |
| Greater Murray | 98 | 5.6 | 120 | 7.0 | 100 | 5.4 | 120 | 5.9 | 116 | 5.6 |
| Southern | 69 | 4.0 | 39 | 2.3 | 51 | 2.8 | 64 | 3.1 | 68 | 3.3 |
| Other–Not stated | 13 | 0.7 | 10 | 0.6 | 13 | 0.7 | 21 | 1.0 | 24 | 1.2 |
| TOTAL | 1739 | 100.0 | 1712 | 100.0 | 1842 | 100.0 | 2043 | 100.0 | 2059 | 100.0 |

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

TABLE 33

HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT MOTHERS BY AGE, NSW 1999

| Health Area | Maternal age (years) | | | | | |
|----------------------|----------------------|------|------|------|-------|-------|
| | Less than 20 | | 20+ | | TOTAL | |
| | No. | % | No. | % | No. | % |
| Central Sydney | 10 | 16.4 | 51 | 83.6 | 61 | 100.0 |
| Northern Sydney # | – | – | – | – | 9 | 100.0 |
| Western Sydney | 26 | 18.7 | 113 | 81.3 | 139 | 100.0 |
| Wentworth | 14 | 18.9 | 60 | 81.1 | 74 | 100.0 |
| South Western Sydney | 18 | 19.8 | 73 | 80.2 | 91 | 100.0 |
| Central Coast | 10 | 20.0 | 40 | 80.0 | 50 | 100.0 |
| Hunter | 20 | 20.4 | 78 | 79.6 | 98 | 100.0 |
| Illawarra | 24 | 23.1 | 80 | 76.9 | 104 | 100.0 |
| South Eastern Sydney | 1 | 2.2 | 44 | 97.8 | 45 | 100.0 |
| Northern Rivers | 29 | 17.9 | 133 | 82.1 | 162 | 100.0 |
| Mid North Coast | 58 | 25.2 | 172 | 74.8 | 230 | 100.0 |
| New England | 64 | 23.4 | 209 | 76.6 | 273 | 100.0 |
| Macquarie | 52 | 22.6 | 178 | 77.4 | 230 | 100.0 |
| Mid Western | 24 | 19.5 | 99 | 80.5 | 123 | 100.0 |
| Far West | 43 | 26.5 | 119 | 73.5 | 162 | 100.0 |
| Greater Murray | 25 | 21.6 | 91 | 78.4 | 116 | 100.0 |
| Southern | 20 | 29.4 | 48 | 70.6 | 68 | 100.0 |
| Other–Not stated | 3 | 12.5 | 21 | 87.5 | 24 | 100.0 |
| TOTAL | 443 | 21.5 | 1616 | 78.5 | 2059 | 100.0 |

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

3.5 BOOKING STATUS

Between 1995 and 1999, there was no substantial change in the proportion of mothers who were booked into the hospital of birth—88.0 per cent in 1995 and 86.4 per cent in 1999.

This compares with 98.3 per cent of non-Aboriginal or Torres Strait Islander mothers who were booked into the hospital of birth in 1999.

3.6 DURATION OF PREGNANCY AT FIRST ANTENATAL CHECK

Between 1995 and 1999, there was a slight increase in the proportion of mothers who commenced antenatal care at less than 20 weeks gestation—from 66.8 per cent in 1995 to 69.2 per cent in 1999. This compares with 87.5 per cent of non-Aboriginal and Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation in 1999.

In 1999, the proportion of Aboriginal and Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation varied from 49.6 per cent in the Western Sydney Area to 82.1 per cent in New England Area (Table 34).

TABLE 34

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Duration of pregnancy at first antenatal visit (weeks) | | | | | | TOTAL | |
|------------------------------|--|------|-----|------|------------|------|-------|-------|
| | 0-19 | | 20+ | | Not stated | | No. | % |
| | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | 34 | 55.7 | 27 | 44.3 | 0 | 0.0 | 61 | 100.0 |
| Northern Sydney [#] | — | — | — | — | — | — | 9 | 100.0 |
| Western Sydney | 69 | 49.6 | 67 | 48.2 | 3 | 2.2 | 139 | 100.0 |
| Wentworth | 46 | 62.2 | 24 | 32.4 | 4 | 5.4 | 74 | 100.0 |
| South Western Sydney | 46 | 50.5 | 40 | 44.0 | 5 | 5.5 | 91 | 100.0 |
| Central Coast | 37 | 74.0 | 12 | 24.0 | 1 | 2.0 | 50 | 100.0 |
| Hunter | 65 | 66.3 | 31 | 31.6 | 2 | 2.0 | 98 | 100.0 |
| Illawarra | 71 | 68.3 | 31 | 29.8 | 2 | 1.9 | 104 | 100.0 |
| South Eastern Sydney | 26 | 57.8 | 15 | 33.3 | 4 | 8.9 | 45 | 100.0 |
| Northern Rivers | 100 | 61.7 | 56 | 34.6 | 6 | 3.7 | 162 | 100.0 |
| Mid North Coast | 155 | 67.4 | 60 | 26.1 | 15 | 6.5 | 230 | 100.0 |
| New England | 224 | 82.1 | 38 | 13.9 | 11 | 4.0 | 273 | 100.0 |
| Macquarie | 140 | 60.9 | 78 | 33.9 | 12 | 5.2 | 230 | 100.0 |
| Mid Western | 88 | 71.5 | 26 | 21.1 | 9 | 7.3 | 123 | 100.0 |
| Far West | 93 | 57.4 | 50 | 30.9 | 19 | 11.7 | 162 | 100.0 |
| Greater Murray | 91 | 78.4 | 20 | 17.2 | 5 | 4.3 | 116 | 100.0 |
| Southern | 39 | 57.4 | 17 | 25.0 | 12 | 17.6 | 68 | 100.0 |
| Other—Not stated | 17 | 70.8 | 5 | 20.8 | 2 | 8.3 | 24 | 100.0 |
| TOTAL | 1348 | 65.5 | 599 | 29.1 | 112 | 5.4 | 2059 | 100.0 |

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

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

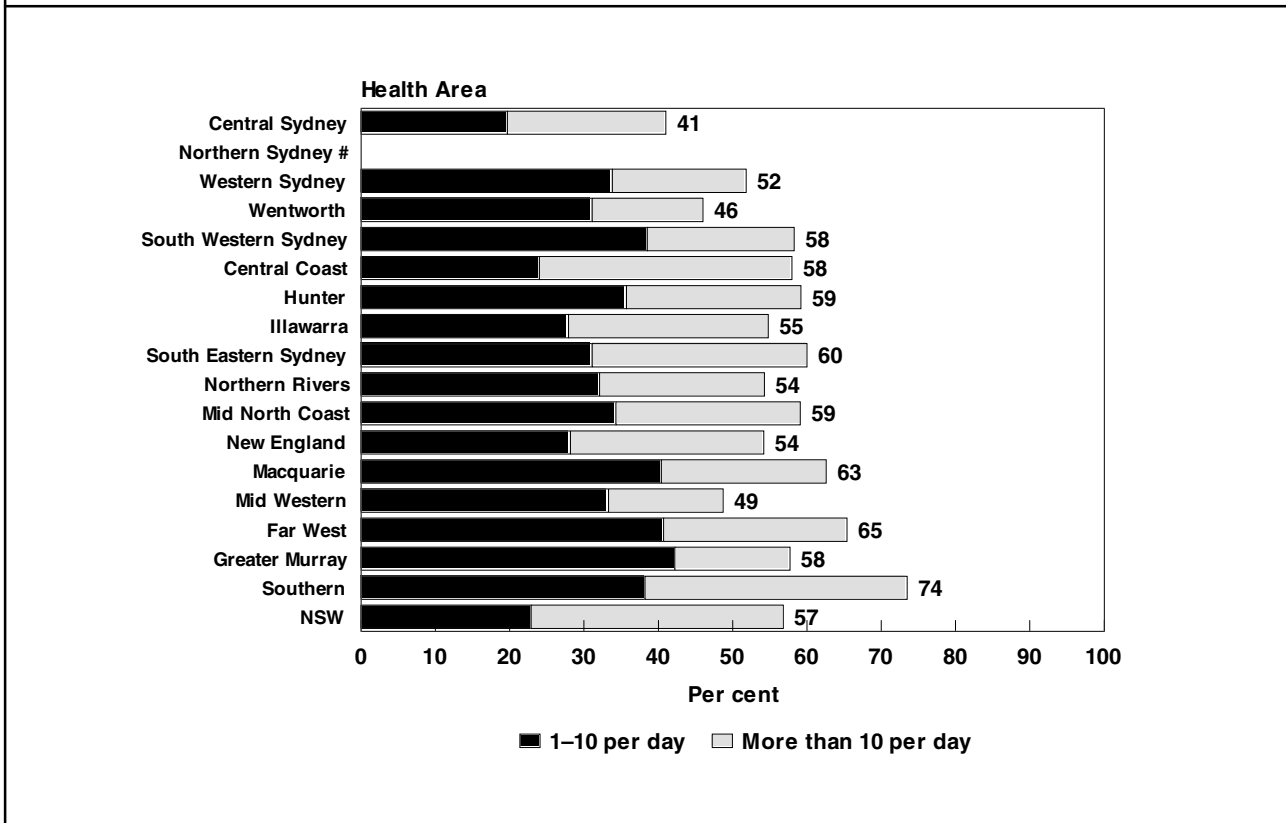
3.7 SMOKING IN PREGNANCY

In 1999, 58.9 per cent of Aboriginal and Torres Strait Islander mothers reported smoking at some time during pregnancy, compared to 60.9 per cent in 1995. This compares with 18.0 per cent of all mothers who reported smoking at some time during pregnancy in 1999 (see Section 1.8, page 21).

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. In 1999, 56.8 per cent of Aboriginal and Torres Strait Islander mothers reported smoking in the second half of pregnancy. This percentage varied from 46.0 per cent in the Wentworth Area to 73.5 per cent in the Southern Area (Figure 4).

FIGURE 4

SMOKING IN THE SECOND HALF OF PREGNANCY AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY AMOUNT SMOKED AND HEALTH AREA OF RESIDENCE, NSW 1999



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

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

3.8 MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS

In 1999, there were similar rates of diabetes and essential hypertension reported among Aboriginal and Torres Strait

Islander mothers than non-Aboriginal or Torres Strait Islander mothers, and slightly lower rates of gestational diabetes and pregnancy induced hypertension (Table 35).

TABLE 35

MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY ABORIGINALITY, NSW 1999

| Condition | Aboriginal and Torres Strait Islander | | Aboriginality Non-Aboriginal or Torres Strait Islander | | TOTAL | |
|---------------------------------|---------------------------------------|-------|--|-------|-------|-------|
| | No. | % | No. | % | No. | % |
| Diabetes mellitus | 13 | 0.6 | 350 | 0.4 | 363 | 0.4 |
| Gestational diabetes | 65 | 3.2 | 3189 | 3.8 | 3254 | 3.8 |
| Essential hypertension | 21 | 1.0 | 795 | 0.9 | 816 | 0.9 |
| Pregnancy- induced hypertension | 121 | 5.9 | 6073 | 7.2 | 6194 | 7.2 |
| TOTAL CONFINEMENTS [#] | 2059 | 100.0 | 83899 | 100.0 | 85967 | 100.0 |

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

Total confinements include nine confinements where maternal Aboriginality was not stated.

3.9 LABOUR AND DELIVERY

The rate of induction of labour among Aboriginal and Torres Strait Islander mothers increased from 15.2 to 18.2 per cent between 1995 and 1999, while the rate of spontaneous onset of labour decreased from 77.3 to 73.4 per cent (Table 36).

These trends follow statewide trends (Section 1.10, page 23). However, the rate of induction of labour among Aboriginal

and Torres Strait Islander mothers continued to be lower than the NSW rate, which was 24.1 per cent in 1999.

Since 1995, the rate of normal vaginal birth has remained stable at about 77 per cent and the caesarean section rate was stable at about 16 per cent (Table 37). Over the five year period, the percentage of deliveries by vacuum extraction almost doubled from 1.4 to 2.6 per cent.

TABLE 36

LABOUR ONSET FOR ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1995-1999

| Labour onset | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|------------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Spontaneous | 1345 | 77.3 | 1315 | 76.8 | 1377 | 74.8 | 1467 | 71.8 | 1512 | 73.4 |
| No labour [#] | 128 | 7.4 | 112 | 6.5 | 153 | 8.3 | 176 | 8.6 | 172 | 8.4 |
| Induced | 265 | 15.2 | 284 | 16.6 | 311 | 16.9 | 400 | 19.6 | 375 | 18.2 |
| Not stated | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 1739 | 100.0 | 1712 | 100.0 | 1842 | 100.0 | 2043 | 100.0 | 2059 | 100.0 |

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

No labour indicates elective caesarean section.

TABLE 37

TYPE OF DELIVERY AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 1995-1999

| Type of delivery | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Normal vaginal | 1347 | 77.5 | 1327 | 77.5 | 1423 | 77.3 | 1563 | 76.5 | 1586 | 77.0 |
| Forceps | 57 | 3.3 | 51 | 3.0 | 47 | 2.6 | 56 | 2.7 | 64 | 3.1 |
| Vacuum extraction | 25 | 1.4 | 31 | 1.8 | 45 | 2.4 | 43 | 2.1 | 54 | 2.6 |
| Vaginal breech | 25 | 1.4 | 28 | 1.6 | 15 | 0.8 | 27 | 1.3 | 25 | 1.2 |
| Elective caesarean section | 128 | 7.4 | 112 | 6.5 | 153 | 8.3 | 176 | 8.6 | 172 | 8.4 |
| Emergency caesarean section [#] | 155 | 8.9 | 162 | 9.5 | 159 | 8.6 | 177 | 8.7 | 158 | 7.7 |
| Not stated | 2 | 0.1 | 1 | 0.1 | 0 | 0.0 | 1 | 0.0 | 0 | 0.0 |
| TOTAL | 1739 | 100.0 | 1712 | 100.0 | 1842 | 100.0 | 2043 | 100.0 | 2059 | 100.0 |

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

Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

3.10 BIRTHWEIGHT

Since 1995, the rate of low birthweight (less than 2,500 grams) in Aboriginal and Torres Strait Islander babies has been over 10 per cent and was 12.6 per cent in 1999 (Table 38). This is about twice the rate for NSW overall, which was 6.2 per cent in 1999. In 1999, the highest rates of low birthweight were 17.8 per cent in both Far West and South Eastern Sydney Areas (Table 39).

TABLE 38

WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1995–1999

| Birthweight (grams) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Less than 1,000 | 20 | 1.1 | 25 | 1.5 | 30 | 1.6 | 24 | 1.2 | 20 | 1.0 |
| 1,000–1,499 | 19 | 1.1 | 15 | 0.9 | 18 | 1.0 | 19 | 0.9 | 24 | 1.2 |
| 1,500–2,499 | 157 | 8.9 | 143 | 8.3 | 175 | 9.4 | 174 | 8.4 | 217 | 10.4 |
| 2,500+ | 1562 | 88.8 | 1538 | 89.2 | 1631 | 88.0 | 1850 | 89.5 | 1816 | 87.4 |
| Not stated | 1 | 0.1 | 3 | 0.2 | 0 | 0.0 | 1 | 0.0 | 1 | 0.0 |
| TOTAL | 1759 | 100.0 | 1724 | 100.0 | 1854 | 100.0 | 2068 | 100.0 | 2078 | 100.0 |

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

TABLE 39

WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES BY HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Less than 2,500 | | Birthweight (grams) 2,500+ | | Not stated | | TOTAL | |
|----------------------|-----------------|------|----------------------------|-------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | 9 | 14.8 | 52 | 85.2 | 0 | 0.0 | 61 | 100.0 |
| Northern Sydney | 0 | 0.0 | 9 | 100.0 | 0 | 0.0 | 9 | 100.0 |
| Western Sydney | 15 | 10.8 | 124 | 89.2 | 0 | 0.0 | 139 | 100.0 |
| Wentworth | 4 | 5.4 | 70 | 94.6 | 0 | 0.0 | 74 | 100.0 |
| South Western Sydney | 15 | 16.1 | 78 | 83.9 | 0 | 0.0 | 93 | 100.0 |
| Central Coast | 6 | 12.0 | 44 | 88.0 | 0 | 0.0 | 50 | 100.0 |
| Hunter | 18 | 18.4 | 80 | 81.6 | 0 | 0.0 | 98 | 100.0 |
| Illawarra | 7 | 6.7 | 97 | 93.3 | 0 | 0.0 | 104 | 100.0 |
| South Eastern Sydney | 8 | 17.8 | 37 | 82.2 | 0 | 0.0 | 45 | 100.0 |
| Northern Rivers | 17 | 10.4 | 146 | 89.6 | 0 | 0.0 | 163 | 100.0 |
| Mid North Coast | 22 | 9.5 | 210 | 90.5 | 0 | 0.0 | 232 | 100.0 |
| New England | 38 | 13.9 | 236 | 86.1 | 0 | 0.0 | 274 | 100.0 |
| Macquarie | 30 | 12.9 | 202 | 87.1 | 0 | 0.0 | 232 | 100.0 |
| Mid Western | 22 | 16.8 | 109 | 83.2 | 0 | 0.0 | 131 | 100.0 |
| Far West | 29 | 17.8 | 134 | 82.2 | 0 | 0.0 | 163 | 100.0 |
| Greater Murray | 8 | 6.8 | 109 | 93.2 | 0 | 0.0 | 117 | 100.0 |
| Southern | 10 | 14.5 | 58 | 84.1 | 1 | 1.4 | 69 | 100.0 |
| Other–Not stated | 3 | 12.5 | 21 | 87.5 | 0 | 0.0 | 24 | 100.0 |
| TOTAL | 261 | 12.6 | 1816 | 87.4 | 1 | 0.0 | 2078 | 100.0 |

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

3.13 GESTATIONAL AGE

Since 1995, the rate of prematurity (less than 37 weeks gestation) in Aboriginal and Torres Strait Islander babies has been over 10 per cent. The rate was 12.3 per cent in 1999 (Table 40)—about one and a half times higher than the rate of 7.2 per cent for NSW overall. In 1999, the highest rates of prematurity were in the Central Sydney (26.2 per cent) and Hunter Areas (21.4 per cent) (Table 41).

TABLE 40

GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1995–1999

| Gestational age (weeks) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|-------------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 20–27 | 22 | 1.3 | 25 | 1.5 | 29 | 1.6 | 26 | 1.3 | 18 | 0.9 |
| 28–31 | 19 | 1.1 | 17 | 1.0 | 18 | 1.0 | 26 | 1.3 | 29 | 1.4 |
| 32–36 | 147 | 8.4 | 139 | 8.1 | 182 | 9.8 | 167 | 8.1 | 209 | 10.1 |
| 37–41 | 1530 | 87.0 | 1508 | 87.5 | 1584 | 85.4 | 1822 | 88.1 | 1780 | 85.7 |
| 42+ | 40 | 2.3 | 33 | 1.9 | 40 | 2.2 | 27 | 1.3 | 42 | 2.0 |
| Not stated | 1 | 0.1 | 2 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 1759 | 100.0 | 1724 | 100.0 | 1854 | 100.0 | 2068 | 100.0 | 2078 | 100.0 |

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

TABLE 41

GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES BY HEALTH AREA OF RESIDENCE, NSW 1999

| Health Area | Less than 37 | | Gestational age (weeks) 37+ | | TOTAL | |
|------------------------------|--------------|------|-----------------------------|------|-------|-------|
| | No. | % | No. | % | No. | % |
| Central Sydney | 16 | 26.2 | 45 | 73.8 | 61 | 100.0 |
| Northern Sydney [#] | — | — | — | — | 9 | 100.0 |
| Western Sydney | 16 | 11.5 | 123 | 88.5 | 139 | 100.0 |
| Wentworth | 7 | 9.5 | 67 | 90.5 | 74 | 100.0 |
| South Western Sydney | 13 | 14.0 | 80 | 86.0 | 93 | 100.0 |
| Central Coast | 6 | 12.0 | 44 | 88.0 | 50 | 100.0 |
| Hunter | 21 | 21.4 | 77 | 78.6 | 98 | 100.0 |
| Illawarra | 9 | 8.7 | 95 | 91.3 | 104 | 100.0 |
| South Eastern Sydney | 5 | 11.1 | 40 | 88.9 | 45 | 100.0 |
| Northern Rivers | 14 | 8.6 | 149 | 91.4 | 163 | 100.0 |
| Mid North Coast | 25 | 10.8 | 207 | 89.2 | 232 | 100.0 |
| New England | 28 | 10.2 | 246 | 89.8 | 274 | 100.0 |
| Macquarie | 29 | 12.5 | 203 | 87.5 | 232 | 100.0 |
| Mid Western | 23 | 17.6 | 108 | 82.4 | 131 | 100.0 |
| Far West | 26 | 16.0 | 137 | 84.0 | 163 | 100.0 |
| Greater Murray | 8 | 6.8 | 109 | 93.2 | 117 | 100.0 |
| Southern | 6 | 8.7 | 63 | 91.3 | 69 | 100.0 |
| Other—Not stated | 3 | 12.5 | 21 | 87.5 | 24 | 100.0 |
| TOTAL | 256 | 12.3 | 1822 | 87.7 | 2078 | 100.0 |

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

[#] Information not shown for Health Areas where the number of babies is less than five in a group.

3.14 APGAR SCORE

In 1999, 2.9 per cent of Aboriginal and Torres Strait Islander babies were born with an Apgar score less than seven (Table 42). This rate has decreased since 1995, but is still slightly higher than the rate of 2.4 per cent for NSW overall (Section 1.15, page 26).

TABLE 42

APGAR SCORE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1995–1999

| Apgar score at 5 minutes | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|--------------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 0–4 | 51 | 2.9 | 33 | 1.9 | 42 | 2.3 | 38 | 1.8 | 36 | 1.7 |
| 5–7 | 27 | 1.5 | 34 | 2.0 | 34 | 1.8 | 28 | 1.4 | 24 | 1.2 |
| 7+ | 1675 | 95.2 | 1652 | 95.8 | 1770 | 95.5 | 1989 | 96.2 | 2003 | 96.4 |
| Not stated | 6 | 0.3 | 5 | 0.3 | 8 | 0.4 | 13 | 0.6 | 15 | 0.7 |
| TOTAL | 1759 | 100.0 | 1724 | 100.0 | 1854 | 100.0 | 2068 | 100.0 | 2078 | 100.0 |

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

3.15 PERINATAL MORTALITY

Since 1995, the perinatal mortality rate among Aboriginal and Torres Strait Islander babies has varied from 14.0 to 20.0 per 1,000 births (Table 43). The rate of 14.0 per 1,000 in 1999 is about one and a half times the rate of 9.2 per 1,000 for NSW overall (Section 1.16, page 26).

TABLE 43

PERINATAL DEATHS AMONG ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 1995–1999#

| Perinatal deaths | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|------------------------|------|------------|------|------------|-----------|------------|------|------------|------|------------|
| | No. | Rate/1,000 | No. | Rate/1,000 | No. | Rate/1,000 | No. | Rate/1,000 | No. | Rate/1,000 |
| Stillbirth | 21 | 11.9 | 20 | 11.6 | 24 | 12.9 | 21 | 10.2 | 21 | 10.1 |
| Neonatal death | 13 | 7.4 | 10 | 5.8 | 13 | 7.0 | 11 | 5.3 | 8 | 3.8 |
| TOTAL PERINATAL DEATHS | 34 | 19.3 | 30 | 17.4 | 37 | 20.0 | 32 | 15.5 | 29 | 14.0 |

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

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

PART 4: MATERNAL COUNTRY OF BIRTH

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

4.1 TRENDS IN CONFINEMENTS

Between 1995 and 1999, about 20 per cent of mothers were born in non-English speaking countries (Table 44). The proportion of mothers from Asian countries increased slightly from 9.9 to 10.8 per cent, while the proportion of mothers from southern European countries continued to decrease slightly from 1.9 to 1.6 per cent.

TABLE 44

CONFINEMENTS AND BIRTHS BY COUNTRY OF BIRTH GROUP, NSW 1995–1999

| Plurality | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Confinements | | | | | | | | | | |
| English speaking | 69311 | 80.3 | 67889 | 79.6 | 68827 | 79.2 | 67971 | 79.9 | 68381 | 79.5 |
| Central & South America | 669 | 0.8 | 756 | 0.9 | 687 | 0.8 | 683 | 0.8 | 725 | 0.8 |
| Melanesia, Micronesia & Polynesia | 1356 | 1.6 | 1410 | 1.7 | 1561 | 1.8 | 1590 | 1.9 | 1540 | 1.8 |
| Southern Europe | 1632 | 1.9 | 1530 | 1.8 | 1516 | 1.7 | 1380 | 1.6 | 1337 | 1.6 |
| Western & Northern Europe | 612 | 0.7 | 614 | 0.7 | 627 | 0.7 | 646 | 0.8 | 690 | 0.8 |
| Eastern Europe, Russia, Central Asian & Baltic States | 403 | 0.5 | 364 | 0.4 | 393 | 0.5 | 362 | 0.4 | 421 | 0.5 |
| Middle East & Africa | 3690 | 4.3 | 3676 | 4.3 | 3793 | 4.4 | 3670 | 4.3 | 3579 | 4.2 |
| South East Asia | 4462 | 5.2 | 4587 | 5.4 | 4599 | 5.3 | 4157 | 4.9 | 4659 | 5.4 |
| North East Asia | 2961 | 3.4 | 3226 | 3.8 | 3325 | 3.8 | 3097 | 3.6 | 3225 | 3.8 |
| Southern Asia | 1102 | 1.3 | 1170 | 1.4 | 1407 | 1.6 | 1349 | 1.6 | 1398 | 1.6 |
| Other–Not stated | 65 | 0.1 | 80 | 0.1 | 185 | 0.2 | 167 | 0.2 | 12 | 0.0 |
| TOTAL | 86263 | 100.0 | 85302 | 100.0 | 86920 | 100.0 | 85072 | 100.0 | 85967 | 100.0 |
| Births | | | | | | | | | | |
| English speaking | 70255 | 80.4 | 68816 | 79.6 | 69843 | 79.2 | 69008 | 80.0 | 69460 | 79.6 |
| Central & South America | 675 | 0.8 | 761 | 0.9 | 693 | 0.8 | 689 | 0.8 | 730 | 0.8 |
| Melanesia, Micronesia & Polynesia | 1370 | 1.6 | 1431 | 1.7 | 1585 | 1.8 | 1610 | 1.9 | 1555 | 1.8 |
| Southern Europe | 1662 | 1.9 | 1559 | 1.8 | 1532 | 1.7 | 1412 | 1.6 | 1361 | 1.6 |
| Western & Northern Europe | 623 | 0.7 | 625 | 0.7 | 633 | 0.7 | 652 | 0.8 | 710 | 0.8 |
| Eastern Europe, Russia, Central Asian & Baltic States | 411 | 0.5 | 366 | 0.4 | 398 | 0.5 | 365 | 0.4 | 423 | 0.5 |
| Middle East & Africa | 3726 | 4.3 | 3722 | 4.3 | 3854 | 4.4 | 3731 | 4.3 | 3644 | 4.2 |
| South East Asia | 4507 | 5.2 | 4624 | 5.4 | 4636 | 5.3 | 4181 | 4.8 | 4707 | 5.4 |
| North East Asia | 2976 | 3.4 | 3260 | 3.8 | 3355 | 3.8 | 3118 | 3.6 | 3266 | 3.7 |
| Southern Asia | 1119 | 1.3 | 1182 | 1.4 | 1416 | 1.6 | 1360 | 1.6 | 1420 | 1.6 |
| Other–Not stated | 67 | 0.1 | 83 | 0.1 | 188 | 0.2 | 179 | 0.2 | 13 | 0.0 |
| TOTAL | 87391 | 100.0 | 86429 | 100.0 | 88133 | 100.0 | 86305 | 100.0 | 87289 | 100.0 |

Source: NSW Midwives Data Collection (HOIST). 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 (Table 45, Figure 5), while the largest proportions of mothers aged 35 years and over were born in North East Asia (30.5 per cent) and Western and Northern Europe (27.4 per cent).

TABLE 45

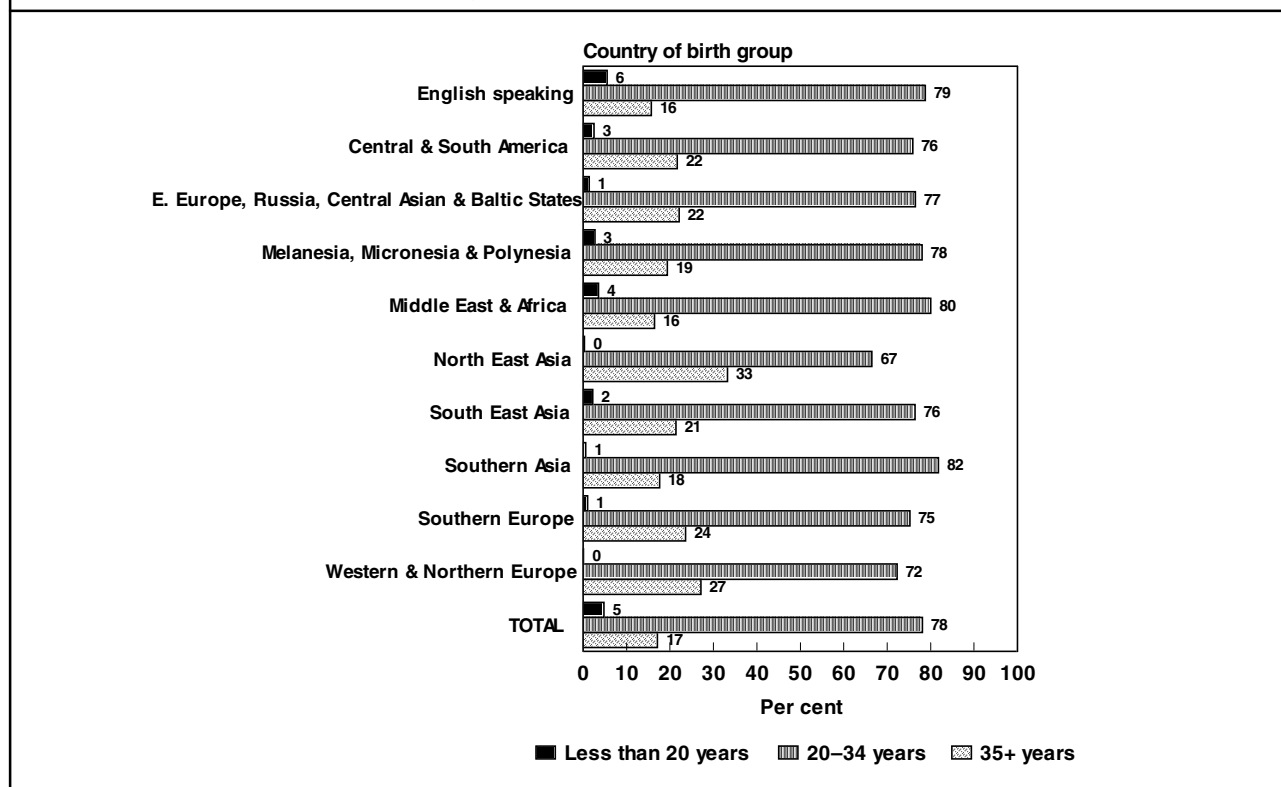
AGE OF MOTHER BY COUNTRY OF BIRTH GROUP, NSW 1999

| Country of birth group | 12-19 | | 20-34 | | Maternal age (years) 35+ | | Not stated | | TOTAL | |
|---|-------|-----|-------|------|-----------------------------|------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| English speaking | 3770 | 5.5 | 53875 | 78.8 | 10712 | 15.7 | 24 | 0.0 | 68381 | 100.0 |
| Central & South America | 18 | 2.5 | 550 | 75.9 | 157 | 21.7 | 0 | 0.0 | 725 | 100.0 |
| Melanesia, Micronesia & Polynesia | 41 | 2.7 | 1201 | 78.0 | 298 | 19.4 | 0 | 0.0 | 1540 | 100.0 |
| Southern Europe | 14 | 1.0 | 1006 | 75.2 | 316 | 23.6 | 1 | 0.1 | 1337 | 100.0 |
| Western & Northern Europe | 1 | 0.1 | 499 | 72.3 | 187 | 27.1 | 3 | 0.4 | 690 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 6 | 1.4 | 322 | 76.5 | 93 | 22.1 | 0 | 0.0 | 421 | 100.0 |
| Middle East & Africa | 126 | 3.5 | 2864 | 80.0 | 588 | 16.4 | 1 | 0.0 | 3579 | 100.0 |
| South East Asia | 104 | 2.2 | 3558 | 76.4 | 997 | 21.4 | 0 | 0.0 | 4659 | 100.0 |
| North East Asia | 10 | 0.3 | 2145 | 66.5 | 1070 | 33.2 | 0 | 0.0 | 3225 | 100.0 |
| Southern Asia | 9 | 0.6 | 1143 | 81.8 | 246 | 17.6 | 0 | 0.0 | 1398 | 100.0 |
| Other-Not stated | 0 | 0.0 | 8 | 66.7 | 4 | 33.3 | 0 | 0.0 | 12 | 100.0 |
| TOTAL | 4099 | 4.8 | 67171 | 78.1 | 14668 | 17.1 | 29 | 0.0 | 85967 | 100.0 |

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

FIGURE 5

AGE OF MOTHER BY COUNTRY OF BIRTH GROUP, NSW 1999



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

4.3 HEALTH AREA OF RESIDENCE

In 1999, the proportion of mothers born in non-English speaking countries was highest in the Central Sydney Area (43.4 per cent), followed by the South Western Sydney and Western Sydney Areas (38.0 and 36.1 per cent respectively). Five per cent of mothers were born in South East Asian countries, 40.6 per cent of whom were

resident in the South Western Sydney Area. Four per cent of mothers were born in Middle Eastern or African countries and 58.7 per cent of these mothers were resident in the South Western or Western Sydney Areas. A further 3.8 per cent of mothers were born in North East Asian countries, the majority living in the Central Sydney, Northern Sydney or Western Sydney Areas (Table 46).

TABLE 46

HEALTH AREA OF RESIDENCE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1999*

| Health Area | Country of birth group | | | | | | | | | | | | | | | | | | | | | | TOTAL | |
|----------------------|------------------------|-------------|-------------------------|------------|------------------------------------|------------|-----------------|------------|---------------------------|------------|---|------------|----------------------|------------|-----------------|------------|-----------------|------------|---------------|------------|------------------|------------|--------------|--------------|
| | English speaking | | Central & South America | | Melanesia & Micronesia & Polynesia | | Southern Europe | | Western & Northern Europe | | Eastern Europe, Russia, Central Asian & Baltic States | | Middle East & Africa | | South East Asia | | North East Asia | | Southern Asia | | Other-Not stated | | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | No. |
| Central Sydney | 3749 | 56.6 | 86 | 1.3 | 247 | 3.7 | 201 | 3.0 | 76 | 1.1 | 42 | 0.6 | 578 | 8.7 | 687 | 10.4 | 746 | 11.3 | 211 | 3.2 | 2 | 0.0 | 6625 | 100.0 |
| Northern Sydney | 7288 | 78.9 | 79 | 0.9 | 82 | 0.9 | 115 | 1.2 | 189 | 2.0 | 73 | 0.8 | 230 | 2.5 | 346 | 3.7 | 644 | 7.0 | 195 | 2.1 | 1 | 0.0 | 9242 | 100.0 |
| Western Sydney | 6841 | 63.9 | 96 | 0.9 | 449 | 4.2 | 182 | 1.7 | 52 | 0.5 | 64 | 0.6 | 991 | 9.3 | 828 | 7.7 | 704 | 6.6 | 504 | 4.7 | 1 | 0.0 | 10712 | 100.0 |
| Wentworth South | 4402 | 90.7 | 32 | 0.7 | 49 | 1.0 | 58 | 1.2 | 33 | 0.7 | 13 | 0.3 | 69 | 1.4 | 106 | 2.2 | 26 | 0.5 | 63 | 1.3 | 0 | 0.0 | 4851 | 100.0 |
| Western Sydney | 7570 | 62.0 | 233 | 1.9 | 419 | 3.4 | 357 | 2.9 | 55 | 0.5 | 72 | 0.6 | 1111 | 9.1 | 1892 | 15.5 | 328 | 2.7 | 181 | 1.5 | 1 | 0.0 | 12219 | 100.0 |
| Central Coast | 3539 | 96.6 | 12 | 0.3 | 21 | 0.6 | 8 | 0.2 | 19 | 0.5 | - | - | 10 | 0.3 | 32 | 0.9 | 13 | 0.4 | 8 | 0.2 | - | - | 3665 | 100.0 |
| Hunter | 6731 | 96.6 | 10 | 0.1 | 26 | 0.4 | 37 | 0.5 | 19 | 0.3 | 6 | 0.1 | 16 | 0.2 | 87 | 1.2 | 19 | 0.3 | 13 | 0.2 | 1 | 0.0 | 6965 | 100.0 |
| Illawarra | 4047 | 91.7 | 19 | 0.4 | 27 | 0.6 | 103 | 2.3 | 32 | 0.7 | 9 | 0.2 | 61 | 1.4 | 74 | 1.7 | 28 | 0.6 | 12 | 0.3 | 1 | 0.0 | 4413 | 100.0 |
| South Eastern Sydney | 6948 | 73.7 | 134 | 1.4 | 138 | 1.5 | 244 | 2.6 | 118 | 1.3 | 122 | 1.3 | 468 | 5.0 | 466 | 4.9 | 640 | 6.8 | 150 | 1.6 | 0 | 0.0 | 9428 | 100.0 |
| Northern Rivers | 2788 | 96.0 | - | - | 13 | 0.4 | - | - | 27 | 0.9 | - | - | 10 | 0.3 | 34 | 1.2 | 15 | 0.5 | 6 | 0.2 | 1 | 0.0 | 2903 | 100.0 |
| Mid North Coast | 2802 | 96.4 | 7 | 0.2 | 11 | 0.4 | - | - | 14 | 0.5 | - | - | 7 | 0.2 | 35 | 1.2 | 10 | 0.3 | 14 | 0.5 | - | - | 2906 | 100.0 |
| New England | 2289 | 97.5 | - | - | 6 | 0.3 | - | - | 14 | 0.6 | - | - | 5 | 0.2 | 13 | 0.6 | 10 | 0.4 | 5 | 0.2 | 0 | 0.0 | 2348 | 100.0 |
| Macquarie | 1565 | 98.1 | - | - | 5 | 0.3 | - | - | 5 | 0.3 | - | - | 5 | 0.3 | 8 | 0.5 | - | - | 0 | 0.0 | 0 | 0.0 | 1596 | 100.0 |
| Mid Western | 2241 | 97.6 | - | - | 9 | 0.4 | 7 | 0.3 | 10 | 0.4 | - | - | 1 | 0.0 | 14 | 0.6 | 8 | 0.3 | - | - | 0 | 0.0 | 2297 | 100.0 |
| Far West | 526 | 98.7 | 0 | 0.0 | - | - | - | - | - | - | 0 | 0.0 | 0 | 0.0 | - | - | - | - | 0 | 0.0 | 0 | 0.0 | 533 | 100.0 |
| Greater Murray | 2513 | 96.5 | - | - | 18 | 0.7 | 6 | 0.2 | 7 | 0.3 | - | - | 8 | 0.3 | 9 | 0.3 | 12 | 0.5 | 26 | 1.0 | 0 | 0.0 | 2603 | 100.0 |
| Southern | 1773 | 96.1 | - | - | 12 | 0.7 | 8 | 0.4 | 11 | 0.6 | - | - | 5 | 0.3 | 16 | 0.9 | 9 | 0.5 | 6 | 0.3 | 1 | 0.1 | 1845 | 100.0 |
| Other-Not stated | 769 | 94.2 | 4 | 0.5 | - | - | 3 | 0.4 | - | - | 1 | 0.1 | - | - | - | - | 8 | 1.0 | - | - | 1 | 0.1 | 816 | 100.0 |
| TOTAL | 68381 | 79.5 | 725 | 0.8 | 1540 | 1.8 | 1337 | 1.6 | 690 | 0.8 | 421 | 0.5 | 3579 | 4.2 | 4659 | 5.4 | 3225 | 3.8 | 1398 | 1.6 | 12 | 0.0 | 85967 | 100.0 |

Source: NSW Midwives Data Collection (HOIST). 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 1999, 98.0 per cent of all mothers were booked at the hospital of birth. The lowest rate (94.7 per cent) was in mothers born in Melanesia, Micronesia and Polynesia. This compared with 97.9 per cent of mothers born in English speaking countries and over 98 per cent of mothers in other country of birth groups.

4.5 DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT

In 1999, 86.2 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 88.1 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 55.0 per cent of mothers born in Melanesia, Micronesia and Polynesia and 70.8 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 1999

| Country of birth group | 0-19 | | Duration of pregnancy at first antenatal visit (weeks) | | | | TOTAL | |
|--|-------|------|--|------|-----|------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| English speaking | 60229 | 88.1 | 7407 | 10.8 | 745 | 1.1 | 68381 | 100.0 |
| Central & South America | 605 | 83.4 | 116 | 16.0 | 4 | 0.6 | 725 | 100.0 |
| Melanesia, Micronesia & Polynesia | 847 | 55.0 | 636 | 41.3 | 57 | 3.7 | 1540 | 100.0 |
| Southern Europe | 1158 | 86.6 | 170 | 12.7 | 9 | 0.7 | 1337 | 100.0 |
| Western & Northern Europe | 621 | 90.0 | 66 | 9.6 | 3 | 0.4 | 690 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 344 | 81.7 | 72 | 17.1 | 5 | 1.2 | 421 | 100.0 |
| Middle East & Africa | 2533 | 70.8 | 1028 | 28.7 | 18 | 0.5 | 3579 | 100.0 |
| South East Asia | 3902 | 83.8 | 725 | 15.6 | 32 | 0.7 | 4659 | 100.0 |
| North East Asia | 2654 | 82.3 | 546 | 16.9 | 25 | 0.8 | 3225 | 100.0 |
| Southern Asia | 1178 | 84.3 | 211 | 15.1 | 9 | 0.6 | 1398 | 100.0 |
| Other-Not stated | 6 | 50.0 | 2 | 16.7 | 4 | 33.3 | 12 | 100.0 |
| TOTAL | 74077 | 86.2 | 10979 | 12.8 | 911 | 1.1 | 85967 | 100.0 |

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

4.6 SMOKING IN PREGNANCY

In 1999, 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 five 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. Mothers born in non-English speaking countries were more likely to quit smoking in the second half of pregnancy compared to mothers born in English-speaking countries (Table 49).

TABLE 48

CONFINEMENTS BY COUNTRY OF BIRTH GROUP AND SMOKING IN PREGNANCY, NSW 1999

| Country of birth group | No | | Smoking in pregnancy | | | | TOTAL | |
|--|-------|------|----------------------|------|-----|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| English speaking | 53143 | 77.7 | 15227 | 22.3 | 11 | 0.0 | 68381 | 100.0 |
| Central & South America | 675 | 93.1 | 50 | 6.9 | 0 | 0.0 | 725 | 100.0 |
| Melanesia, Micronesia & Polynesia | 1370 | 89.0 | 170 | 11.0 | 0 | 0.0 | 1540 | 100.0 |
| Southern Europe | 1165 | 87.1 | 172 | 12.9 | 0 | 0.0 | 1337 | 100.0 |
| Western & Northern Europe | 612 | 88.7 | 77 | 11.2 | 1 | 0.1 | 690 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 386 | 91.7 | 35 | 8.3 | 0 | 0.0 | 421 | 100.0 |
| Middle East & Africa | 3204 | 89.5 | 375 | 10.5 | 0 | 0.0 | 3579 | 100.0 |
| South East Asia | 4518 | 97.0 | 140 | 3.0 | 1 | 0.0 | 4659 | 100.0 |
| North East Asia | 3184 | 98.7 | 41 | 1.3 | 0 | 0.0 | 3225 | 100.0 |
| Southern Asia | 1385 | 99.1 | 13 | 0.9 | 0 | 0.0 | 1398 | 100.0 |
| Other-Not stated | 10 | 83.3 | 2 | 16.7 | 0 | 0.0 | 12 | 100.0 |
| TOTAL | 69652 | 81.0 | 16302 | 19.0 | 13 | 0.0 | 85967 | 100.0 |

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

TABLE 49**MOTHERS WHO SMOKED AT ALL DURING PREGNANCY BY NUMBER OF CIGARETTES SMOKED IN THE SECOND HALF OF PREGNANCY AND COUNTRY OF BIRTH GROUP, NSW 1999**

| Country of birth group | Cigarettes smoked in the second half of pregnancy | | | | | | | | TOTAL | |
|---|---|------|-----------------------|------|--------------|------|-------------------|-----|-------|-------|
| | None | | More than ten per day | | 1-10 per day | | Amount not stated | | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| English speaking | 658 | 4.3 | 7580 | 49.8 | 6720 | 44.1 | 269 | 1.8 | 15227 | 100.0 |
| Central & South America | 4 | 8.0 | 20 | 40.0 | 25 | 50.0 | 1 | 2.0 | 50 | 100.0 |
| Melanesia, Micronesia & Polynesia | 10 | 5.9 | 58 | 34.1 | 98 | 57.6 | 4 | 2.4 | 170 | 100.0 |
| Southern Europe | 8 | 4.7 | 77 | 44.8 | 85 | 49.4 | 2 | 1.2 | 172 | 100.0 |
| Western & Northern Europe | 5 | 6.5 | 33 | 42.9 | 38 | 49.4 | 1 | 1.3 | 77 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 3 | 8.6 | 13 | 37.1 | 18 | 51.4 | 1 | 2.9 | 35 | 100.0 |
| Middle East & Africa | 16 | 4.3 | 143 | 38.1 | 208 | 55.5 | 8 | 2.1 | 375 | 100.0 |
| South East Asia | 20 | 14.3 | 33 | 23.6 | 81 | 57.9 | 6 | 4.3 | 140 | 100.0 |
| North East Asia | 11 | 26.8 | 6 | 14.6 | 23 | 56.1 | 1 | 2.4 | 41 | 100.0 |
| Southern Asia | 4 | 30.8 | 2 | 15.4 | 6 | 46.2 | 1 | 7.7 | 13 | 100.0 |
| Other-Not stated | 0 | 0.0 | 1 | 50.0 | 1 | 50.0 | 0 | 0.0 | 2 | 100.0 |
| TOTAL | 739 | 4.5 | 7966 | 48.9 | 7303 | 44.8 | 294 | 1.8 | 16302 | 100.0 |

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

4.7 MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS

In 1999, 1.0 per cent of mothers born in Melanesia, Micronesia and Polynesia were reported to have diabetes mellitus, twice the rate for all mothers in NSW. The rates of gestational diabetes in mothers born in Asian countries and Melanesia, Micronesia and Polynesia were over 7 per cent, and were more than twice the rate for all mothers in NSW (Table 50).

TABLE 50**MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY COUNTRY OF BIRTH GROUP, NSW 1999[#]**

| Condition | Country of birth group | | | | | | | | | | | | | | | | | | | | | | TOTAL | |
|--------------------------------|------------------------|-------|-------------------------|-------|------------------------------------|-------|-----------------|-------|---------------------------|-------|---|-------|----------------------|-------|-----------------|-------|-----------------|-------|---------------|-------|------------------|-------|-------|-------|
| | English speaking | | Central & South America | | Melanesia & Micronesia & Polynesia | | Southern Europe | | Western & Northern Europe | | Eastern Europe, Russia, Central Asian & Baltic States | | Middle East & Africa | | South East Asia | | North East Asia | | Southern Asia | | Other/Not stated | | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Diabetes mellitus | 279 | 0.4 | 4 | 0.6 | 15 | 1.0 | 5 | 0.4 | 2 | 0.3 | 1 | 0.2 | 12 | 0.3 | 23 | 0.5 | 16 | 0.5 | 6 | 0.4 | 0 | 0.0 | 363 | 0.4 |
| Gestational diabetes | 1859 | 2.7 | 41 | 5.7 | 120 | 7.8 | 78 | 5.8 | 21 | 3.0 | 14 | 3.3 | 220 | 6.1 | 416 | 8.9 | 336 | 10.4 | 149 | 10.7 | 0 | 0.0 | 3254 | 3.8 |
| Essential hypertension | 699 | 1.0 | 10 | 1.4 | 21 | 1.4 | 7 | 0.5 | 3 | 0.4 | 4 | 1.0 | 25 | 0.7 | 30 | 0.6 | 11 | 0.3 | 6 | 0.4 | 0 | 0.0 | 816 | 0.9 |
| Pregnancy-induced hypertension | 5252 | 7.7 | 59 | 8.1 | 113 | 7.3 | 86 | 6.4 | 57 | 8.3 | 21 | 5.0 | 140 | 3.9 | 248 | 5.3 | 115 | 3.6 | 103 | 7.4 | 0 | 0.0 | 6194 | 7.2 |
| TOTAL [#] | 68381 | 100.0 | 725 | 100.0 | 1540 | 100.0 | 1337 | 100.0 | 690 | 100.0 | 421 | 100.0 | 3579 | 100.0 | 4659 | 100.0 | 3225 | 100.0 | 1398 | 100.0 | 12 | 100.0 | 85967 | 100.0 |

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

Total refers to total confinements in NSW.

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 51).

Mothers born in the Middle East and Africa were more likely to have a normal vaginal delivery than mothers in other country of birth groups (Table 52). The highest caesarean section rate was among mothers born in Central and South America (21.1 per cent).

TABLE 51

LABOUR ONSET BY COUNTRY OF BIRTH GROUP, NSW 1999

| Country of birth group | Spontaneous | | No labour [#] | | Onset of labour Induced | | Not stated | | TOTAL | |
|---|-------------|------|------------------------|------|-------------------------|------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| English speaking | 43351 | 63.4 | 7442 | 10.9 | 17587 | 25.7 | 1 | 0.0 | 68381 | 100.0 |
| Central & South America | 506 | 69.8 | 70 | 9.7 | 149 | 20.6 | 0 | 0.0 | 725 | 100.0 |
| Melanesia, Micronesia & Polynesia | 1123 | 72.9 | 136 | 8.8 | 281 | 18.2 | 0 | 0.0 | 1540 | 100.0 |
| Southern Europe | 865 | 64.7 | 173 | 12.9 | 299 | 22.4 | 0 | 0.0 | 1337 | 100.0 |
| Western & Northern Europe | 458 | 66.4 | 73 | 10.6 | 159 | 23.0 | 0 | 0.0 | 690 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 302 | 71.7 | 41 | 9.7 | 78 | 18.5 | 0 | 0.0 | 421 | 100.0 |
| Middle East & Africa | 2652 | 74.1 | 289 | 8.1 | 638 | 17.8 | 0 | 0.0 | 3579 | 100.0 |
| South East Asia | 3639 | 78.1 | 394 | 8.5 | 626 | 13.4 | 0 | 0.0 | 4659 | 100.0 |
| North East Asia | 2349 | 72.8 | 382 | 11.8 | 494 | 15.3 | 0 | 0.0 | 3225 | 100.0 |
| Southern Asia | 952 | 68.1 | 146 | 10.4 | 300 | 21.5 | 0 | 0.0 | 1398 | 100.0 |
| Other–Not stated | 10 | 83.3 | 1 | 8.3 | 1 | 8.3 | 0 | 0.0 | 12 | 100.0 |
| TOTAL | 56207 | 65.4 | 9147 | 10.6 | 20612 | 24.0 | 1 | 0.0 | 85967 | 100.0 |

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

No labour indicates elective caesarean section.

TABLE 52

TYPE OF DELIVERY BY COUNTRY OF BIRTH GROUP, NSW 1999

| Country of birth group | Type of delivery | | | | | | | | | | | | TOTAL | |
|---|------------------|------|---------|-----|-------------------|-----|----------------|-----|----------------------------|------|--|------|-------|-------|
| | Normal vaginal | | Forceps | | Vacuum extraction | | Vaginal breech | | Elective caesarean section | | Emergency caesarean section [#] | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| English speaking | 46833 | 68.5 | 3341 | 4.9 | 4003 | 5.9 | 591 | 0.9 | 7442 | 10.9 | 6171 | 9.0 | 68381 | 100.0 |
| Central & South America | 479 | 66.1 | 34 | 4.7 | 50 | 6.9 | 9 | 1.2 | 70 | 9.7 | 83 | 11.4 | 725 | 100.0 |
| Melanesia, Micronesia & Polynesia | 1157 | 75.1 | 48 | 3.1 | 56 | 3.6 | 19 | 1.2 | 136 | 8.8 | 124 | 8.1 | 1540 | 100.0 |
| Southern Europe | 899 | 67.2 | 64 | 4.8 | 91 | 6.8 | 12 | 0.9 | 173 | 12.9 | 98 | 7.3 | 1337 | 100.0 |
| Western & Northern Europe | 470 | 68.1 | 39 | 5.7 | 50 | 7.2 | 7 | 1.0 | 73 | 10.6 | 51 | 7.4 | 690 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 288 | 68.4 | 27 | 6.4 | 24 | 5.7 | 3 | 0.7 | 41 | 9.7 | 38 | 9.0 | 421 | 100.0 |
| Middle East & Africa | 2756 | 77.0 | 123 | 3.4 | 139 | 3.9 | 41 | 1.1 | 289 | 8.1 | 231 | 6.5 | 3579 | 100.0 |
| South East Asia | 3202 | 68.7 | 220 | 4.7 | 361 | 7.7 | 48 | 1.0 | 394 | 8.5 | 434 | 9.3 | 4659 | 100.0 |
| North East Asia | 1991 | 61.7 | 199 | 6.2 | 283 | 8.8 | 23 | 0.7 | 382 | 11.8 | 347 | 10.8 | 3225 | 100.0 |
| Southern Asia | 867 | 62.0 | 94 | 6.7 | 94 | 6.7 | 9 | 0.6 | 146 | 10.4 | 188 | 13.4 | 1398 | 100.0 |
| Other–Not stated | 9 | 75.0 | 1 | 8.3 | 1 | 8.3 | 0 | 0.0 | 1 | 8.3 | 0 | 0.0 | 12 | 100.0 |
| TOTAL | 58951 | 68.6 | 4190 | 4.9 | 5152 | 6.0 | 762 | 0.9 | 9147 | 10.6 | 7765 | 9.0 | 85967 | 100.0 |

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

Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

4.9 BIRTHWEIGHT

The rate of low birthweight (less than 2,500 grams) in 1999 was 6.3 per cent in NSW. The highest rates of low birthweight were in babies of mothers born in Southern Asian countries (9.1 per cent) (Table 53). Babies of mothers born in North East Asia and Southern Europe were least likely to be low birthweight.

TABLE 53

BIRTHWEIGHT BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1999

| Country of birth group | Less than 2,500 | | Birthweight (grams) | | | | TOTAL | |
|---|-----------------|------------|---------------------|-------------|-----------|--------------|--------------|--------------|
| | No. | % | No. | 2,500+ % | No. | Not stated % | No. | % |
| English speaking | 4450 | 6.4 | 64990 | 93.6 | 20 | 0.0 | 69460 | 100.0 |
| Central & South America | 48 | 6.6 | 682 | 93.4 | 0 | 0.0 | 730 | 100.0 |
| Melanesia, Micronesia & Polynesia | 89 | 5.7 | 1466 | 94.3 | 0 | 0.0 | 1555 | 100.0 |
| Southern Europe | 76 | 5.6 | 1284 | 94.3 | 1 | 0.1 | 1361 | 100.0 |
| Western & Northern Europe | 52 | 7.3 | 657 | 92.5 | 1 | 0.1 | 710 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 25 | 5.9 | 398 | 94.1 | 0 | 0.0 | 423 | 100.0 |
| Middle East & Africa | 207 | 5.7 | 3437 | 94.3 | 0 | 0.0 | 3644 | 100.0 |
| South East Asia | 319 | 6.8 | 4386 | 93.2 | 2 | 0.0 | 4707 | 100.0 |
| North East Asia | 142 | 4.3 | 3124 | 95.7 | 0 | 0.0 | 3266 | 100.0 |
| Southern Asia | 129 | 9.1 | 1291 | 90.9 | 0 | 0.0 | 1420 | 100.0 |
| Other/Not stated | 4 | 30.8 | 9 | 69.2 | 0 | 0.0 | 13 | 100.0 |
| TOTAL | 5541 | 6.3 | 81724 | 93.6 | 24 | 0.0 | 87289 | 100.0 |

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

4.10 GESTATIONAL AGE

The rate of prematurity (less than 37 weeks gestation) in 1999 was 7.1 per cent in NSW. The highest rates of prematurity were in babies of mothers born in Southern Asian countries (7.5 per cent). Babies of mothers born in North East Asia or the Middle East and Africa were least likely to be premature (Table 54).

TABLE 54

GESTATIONAL AGE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 1999

| Country of birth group | Less than 37 | | Gestational age (weeks) | | | | TOTAL | |
|---|--------------|------------|-------------------------|-------------|----------|--------------|--------------|--------------|
| | No. | % | No. | 37+ % | No. | Not stated % | No. | % |
| English speaking | 5036 | 7.3 | 64417 | 92.7 | 7 | 0.0 | 69460 | 100.0 |
| Central & South America | 50 | 6.8 | 680 | 93.2 | 0 | 0.0 | 730 | 100.0 |
| Melanesia, Micronesia & Polynesia | 105 | 6.8 | 1450 | 93.2 | 0 | 0.0 | 1555 | 100.0 |
| Southern Europe | 92 | 6.8 | 1269 | 93.2 | 0 | 0.0 | 1361 | 100.0 |
| Western & Northern Europe | 66 | 9.3 | 644 | 90.7 | 0 | 0.0 | 710 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 31 | 7.3 | 392 | 92.7 | 0 | 0.0 | 423 | 100.0 |
| Middle East & Africa | 223 | 6.1 | 3421 | 93.9 | 0 | 0.0 | 3644 | 100.0 |
| South East Asia | 340 | 7.2 | 4367 | 92.8 | 0 | 0.0 | 4707 | 100.0 |
| North East Asia | 182 | 5.6 | 3084 | 94.4 | 0 | 0.0 | 3266 | 100.0 |
| Southern Asia | 107 | 7.5 | 1313 | 92.5 | 0 | 0.0 | 1420 | 100.0 |
| Other-Not stated | 4 | 30.8 | 9 | 69.2 | 0 | 0.0 | 13 | 100.0 |
| TOTAL | 6236 | 7.1 | 81046 | 92.8 | 7 | 0.0 | 87289 | 100.0 |

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

4.11 APGAR SCORE

In 1999, 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 55). Low Apgar scores were most common among babies of mothers born in Melanesia, Micronesia and Polynesia (3.5 per cent).

TABLE 55

BIRTHS BY COUNTRY OF BIRTH GROUP AND APGAR SCORE AT FIVE MINUTES, NSW 1999#

| Country of birth group | 0-4 | | 5-6 | | Apgar score 7+ | | Not stated | | TOTAL | |
|---|-----|-----|------|-----|----------------|------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| English speaking | 777 | 1.1 | 865 | 1.2 | 67686 | 97.4 | 132 | 0.2 | 69460 | 100.0 |
| Central & South America | 12 | 1.6 | 9 | 1.2 | 707 | 96.8 | 2 | 0.3 | 730 | 100.0 |
| Melanesia, Micronesia & Polynesia | 26 | 1.7 | 28 | 1.8 | 1497 | 96.3 | 4 | 0.3 | 1555 | 100.0 |
| Southern Europe | 14 | 1.0 | 18 | 1.3 | 1327 | 97.5 | 2 | 0.1 | 1361 | 100.0 |
| Western & Northern Europe | 8 | 1.1 | 7 | 1.0 | 691 | 97.3 | 4 | 0.6 | 710 | 100.0 |
| Eastern Europe, Russia, Central Asian & Baltic States | 3 | 0.7 | 5 | 1.2 | 415 | 98.1 | 0 | 0.0 | 423 | 100.0 |
| Middle East & Africa | 42 | 1.2 | 49 | 1.3 | 3547 | 97.3 | 6 | 0.2 | 3644 | 100.0 |
| South East Asia | 54 | 1.1 | 77 | 1.6 | 4566 | 97.0 | 10 | 0.2 | 4707 | 100.0 |
| North East Asia | 35 | 1.1 | 26 | 0.8 | 3203 | 98.1 | 2 | 0.1 | 3266 | 100.0 |
| Southern Asia | 24 | 1.7 | 14 | 1.0 | 1377 | 97.0 | 5 | 0.4 | 1420 | 100.0 |
| Other/Not stated | 1 | 7.7 | 0 | 0.0 | 12 | 92.3 | 0 | 0.0 | 13 | 100.0 |
| TOTAL | 996 | 1.1 | 1098 | 1.3 | 85028 | 97.4 | 167 | 0.2 | 87289 | 100.0 |

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

4.12 PERINATAL OUTCOMES

In 1999, 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 56). Perinatal mortality was highest among babies of mothers born in Southern Asia, Central and South America and Melanesia, Micronesia and Polynesia.

TABLE 56

PERINATAL OUTCOMES BY COUNTRY OF BIRTH GROUP, NSW 1999#

| Country of birth group | Liveborn surviving | | Stillborn | | Perinatal outcome Neonatal death | | Not stated | | Total births | | Perinatal mortality rate/1,000 births |
|---|--------------------|------|-----------|-----|----------------------------------|-----|------------|-----|--------------|-------|---------------------------------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | |
| English speaking | 68815 | 99.1 | 416 | 0.6 | 216 | 0.3 | 13 | 0.0 | 69460 | 100.0 | 9.1 |
| Central & South America | 721 | 98.8 | 7 | 1.0 | 2 | 0.3 | 0 | 0.0 | 730 | 100.0 | 12.3 |
| Melanesia, Micronesia & Polynesia | 1536 | 98.8 | 12 | 0.8 | 7 | 0.5 | 0 | 0.0 | 1555 | 100.0 | 12.2 |
| Southern Europe | 1352 | 99.3 | 7 | 0.5 | 2 | 0.1 | 0 | 0.0 | 1361 | 100.0 | 6.6 |
| Western & Northern Europe | 701 | 98.7 | 5 | 0.7 | 2 | 0.3 | 2 | 0.3 | 710 | 100.0 | 9.9 |
| Eastern Europe, Russia, Central Asian & Baltic States## | 420 | 99.3 | 2 | 0.5 | 1 | 0.2 | 0 | 0.0 | 423 | 100.0 | - |
| Middle East & Africa | 3605 | 98.9 | 24 | 0.7 | 15 | 0.4 | 0 | 0.0 | 3644 | 100.0 | 10.7 |
| South East Asia | 4668 | 99.2 | 27 | 0.6 | 12 | 0.3 | 0 | 0.0 | 4707 | 100.0 | 8.3 |
| North East Asia | 3237 | 99.1 | 20 | 0.6 | 8 | 0.2 | 1 | 0.0 | 3266 | 100.0 | 8.6 |
| Southern Asia | 1401 | 98.7 | 13 | 0.9 | 6 | 0.4 | 0 | 0.0 | 1420 | 100.0 | 13.4 |
| Other/Not stated | 12 | 92.3 | 0 | 0.0 | 0 | 0.0 | 1 | 7.7 | 13 | 100.0 | - |
| TOTAL | 86468 | 99.1 | 533 | 0.6 | 271 | 0.3 | 17 | 0.0 | 87289 | 100.0 | 9.2 |

Source: NSW Midwives Data Collection (HOIST). 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 five perinatal deaths.

PART 5: NEONATAL INTENSIVE CARE

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

5.1 REGISTRATION RATE

There were 1,991 infants registered in NICUS in 1999. The most common reasons for registration of an infant were assisted ventilation for four hours or more (74.4 per cent) and gestational age less than 29 weeks (19.4 per cent). Infants generally met more than one of the registration criteria.

The NICUS registration rate in 1999 was 21.8 per 1,000 live births, which has increased slightly each year since 1992 (17.9 per 1,000 live births). The ACT joined NICUS in 1995. Figure 6 and Table 57 show the registration rate according to the mothers' health area of residence. The relatively low registration rates from the health areas adjoining the

New South Wales border reflect the fact that some infants are preferentially referred interstate. The registration rate in health areas with low numbers of births should be interpreted with caution. The proportion of mothers in each health area has remained relatively constant since 1992.

Sixty-one of the 1,991 infants (3.1 per cent) registered in NICUS were born to Aboriginal and/or Torres Strait Islander mothers. There were 2,118 live births to Aboriginal and Torres Strait Islander women recorded by the NSW and ACT Midwives Data Collections for 1999. The registration rate for these infants was 28.8 per 1,000 live births and has increased since 1992. Fifty-six of the 1,828 mothers (3.1 per cent) were Aboriginal and Torres Strait Islander, of whom 17 (30.4 per cent) were residents of the Mid North Coast and Mid Western Health Areas (Table 58). Fifteen of the 367 mothers (4.1 per cent) of infants less than 29 weeks and/or less than 1,000 grams were Aboriginal and Torres Strait Islander.

TABLE 57

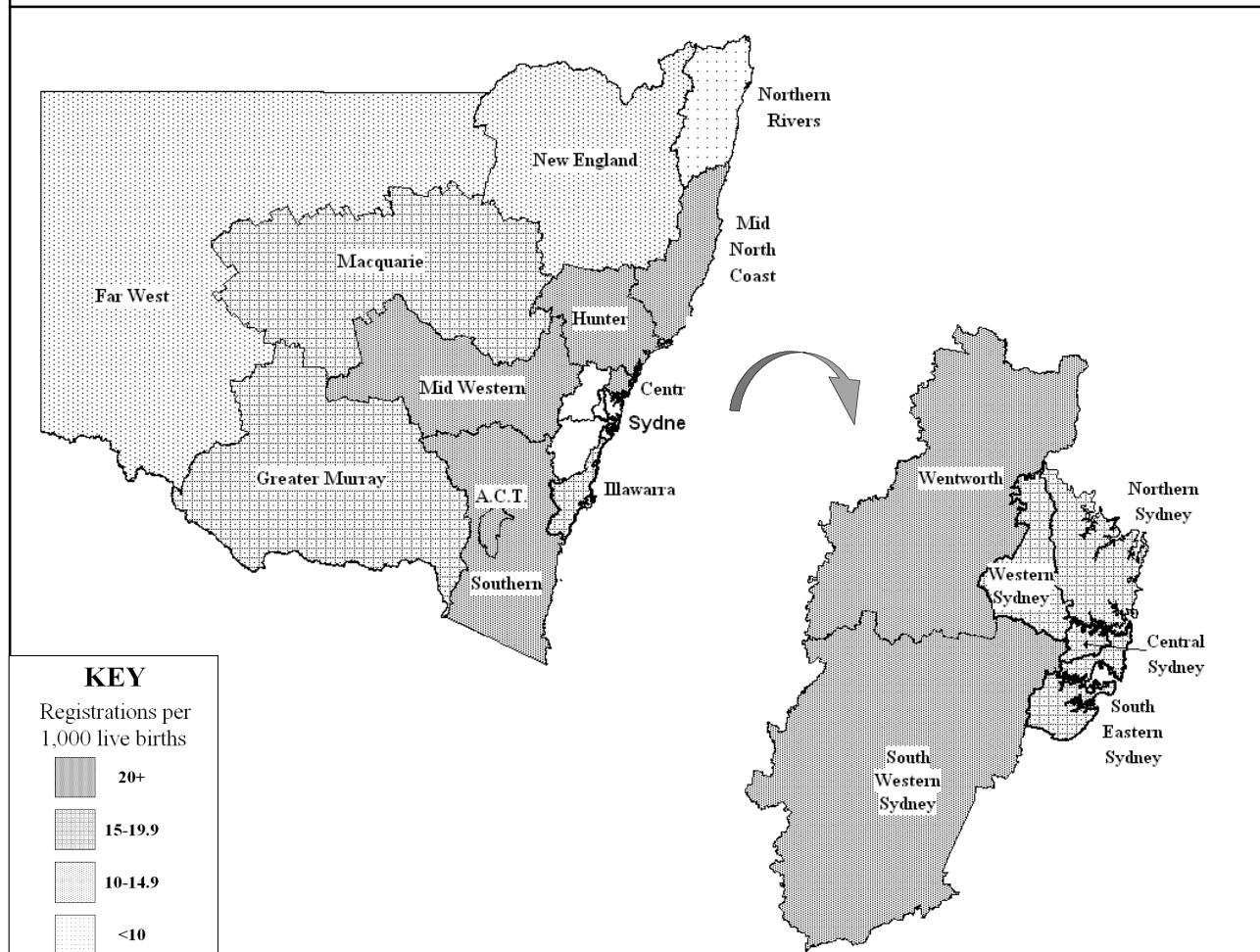
NICUS REGISTRATIONS BY HEALTH AREA OF RESIDENCE, NSW & ACT 1999

| Health Area | Total NICUS registrants | | Total NSW & ACT live births | Registrants per 1,000 live births |
|-------------------|-------------------------|--------------|-----------------------------|-----------------------------------|
| | No. | % | No. | |
| Central Sydney | 118 | 5.9 | 6712 | 17.5 |
| North Sydney | 172 | 8.6 | 9393 | 18.3 |
| South East Sydney | 171 | 8.6 | 9568 | 17.9 |
| South West Sydney | 283 | 14.2 | 10924 | 25.9 |
| Wentworth | 120 | 6.0 | 4439 | 27.0 |
| Western Sydney | 229 | 11.5 | 12714 | 18.0 |
| Central Coast | 109 | 5.5 | 3784 | 28.8 |
| Hunter | 292 | 14.7 | 7087 | 41.2 |
| Illawarra | 68 | 3.4 | 4481 | 15.2 |
| Far West | 6 | 0.3 | 528 | 11.4 |
| Greater Murray | 45 | 2.3 | 2664 | 16.9 |
| Macquarie | 26 | 1.3 | 1598 | 16.3 |
| Mid North Coast | 70 | 3.5 | 2911 | 24.0 |
| Mid Western | 54 | 2.7 | 2318 | 23.3 |
| New England | 33 | 1.7 | 2353 | 14.0 |
| Northern Rivers | 13 | 0.7 | 2890 | 4.5 |
| Southern | 56 | 2.8 | 2322 | 24.1 |
| ACT | 113 | 5.7 | 4124 | 27.4 |
| Interstate | 7 | 0.4 | 609 | 11.5 |
| Overseas | 6 | 0.3 | 0 | — |
| Not stated | 0 | 0.0 | 11 | — |
| TOTAL | 1991 | 100.0 | 91430 | 21.8 |

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 1999. Epidemiology and Surveillance Branch, NSW Health Department. ACT Maternal-Perinatal Data Collection, 1998.

FIGURE 6

NEONATAL INTENSIVE CARE REGISTRATION RATE BY MATERNAL HEALTH AREA OF RESIDENCE, NSW & ACT, 1999



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

TABLE 58

CONFINEMENTS BY HEALTH AREA OF RESIDENCE AND ABORIGINALITY, NSW & ACT 1999

| Health Area | Aboriginal | | Non-Aboriginal | | TOTAL | |
|-------------------|------------|------------|----------------|-------------|-------------|--------------|
| | No. | % | No. | % | No. | % |
| Central Sydney | 4 | 3.7 | 104 | 96.3 | 108 | 5.9 |
| North Sydney | 0 | 0.0 | 161 | 100.0 | 161 | 8.8 |
| South East Sydney | 1 | 0.6 | 159 | 99.4 | 160 | 8.7 |
| South West Sydney | 2 | 0.8 | 252 | 99.2 | 254 | 13.9 |
| Wentworth | 4 | 3.5 | 110 | 96.5 | 114 | 6.2 |
| Western Sydney | 3 | 1.4 | 214 | 98.6 | 217 | 11.9 |
| Central Coast | 0 | 0.0 | 99 | 100.0 | 99 | 5.4 |
| Hunter | 3 | 1.2 | 256 | 98.8 | 259 | 14.2 |
| Illawarra | 2 | 3.1 | 62 | 96.9 | 64 | 3.5 |
| Far West | 3 | 50.0 | 3 | 50.0 | 6 | 0.3 |
| Greater Murray | 2 | 4.7 | 41 | 95.3 | 43 | 2.4 |
| Macquarie | 6 | 23.1 | 20 | 76.9 | 26 | 1.4 |
| Mid North Coast | 10 | 15.9 | 53 | 84.1 | 63 | 3.4 |
| Mid Western | 7 | 14.3 | 42 | 85.7 | 49 | 2.7 |
| New England | 4 | 13.8 | 25 | 86.2 | 29 | 1.6 |
| Northern Rivers | 1 | 8.3 | 11 | 91.7 | 12 | 0.7 |
| Southern | 2 | 4.0 | 48 | 96.0 | 50 | 2.7 |
| ACT | 2 | 2.0 | 100 | 98.0 | 102 | 5.6 |
| Interstate | 0 | 0.0 | 6 | 100.0 | 6 | 0.3 |
| Overseas | 0 | 0.0 | 6 | 100.0 | 6 | 0.3 |
| TOTAL | 56 | 3.1 | 1772 | 96.9 | 1828 | 100.0 |

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

5.2 MATERNAL CHARACTERISTICS

There were 1,828 mothers of the 1,991 infants registered in NICUS during 1999. Nearly 80 per cent of the mothers were residents of the Sydney, Central Coast, Hunter and Illawarra Health Areas. The distribution of the mothers Health Area of residence for infants less than 29 weeks and/or less than 1,000 grams was similar to those for the whole group. Of the 367 mothers of infants in this group just over half (58.5 per cent) were residents of the South Western Sydney, Western Sydney, Hunter, South Eastern Sydney or Northern Sydney Health Areas.

The age of mothers of NICUS infants ranged from 15 to 48 years with a mean age of 29.4 years. The mean maternal age was similar across all gestational age groups and has remained constant since 1992. The proportion of mothers aged 35 years or more has increased from 13.7 per cent in 1992 to 20.8 per cent in 1999. There were 5.1 per cent of mothers aged less than 20 years (Table 59). The health areas of residence with the highest proportion of teenage mothers were Far West, Macquarie, Mid North Coast, Illawarra and Southern.

There were 1,641 mothers (89.8 per cent) who had an antenatal complication. The most common antenatal complications were threatened preterm labour (860/1,828; 47.0 per cent), fetal distress (408/1,828; 22.3 per cent), hypertensive disease of pregnancy (339/1,828; 18.5 per cent) and antepartum haemorrhage (314/1,828; 17.2 per cent). Antenatal complications were more frequent in mothers delivering at less than 37 weeks compared with at term. Even so, 63.5 per cent (325/512) of mothers giving birth at 37–41 weeks gestation had an antenatal complication.

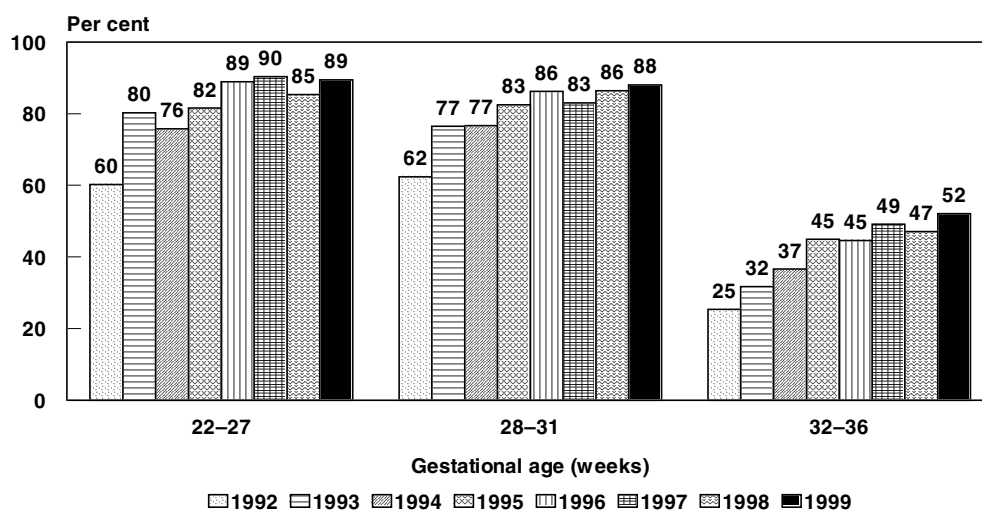
In 1999, 89.4 per cent of mothers of infants born at less than 28 weeks received corticosteroids (Figure 7 and Table 60). Over three-quarters (88.0 per cent) of mothers of 28–31 week gestation infants received antenatal corticosteroids. The overall proportion of mothers receiving antenatal corticosteroids has increased from 45 per cent in 1992 to 72.5 per cent in 1999.

TABLE 59

CONFINEMENTS BY HEALTH AREA OF RESIDENCE AND MATERNAL AGE, NSW & ACT 1999

| Health Area | Less than 20 | | Maternal age (years) | | | | TOTAL | |
|-------------------|--------------|------|----------------------|------|-----|------|-------|-------|
| | No | % | 20–34 | | 35+ | | No | % |
| | | | No | % | No. | % | | |
| Central Sydney | 3 | 2.8 | 67 | 62.0 | 38 | 35.2 | 108 | 5.9 |
| North Sydney | 1 | 0.6 | 106 | 65.8 | 54 | 33.5 | 161 | 8.8 |
| South East Sydney | 5 | 3.1 | 110 | 68.8 | 45 | 28.1 | 160 | 8.7 |
| South West Sydney | 12 | 4.7 | 197 | 77.9 | 45 | 17.7 | 254 | 13.9 |
| Wentworth | 7 | 6.1 | 86 | 75.4 | 21 | 18.4 | 114 | 6.2 |
| Western Sydney | 7 | 3.2 | 169 | 77.9 | 41 | 18.9 | 217 | 11.9 |
| Central Coast | 3 | 3.0 | 81 | 81.8 | 15 | 15.2 | 99 | 5.4 |
| Hunter | 15 | 5.8 | 213 | 82.2 | 31 | 12.0 | 259 | 14.2 |
| Illawarra | 8 | 12.5 | 41 | 64.1 | 15 | 23.4 | 64 | 3.5 |
| Far West | 2 | 33.3 | 4 | 66.7 | 0 | 0.0 | 6 | 0.3 |
| Greater Murray | 4 | 9.3 | 35 | 81.4 | 4 | 9.3 | 43 | 2.4 |
| Macquarie | 5 | 19.2 | 19 | 73.1 | 2 | 7.7 | 26 | 1.4 |
| Mid North Coast | 8 | 12.7 | 42 | 66.7 | 13 | 20.6 | 63 | 3.4 |
| Mid Western | 2 | 4.1 | 37 | 75.5 | 10 | 20.4 | 49 | 2.7 |
| New England | 2 | 6.9 | 23 | 79.3 | 4 | 13.8 | 29 | 1.6 |
| Northern Rivers | 0 | 0.0 | 11 | 91.7 | 1 | 8.3 | 12 | 0.7 |
| Southern | 4 | 8.0 | 37 | 74.0 | 9 | 18.0 | 50 | 2.7 |
| ACT | 3 | 2.9 | 69 | 67.6 | 30 | 29.4 | 102 | 5.6 |
| Interstate | 1 | 16.7 | 5 | 83.3 | 0 | 0.0 | 6 | 0.3 |
| Overseas | 0 | 0.0 | 3 | 50.0 | 3 | 50.0 | 6 | 0.3 |
| TOTAL | 92 | 5.1 | 1355 | 74.1 | 381 | 20.8 | 1828 | 100.0 |

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

FIGURE 7**CONFINEMENTS BY ANTENATAL CORTICOSTEROID ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 1992–1999**

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

TABLE 60**CONFINEMENTS BY ANTENATAL CORTICOSTEROID ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 1995–1999**

| Year | Corticosteroid administration | Gestational age (weeks) | | | | | | TOTAL | |
|------|-------------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| | | 22-27 | | 28-31 | | 32-36 | | No. | % |
| | | No. | % | No. | % | No. | % | No. | % |
| 1995 | No | 37 | 18.4 | 80 | 17.5 | 264 | 55.1 | 381 | 33.5 |
| | Yes | 164 | 81.6 | 376 | 82.5 | 215 | 44.9 | 755 | 66.5 |
| | TOTAL | 201 | 100.0 | 456 | 100.0 | 479 | 100.0 | 1136 | 100.0 |
| 1996 | No | 23 | 11.1 | 64 | 13.8 | 291 | 55.4 | 378 | 31.6 |
| | Yes | 185 | 88.9 | 400 | 86.2 | 234 | 44.6 | 819 | 68.4 |
| | TOTAL | 208 | 100.0 | 464 | 100.0 | 525 | 100.0 | 1197 | 100.0 |
| 1997 | No | 20 | 9.7 | 79 | 17.0 | 261 | 50.9 | 360 | 30.4 |
| | Yes | 186 | 90.3 | 385 | 83.0 | 252 | 49.1 | 823 | 69.6 |
| | TOTAL | 206 | 100.0 | 464 | 100.0 | 513 | 100.0 | 1183 | 100.0 |
| 1998 | No | 37 | 14.7 | 70 | 13.6 | 274 | 52.9 | 381 | 29.7 |
| | Yes | 214 | 85.3 | 444 | 86.4 | 244 | 47.1 | 902 | 70.3 |
| | TOTAL | 251 | 100.0 | 514 | 100.0 | 518 | 100.0 | 1283 | 100.0 |
| 1999 | No | 27 | 10.6 | 57 | 12.0 | 273 | 47.9 | 357 | 27.5 |
| | Yes | 227 | 89.4 | 419 | 88.0 | 297 | 52.1 | 943 | 72.5 |
| | TOTAL | 254 | 100.0 | 476 | 100.0 | 570 | 100.0 | 1300 | 100.0 |

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

5.3 TRANSFER STATUS, LABOUR AND DELIVERY

Infants are admitted to a neonatal intensive care unit after:

- delivery which has been booked to occur in a tertiary centre;
- delivery in a tertiary centre following maternal transfer;
- delivery in a non-tertiary centre followed by infant transfer to a tertiary centre.

Thirty-six per cent of all births were booked at a tertiary centre, ranging from 39.5 per cent for the 32–36 week gestational age group to 31.6 per cent for the 37-plus week gestational age group (Table 61). Maternal transfer was most common at gestations less than 32 weeks. The rate of maternal transfer was similar for infants born before 28 weeks gestation (54.7 per cent) and for those born at 28–31 weeks gestation (55.9 per cent). The overall rate of maternal transfer was 33.2 per cent.

Thirty-one per cent of infants were transferred to a tertiary centre following birth. There were 6.9 per cent (102/1,477) of infants transferred from one tertiary centre to another within four hours of commencing assisted ventilation or for major surgery. Transfer following birth was most common in the 37-plus weeks gestational age group (65.5 per cent). Fifty infants (50/1,151; 4.3 per cent) greater than 31 weeks gestation were discharged home prior to the admission that qualified them for registration in NICUS.

The inverse relationship between gestational age groups and the proportion of births in a tertiary centre is shown in Figure 8 and Table 62. The proportion of infants born in a tertiary centre increased from 61.3 per cent in 1992 to 74.2 per cent 1999. In 1999, 91.2 per cent of infants less than 32 weeks gestation were born in a tertiary centre

compared with 72.7 per cent of 32–36 week gestation infants and 48.9 per cent of term infants.

The pattern of transfer status (Table 63) and place of birth (Table 64) by birthweight is similar to that of gestational age, with the majority (91.6 per cent) of the very low birthweight infants (less than 1,500 grams) born in a tertiary centre.

Spontaneous onset of labour was more common among mothers of infants less than 28 weeks gestation (Table 65). Augmentation and induction of labour was most common in term and post-term births.

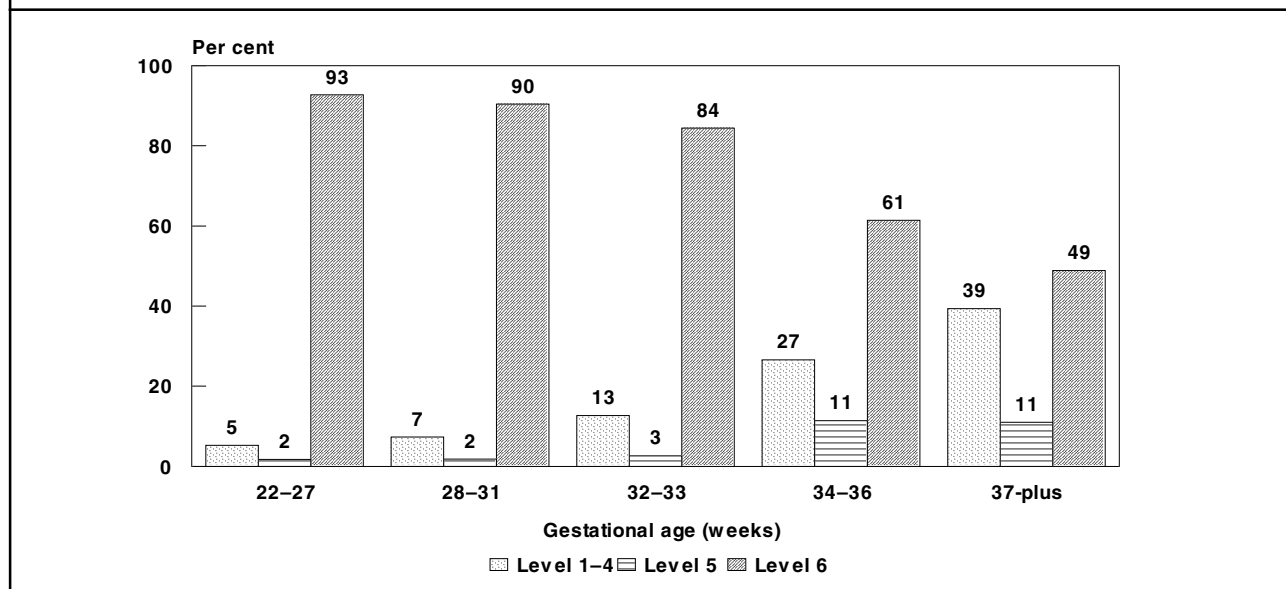
The proportion of mothers who gave birth by elective caesarean section (caesarean section without labour) increased from 27.5 per cent in 1992 to 32.1 per cent in 1999. Spontaneous onset of labour occurred in just over half (54.1 per cent) of all infants less than 2,500 grams birth weight (Table 66). As expected, augmentation or induction of labour was most common in mothers of infants with a birthweight of 2,500 grams or more (33.5 per cent).

Prolonged rupture of membranes (greater than 24 hours) was more common at lower gestations, affecting about 30 per cent of infants less than 28 weeks gestation (Table 67).

The most common type of delivery was caesarean section (53.1 per cent in 1992 to 50.5 per cent in 1999), followed by normal vaginal delivery (33.8 per cent in 1992 to 39.1 per cent in 1999) and vaginal breech delivery (6.0 per cent in 1992 to 5.4 per cent in 1999) (Tables 68 and 69). The high rate of caesarean section and breech delivery in the NICUS cohort is related to the high proportion of preterm births. The rate of caesarean section in term and post-term births was 34.7 per cent, almost double the rate for all births in NSW and the ACT in 1999.

FIGURE 8

PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) BY GESTATIONAL AGE, NSW & ACT 1999



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

TABLE 61**BIRTHS BY BOOKING STATUS, TRANSFER STATUS AND GESTATIONAL AGE, NSW & ACT 1999**

| Booking status and transfer status | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|------------------------------------|-------------------------|--------------|------------|--------------|------------|--------------|------------|--------------|-----------|--------------|-------------|--------------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Booked at tertiary hosp | 110 | 38.1 | 189 | 34.3 | 246 | 39.5 | 161 | 31.4 | 6 | 37.5 | 712 | 35.8 |
| Transfer before birth | 158 | 54.7 | 308 | 55.9 | 181 | 29.1 | 15 | 2.9 | 0 | 0.0 | 662 | 33.2 |
| Transfer after birth | 21 | 7.3 | 54 | 9.8 | 196 | 31.5 | 336 | 65.6 | 10 | 62.5 | 617 | 31.0 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 623 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1991 | 100.0 |

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

TABLE 62**BIRTHS BY PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) AND GESTATIONAL AGE, NSW & ACT 1999**

| Place of birth | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|---------------------|-------------------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|-------------|--------------|
| | 22-27 | | 28-31 | | 32-33 | | 34-36 | | 37+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Level 1-4 | 15 | 5.2 | 40# | 7.3 | 39 | 12.7 | 84 | 26.6 | 208 | 39.4 | 386 | 19.4 |
| Level 5 | 5 | 1.7 | 10# | 1.8 | 8 | 2.6 | 36 | 11.4 | 58 | 11.0 | 117 | 5.9 |
| Level 6 | 268 | 92.7 | 498# | 90.4 | 259 | 84.4 | 194 | 61.4 | 258 | 48.9 | 1477 | 74.2 |
| Planned home birth | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.6 | 0 | 0.0 | 2 | 0.1 |
| Born before arrival | 1 | 0.3 | 3 | 0.5 | 1 | 0.3 | 0 | 0.0 | 4 | 0.8 | 9 | 0.5 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 307 | 100.0 | 316 | 100.0 | 528 | 100.0 | 1991 | 100.0 |

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

26/50 (52%) babies not born in a level 6 hospital were 30-31 weeks gestation.
304/498 (61%) babies born in a level 6 hospital were 30-31 weeks gestation.

TABLE 63**BIRTHS BY BOOKING STATUS, TRANSFER STATUS AND BIRTHWEIGHT, NSW & ACT 1999**

| Booking status and transfer status | Birthweight (grams) | | | | | | | | TOTAL | |
|------------------------------------|---------------------|--------------|-------------|--------------|-------------|--------------|------------|--------------|-------------|--------------|
| | Less than 1,000 | | 1,000-1,499 | | 1,500-2,499 | | 2,500+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | | |
| Booked at tertiary hosp | 107 | 37.9 | 161 | 35.2 | 220 | 36.7 | 224 | 34.4 | 712 | 35.8 |
| Transfer before birth | 154 | 54.6 | 255 | 55.8 | 225 | 37.5 | 28 | 4.3 | 662 | 33.2 |
| Transfer after birth | 21 | 7.4 | 41 | 9.0 | 155 | 25.8 | 400 | 61.3 | 617 | 31.0 |
| TOTAL | 282 | 100.0 | 457 | 100.0 | 600 | 100.0 | 652 | 100.0 | 1991 | 100.0 |

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

TABLE 64**BIRTHS BY PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) AND BIRTHWEIGHT, NSW & ACT 1999**

| Place of birth | Birthweight (grams) | | | | | | | | TOTAL | |
|---------------------|---------------------|--------------|-------------|--------------|-------------|--------------|------------|--------------|-------------|--------------|
| | Less than 1,000 | | 1,000-1,499 | | 1,500-2,499 | | 2,500+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | | |
| Level 1-4 | 14 | 5.0 | 31 | 6.8 | 93 | 15.5 | 248 | 38.0 | 386 | 19.4 |
| Level 5 | 5 | 1.8 | 8 | 1.8 | 36 | 6.0 | 68 | 10.4 | 117 | 5.9 |
| Level 6 | 261 | 92.6 | 416 | 91.0 | 468 | 78.0 | 332 | 50.9 | 1477 | 74.2 |
| Planned home birth | 0 | 0.0 | 0 | 0.0 | 2 | 0.3 | 0 | 0.0 | 2 | 0.1 |
| Born before arrival | 2 | 0.7 | 2 | 0.4 | 1 | 0.2 | 4 | 0.6 | 9 | 0.5 |
| TOTAL | 282 | 100.0 | 457 | 100.0 | 600 | 100.0 | 652 | 100.0 | 1991 | 100.0 |

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

TABLE 65**CONFINEMENTS BY ONSET OF LABOUR AND GESTATIONAL AGE, NSW & ACT 1999**

| Onset of labour | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|-----------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Spontaneous | 167 | 65.7 | 256 | 53.8 | 276 | 48.4 | 217 | 42.4 | 6 | 37.5 | 922 | 50.4 |
| Augmented | 12 | 4.7 | 17 | 3.6 | 31 | 5.4 | 55 | 10.7 | 1 | 6.3 | 116 | 6.3 |
| Induced | 2 | 0.8 | 7 | 1.5 | 49 | 8.6 | 133 | 26.0 | 9 | 56.3 | 200 | 10.9 |
| No labour | 73 | 28.7 | 196 | 41.2 | 214 | 37.5 | 107 | 20.9 | 0 | 0.0 | 590 | 32.3 |
| TOTAL | 254 | 100.0 | 476 | 100.0 | 570 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1828 | 100.0 |

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

TABLE 66**CONFINEMENTS BY ONSET OF LABOUR AND BIRTHWEIGHT, NSW & ACT 1999**

| Onset of labour | Birthweight (grams) | | | | | | | | TOTAL | |
|-----------------|---------------------|-------|-------------|-------|-------------|-------|--------|-------|-------|-------|
| | Less than 1,000 | | 1,000-1,499 | | 1,500-2,499 | | 2,500+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | | |
| Spontaneous | 138 | 56.1 | 191 | 48.2 | 308 | 57.5 | 285 | 43.8 | 922 | 50.4 |
| Augmented | 9 | 3.7 | 19 | 4.8 | 24 | 4.5 | 64 | 9.8 | 116 | 6.3 |
| Induced | 2 | 0.8 | 9 | 2.3 | 35 | 6.5 | 154 | 23.7 | 200 | 10.9 |
| No labour | 97 | 39.4 | 177 | 44.7 | 169 | 31.5 | 147 | 22.6 | 590 | 32.3 |
| TOTAL | 246 | 100.0 | 396 | 100.0 | 536 | 100.0 | 650 | 100.0 | 1828 | 100.0 |

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

TABLE 67**BIRTHS BY DURATION OF RUPTURE OF MEMBRANES AND GESTATIONAL AGE, NSW & ACT 1999**

| Duration of rupture of membranes | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|----------------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Less than 24 hours | 203 | 70.2 | 400 | 72.6 | 507 | 81.4 | 474 | 92.6 | 15 | 93.8 | 1599 | 80.3 |
| 24 hours to seven days | 50 | 17.3 | 96 | 17.4 | 72 | 11.6 | 28 | 5.5 | 1 | 6.3 | 247 | 12.4 |
| 8+ days | 36 | 12.5 | 55 | 10.0 | 44 | 7.1 | 10 | 2.0 | 0 | 0.0 | 145 | 7.3 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 623 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1991 | 100.0 |

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

TABLE 68**BIRTHS BY TYPE OF DELIVERY AND GESTATIONAL AGE, NSW & ACT 1999**

| Type of delivery | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|---------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Normal vaginal | 102 | 35.3 | 180 | 32.7 | 214 | 34.3 | 274 | 53.5 | 8 | 50.0 | 778 | 39.1 |
| Forceps | 6 | 2.1 | 5 | 0.9 | 14 | 2.2 | 16 | 3.1 | 2 | 12.5 | 43 | 2.2 |
| Forceps rotation | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 7 | 1.4 | 1 | 6.3 | 8 | 0.4 |
| Vacuum extraction | 1 | 0.3 | 1 | 0.2 | 17 | 2.7 | 28 | 5.5 | 2 | 12.5 | 49 | 2.5 |
| Vaginal breech | 43 | 14.9 | 32 | 5.8 | 26 | 4.2 | 7 | 1.4 | 0 | 0.0 | 108 | 5.4 |
| Elective caesarean | 81 | 28.0 | 219 | 39.7 | 233 | 37.4 | 107 | 20.9 | 0 | 0.0 | 640 | 32.1 |
| Emergency caesarean | 56 | 19.4 | 114 | 20.7 | 119 | 19.1 | 73 | 14.3 | 3 | 18.8 | 365 | 18.3 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 623 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1991 | 100.0 |

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

TABLE 69**BIRTHS BY TYPE OF DELIVERY AND BIRTHWEIGHT, NSW & ACT 1999**

| Type of delivery | Less than 1,000 | | 1,000–1,499 | | Birthweight (grams) | | | | TOTAL | |
|---------------------|-----------------|-------|-------------|-------|---------------------|-------|--------|-------|-------|-------|
| | No. | % | No. | % | 1,500–2,499 | | 2,500+ | | No. | % |
| | | | | | No. | % | No. | % | | |
| Normal vaginal | 78 | 27.7 | 140 | 30.6 | 226 | 37.7 | 334 | 51.2 | 778 | 39.1 |
| Forceps | 5 | 1.8 | 5 | 1.1 | 15 | 2.5 | 18 | 2.8 | 43 | 2.2 |
| Forceps rotation | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 8 | 1.2 | 8 | 0.4 |
| Vacuum extraction | 1 | 0.4 | 2 | 0.4 | 13 | 2.2 | 33 | 5.1 | 49 | 2.5 |
| Vaginal breech | 37 | 13.1 | 35 | 7.7 | 26 | 4.3 | 10 | 1.5 | 108 | 5.4 |
| Elective Caesarean | 110 | 39.0 | 199 | 43.5 | 183 | 30.5 | 148 | 22.7 | 640 | 32.1 |
| Emergency Caesarean | 51 | 18.0 | 76 | 16.6 | 137 | 22.8 | 101 | 15.5 | 365 | 18.3 |
| TOTAL | 282 | 100.0 | 457 | 100.0 | 600 | 100.0 | 652 | 100.0 | 1991 | 100.0 |

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

5.4 INFANT CHARACTERISTICS

Nearly three quarters of the infants (73.5 per cent) were preterm (less than 37 weeks gestation), 42.2 per cent were very preterm (less than 32 weeks gestation) and 14.5 per cent were extremely preterm (less than 28 weeks gestation) (Figure 9). The proportion of infants in each gestational age group has remained constant (Table 70). Almost all live born infants at 24–30 weeks gestation were admitted to a NICU, about two-thirds at 31–32 weeks gestation, and one-fifth at 33–34 weeks gestation (Table 71).

Sixty-eight per cent of infants had a low birthweight (less than 2,500 grams), 37.1 per cent had a very low birthweight (less than 1,500 grams) and 14.2 per cent had an extremely low birthweight (less than 1,000 grams) (Table 72). The proportion of infants in each birthweight group has remained constant (Table 73).

Overall, 56.0 per cent of infants were male. The ratio of males to females was approximately 3:2 in most gestational age groups (Table 74).

The overall proportion of the infants who had a major congenital anomaly decreased from 20.9 per cent in 1992 to 18.1 per cent in 1999. Congenital anomalies were more common among term infants (37 plus weeks gestational age), of whom 43.0 per cent had a major congenital anomaly and 5.9 per cent had a minor congenital anomaly (Table 75).

The overall proportion of infants born following a multiple pregnancy has remained constant since 1992. In 1999 most of the infants (80.2 per cent) were from a singleton pregnancy, 17.2 per cent were from a twin pregnancy and 2.6 per cent were from a triplet pregnancy. Infants born as a result of a multiple gestation were more likely to be preterm, with 26.4 per cent of infants less than 37 weeks gestation being from a multiple gestation pregnancy (Table 76). Multiple births represented 3.1 per cent of all NSW and ACT births in 1999. The higher than expected rate of multiple births among the 1999 NICUS cohort reflects the high proportion of multiple pregnancies resulting in preterm birth.

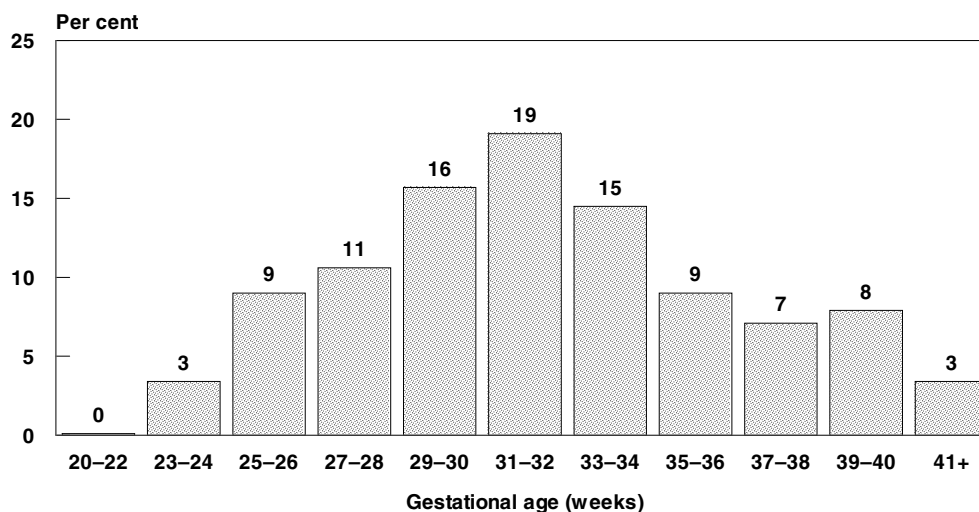
Table 77 shows the median, 25th and 75th percentiles for one- and five-minute Apgar scores according to gestational age groups. For infants greater than 27 weeks gestational age the median one-minute Apgar score was seven and the median five minute score was nine. The proportion of infants with a one-minute Apgar score of 0–4 has decreased from 38.7 per cent in 1992 to 26.6 per cent in 1999, similarly the proportion of infants with a five-minute Apgar score of 0–4 has decreased from 10.8 per cent in 1992 to 6.6 per cent in 1999 (Table 78).

continued on p.62

TABLE 70**BIRTHS BY GESTATIONAL AGE, NSW & ACT 1995–1999**

| Gestational age (weeks) | 1995 | | 1996 | | Year 1997 | | 1998 | | 1999 | |
|-------------------------|------|-------|------|-------|-----------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| | | | | | | | | | | |
| 22–27 | 230 | 13.3 | 237 | 13.3 | 232 | 13.2 | 287 | 15.1 | 289 | 14.5 |
| 28–31 | 513 | 29.6 | 528 | 29.6 | 535 | 30.5 | 589 | 31.0 | 551 | 27.7 |
| 32–36 | 506 | 29.2 | 552 | 30.9 | 538 | 30.7 | 536 | 28.2 | 623 | 31.3 |
| 37–41 | 461 | 26.6 | 461 | 25.8 | 427 | 24.3 | 479 | 25.2 | 512 | 25.7 |
| 42+ | 24 | 1.4 | 8 | 0.4 | 22 | 1.3 | 8 | 0.4 | 16 | 0.8 |
| TOTAL | 1734 | 100.0 | 1786 | 100.0 | 1754 | 100.0 | 1899 | 100.0 | 1991 | 100.0 |

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

FIGURE 9**BIRTHS BY GESTATIONAL AGE, NSW & ACT 1999**

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

TABLE 71**BIRTHS BY NICUS REGISTRATION AND GESTATIONAL AGE, NSW & ACT 1999***

| Gestational age (weeks) | NSW & ACT | | Registrations No. | NICUS Rate per 1,000 live births | % of cohort |
|-------------------------|-----------------|-----------------|-------------------|----------------------------------|-------------|
| | Stillbirths No. | Live births No. | | | |
| Less than 21 | 33 | 19 | 0 | 0.0 | 0.0 |
| 21 | 46 | 30 | 0 | 0.0 | 0.0 |
| 22 | 42 | 28 | 2 | 71.4 | 0.1 |
| 23 | 31 | 42 | 15 | 357.1 | 0.8 |
| 24 | 34 | 46 | 42 | 913.0 | 2.1 |
| 25 | 22 | 44 | 63 | 1431.8 | 3.2 |
| 26 | 25 | 75 | 85 | 1133.3 | 4.3 |
| 27 | 14 | 93 | 82 | 881.7 | 4.1 |
| 28 | 23 | 119 | 97 | 815.1 | 4.9 |
| 29 | 10 | 133 | 124 | 932.3 | 6.2 |
| 30 | 20 | 143 | 145 | 1014.0 | 7.3 |
| 31 | 16 | 226 | 185 | 818.6 | 9.3 |
| 32 | 20 | 315 | 154 | 488.9 | 7.7 |
| 33 | 17 | 475 | 153 | 322.1 | 7.7 |
| 34 | 27 | 750 | 118 | 157.3 | 5.9 |
| 35 | 18 | 1211 | 92 | 76.0 | 4.6 |
| 36 | 32 | 2451 | 106 | 43.2 | 5.3 |
| 37 | 32 | 4948 | 82 | 16.6 | 4.1 |
| 38 | 37 | 13787 | 121 | 8.8 | 6.1 |
| 39 | 23 | 19645 | 101 | 5.1 | 5.1 |
| 40 | 34 | 30555 | 134 | 4.4 | 6.7 |
| 41 | 20 | 14217 | 74 | 5.2 | 3.7 |
| 42 | 3 | 1988 | 16 | 8.0 | 0.8 |
| 43 | 0 | 66 | 0 | 0.0 | 0.0 |
| 44 | 0 | 5 | 0 | 0.0 | 0.0 |
| 45 | 0 | 1 | 0 | 0.0 | 0.0 |
| Not stated | 0 | 18 | 0 | 0.0 | 0.0 |
| TOTAL | 579 | 91430 | 1991 | 21.8 | 100.0 |

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research, 1999. NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department, 1999. ACT Maternal-Perinatal Data Collection, 1998.

Excludes 117 babies reported to the MDC in 1999 for whom the birth outcome was not known.

TABLE 72**BIRTHS BY BIRTHWEIGHT, NSW & ACT 1999**

| Birthweight (grams) | 1995 | | 1996 | | Year of birth 1997 | | 1998 | | 1999 | |
|---------------------|------|-------|------|-------|-----------------------|-------|------|-------|------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Less than 400 | 0 | 0.0 | 0 | 0.0 | 2 | 0.1 | 0 | 0.0 | 3 | 0.2 |
| 400-499 | 8 | 0.5 | 4 | 0.2 | 3 | 0.2 | 6 | 0.3 | 9 | 0.5 |
| 500-599 | 11 | 0.6 | 19 | 1.1 | 19 | 1.1 | 23 | 1.2 | 24 | 1.2 |
| 600-699 | 40 | 2.3 | 38 | 2.1 | 42 | 2.4 | 43 | 2.3 | 51 | 2.6 |
| 700-799 | 53 | 3.1 | 61 | 3.4 | 58 | 3.3 | 62 | 3.3 | 62 | 3.1 |
| 800-899 | 65 | 3.7 | 62 | 3.5 | 48 | 2.7 | 65 | 3.4 | 75 | 3.8 |
| 900-999 | 68 | 3.9 | 63 | 3.5 | 80 | 4.6 | 85 | 4.5 | 58 | 2.9 |
| 1,000-1,249 | 169 | 9.7 | 192 | 10.8 | 202 | 11.5 | 207 | 10.9 | 210 | 10.5 |
| 1,250-1,499 | 226 | 13.0 | 211 | 11.8 | 223 | 12.7 | 238 | 12.5 | 247 | 12.4 |
| 1,500-1,749 | 178 | 10.3 | 168 | 9.4 | 161 | 9.2 | 205 | 10.8 | 207 | 10.4 |
| 1,750-1,999 | 134 | 7.7 | 149 | 8.3 | 137 | 7.8 | 143 | 7.5 | 151 | 7.6 |
| 2,000-2,499 | 218 | 12.6 | 238 | 13.3 | 227 | 12.9 | 221 | 11.6 | 242 | 12.1 |
| 2,500-2,999 | 199 | 11.5 | 217 | 12.2 | 179 | 10.2 | 198 | 10.4 | 211 | 10.6 |
| 3,000-3,499 | 185 | 10.7 | 184 | 10.3 | 191 | 10.9 | 214 | 11.3 | 205 | 10.3 |
| 3,500-3,999 | 132 | 7.6 | 110 | 6.2 | 123 | 7.0 | 128 | 6.7 | 153 | 7.7 |
| 4,000+ | 48 | 2.8 | 70 | 3.9 | 59 | 3.4 | 61 | 3.2 | 83 | 4.2 |
| TOTAL | 1734 | 100.0 | 1786 | 100.0 | 1754 | 100.0 | 1899 | 100.0 | 1991 | 100.0 |

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

TABLE 73**BIRTHS BY NICUS REGISTRATION AND BIRTHWEIGHT, NSW & ACT 1999#**

| Birthweight (grams) | NSW & ACT | | Registrations No. | NICUS Rate per 1,000 live births | % of cohort |
|---------------------|--------------------|---------------------|----------------------|--|----------------|
| | Stillbirths No. | Live births# No. | | | |
| Less than 400 | 97 | 46 | 3 | 65.2 | 0.2 |
| 400-499 | 57 | 50 | 9 | 18.0 | 0.5 |
| 500-599 | 50 | 42 | 24 | 571.4 | 1.2 |
| 600-699 | 29 | 63 | 51 | 809.5 | 2.6 |
| 700-799 | 19 | 62 | 62 | 1000.0 | 3.1 |
| 800-899 | 12 | 77 | 75 | 974.0 | 3.8 |
| 900-999 | 12 | 69 | 58 | 840.6 | 2.9 |
| 1,000-1,249 | 27 | 219 | 210 | 958.9 | 10.5 |
| 1,250-1,499 | 15 | 289 | 247 | 854.7 | 12.4 |
| 1,500-1,749 | 28 | 421 | 207 | 491.7 | 10.4 |
| 1,750-1,999 | 38 | 666 | 151 | 226.7 | 7.6 |
| 2,000-2,499 | 45 | 3504 | 242 | 69.1 | 12.1 |
| 2,500-2,999 | 61 | 13562 | 211 | 15.6 | 10.6 |
| 3,000-3,499 | 53 | 32506 | 205 | 6.3 | 10.3 |
| 3,500-3,999 | 29 | 28643 | 153 | 5.3 | 7.7 |
| 4,000+ | 7 | 11211 | 83 | 7.4 | 4.2 |
| TOTAL | 579 | 91430 | 1991 | 21.8 | 100.0 |

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research, 1999. NSW Midwives Data Collection. Epidemiology and Surveillance Branch, NSW Health Department. ACT Maternal-Perinatal Data Collection, 1998.

Excludes 17 babies reported to the MDC in 1999 for whom the birth outcome was not known.

TABLE 74**BIRTHS BY GENDER AND GESTATIONAL AGE, NSW & ACT 1999**

| Sex | Gestational age (weeks) | | | | | | | | | | | |
|--------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | TOTAL | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Male | 174 | 60.2 | 279 | 50.6 | 356 | 57.1 | 296 | 57.8 | 10 | 62.5 | 1115 | 56.0 |
| Female | 115 | 39.8 | 272 | 49.4 | 267 | 42.9 | 216 | 42.2 | 6 | 37.5 | 876 | 44.0 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 623 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1991 | 100.0 |

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

TABLE 75**BIRTHS BY CONGENITAL ANOMALIES AND GESTATIONAL AGE, NSW & ACT 1999**

| Congenital anomaly | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|--------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| None | 272 | 94.1 | 513 | 93.1 | 497 | 79.8 | 261 | 51.0 | 9 | 56.3 | 1552 | 78.0 |
| Minor | 9 | 3.1 | 11 | 2.0 | 27 | 4.3 | 30 | 5.9 | 1 | 6.3 | 78 | 3.9 |
| Major | 8 | 2.8 | 27 | 4.9 | 99 | 15.9 | 221 | 43.2 | 6 | 37.5 | 361 | 18.1 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 623 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1991 | 100.0 |

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

TABLE 76**BIRTHS BY PLURALITY AND GESTATIONAL AGE, NSW & ACT 1999**

| Plurality | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|-----------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37-41 | | 42+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Singleton | 215 | 74.4 | 401 | 72.8 | 461 | 74.0 | 503 | 98.2 | 16 | 100.0 | 1596 | 80.2 |
| Twins | 63 | 21.8 | 121 | 22.0 | 150 | 24.1 | 9 | 1.8 | 0 | 0.0 | 343 | 17.2 |
| Triplets | 11 | 3.8 | 29 | 5.3 | 12 | 1.9 | 0 | 0.0 | 0 | 0.0 | 52 | 2.6 |
| TOTAL | 289 | 100.0 | 551 | 100.0 | 623 | 100.0 | 512 | 100.0 | 16 | 100.0 | 1991 | 100.0 |

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

TABLE 77**BIRTHS BY APGAR SCORE AND GESTATIONAL AGE, NSW & ACT 1999**

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

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

TABLE 78**BIRTHS BY APGAR SCORE AT ONE AND FIVE MINUTES, NSW & ACT 1995-1999**

| Apgar Score | Year | | | | | | | | | |
|--------------|------|-------|------|-------|------|-------|------|-------|------|-------|
| | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| One minute | | | | | | | | | | |
| 0-4 | 604 | 34.8 | 533 | 29.8 | 453 | 25.8 | 533 | 28.1 | 530 | 26.6 |
| 5-7 | 566 | 32.6 | 654 | 36.6 | 647 | 36.9 | 693 | 36.5 | 689 | 34.6 |
| 8+ | 550 | 31.7 | 586 | 32.8 | 644 | 36.7 | 657 | 34.6 | 766 | 38.5 |
| Not stated | 14 | 0.8 | 13 | 0.7 | 10 | 0.6 | 16 | 0.8 | 6 | 0.3 |
| TOTAL | 1734 | 100.0 | 1786 | 100.0 | 1754 | 100.0 | 1899 | 100.0 | 1991 | 100.0 |
| Five minutes | | | | | | | | | | |
| 0-4 | 140 | 8.1 | 150 | 8.4 | 121 | 6.9 | 142 | 7.5 | 132 | 6.6 |
| 5-7 | 502 | 29.0 | 453 | 25.4 | 413 | 23.5 | 412 | 21.7 | 436 | 21.9 |
| 8+ | 1077 | 62.1 | 1170 | 65.5 | 1211 | 69.0 | 1329 | 70.0 | 1417 | 71.2 |
| Not stated | 15 | 0.9 | 13 | 0.7 | 9 | 0.5 | 16 | 0.8 | 6 | 0.3 |
| TOTAL | 1734 | 100.0 | 1786 | 100.0 | 1754 | 100.0 | 1899 | 100.0 | 1991 | 100.0 |

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

continued from p.58

Infants with major congenital anomalies ($n=361$) have been excluded from the analysis of morbidity and mortality.

The majority of infants without a major congenital anomaly ($n=1,630$; 88.4 per cent) in the 1999 NICUS cohort received assisted ventilation (intermittent mandatory ventilation and/or continuous positive airways pressure) (Table 79).

The main indication for ventilation for most infants was Respiratory Distress Syndrome (Figure 10). Main indication for assisted ventilation varied with gestational age. Respiratory distress syndrome, immature lung and transient tachypnoea were more common in the preterm groups, whereas perinatal asphyxia, meconium aspiration, pulmonary hypertension and apnoea were more common in term infants (Table 80).

Proven systemic infection has decreased from 22.9 per cent in 1992 to 15.8 per cent of infants in 1999. Infection was most common among infants less than 28 weeks gestation (44.5 per cent) (Table 81).

The overall proportion of ventilated infants who received surfactant has increased from 33.8 per cent in 1992 to 46.2 per cent in 1999 (Table 82). In 1999, the majority (70.1 per cent) of ventilated infants with a diagnosis of Respiratory Distress Syndrome received surfactant. Sixty per cent of the infants who received surfactant were less than 32 weeks gestational age.

Overall, the incidence of treated patent ductus arteriosus (PDA) has decreased from 18.7 per cent in 1993 to 13.6 per cent in 1999. In 1999, 92.8 per cent of the infants treated for PDA were less than 32 weeks gestational age (Table 83). The majority of infants with a PDA requiring treatment received indomethacin only (12.9 per cent). Surgical treatment of PDA was predominantly performed on infants less than 28 weeks gestation (2.8 per cent). Some infants (0.8 per cent) were treated with both indomethacin and surgery.

Overall, the incidence of necrotising enterocolitis (NEC) has decreased from 9.7 per cent in 1992 to 3.2 per cent in 1999 (Table 84). The diagnosis of NEC was made radiologically or at surgery in 48.1 per cent of infants and clinically in the remainder. NEC was more common at the lower gestational age groups and 82.7 per cent of the infants with NEC were born at less than 32 weeks gestation.

The overall incidence of major surgery has decreased from 7.6 per cent in 1992 to 3.7 per cent in 1999. In 1999, 57.4 per cent of the infants who required major surgery were less than 32 weeks gestation (Table 85). The most common surgical procedures amongst these infants were for patent ductus arteriosus and necrotising enterocolitis.

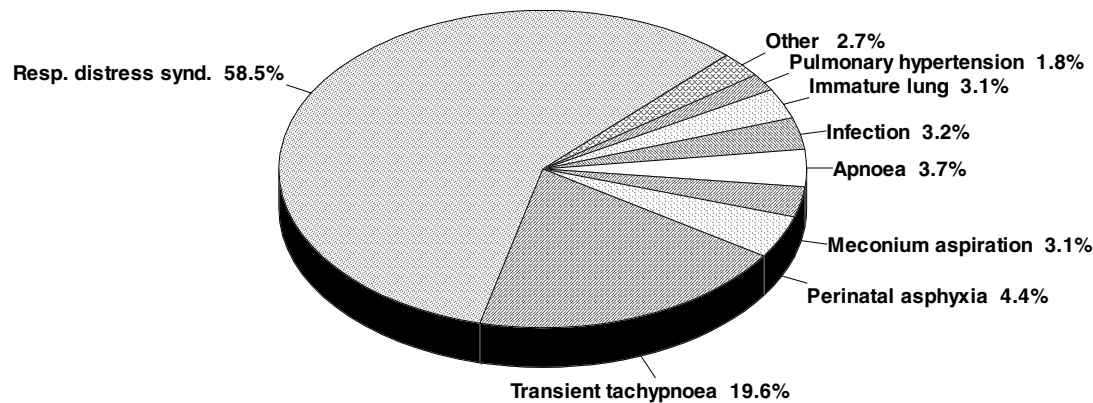
continued on p.65

TABLE 79

ASSISTED VENTILATION AND GESTATIONAL AGE, NSW & ACT 1995–1999*

| Year | Assisted ventilation | Gestational age (weeks) | | | | | | | | TOTAL | |
|------|----------------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | | 22–27 | | 28–31 | | 32–36 | | 37+ | | | |
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 1995 | No | 0 | 0 | 104 | 21.3 | 51 | 11.8 | 7 | 2.6 | 162 | 11.5 |
| | Yes | 220 | 100.0 | 385 | 78.7 | 381 | 88.2 | 265 | 97.4 | 1251 | 88.5 |
| | TOTAL | 220 | 100.0 | 489 | 100.0 | 432 | 100.0 | 272 | 100.0 | 1413 | 100.0 |
| 1996 | No | 1 | 0.4 | 117 | 23.4 | 48 | 10.2 | 6 | 2.2 | 172 | 11.7 |
| | Yes | 227 | 99.6 | 384 | 76.6 | 424 | 89.8 | 267 | 97.8 | 1302 | 88.3 |
| | TOTAL | 228 | 100.0 | 501 | 100.0 | 472 | 100.0 | 273 | 100.0 | 1474 | 100.0 |
| 1997 | No | 0 | 0 | 101 | 19.6 | 57 | 12.3 | 9 | 3.5 | 167 | 11.4 |
| | Yes | 227 | 100.0 | 413 | 80.4 | 406 | 87.7 | 248 | 96.5 | 1294 | 88.6 |
| | TOTAL | 227 | 100.0 | 514 | 100.0 | 463 | 100.0 | 257 | 100.0 | 1461 | 100.0 |
| 1998 | No | 2 | 0.7 | 99 | 17.6 | 48 | 10.4 | 7 | 2.6 | 156 | 9.9 |
| | Yes | 278 | 99.3 | 465 | 82.4 | 415 | 89.6 | 265 | 97.4 | 1423 | 90.1 |
| | TOTAL | 280 | 100.0 | 564 | 100.0 | 463 | 100.0 | 272 | 100.0 | 1579 | 100.0 |
| 1999 | No | 1 | 0.4 | 119 | 22.7 | 60 | 11.5 | 9 | 3.0 | 189 | 11.6 |
| | Yes | 280 | 99.6 | 405 | 77.3 | 464 | 88.5 | 292 | 97.0 | 1441 | 88.4 |
| | TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 301 | 100.0 | 1630 | 100.0 |

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

FIGURE 10**BIRTHS BY MAIN INDICATION FOR ASSISTED VENTILATION, NSW & ACT 1998***

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

Babies with major congenital anomalies or not ventilated excluded.

TABLE 80**MAIN INDICATION FOR ASSISTED VENTILATION OF BABIES BY GESTATIONAL AGE, NSW & ACT 1999***

| Indication | Gestational age (weeks) | | | | | | | | TOTAL | |
|---------------------------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Respiratory distress syndrome | 248 | 88.6 | 269 | 66.4 | 269 | 58.0 | 57 | 19.5 | 843 | 58.5 |
| Transient tachypnoea of newborn | 3 | 1.1 | 79 | 19.5 | 136 | 29.3 | 64 | 21.9 | 282 | 19.6 |
| Meconium aspiration | 0 | 0.0 | 0 | 0.0 | 2 | 0.4 | 42 | 14.4 | 44 | 3.1 |
| Infection | 2 | 0.7 | 6 | 1.5 | 17 | 3.7 | 21 | 7.2 | 46 | 3.2 |
| Perinatal asphyxia | 4 | 1.4 | 6 | 1.5 | 14 | 3.0 | 39 | 13.4 | 63 | 4.4 |
| Immature lung | 15 | 5.4 | 29 | 7.2 | 1 | 0.2 | 0 | 0.0 | 45 | 3.1 |
| Apnoea | 7 | 2.5 | 15 | 3.7 | 13 | 2.8 | 18 | 6.2 | 53 | 3.7 |
| Pulmonary hypertension | 1 | 0.4 | 0 | 0.0 | 1 | 0.2 | 24 | 8.2 | 26 | 1.8 |
| Congenital anomaly | 0 | 0.0 | 0 | 0.0 | 2 | 0.4 | 4 | 1.4 | 6 | 0.4 |
| Cardiac disorder | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 6 | 2.1 | 6 | 0.4 |
| Peri surgery | 0 | 0.0 | 1 | 0.2 | 4 | 0.9 | 9 | 3.1 | 14 | 1.0 |
| Other | 0 | 0.0 | 0 | 0.0 | 5 | 1.1 | 8 | 2.7 | 13 | 0.9 |
| TOTAL | 280 | 100.0 | 405 | 100.0 | 464 | 100.0 | 292 | 100.0 | 1441 | 100.0 |

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

Babies with major congenital anomalies or not ventilated excluded.

TABLE 81**PROVEN SYSTEMIC INFECTION BY GESTATIONAL AGE, NSW & ACT 1999***

| Infection | Gestational age (weeks) | | | | | | | | TOTAL | |
|-----------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22-27 | | 28-31 | | 32-36 | | 37+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| No | 156 | 55.5 | 439 | 83.8 | 496 | 94.7 | 282 | 93.7 | 1373 | 84.2 |
| Yes | 125 | 44.5 | 85 | 16.2 | 28 | 5.3 | 19 | 6.3 | 257 | 15.8 |
| TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 301 | 100.0 | 1630 | 100.0 |

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

Babies with major congenital anomalies excluded.

TABLE 82**SURFACTANT ADMINISTRATION BY GESTATIONAL AGE, NSW & ACT 1995–1999***

| Year | Surfactant administration | Gestational age (weeks) | | | | | | | | | |
|------|---------------------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | | 22–27 | | 28–31 | | 32–36 | | 37+ | | TOTAL | |
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 1995 | No | 58 | 26.4 | 176 | 45.7 | 204 | 53.5 | 210 | 79.2 | 648 | 51.8 |
| | Yes | 162 | 73.6 | 209 | 54.3 | 177 | 46.5 | 55 | 20.8 | 603 | 48.2 |
| | TOTAL | 220 | 100.0 | 385 | 100.0 | 381 | 100.0 | 265 | 100.0 | 1251 | 100.0 |
| 1996 | No | 46 | 20.3 | 149 | 38.8 | 226 | 53.3 | 208 | 77.9 | 629 | 48.3 |
| | Yes | 181 | 79.7 | 235 | 61.2 | 198 | 46.7 | 59 | 22.1 | 673 | 51.7 |
| | TOTAL | 227 | 100.0 | 384 | 100.0 | 424 | 100.0 | 267 | 100.0 | 1302 | 100.0 |
| 1997 | No | 60 | 26.4 | 175 | 42.4 | 218 | 53.7 | 187 | 75.4 | 640 | 49.5 |
| | Yes | 167 | 73.6 | 238 | 57.6 | 188 | 46.3 | 61 | 24.6 | 654 | 50.5 |
| | TOTAL | 227 | 100.0 | 413 | 100.0 | 406 | 100.0 | 248 | 100.0 | 1294 | 100.0 |
| 1998 | No | 53 | 19.1 | 212 | 45.6 | 213 | 51.3 | 208 | 78.5 | 686 | 48.2 |
| | Yes | 225 | 80.9 | 253 | 54.4 | 202 | 48.7 | 57 | 21.5 | 737 | 51.8 |
| | TOTAL | 278 | 100.0 | 465 | 100.0 | 415 | 100.0 | 265 | 100.0 | 1423 | 100.0 |
| 1999 | No | 57 | 20.4 | 218 | 53.8 | 282 | 60.8 | 218 | 74.7 | 775 | 53.8 |
| | Yes | 223 | 79.6 | 187 | 46.2 | 182 | 39.2 | 74 | 25.3 | 666 | 46.2 |
| | TOTAL | 280 | 100.0 | 405 | 100.0 | 464 | 100.0 | 292 | 100.0 | 1441 | 100.0 |

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

TABLE 83**TREATED PATENT DUCTUS ARTERIOSUS (PDA) BY GESTATIONAL AGE, NSW & ACT 1999***

| PDA—Treatment for PDA | Gestational age (weeks) | | | | | | | | | |
|------------------------|-------------------------|-------|-------|-------|-------|-------|------|-------|-------|---|
| | 22–27 | | 28–31 | | 32–36 | | 37+ | | TOTAL | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| No treated PDA | 172 | 61.2 | 465 | 88.7 | 511 | 97.5 | 1148 | 86.4 | | |
| Indomethacin only | 101 | 35.9 | 57 | 10.9 | 13 | 2.5 | 171 | 12.9 | | |
| Surgery only | 0 | 0.0 | 1 | 0.2 | 0 | 0.0 | 1 | 0.1 | | |
| Indomethacin & surgery | 8 | 2.8 | 1 | 0.2 | 0 | 0.0 | 9 | 0.7 | | |
| TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 1329 | 100.0 | | |

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

TABLE 84**NECROTISING ENTEROCOLITIS (NEC) BY GESTATIONAL AGE, NSW & ACT 1999***

| NEC—Treatment for NEC | Gestational age (weeks) | | | | | | | | | |
|-----------------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22–27 | | 28–31 | | 32–36 | | 37+ | | TOTAL | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| No NEC | 263 | 93.6 | 499 | 95.2 | 515 | 98.3 | 301 | 100.0 | 1578 | 96.8 |
| Clinical diagnosis | 4 | 1.4 | 18 | 3.4 | 5 | 1.0 | 0 | 0.0 | 27 | 1.7 |
| X-ray diagnosis | 8 | 2.8 | 6 | 1.1 | 3 | 0.6 | 0 | 0.0 | 17 | 1.0 |
| Surgery for NEC | 6 | 2.1 | 1 | 0.2 | 1 | 0.2 | 0 | 0.0 | 8 | 0.5 |
| TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 301 | 100.0 | 1630 | 100.0 |

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

continued from p.62

The incidence of intraventricular haemorrhage (IVH) among preterm infants (less than 37 weeks gestational age) has remained relatively constant (17.1 per cent in 1999). In 1999, confirmed IVH was most common among infants less than 28-weeks gestation (42.9 per cent)—43.1 per cent of these infants had severe IVH (grade 3 or 4). Six infants less than 32 weeks gestation with severe IVH required surgical drainage for post haemorrhagic hydrocephalus (6/57; 10.5 per cent). Of the surviving infants born before 32 weeks gestation, 94.0 per cent had a head ultrasound examination

to detect IVH (Table 86). The incidence of severe IVH has remained constant since 1992.

The proportion of infants with severe grades (Grade 3 or Grade 4) of retinopathy of prematurity (ROP) has decreased from 7.5 per cent in 1992 to 3.9 per cent in 1999. In 1999, all infants with severe grades of ROP were less than 32 weeks gestation and 72.4 per cent of the infants less than 28 weeks gestation received either cryo- or laser therapy. Importantly, 17.6 per cent of surviving infants of 28–31 weeks gestational age did not have an eye examination recorded (Table 87).

TABLE 85

MAJOR SURGERY BY GESTATIONAL AGE, NSW & ACT 1999*

| Major Surgery | Gestational age (weeks) | | | | | | | | | |
|---------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22–27 | | 28–31 | | 32–36 | | 37+ | | TOTAL | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| No | 257 | 91.5 | 513 | 97.9 | 514 | 98.1 | 285 | 94.7 | 1569 | 96.3 |
| Yes | 24 | 8.5 | 11 | 2.1 | 10 | 1.9 | 16 | 5.3 | 61 | 3.7 |
| TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 301 | 100.0 | 1630 | 100.0 |

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

Babies with major congenital anomalies excluded.

TABLE 86

INTRAVENTRICULAR HAEMORRHAGE BY GESTATIONAL AGE, NSW & ACT 1999*

| Head ultrasound | Gestational age (weeks) | | | | | | | | | |
|----------------------------------|-------------------------|-------|-------|-------|-------|-------|------|-------|-------|---|
| | 22–27 | | 28–31 | | 32–36 | | 37+ | | TOTAL | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| No IVH | 145 | 51.6 | 391 | 74.6 | 282 | 53.8 | 818 | 61.6 | | |
| Grade 1 | 39 | 13.9 | 61 | 11.6 | 29 | 5.5 | 129 | 9.7 | | |
| Grade 2 | 23 | 8.2 | 11 | 2.1 | 0 | 0.0 | 34 | 2.6 | | |
| Grade 3 | 24 | 8.5 | 5 | 1.0 | 6 | 1.1 | 35 | 2.6 | | |
| Grade 4 | 23 | 8.2 | 5 | 1.0 | 1 | 0.2 | 29 | 2.2 | | |
| Hydrocephalus requiring drainage | 3 | 6.4 | 3 | 30.0 | 0 | 0.0 | 6 | 16.7 | | |
| Not examined & lived | 0 | 0.0 | 46 | 8.8 | 201 | 38.4 | 247 | 18.6 | | |
| Not examined & died | 27 | 9.6 | 5 | 1.0 | 5 | 1.0 | 37 | 2.8 | | |
| TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 1329 | 100.0 | | |

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

Babies with major congenital anomalies excluded.

TABLE 87

RETINOPATHY OF PREMATURITY BY GESTATIONAL AGE, NSW & ACT 1999#

| Retinopathy of prematurity (ROP) | Gestational age (weeks) | | | | | |
|----------------------------------|-------------------------|-------|-------|-------|-------|-------|
| | 22–27 | | 28–31 | | TOTAL | |
| | No. | % | No. | % | No. | % |
| No ROP | 93 | 33.1 | 366 | 69.8 | 459 | 57.0 |
| Grade 1 | 27 | 9.6 | 32 | 6.1 | 59 | 7.3 |
| Grade 2 | 54 | 19.2 | 17 | 3.2 | 71 | 8.8 |
| Grade 3 | 27 | 9.6 | 2 | 0.4 | 29 | 3.6 |
| Grade 4 | 2 | 0.7 | 0 | 0.0 | 2 | 0.2 |
| Treated with cryotherapy–laser | 21 | 7.5 | 0 | 0.0 | 21 | 2.6 |
| Not examined & lived | 3 | 1.1 | 92 | 17.6 | 95 | 11.8 |
| Not examined & died | 75 | 26.7 | 15 | 2.9 | 90 | 11.2 |
| TOTAL | 281 | 100.0 | 524 | 100.0 | 805 | 100.0 |

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

Babies with major congenital anomalies excluded.

5.5 SERVICE UTILISATION

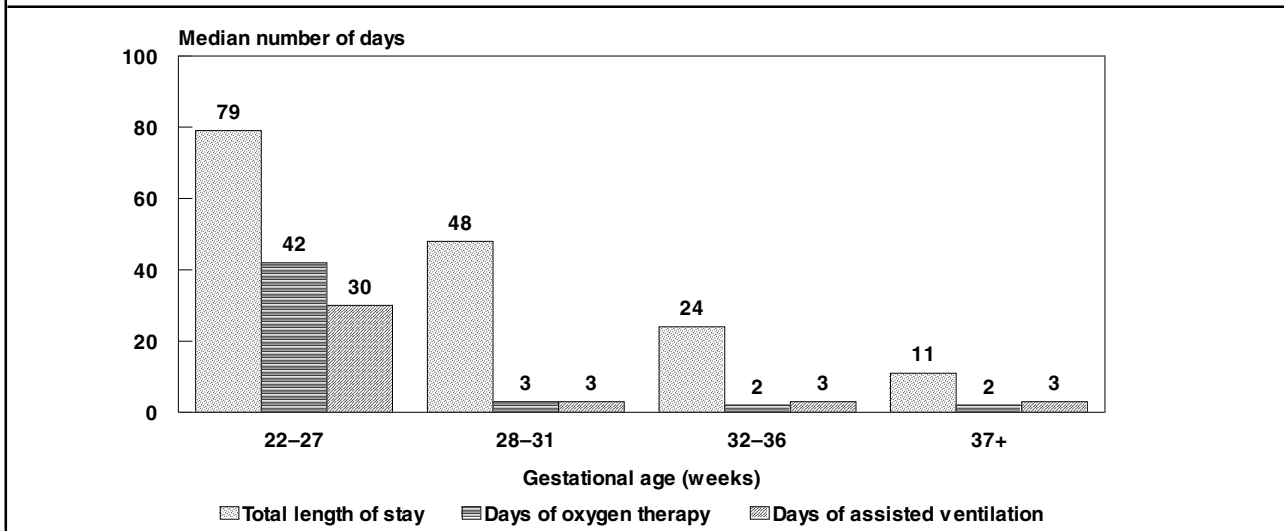
Indicators of service utilisation collected as part of NICUS include length of stay in tertiary and non-tertiary centres, days on assisted ventilation and days in oxygen (Figures 11 and 12 and Table 88). On an individual basis, infants born at less than 28 weeks gestation consumed most resources. However, as a group those born at 28–31 weeks gestation consumed more bed days than any other group due to their higher numbers. In 1999, the total cohort used 53,442 bed days in a tertiary centre in NSW and the ACT (range 46,091 in 1993 to 56,576 in 1998); as well as 19,094 in a non-tertiary centre (level 2 neonatal unit) in NSW and

the ACT (14,287 in 1992 to 19,094 in 1999). Even when these infants leave the neonatal intensive care unit, they still require substantial resources.

In 1999, NICUS registrants used 17,455 days of assisted ventilation (range 15,282 in 1993 to 18,059 in 1998) and 26,667 days of oxygen therapy (range 22,526 in 1992 to 30,323 in 1998). The overall proportion of infants going home on supplemental oxygen was 3.4 per cent in 1999 (range 2.1 per cent in 1992 to 5.1 per cent in 1998). The proportion of infants less than 28 weeks gestation going home on supplemental oxygen was 13.5 per cent (range 10.1 per cent in 1997 to 20.0 in 1998) (Table 89).

FIGURE 11

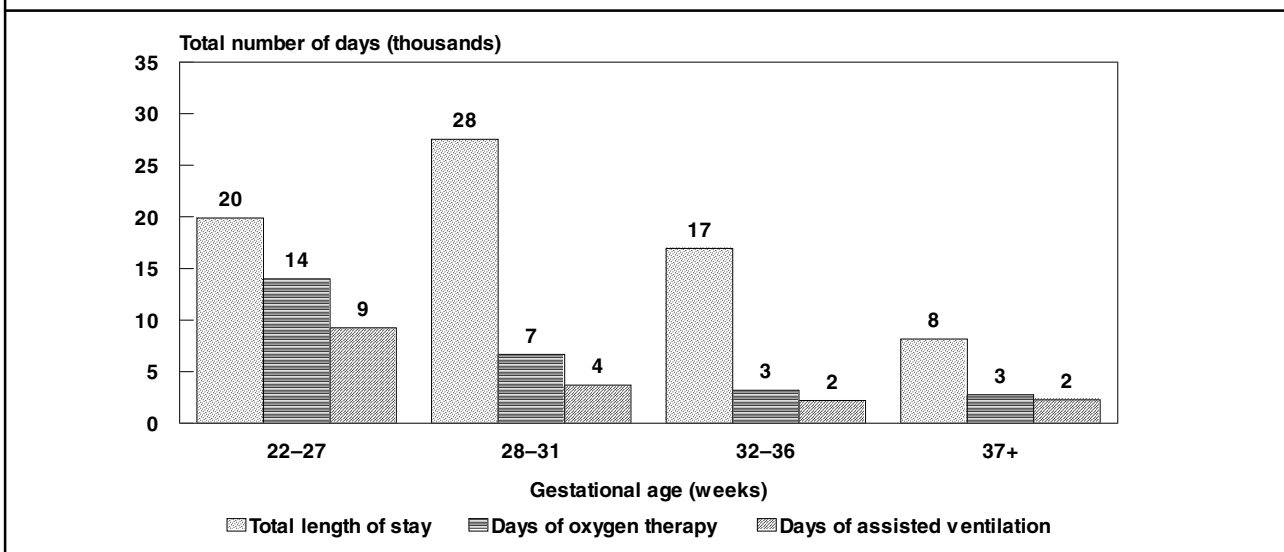
MEDIAN NUMBER OF DAYS IN HOSPITAL, OXYGEN THERAPY AND ASSISTED VENTILATION BY GESTATIONAL AGE, NSW & ACT 1999



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

FIGURE 12

TOTAL NUMBER OF DAYS IN HOSPITAL, OXYGEN THERAPY AND ASSISTED VENTILATION BY GESTATIONAL AGE, NSW & ACT 1999



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

TABLE 88**SERVICE UTILISATION INDICATORS BY GESTATIONAL AGE, NSW & ACT 1999**

| Indicators | Gestational age (weeks) | | | | TOTAL |
|--|-------------------------|-------|-------|------|-------|
| | 22-27 | 28-31 | 32-36 | 37+ | |
| Non tertiary hospital stay (days) | | | | | |
| Minimum | 0 | 0 | 0 | 0 | 0 |
| Maximum | 105 | 151 | 150 | 72 | 151 |
| Sum | 2581 | 9802 | 5599 | 1112 | 19094 |
| Median | 0 | 18 | 3 | 0 | 1 |
| 25 th percentile | 0 | 0 | 0 | 0 | 0 |
| 75 th percentile | 13 | 30 | 16 | 2 | 17 |
| Tertiary hospital stay (days) | | | | | |
| Minimum | 1 | 1 | 1 | 1 | 1 |
| Maximum | 147 | 198 | 248 | 211 | 248 |
| Sum | 17305 | 17720 | 11352 | 7065 | 53442 |
| Median | 66 | 28 | 13 | 8 | 16 |
| 25 th percentile | 20 | 13 | 7 | 5 | 7 |
| 75 th percentile | 94 | 45 | 23 | 16 | 36 |
| Total hospital stay (days) | | | | | |
| Minimum | 1 | 1 | 1 | 1 | 1 |
| Maximum | 165 | 221 | 248 | 211 | 248 |
| Sum | 19886 | 27522 | 16951 | 8177 | 72536 |
| Median | 79 | 48 | 24 | 11 | 29 |
| 25 th percentile | 21 | 37 | 16 | 7 | 12 |
| 75 th percentile | 102 | 59 | 34 | 19 | 51 |
| Mechanical ventilation (days) | | | | | |
| Minimum | 0 | 0 | 0 | 0 | 0 |
| Maximum | 78 | 59 | 33 | 80 | 80 |
| Sum | 4226 | 1585 | 1381 | 1863 | 9055 |
| Median | 8 | 1 | 1 | 2 | 2 |
| 25 th percentile | 3 | 0 | 0 | 1 | 0 |
| 75 th percentile | 22 | 4 | 3 | 4 | 4 |
| Continuous positive airways pressure (days) | | | | | |
| Minimum | 0 | 0 | 0 | 0 | 0 |
| Maximum | 79 | 47 | 37 | 98 | 98 |
| Sum | 5031 | 2119 | 828 | 422 | 8400 |
| Median | 14 | 1 | 0 | 0 | 0 |
| 25 th percentile | 0 | 0 | 0 | 0 | 0 |
| 75 th percentile | 31 | 4 | 2 | 1 | 3 |
| Assisted ventilation (days) | | | | | |
| Minimum | 0 | 0 | 0 | 0 | 0 |
| Maximum | 157 | 64 | 66 | 178 | 178 |
| Sum | 9257 | 3704 | 2209 | 2285 | 17455 |
| Median | 30 | 3 | 3 | 3 | 3 |
| 25 th percentile | 7 | 1 | 1 | 1 | 1 |
| 75 th percentile | 53 | 8 | 4 | 4 | 7 |
| Oxygen therapy (days) | | | | | |
| Minimum | 0 | 0 | 0 | 0 | 0 |
| Maximum | 164 | 198 | 248 | 182 | 248 |
| Sum | 14000 | 6670 | 3220 | 2777 | 26667 |
| Median | 42 | 3 | 2 | 2 | 3 |
| 25 th percentile | 6 | 1 | 1 | 1 | 1 |
| 75 th percentile | 86 | 14 | 5 | 6 | 10 |

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

TABLE 89**HOME OXYGEN ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 1995-1999#**

| Year | Home oxygen | Gestational age (weeks) | | | | | | | | TOTAL | |
|------|-------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | | 22-27 | | 28-31 | | 32-36 | | 37+ | | No. | % |
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 1995 | No | 185 | 84.1 | 469 | 95.9 | 430 | 99.5 | 271 | 99.6 | 1355 | 95.9 |
| | Yes | 35 | 15.9 | 20 | 4.1 | 2 | 0.5 | 1 | 0.4 | 58 | 4.1 |
| | TOTAL | 220 | 100.0 | 489 | 100.0 | 432 | 100.0 | 272 | 100.0 | 1413 | 100.0 |
| 1996 | No | 191 | 83.8 | 482 | 96.2 | 469 | 99.4 | 267 | 97.8 | 1409 | 95.6 |
| | Yes | 37 | 16.2 | 19 | 3.8 | 3 | 0.6 | 6 | 2.2 | 65 | 4.4 |
| | TOTAL | 228 | 100.0 | 501 | 100.0 | 472 | 100.0 | 273 | 100.0 | 1474 | 100.0 |
| 1997 | No | 204 | 89.9 | 495 | 96.3 | 460 | 99.6 | 254 | 98.8 | 1413 | 96.8 |
| | Yes | 23 | 10.1 | 19 | 3.7 | 2 | 0.4 | 3 | 1.2 | 47 | 3.2 |
| | TOTAL | 227 | 100.0 | 514 | 100.0 | 462 | 100.0 | 257 | 100.0 | 1460 | 100.0 |
| 1998 | No | 224 | 80.0 | 550 | 97.5 | 459 | 99.1 | 266 | 97.8 | 1499 | 94.9 |
| | Yes | 56 | 20.0 | 14 | 2.5 | 4 | 0.9 | 6 | 2.2 | 80 | 5.1 |
| | TOTAL | 280 | 100.0 | 564 | 100.0 | 463 | 100.0 | 272 | 100.0 | 1579 | 100.0 |
| 1999 | No | 243 | 86.5 | 512 | 97.7 | 521 | 99.4 | 298 | 99.0 | 1574 | 96.6 |
| | Yes | 38 | 13.5 | 12 | 2.3 | 3 | 0.6 | 3 | 1.0 | 56 | 3.4 |
| | TOTAL | 281 | 100.0 | 524 | 100.0 | 524 | 100.0 | 301 | 100.0 | 1630 | 100.0 |

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

Babies with major congenital anomalies excluded.

TABLE 90**DURATION OF SURVIVAL OF BABIES BY GESTATIONAL AGE, NSW & ACT 1999#**

| Gestational age (weeks) | Alive at six months | | Age at death (days) | | | | | | TOTAL | |
|-------------------------|---------------------|-------|---------------------|-------|------|-----|-----|------|-------|-------|
| | No. | % | 0-7 | | 8-28 | | 28+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 22 | 0 | 0.0 | 2 | 100.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.1 |
| 23 | 4 | 26.7 | 10 | 66.7 | 0 | 0.0 | 1 | 6.7 | 15 | 0.9 |
| 24 | 22 | 53.7 | 11 | 26.8 | 4 | 9.8 | 4 | 9.8 | 41 | 2.5 |
| 25 | 38 | 61.3 | 17 | 27.4 | 6 | 9.7 | 1 | 1.6 | 62 | 3.8 |
| 26 | 64 | 76.2 | 13 | 15.5 | 3 | 3.6 | 4 | 4.8 | 84 | 5.2 |
| 27 | 68 | 88.3 | 6 | 7.8 | 3 | 3.9 | 0 | 0.0 | 77 | 4.7 |
| 28 | 94 | 97.9 | 1 | 1.0 | 1 | 1.0 | 0 | 0.0 | 96 | 5.9 |
| 29 | 109 | 93.2 | 7 | 6.0 | 0 | 0.0 | 1 | 0.9 | 117 | 7.2 |
| 30 | 137 | 98.6 | 1 | 0.7 | 1 | 0.7 | 0 | 0.0 | 139 | 8.5 |
| 31 | 168 | 97.7 | 1 | 0.6 | 3 | 1.7 | 0 | 0.0 | 172 | 10.5 |
| 32 | 139 | 99.3 | 1 | 0.7 | 0 | 0.0 | 0 | 0.0 | 140 | 8.6 |
| 33 | 135 | 98.5 | 2 | 1.5 | 0 | 0.0 | 0 | 0.0 | 137 | 8.4 |
| 34 | 99 | 99.0 | 1 | 1.0 | 0 | 0.0 | 0 | 0.0 | 100 | 6.1 |
| 35 | 77 | 100.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 77 | 4.7 |
| 36 | 66 | 94.3 | 2 | 2.9 | 2 | 2.9 | 0 | 0.0 | 70 | 4.3 |
| 37 | 47 | 97.9 | 1 | 2.1 | 0 | 0.0 | 0 | 0.0 | 48 | 2.9 |
| 38 | 64 | 94.1 | 2 | 2.9 | 2 | 2.9 | 0 | 0.0 | 68 | 4.2 |
| 39 | 50 | 90.9 | 4 | 7.3 | 0 | 0.0 | 1 | 1.8 | 55 | 3.4 |
| 40 | 66 | 89.2 | 5 | 6.8 | 3 | 4.1 | 0 | 0.0 | 74 | 4.5 |
| 41 | 43 | 93.5 | 2 | 4.3 | 1 | 2.2 | 0 | 0.0 | 46 | 2.8 |
| 42 | 9 | 90.0 | 0 | 0.0 | 0 | 0.0 | 1 | 10.0 | 10 | 0.6 |
| TOTAL | 1499 | 92.0 | 89 | 5.5 | 29 | 1.8 | 13 | 0.8 | 1630 | 100.0 |

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

Babies with major congenital anomalies excluded.

5.6 SURVIVAL

Infants with a major congenital anomaly have been excluded from the analysis of survival with the exception of data reported in Table 92.

The six-month survival rate for all infants without a major congenital anomaly in the 1999 cohort was 92.0 per cent (compared with 87.8 per cent in 1992 to 92.5 per cent in 1998). Survival of infants born at less than 25 weeks gestation was 44.8 per cent (range 33.9 per cent in 1998 to 54.8 per cent in 1993). There was a trend for survival to improve with gestational age up to 35 weeks gestation after which it decreased slightly. Term infants (92.7 per cent) were more likely to survive than preterm infants (91.8 per cent). Amongst infants who died, 67.9 per cent of deaths occurred during the first week of life (compared with 63.0 per cent in 1998 to 75.5 in 1994) with a further 22.1 per cent occurring during the first month of life (Table 90).

The six-month survival rate improved with increasing birth weight, ranging from 62.5 per cent for infants in the 500–599 grams group to 86.0 per cent for the 900–999 gram group. Six-month survival continued to improve with increasing birthweight to a maximum of 98.0 per cent for infants of 1,500–1,749 grams birthweight and then decreased slightly (Table 91).

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

In 1999, the six-month survival rate for infants born at 22 to 27 weeks was greater for those born in a tertiary centre

(72.4 per cent) compared with those born in a non tertiary centre (35.0 per cent). This trend was also evident for those born between 1992–1998. Place of birth did not affect survival for infants in the other gestational age groups (Table 92).

The six-month survival rate for all male infants (90.8 per cent) was similar to that for all female infants (93.5 per cent). The six-month survival rate was similar for males and females for all gestational age groups: less than 28 weeks (66.3 per cent versus 75.0 per cent), 28–31 weeks (96.2 per cent versus 97.7 per cent), 32–36 weeks (98.3 per cent versus 98.7 per cent) and 37–41 weeks gestation groups (93.6 per cent versus 91.7 per cent).

The six-month survival rate was 92.3 per cent ($n=1,265$) for singleton infants and 91.0 per cent ($n=365$) for multiple gestation infants. Plurality did not influence survival in the 28–31 weeks, 32–36 weeks and 37 plus gestational age groups. There were only five infants born of a multiple pregnancy in the 37–41 weeks group and none in the 42 plus weeks group. In 1999 the survival rate for infants in the less than 28 week gestation group was lower for infants born of a multiple (47/74; 63.5 per cent) than a singleton pregnancy (149/207; 72.0 per cent).

As expected survival was generally lower (79.5 per cent) in the presence of a major congenital anomaly (Table 93).

Post-mortem examinations were performed on 34 of the 131 infants (26.0 per cent) who died in the 1999 cohort (Figure 13 and Table 94). Post-mortem examinations were most commonly not requested for infant's 22–27 weeks gestation (52.9 per cent) and 28–31 weeks gestation (50.0 per cent). The highest rate of refusal was in 32–36 weeks gestation group (50.0 per cent) and the highest rate of post-mortems done was in the term group (50.0 per cent).

TABLE 91

DURATION OF SURVIVAL BY BIRTHWEIGHT, NSW & ACT 1999[#]

| Birthweight (grams) | Alive at six months | | Age at death (days) | | | | TOTAL | | | |
|---------------------|---------------------|------|---------------------|-------|------|------|-------|------|------|-------|
| | No. | % | 0–7 | | 8–28 | | 28+ | | No. | % |
| <400 | 0 | 0.0 | 3 | 100.0 | 0 | 0.0 | 0 | 0.0 | 3 | 0.2 |
| 400–499 | 2 | 25.0 | 6 | 75.0 | 0 | 0.0 | 0 | 0.0 | 8 | 0.5 |
| 500–599 | 15 | 62.5 | 3 | 12.5 | 3 | 12.5 | 3 | 12.5 | 24 | 1.5 |
| 600–699 | 31 | 62.0 | 13 | 26.0 | 3 | 6.0 | 3 | 6.0 | 50 | 3.1 |
| 700–799 | 41 | 68.3 | 15 | 25.0 | 2 | 3.3 | 2 | 3.3 | 60 | 3.7 |
| 800–899 | 53 | 76.8 | 9 | 13.0 | 5 | 7.2 | 2 | 2.9 | 69 | 4.2 |
| 900–999 | 49 | 86.0 | 6 | 10.5 | 1 | 1.8 | 1 | 1.8 | 57 | 3.5 |
| 1,000–1,249 | 190 | 95.0 | 8 | 4.0 | 2 | 1.0 | 0 | 0.0 | 200 | 12.3 |
| 1,250–1,499 | 224 | 97.8 | 4 | 1.7 | 1 | 0.4 | 0 | 0.0 | 229 | 14.0 |
| 1,500–1,749 | 192 | 98.0 | 1 | 0.5 | 3 | 1.5 | 0 | 0.0 | 196 | 12.0 |
| 1,750–1,999 | 128 | 97.7 | 2 | 1.5 | 1 | 0.8 | 0 | 0.0 | 131 | 8.0 |
| 2,000–2,499 | 181 | 97.8 | 4 | 2.2 | 0 | 0.0 | 0 | 0.0 | 185 | 11.3 |
| 2,500–2,999 | 138 | 93.2 | 8 | 5.4 | 2 | 1.4 | 0 | 0.0 | 148 | 9.1 |
| 3,000–3,499 | 111 | 92.5 | 5 | 4.2 | 3 | 2.5 | 1 | 0.8 | 120 | 7.4 |
| 3,500–3,999 | 92 | 95.8 | 1 | 1.0 | 3 | 3.1 | 0 | 0.0 | 96 | 5.9 |
| 4,000+ | 52 | 96.3 | 1 | 1.9 | 0 | 0.0 | 1 | 1.9 | 54 | 3.3 |
| TOTAL | 1499 | 92.0 | 89 | 5.5 | 29 | 1.8 | 13 | 0.8 | 1630 | 100.0 |

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

TABLE 92**DURATION OF SURVIVAL BY PLACE OF BIRTH AND GESTATIONAL AGE, NSW & ACT 1999#**

| Gestational age (weeks) | Place of birth | Alive at six months | | 0-7 | | Age at death (days) 8-28 | | 28+ | | TOTAL | |
|-------------------------|----------------|---------------------|-------|-----|------|--------------------------|------|-----|------|-------|-------|
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 22-27 | Non tertiary | 7 | 35.0 | 10 | 50.0 | 2 | 10.0 | 1 | 5.0 | 20 | 7.1 |
| | Tertiary | 189 | 72.4 | 49 | 18.8 | 14 | 5.4 | 9 | 3.4 | 261 | 92.9 |
| | Sub-total | 196 | 69.8 | 59 | 21.0 | 16 | 5.7 | 10 | 3.6 | 281 | 100.0 |
| 28-31 | Non tertiary | 49 | 96.1 | 1 | 2.0 | 1 | 2.0 | 0 | 0.0 | 51 | 9.7 |
| | Tertiary | 459 | 97.0 | 9 | 1.9 | 4 | 0.8 | 1 | 0.2 | 473 | 90.3 |
| | Sub-total | 508 | 96.9 | 10 | 1.9 | 5 | 1.0 | 1 | 0.2 | 524 | 100.0 |
| 32-36 | Non tertiary | 142 | 97.9 | 1 | 0.7 | 2 | 1.4 | 0 | 0.0 | 145 | 27.7 |
| | Tertiary | 374 | 98.7 | 5 | 1.3 | 0 | 0.0 | 0 | 0.0 | 379 | 72.3 |
| | Sub-total | 516 | 98.5 | 6 | 1.1 | 2 | 0.4 | 0 | 0.0 | 524 | 100.0 |
| 37-41 | Non tertiary | 136 | 91.3 | 7 | 4.7 | 5 | 3.4 | 1 | 0.7 | 149 | 51.2 |
| | Tertiary | 134 | 94.4 | 7 | 4.9 | 1 | 0.7 | 0 | 0.0 | 142 | 48.8 |
| | Sub-total | 270 | 92.8 | 14 | 4.8 | 6 | 2.1 | 1 | 0.3 | 291 | 100.0 |
| 42+ | Non tertiary | 4 | 80.0 | 0 | 0.0 | 0 | 0.0 | 1 | 20.0 | 5 | 50.0 |
| | Tertiary | 5 | 100.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 50.0 |
| | Sub-total | 9 | 90.0 | 0 | 0.0 | 0 | 0.0 | 1 | 10.0 | 10 | 100.0 |
| TOTAL | | 1499 | 92.0 | 89 | 5.5 | 29 | 1.8 | 13 | 0.8 | 1630 | 100.0 |

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

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

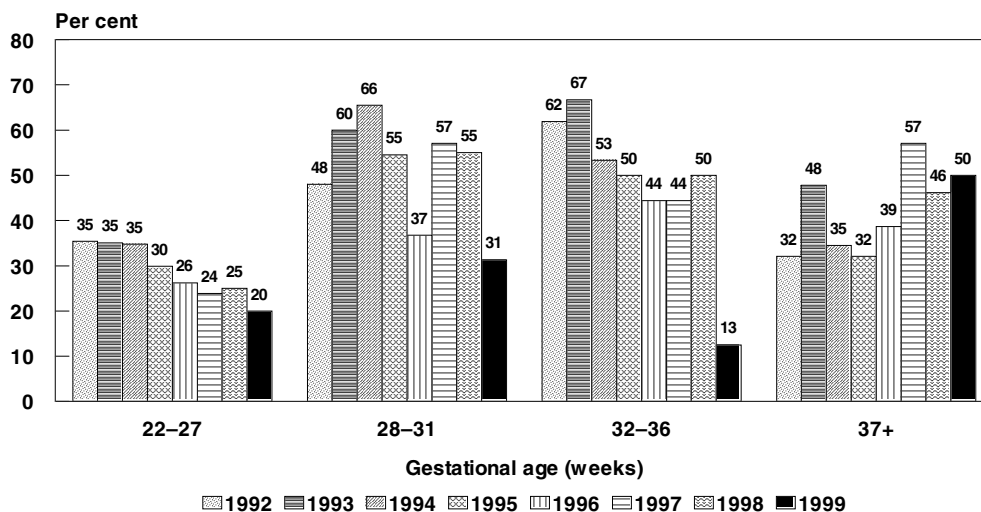
TABLE 93**DURATION OF SURVIVAL BY MAJOR CONGENITAL ANOMALY AND GESTATIONAL AGE, NSW & ACT 1999**

| Gestational age (weeks) | Major congenital anomaly | Alive at six months | | 0-7 | | Age at death (days) 8-28 | | 28+ | | TOTAL | |
|-------------------------|--------------------------|---------------------|------|-----|------|--------------------------|------|-----|------|-------|-------|
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| 22-27 | No | 196 | 69.8 | 59 | 21.0 | 16 | 5.7 | 10 | 3.6 | 281 | 97.2 |
| | Yes | 7 | 87.5 | 1 | 12.5 | 0 | 0.0 | 0 | 0.0 | 8 | 2.8 |
| | Sub-total | 203 | 70.2 | 60 | 20.8 | 16 | 5.5 | 10 | 3.5 | 289 | 100.0 |
| 28-31 | No | 508 | 96.9 | 10 | 1.9 | 5 | 1.0 | 1 | 0.2 | 524 | 95.1 |
| | Yes | 19 | 70.4 | 5 | 18.5 | 2 | 7.4 | 1 | 3.7 | 27 | 4.9 |
| | Sub-total | 527 | 95.7 | 15 | 2.7 | 7 | 1.3 | 2 | 0.4 | 551 | 100.0 |
| 32-36 | No | 516 | 98.5 | 6 | 1.1 | 2 | 0.4 | 0 | 0.0 | 524 | 84.1 |
| | Yes | 76 | 76.8 | 14 | 14.1 | 3 | 3.0 | 6 | 6.1 | 99 | 15.9 |
| | Sub-total | 592 | 95.0 | 20 | 3.2 | 5 | 0.8 | 6 | 1.0 | 623 | 100.0 |
| 37-41 | No | 270 | 92.8 | 14 | 4.8 | 6 | 2.1 | 1 | 0.3 | 291 | 56.8 |
| | Yes | 180 | 81.4 | 23 | 10.4 | 12 | 5.4 | 6 | 2.7 | 221 | 43.2 |
| | Sub-total | 450 | 87.9 | 37 | 7.2 | 18 | 3.5 | 7 | 1.4 | 512 | 100.0 |
| 42+ | No | 9 | 90.0 | 0 | 0.0 | 0 | 0.0 | 1 | 10.0 | 10 | 62.5 |
| | Yes | 5 | 83.3 | 0 | 0.0 | 1 | 16.7 | 0 | 0.0 | 6 | 37.5 |
| | Sub-total | 14 | 87.5 | 0 | 0.0 | 1 | 6.3 | 1 | 6.3 | 16 | 100.0 |
| TOTAL | | 1786 | 89.7 | 132 | 6.6 | 47 | 2.4 | 26 | 1.3 | 1991 | 100.0 |

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

FIGURE 13

DEATHS BY POST-MORTEM EXAMINATION AND GESTATIONAL AGE, NSW & ACT 1992–1999#



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

Infants with major congenital anomalies excluded.

TABLE 94

POST-MORTEM EXAMINATION BY GESTATIONAL AGE, NSW & ACT 1999#

| Post-mortem | Gestational age (weeks) | | | | | | | | TOTAL | |
|---------------|-------------------------|-------|-------|-------|-------|-------|-----|-------|-------|-------|
| | 22–27 | | 28–31 | | 32–36 | | 37+ | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Not requested | 45 | 52.9 | 8 | 50.0 | 3 | 37.5 | 9 | 40.9 | 65 | 49.6 |
| Refused | 23 | 27.1 | 3 | 18.8 | 4 | 50.0 | 2 | 9.1 | 32 | 24.4 |
| Done | 17 | 20.0 | 5 | 31.3 | 1 | 12.5 | 11 | 50.0 | 34 | 26.0 |
| TOTAL | 85 | 100.0 | 16 | 100.0 | 8 | 100.0 | 22 | 100.0 | 131 | 100.0 |

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

Babies with major congenital anomalies excluded.

PART 6: BIRTH DEFECTS

6.1 BIRTH DEFECTS AMONG STILLBORN AND LIVEBORN INFANTS

A birth defect is any structural defect detected during pregnancy or at birth, excluding birth injuries and minor anomalies such as skin tags, talipes, birthmarks or clicky hips. A list of common exclusions is shown in Appendix 1.

From 1 January 1998 doctors, hospitals and laboratories are required to notify birth defects detected during pregnancy, at birth, or up to one year of life under NSW Public Health Act 1991. Information reported is included in the NSW Birth Defects Register (BDR). The quality of information received by the BDR has improved since 1998, particularly in relation to pregnancy outcome.

Descriptions of some common birth defects are shown in Appendix 2. This chapter reports birth defects detected during pregnancy or in the first year of life for 1993–1998 and birth defects detected during pregnancy or at birth for 1999.

6.1.1 TRENDS IN REPORTED BIRTH DEFECTS

Between 1993 and 1998, the reported number of infants with birth defects has remained stable at just over two per cent (Table 95). In 1999, 988 cases of birth defects detected during pregnancy or at birth were reported.

6.1.2 BIRTH DEFECTS BY DIAGNOSTIC CATEGORY

The most common categories of birth defects for births of more than 20 weeks gestation or with a birthweight greater than 400 grams are presented in Table 96. Birth defects are classified using the British Paediatric Association

TABLE 95

BIRTH DEFECT CASES, NSW 1993–1999[#]

| Year | Birth defect cases | Births | Rate/1,000 births |
|------|--------------------|--------|-------------------|
| 1993 | 2142 | 87143 | 24.6 |
| 1994 | 1989 | 87262 | 22.8 |
| 1995 | 1947 | 86648 | 22.5 |
| 1996 | 1880 | 85706 | 21.9 |
| 1997 | 2001 | 87416 | 22.9 |
| 1998 | 1949 | 85627 | 22.8 |
| 1999 | 988 | 86468 | 11.4 |

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

[#] For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

(BPA) Classification of Diseases, which is primarily organised by body system.¹ 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.

In 1993–1999, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genito-urinary system. This is a similar pattern to previous years. In 1998, the overall rate of defects was slightly lower than the previous five years combined (42.1 versus 55.4 per 1,000), due to a decrease in the number of babies with multiple malformations. The proportion of reported cases with three or more malformations fell from 22.3 to 19.0 per cent between 1993 and 1998.

TABLE 96

BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1993–1999

| Diagnostic category | No. defects | | | Rate/1,000 births | | | | |
|---|-------------|------|------|-------------------|---------|------|------|---------|
| | 1993–97 | 1998 | 1999 | 1993–99 | 1993–97 | 1998 | 1999 | 1993–99 |
| Defects of nervous system | | | | | | | | |
| Anencephaly | 57 | 11 | 5 | 73 | 0.2 | 0.1 | 0.1 | 0.1 |
| Spina Bifida | 171 | 28 | 22 | 221 | 0.5 | 0.3 | 0.3 | 0.4 |
| Encephalocele | 45 | 5 | 4 | 54 | 0.1 | 0.1 | 0.0 | 0.1 |
| Microcephaly | 156 | 27 | 4 | 187 | 0.4 | 0.3 | 0.0 | 0.3 |
| Congenital hydrocephalus | 195 | 38 | 25 | 258 | 0.6 | 0.4 | 0.3 | 0.4 |
| Other nervous system defects | 406 | 90 | 38 | 534 | 1.2 | 1.0 | 0.4 | 0.9 |
| TOTAL | 1030 | 199 | 98 | 1327 | 3.0 | 2.3 | 1.1 | 2.2 |
| Defects of eye | | | | | | | | |
| Anophthalmos–microphthalmos | 78 | 12 | 13 | 103 | 0.2 | 0.1 | 0.2 | 0.2 |
| Buphthalmos–congenital glaucoma | 38 | 5 | 0 | 43 | 0.1 | 0.1 | 0.0 | 0.1 |
| Congenital cataract | 79 | 23 | 7 | 109 | 0.2 | 0.3 | 0.1 | 0.2 |
| Other eye defects | 193 | 42 | 16 | 251 | 0.6 | 0.5 | 0.2 | 0.4 |
| TOTAL | 388 | 82 | 36 | 506 | 1.1 | 0.9 | 0.4 | 0.8 |
| Defects of ear, face and neck | | | | | | | | |
| Absence–stricture auditory canal | 43 | 11 | 9 | 63 | 0.1 | 0.1 | 0.1 | 0.1 |
| Absent auricle | 6 | 1 | 1 | 8 | 0.0 | 0.0 | 0.0 | 0.0 |
| Defects of face and neck | 39 | 12 | 2 | 53 | 0.1 | 0.1 | 0.0 | 0.1 |
| Other ear defects | 89 | 22 | 10 | 121 | 0.3 | 0.3 | 0.1 | 0.2 |
| TOTAL | 177 | 46 | 22 | 245 | 0.5 | 0.5 | 0.3 | 0.4 |
| Defects of cardiovascular system | | | | | | | | |
| Transposition of great vessels | 214 | 47 | 22 | 283 | 0.6 | 0.5 | 0.3 | 0.5 |
| Tetralogy of Fallot | 145 | 36 | 13 | 194 | 0.4 | 0.4 | 0.2 | 0.3 |
| Ventricular septal defect | 1073 | 210 | 83 | 1366 | 3.1 | 2.4 | 1.0 | 2.3 |
| Atrial septal defect | 1119 | 169 | 63 | 1351 | 3.2 | 1.9 | 0.7 | 2.2 |
| Heart valve defects | 882 | 149 | 73 | 1104 | 2.5 | 1.7 | 0.9 | 1.8 |

TABLE 96 (CONT)
BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1993–1999*

| Diagnostic category | No. defects | | | Rate/1,000 births | | | | |
|--|--------------|-------------|-------------|-------------------|-------------|-------------|-------------|-------------|
| | 1993–1997 | 1998 | 1999 | 1993–1999 | 1993–1997 | 1998 | 1999 | 1993–1999 |
| Defects of cardiovascular system (cont) | | | | | | | | |
| Patent ductus arteriosus > 37 weeks | 666 | 105 | 60 | 831 | 1.9 | 1.2 | 0.7 | 1.4 |
| Coarctation of aorta | 192 | 37 | 18 | 247 | 0.6 | 0.4 | 0.2 | 0.4 |
| Other defects of aorta | 97 | 31 | 16 | 144 | 0.3 | 0.4 | 0.2 | 0.2 |
| Defects of pulmonary artery | 148 | 31 | 12 | 191 | 0.4 | 0.4 | 0.1 | 0.3 |
| Other cardiovascular defects | 976 | 168 | 133 | 1277 | 2.8 | 1.9 | 1.6 | 2.1 |
| TOTAL | 5512 | 983 | 493 | 6988 | 15.9 | 11.2 | 5.8 | 11.5 |
| Defects of respiratory system | | | | | | | | |
| Defects of nose | 78 | 20 | 8 | 106 | 0.2 | 0.2 | 0.1 | 0.2 |
| Defects of larynx, trachea and bronchus | 45 | 14 | 2 | 61 | 0.1 | 0.2 | 0.0 | 0.1 |
| Defects of lung | 88 | 21 | 22 | 131 | 0.3 | 0.2 | 0.3 | 0.2 |
| Other respiratory defects | 3 | 0 | 0 | 3 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 214 | 55 | 32 | 301 | 0.6 | 0.6 | 0.4 | 0.5 |
| Defects of gastrointestinal system | | | | | | | | |
| Cleft palate only | 434 | 77 | 49 | 560 | 1.3 | 0.9 | 0.6 | 0.9 |
| Cleft lip only | 180 | 32 | 27 | 239 | 0.5 | 0.4 | 0.3 | 0.4 |
| Cleft palate and cleft lip | 267 | 53 | 43 | 363 | 0.8 | 0.6 | 0.5 | 0.6 |
| Oesophageal atresia only | 12 | 0 | 2 | 14 | 0.0 | 0.0 | 0.0 | 0.0 |
| Oesophageal atresia with TOF | 90 | 19 | 19 | 128 | 0.3 | 0.2 | 0.2 | 0.2 |
| Tracheo-oesophageal fistula (TOF) only | 29 | 7 | 5 | 41 | 0.1 | 0.1 | 0.1 | 0.1 |
| Atresia–stenosis of small intestine | 137 | 20 | 15 | 172 | 0.4 | 0.2 | 0.2 | 0.3 |
| Atresia–stenosis of anus | 160 | 33 | 24 | 217 | 0.5 | 0.4 | 0.3 | 0.4 |
| Other gastrointestinal defects | 528 | 113 | 44 | 685 | 1.5 | 1.3 | 0.5 | 1.1 |
| TOTAL | 1837 | 354 | 228 | 2419 | 5.3 | 4.0 | 2.7 | 4.0 |
| Defects of genito-urinary system | | | | | | | | |
| Defects of female genitals | 81 | 14 | 5 | 100 | 0.2 | 0.2 | 0.1 | 0.2 |
| Undescended testis | 465 | 84 | 25 | 574 | 1.3 | 1.0 | 0.3 | 0.9 |
| Hypospadias | 999 | 193 | 148 | 1340 | 2.9 | 2.2 | 1.7 | 2.2 |
| Epispadias | 24 | 7 | 2 | 33 | 0.1 | 0.1 | 0.0 | 0.1 |
| Chordee | 220 | 29 | 9 | 258 | 0.6 | 0.3 | 0.1 | 0.4 |
| Indeterminate sex–ambiguous genitalia | 74 | 10 | 6 | 90 | 0.2 | 0.1 | 0.1 | 0.1 |
| Renal agenesis–dysgenesis | 148 | 53 | 29 | 230 | 0.4 | 0.6 | 0.3 | 0.4 |
| Obstructive defects of renal pelvis and ureter | 842 | 157 | 57 | 1056 | 2.4 | 1.8 | 0.7 | 1.7 |
| Other genito-urinary system defects | 752 | 153 | 61 | 966 | 2.2 | 1.8 | 0.7 | 1.6 |
| TOTAL | 3605 | 700 | 342 | 4647 | 10.4 | 8.0 | 4.0 | 7.7 |
| Defects of musculoskeletal system | | | | | | | | |
| Congenital dislocation of the hips | 875 | 153 | 69 | 1097 | 2.5 | 1.8 | 0.8 | 1.8 |
| Talipes equinovarus | 328 | 46 | 29 | 403 | 0.9 | 0.5 | 0.3 | 0.7 |
| Polydactyly | 483 | 100 | 77 | 660 | 1.4 | 1.1 | 0.9 | 1.1 |
| Syndactyly | 161 | 41 | 19 | 221 | 0.5 | 0.5 | 0.2 | 0.4 |
| Reduction deformities of limbs | 356 | 56 | 49 | 461 | 1.0 | 0.6 | 0.6 | 0.8 |
| Craniosynostosis | 481 | 75 | 7 | 563 | 1.4 | 0.9 | 0.1 | 0.9 |
| Diaphragmatic hernia | 121 | 21 | 28 | 170 | 0.3 | 0.2 | 0.3 | 0.3 |
| Exomphalos | 73 | 14 | 12 | 99 | 0.2 | 0.2 | 0.1 | 0.2 |
| Gastroschisis | 82 | 17 | 17 | 116 | 0.2 | 0.2 | 0.2 | 0.2 |
| Other musculoskeletal defects | 1307 | 233 | 135 | 1675 | 3.8 | 2.7 | 1.6 | 2.8 |
| TOTAL | 4267 | 756 | 442 | 5465 | 12.3 | 8.6 | 5.2 | 9.0 |
| Defects of integumentary system | | | | | | | | |
| Cystic hygroma | 379 | 78 | 33 | 490 | 1.1 | 0.9 | 0.4 | 0.8 |
| TOTAL | 49 | 12 | 4 | 65 | 0.1 | 0.1 | 0.0 | 0.1 |
| Chromosomal defects | | | | | | | | |
| Trisomy 21 | 558 | 112 | 69 | 739 | 1.6 | 1.3 | 0.8 | 1.2 |
| Trisomy 13 | 21 | 6 | 7 | 34 | 0.1 | 0.1 | 0.1 | 0.1 |
| Trisomy 18 | 90 | 21 | 20 | 131 | 0.3 | 0.2 | 0.2 | 0.2 |
| Turner syndrome | 43 | 12 | 5 | 60 | 0.1 | 0.1 | 0.1 | 0.1 |
| Other chromosomal defects | 202 | 52 | 31 | 285 | 0.6 | 0.6 | 0.4 | 0.5 |
| TOTAL | 914 | 203 | 132 | 1249 | 2.6 | 2.3 | 1.5 | 2.1 |
| Situs inversus | | | | | | | | |
| TOTAL | 24 | 5 | 3 | 32 | 0.1 | 0.1 | 0.0 | 0.1 |
| Congenital malformation syndromes | | | | | | | | |
| TOTAL | 198 | 43 | 18 | 259 | 0.6 | 0.5 | 0.2 | 0.4 |
| Congenital rubella syndrome | | | | | | | | |
| TOTAL | 6 | 0 | 0 | 6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Congenital cytomegalovirus infection | | | | | | | | |
| TOTAL | 12 | 2 | 1 | 15 | 0.0 | 0.0 | 0.0 | 0.0 |
| Congenital toxoplasmosis | | | | | | | | |
| TOTAL | 2 | 0 | 0 | 2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Non-immune hydrops foetalis | | | | | | | | |
| TOTAL | 86 | 30 | 20 | 136 | 0.2 | 0.3 | 0.2 | 0.2 |
| Other and unspecified birth defects | | | | | | | | |
| TOTAL | 526 | 129 | 21 | 676 | 1.5 | 1.5 | 0.2 | 1.1 |
| TOTAL | 19226 | 3677 | 1925 | 24828 | 55.4 | 42.1 | 22.5 | 41.0 |

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

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

6.1.3 INFANT CHARACTERISTICS

In the period 1993–1999, a single defect was reported in 62.3 per cent of infants, two defects in 17.6 per cent, three defects in 8.0 per cent, and four or more defects in 12.2 per cent of cases.

The sex was male in 59.5 per cent of infants, female in 39.8 per cent, indeterminate in 0.4 per cent of infants, and was not stated for 0.4 per cent.

Birth defects were more common in preterm and post-term infants than infants born at term (Table 97). Birth defects were also more common in infants born of a multiple

pregnancy than a singleton pregnancy: in 1993–1999, 2.1 per cent of singleton babies, 2.9 per cent of twins and 3.0 per cent of triplets were born with a birth defect.

Almost 10 per cent of infants born with birth defects died in the perinatal period, with stillbirths contributing about half the perinatal deaths (Table 98). These figures comprise all birth defect cases, including those where the cause of death may not be directly related to the birth defect(s). By comparison, the perinatal mortality rate among all births reported to the NSW Midwives Data Collection was 9.2 per 1,000 in 1999 (see Section 1.16).

TABLE 97

BIRTH DEFECT CASES BY GESTATIONAL AGE, NSW 1993–1999[#]

| Gestational age (weeks) | 1993–1997 | | 1998 | | Year 1999 | | 1993–1999 | | Rate/1,000 births |
|-------------------------|-----------|-------|------|-------|-----------|-------|-----------|-------|-------------------|
| | No. | % | No. | % | No. | % | No. | % | |
| 20–27 | 384 | 3.9 | 114 | 5.8 | 80 | 8.1 | 578 | 4.5 | 154.8 |
| 28–31 | 294 | 3.0 | 64 | 3.3 | 24 | 2.4 | 382 | 3.0 | 91.0 |
| 32–36 | 1106 | 11.1 | 211 | 10.8 | 122 | 12.3 | 1439 | 11.2 | 44.3 |
| 37–41 | 7523 | 75.5 | 1452 | 74.5 | 736 | 74.5 | 9711 | 75.3 | 17.7 |
| 42 + | 284 | 2.9 | 39 | 2.0 | 25 | 2.5 | 348 | 2.7 | 21.5 |
| Not stated | 368 | 3.7 | 69 | 3.5 | 1 | 0.1 | 438 | 3.4 | – |
| TOTAL | 9959 | 100.0 | 1949 | 100.0 | 988 | 100.0 | 12896 | 100.0 | 21.3 |

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

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

TABLE 98

BIRTH DEFECT CASES BY PREGNANCY OUTCOME, NSW 1993–1999[#]

| Pregnancy outcome | 1993–1997 | | 1998 | | Year 1999 | | 1993–1999 | |
|-----------------------------|-----------|-------|------|-------|-----------|-------|-----------|-------|
| | No. | % | No. | % | No. | % | No. | % |
| Stillbirth | 448 | 4.5 | 115 | 5.9 | 85 | 8.6 | 648 | 5.0 |
| Liveborn–neonatal death | 438 | 4.4 | 82 | 4.2 | 69 | 7.0 | 589 | 4.6 |
| Liveborn–postneonatal death | 89 | 0.9 | 18 | 0.9 | 8 | 0.8 | 115 | 0.9 |
| Liveborn surviving | 8984 | 90.2 | 1734 | 89.0 | 826 | 83.6 | 11544 | 89.5 |
| TOTAL | 9959 | 100.0 | 1949 | 100.0 | 988 | 100.0 | 12896 | 100.0 |

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

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported. Postneonatal mortality was recorded from 1993.

6.1.4 MATERNAL CHARACTERISTICS

After 20 years of age, the incidence of birth defects increased with increasing maternal age (Table 99). While the rate of birth defects is higher in older women, the majority of births occur in younger women: in 1993–1999, 78.0 per cent of babies with birth defects were born to women aged less than 35 years.

In 1993–1999, 218 babies of Aboriginal or Torres Strait Islander mothers were reported to have birth defects. The rate of birth defects among these babies was 17.6 per 1,000 compared with 21.4 per cent for non-Aboriginal mothers.

TABLE 99

BIRTH DEFECT CASES BY MATERNAL AGE, NSW 1993–1999*

| Maternal age (years) | 1993–1997 | | 1998 | | 1999 | | 1993–1999 | | Rate/1,000 births |
|----------------------|-----------|-------|------|-------|------|-------|-----------|-------|-------------------|
| | No. | % | No. | % | No. | % | No. | % | |
| Under 20 | 508 | 5.1 | 94 | 4.8 | 53 | 5.4 | 655 | 5.1 | 21.9 |
| 20–24 | 1683 | 16.9 | 313 | 16.1 | 149 | 15.1 | 2145 | 16.6 | 19.6 |
| 25–29 | 2840 | 28.5 | 589 | 30.2 | 304 | 30.8 | 3733 | 28.9 | 19.0 |
| 30–34 | 2754 | 27.7 | 507 | 26.0 | 266 | 26.9 | 3527 | 27.3 | 19.6 |
| 35–39 | 1244 | 12.5 | 258 | 13.2 | 168 | 17.0 | 1670 | 12.9 | 21.9 |
| 40–44 | 256 | 2.6 | 65 | 3.3 | 44 | 4.5 | 365 | 2.8 | 28.9 |
| 45+ | 21 | 0.2 | 2 | 0.1 | 3 | 0.3 | 26 | 0.2 | 53.3 |
| Not stated | 653 | 6.6 | 121 | 6.2 | 1 | 0.1 | 775 | 6.0 | – |
| TOTAL | 9959 | 100.0 | 1949 | 100.0 | 988 | 100.0 | 12896 | 100.0 | 21.3 |

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

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported. Postneonatal mortality was recorded from 1993.

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

In the period 1993–1997, about 130 terminations of pregnancy per year were reported to the NSW Birth Defects Register (Table 100). Following the introduction of a requirement to notify birth defects under the NSW Public Health Act 1991 from 1 January 1998, the number of terminations reported rose to 250 in 1998 and 236 in 1999.

Of the total 1,150 terminations of pregnancy reported in 1993–99, 644 (56.0 per cent) were associated with a chromosomal abnormality, the most common of which was Down syndrome, and 277 (24.1 per cent) were associated with a neural tube defect (Table 101). In 1993–1999, 53.9 per cent of terminations were carried out in women aged less than 35 years (Table 102).

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

TABLE 100

PREGNANCIES WITH FETUSES AFFECTED BY BIRTH DEFECTS AND RESULTING IN SPONTANEOUS ABORTION, TERMINATION OF PREGNANCY OR UNKNOWN OUTCOME, NSW 1993–1999

| Pregnancy outcome | Year | | | |
|---|------------------|-------------|-------------|------------------|
| | 1993–1997 No. | 1998 No. | 1999 No. | 1993–1999 No. |
| Spontaneous abortion | 272 | 84 | 114 | 470 |
| Termination of pregnancy less than 20 weeks gestation | 664 | 250 | 236 | 1150 |
| Unknown outcome | 713 | 16 | 0 | 729 |
| TOTAL | 1649 | 350 | 350 | 2349 |

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

TABLE 101
BIRTH DEFECTS AMONG SPONTANEOUS ABORTIONS, TERMINATIONS OF PREGNANCY AND UNKNOWN OUTCOME OF PREGNANCY BY DIAGNOSTIC CATEGORY, NSW 1993–1999

| Diagnostic category | 1993–1997 | | | Year 1998 | | | 1999 | | | 1993–1999 | | |
|--|-----------------|---|-----------------|-----------------|---|-----------------|-----------------|---|-----------------|-----------------|---|-----------------|
| | 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 |
| | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. | No. |
| Defects of nervous system | | | | | | | | | | | | |
| Neural tube defects | 12 | 186 | 7 | 3 | 43 | 0 | 0 | 48 | 15 | 277 | 7 | |
| Other nervous system defects | 7 | 68 | 13 | 0 | 32 | 0 | 0 | 29 | 7 | 129 | 13 | |
| TOTAL | 19 | 254 | 20 | 3 | 75 | 0 | 0 | 77 | 22 | 406 | 20 | |
| Defects of eye | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 1 | |
| Defects of ear, face and neck | 0 | 6 | 1 | 0 | 2 | 0 | 0 | 4 | 0 | 12 | 1 | |
| Defects of cardiovascular system | 2 | 88 | 44 | 2 | 24 | 0 | 0 | 44 | 4 | 156 | 44 | |
| Defects of respiratory system | 0 | 17 | 3 | 0 | 6 | 0 | 0 | 11 | 0 | 34 | 3 | |
| Defects of gastrointestinal system | 2 | 53 | 13 | 1 | 14 | 0 | 0 | 34 | 3 | 101 | 13 | |
| Defects of genito-urinary system | 7 | 120 | 21 | 0 | 32 | 2 | 4 | 39 | 11 | 191 | 23 | |
| Defects of musculoskeletal system | 12 | 250 | 34 | 9 | 75 | 0 | 4 | 89 | 25 | 414 | 34 | |
| Defects of integumentary system | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | |
| Cystic hygroma | 9 | 69 | 34 | 0 | 15 | 0 | 4 | 13 | 13 | 97 | 34 | |
| Chromosomal defects | | | | | | | | | | | | |
| Trisomy 21 | 27 | 134 | 274 | 8 | 73 | 6 | 10 | 69 | 45 | 276 | 280 | |
| Trisomy 13 | 9 | 23 | 34 | 2 | 10 | 0 | 4 | 13 | 15 | 46 | 34 | |
| Trisomy 18 | 17 | 55 | 95 | 4 | 35 | 1 | 7 | 29 | 28 | 119 | 96 | |
| Other chromosomal defects | 172 | 100 | 187 | 54 | 28 | 6 | 77 | 30 | 303 | 158 | 193 | |
| Turner syndrome | 32 | 28 | 43 | 10 | 8 | 1 | 10 | 9 | 52 | 45 | 44 | |
| TOTAL | 257 | 340 | 633 | 78 | 154 | 14 | 108 | 150 | 443 | 644 | 647 | |
| Situs inversus | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | |
| Congenital malformation syndromes | 0 | 20 | 2 | 0 | 2 | 0 | 0 | 3 | 0 | 25 | 2 | |
| Non-immune hydrops foetalis | 1 | 28 | 9 | 2 | 5 | 0 | 2 | 11 | 5 | 44 | 9 | |
| Other and unspecified birth defects | 0 | 26 | 23 | 1 | 10 | 0 | 0 | 8 | 1 | 44 | 23 | |
| TOTAL | 310 | 1277 | 839 | 97 | 415 | 16 | 122 | 485 | 529 | 2177 | 855 | |

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

TABLE 102
TRENDS IN REPORTED TERMINATIONS OF PREGNANCY ASSOCIATED WITH BIRTH DEFECTS BY MATERNAL AGE, 1993–1999

| Year | Maternal age (years) | | | | | | | | | | | | | | | | TOTAL | |
|-----------|----------------------|-----|-------|------|-------|------|-------|------|-------|------|-------|------|-----|-----|------------|------|-------|-------|
| | 15–19 | | 20–24 | | 25–29 | | 30–34 | | 35–39 | | 40–44 | | 45+ | | Not stated | | | |
| | No | % | No | % | No | % | No | % | No | % | No | % | No | % | No | % | | |
| 1993 | 4 | 2.9 | 15 | 10.7 | 29 | 20.7 | 28 | 20.0 | 37 | 26.4 | 16 | 11.4 | 1 | 0.7 | 10 | 7.1 | 140 | 100.0 |
| 1994 | 5 | 3.6 | 26 | 18.8 | 20 | 14.5 | 23 | 16.7 | 29 | 21.0 | 17 | 12.3 | 2 | 1.4 | 16 | 11.6 | 138 | 100.0 |
| 1995 | 6 | 3.9 | 19 | 12.3 | 31 | 20.0 | 38 | 24.5 | 33 | 21.3 | 23 | 14.8 | 2 | 1.3 | 3 | 1.9 | 155 | 100.0 |
| 1996 | 3 | 2.8 | 16 | 15.1 | 22 | 20.8 | 24 | 22.6 | 24 | 22.6 | 11 | 10.4 | 0 | 0.0 | 6 | 5.7 | 106 | 100.0 |
| 1997 | 3 | 2.4 | 13 | 10.4 | 32 | 25.6 | 29 | 23.2 | 23 | 18.4 | 10 | 8.0 | 1 | 0.8 | 14 | 11.2 | 125 | 100.0 |
| 1998 | 3 | 1.2 | 17 | 6.8 | 53 | 21.2 | 40 | 16.0 | 56 | 22.4 | 43 | 17.2 | 4 | 1.6 | 34 | 13.6 | 250 | 100.0 |
| 1999 | 6 | 2.5 | 17 | 7.2 | 43 | 18.2 | 55 | 23.3 | 41 | 17.4 | 17 | 7.2 | 2 | 0.8 | 55 | 23.3 | 236 | 100.0 |
| 1993–1999 | 30 | 2.6 | 123 | 10.7 | 230 | 20.0 | 237 | 20.6 | 243 | 21.1 | 137 | 11.9 | 12 | 1.0 | 138 | 12.0 | 1150 | 100.0 |

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

6.3 TRENDS IN SELECTED BIRTH DEFECTS

Trends in a selection of common birth defects are shown in Figures 14 to 21. For 1993–1998, malformations reported up to one year of age are included and for 1999 malformations reported during pregnancy or at birth are included.

The reported number of infants born with neural tube defects fell from 79 in 1993 to 42 in 1998, and 31 have been reported for 1999 to date. The number of reported terminations of pregnancy was 32 in 1993 and 44 in 1999.

Over the period 1993–1999, the number of cases of isolated cleft palate ranged from 49 in 1999 to 91 in 1995 and for total cleft lip (including cases of cleft lip and cleft palate) from 77 in 1999 to 101 in 1995 (Figures 15 and 16). Termination of pregnancy was usually associated with other defects such as neural tube defects, chromosomal abnormalities or multiple abnormalities in addition to the cleft lip and/or cleft palate.

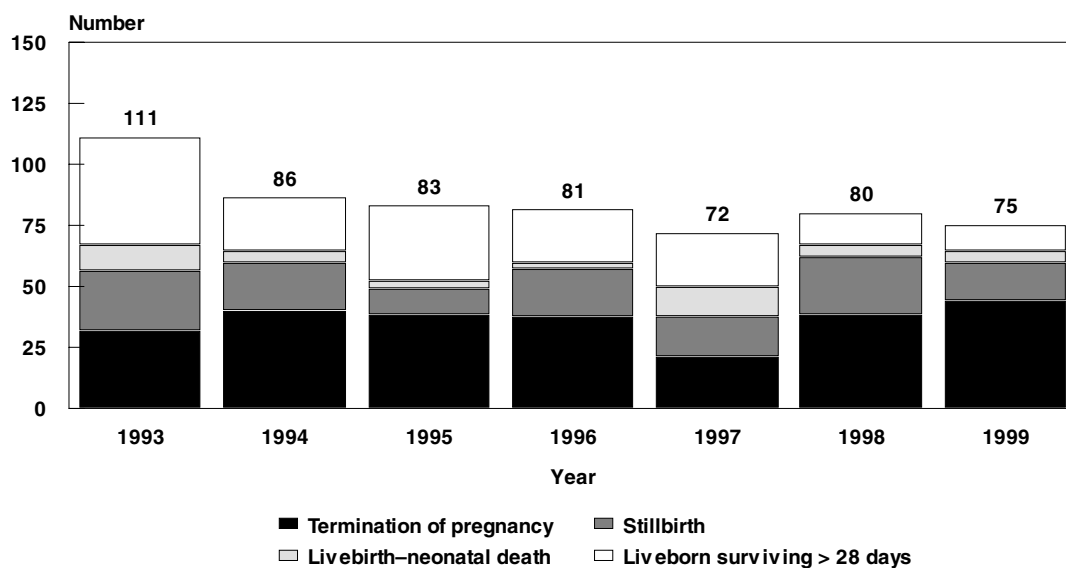
The number of reported cases of hypospadias varied from 148 in 1999 to 224 in 1993 (Figure 17), and cases of limb reduction defects varied from 44 in 1996 to 63 in 1993 (Figure 18).

The number of reported terminations of pregnancy for chromosomal abnormalities, including Down syndrome, increased following the introduction of a requirement to notify birth defects under the NSW Public Health Act 1991 from 1 January 1998 (Figures 19 and 20).

There was a trend towards improved notification of cases of renal agenesis and dysgenesis, particularly in 1998. The increased reporting is due partly to the introduction of notification requirements in 1998, but also to improved diagnosis of less severe forms of renal dysgenesis in infants. (Figure 21).

FIGURE 14

NEURAL TUBE DEFECTS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999*

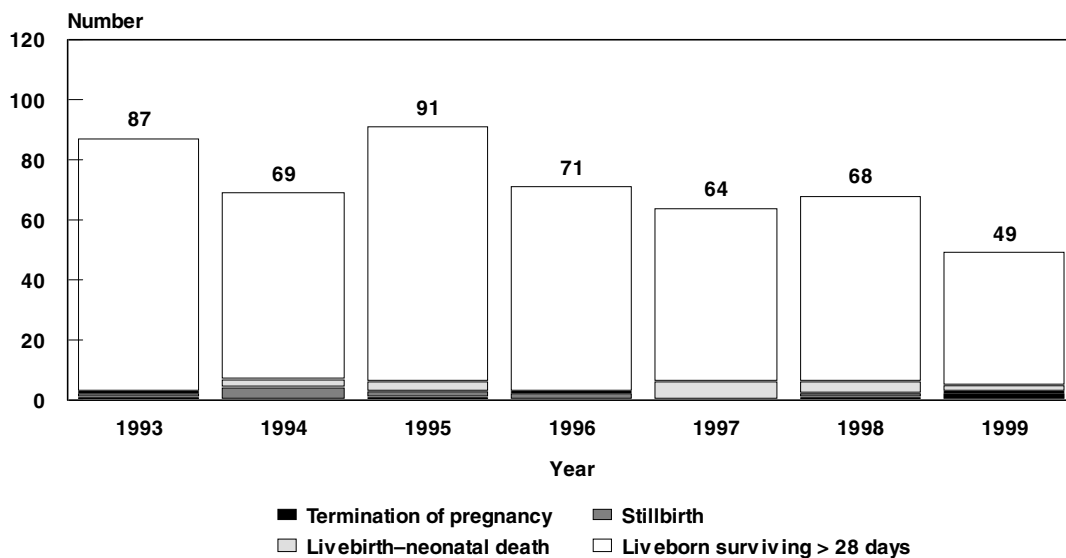


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 15

CLEFT PALATE: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#

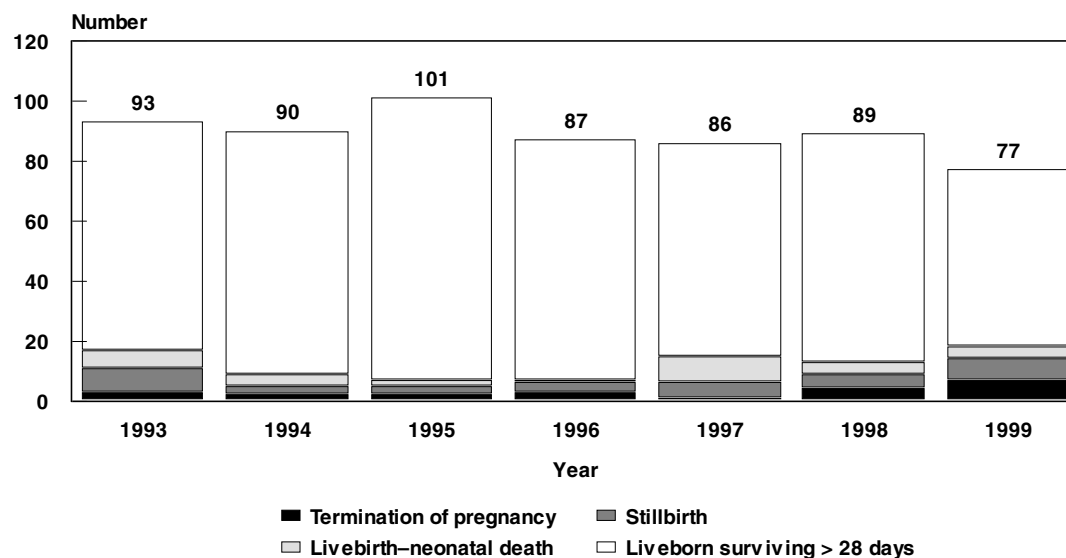


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 16

TOTAL CLEFT LIP: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#

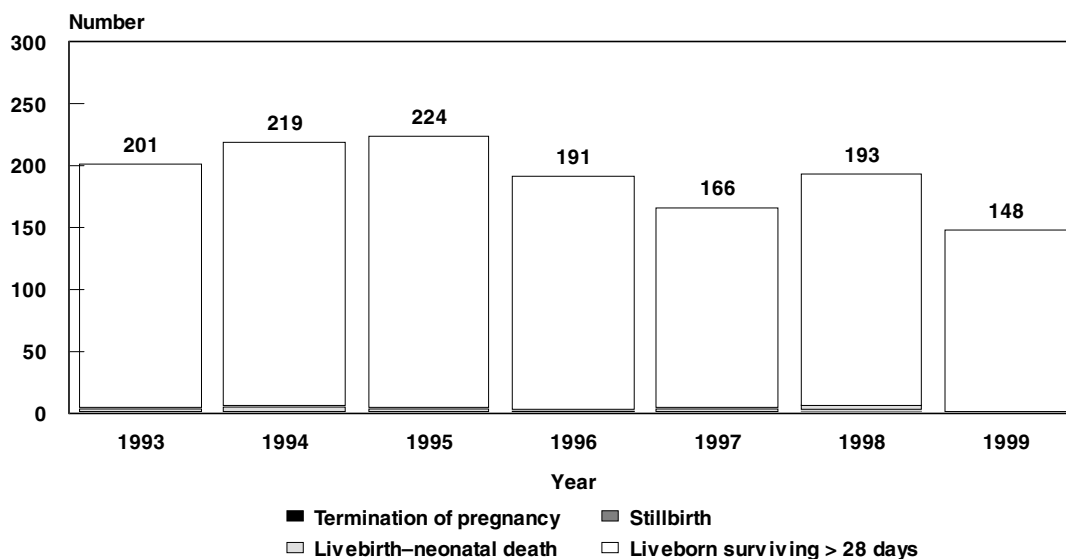


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 17

HYPOSPADIAS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#

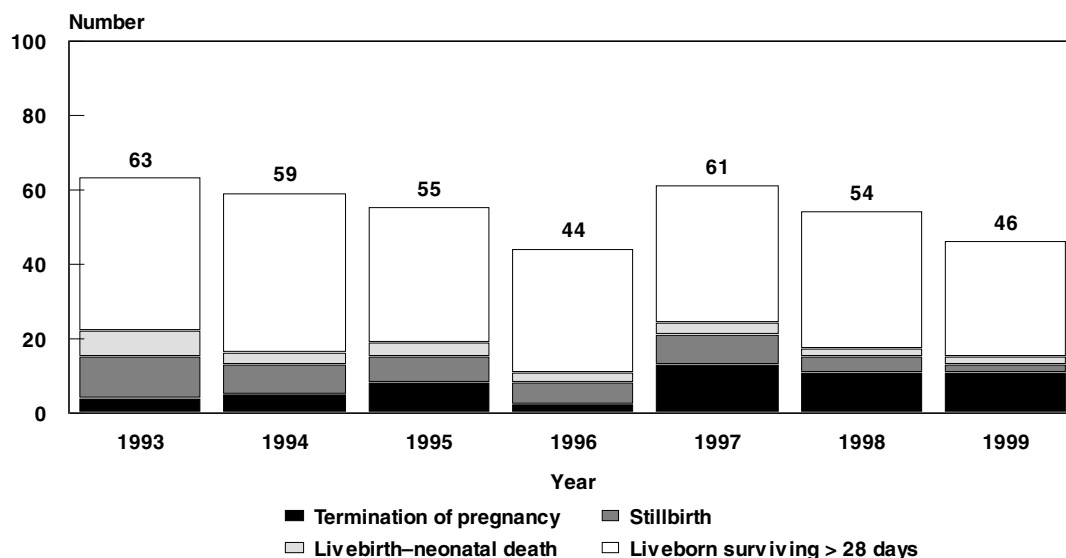


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 18

LIMB REDUCTION DEFECTS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#

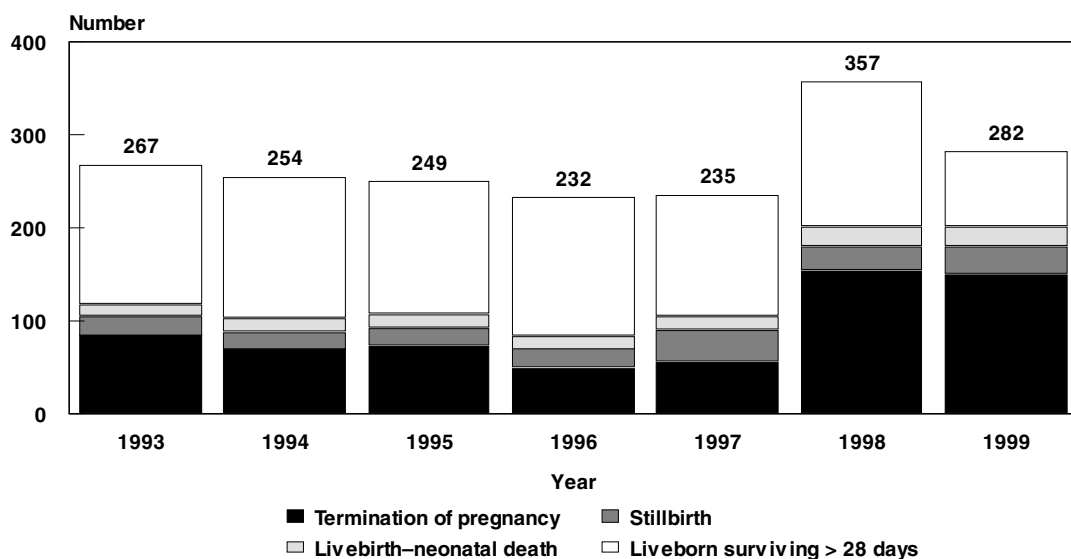


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 19

CHROMOSOMAL ABNORMALITIES: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#

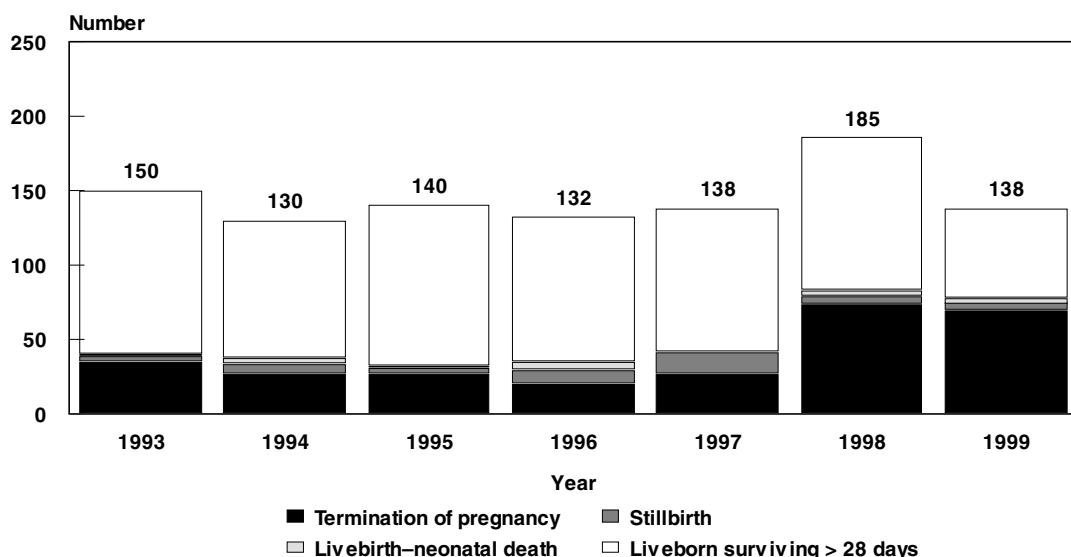


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

From 1 January 1999 birth defects are notifiable under the NSW Public Health Act 1991. The increase in reported terminations of pregnancy in 1998 follows the introduction of this notification requirement. For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 20

DOWN SYNDROME: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#

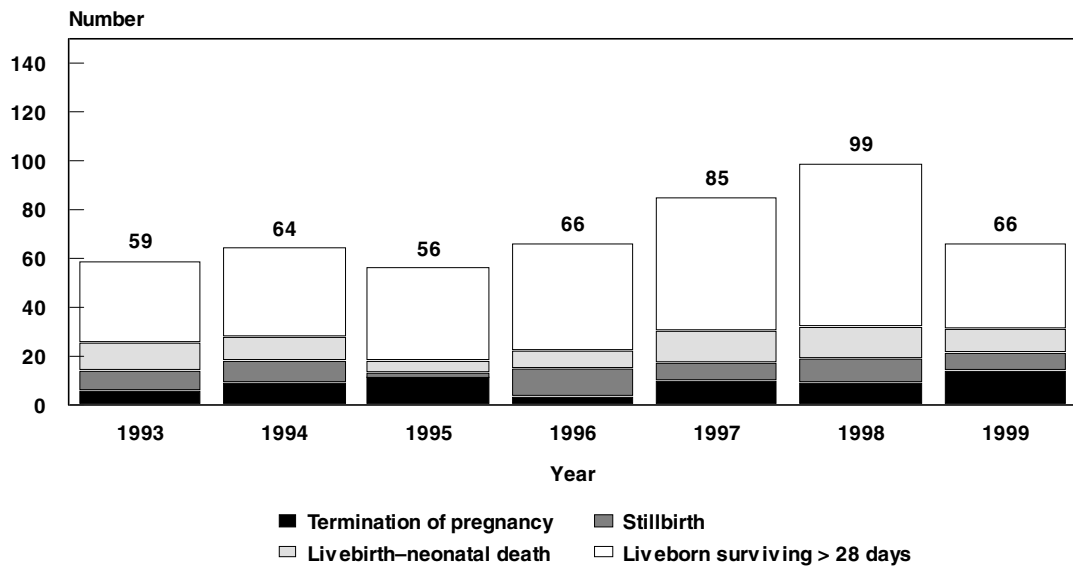


Source: NSW Birth Defects Register. Epidemiology and Surveillance Branch, NSW Health Department.

From 1 January 1999 birth defects are notifiable under the NSW Public Health Act 1991. The increase in reported terminations of pregnancy in 1998 follows the introduction of this notification requirement. For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

FIGURE 21

RENAL AGENESIS AND DYSGENESIS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1993–1999#



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

Includes cystic renal disease and excludes obstructive defects of the renal pelvis, abnormally shaped kidney, double/triple kidney, ectopic kidney and enlarged kidney without dysplasia. For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

6.4 BIRTH DEFECTS BY NSW HEALTH AREAS

Crude rates of reported birth defects for NSW Health Areas and rates standardised for maternal age are shown in Table 103. For 1993–1999, birth defects detected up to one year of age are reported and for 1999 birth defects detected during pregnancy or at birth are reported. The denominator population includes live births and stillbirths among NSW residents as reported to the MDC. The rate of birth defects increases with increasing maternal age (Table 99). 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. From 1 January 1998 doctors, hospitals and laboratories are required to notify birth defects detected during pregnancy, at birth or up to one year of life under NSW Public Health Act 1991. Thus higher rates of reported birth defects may be expected from 1998 onwards compared to previous years. In interpreting birth defect rates among NSW areas it should also be noted that infants with birth defects who are born to mothers resident in areas close to interstate borders may be transferred interstate for care and therefore may not be reported to the BDR.

Over the period 1993–1999 standardised rates of reported birth defects were lowest in the Northern Rivers Health Area and highest in the Hunter Health Area. Review of cases reported from the Hunter Health Area showed slightly increased reported rates of several birth defects including: unstable hip, unilateral (but not bilateral) undescended testis, first degree hypospadias (but not more severe forms of hypospadias), ventricular septal defect, patent foramen ovale and patent ductus arteriosus. A greater proportion of these cases reported from the Hunter Health Area had single birth defects compared with NSW as a whole. The range and generally less severe nature of the defects reported suggests that enumeration of less severe conditions is better in the Hunter Health Area compared with NSW as a whole.

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 103

BIRTH DEFECTS IN NSW HEALTH AREAS, 1993–1999*

| Health Area | 1993–1997 | | | 1998 | | | 1999 | | | 1993–1999 | | | 99% confidence intervals |
|----------------------|-----------|-----------------------------|------------------------------------|------|-----------------------------|------------------------------------|------|-----------------------------|------------------------------------|-----------|-----------------------------|------------------------------------|--------------------------|
| | No. | Crude rate per 1,000 births | Standardised rate per 1,000 births | No. | Crude rate per 1,000 births | Standardised rate per 1,000 births | No. | Crude rate per 1,000 births | Standardised rate per 1,000 births | No. | Crude rate per 1,000 births | Standardised rate per 1,000 births | |
| Central Sydney | 770 | 22.6 | 21.2 | 163 | 24.4 | 22.4 | 67 | 10.0 | 9.5 | 1000 | 21.0 | 19.8 | 18.0–21.6 |
| Northern Sydney | 1095 | 24.8 | 23.7 | 233 | 26.0 | 24.3 | 132 | 14.0 | 13.0 | 1460 | 23.4 | 22.4 | 20.4–24.4 |
| Western Sydney | 1270 | 24.5 | 23.6 | 261 | 24.4 | 23.5 | 150 | 13.8 | 13.3 | 1681 | 22.9 | 22.1 | 20.6–23.5 |
| Wentworth | 496 | 19.9 | 19.3 | 132 | 26.9 | 25.3 | 84 | 17.1 | 17.0 | 712 | 20.5 | 19.9 | 18.0–22.0 |
| South Western Sydney | 1398 | 22.7 | 21.8 | 289 | 23.7 | 22.5 | 152 | 12.2 | 12.4 | 1839 | 21.3 | 20.5 | 19.3–21.8 |
| Central Coast | 483 | 25.3 | 25.3 | 97 | 25.6 | 24.3 | 47 | 12.6 | 11.1 | 627 | 23.6 | 23.3 | 20.9–25.8 |
| Hunter | 1021 | 28.2 | 27.2 | 191 | 27.4 | 27.5 | 121 | 17.1 | 15.5 | 1333 | 26.5 | 25.5 | 23.7–27.4 |
| Illawarra | 497 | 21.7 | 21.2 | 108 | 24.4 | 22.6 | 51 | 11.4 | 11.0 | 656 | 20.6 | 19.9 | 17.9–22.1 |
| South Eastern Sydney | 1155 | 25.8 | 24.1 | 256 | 27.5 | 23.9 | 145 | 15.1 | 13.9 | 1556 | 24.5 | 22.6 | 20.9–24.4 |
| Northern Rivers | 272 | 18.0 | 18.3 | 72 | 24.2 | 24.4 | 46 | 15.7 | 15.3 | 390 | 18.6 | 18.9 | 16.5–21.5 |
| Mid North Coast | 348 | 22.3 | 22.4 | 76 | 25.4 | 23.8 | 35 | 11.9 | 11.1 | 459 | 21.3 | 21.1 | 18.6–23.8 |
| New England | 297 | 23.2 | 23.6 | 66 | 27.3 | 26.3 | 40 | 16.9 | 16.9 | 403 | 22.9 | 23.0 | 20.1–26.2 |
| Macquarie | 235 | 27.9 | 27.5 | 38 | 23.6 | 22.2 | 17 | 10.5 | 11.1 | 290 | 24.9 | 24.4 | 20.8–28.5 |
| Mid Western | 253 | 20.7 | 20.1 | 49 | 20.6 | 20.1 | 33 | 14.1 | 14.1 | 335 | 19.8 | 19.3 | 16.6–22.2 |
| Far West | 64 | 21.1 | 21.2 | 15 | 26.6 | 21.8 | 8 | 14.9 | 16.9 | 87 | 21.1 | 21.5 | 15.5–28.9 |
| Greater Murray | 382 | 21.3 | 21.3 | 57 | 19.1 | 17.9 | 34 | 12.8 | 12.6 | 473 | 20.1 | 19.9 | 17.6–22.5 |
| Southern AHS | 238 | 24.1 | 22.6 | 36 | 20.0 | 17.0 | 26 | 14.0 | 14.4 | 300 | 22.1 | 20.7 | 17.6–24.2 |
| TOTAL NSW | 10274 | 23.7 | 22.8 | 2139 | 25.0 | 23.6 | 1118 | 13.8 | 13.1 | 13601 | 22.4 | 21.5 | 21.0–22.0 |

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

Cases include terminations of pregnancy, stillbirths and livebirths where the place of residence is known. For 1993–1998, cases reported during pregnancy and up to one year of age are included. For 1999, cases reported during pregnancy or at birth are reported.

Reference

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

PART 7: NSW HOSPITALS

7.1 ONSET AND AUGMENTATION OF LABOUR IN SELECTED HOSPITALS

Table 104 gives onset or augmentation of labour for individual hospitals where the number of reported deliveries exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total.

TABLE 104

CONFINEMENTS BY ONSET AND AUGMENTATION OF LABOUR AND HOSPITAL, NSW 1999*

| Health Area and Hospital | Onset and augmentation of labour | | | | | | | | | | | | | | | | TOTAL | | | |
|-----------------------------|----------------------------------|------|--------------------------------|------|---|------|-----------|------|-----------------------------|------|------------------|-----|----------------------------------|------|-----------------|-----|------------|-----|-------|-------|
| | Spontaneous | | Spontaneous augmented with ARM | | Spontaneous augmented oxytocics-prostagl. | | No labour | | Induced-oxytocics-prostagl. | | Induced-ARM only | | Induced-ARM+ oxytocics-prostagl. | | Induced-other** | | Not stated | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Central Sydney | | | | | | | | | | | | | | | | | | | | |
| Canterbury | 950 | 60.2 | 44 | 2.8 | 198 | 12.5 | 118 | 7.5 | 215 | 13.6 | 9 | 0.6 | 44 | 2.8 | 1 | 0.1 | 0 | 0.0 | 1579 | 100.0 |
| King George V * | 2192 | 56.1 | 0 | 0.0 | 537 | 13.7 | 397 | 10.2 | 741 | 19.0 | 33 | 0.8 | 0 | 0.0 | 7 | 0.2 | 0 | 0.0 | 3907 | 100.0 |
| NSW Private | 93 | 29.5 | 24 | 7.6 | 33 | 10.5 | 61 | 19.4 | 48 | 15.2 | 1 | 0.3 | 55 | 17.5 | 0 | 0.0 | 0 | 0.0 | 315 | 100.0 |
| ALL HOSPITALS | 3235 | 55.8 | 68 | 1.2 | 768 | 13.2 | 576 | 9.9 | 1004 | 17.3 | 43 | 0.7 | 99 | 1.7 | 8 | 0.1 | 0 | 0.0 | 5801 | 100.0 |
| Northern Sydney | | | | | | | | | | | | | | | | | | | | |
| Hornsby | 443 | 39.6 | 109 | 9.7 | 162 | 14.5 | 137 | 12.2 | 66 | 5.9 | 7 | 0.6 | 195 | 17.4 | 1 | 0.1 | 0 | 0.0 | 1120 | 100.0 |
| Manly | 254 | 51.0 | 27 | 5.4 | 35 | 7.0 | 50 | 10.0 | 62 | 12.4 | 8 | 1.6 | 61 | 12.2 | 1 | 0.2 | 0 | 0.0 | 498 | 100.0 |
| Mona Vale | 402 | 39.5 | 101 | 9.9 | 129 | 12.7 | 75 | 7.4 | 92 | 9.0 | 16 | 1.6 | 204 | 20.0 | 0 | 0.0 | 0 | 0.0 | 1019 | 100.0 |
| Royal North Shore | 927 | 49.7 | 54 | 2.9 | 214 | 11.5 | 285 | 15.3 | 125 | 6.7 | 23 | 1.2 | 237 | 12.7 | 2 | 0.1 | 0 | 0.0 | 1867 | 100.0 |
| Ryde | 335 | 45.9 | 79 | 10.8 | 67 | 9.2 | 57 | 7.8 | 80 | 11.0 | 22 | 3.0 | 88 | 12.1 | 2 | 0.3 | 0 | 0.0 | 730 | 100.0 |
| Mater, North Sydney | 530 | 30.0 | 134 | 7.6 | 259 | 14.7 | 343 | 19.4 | 156 | 8.8 | 80 | 4.5 | 263 | 14.9 | 0 | 0.0 | 0 | 0.0 | 1765 | 100.0 |
| North Shore Private | 515 | 31.3 | 100 | 6.1 | 259 | 15.8 | 314 | 19.1 | 144 | 8.8 | 35 | 2.1 | 275 | 16.7 | 1 | 0.1 | 0 | 0.0 | 1643 | 100.0 |
| Sydney Adventist | 482 | 22.1 | 308 | 14.1 | 320 | 14.7 | 368 | 16.8 | 131 | 6.0 | 21 | 1.0 | 552 | 25.3 | 2 | 0.1 | 0 | 0.0 | 2184 | 100.0 |
| ALL HOSPITALS | 3888 | 35.9 | 912 | 8.4 | 1445 | 13.3 | 1629 | 15.0 | 856 | 7.9 | 212 | 2.0 | 1875 | 17.3 | 9 | 0.1 | 0 | 0.0 | 10826 | 100.0 |
| Western Sydney | | | | | | | | | | | | | | | | | | | | |
| Auburn | 806 | 57.4 | 134 | 9.5 | 139 | 9.9 | 78 | 5.6 | 66 | 4.7 | 7 | 0.5 | 173 | 12.3 | 1 | 0.1 | 0 | 0.0 | 1404 | 100.0 |
| Blacktown | 1153 | 47.3 | 339 | 13.9 | 218 | 8.9 | 154 | 6.3 | 126 | 5.2 | 11 | 0.5 | 434 | 17.8 | 2 | 0.1 | 0 | 0.0 | 2437 | 100.0 |
| Westmead | 2485 | 57.7 | 136 | 3.2 | 461 | 10.7 | 419 | 9.7 | 155 | 3.6 | 18 | 0.4 | 615 | 14.3 | 16 | 0.4 | 0 | 0.0 | 4305 | 100.0 |
| The Hills Private | 414 | 31.5 | 149 | 11.3 | 162 | 12.3 | 156 | 11.9 | 98 | 7.4 | 5 | 0.4 | 332 | 25.2 | 0 | 0.0 | 0 | 0.0 | 1316 | 100.0 |
| ALL HOSPITALS | 4858 | 51.3 | 758 | 8.0 | 980 | 10.4 | 807 | 8.5 | 445 | 4.7 | 41 | 0.4 | 1554 | 16.4 | 19 | 0.2 | 0 | 0.0 | 9462 | 100.0 |
| Wentworth | | | | | | | | | | | | | | | | | | | | |
| Blue Mountains | 259 | 61.7 | 30 | 7.1 | 45 | 10.7 | 32 | 7.6 | 32 | 7.6 | 13 | 3.1 | 9 | 2.1 | 0 | 0.0 | 0 | 0.0 | 420 | 100.0 |
| Nepean | 1801 | 54.8 | 98 | 3.0 | 210 | 6.4 | 352 | 10.7 | 157 | 4.8 | 22 | 0.7 | 634 | 19.3 | 14 | 0.4 | 0 | 0.0 | 3288 | 100.0 |
| Jamison Private | 270 | 36.0 | 122 | 16.3 | 50 | 6.7 | 108 | 14.4 | 89 | 11.9 | 9 | 1.2 | 100 | 13.4 | 1 | 0.1 | 0 | 0.0 | 749 | 100.0 |
| Hawkesbury | 466 | 46.9 | 155 | 15.6 | 65 | 6.5 | 80 | 8.0 | 118 | 11.9 | 12 | 1.2 | 98 | 9.9 | 0 | 0.0 | 0 | 0.0 | 994 | 100.0 |
| ALL HOSPITALS | 2796 | 51.3 | 405 | 7.4 | 370 | 6.8 | 572 | 10.5 | 396 | 7.3 | 56 | 1.0 | 841 | 15.4 | 15 | 0.3 | 0 | 0.0 | 5451 | 100.0 |
| South Western Sydney | | | | | | | | | | | | | | | | | | | | |
| Fairfield | 1168 | 54.1 | 204 | 9.5 | 207 | 9.6 | 149 | 6.9 | 146 | 6.8 | 7 | 0.3 | 273 | 12.7 | 3 | 0.1 | 0 | 0.0 | 2157 | 100.0 |
| Liverpool | 1508 | 49.3 | 256 | 8.4 | 296 | 9.7 | 224 | 7.3 | 306 | 10.0 | 41 | 1.3 | 387 | 12.7 | 40 | 1.3 | 0 | 0.0 | 3058 | 100.0 |
| Campbelltown | 1279 | 44.6 | 384 | 13.4 | 206 | 7.2 | 236 | 8.2 | 152 | 5.3 | 38 | 1.3 | 565 | 19.7 | 7 | 0.2 | 0 | 0.0 | 2867 | 100.0 |
| Bankstown-Lidcombe | 948 | 53.3 | 162 | 9.1 | 201 | 11.3 | 143 | 8.0 | 143 | 8.0 | 8 | 0.4 | 173 | 9.7 | 2 | 0.1 | 0 | 0.0 | 1780 | 100.0 |
| Bankstown Private | 151 | 24.0 | 72 | 11.4 | 102 | 16.2 | 96 | 15.3 | 71 | 11.3 | 9 | 1.4 | 128 | 20.3 | 0 | 0.0 | 0 | 0.0 | 629 | 100.0 |
| Bowral | 399 | 61.2 | 21 | 3.2 | 23 | 3.5 | 52 | 8.0 | 44 | 6.7 | 21 | 3.2 | 91 | 14.0 | 1 | 0.2 | 0 | 0.0 | 652 | 100.0 |
| Other area hospitals | 50 | 29.2 | 17 | 9.9 | 24 | 14.0 | 24 | 14.0 | 25 | 14.6 | 0 | 0.0 | 31 | 18.1 | 0 | 0.0 | 0 | 0.0 | 171 | 100.0 |
| ALL HOSPITALS | 5503 | 48.6 | 1116 | 9.9 | 1059 | 9.4 | 924 | 8.2 | 887 | 7.8 | 124 | 1.1 | 1648 | 14.6 | 53 | 0.5 | 0 | 0.0 | 11314 | 100.0 |
| Central Coast | | | | | | | | | | | | | | | | | | | | |
| Gosford | 974 | 40.1 | 284 | 11.7 | 334 | 13.8 | 223 | 9.2 | 184 | 7.6 | 54 | 2.2 | 374 | 15.4 | 0 | 0.0 | 0 | 0.0 | 2427 | 100.0 |
| Wyong | 252 | 66.5 | 95 | 25.1 | 29 | 7.7 | 1 | 0.3 | 0 | 0.0 | 1 | 0.3 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 379 | 100.0 |
| North Gosford Private | 211 | 32.7 | 83 | 12.9 | 76 | 11.8 | 95 | 14.7 | 67 | 10.4 | 21 | 3.3 | 90 | 14.0 | 2 | 0.3 | 0 | 0.0 | 645 | 100.0 |
| ALL HOSPITALS | 1437 | 41.6 | 462 | 13.4 | 439 | 12.7 | 319 | 9.2 | 251 | 7.3 | 76 | 2.2 | 465 | 13.5 | 2 | 0.1 | 0 | 0.0 | 3451 | 100.0 |
| Hunter | | | | | | | | | | | | | | | | | | | | |
| Maitland | 596 | 47.9 | 101 | 8.1 | 97 | 7.8 | 143 | 11.5 | 123 | 9.9 | 37 | 3.0 | 146 | 11.7 | 2 | 0.2 | 0 | 0.0 | 1245 | 100.0 |
| Muswellbrook | 137 | 58.5 | 22 | 9.4 | 6 | 2.6 | 7 | 3.0 | 36 | 15.4 | 5 | 2.1 | 21 | 9.0 | 0 | 0.0 | 0 | 0.0 | 234 | 100.0 |
| Belmont | 277 | 43.5 | 58 | 9.1 | 43 | 6.8 | 72 | 11.3 | 51 | 8.0 | 25 | 3.9 | 111 | 17.4 | 0 | 0.0 | 0 | 0.0 | 637 | 100.0 |
| Singleton | 129 | 60.0 | 9 | 4.2 | 17 | 7.9 | 16 | 7.4 | 36 | 16.7 | 1 | 0.5 | 7 | 3.3 | 0 | 0.0 | 0 | 0.0 | 215 | 100.0 |
| John Hunter | 2418 | 68.0 | 7 | 0.2 | 6 | 0.2 | 288 | 8.1 | 319 | 9.0 | 128 | 3.6 | 391 | 11.0 | 1 | 0.0 | 0 | 0.0 | 3558 | 100.0 |
| Christo Road Private | 456 | 48.2 | 7 | 0.7 | 69 | 7.3 | 141 | 14.9 | 76 | 8.0 | 34 | 3.6 | 163 | 17.2 | 0 | 0.0 | 0 | 0.0 | 946 | 100.0 |
| Other area hospitals | 147 | 49.0 | 35 | 11.7 | 13 | 4.3 | 70 | 23.3 | 16 | 5.3 | 0 | 0.0 | 19 | 6.3 | 0 | 0.0 | 0 | 0.0 | 300 | 100.0 |
| ALL HOSPITALS | 4160 | 58.3 | 239 | 3.3 | 251 | 3.5 | 737 | 10.3 | 657 | 9.2 | 230 | 3.2 | 858 | 12.0 | 3 | 0.0 | 0 | 0.0 | 7135 | 100.0 |
| Illawarra | | | | | | | | | | | | | | | | | | | | |
| Shoalhaven | 475 | 59.3 | 32 | 4.0 | 30 | 3.7 | 90 | 11.2 | 89 | 11.1 | 10 | 1.2 | 69 | 8.6 | 6 | 0.7 | 0 | 0.0 | 801 | 100.0 |
| Wollongong | 891 | 43.3 | 199 | 9.7 | 227 | 11.0 | 133 | 6.5 | 173 | 8.4 | 33 | 1.6 | 390 | 19.0 | 11 | 0.5 | 0 | 0.0 | 2057 | 100.0 |
| Shellharbour | 271 | 50.3 | 105 | 19.5 | 34 | 6.3 | 26 | 4.8 | 34 | 6.3 | 7 | 1.3 | 62 | 11.5 | 0 | 0.0 | 0 | 0.0 | 539 | 100.0 |
| Illawarra Private | 216 | 32.3 | 96 | 14.3 | 84 | 12.6 | 88 | 13.2 | 31 | 4.6 | 15 | 2.2 | 137 | 20.5 | 2 | 0.3 | 0 | 0.0 | 669 | 100.0 |
| Other area hospitals | 58 | 43.0 | 16 | 11.9 | 9 | 6.7 | 28 | 20.7 | 10 | 7.4 | 4 | 3.0 | 10 | 7.4 | 0 | 0.0 | 0 | 0.0 | 135 | 100.0 |
| ALL HOSPITALS | 1911 | 45.5 | 448 | 10.7 | 384 | 9.1 | 365 | 8.7 | 337 | 8.0 | 69 | 1.6 | 668 | 15.9 | 19 | 0.5 | 0 | 0.0 | 4201 | 100.0 |

7.2 TYPE OF DELIVERY IN SELECTED HOSPITALS

Table 105 gives type of delivery for individual hospitals where the number of reported confinements exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total.

TABLE 105

CONFINEMENTS BY TYPE OF DELIVERY AND HOSPITAL, NSW 1999*

| Health Area and Hospital | Normal | | Forceps vaginal | | Type of delivery | | | | Elective caesarean | | Emergency caesarean | | TOTAL | |
|-----------------------------|--------|------|-----------------|------|------------------|------|-----|-----|--------------------|------|---------------------|------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | | | | | | | | | | | | | | |
| Canterbury | 1141 | 72.3 | 44 | 2.8 | 124 | 7.9 | 6 | 0.4 | 118 | 7.5 | 146 | 9.2 | 1579 | 100.0 |
| King George V | 2658 | 68.0 | 167 | 4.3 | 253 | 6.5 | 46 | 1.2 | 397 | 10.2 | 386 | 9.9 | 3907 | 100.0 |
| NSW Private | 180 | 57.1 | 16 | 5.1 | 21 | 6.7 | 3 | 1.0 | 61 | 19.4 | 34 | 10.8 | 315 | 100.0 |
| ALL HOSPITALS | 3979 | 68.6 | 227 | 3.9 | 398 | 6.9 | 55 | 0.9 | 576 | 9.9 | 566 | 9.8 | 5801 | 100.0 |
| Northern Sydney | | | | | | | | | | | | | | |
| Hornsby | 728 | 65.0 | 88 | 7.9 | 70 | 6.3 | 1 | 0.1 | 137 | 12.2 | 96 | 8.6 | 1120 | 100.0 |
| Manly | 351 | 70.5 | 33 | 6.6 | 17 | 3.4 | 3 | 0.6 | 50 | 10.0 | 44 | 8.8 | 498 | 100.0 |
| Mona Vale | 696 | 68.3 | 66 | 6.5 | 69 | 6.8 | 12 | 1.2 | 75 | 7.4 | 101 | 9.9 | 1019 | 100.0 |
| Royal North Shore | 1081 | 57.9 | 84 | 4.5 | 174 | 9.3 | 13 | 0.7 | 285 | 15.3 | 230 | 12.3 | 1867 | 100.0 |
| Ryde | 510 | 69.9 | 21 | 2.9 | 62 | 8.5 | 7 | 1.0 | 57 | 7.8 | 73 | 10.0 | 730 | 100.0 |
| Mater, North Sydney | 864 | 49.0 | 95 | 5.4 | 265 | 15.0 | 2 | 0.1 | 343 | 19.4 | 196 | 11.1 | 1765 | 100.0 |
| North Shore Private | 784 | 47.7 | 110 | 6.7 | 219 | 13.3 | 4 | 0.2 | 314 | 19.1 | 212 | 12.9 | 1643 | 100.0 |
| Sydney Adventist | 1318 | 60.3 | 171 | 7.8 | 144 | 6.6 | 6 | 0.3 | 368 | 16.8 | 177 | 8.1 | 2184 | 100.0 |
| ALL HOSPITALS | 6332 | 58.5 | 668 | 6.2 | 1020 | 9.4 | 48 | 0.4 | 1629 | 15.0 | 1129 | 10.4 | 10826 | 100.0 |
| Western Sydney | | | | | | | | | | | | | | |
| Auburn | 1155 | 82.3 | 59 | 4.2 | 30 | 2.1 | 23 | 1.6 | 78 | 5.6 | 59 | 4.2 | 1404 | 100.0 |
| Blacktown | 1838 | 75.4 | 143 | 5.9 | 116 | 4.8 | 17 | 0.7 | 154 | 6.3 | 169 | 6.9 | 2437 | 100.0 |
| Westmead | 2860 | 66.4 | 357 | 8.3 | 158 | 3.7 | 75 | 1.7 | 419 | 9.7 | 436 | 10.1 | 4305 | 100.0 |
| The Hills Private | 861 | 65.4 | 133 | 10.1 | 43 | 3.3 | 10 | 0.8 | 156 | 11.9 | 113 | 8.6 | 1316 | 100.0 |
| ALL HOSPITALS | 6714 | 71.0 | 692 | 7.3 | 347 | 3.7 | 125 | 1.3 | 807 | 8.5 | 777 | 8.2 | 9462 | 100.0 |
| Wentworth | | | | | | | | | | | | | | |
| Blue Mountains | 325 | 77.4 | 6 | 1.4 | 24 | 5.7 | 5 | 1.2 | 32 | 7.6 | 28 | 6.7 | 420 | 100.0 |
| Nepean | 2343 | 71.3 | 92 | 2.8 | 144 | 4.4 | 27 | 0.8 | 352 | 10.7 | 330 | 10.0 | 3288 | 100.0 |
| Jamison Private | 485 | 64.8 | 56 | 7.5 | 5 | 0.7 | 4 | 0.5 | 108 | 14.4 | 91 | 12.1 | 749 | 100.0 |
| Hawkesbury | 708 | 71.2 | 79 | 7.9 | 45 | 4.5 | 8 | 0.8 | 80 | 8.0 | 74 | 7.4 | 994 | 100.0 |
| ALL HOSPITALS | 3861 | 70.8 | 233 | 4.3 | 218 | 4.0 | 44 | 0.8 | 572 | 10.5 | 523 | 9.6 | 5451 | 100.0 |
| South Western Sydney | | | | | | | | | | | | | | |
| Fairfield | 1705 | 79.0 | 30 | 1.4 | 129 | 6.0 | 34 | 1.6 | 149 | 6.9 | 110 | 5.1 | 2157 | 100.0 |
| Liverpool | 2266 | 74.1 | 70 | 2.3 | 231 | 7.6 | 56 | 1.8 | 224 | 7.3 | 211 | 6.9 | 3058 | 100.0 |
| Campbelltown | 2221 | 77.5 | 37 | 1.3 | 161 | 5.6 | 28 | 1.0 | 236 | 8.2 | 184 | 6.4 | 2867 | 100.0 |
| Bankstown-Lidcombe | 1403 | 78.8 | 25 | 1.4 | 84 | 4.7 | 17 | 1.0 | 143 | 8.0 | 108 | 6.1 | 1780 | 100.0 |
| Bankstown Private | 360 | 57.2 | 39 | 6.2 | 72 | 11.4 | 3 | 0.5 | 96 | 15.3 | 59 | 9.4 | 629 | 100.0 |
| Bowral | 457 | 70.1 | 68 | 10.4 | 33 | 5.1 | 15 | 2.3 | 52 | 8.0 | 27 | 4.1 | 652 | 100.0 |
| Other area hospitals | 107 | 62.6 | 6 | 3.5 | 24 | 14.0 | 0 | 0.0 | 24 | 14.0 | 10 | 5.8 | 171 | 100.0 |
| ALL HOSPITALS | 8519 | 75.3 | 275 | 2.4 | 734 | 6.5 | 153 | 1.4 | 924 | 8.2 | 709 | 6.3 | 11314 | 100.0 |
| Central Coast | | | | | | | | | | | | | | |
| Gosford | 1656 | 68.2 | 49 | 2.0 | 229 | 9.4 | 20 | 0.8 | 223 | 9.2 | 250 | 10.3 | 2427 | 100.0 |
| Wyong | 355 | 93.7 | 7 | 1.8 | 2 | 0.5 | 5 | 1.3 | 1 | 0.3 | 9 | 2.4 | 379 | 100.0 |
| North Gosford Private | 348 | 54.0 | 31 | 4.8 | 91 | 14.1 | 5 | 0.8 | 95 | 14.7 | 75 | 11.6 | 645 | 100.0 |
| ALL HOSPITALS | 2359 | 68.4 | 87 | 2.5 | 322 | 9.3 | 30 | 0.9 | 319 | 9.2 | 334 | 9.7 | 3451 | 100.0 |
| Hunter | | | | | | | | | | | | | | |
| Maitland | 906 | 72.8 | 21 | 1.7 | 56 | 4.5 | 9 | 0.7 | 143 | 11.5 | 110 | 8.8 | 1245 | 100.0 |
| Muswellbrook | 197 | 84.2 | 1 | 0.4 | 11 | 4.7 | 3 | 1.3 | 7 | 3.0 | 15 | 6.4 | 234 | 100.0 |
| Belmont | 463 | 72.7 | 23 | 3.6 | 27 | 4.2 | 3 | 0.5 | 72 | 11.3 | 49 | 7.7 | 637 | 100.0 |
| Singleton | 174 | 80.9 | 0 | 0.0 | 16 | 7.4 | 0 | 0.0 | 16 | 7.4 | 9 | 4.2 | 215 | 100.0 |
| John Hunter | 2560 | 72.0 | 91 | 2.6 | 231 | 6.5 | 44 | 1.2 | 288 | 8.1 | 344 | 9.7 | 3558 | 100.0 |
| Christo Road Private | 586 | 61.9 | 39 | 4.1 | 83 | 8.8 | 0 | 0.0 | 141 | 14.9 | 97 | 10.3 | 946 | 100.0 |
| Other area hospitals | 203 | 67.7 | 2 | 0.7 | 6 | 2.0 | 1 | 0.3 | 70 | 23.3 | 18 | 6.0 | 300 | 100.0 |
| ALL HOSPITALS | 5089 | 71.3 | 177 | 2.5 | 430 | 6.0 | 60 | 0.8 | 737 | 10.3 | 642 | 9.0 | 7135 | 100.0 |
| Illawarra | | | | | | | | | | | | | | |
| Shoalhaven | 591 | 73.8 | 45 | 5.6 | 0 | 0.0 | 5 | 0.6 | 90 | 11.2 | 70 | 8.7 | 801 | 100.0 |
| Wollongong | 1540 | 74.9 | 55 | 2.7 | 152 | 7.4 | 32 | 1.6 | 133 | 6.5 | 145 | 7.0 | 2057 | 100.0 |
| Shellharbour | 447 | 82.9 | 7 | 1.3 | 30 | 5.6 | 1 | 0.2 | 26 | 4.8 | 28 | 5.2 | 539 | 100.0 |
| Illawarra Private | 427 | 63.8 | 10 | 1.5 | 103 | 15.4 | 1 | 0.1 | 88 | 13.2 | 40 | 6.0 | 669 | 100.0 |
| Other area hospitals | 87 | 64.4 | 6 | 4.4 | 9 | 6.7 | 0 | 0.0 | 28 | 20.7 | 5 | 3.7 | 135 | 100.0 |
| ALL HOSPITALS | 3092 | 73.6 | 123 | 2.9 | 294 | 7.0 | 39 | 0.9 | 365 | 8.7 | 288 | 6.9 | 4201 | 100.0 |

TABLE 105 (continued)
CONFINEMENTS BY TYPE OF DELIVERY AND HOSPITAL, NSW 1999[#]

| Health Area and Hospital | Normal | | Forceps vaginal | | Vacuum extraction | | Vaginal breech | | Elective caesarean | | Emergency caesarean | | TOTAL | |
|-----------------------------|--------|------|-----------------|------|-------------------|------|----------------|-----|--------------------|------|---------------------|------|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| South Eastern Sydney | | | | | | | | | | | | | | |
| Royal Hospital for Women | 2379 | 62.6 | 292 | 7.7 | 269 | 7.1 | 54 | 1.4 | 364 | 9.6 | 443 | 11.7 | 3801 | 100.0 |
| St. George | 1518 | 63.6 | 123 | 5.2 | 175 | 7.3 | 16 | 0.7 | 255 | 10.7 | 300 | 12.6 | 2387 | 100.0 |
| Sutherland | 691 | 69.2 | 84 | 8.4 | 46 | 4.6 | 3 | 0.3 | 78 | 7.8 | 97 | 9.7 | 999 | 100.0 |
| Hurstville Community | 353 | 52.8 | 103 | 15.4 | 37 | 5.5 | 2 | 0.3 | 90 | 13.5 | 84 | 12.6 | 669 | 100.0 |
| Kareena Private | 352 | 48.4 | 110 | 15.1 | 31 | 4.3 | 1 | 0.1 | 137 | 18.8 | 96 | 13.2 | 727 | 100.0 |
| St. George Private | 519 | 47.1 | 130 | 11.8 | 65 | 5.9 | 3 | 0.3 | 208 | 18.9 | 176 | 16.0 | 1101 | 100.0 |
| Prince of Wales Private | 731 | 52.9 | 74 | 5.4 | 176 | 12.7 | 11 | 0.8 | 263 | 19.0 | 127 | 9.2 | 1382 | 100.0 |
| ALL HOSPITALS | 6543 | 59.1 | 916 | 8.3 | 799 | 7.2 | 90 | 0.8 | 1395 | 12.6 | 1323 | 12.0 | 11066 | 100.0 |
| Northern Rivers | | | | | | | | | | | | | | |
| Grafton Base | 281 | 60.0 | 27 | 5.8 | 18 | 3.8 | 1 | 0.2 | 66 | 14.1 | 75 | 16.0 | 468 | 100.0 |
| Lismore Base | 968 | 71.8 | 72 | 5.3 | 25 | 1.9 | 11 | 0.8 | 129 | 9.6 | 144 | 10.7 | 1349 | 100.0 |
| Murwillumbah | 348 | 76.7 | 4 | 0.9 | 4 | 0.9 | 6 | 1.3 | 41 | 9.0 | 51 | 11.2 | 454 | 100.0 |
| Tweed Heads | 589 | 75.1 | 41 | 5.2 | 23 | 2.9 | 3 | 0.4 | 66 | 8.4 | 62 | 7.9 | 784 | 100.0 |
| Other area hospitals | 276 | 89.6 | 4 | 1.3 | 2 | 0.6 | 0 | 0.0 | 26 | 8.4 | 0 | 0.0 | 308 | 100.0 |
| ALL HOSPITALS | 2462 | 73.2 | 148 | 4.4 | 72 | 2.1 | 21 | 0.6 | 328 | 9.8 | 332 | 9.9 | 3363 | 100.0 |
| Mid North Coast | | | | | | | | | | | | | | |
| Coffs Harbour | 503 | 65.8 | 53 | 6.9 | 4 | 0.5 | 5 | 0.7 | 129 | 16.9 | 70 | 9.2 | 764 | 100.0 |
| Kempsey | 233 | 83.5 | 5 | 1.8 | 2 | 0.7 | 1 | 0.4 | 21 | 7.5 | 17 | 6.1 | 279 | 100.0 |
| Port Macquarie Base | 522 | 71.5 | 44 | 6.0 | 14 | 1.9 | 4 | 0.5 | 62 | 8.5 | 84 | 11.5 | 730 | 100.0 |
| Manning Base | 544 | 76.7 | 39 | 5.5 | 14 | 2.0 | 13 | 1.8 | 50 | 7.1 | 49 | 6.9 | 709 | 100.0 |
| Other area hospitals | 229 | 74.8 | 7 | 2.3 | 2 | 0.7 | 0 | 0.0 | 53 | 17.3 | 15 | 4.9 | 306 | 100.0 |
| ALL HOSPITALS | 2031 | 72.8 | 148 | 5.3 | 36 | 1.3 | 23 | 0.8 | 315 | 11.3 | 235 | 8.4 | 2788 | 100.0 |
| New England | | | | | | | | | | | | | | |
| Armidale | 387 | 83.8 | 8 | 1.7 | 17 | 3.7 | 2 | 0.4 | 25 | 5.4 | 23 | 5.0 | 462 | 100.0 |
| Inverell | 183 | 69.8 | 20 | 7.6 | 5 | 1.9 | 1 | 0.4 | 39 | 14.9 | 14 | 5.3 | 262 | 100.0 |
| Moree | 174 | 71.0 | 9 | 3.7 | 17 | 6.9 | 4 | 1.6 | 17 | 6.9 | 24 | 9.8 | 245 | 100.0 |
| Tamworth Base | 440 | 65.0 | 26 | 3.8 | 43 | 6.4 | 2 | 0.3 | 99 | 14.6 | 67 | 9.9 | 677 | 100.0 |
| Other area hospitals | 560 | 74.6 | 23 | 3.1 | 27 | 3.6 | 6 | 0.8 | 76 | 10.1 | 59 | 7.9 | 751 | 100.0 |
| ALL HOSPITALS | 1744 | 72.8 | 86 | 3.6 | 109 | 4.5 | 15 | 0.6 | 256 | 10.7 | 187 | 7.8 | 2397 | 100.0 |
| Macquarie | | | | | | | | | | | | | | |
| Dubbo Base | 939 | 73.6 | 64 | 5.0 | 29 | 2.3 | 13 | 1.0 | 126 | 9.9 | 105 | 8.2 | 1276 | 100.0 |
| Mudgee | 180 | 77.9 | 3 | 1.3 | 12 | 5.2 | 1 | 0.4 | 21 | 9.1 | 14 | 6.1 | 231 | 100.0 |
| Other area hospitals | 128 | 80.5 | 5 | 3.1 | 4 | 2.5 | 0 | 0.0 | 21 | 13.2 | 1 | 0.6 | 159 | 100.0 |
| ALL HOSPITALS | 1247 | 74.8 | 72 | 4.3 | 45 | 2.7 | 14 | 0.8 | 168 | 10.1 | 120 | 7.2 | 1666 | 100.0 |
| Mid Western | | | | | | | | | | | | | | |
| Bathurst Base | 336 | 65.1 | 33 | 6.4 | 4 | 0.8 | 3 | 0.6 | 74 | 14.3 | 66 | 12.8 | 516 | 100.0 |
| Lithgow | 181 | 78.7 | 5 | 2.2 | 6 | 2.6 | 0 | 0.0 | 24 | 10.4 | 14 | 6.1 | 230 | 100.0 |
| Orange Base | 531 | 69.1 | 49 | 6.4 | 29 | 3.8 | 8 | 1.0 | 76 | 9.9 | 76 | 9.9 | 769 | 100.0 |
| Parkes | 157 | 77.7 | 5 | 2.5 | 3 | 1.5 | 1 | 0.5 | 17 | 8.4 | 19 | 9.4 | 202 | 100.0 |
| Other area hospitals | 272 | 66.3 | 9 | 2.2 | 13 | 3.2 | 2 | 0.5 | 70 | 17.1 | 44 | 10.7 | 410 | 100.0 |
| ALL HOSPITALS | 1477 | 69.4 | 101 | 4.7 | 55 | 2.6 | 14 | 0.7 | 261 | 12.3 | 219 | 10.3 | 2127 | 100.0 |
| Far West | | | | | | | | | | | | | | |
| Broken Hill Base | 222 | 81.3 | 11 | 4.0 | 3 | 1.1 | 3 | 1.1 | 14 | 5.1 | 20 | 7.3 | 273 | 100.0 |
| Other area hospitals | 65 | 90.3 | 3 | 4.2 | 0 | 0.0 | 1 | 1.4 | 0 | 0.0 | 3 | 4.2 | 72 | 100.0 |
| ALL HOSPITALS | 287 | 83.2 | 14 | 4.1 | 3 | 0.9 | 4 | 1.2 | 14 | 4.1 | 23 | 6.7 | 345 | 100.0 |
| Greater Murray | | | | | | | | | | | | | | |
| Deniliquin | 132 | 63.5 | 10 | 4.8 | 21 | 10.1 | 2 | 1.0 | 27 | 13.0 | 16 | 7.7 | 208 | 100.0 |
| Griffith Base | 350 | 69.2 | 18 | 3.6 | 22 | 4.3 | 5 | 1.0 | 63 | 12.5 | 48 | 9.5 | 506 | 100.0 |
| Wagga Wagga Base | 565 | 66.9 | 57 | 6.8 | 43 | 5.1 | 8 | 0.9 | 89 | 10.5 | 82 | 9.7 | 844 | 100.0 |
| Calvary, Wagga Wagga | 209 | 52.8 | 46 | 11.6 | 59 | 14.9 | 1 | 0.3 | 53 | 13.4 | 28 | 7.1 | 396 | 100.0 |
| Other area hospitals | 553 | 75.1 | 38 | 5.2 | 24 | 3.3 | 3 | 0.4 | 62 | 8.4 | 56 | 7.6 | 736 | 100.0 |
| ALL HOSPITALS | 1809 | 67.2 | 169 | 6.3 | 169 | 6.3 | 19 | 0.7 | 294 | 10.9 | 230 | 8.6 | 2690 | 100.0 |
| Southern | | | | | | | | | | | | | | |
| Bega | 141 | 67.8 | 4 | 1.9 | 25 | 12.0 | 0 | 0.0 | 22 | 10.6 | 16 | 7.7 | 208 | 100.0 |
| Goulburn Base | 219 | 67.6 | 25 | 7.7 | 10 | 3.1 | 2 | 0.6 | 45 | 13.9 | 23 | 7.1 | 324 | 100.0 |
| Queanbeyan | 249 | 75.5 | 6 | 1.8 | 16 | 4.8 | 2 | 0.6 | 30 | 9.1 | 27 | 8.2 | 330 | 100.0 |
| Other area hospitals | 651 | 74.5 | 19 | 2.2 | 50 | 5.7 | 2 | 0.2 | 90 | 10.3 | 62 | 7.1 | 874 | 100.0 |
| ALL HOSPITALS | 1260 | 72.6 | 54 | 3.1 | 101 | 5.8 | 6 | 0.3 | 187 | 10.8 | 128 | 7.4 | 1736 | 100.0 |
| TOTAL NSW | 58951 | 68.6 | 4190 | 4.9 | 5152 | 6.0 | 762 | 0.9 | 9147 | 10.6 | 7765 | 9.0 | 85967 | 100.0 |

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

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

7.3 PAIN RELIEF IN SELECTED HOSPITALS

Table 106 gives type of pain relief provided to women for individual hospitals where the number of reported confinements exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total. In addition to

the types of pain relief listed a further 21,370 (24.9 per cent) women were reported to have received local anaesthetic to the perineum, and 927 (1.1 per cent) received a pudendal block.

TABLE 106

CONFINEMENTS BY TYPE OF PAIN RELIEF AND HOSPITAL, NSW 1999*

| Health Area and Hospital | Epidural | | General anaesthetic | | Type of pain relief | | | | Spinal | | Nil | | TOTAL | |
|-----------------------------|----------|------|---------------------|------|---------------------|------|---------------|------|--------|------|------|------|-------|-------|
| | No. | % | No. | % | IM narcotics | % | Nitrous oxide | % | No. | % | No. | % | No. | % |
| Central Sydney | | | | | | | | | | | | | | |
| Canterbury | 262 | 16.6 | 105 | 6.6 | 472 | 29.9 | 794 | 50.3 | 86 | 5.4 | 220 | 13.9 | 1579 | 100.0 |
| King George V | 1354 | 34.7 | 223 | 5.7 | 1335 | 34.2 | 1095 | 28.0 | 101 | 2.6 | 651 | 16.7 | 3907 | 100.0 |
| NSW Private | 88 | 27.9 | 37 | 11.7 | 77 | 24.4 | 153 | 48.6 | 27 | 8.6 | 22 | 7.0 | 315 | 100.0 |
| ALL HOSPITALS | 1704 | 29.4 | 365 | 6.3 | 1884 | 32.5 | 2042 | 35.2 | 214 | 3.7 | 893 | 15.4 | 5801 | 100.0 |
| Northern Sydney | | | | | | | | | | | | | | |
| Hornsby | 494 | 44.1 | 66 | 5.9 | 299 | 26.7 | 567 | 50.6 | 20 | 1.8 | 79 | 7.1 | 1120 | 100.0 |
| Manly | 157 | 31.5 | 23 | 4.6 | 157 | 31.5 | 220 | 44.2 | 38 | 7.6 | 51 | 10.2 | 498 | 100.0 |
| Mona Vale | 381 | 37.4 | 31 | 3.0 | 426 | 41.8 | 375 | 36.8 | 27 | 2.6 | 122 | 12.0 | 1019 | 100.0 |
| Royal North Shore | 721 | 38.6 | 85 | 4.6 | 553 | 29.6 | 1038 | 55.6 | 289 | 15.5 | 54 | 2.9 | 1867 | 100.0 |
| Ryde | 127 | 17.4 | 49 | 6.7 | 163 | 22.3 | 396 | 54.2 | 39 | 5.3 | 138 | 18.9 | 730 | 100.0 |
| Mater, North Sydney | 1139 | 64.5 | 37 | 2.1 | 180 | 10.2 | 621 | 35.2 | 24 | 1.4 | 51 | 2.9 | 1765 | 100.0 |
| North Shore Private | 904 | 55.0 | 50 | 3.0 | 222 | 13.5 | 644 | 39.2 | 151 | 9.2 | 56 | 3.4 | 1643 | 100.0 |
| Sydney Adventist | 1093 | 50.0 | 124 | 5.7 | 316 | 14.5 | 811 | 37.1 | 35 | 1.6 | 65 | 3.0 | 2184 | 100.0 |
| ALL HOSPITALS | 5016 | 46.3 | 465 | 4.3 | 2316 | 21.4 | 4672 | 43.2 | 623 | 5.8 | 616 | 5.7 | 10826 | 100.0 |
| Western Sydney | | | | | | | | | | | | | | |
| Auburn | 157 | 11.2 | 83 | 5.9 | 434 | 30.9 | 646 | 46.0 | 17 | 1.2 | 247 | 17.6 | 1404 | 100.0 |
| Blacktown | 534 | 21.9 | 174 | 7.1 | 388 | 15.9 | 1407 | 57.7 | 43 | 1.8 | 520 | 21.3 | 2437 | 100.0 |
| Westmead | 1872 | 43.5 | 245 | 5.7 | 716 | 16.6 | 1914 | 44.5 | 59 | 1.4 | 491 | 11.4 | 4305 | 100.0 |
| The Hills Private | 608 | 46.2 | 60 | 4.6 | 231 | 17.6 | 486 | 36.9 | 11 | 0.8 | 106 | 8.1 | 1316 | 100.0 |
| ALL HOSPITALS | 3171 | 33.5 | 562 | 5.9 | 1769 | 18.7 | 4453 | 47.1 | 130 | 1.4 | 1364 | 14.4 | 9462 | 100.0 |
| Wentworth | | | | | | | | | | | | | | |
| Blue Mountains | 99 | 23.6 | 13 | 3.1 | 119 | 28.3 | 243 | 57.9 | 24 | 5.7 | 84 | 20.0 | 420 | 100.0 |
| Nepean | 735 | 22.4 | 258 | 7.8 | 1146 | 34.9 | 1816 | 55.2 | 228 | 6.9 | 451 | 13.7 | 3288 | 100.0 |
| Jamison Private | 150 | 20.0 | 37 | 4.9 | 264 | 35.2 | 437 | 58.3 | 124 | 16.6 | 65 | 8.7 | 749 | 100.0 |
| Hawkesbury | 83 | 8.4 | 74 | 7.4 | 369 | 37.1 | 608 | 61.2 | 57 | 5.7 | 155 | 15.6 | 994 | 100.0 |
| ALL HOSPITALS | 1067 | 19.6 | 382 | 7.0 | 1898 | 34.8 | 3104 | 56.9 | 433 | 7.9 | 755 | 13.9 | 5451 | 100.0 |
| South Western Sydney | | | | | | | | | | | | | | |
| Fairfield | 67 | 3.1 | 237 | 11.0 | 666 | 30.9 | 1162 | 53.9 | 1 | 0.0 | 382 | 17.7 | 2157 | 100.0 |
| Liverpool | 602 | 19.7 | 205 | 6.7 | 990 | 32.4 | 1603 | 52.4 | 81 | 2.6 | 301 | 9.8 | 3058 | 100.0 |
| Campbelltown | 302 | 10.5 | 198 | 6.9 | 1236 | 43.1 | 1818 | 63.4 | 143 | 5.0 | 369 | 12.9 | 2867 | 100.0 |
| Bankstown-Lidcombe | 202 | 11.3 | 132 | 7.4 | 512 | 28.8 | 1183 | 66.5 | 49 | 2.8 | 184 | 10.3 | 1780 | 100.0 |
| Bankstown Private | 160 | 25.4 | 75 | 11.9 | 199 | 31.6 | 381 | 60.6 | 35 | 5.6 | 37 | 5.9 | 629 | 100.0 |
| Bowral | 167 | 25.6 | 18 | 2.8 | 240 | 36.8 | 311 | 47.7 | 20 | 3.1 | 110 | 16.9 | 652 | 100.0 |
| Other area hospitals | 58 | 33.9 | 4 | 2.3 | 59 | 34.5 | 82 | 48.0 | 4 | 2.3 | 21 | 12.3 | 171 | 100.0 |
| ALL HOSPITALS | 1558 | 13.8 | 869 | 7.7 | 3902 | 34.5 | 6540 | 57.8 | 333 | 2.9 | 1404 | 12.4 | 11314 | 100.0 |
| Central Coast | | | | | | | | | | | | | | |
| Gosford | 617 | 25.4 | 121 | 5.0 | 926 | 38.2 | 1294 | 53.3 | 232 | 9.6 | 258 | 10.6 | 2427 | 100.0 |
| Wyong | 0 | 0.0 | 13 | 3.4 | 114 | 30.1 | 188 | 49.6 | 1 | 0.3 | 118 | 31.1 | 379 | 100.0 |
| North Gosford Private | 322 | 49.9 | 13 | 2.0 | 149 | 23.1 | 282 | 43.7 | 29 | 4.5 | 50 | 7.8 | 645 | 100.0 |
| ALL HOSPITALS | 939 | 27.2 | 147 | 4.3 | 1189 | 34.5 | 1764 | 51.1 | 262 | 7.6 | 426 | 12.3 | 3451 | 100.0 |
| Hunter | | | | | | | | | | | | | | |
| Maitland | 93 | 7.5 | 89 | 7.1 | 355 | 28.5 | 733 | 58.9 | 143 | 11.5 | 198 | 15.9 | 1245 | 100.0 |
| Muswellbrook | 3 | 1.3 | . | . | 57 | 24.4 | 141 | 60.3 | 20 | 8.5 | 62 | 26.5 | 234 | 100.0 |
| Belmont | 33 | 5.2 | 47 | 7.4 | 257 | 40.3 | 403 | 63.3 | 65 | 10.2 | 73 | 11.5 | 637 | 100.0 |
| Singleton | 11 | 5.1 | 8 | 3.7 | 60 | 27.9 | 140 | 65.1 | 14 | 6.5 | 33 | 15.3 | 215 | 100.0 |
| John Hunter | 732 | 20.6 | 234 | 6.6 | 879 | 24.7 | 1614 | 45.4 | 197 | 5.5 | 690 | 19.4 | 3558 | 100.0 |
| Christo Road Private | 257 | 27.2 | 50 | 5.3 | 216 | 22.8 | 451 | 47.7 | 95 | 10.0 | 96 | 10.1 | 946 | 100.0 |
| Other area hospitals | 38 | 12.7 | 15 | 5.0 | 37 | 12.3 | 136 | 45.3 | 35 | 11.7 | 73 | 24.3 | 300 | 100.0 |
| ALL HOSPITALS | 1167 | 16.4 | 443 | 6.2 | 1861 | 26.1 | 3618 | 50.7 | 569 | 8.0 | 1225 | 17.2 | 7135 | 100.0 |
| Illawarra | | | | | | | | | | | | | | |
| Shoalhaven | 102 | 12.7 | 39 | 4.9 | 113 | 14.1 | 328 | 40.9 | 85 | 10.6 | 228 | 28.5 | 801 | 100.0 |
| Wollongong | 371 | 23.1 | 69 | 4.3 | 429 | 26.7 | 1061 | 66.0 | 40 | 2.5 | 170 | 10.6 | 1607 | 100.0 |
| Shellharbour | 15 | 2.8 | 27 | 5.0 | 211 | 39.1 | 374 | 69.4 | 18 | 3.3 | 58 | 10.8 | 539 | 100.0 |
| Wollongong | 83 | 18.4 | 20 | 4.4 | 119 | 26.4 | 291 | 64.7 | 6 | 1.3 | 58 | 12.9 | 450 | 100.0 |
| Illawarra Private | 149 | 22.3 | 37 | 5.5 | 215 | 32.1 | 460 | 68.8 | 16 | 2.4 | 34 | 5.1 | 669 | 100.0 |
| Other area hospitals | 13 | 9.6 | 3 | 2.2 | 42 | 31.1 | 43 | 31.9 | 25 | 18.5 | 26 | 19.3 | 135 | 100.0 |
| ALL HOSPITALS | 733 | 17.4 | 195 | 4.6 | 1129 | 26.9 | 2557 | 60.9 | 190 | 4.5 | 574 | 13.7 | 4201 | 100.0 |

TABLE 106 (continued)

CONFINEMENTS BY TYPE OF PAIN RELIEF AND HOSPITAL, NSW 1999#

| Health Area and Hospital | Epidural | | General anaesthetic | | Type of pain relief | | | | Spinal | | Nil | | TOTAL | |
|-----------------------------|----------|------|---------------------|------|---------------------|------|---------------|------|--------|------|-------|------|-------|-------|
| | No. | % | No. | % | IM narcotics | % | Nitrous oxide | % | No. | % | No. | % | No. | % |
| South Eastern Sydney | | | | | | | | | | | | | | |
| Royal Hospital for Women | 1873 | 49.3 | 75 | 2.0 | 875 | 23.0 | 1576 | 41.5 | 134 | 3.5 | 342 | 9.0 | 3801 | 100.0 |
| St. George | 769 | 32.2 | 116 | 4.9 | 618 | 25.9 | 1386 | 58.1 | 120 | 5.0 | 257 | 10.8 | 2387 | 100.0 |
| Sutherland | 368 | 36.8 | 34 | 3.4 | 139 | 13.9 | 571 | 57.2 | 68 | 6.8 | 115 | 11.5 | 999 | 100.0 |
| Hurstville Community | 467 | 69.8 | 13 | 1.9 | 75 | 11.2 | 185 | 27.7 | 6 | 0.9 | 28 | 4.2 | 669 | 100.0 |
| Kareena Private | 513 | 70.6 | 16 | 2.2 | 75 | 10.3 | 195 | 26.8 | 18 | 2.5 | 25 | 3.4 | 727 | 100.0 |
| St. George Private | 622 | 56.5 | 69 | 6.3 | 286 | 26.0 | 478 | 43.4 | 45 | 4.1 | 55 | 5.0 | 1101 | 100.0 |
| Prince of Wales Private | 1023 | 74.0 | 11 | 0.8 | 105 | 7.6 | 428 | 31.0 | 50 | 3.6 | 47 | 3.4 | 1382 | 100.0 |
| ALL HOSPITALS | 5635 | 50.9 | 334 | 3.0 | 2173 | 19.6 | 4819 | 43.5 | 441 | 4.0 | 869 | 7.9 | 11066 | 100.0 |
| Northern Rivers | | | | | | | | | | | | | | |
| Grafton Base | 140 | 29.9 | 55 | 11.8 | 118 | 25.2 | 206 | 44.0 | 54 | 11.5 | 47 | 10.0 | 468 | 100.0 |
| Lismore Base | 442 | 32.8 | 42 | 3.1 | 376 | 27.9 | 496 | 36.8 | 64 | 4.7 | 232 | 17.2 | 1349 | 100.0 |
| Murwillumbah | 52 | 11.5 | 58 | 12.8 | 145 | 31.9 | 232 | 51.1 | 5 | 1.1 | 98 | 21.6 | 454 | 100.0 |
| Tweed Heads | 185 | 23.6 | 31 | 4.0 | 372 | 47.4 | 483 | 61.6 | 14 | 1.8 | 74 | 9.4 | 784 | 100.0 |
| Other area hospitals | 22 | 7.1 | 3 | 1.0 | 38 | 12.3 | 132 | 42.9 | 2 | 0.6 | 123 | 39.9 | 308 | 100.0 |
| ALL HOSPITALS | 841 | 25.0 | 189 | 5.6 | 1049 | 31.2 | 1549 | 46.1 | 139 | 4.1 | 574 | 17.1 | 3363 | 100.0 |
| Mid North Coast | | | | | | | | | | | | | | |
| Coffs Harbour | 163 | 21.3 | 70 | 9.2 | 186 | 24.3 | 389 | 50.9 | 54 | 7.1 | 130 | 17.0 | 764 | 100.0 |
| Kempsey | 45 | 16.1 | 13 | 4.7 | 90 | 32.3 | 138 | 49.5 | 8 | 2.9 | 78 | 28.0 | 279 | 100.0 |
| Port Macquarie Base | 216 | 29.6 | 48 | 6.6 | 215 | 29.5 | 440 | 60.3 | 20 | 2.7 | 95 | 13.0 | 730 | 100.0 |
| Manning Base | 87 | 12.3 | 32 | 4.5 | 304 | 42.9 | 407 | 57.4 | 64 | 9.0 | 113 | 15.9 | 709 | 100.0 |
| Other area hospitals | 39 | 12.7 | 10 | 3.3 | 50 | 16.3 | 102 | 33.3 | 31 | 10.1 | 106 | 34.6 | 306 | 100.0 |
| ALL HOSPITALS | 550 | 19.7 | 173 | 6.2 | 845 | 30.3 | 1476 | 52.9 | 177 | 6.3 | 522 | 18.7 | 2788 | 100.0 |
| New England | | | | | | | | | | | | | | |
| Armidale | 3 | 0.6 | 23 | 5.0 | 99 | 21.4 | 213 | 46.1 | 24 | 5.2 | 111 | 24.0 | 462 | 100.0 |
| Inverell | 5 | 1.9 | 5 | 1.9 | 67 | 25.6 | 140 | 53.4 | 46 | 17.6 | 54 | 20.6 | 262 | 100.0 |
| Moree | 30 | 12.2 | 5 | 2.0 | 38 | 15.5 | 137 | 55.9 | 35 | 14.3 | 40 | 16.3 | 245 | 100.0 |
| Tamworth Base | 190 | 28.1 | 73 | 10.8 | 189 | 27.9 | 396 | 58.5 | 16 | 2.4 | 61 | 9.0 | 677 | 100.0 |
| Other area hospitals | 75 | 10.0 | 68 | 9.1 | 189 | 25.2 | 396 | 52.7 | 48 | 6.4 | 151 | 20.1 | 751 | 100.0 |
| ALL HOSPITALS | 303 | 12.6 | 174 | 7.3 | 582 | 24.3 | 1282 | 53.5 | 169 | 7.1 | 417 | 17.4 | 2397 | 100.0 |
| Macquarie | | | | | | | | | | | | | | |
| Dubbo Base | 265 | 20.8 | 74 | 5.8 | 375 | 29.4 | 762 | 59.7 | 57 | 4.5 | 177 | 13.9 | 1276 | 100.0 |
| Mudgee | 8 | 3.5 | 20 | 8.7 | 37 | 16.0 | 136 | 58.9 | 16 | 6.9 | 43 | 18.6 | 231 | 100.0 |
| Other area hospitals | 19 | 11.9 | 4 | 2.5 | 25 | 15.7 | 57 | 35.8 | . | . | 66 | 41.5 | 159 | 100.0 |
| ALL HOSPITALS | 292 | 17.5 | 98 | 5.9 | 437 | 26.2 | 955 | 57.3 | 73 | 4.4 | 286 | 17.2 | 1666 | 100.0 |
| Mid Western | | | | | | | | | | | | | | |
| Bathurst Base | 129 | 25.0 | 54 | 10.5 | 78 | 15.1 | 251 | 48.6 | 6 | 1.2 | 100 | 19.4 | 516 | 100.0 |
| Lithgow | 59 | 25.7 | 5 | 2.2 | 63 | 27.4 | 133 | 57.8 | 6 | 2.6 | 36 | 15.7 | 230 | 100.0 |
| Orange Base | 185 | 24.1 | 43 | 5.6 | 196 | 25.5 | 402 | 52.3 | 13 | 1.7 | 143 | 18.6 | 769 | 100.0 |
| Parkes | 22 | 10.9 | 22 | 10.9 | 30 | 14.9 | 89 | 44.1 | 4 | 2.0 | 67 | 33.2 | 202 | 100.0 |
| Other area hospitals | 80 | 19.5 | 34 | 8.3 | 116 | 28.3 | 204 | 49.8 | 21 | 5.1 | 74 | 18.0 | 410 | 100.0 |
| ALL HOSPITALS | 475 | 22.3 | 158 | 7.4 | 483 | 22.7 | 1079 | 50.7 | 50 | 2.4 | 420 | 19.7 | 2127 | 100.0 |
| Far West | | | | | | | | | | | | | | |
| Broken Hill Base | 38 | 13.9 | 5 | 1.8 | 93 | 34.1 | 171 | 62.6 | 7 | 2.6 | 52 | 19.0 | 273 | 100.0 |
| Other area hospitals | . | . | . | . | 9 | 12.5 | 25 | 34.7 | 3 | 4.2 | 38 | 52.8 | 72 | 100.0 |
| ALL HOSPITALS | 38 | 11.0 | 5 | 1.4 | 102 | 29.6 | 196 | 56.8 | 10 | 2.9 | 90 | 26.1 | 345 | 100.0 |
| Greater Murray | | | | | | | | | | | | | | |
| Deniliquin | 52 | 25.0 | 10 | 4.8 | 105 | 50.5 | 129 | 62.0 | 5 | 2.4 | 25 | 12.0 | 208 | 100.0 |
| Griffith Base | 58 | 11.5 | 18 | 3.6 | 201 | 39.7 | 296 | 58.5 | 74 | 14.6 | 70 | 13.8 | 506 | 100.0 |
| Wagga Wagga Base | 222 | 26.3 | 33 | 3.9 | 218 | 25.8 | 416 | 49.3 | 60 | 7.1 | 160 | 19.0 | 844 | 100.0 |
| Calvary, Wagga Wagga | 155 | 39.1 | 6 | 1.5 | 95 | 24.0 | 146 | 36.9 | 29 | 7.3 | 57 | 14.4 | 396 | 100.0 |
| Other area hospitals | 44 | 6.0 | 26 | 3.5 | 179 | 24.3 | 387 | 52.6 | 89 | 12.1 | 185 | 25.1 | 736 | 100.0 |
| ALL HOSPITALS | 531 | 19.7 | 93 | 3.5 | 798 | 29.7 | 1374 | 51.1 | 257 | 9.6 | 497 | 18.5 | 2690 | 100.0 |
| Southern | | | | | | | | | | | | | | |
| Bega | 19 | 9.1 | 10 | 4.8 | 65 | 31.3 | 129 | 62.0 | 28 | 13.5 | 30 | 14.4 | 208 | 100.0 |
| Goulburn Base | 75 | 23.1 | 19 | 5.9 | 56 | 17.3 | 184 | 56.8 | 3 | 0.9 | 46 | 14.2 | 324 | 100.0 |
| Queanbeyan | 63 | 19.1 | 14 | 4.2 | 53 | 16.1 | 142 | 43.0 | 14 | 4.2 | 122 | 37.0 | 330 | 100.0 |
| Other area hospitals | 108 | 12.4 | 40 | 4.6 | 202 | 23.1 | 419 | 47.9 | 64 | 7.3 | 204 | 23.3 | 874 | 100.0 |
| ALL HOSPITALS | 265 | 15.3 | 83 | 4.8 | 376 | 21.7 | 874 | 50.3 | 109 | 6.3 | 402 | 23.2 | 1736 | 100.0 |
| TOTAL NSW | 24289 | 28.3 | 4735 | 5.5 | 22800 | 26.5 | 42361 | 49.3 | 4179 | 4.9 | 11468 | 13.3 | 85967 | 100.0 |

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

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

7.4 PERINEAL STATUS IN SELECTED HOSPITALS

Table 107 show the perineal status in vaginal deliveries for individual hospitals where the number of reported confinements exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total.

TABLE 107

CONFINEMENTS WITH VAGINAL DELIVERIES BY PERINEAL STATUS AND HOSPITAL, NSW 1999*

| Health Area and Hospital | Intact | | 1st degree tear-graze | | 2nd degree tear | | Perineal status 3rd or 4th degree tear | | Episiotomy | | Comined tear and episiotomy | | Other | | Not stated | | TOTAL | | |
|-----------------------------|--------|------|-----------------------|------|-----------------|------|--|-----|------------|------|-----------------------------|-----|-------|------|------------|-----|-------|-------|--|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | |
| | | | | | | | | | | | | | | | | | | | |
| Central Sydney | | | | | | | | | | | | | | | | | | | |
| Canterbury | 320 | 24.3 | 400 | 30.4 | 367 | 27.9 | 35 | 2.7 | 149 | 11.3 | 11 | 0.8 | 33 | 2.5 | 0 | 0.0 | 1315 | 100.0 | |
| King George V | 556 | 17.8 | 1202 | 38.5 | 939 | 30.1 | 54 | 1.7 | 331 | 10.6 | 8 | 0.3 | 34 | 1.1 | 0 | 0.0 | 3124 | 100.0 | |
| NSW Private | 51 | 23.2 | 50 | 22.7 | 43 | 19.5 | 0 | 0.0 | 68 | 30.9 | 6 | 2.7 | 2 | 0.9 | 0 | 0.0 | 220 | 100.0 | |
| ALL HOSPITALS | 927 | 19.9 | 1652 | 35.5 | 1349 | 29.0 | 89 | 1.9 | 548 | 11.8 | 25 | 0.5 | 69 | 1.5 | 0 | 0.0 | 4659 | 100.0 | |
| Northern Sydney | | | | | | | | | | | | | | | | | | | |
| Hornsby | 205 | 23.1 | 180 | 20.3 | 251 | 28.3 | 14 | 1.6 | 145 | 16.3 | 24 | 2.7 | 68 | 7.7 | 0 | 0.0 | 887 | 100.0 | |
| Manly | 91 | 22.5 | 132 | 32.7 | 76 | 18.8 | 10 | 2.5 | 44 | 10.9 | 2 | 0.5 | 49 | 12.1 | 0 | 0.0 | 404 | 100.0 | |
| Mona Vale | 254 | 30.1 | 281 | 33.3 | 149 | 17.7 | 6 | 0.7 | 108 | 12.8 | 3 | 0.4 | 42 | 5.0 | 0 | 0.0 | 843 | 100.0 | |
| Royal North Shore | 179 | 13.2 | 395 | 29.2 | 390 | 28.8 | 49 | 3.6 | 206 | 15.2 | 2 | 0.1 | 131 | 9.7 | 0 | 0.0 | 1352 | 100.0 | |
| Ryde | 149 | 24.8 | 137 | 22.8 | 158 | 26.3 | 7 | 1.2 | 120 | 20.0 | 20 | 3.3 | 9 | 1.5 | 0 | 0.0 | 600 | 100.0 | |
| Mater, North Sydney | 168 | 13.7 | 258 | 21.0 | 286 | 23.3 | 10 | 0.8 | 415 | 33.8 | 46 | 3.8 | 43 | 3.5 | 0 | 0.0 | 1226 | 100.0 | |
| North Shore Private | 175 | 15.7 | 177 | 15.8 | 285 | 25.5 | 12 | 1.1 | 400 | 35.8 | 38 | 3.4 | 30 | 2.7 | 0 | 0.0 | 1117 | 100.0 | |
| Sydney Adventist | 299 | 18.2 | 350 | 21.4 | 344 | 21.0 | 9 | 0.5 | 558 | 34.0 | 49 | 3.0 | 30 | 1.8 | 0 | 0.0 | 1639 | 100.0 | |
| ALL HOSPITALS | 1520 | 18.8 | 1910 | 23.7 | 1939 | 24.0 | 117 | 1.5 | 1996 | 24.7 | 184 | 2.3 | 402 | 5.0 | 0 | 0.0 | 8068 | 100.0 | |
| Western Sydney | | | | | | | | | | | | | | | | | | | |
| Auburn | 470 | 37.1 | 308 | 24.3 | 285 | 22.5 | 7 | 0.6 | 149 | 11.8 | 14 | 1.1 | 34 | 2.7 | 0 | 0.0 | 1267 | 100.0 | |
| Blacktown | 617 | 29.2 | 420 | 19.9 | 437 | 20.7 | 16 | 0.8 | 445 | 21.1 | 75 | 3.5 | 103 | 4.9 | 1 | 0.0 | 2114 | 100.0 | |
| Westmead | 758 | 22.0 | 1024 | 29.7 | 651 | 18.9 | 33 | 1.0 | 776 | 22.5 | 16 | 0.5 | 192 | 5.6 | 0 | 0.0 | 3450 | 100.0 | |
| The Hills Private | 298 | 28.5 | 244 | 23.3 | 194 | 18.5 | 5 | 0.5 | 279 | 26.6 | 16 | 1.5 | 11 | 1.1 | 0 | 0.0 | 1047 | 100.0 | |
| ALL HOSPITALS | 2143 | 27.2 | 1996 | 25.3 | 1567 | 19.9 | 61 | 0.8 | 1649 | 20.9 | 121 | 1.5 | 340 | 4.3 | 1 | 0.0 | 7878 | 100.0 | |
| Wentworth | | | | | | | | | | | | | | | | | | | |
| Blue Mountains | 113 | 31.4 | 81 | 22.5 | 100 | 27.8 | 6 | 1.7 | 41 | 11.4 | 5 | 1.4 | 14 | 3.9 | 0 | 0.0 | 360 | 100.0 | |
| Nepean | 1095 | 42.0 | 530 | 20.3 | 538 | 20.6 | 29 | 1.1 | 265 | 10.2 | 4 | 0.2 | 145 | 5.6 | 0 | 0.0 | 2606 | 100.0 | |
| Jamison Private | 106 | 19.3 | 79 | 14.4 | 163 | 29.6 | 6 | 1.1 | 162 | 29.5 | 20 | 3.6 | 14 | 2.5 | 0 | 0.0 | 550 | 100.0 | |
| Hawkesbury | 312 | 37.1 | 204 | 24.3 | 185 | 22.0 | 13 | 1.5 | 102 | 12.1 | 6 | 0.7 | 18 | 2.1 | 0 | 0.0 | 840 | 100.0 | |
| ALL HOSPITALS | 1626 | 37.3 | 894 | 20.5 | 986 | 22.6 | 54 | 1.2 | 570 | 13.1 | 35 | 0.8 | 191 | 4.4 | 0 | 0.0 | 4356 | 100.0 | |
| South Western Sydney | | | | | | | | | | | | | | | | | | | |
| Fairfield | 579 | 30.5 | 405 | 21.3 | 412 | 21.7 | 9 | 0.5 | 426 | 22.4 | 27 | 1.4 | 40 | 2.1 | 0 | 0.0 | 1898 | 100.0 | |
| Liverpool | 736 | 28.1 | 640 | 24.4 | 478 | 18.2 | 45 | 1.7 | 579 | 22.1 | 8 | 0.3 | 137 | 5.2 | 0 | 0.0 | 2623 | 100.0 | |
| Campbelltown | 771 | 31.5 | 537 | 21.9 | 523 | 21.4 | 22 | 0.9 | 448 | 18.3 | 23 | 0.9 | 123 | 5.0 | 0 | 0.0 | 2447 | 100.0 | |
| Bankstown-Lidcombe | 364 | 23.8 | 492 | 32.2 | 305 | 19.9 | 5 | 0.3 | 281 | 18.4 | 78 | 5.1 | 4 | 0.3 | 0 | 0.0 | 1529 | 100.0 | |
| Bankstown Private | 73 | 15.4 | 119 | 25.1 | 62 | 13.1 | 2 | 0.4 | 187 | 39.5 | 19 | 4.0 | 12 | 2.5 | 0 | 0.0 | 474 | 100.0 | |
| Bowral | 180 | 31.4 | 162 | 28.3 | 132 | 23.0 | 3 | 0.5 | 57 | 9.9 | 7 | 1.2 | 32 | 5.6 | 0 | 0.0 | 573 | 100.0 | |
| Other area hospitals | 35 | 25.5 | 29 | 21.2 | 35 | 25.5 | 0 | 0.0 | 35 | 25.5 | 1 | 0.7 | 2 | 1.5 | 0 | 0.0 | 137 | 100.0 | |
| ALL HOSPITALS | 2738 | 28.3 | 2384 | 24.6 | 1947 | 20.1 | 86 | 0.9 | 2013 | 20.8 | 163 | 1.7 | 350 | 3.6 | 0 | 0.0 | 9681 | 100.0 | |
| Central Coast | | | | | | | | | | | | | | | | | | | |
| Gosford | 488 | 25.0 | 643 | 32.9 | 589 | 30.1 | 38 | 1.9 | 96 | 4.9 | 27 | 1.4 | 73 | 3.7 | 0 | 0.0 | 1954 | 100.0 | |
| Wyong | 133 | 36.0 | 132 | 35.8 | 77 | 20.9 | 6 | 1.6 | 14 | 3.8 | 2 | 0.5 | 5 | 1.4 | 0 | 0.0 | 369 | 100.0 | |
| North Gosford Private | 113 | 23.8 | 77 | 16.2 | 167 | 35.2 | 6 | 1.3 | 81 | 17.1 | 17 | 3.6 | 14 | 2.9 | 0 | 0.0 | 475 | 100.0 | |
| ALL HOSPITALS | 734 | 26.2 | 852 | 30.5 | 833 | 29.8 | 50 | 1.8 | 191 | 6.8 | 46 | 1.6 | 92 | 3.3 | 0 | 0.0 | 2798 | 100.0 | |
| Hunter | | | | | | | | | | | | | | | | | | | |
| Maitland | 346 | 34.9 | 271 | 27.3 | 216 | 21.8 | 12 | 1.2 | 69 | 7.0 | 13 | 1.3 | 65 | 6.6 | 0 | 0.0 | 992 | 100.0 | |
| Muswellbrook | 114 | 53.8 | 40 | 18.9 | 37 | 17.5 | 0 | 0.0 | 14 | 6.6 | 3 | 1.4 | 4 | 1.9 | 0 | 0.0 | 212 | 100.0 | |
| Belmont | 193 | 37.4 | 153 | 29.7 | 90 | 17.4 | 7 | 1.4 | 48 | 9.3 | 12 | 2.3 | 13 | 2.5 | 0 | 0.0 | 516 | 100.0 | |
| Singleton | 76 | 40.0 | 55 | 28.9 | 43 | 22.6 | 2 | 1.1 | 12 | 6.3 | 1 | 0.5 | 1 | 0.5 | 0 | 0.0 | 190 | 100.0 | |
| John Hunter | 913 | 31.2 | 1010 | 34.5 | 687 | 23.5 | 41 | 1.4 | 147 | 5.0 | 48 | 1.6 | 78 | 2.7 | 2 | 0.1 | 2926 | 100.0 | |
| Christo Road Private | 175 | 24.7 | 171 | 24.2 | 212 | 29.9 | 13 | 1.8 | 112 | 15.8 | 19 | 2.7 | 6 | 0.8 | 0 | 0.0 | 708 | 100.0 | |
| Other area hospitals | 99 | 46.7 | 71 | 33.5 | 27 | 12.7 | 0 | 0.0 | 12 | 5.7 | 1 | 0.5 | 2 | 0.9 | 0 | 0.0 | 212 | 100.0 | |
| ALL HOSPITALS | 1916 | 33.3 | 1771 | 30.8 | 1312 | 22.8 | 75 | 1.3 | 414 | 7.2 | 97 | 1.7 | 169 | 2.9 | 2 | 0.0 | 5756 | 100.0 | |
| Illawarra | | | | | | | | | | | | | | | | | | | |
| Shoalhaven | 251 | 39.2 | 217 | 33.9 | 85 | 13.3 | 6 | 0.9 | 42 | 6.6 | 6 | 0.9 | 34 | 5.3 | 0 | 0.0 | 641 | 100.0 | |
| Wollongong | 661 | 37.2 | 393 | 22.1 | 419 | 23.6 | 10 | 0.6 | 188 | 10.6 | 32 | 1.8 | 76 | 4.3 | 0 | 0.0 | 1779 | 100.0 | |
| Shellharbour | 198 | 40.8 | 126 | 26.0 | 83 | 17.1 | 1 | 0.2 | 68 | 14.0 | 3 | 0.6 | 6 | 1.2 | 0 | 0.0 | 485 | 100.0 | |
| Illawarra Private | 125 | 23.1 | 80 | 14.8 | 131 | 24.2 | 7 | 1.3 | 183 | 33.8 | 12 | 2.2 | 3 | 0.6 | 0 | 0.0 | 541 | 100.0 | |
| Other area hospitals | 29 | 28.4 | 20 | 19.6 | 25 | 24.5 | 1 | 1.0 | 20 | 19.6 | 3 | 2.9 | 4 | 3.9 | 0 | 0.0 | 102 | 100.0 | |
| ALL HOSPITALS | 1264 | 35.6 | 836 | 23.6 | 743 | 20.9 | 25 | 0.7 | 501 | 14.1 | 56 | 1.6 | 123 | 3.5 | 0 | 0.0 | 3548 | 100.0 | |

TABLE 107 (continued)

CONFINEMENTS WITH VAGINAL DELIVERIES BY PERINEAL STATUS AND HOSPITAL, NSW 1999#

| Health Area and Hospital | Intact | | 1st degree tear-graze | | 2nd degree tear | | 3rd or 4th degree tear | | Episiotomy | | Comined tear and episiotomy | | Other | | Not stated | | TOTAL | | |
|-----------------------------|--------|------|-----------------------|------|-----------------|------|------------------------|-----|------------|------|-----------------------------|-----|-------|------|------------|-----|-------|-------|--|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | |
| South Eastern Sydney | | | | | | | | | | | | | | | | | | | |
| Royal Hospital for Women | 602 | 20.1 | 767 | 25.6 | 853 | 28.5 | 67 | 2.2 | 665 | 22.2 | 39 | 1.3 | 0 | 0.0 | 1 | 0.0 | 2994 | 100.0 | |
| St. George | 448 | 24.5 | 429 | 23.4 | 567 | 30.9 | 29 | 1.6 | 258 | 14.1 | 35 | 1.9 | 66 | 3.6 | 0 | 0.0 | 1832 | 100.0 | |
| Sutherland | 220 | 26.7 | 163 | 19.8 | 179 | 21.7 | 8 | 1.0 | 146 | 17.7 | 15 | 1.8 | 93 | 11.3 | 0 | 0.0 | 824 | 100.0 | |
| Hurstville Community | 86 | 17.4 | 87 | 17.6 | 131 | 26.5 | 1 | 0.2 | 173 | 34.9 | 9 | 1.8 | 8 | 1.6 | 0 | 0.0 | 495 | 100.0 | |
| Kareena Private | 98 | 19.8 | 110 | 22.3 | 81 | 16.4 | 2 | 0.4 | 187 | 37.9 | 15 | 3.0 | 1 | 0.2 | 0 | 0.0 | 494 | 100.0 | |
| St. George Private | 179 | 25.0 | 159 | 22.2 | 196 | 27.3 | 2 | 0.3 | 147 | 20.5 | 23 | 3.2 | 11 | 1.5 | 0 | 0.0 | 717 | 100.0 | |
| Prince of Wales Private | 179 | 18.0 | 282 | 28.4 | 208 | 21.0 | 2 | 0.2 | 272 | 27.4 | 21 | 2.1 | 28 | 2.8 | 0 | 0.0 | 992 | 100.0 | |
| ALL HOSPITALS | 1812 | 21.7 | 1997 | 23.9 | 2215 | 26.5 | 111 | 1.3 | 1848 | 22.1 | 157 | 1.9 | 207 | 2.5 | 1 | 0.0 | 8348 | 100.0 | |
| Northern Rivers | | | | | | | | | | | | | | | | | | | |
| Grafton Base | 86 | 26.3 | 72 | 22.0 | 71 | 21.7 | 2 | 0.6 | 59 | 18.0 | 6 | 1.8 | 31 | 9.5 | 0 | 0.0 | 327 | 100.0 | |
| Lismore Base | 383 | 35.6 | 296 | 27.5 | 177 | 16.4 | 7 | 0.7 | 147 | 13.7 | 20 | 1.9 | 46 | 4.3 | 0 | 0.0 | 1076 | 100.0 | |
| Murwillumbah | 112 | 30.9 | 82 | 22.7 | 71 | 19.6 | 3 | 0.8 | 74 | 20.4 | 7 | 1.9 | 13 | 3.6 | 0 | 0.0 | 362 | 100.0 | |
| Tweed Heads | 240 | 36.6 | 186 | 28.4 | 132 | 20.1 | 5 | 0.8 | 55 | 8.4 | 6 | 0.9 | 32 | 4.9 | 0 | 0.0 | 656 | 100.0 | |
| Other area hospitals | 138 | 48.9 | 77 | 27.3 | 47 | 16.7 | 1 | 0.4 | 14 | 5.0 | 1 | 0.4 | 4 | 1.4 | 0 | 0.0 | 282 | 100.0 | |
| ALL HOSPITALS | 959 | 35.5 | 713 | 26.4 | 498 | 18.4 | 18 | 0.7 | 349 | 12.9 | 40 | 1.5 | 126 | 4.7 | 0 | 0.0 | 2703 | 100.0 | |
| Mid North Coast | | | | | | | | | | | | | | | | | | | |
| Coffs Harbour | 241 | 42.7 | 135 | 23.9 | 77 | 13.6 | 1 | 0.2 | 87 | 15.4 | 8 | 1.4 | 16 | 2.8 | 0 | 0.0 | 565 | 100.0 | |
| Kempsey | 137 | 56.8 | 40 | 16.6 | 46 | 19.1 | 0 | 0.0 | 16 | 6.6 | 1 | 0.4 | 1 | 0.4 | 0 | 0.0 | 241 | 100.0 | |
| Port Macquarie Base | 218 | 37.3 | 119 | 20.4 | 127 | 21.7 | 5 | 0.9 | 81 | 13.9 | 11 | 1.9 | 23 | 3.9 | 0 | 0.0 | 584 | 100.0 | |
| Manning Base | 306 | 50.2 | 148 | 24.3 | 70 | 11.5 | 3 | 0.5 | 46 | 7.5 | 11 | 1.8 | 26 | 4.3 | 0 | 0.0 | 610 | 100.0 | |
| Other area hospitals | 94 | 39.5 | 68 | 28.6 | 39 | 16.4 | 0 | 0.0 | 31 | 13.0 | 2 | 0.8 | 4 | 1.7 | 0 | 0.0 | 238 | 100.0 | |
| ALL HOSPITALS | 996 | 44.5 | 510 | 22.8 | 359 | 16.0 | 9 | 0.4 | 261 | 11.7 | 33 | 1.5 | 70 | 3.1 | 0 | 0.0 | 2238 | 100.0 | |
| New England | | | | | | | | | | | | | | | | | | | |
| Armidale | 101 | 24.4 | 106 | 25.6 | 93 | 22.5 | 0 | 0.0 | 99 | 23.9 | 10 | 2.4 | 5 | 1.2 | 0 | 0.0 | 414 | 100.0 | |
| Inverell | 76 | 36.4 | 70 | 33.5 | 10 | 4.8 | 0 | 0.0 | 49 | 23.4 | 1 | 0.5 | 3 | 1.4 | 0 | 0.0 | 209 | 100.0 | |
| Moree | 92 | 45.1 | 46 | 22.5 | 41 | 20.1 | 2 | 1.0 | 20 | 9.8 | 1 | 0.5 | 2 | 1.0 | 0 | 0.0 | 204 | 100.0 | |
| Tamworth Base | 165 | 32.3 | 142 | 27.8 | 112 | 21.9 | 2 | 0.4 | 64 | 12.5 | 3 | 0.6 | 23 | 4.5 | 0 | 0.0 | 511 | 100.0 | |
| Other area hospitals | 214 | 34.7 | 179 | 29.1 | 104 | 16.9 | 1 | 0.2 | 89 | 14.4 | 22 | 3.6 | 7 | 1.1 | 0 | 0.0 | 616 | 100.0 | |
| ALL HOSPITALS | 648 | 33.2 | 543 | 27.8 | 360 | 18.4 | 5 | 0.3 | 321 | 16.4 | 37 | 1.9 | 40 | 2.0 | 0 | 0.0 | 1954 | 100.0 | |
| Macquarie | | | | | | | | | | | | | | | | | | | |
| Dubbo Base | 312 | 29.9 | 353 | 33.8 | 119 | 11.4 | 9 | 0.9 | 215 | 20.6 | 19 | 1.8 | 18 | 1.7 | 0 | 0.0 | 1045 | 100.0 | |
| Mudgee | 81 | 41.3 | 45 | 23.0 | 32 | 16.3 | 3 | 1.5 | 27 | 13.8 | 7 | 3.6 | 1 | 0.5 | 0 | 0.0 | 196 | 100.0 | |
| Other area hospitals | 70 | 51.1 | 39 | 28.5 | 14 | 10.2 | 1 | 0.7 | 10 | 7.3 | 2 | 1.5 | 0 | 0.0 | 1 | 0.7 | 137 | 100.0 | |
| ALL HOSPITALS | 463 | 33.6 | 437 | 31.7 | 165 | 12.0 | 13 | 0.9 | 252 | 18.3 | 28 | 2.0 | 19 | 1.4 | 1 | 0.1 | 1378 | 100.0 | |
| Mid Western | | | | | | | | | | | | | | | | | | | |
| Bathurst Base | 148 | 39.4 | 119 | 31.6 | 63 | 16.8 | 1 | 0.3 | 33 | 8.8 | 10 | 2.7 | 2 | 0.5 | 0 | 0.0 | 376 | 100.0 | |
| Lithgow | 58 | 30.2 | 35 | 18.2 | 52 | 27.1 | 0 | 0.0 | 38 | 19.8 | 8 | 4.2 | 1 | 0.5 | 0 | 0.0 | 192 | 100.0 | |
| Orange Base | 235 | 38.1 | 134 | 21.7 | 123 | 19.9 | 14 | 2.3 | 77 | 12.5 | 17 | 2.8 | 16 | 2.6 | 1 | 0.2 | 617 | 100.0 | |
| Parke | 69 | 41.6 | 38 | 22.9 | 37 | 22.3 | 1 | 0.6 | 17 | 10.2 | 3 | 1.8 | 1 | 0.6 | 0 | 0.0 | 166 | 100.0 | |
| Other area hospitals | 134 | 45.3 | 63 | 21.3 | 63 | 21.3 | 1 | 0.3 | 30 | 10.1 | 4 | 1.4 | 1 | 0.3 | 0 | 0.0 | 296 | 100.0 | |
| ALL HOSPITALS | 644 | 39.1 | 389 | 23.6 | 338 | 20.5 | 17 | 1.0 | 195 | 11.8 | 42 | 2.6 | 21 | 1.3 | 1 | 0.1 | 1647 | 100.0 | |
| Far West | | | | | | | | | | | | | | | | | | | |
| Broken Hill Base | 127 | 53.1 | 53 | 22.2 | 42 | 17.6 | 3 | 1.3 | 8 | 3.3 | 0 | 0.0 | 6 | 2.5 | 0 | 0.0 | 239 | 100.0 | |
| Other area hospitals | 26 | 37.7 | 23 | 33.3 | 12 | 17.4 | 0 | 0.0 | 6 | 8.7 | 2 | 2.9 | 0 | 0.0 | 0 | 0.0 | 69 | 100.0 | |
| ALL HOSPITALS | 153 | 49.7 | 76 | 24.7 | 54 | 17.5 | 3 | 1.0 | 14 | 4.5 | 2 | 0.6 | 6 | 1.9 | 0 | 0.0 | 308 | 100.0 | |
| Greater Murray | | | | | | | | | | | | | | | | | | | |
| Deniliquin | 62 | 37.6 | 52 | 31.5 | 16 | 9.7 | 1 | 0.6 | 28 | 17.0 | 4 | 2.4 | 2 | 1.2 | 0 | 0.0 | 165 | 100.0 | |
| Griffith Base | 174 | 44.1 | 143 | 36.2 | 32 | 8.1 | 4 | 1.0 | 38 | 9.6 | 1 | 0.3 | 3 | 0.8 | 0 | 0.0 | 395 | 100.0 | |
| Wagga Wagga Base | 246 | 36.6 | 220 | 32.7 | 121 | 18.0 | 9 | 1.3 | 68 | 10.1 | 3 | 0.4 | 6 | 0.9 | 0 | 0.0 | 673 | 100.0 | |
| Calvary, Wagga | | | | | | | | | | | | | | | | | | | |
| Wagga | 93 | 29.5 | 57 | 18.1 | 94 | 29.8 | 7 | 2.2 | 53 | 16.8 | 8 | 2.5 | 3 | 1.0 | 0 | 0.0 | 315 | 100.0 | |
| Other area hospitals | 252 | 40.8 | 136 | 22.0 | 108 | 17.5 | 6 | 1.0 | 99 | 16.0 | 10 | 1.6 | 7 | 1.1 | 0 | 0.0 | 618 | 100.0 | |
| ALL HOSPITALS | 827 | 38.2 | 608 | 28.1 | 371 | 17.1 | 27 | 1.2 | 286 | 13.2 | 26 | 1.2 | 21 | 1.0 | 0 | 0.0 | 2166 | 100.0 | |
| Southern | | | | | | | | | | | | | | | | | | | |
| Bega | 77 | 45.3 | 40 | 23.5 | 23 | 13.5 | 0 | 0.0 | 21 | 12.4 | 2 | 1.2 | 7 | 4.1 | 0 | 0.0 | 170 | 100.0 | |
| Goulburn Base | 83 | 32.4 | 44 | 17.2 | 35 | 13.7 | 0 | 0.0 | 76 | 29.7 | 9 | 3.5 | 9 | 3.5 | 0 | 0.0 | 256 | 100.0 | |
| Queanbeyan | 120 | 44.0 | 85 | 31.1 | 51 | 18.7 | 2 | 0.7 | 14 | 5.1 | 1 | 0.4 | 0 | 0.0 | 0 | 0.0 | 273 | 100.0 | |
| Other area hospitals | 307 | 42.5 | 181 | 25.1 | 141 | 19.5 | 8 | 1.1 | 71 | 9.8 | 8 | 1.1 | 6 | 0.8 | 0 | 0.0 | 722 | 100.0 | |
| ALL HOSPITALS | 587 | 41.3 | 350 | 24.6 | 250 | 17.6 | 10 | 0.7 | 182 | 12.8 | 20 | 1.4 | 22 | 1.5 | 0 | 0.0 | 1421 | 100.0 | |
| TOTAL NSW | 20037 | 29.0 | 17946 | 26.0 | 15308 | 22.2 | 771 | 1.1 | 11592 | 16.8 | 1112 | 1.6 | 2270 | 3.3 | 19 | 0.0 | 69055 | 100.0 | |

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

Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals. There were 65 cases of 4th degree tears reported in 1999.

7.5 BIRTHWEIGHT IN SELECTED HOSPITALS

Table 108 shows the birthweight among live born babies for individual hospitals where the number of reported confinements exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total.

TABLE 108

CONFINEMENTS BY BIRTHWEIGHT AND HOSPITAL, NSW 1999#

| Health Area and Hospital | Birthweight (grams) | | | | | | | | | | | |
|-----------------------------|---------------------|-----|-------------|-----|-------------|-----|--------|------|------------|-----|-------|-------|
| | Less than 1,000 | | 1,000–1,499 | | 1,500–2,499 | | 2,500+ | | Not stated | | Total | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Central Sydney | | | | | | | | | | | | |
| Canterbury | 6 | 0.4 | 0 | 0.0 | 64 | 4.0 | 1517 | 95.6 | 0 | 0.0 | 1587 | 100.0 |
| King George V | 76 | 1.9 | 64 | 1.6 | 285 | 7.1 | 3566 | 89.3 | 2 | 0.1 | 3993 | 100.0 |
| NSW Private | 1 | 0.3 | 0 | 0.0 | 5 | 1.6 | 309 | 98.1 | 0 | 0.0 | 315 | 100.0 |
| ALL HOSPITALS | 83 | 1.4 | 64 | 1.1 | 354 | 6.0 | 5392 | 91.5 | 2 | 0.0 | 5895 | 100.0 |
| Northern Sydney | | | | | | | | | | | | |
| Hornsby | 4 | 0.4 | 2 | 0.2 | 48 | 4.2 | 1084 | 95.3 | 0 | 0.0 | 1138 | 100.0 |
| Manly | 1 | 0.2 | 0 | 0.0 | 21 | 4.2 | 484 | 95.7 | 0 | 0.0 | 506 | 100.0 |
| Mona Vale | 1 | 0.1 | 1 | 0.1 | 33 | 3.2 | 997 | 96.6 | 0 | 0.0 | 1032 | 100.0 |
| Royal North Shore | 49 | 2.5 | 47 | 2.4 | 157 | 8.2 | 1669 | 86.8 | 1 | 0.1 | 1923 | 100.0 |
| Ryde | 3 | 0.4 | 0 | 0.0 | 24 | 3.3 | 706 | 96.3 | 0 | 0.0 | 733 | 100.0 |
| Mater, North Sydney | 2 | 0.1 | 0 | 0.0 | 59 | 3.3 | 1737 | 96.6 | 1 | 0.1 | 1799 | 100.0 |
| North Shore Private | 2 | 0.1 | 4 | 0.2 | 72 | 4.3 | 1608 | 95.4 | 0 | 0.0 | 1686 | 100.0 |
| Sydney Adventist | 7 | 0.3 | 2 | 0.1 | 83 | 3.7 | 2138 | 95.9 | 0 | 0.0 | 2230 | 100.0 |
| ALL HOSPITALS | 69 | 0.6 | 56 | 0.5 | 497 | 4.5 | 10423 | 94.4 | 2 | 0.0 | 11047 | 100.0 |
| Western Sydney | | | | | | | | | | | | |
| Auburn | 8 | 0.6 | 2 | 0.1 | 51 | 3.6 | 1356 | 95.7 | 0 | 0.0 | 1417 | 100.0 |
| Blacktown | 14 | 0.6 | 4 | 0.2 | 130 | 5.3 | 2317 | 94.0 | 1 | 0.0 | 2466 | 100.0 |
| Westmead | 67 | 1.5 | 50 | 1.1 | 282 | 6.4 | 4002 | 90.9 | 0 | 0.0 | 4401 | 100.0 |
| The Hills Private | 0 | 0.0 | 2 | 0.2 | 39 | 2.9 | 1287 | 96.9 | 0 | 0.0 | 1328 | 100.0 |
| ALL HOSPITALS | 89 | 0.9 | 58 | 0.6 | 502 | 5.2 | 8962 | 93.2 | 1 | 0.0 | 9612 | 100.0 |
| Wentworth | | | | | | | | | | | | |
| Blue Mountains | 1 | 0.2 | 1 | 0.2 | 10 | 2.4 | 409 | 97.1 | 0 | 0.0 | 421 | 100.0 |
| Nepean | 40 | 1.2 | 37 | 1.1 | 221 | 6.6 | 3038 | 91.1 | 0 | 0.0 | 3336 | 100.0 |
| Jamison Private | 1 | 0.1 | 0 | 0.0 | 12 | 1.6 | 747 | 98.3 | 0 | 0.0 | 760 | 100.0 |
| Hawkesbury | 0 | 0.0 | 1 | 0.1 | 39 | 3.9 | 961 | 96.0 | 0 | 0.0 | 1001 | 100.0 |
| ALL HOSPITALS | 42 | 0.8 | 39 | 0.7 | 282 | 5.1 | 5155 | 93.4 | 0 | 0.0 | 5518 | 100.0 |
| South Western Sydney | | | | | | | | | | | | |
| Fairfield | 2 | 0.1 | 2 | 0.1 | 101 | 4.6 | 2078 | 95.1 | 1 | 0.0 | 2184 | 100.0 |
| Liverpool | 58 | 1.9 | 65 | 2.1 | 261 | 8.3 | 2746 | 87.7 | 0 | 0.0 | 3130 | 100.0 |
| Campbelltown | 13 | 0.4 | 6 | 0.2 | 134 | 4.6 | 2749 | 94.7 | 0 | 0.0 | 2902 | 100.0 |
| Bankstown–Lidcombe | 5 | 0.3 | 2 | 0.1 | 81 | 4.5 | 1708 | 95.0 | 1 | 0.1 | 1797 | 100.0 |
| Bankstown Private | 2 | 0.3 | 1 | 0.2 | 22 | 3.5 | 612 | 96.1 | 0 | 0.0 | 637 | 100.0 |
| Bowral | 3 | 0.5 | 1 | 0.2 | 16 | 2.4 | 635 | 96.9 | 0 | 0.0 | 655 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 5 | 2.9 | 169 | 97.1 | 0 | 0.0 | 174 | 100.0 |
| ALL HOSPITALS | 83 | 0.7 | 77 | 0.7 | 620 | 5.4 | 10697 | 93.2 | 2 | 0.0 | 11479 | 100.0 |
| Central Coast | | | | | | | | | | | | |
| Gosford | 14 | 0.6 | 7 | 0.3 | 153 | 6.2 | 2293 | 92.9 | 1 | 0.0 | 2468 | 100.0 |
| Wyong | 0 | 0.0 | 1 | 0.3 | 7 | 1.8 | 371 | 97.9 | 0 | 0.0 | 379 | 100.0 |
| North Gosford Private | 1 | 0.2 | 0 | 0.0 | 18 | 2.8 | 629 | 97.1 | 0 | 0.0 | 648 | 100.0 |
| ALL HOSPITALS | 15 | 0.4 | 8 | 0.2 | 178 | 5.1 | 3293 | 94.2 | 1 | 0.0 | 3495 | 100.0 |
| Hunter | | | | | | | | | | | | |
| Maitland | 4 | 0.3 | 1 | 0.1 | 76 | 6.0 | 1185 | 93.6 | 0 | 0.0 | 1266 | 100.0 |
| Muswellbrook | 1 | 0.4 | 0 | 0.0 | 5 | 2.1 | 230 | 97.5 | 0 | 0.0 | 236 | 100.0 |
| Belmont | 0 | 0.0 | 3 | 0.5 | 15 | 2.3 | 623 | 97.2 | 0 | 0.0 | 641 | 100.0 |
| Singleton | 0 | 0.0 | 0 | 0.0 | 6 | 2.8 | 209 | 97.2 | 0 | 0.0 | 215 | 100.0 |
| John Hunter | 60 | 1.6 | 79 | 2.2 | 300 | 8.2 | 3212 | 88.0 | 0 | 0.0 | 3651 | 100.0 |
| Christo Road Private | 2 | 0.2 | 0 | 0.0 | 48 | 5.0 | 911 | 94.7 | 1 | 0.1 | 962 | 100.0 |
| Other area hospitals | 1 | 0.3 | 0 | 0.0 | 8 | 2.7 | 291 | 97.0 | 0 | 0.0 | 300 | 100.0 |
| ALL HOSPITALS | 68 | 0.9 | 83 | 1.1 | 458 | 6.3 | 6661 | 91.6 | 1 | 0.0 | 7271 | 100.0 |
| Illawarra | | | | | | | | | | | | |
| Shoalhaven | 3 | 0.4 | 1 | 0.1 | 42 | 5.1 | 771 | 94.4 | 0 | 0.0 | 817 | 100.0 |
| Wollongong | 12 | 0.6 | 12 | 0.6 | 157 | 7.5 | 1917 | 91.3 | 1 | 0.0 | 2099 | 100.0 |
| Shellharbour | 1 | 0.2 | 1 | 0.2 | 6 | 1.1 | 531 | 98.5 | 0 | 0.0 | 539 | 100.0 |
| Illawarra Private | 0 | 0.0 | 0 | 0.0 | 10 | 1.5 | 664 | 98.5 | 0 | 0.0 | 674 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 1 | 0.7 | 134 | 99.3 | 0 | 0.0 | 135 | 100.0 |
| ALL HOSPITALS | 16 | 0.4 | 14 | 0.3 | 216 | 5.1 | 4017 | 94.2 | 1 | 0.0 | 4264 | 100.0 |

TABLE 108 (continued)

CONFINEMENTS BY BIRTHWEIGHT AND HOSPITAL, NSW 1999#

| Health Area and Hospital | Less than 1,000 | | 1,000–1,499 | | 1,500–2,499 | | 2,500+ | | Not stated | | Total | |
|-----------------------------|-----------------|-----|-------------|-----|-------------|-----|--------|------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| South Eastern Sydney | | | | | | | | | | | | |
| Royal Hospital for Women | 49 | 1.3 | 68 | 1.8 | 218 | 5.6 | 3544 | 91.3 | 2 | 0.1 | 3881 | 100.0 |
| St. George | 13 | 0.5 | 4 | 0.2 | 107 | 4.4 | 2293 | 94.8 | 1 | 0.0 | 2418 | 100.0 |
| Sutherland | 1 | 0.1 | 1 | 0.1 | 47 | 4.6 | 964 | 95.2 | 0 | 0.0 | 1013 | 100.0 |
| Hurstville Community | 1 | 0.1 | 0 | 0.0 | 26 | 3.8 | 654 | 96.0 | 0 | 0.0 | 681 | 100.0 |
| Kareena Private | 0 | 0.0 | 0 | 0.0 | 20 | 2.7 | 714 | 97.3 | 0 | 0.0 | 734 | 100.0 |
| St. George Private | 4 | 0.4 | 3 | 0.3 | 45 | 4.0 | 1065 | 95.3 | 0 | 0.0 | 1117 | 100.0 |
| Prince of Wales Private | 4 | 0.3 | 0 | 0.0 | 48 | 3.4 | 1350 | 96.3 | 0 | 0.0 | 1402 | 100.0 |
| ALL HOSPITALS | 72 | 0.6 | 76 | 0.7 | 511 | 4.5 | 10584 | 94.1 | 3 | 0.0 | 11246 | 100.0 |
| Northern Rivers | | | | | | | | | | | | |
| Grafton Base | 1 | 0.2 | 1 | 0.2 | 23 | 4.9 | 447 | 94.7 | 0 | 0.0 | 472 | 100.0 |
| Lismore Base | 8 | 0.6 | 7 | 0.5 | 77 | 5.6 | 1280 | 93.2 | 1 | 0.1 | 1373 | 100.0 |
| Murwillumbah | 0 | 0.0 | 1 | 0.2 | 13 | 2.9 | 442 | 96.9 | 0 | 0.0 | 456 | 100.0 |
| Tweed Heads | 3 | 0.4 | 2 | 0.3 | 31 | 3.9 | 751 | 95.3 | 1 | 0.1 | 788 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 6 | 1.9 | 302 | 98.1 | 0 | 0.0 | 308 | 100.0 |
| ALL HOSPITALS | 12 | 0.4 | 11 | 0.3 | 150 | 4.4 | 3222 | 94.8 | 2 | 0.1 | 3397 | 100.0 |
| Mid North Coast | | | | | | | | | | | | |
| Coffs Harbour | 2 | 0.3 | 2 | 0.3 | 42 | 5.4 | 729 | 94.1 | 0 | 0.0 | 775 | 100.0 |
| Kempsey | 1 | 0.4 | 0 | 0.0 | 9 | 3.2 | 269 | 96.4 | 0 | 0.0 | 279 | 100.0 |
| Port Macquarie Base | 3 | 0.4 | 0 | 0.0 | 41 | 5.5 | 696 | 93.9 | 1 | 0.1 | 741 | 100.0 |
| Manning Base | 4 | 0.6 | 3 | 0.4 | 40 | 5.6 | 672 | 93.5 | 0 | 0.0 | 719 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 12 | 3.9 | 298 | 96.1 | 0 | 0.0 | 310 | 100.0 |
| ALL HOSPITALS | 10 | 0.4 | 5 | 0.2 | 144 | 5.1 | 2664 | 94.3 | 1 | 0.0 | 2824 | 100.0 |
| New England | | | | | | | | | | | | |
| Armidale | 1 | 0.2 | 1 | 0.2 | 33 | 7.1 | 432 | 92.5 | 0 | 0.0 | 467 | 100.0 |
| Inverell | 1 | 0.4 | 1 | 0.4 | 9 | 3.4 | 252 | 95.5 | 1 | 0.4 | 264 | 100.0 |
| Moree | 1 | 0.4 | 0 | 0.0 | 9 | 3.7 | 235 | 95.9 | 0 | 0.0 | 245 | 100.0 |
| Tamworth Base | 3 | 0.4 | 1 | 0.1 | 47 | 6.9 | 634 | 92.6 | 0 | 0.0 | 685 | 100.0 |
| Other area hospitals | 1 | 0.1 | 2 | 0.3 | 18 | 2.4 | 735 | 97.2 | 0 | 0.0 | 756 | 100.0 |
| ALL HOSPITALS | 7 | 0.3 | 5 | 0.2 | 116 | 4.8 | 2288 | 94.7 | 1 | 0.0 | 2417 | 100.0 |
| Macquarie | | | | | | | | | | | | |
| Dubbo Base | 12 | 0.9 | 1 | 0.1 | 67 | 5.2 | 1215 | 93.8 | 0 | 0.0 | 1295 | 100.0 |
| Mudgee | 0 | 0.0 | 0 | 0.0 | 3 | 1.3 | 228 | 98.7 | 0 | 0.0 | 231 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 9 | 5.7 | 150 | 94.3 | 0 | 0.0 | 159 | 100.0 |
| ALL HOSPITALS | 12 | 0.7 | 1 | 0.1 | 79 | 4.7 | 1593 | 94.5 | 0 | 0.0 | 1685 | 100.0 |
| Mid Western | | | | | | | | | | | | |
| Bathurst Base | 0 | 0.0 | 0 | 0.0 | 28 | 5.3 | 497 | 94.7 | 0 | 0.0 | 525 | 100.0 |
| Lithgow | 1 | 0.4 | 0 | 0.0 | 6 | 2.6 | 224 | 97.0 | 0 | 0.0 | 231 | 100.0 |
| Orange Base | 3 | 0.4 | 2 | 0.3 | 51 | 6.5 | 731 | 92.9 | 0 | 0.0 | 787 | 100.0 |
| Parkes | 1 | 0.5 | 0 | 0.0 | 3 | 1.5 | 198 | 98.0 | 0 | 0.0 | 202 | 100.0 |
| Other area hospitals | 1 | 0.2 | 0 | 0.0 | 9 | 2.2 | 400 | 97.6 | 0 | 0.0 | 410 | 100.0 |
| ALL HOSPITALS | 6 | 0.3 | 2 | 0.1 | 97 | 4.5 | 2050 | 95.1 | 0 | 0.0 | 2155 | 100.0 |
| Far West | | | | | | | | | | | | |
| Broken Hill Base | 3 | 1.1 | 0 | 0.0 | 11 | 4.0 | 260 | 94.9 | 0 | 0.0 | 274 | 100.0 |
| Other area hospitals | 1 | 1.4 | 1 | 1.4 | 6 | 8.3 | 64 | 88.9 | 0 | 0.0 | 72 | 100.0 |
| ALL HOSPITALS | 4 | 1.2 | 1 | 0.3 | 17 | 4.9 | 324 | 93.6 | 0 | 0.0 | 346 | 100.0 |
| Greater Murray | | | | | | | | | | | | |
| Deniliquin | 0 | 0.0 | 0 | 0.0 | 8 | 3.8 | 205 | 96.2 | 0 | 0.0 | 213 | 100.0 |
| Griffith Base | 0 | 0.0 | 1 | 0.2 | 23 | 4.5 | 487 | 95.3 | 0 | 0.0 | 511 | 100.0 |
| Wagga Wagga Base | 8 | 0.9 | 4 | 0.5 | 60 | 6.9 | 791 | 91.6 | 1 | 0.1 | 864 | 100.0 |
| Calvary, Wagga Wagga | 1 | 0.2 | 0 | 0.0 | 18 | 4.4 | 389 | 95.3 | 0 | 0.0 | 408 | 100.0 |
| Other area hospitals | 0 | 0.0 | 1 | 0.1 | 21 | 2.8 | 716 | 97.0 | 0 | 0.0 | 738 | 100.0 |
| ALL HOSPITALS | 9 | 0.3 | 6 | 0.2 | 130 | 4.8 | 2588 | 94.7 | 1 | 0.0 | 2734 | 100.0 |
| Southern | | | | | | | | | | | | |
| Bega | 0 | 0.0 | 1 | 0.5 | 18 | 8.5 | 192 | 91.0 | 0 | 0.0 | 211 | 100.0 |
| Goulburn Base | 3 | 0.9 | 0 | 0.0 | 12 | 3.7 | 311 | 95.4 | 0 | 0.0 | 326 | 100.0 |
| Queanbeyan | 1 | 0.3 | 0 | 0.0 | 8 | 2.4 | 321 | 96.7 | 2 | 0.6 | 332 | 100.0 |
| Other area hospitals | 2 | 0.2 | 2 | 0.2 | 36 | 4.1 | 844 | 95.4 | 1 | 0.1 | 885 | 100.0 |
| ALL HOSPITALS | 6 | 0.3 | 3 | 0.2 | 74 | 4.2 | 1668 | 95.1 | 3 | 0.2 | 1754 | 100.0 |

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

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

7.6 GESTATIONAL AGE IN SELECTED HOSPITALS

Table 109 shows the gestational age among live born babies for individual hospitals where the number of reported confinements exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total.

TABLE 109

CONFINEMENTS BY GESTATIONAL AGE AND HOSPITAL, NSW 1999*

| Health Area and Hospital | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|-----------------------------|-------------------------|-----|-------|-----|-------|-----|-------|------|------------|-----|-------|-------|
| | 20-31 | | 32-33 | | 34-36 | | 37+ | | Not stated | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | | |
| Central Sydney | | | | | | | | | | | | |
| King George V | 172 | 4.3 | 79 | 2.0 | 222 | 5.6 | 3520 | 88.2 | 0 | 0.0 | 3993 | 100.0 |
| Canterbury | 6 | 0.4 | 5 | 0.3 | 51 | 3.2 | 1525 | 96.1 | 0 | 0.0 | 1587 | 100.0 |
| NSW Private | 1 | 0.3 | 0 | 0.0 | 6 | 1.9 | 308 | 97.8 | 0 | 0.0 | 315 | 100.0 |
| ALL HOSPITALS | 179 | 3.0 | 84 | 1.4 | 279 | 4.7 | 5353 | 90.8 | 0 | 0.0 | 5895 | 100.0 |
| Northern Sydney | | | | | | | | | | | | |
| Hornsby | 6 | 0.5 | 4 | 0.4 | 50 | 4.4 | 1078 | 94.7 | 0 | 0.0 | 1138 | 100.0 |
| Mater, North Sydney | 2 | 0.1 | 9 | 0.5 | 68 | 3.8 | 1720 | 95.6 | 0 | 0.0 | 1799 | 100.0 |
| Ryde | 3 | 0.4 | 0 | 0.0 | 24 | 3.3 | 706 | 96.3 | 0 | 0.0 | 733 | 100.0 |
| Royal North Shore | 106 | 5.5 | 66 | 3.4 | 90 | 4.7 | 1660 | 86.3 | 1 | 0.1 | 1923 | 100.0 |
| Sydney Adventist | 8 | 0.4 | 11 | 0.5 | 106 | 4.8 | 2105 | 94.4 | 0 | 0.0 | 2230 | 100.0 |
| North Shore Private | 5 | 0.3 | 11 | 0.7 | 91 | 5.4 | 1579 | 93.7 | 0 | 0.0 | 1686 | 100.0 |
| Manly | 2 | 0.4 | 0 | 0.0 | 22 | 4.3 | 482 | 95.3 | 0 | 0.0 | 506 | 100.0 |
| Mona Vale | 1 | 0.1 | 7 | 0.7 | 38 | 3.7 | 986 | 95.5 | 0 | 0.0 | 1032 | 100.0 |
| ALL HOSPITALS | 133 | 1.2 | 108 | 1.0 | 489 | 4.4 | 10316 | 93.4 | 1 | 0.0 | 11047 | 100.0 |
| Western Sydney | | | | | | | | | | | | |
| Blacktown | 20 | 0.8 | 23 | 0.9 | 134 | 5.4 | 2289 | 92.8 | 0 | 0.0 | 2466 | 100.0 |
| Westmead | 118 | 2.7 | 79 | 1.8 | 198 | 4.5 | 4006 | 91.0 | 0 | 0.0 | 4401 | 100.0 |
| Auburn | 10 | 0.7 | 4 | 0.3 | 49 | 3.5 | 1354 | 95.6 | 0 | 0.0 | 1417 | 100.0 |
| The Hills Private | 2 | 0.2 | 2 | 0.2 | 55 | 4.1 | 1269 | 95.6 | 0 | 0.0 | 1328 | 100.0 |
| ALL HOSPITALS | 150 | 1.6 | 108 | 1.1 | 436 | 4.5 | 8918 | 92.8 | 0 | 0.0 | 9612 | 100.0 |
| Wentworth | | | | | | | | | | | | |
| Nepean | 77 | 2.3 | 58 | 1.7 | 178 | 5.3 | 3023 | 90.6 | 0 | 0.0 | 3336 | 100.0 |
| Blue Mountains | 1 | 0.2 | 1 | 0.2 | 15 | 3.6 | 404 | 96.0 | 0 | 0.0 | 421 | 100.0 |
| Jamison Private | 1 | 0.1 | 0 | 0.0 | 28 | 3.7 | 731 | 96.2 | 0 | 0.0 | 760 | 100.0 |
| Hawkesbury | 2 | 0.2 | 0 | 0.0 | 41 | 4.1 | 958 | 95.7 | 0 | 0.0 | 1001 | 100.0 |
| ALL HOSPITALS | 81 | 1.5 | 59 | 1.1 | 262 | 4.7 | 5116 | 92.7 | 0 | 0.0 | 5518 | 100.0 |
| South Western Sydney | | | | | | | | | | | | |
| Liverpool | 140 | 4.5 | 65 | 2.1 | 181 | 5.8 | 2744 | 87.7 | 0 | 0.0 | 3130 | 100.0 |
| Campbelltown | 17 | 0.6 | 9 | 0.3 | 168 | 5.8 | 2706 | 93.2 | 2 | 0.1 | 2902 | 100.0 |
| Bankstown Private | 2 | 0.3 | 0 | 0.0 | 28 | 4.4 | 607 | 95.3 | 0 | 0.0 | 637 | 100.0 |
| Bankstown-Lidcombe | 7 | 0.4 | 5 | 0.3 | 90 | 5.0 | 1695 | 94.3 | 0 | 0.0 | 1797 | 100.0 |
| Fairfield | 7 | 0.3 | 4 | 0.2 | 116 | 5.3 | 2057 | 94.2 | 0 | 0.0 | 2184 | 100.0 |
| Bowral | 4 | 0.6 | 1 | 0.2 | 19 | 2.9 | 631 | 96.3 | 0 | 0.0 | 655 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 6 | 3.4 | 168 | 96.6 | 0 | 0.0 | 174 | 100.0 |
| ALL HOSPITALS | 177 | 1.5 | 84 | 0.7 | 608 | 5.3 | 10608 | 92.4 | 2 | 0.0 | 11479 | 100.0 |
| Central Coast | | | | | | | | | | | | |
| Gosford | 21 | 0.9 | 14 | 0.6 | 190 | 7.7 | 2243 | 90.9 | 0 | 0.0 | 2468 | 100.0 |
| North Gosford Private | 1 | 0.2 | 2 | 0.3 | 26 | 4.0 | 619 | 95.5 | 0 | 0.0 | 648 | 100.0 |
| Wyong | 1 | 0.3 | 1 | 0.3 | 6 | 1.6 | 371 | 97.9 | 0 | 0.0 | 379 | 100.0 |
| ALL HOSPITALS | 23 | 0.7 | 17 | 0.5 | 222 | 6.4 | 3233 | 92.5 | 0 | 0.0 | 3495 | 100.0 |
| Hunter | | | | | | | | | | | | |
| John Hunter | 147 | 4.0 | 113 | 3.1 | 241 | 6.6 | 3150 | 86.3 | 0 | 0.0 | 3651 | 100.0 |
| Maitland | 8 | 0.6 | 3 | 0.2 | 94 | 7.4 | 1161 | 91.7 | 0 | 0.0 | 1266 | 100.0 |
| Christo Road Private | 3 | 0.3 | 2 | 0.2 | 68 | 7.1 | 889 | 92.4 | 0 | 0.0 | 962 | 100.0 |
| Muswellbrook | 1 | 0.4 | 0 | 0.0 | 5 | 2.1 | 230 | 97.5 | 0 | 0.0 | 236 | 100.0 |
| Belmont | 2 | 0.3 | 1 | 0.2 | 13 | 2.0 | 625 | 97.5 | 0 | 0.0 | 641 | 100.0 |
| Singleton | 1 | 0.5 | 1 | 0.5 | 6 | 2.8 | 207 | 96.3 | 0 | 0.0 | 215 | 100.0 |
| Other area hospitals | 1 | 0.3 | 0 | 0.0 | 6 | 2.0 | 293 | 97.7 | 0 | 0.0 | 300 | 100.0 |
| ALL HOSPITALS | 163 | 2.2 | 120 | 1.7 | 433 | 6.0 | 6555 | 90.2 | 0 | 0.0 | 7271 | 100.0 |
| Illawarra | | | | | | | | | | | | |
| Wollongong | 21 | 1.0 | 27 | 1.3 | 147 | 7.0 | 1904 | 90.7 | 0 | 0.0 | 2099 | 100.0 |
| Shoalhaven | 7 | 0.9 | 1 | 0.1 | 47 | 5.8 | 762 | 93.3 | 0 | 0.0 | 817 | 100.0 |
| Shellharbour | 3 | 0.6 | 0 | 0.0 | 1 | 0.2 | 535 | 99.3 | 0 | 0.0 | 539 | 100.0 |
| Illawarra Private | 1 | 0.1 | 0 | 0.0 | 4 | 0.6 | 669 | 99.3 | 0 | 0.0 | 674 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 1 | 0.7 | 134 | 99.3 | 0 | 0.0 | 135 | 100.0 |
| ALL HOSPITALS | 32 | 0.8 | 28 | 0.7 | 200 | 4.7 | 4004 | 93.9 | 0 | 0.0 | 4264 | 100.0 |

TABLE 109 (continued)
CONFINEMENTS BY GESTATIONAL AGE AND HOSPITAL, NSW 1999#

| Health Area and Hospital | Gestational age (weeks) | | | | | | | | | | TOTAL | |
|-----------------------------|-------------------------|-----|-------|-----|-------|-----|-------|------|------------|-----|-------|-------|
| | 20-31 | | 32-33 | | 34-36 | | 37+ | | Not stated | | No. | % |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| South Eastern Sydney | | | | | | | | | | | | |
| Royal Hospital for Women | 128 | 3.3 | 54 | 1.4 | 184 | 4.7 | 3514 | 90.5 | 1 | 0.0 | 3881 | 100.0 |
| St. George | 17 | 0.7 | 23 | 1.0 | 132 | 5.5 | 2246 | 92.9 | 0 | 0.0 | 2418 | 100.0 |
| St. George Private | 5 | 0.4 | 2 | 0.2 | 60 | 5.4 | 1050 | 94.0 | 0 | 0.0 | 1117 | 100.0 |
| Hurstville Community | 1 | 0.1 | 1 | 0.1 | 39 | 5.7 | 640 | 94.0 | 0 | 0.0 | 681 | 100.0 |
| Prince of Wales Private | 5 | 0.4 | 4 | 0.3 | 49 | 3.5 | 1344 | 95.9 | 0 | 0.0 | 1402 | 100.0 |
| Sutherland | 2 | 0.2 | 8 | 0.8 | 51 | 5.0 | 952 | 94.0 | 0 | 0.0 | 1013 | 100.0 |
| Kareena Private | 0 | 0.0 | 3 | 0.4 | 35 | 4.8 | 696 | 94.8 | 0 | 0.0 | 734 | 100.0 |
| ALL HOSPITALS | 158 | 1.4 | 95 | 0.8 | 550 | 4.9 | 10442 | 92.9 | 1 | 0.0 | 11246 | 100.0 |
| Northern Rivers | | | | | | | | | | | | |
| Tweed Heads | 6 | 0.8 | 3 | 0.4 | 37 | 4.7 | 742 | 94.2 | 0 | 0.0 | 788 | 100.0 |
| Lismore Base | 15 | 1.1 | 9 | 0.7 | 86 | 6.3 | 1263 | 92.0 | 0 | 0.0 | 1373 | 100.0 |
| Grafton Base | 2 | 0.4 | 3 | 0.6 | 28 | 5.9 | 439 | 93.0 | 0 | 0.0 | 472 | 100.0 |
| Murwillumbah | 1 | 0.2 | 0 | 0.0 | 8 | 1.8 | 447 | 98.0 | 0 | 0.0 | 456 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 7 | 2.3 | 301 | 97.7 | 0 | 0.0 | 308 | 100.0 |
| ALL HOSPITALS | 24 | 0.7 | 15 | 0.4 | 166 | 4.9 | 3192 | 94.0 | 0 | 0.0 | 3397 | 100.0 |
| Mid North Coast | | | | | | | | | | | | |
| Port Macquarie Base | 5 | 0.7 | 5 | 0.7 | 39 | 5.3 | 692 | 93.4 | 0 | 0.0 | 741 | 100.0 |
| Manning Base | 7 | 1.0 | 3 | 0.4 | 31 | 4.3 | 678 | 94.3 | 0 | 0.0 | 719 | 100.0 |
| Coffs Harbour | 7 | 0.9 | 3 | 0.4 | 30 | 3.9 | 735 | 94.8 | 0 | 0.0 | 775 | 100.0 |
| Kempsey | 1 | 0.4 | 1 | 0.4 | 9 | 3.2 | 268 | 96.1 | 0 | 0.0 | 279 | 100.0 |
| Other Area hospitals | 0 | 0.0 | 0 | 0.0 | 8 | 2.6 | 302 | 97.4 | 0 | 0.0 | 310 | 100.0 |
| ALL HOSPITALS | 20 | 0.7 | 12 | 0.4 | 117 | 4.1 | 2675 | 94.7 | 0 | 0.0 | 2824 | 100.0 |
| New England | | | | | | | | | | | | |
| Moree | 2 | 0.8 | 0 | 0.0 | 7 | 2.9 | 236 | 96.3 | 0 | 0.0 | 245 | 100.0 |
| Tamworth Base | 3 | 0.4 | 4 | 0.6 | 53 | 7.7 | 625 | 91.2 | 0 | 0.0 | 685 | 100.0 |
| Armidale | 1 | 0.2 | 5 | 1.1 | 20 | 4.3 | 441 | 94.4 | 0 | 0.0 | 467 | 100.0 |
| Inverell | 1 | 0.4 | 1 | 0.4 | 9 | 3.4 | 253 | 95.8 | 0 | 0.0 | 264 | 100.0 |
| Other area hospitals | 3 | 0.4 | 2 | 0.3 | 15 | 2.0 | 736 | 97.4 | 0 | 0.0 | 756 | 100.0 |
| ALL HOSPITALS | 10 | 0.4 | 12 | 0.5 | 104 | 4.3 | 2291 | 94.8 | 0 | 0.0 | 2417 | 100.0 |
| Macquarie | | | | | | | | | | | | |
| Dubbo Base | 15 | 1.2 | 6 | 0.5 | 71 | 5.5 | 1203 | 92.9 | 0 | 0.0 | 1295 | 100.0 |
| Mudgee | 0 | 0.0 | 0 | 0.0 | 2 | 0.9 | 229 | 99.1 | 0 | 0.0 | 231 | 100.0 |
| Other area hospitals | 0 | 0.0 | 0 | 0.0 | 7 | 4.4 | 152 | 95.6 | 0 | 0.0 | 159 | 100.0 |
| ALL HOSPITALS | 15 | 0.9 | 6 | 0.4 | 80 | 4.7 | 1584 | 94.0 | 0 | 0.0 | 1685 | 100.0 |
| Mid Western | | | | | | | | | | | | |
| Orange Base | 8 | 1.0 | 4 | 0.5 | 50 | 6.4 | 725 | 92.1 | 0 | 0.0 | 787 | 100.0 |
| Parkes | 1 | 0.5 | 0 | 0.0 | 1 | 0.5 | 200 | 99.0 | 0 | 0.0 | 202 | 100.0 |
| Lithgow | 1 | 0.4 | 0 | 0.0 | 7 | 3.0 | 223 | 96.5 | 0 | 0.0 | 231 | 100.0 |
| Bathurst Base | 1 | 0.2 | 0 | 0.0 | 31 | 5.9 | 493 | 93.9 | 0 | 0.0 | 525 | 100.0 |
| Other area hospitals | 3 | 0.7 | 0 | 0.0 | 9 | 2.2 | 398 | 97.1 | 0 | 0.0 | 410 | 100.0 |
| ALL HOSPITALS | 14 | 0.6 | 4 | 0.2 | 98 | 4.5 | 2039 | 94.6 | 0 | 0.0 | 2155 | 100.0 |
| Far West | | | | | | | | | | | | |
| Broken Hill Base | 3 | 1.1 | 1 | 0.4 | 12 | 4.4 | 258 | 94.2 | 0 | 0.0 | 274 | 100.0 |
| Other area hospitals | 3 | 4.2 | 0 | 0.0 | 7 | 9.7 | 62 | 86.1 | 0 | 0.0 | 72 | 100.0 |
| ALL HOSPITALS | 6 | 1.7 | 1 | 0.3 | 19 | 5.5 | 320 | 92.5 | 0 | 0.0 | 346 | 100.0 |
| Greater Murray | | | | | | | | | | | | |
| Wagga Wagga Base | 12 | 1.4 | 8 | 0.9 | 58 | 6.7 | 786 | 91.0 | 0 | 0.0 | 864 | 100.0 |
| Calvary, Wagga Wagga | 2 | 0.5 | 4 | 1.0 | 24 | 5.9 | 378 | 92.6 | 0 | 0.0 | 408 | 100.0 |
| Griffith Base | 2 | 0.4 | 3 | 0.6 | 21 | 4.1 | 485 | 94.9 | 0 | 0.0 | 511 | 100.0 |
| Deniliquin | 0 | 0.0 | 1 | 0.5 | 10 | 4.7 | 202 | 94.8 | 0 | 0.0 | 213 | 100.0 |
| Other area hospitals | 0 | 0.0 | 2 | 0.3 | 16 | 2.2 | 720 | 97.6 | 0 | 0.0 | 738 | 100.0 |
| ALL HOSPITALS | 16 | 0.6 | 18 | 0.7 | 129 | 4.7 | 2571 | 94.0 | 0 | 0.0 | 2734 | 100.0 |
| Southern | | | | | | | | | | | | |
| Queanbeyan | 1 | 0.3 | 0 | 0.0 | 7 | 2.1 | 324 | 97.6 | 0 | 0.0 | 332 | 100.0 |
| Goulburn Base | 3 | 0.9 | 0 | 0.0 | 9 | 2.8 | 314 | 96.3 | 0 | 0.0 | 326 | 100.0 |
| Bega | 1 | 0.5 | 1 | 0.5 | 10 | 4.7 | 199 | 94.3 | 0 | 0.0 | 211 | 100.0 |
| Other area hospitals | 4 | 0.5 | 3 | 0.3 | 31 | 3.5 | 847 | 95.7 | 0 | 0.0 | 885 | 100.0 |
| ALL HOSPITALS | 9 | 0.5 | 4 | 0.2 | 57 | 3.2 | 1684 | 96.0 | 0 | 0.0 | 1754 | 100.0 |
| TOTAL NSW | 1210 | 1.4 | 775 | 0.9 | 4251 | 4.9 | 81046 | 92.8 | 7 | 0.0 | 87289 | 100.0 |

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

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

7.7 BABY DISCHARGE STATUS IN SELECTED HOSPITALS

Table 110 shows the discharge status of babies born in hospitals where the number of reported confinements exceeded 200 in 1999, totals for all hospitals within each health area and the NSW total.

TABLE 110

CONFINEMENTS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 1999*

| Health Area and Hospital | Discharged | | Stillborn | | Baby discharge status | | | | Not stated | | TOTAL | |
|-----------------------------|------------|------|-----------|-----|-----------------------|-----|-------------|------|------------|-----|-------|-------|
| | No. | % | No. | % | Neonatal death | | Transferred | | No. | % | No. | % |
| | | | | | No. | % | No. | % | | | | |
| Central Sydney | | | | | | | | | | | | |
| Canterbury | 1561 | 98.4 | 5 | 0.3 | 3 | 0.2 | 18 | 1.1 | 0 | 0.0 | 1587 | 100.0 |
| King George V | 3749 | 93.9 | 40 | 1.0 | 35 | 0.9 | 169 | 4.2 | 0 | 0.0 | 3993 | 100.0 |
| NSW Private | 308 | 97.8 | 3 | 1.0 | 0 | 0.0 | 4 | 1.3 | 0 | 0.0 | 315 | 100.0 |
| ALL HOSPITALS | 5618 | 95.3 | 48 | 0.8 | 38 | 0.6 | 191 | 3.2 | 0 | 0.0 | 5895 | 100.0 |
| Northern Sydney | | | | | | | | | | | | |
| Hornsby | 1121 | 98.5 | 4 | 0.4 | 3 | 0.3 | 10 | 0.9 | 0 | 0.0 | 1138 | 100.0 |
| Manly | 496 | 98.0 | 4 | 0.8 | 1 | 0.2 | 5 | 1.0 | 0 | 0.0 | 506 | 100.0 |
| Mona Vale | 1011 | 98.0 | 4 | 0.4 | 1 | 0.1 | 16 | 1.6 | 0 | 0.0 | 1032 | 100.0 |
| Royal North Shore | 1830 | 95.2 | 14 | 0.7 | 16 | 0.8 | 63 | 3.3 | 0 | 0.0 | 1923 | 100.0 |
| Ryde | 719 | 98.1 | 5 | 0.7 | 1 | 0.1 | 8 | 1.1 | 0 | 0.0 | 733 | 100.0 |
| Mater, North Sydney | 1780 | 98.9 | 4 | 0.2 | 0 | 0.0 | 15 | 0.8 | 0 | 0.0 | 1799 | 100.0 |
| North Shore Private | 1663 | 98.6 | 2 | 0.1 | 2 | 0.1 | 19 | 1.1 | 0 | 0.0 | 1686 | 100.0 |
| Sydney Adventist | 2198 | 98.6 | 7 | 0.3 | 3 | 0.1 | 22 | 1.0 | 0 | 0.0 | 2230 | 100.0 |
| ALL HOSPITALS | 10818 | 97.9 | 44 | 0.4 | 27 | 0.2 | 158 | 1.4 | 0 | 0.0 | 11047 | 100.0 |
| Western Sydney | | | | | | | | | | | | |
| Auburn | 1384 | 97.7 | 6 | 0.4 | 4 | 0.3 | 23 | 1.6 | 0 | 0.0 | 1417 | 100.0 |
| Blacktown | 2421 | 98.2 | 14 | 0.6 | 6 | 0.2 | 24 | 1.0 | 1 | 0.0 | 2466 | 100.0 |
| Westmead | 4161 | 94.5 | 39 | 0.9 | 20 | 0.5 | 181 | 4.1 | 0 | 0.0 | 4401 | 100.0 |
| The Hills Private | 1304 | 98.2 | 4 | 0.3 | 4 | 0.3 | 16 | 1.2 | 0 | 0.0 | 1328 | 100.0 |
| ALL HOSPITALS | 9270 | 96.4 | 63 | 0.7 | 34 | 0.4 | 244 | 2.5 | 1 | 0.0 | 9612 | 100.0 |
| Wentworth | | | | | | | | | | | | |
| Blue Mountains | 404 | 96.0 | 6 | 1.4 | 0 | 0.0 | 11 | 2.6 | 0 | 0.0 | 421 | 100.0 |
| Nepean | 3196 | 95.8 | 28 | 0.8 | 15 | 0.4 | 97 | 2.9 | 0 | 0.0 | 3336 | 100.0 |
| Jamison Private | 754 | 99.2 | 2 | 0.3 | 0 | 0.0 | 4 | 0.5 | 0 | 0.0 | 760 | 100.0 |
| Hawkesbury | 983 | 98.2 | 3 | 0.3 | 0 | 0.0 | 15 | 1.5 | 0 | 0.0 | 1001 | 100.0 |
| ALL HOSPITALS | 5337 | 96.7 | 39 | 0.7 | 15 | 0.3 | 127 | 2.3 | 0 | 0.0 | 5518 | 100.0 |
| South Western Sydney | | | | | | | | | | | | |
| Fairfield | 2153 | 98.6 | 12 | 0.5 | 0 | 0.0 | 19 | 0.9 | 0 | 0.0 | 2184 | 100.0 |
| Liverpool | 2895 | 92.5 | 26 | 0.8 | 26 | 0.8 | 183 | 5.8 | 0 | 0.0 | 3130 | 100.0 |
| Campbelltown | 2762 | 95.2 | 20 | 0.7 | 8 | 0.3 | 112 | 3.9 | 0 | 0.0 | 2902 | 100.0 |
| Bankstown-Lidcombe | 1764 | 98.2 | 13 | 0.7 | 0 | 0.0 | 20 | 1.1 | 0 | 0.0 | 1797 | 100.0 |
| Bankstown Private | 628 | 98.6 | 3 | 0.5 | 0 | 0.0 | 6 | 0.9 | 0 | 0.0 | 637 | 100.0 |
| Bowral | 606 | 92.5 | 2 | 0.3 | 1 | 0.2 | 46 | 7.0 | 0 | 0.0 | 655 | 100.0 |
| Other area hospitals | 173 | 99.4 | 0 | 0.0 | 0 | 0.0 | 1 | 0.6 | 0 | 0.0 | 174 | 100.0 |
| ALL HOSPITALS | 10981 | 95.7 | 76 | 0.7 | 35 | 0.3 | 387 | 3.4 | 0 | 0.0 | 11479 | 100.0 |
| Central Coast | | | | | | | | | | | | |
| Gosford | 1848 | 74.9 | 12 | 0.5 | 8 | 0.3 | 600 | 24.3 | 0 | 0.0 | 2468 | 100.0 |
| Wyong | 358 | 94.5 | 1 | 0.3 | 0 | 0.0 | 20 | 5.3 | 0 | 0.0 | 379 | 100.0 |
| North Gosford Private | 636 | 98.1 | 2 | 0.3 | 1 | 0.2 | 9 | 1.4 | 0 | 0.0 | 648 | 100.0 |
| ALL HOSPITALS | 2842 | 81.3 | 15 | 0.4 | 9 | 0.3 | 629 | 18.0 | 0 | 0.0 | 3495 | 100.0 |
| Hunter | | | | | | | | | | | | |
| Maitland | 1175 | 92.8 | 5 | 0.4 | 2 | 0.2 | 84 | 6.6 | 0 | 0.0 | 1266 | 100.0 |
| Muswellbrook | 226 | 95.8 | 0 | 0.0 | 0 | 0.0 | 10 | 4.2 | 0 | 0.0 | 236 | 100.0 |
| Belmont | 603 | 94.1 | 0 | 0.0 | 0 | 0.0 | 38 | 5.9 | 0 | 0.0 | 641 | 100.0 |
| Singleton | 212 | 98.6 | 0 | 0.0 | 0 | 0.0 | 3 | 1.4 | 0 | 0.0 | 215 | 100.0 |
| John Hunter | 3261 | 89.3 | 41 | 1.1 | 27 | 0.7 | 322 | 8.8 | 0 | 0.0 | 3651 | 100.0 |
| Christo Road Private | 929 | 96.6 | 6 | 0.6 | 2 | 0.2 | 25 | 2.6 | 0 | 0.0 | 962 | 100.0 |
| Other area hospitals | 291 | 97.0 | 0 | 0.0 | 0 | 0.0 | 9 | 3.0 | 0 | 0.0 | 300 | 100.0 |
| ALL HOSPITALS | 6697 | 92.1 | 52 | 0.7 | 31 | 0.4 | 491 | 6.8 | 0 | 0.0 | 7271 | 100.0 |
| Illawarra | | | | | | | | | | | | |
| Shoalhaven | 793 | 97.1 | 4 | 0.5 | 0 | 0.0 | 20 | 2.4 | 0 | 0.0 | 817 | 100.0 |
| Wollongong | 1884 | 89.8 | 17 | 0.8 | 2 | 0.1 | 196 | 9.3 | 0 | 0.0 | 2099 | 100.0 |
| Shellharbour | 517 | 95.9 | 0 | 0.0 | 1 | 0.2 | 21 | 3.9 | 0 | 0.0 | 539 | 100.0 |
| Illawarra Private | 657 | 97.5 | 0 | 0.0 | 0 | 0.0 | 17 | 2.5 | 0 | 0.0 | 674 | 100.0 |
| Other area hospitals | 133 | 98.5 | 0 | 0.0 | 0 | 0.0 | 2 | 1.5 | 0 | 0.0 | 135 | 100.0 |
| ALL HOSPITALS | 3984 | 93.4 | 21 | 0.5 | 3 | 0.1 | 256 | 6.0 | 0 | 0.0 | 4264 | 100.0 |

TABLE 110 (continued)
CONFINEMENTS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 1999#

| Health Area and Hospital | Discharged | | Stillborn | | Baby discharge status Neonatal death | | Transferred | | Not stated | | TOTAL | |
|-----------------------------|------------|------|-----------|-----|---|-----|-------------|------|------------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| South Eastern Sydney | | | | | | | | | | | | |
| Royal Hospital for Women | 3658 | 94.3 | 32 | 0.8 | 28 | 0.7 | 163 | 4.2 | 0 | 0.0 | 3881 | 100.0 |
| St. George | 2372 | 98.1 | 17 | 0.7 | 6 | 0.2 | 23 | 1.0 | 0 | 0.0 | 2418 | 100.0 |
| Sutherland | 999 | 98.6 | 3 | 0.3 | 1 | 0.1 | 10 | 1.0 | 0 | 0.0 | 1013 | 100.0 |
| Hurstville Community | 675 | 99.1 | 0 | 0.0 | 1 | 0.1 | 5 | 0.7 | 0 | 0.0 | 681 | 100.0 |
| Kareena Private | 724 | 98.6 | 1 | 0.1 | 0 | 0.0 | 9 | 1.2 | 0 | 0.0 | 734 | 100.0 |
| St. George Private | 1105 | 98.9 | 6 | 0.5 | 0 | 0.0 | 6 | 0.5 | 0 | 0.0 | 1117 | 100.0 |
| Prince of Wales Private | 1387 | 98.9 | 4 | 0.3 | 1 | 0.1 | 10 | 0.7 | 0 | 0.0 | 1402 | 100.0 |
| ALL HOSPITALS | 10920 | 97.1 | 63 | 0.6 | 37 | 0.3 | 226 | 2.0 | 0 | 0.0 | 11246 | 100.0 |
| Northern Rivers | | | | | | | | | | | | |
| Grafton Base | 434 | 91.9 | 2 | 0.4 | 1 | 0.2 | 35 | 7.4 | 0 | 0.0 | 472 | 100.0 |
| Lismore Base | 1031 | 75.1 | 14 | 1.0 | 3 | 0.2 | 325 | 23.7 | 0 | 0.0 | 1373 | 100.0 |
| Murwillumbah | 442 | 96.9 | 1 | 0.2 | 1 | 0.2 | 12 | 2.6 | 0 | 0.0 | 456 | 100.0 |
| Tweed Heads | 775 | 98.4 | 9 | 1.1 | 0 | 0.0 | 4 | 0.5 | 0 | 0.0 | 788 | 100.0 |
| Other area hospitals | 291 | 94.5 | 0 | 0.0 | 0 | 0.0 | 17 | 5.5 | 0 | 0.0 | 308 | 100.0 |
| ALL HOSPITALS | 2973 | 87.5 | 26 | 0.8 | 5 | 0.1 | 393 | 11.6 | 0 | 0.0 | 3397 | 100.0 |
| Mid North Coast | | | | | | | | | | | | |
| Coffs Harbour | 700 | 90.3 | 3 | 0.4 | 3 | 0.4 | 69 | 8.9 | 0 | 0.0 | 775 | 100.0 |
| Kempsey | 275 | 98.6 | 2 | 0.7 | 0 | 0.0 | 2 | 0.7 | 0 | 0.0 | 279 | 100.0 |
| Port Macquarie Base | 655 | 88.4 | 5 | 0.7 | 1 | 0.1 | 80 | 10.8 | 0 | 0.0 | 741 | 100.0 |
| Manning Base | 670 | 93.2 | 7 | 1.0 | 0 | 0.0 | 42 | 5.8 | 0 | 0.0 | 719 | 100.0 |
| Other area hospitals | 289 | 93.2 | 1 | 0.3 | 0 | 0.0 | 20 | 6.5 | 0 | 0.0 | 310 | 100.0 |
| ALL HOSPITALS | 2589 | 91.7 | 18 | 0.6 | 4 | 0.1 | 213 | 7.5 | 0 | 0.0 | 2824 | 100.0 |
| New England | | | | | | | | | | | | |
| Armidale | 427 | 91.4 | 2 | 0.4 | 0 | 0.0 | 38 | 8.1 | 0 | 0.0 | 467 | 100.0 |
| Inverell | 250 | 94.7 | 4 | 1.5 | 1 | 0.4 | 9 | 3.4 | 0 | 0.0 | 264 | 100.0 |
| Moree | 239 | 97.6 | 2 | 0.8 | 1 | 0.4 | 3 | 1.2 | 0 | 0.0 | 245 | 100.0 |
| Tamworth Base | 613 | 89.5 | 5 | 0.7 | 2 | 0.3 | 65 | 9.5 | 0 | 0.0 | 685 | 100.0 |
| Other area hospitals | 714 | 94.4 | 2 | 0.3 | 1 | 0.1 | 39 | 5.2 | 0 | 0.0 | 756 | 100.0 |
| ALL HOSPITALS | 2243 | 92.8 | 15 | 0.6 | 5 | 0.2 | 154 | 6.4 | 0 | 0.0 | 2417 | 100.0 |
| Macquarie | | | | | | | | | | | | |
| Dubbo Base | 862 | 66.6 | 17 | 1.3 | 3 | 0.2 | 413 | 31.9 | 0 | 0.0 | 1295 | 100.0 |
| Mudgee | 224 | 97.0 | 0 | 0.0 | 0 | 0.0 | 7 | 3.0 | 0 | 0.0 | 231 | 100.0 |
| Other area hospitals | 144 | 90.6 | 0 | 0.0 | 0 | 0.0 | 15 | 9.4 | 0 | 0.0 | 159 | 100.0 |
| ALL HOSPITALS | 1230 | 73.0 | 17 | 1.0 | 3 | 0.2 | 435 | 25.8 | 0 | 0.0 | 1685 | 100.0 |
| Mid Western | | | | | | | | | | | | |
| Bathurst Base | 457 | 87.0 | 1 | 0.2 | 0 | 0.0 | 67 | 12.8 | 0 | 0.0 | 525 | 100.0 |
| Lithgow | 225 | 97.4 | 2 | 0.9 | 0 | 0.0 | 4 | 1.7 | 0 | 0.0 | 231 | 100.0 |
| Orange Base | 621 | 78.9 | 6 | 0.8 | 1 | 0.1 | 159 | 20.2 | 0 | 0.0 | 787 | 100.0 |
| Parkes | 188 | 93.1 | 3 | 1.5 | 1 | 0.5 | 10 | 5.0 | 0 | 0.0 | 202 | 100.0 |
| Other area hospitals | 392 | 95.6 | 0 | 0.0 | 1 | 0.2 | 17 | 4.1 | 0 | 0.0 | 410 | 100.0 |
| ALL HOSPITALS | 1883 | 87.4 | 12 | 0.6 | 3 | 0.1 | 257 | 11.9 | 0 | 0.0 | 2155 | 100.0 |
| Far West | | | | | | | | | | | | |
| Broken Hill Base | 266 | 97.1 | 2 | 0.7 | 1 | 0.4 | 5 | 1.8 | 0 | 0.0 | 274 | 100.0 |
| Other area hospitals | 63 | 87.5 | 0 | 0.0 | 0 | 0.0 | 9 | 12.5 | 0 | 0.0 | 72 | 100.0 |
| ALL HOSPITALS | 329 | 95.1 | 2 | 0.6 | 1 | 0.3 | 14 | 4.0 | 0 | 0.0 | 346 | 100.0 |
| Greater Murray | | | | | | | | | | | | |
| Deniliquin | 192 | 90.1 | 0 | 0.0 | 1 | 0.5 | 20 | 9.4 | 0 | 0.0 | 213 | 100.0 |
| Griffith Base | 484 | 94.7 | 1 | 0.2 | 0 | 0.0 | 26 | 5.1 | 0 | 0.0 | 511 | 100.0 |
| Wagga Wagga Base | 756 | 87.5 | 9 | 1.0 | 1 | 0.1 | 98 | 11.3 | 0 | 0.0 | 864 | 100.0 |
| Calvary, Wagga Wagga | 394 | 96.6 | 3 | 0.7 | 0 | 0.0 | 11 | 2.7 | 0 | 0.0 | 408 | 100.0 |
| Other area hospitals | 714 | 96.7 | 1 | 0.1 | 0 | 0.0 | 23 | 3.1 | 0 | 0.0 | 738 | 100.0 |
| ALL HOSPITALS | 2540 | 92.9 | 14 | 0.5 | 2 | 0.1 | 178 | 6.5 | 0 | 0.0 | 2734 | 100.0 |
| Southern | | | | | | | | | | | | |
| Bega | 194 | 91.9 | 0 | 0.0 | 0 | 0.0 | 17 | 8.1 | 0 | 0.0 | 211 | 100.0 |
| Goulburn Base | 301 | 92.3 | 4 | 1.2 | 1 | 0.3 | 20 | 6.1 | 0 | 0.0 | 326 | 100.0 |
| Queanbeyan | 317 | 95.5 | 1 | 0.3 | 1 | 0.3 | 8 | 2.4 | 5 | 1.5 | 332 | 100.0 |
| Other area hospitals | 854 | 96.5 | 3 | 0.3 | 1 | 0.1 | 27 | 3.1 | 0 | 0.0 | 885 | 100.0 |
| ALL HOSPITALS | 1666 | 95.0 | 8 | 0.5 | 3 | 0.2 | 72 | 4.1 | 5 | 0.3 | 1754 | 100.0 |
| TOTAL NSW | 82055 | 94.0 | 533 | 0.6 | 256 | 0.3 | 4428 | 5.1 | 17 | 0.0 | 87289 | 100.0 |

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

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

7.8 POSTNATAL LENGTH OF STAY IN SELECTED HOSPITALS

Table 111 shows the mother's postnatal length of stay in the hospital of birth for hospitals where the number of reported confinements exceeded 200 in 1998, totals for all hospitals within each health area and the NSW total.

TABLE 111

AVERAGE MATERNAL POSTNATAL LENGTH OF STAY IN HOSPITAL OF BIRTH, NSW 1994–1998*

| Health Area and Hospital | Average postnatal length of stay (days) | | | | | Health Area and Hospital | Average postnatal length of stay (days) | | | | |
|-----------------------------|---|------|------|------|------|-----------------------------|---|------|------|------|------|
| | 1994 | 1995 | 1996 | 1997 | 1998 | | 1994 | 1995 | 1996 | 1997 | 1998 |
| Central Sydney | | | | | | South Eastern Sydney | | | | | |
| Canterbury | 3.5 | 3.5 | 3.1 | – | 2.8 | Royal Hospital for Women | 4.4 | 4.6 | 4.2 | 4.1 | 3.8 |
| King George V | 4.2 | 4.1 | 3.7 | 3.9 | 3.9 | St. George | 4.6 | 4.1 | 3.8 | 3.9 | 3.6 |
| NSW Private | 6.1 | 5.8 | 5.4 | 5.4 | 4.6 | Sutherland | 5.2 | 4.5 | 4.1 | 3.8 | 3.8 |
| ALL HOSPITALS | 4.2 | 4.1 | 3.8 | 4.0 | 3.9 | Hurstville Community | 6.4 | 6.2 | 6.5 | 6.6 | 6.4 |
| Northern Sydney | | | | | | Kareena Private | 6.4 | 6.3 | 6.4 | 6.3 | 5.9 |
| Hornsby | 4.8 | 4.4 | 4.1 | 3.7 | 3.8 | St. George Private | – | 8.0 | 6.2 | 6.2 | 5.5 |
| Manly | 4.5 | 4.3 | 3.9 | 3.8 | 3.7 | Prince of Wales Private | – | – | – | 6.3 | 5.6 |
| Mona Vale | 4.6 | 4.3 | 4.2 | 3.9 | 3.8 | Other area hospitals | 6.6 | 6.0 | 5.8 | 5.8 | 5.6 |
| Royal North Shore | 4.5 | 4.3 | 4.3 | 3.9 | 4.1 | ALL HOSPITALS | 5.2 | 5.0 | 4.8 | 4.8 | 4.5 |
| Ryde | 4.2 | 4.0 | 4.3 | 3.6 | 3.3 | Northern Rivers | | | | | |
| Mater, North Sydney | 5.7 | 5.6 | 5.3 | 5.3 | 5.2 | Grafton Base | 4.4 | 4.4 | 4.8 | 4.5 | 3.9 |
| North Shore Private | – | – | – | – | 4.8 | Lismore Base | 3.5 | 3.8 | 3.3 | 3.2 | 3.4 |
| Sydney Adventist | 6.0 | 6.2 | 5.9 | 5.6 | 5.3 | Murwillumbah | 4.6 | 4.2 | 4.0 | 4.0 | 3.7 |
| ALL HOSPITALS | 5.1 | 4.9 | 4.8 | 4.5 | 4.5 | Tweed Heads | 3.7 | 3.1 | 3.4 | 3.0 | 3.1 |
| Western Sydney | | | | | | Other area hospitals | 4.0 | 3.6 | 3.6 | 3.9 | 3.4 |
| Auburn | 3.5 | 3.6 | 3.4 | 3.0 | 2.8 | ALL HOSPITALS | 3.9 | 3.8 | 3.6 | 3.5 | 3.5 |
| Blacktown | 3.4 | 3.3 | 3.3 | 3.1 | 3.1 | Mid North Coast | | | | | |
| Westmead | – | – | – | – | 3.3 | Coffs Harbour | 4.6 | 4.5 | 4.4 | 3.9 | 4.0 |
| The Hills Private | 5.7 | 5.8 | 5.8 | 5.8 | 5.6 | Kempsey | 4.4 | 4.7 | 4.6 | 4.1 | 3.9 |
| ALL HOSPITALS | 4.1 | 3.9 | 3.7 | 3.6 | 3.5 | Port Macquarie Base | 3.9 | 3.9 | 3.9 | 3.7 | 3.8 |
| Wentworth | | | | | | Manning River Base | 4.6 | 4.3 | 4.3 | 4.5 | 3.9 |
| Blue Mountains | 4.4 | 3.5 | 3.6 | 3.6 | 3.7 | Other area hospitals | 4.1 | 4.7 | 4.4 | 4.5 | 4.8 |
| Nepean | 3.5 | 3.5 | 3.4 | 3.5 | 3.2 | ALL HOSPITALS | 4.4 | 4.4 | 4.3 | 4.1 | 4.0 |
| Jamison Private | 5.2 | 5.3 | 5.3 | 5.5 | 5.3 | New England | | | | | |
| Hawkesbury | – | – | 3.8 | 3.8 | 3.5 | Armidale | 5.5 | 5.1 | 5.1 | 4.7 | 4.4 |
| ALL HOSPITALS | 3.9 | 3.7 | 3.7 | 3.9 | 3.6 | Inverell | 4.1 | 3.7 | 3.6 | 3.8 | 3.4 |
| South Western Sydney | | | | | | Moree | 4.3 | 4.1 | 3.8 | 3.6 | 4.0 |
| Camden | 4.0 | 3.7 | 3.4 | 3.8 | 3.3 | Tamworth Base | 3.3 | 3.7 | 3.5 | 3.6 | 3.6 |
| Fairfield | 3.2 | 3.1 | 3.0 | 2.9 | 2.9 | Other area hospitals | 4.4 | 4.6 | 4.6 | 4.2 | 4.1 |
| Liverpool | 3.3 | 3.1 | 3.1 | 3.1 | 2.9 | ALL HOSPITALS | 4.2 | 4.3 | 4.2 | 4.0 | 3.9 |
| Campbelltown | 3.2 | 3.0 | 2.8 | 2.7 | 2.6 | Macquarie | | | | | |
| Bankstown–Lidcombe | 3.2 | 3.0 | 3.0 | 2.8 | 2.8 | Dubbo Base | 4.7 | 3.3 | 3.2 | 3.0 | 3.0 |
| Bankstown Private | 5.2 | 5.3 | 5.0 | 5.4 | 4.9 | Mudgee | 3.8 | 3.6 | 3.6 | 3.3 | 3.5 |
| Bowral | 3.5 | 3.7 | 3.2 | 3.0 | 3.0 | Other area hospitals | 3.8 | 3.4 | 3.2 | 3.3 | 3.5 |
| ALL HOSPITALS | 3.4 | 3.2 | 3.2 | 3.1 | 3.0 | ALL HOSPITALS | 4.3 | 3.3 | 3.3 | 3.1 | 3.1 |
| Central Coast | | | | | | Mid Western | | | | | |
| Gosford | 3.8 | 3.7 | 3.5 | 3.1 | 2.4 | Bathurst Base | 4.1 | 4.2 | 3.7 | 3.2 | 3.3 |
| Wyong | – | – | – | 3.2 | 2.5 | Lithgow | 4.6 | 4.1 | 5.3 | 4.5 | 4.4 |
| North Gosford Private | 6.4 | 6.1 | 6.2 | 5.9 | 5.9 | Orange Base | 3.5 | 3.4 | 3.1 | 3.4 | 3.1 |
| ALL HOSPITALS | 4.3 | 4.2 | 4.1 | 3.7 | 3.1 | Parkes | 4.6 | 4.5 | 4.2 | 3.9 | 3.9 |
| Hunter | | | | | | Other area hospitals | 4.7 | 4.5 | 4.7 | 4.1 | 3.8 |
| Maitland | 3.7 | 3.5 | 3.2 | 3.1 | 3.2 | ALL HOSPITALS | 4.1 | 4.0 | 3.9 | 3.7 | 3.5 |
| Muswellbrook | 4.1 | 3.9 | 3.9 | 3.8 | 3.5 | Far West | | | | | |
| Belmont | 3.8 | 3.6 | 3.3 | 3.5 | 3.5 | Broken Hill Base | 5.3 | 4.3 | 4.1 | 3.8 | 4.1 |
| Singleton | 4.1 | 4.2 | 3.7 | 3.3 | 3.5 | Other area hospitals | 3.3 | 3.2 | 3.8 | 2.9 | 2.8 |
| John Hunter | 3.8 | 3.9 | 3.7 | 4.0 | 3.9 | ALL HOSPITALS | 4.7 | 4.0 | 4.1 | 3.6 | 3.8 |
| Christo Road Private | 5.4 | 5.7 | 5.7 | 5.8 | 5.5 | Greater Murray | | | | | |
| Other area hospitals | 4.2 | 4.8 | 4.8 | 4.7 | 4.8 | Mercy Care Centre, Albury | 4.6 | 4.6 | 4.3 | 4.1 | 3.9 |
| ALL HOSPITALS | 3.9 | 4.0 | 3.9 | 4.1 | 4.0 | Griffith Base | 4.1 | 4.1 | 3.6 | 3.4 | 3.4 |
| Illawarra | | | | | | Wagga Wagga Base | 4.4 | 4.0 | 3.7 | 3.4 | 3.3 |
| Shoalhaven | 3.1 | 2.9 | 2.7 | 2.3 | 2.5 | Calvary, Wagga Wagga | 6.0 | 5.9 | 6.3 | 6.5 | 5.5 |
| Shellharbour | 3.6 | 3.5 | 3.8 | 3.3 | 3.0 | Other area hospitals | 4.8 | 4.6 | 4.5 | 4.2 | 4.0 |
| Wollongong | 2.6 | 2.5 | 2.4 | 2.4 | 2.6 | ALL HOSPITALS | 4.7 | 4.5 | 4.4 | 4.2 | 3.9 |
| Illawarra Private | 0.0 | 6.3 | 5.6 | 6.3 | 5.6 | Southern | | | | | |
| Other area hospitals | 4.1 | 4.2 | 4.4 | 3.8 | 3.7 | Bega | 5.4 | 4.4 | 4.2 | 4.2 | 4.0 |
| ALL HOSPITALS | 3.0 | 2.9 | 2.7 | 2.5 | 3.0 | Goulburn Base | 4.4 | 4.1 | 3.6 | 3.8 | 3.3 |
| | | | | | | Queanbeyan | 3.9 | 3.4 | 3.2 | 3.2 | 3.4 |
| | | | | | | Other area hospitals | 4.3 | 4.2 | 4.1 | 3.8 | 3.9 |
| | | | | | | ALL HOSPITALS | 4.4 | 4.0 | 3.8 | 3.7 | 3.7 |
| | | | | | | TOTAL NSW | 4.2 | 4.1 | 4.0 | 3.9 | 3.7 |

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

* Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals. Mercy Care Centre, Albury ceased deliveries in June 1998.

7.9 INDICATORS OF OBSTETRIC CARE

The Australian Council on Healthcare Standards and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists have endorsed seven clinical indicators for use in Hospitals. Table 112 shows aggregate information for these indicators for all NSW hospitals and comparative information for all participating hospitals in Australia.

TABLE 112

CLINICAL INDICATORS FOR OBSTETRICS, NSW HOSPITALS AND PARTICIPATING AUSTRALIAN HOSPITALS, 1999

| Indicator description | NSW (%) | Australia (%) |
|--|---------|---------------|
| Indicator 1: Induction of labour for other than defined indications#. | | |
| 1.1 Mothers undergoing induction of labour for other than defined indications as a percentage of all mothers undergoing induction of labour for any reason. | 29.9 | 30.5 |
| 1.2 Mothers undergoing induction of labour for other than defined indications as a percentage of all mothers giving birth. | 7.2 | 8.8 |
| Indicator 2: The rate of vaginal delivery after primary caesarean section. | | |
| 2.1 Mothers delivering vaginally at the birth immediately following primary caesarean section as a percentage of all mothers delivering at the birth immediately following primary caesarean section. | 22.5 | 24.2 |
| Indicator 3: Primary caesarean section for failure to progress. | | |
| 3.1 Mothers undergoing primary caesarean section for failure to progress after a period of labour with cervical dilation of 3 cm or less as a percentage of all mothers undergoing primary non-elective caesarean section. | 10.0 | 9.1 |
| 3.2 Mothers undergoing primary caesarean section for failure to progress after a period of labour with cervical dilation of more than 3 cm as a percentage of all mothers undergoing primary non-elective caesarean section. | 31.9 | 26.3 |
| Indicator 4: Primary caesarean section for fetal distress. | | |
| 4.1 Mothers undergoing primary caesarean section for fetal distress as a percentage of total mothers delivering. | 2.9 | 3.6 |
| 4.2 Mothers undergoing primary caesarean section for fetal distress as a percentage of mothers delivering by primary caesarean section. | 21.3 | 26.5 |
| Indicator 5: Incidence of intact lower genital tract in vaginal deliveries. | | |
| 5.1 Primiparous mothers not requiring surgical repair of the lower genital tract as a percentage of all primiparous mothers. | 30.1 | 26.1 |
| Indicator 6: Apgar score. | | |
| 6.1 Infants born with an Apgar score of four or less at five minutes post delivery as a percentage of all infants born##. | 0.5 | 0.7 |
| 6.2 Infants born with an Apgar score of six or less at ten minutes post delivery as a percentage of all infants born###. | – | 0.4 |
| Indicator 7: Term infants transferred or admitted to a neonatal intensive care unit for reasons other than congenital abnormality####. | | |
| 7.1 Term infants admitted to a neonatal intensive care unit for reasons other than congenital abnormality as a percentage of all term infants born. | 0.9 | 1.0 |

Source: NSW Midwives Data Collection (HOIST). Epidemiology and Surveillance Branch, NSW Health Department. Australian Council on Healthcare Standards (unpublished data).

Defined indications include: diabetes, hypertensive disease, fetal distress, fetal death, chorioamnionitis, blood group isoimmunisation, prelabour rupture of membranes, prolonged pregnancy (41 or more weeks), and suspected intrauterine growth retardation.

NSW denominator includes live births only.

NSW data not collected.

NSW data are provided by hospital of birth and may be under-enumerated. Infants transferred to another hospital and then admitted to NICU for reasons other than congenital abnormality may not be reported by the hospital of birth.

PART 8: QUALITY OF REPORTING OF ABORIGINALITY TO THE NSW MIDWIVES DATA COLLECTION

This chapter describes a study that used capture–recapture methods to assess the quality of information on Aboriginality reported to the NSW Midwives Data Collection (MDC). This report has been published previously.¹

The NSW Aboriginal Health Strategic Plan states that: ‘In order to measure improvements and effectively target funding to programs which will improve the health of Aboriginal people, strategies are required to develop robust performance indicators, improve data collection and improve reporting processes.’² Aboriginality is known to be under-reported on Department of Health data collections in NSW, although it is not known to what extent. Improving the quality of information on Aboriginality in health data collections is an important part of improving the overall quality of information on Aboriginal health in NSW.

The MDC is a population-based surveillance system covering all births in NSW public and private hospitals, as well as home births. Births in NSW are required to be reported to the MDC under the NSW Public Health Act 1991. The data are used to monitor trends and variations in mortality and morbidity of mothers and newborns, quality of care and the major risk factors for adverse outcomes for mothers and babies. The MDC encompasses all live births and stillbirths of at least 20 weeks gestation or at least 400 grams birthweight.

METHODS

The Aboriginality of the mother, rather than the baby, is reported to the MDC, although mother’s Aboriginality is frequently used as a proxy measure for the baby’s Aboriginality. Consequently, maternal Aboriginality was used for this analysis.

Aboriginal or Torres Straight Islander mothers were counted as one group in the MDC up to 1997 and as two separate groups thereafter. We were therefore unable to examine trends in the quality of reporting for both these groups. For ease of reference, in this report ‘Aboriginal’ will be used to refer to both groups combined.

Records of births reported to the MDC were linked to birth registration records of the NSW Registry of Births, Deaths and Marriages for births occurring in the five-year period 1994–1998. Records from the two files were matched using a probabilistic linkage software (Automatch). Prior to matching, residential address and mothers’ name were standardised using a standardisation software (Autostan). The overall linkage rate was 96.6 per cent of MDC records (97.8 per cent of birth registration records).

Capture–recapture methods are used to adjust estimates of counts to reflect ascertainment level or undercounting. Capture–recapture was carried out using the method

described by McCarty et al.³ Analysis was carried out using SAS version 6.12. Analyses concerning geographic location were based on health area of hospital of birth as reported to the MDC. Home births were excluded from the analysis.

RESULTS

The estimated percentage of births to Aboriginal mothers in NSW, which were reported as Aboriginal in the MDC, rose from 58.7 to 64.8 per cent over the five-year period 1994–1998 (Table 113, Figure 22). Reporting was better in rural hospitals than urban hospitals: in 1998 47.0 per cent of births to Aboriginal mothers in urban hospitals were reported compared to 85.6 per cent in rural hospitals, though there was a trend towards improved reporting in both urban and rural hospitals.

In 1998, the highest ascertainment rate was in hospitals in the New England Area (93.3 per cent) and the lowest in hospitals in the Northern Sydney Area (15.8 per cent) (Table 114). The number of reported births to Aboriginal mothers in Northern Sydney Area hospitals was small for both the MDC and the Registry of Births, Deaths and Marriages and the estimate of total births for this Area is not very reliable, as indicated by the wide confidence intervals (8.7–23.0 per cent).

Of the nine urban health areas, only three (Central Sydney, Wentworth, and Illawarra) had ascertainment rates of maternal Aboriginality of more than 50 per cent in 1998. All rural areas had ascertainment rates of more than 70 per cent.

DISCUSSION

In using capture–recapture methods, three conditions need to be met:

- the two systems should be independent;
- all true matches and only matches should be identified;
- all cases identified by the two or more surveillance systems should be true cases that occurred in the population under investigation and within the appropriate time period.⁴

These three conditions are reasonably well met in this study. First, the two sources of data are independent. Second, the data linkage was carried out in such a way that the likelihood of obtaining true matches was maximised. For the third criteria, it is not known how many mothers in each data collection were incorrectly identified as Aboriginal. It is more likely that mothers would be incorrectly identified as non-Aboriginal than Aboriginal in NSW. If some mothers were incorrectly reported as Aboriginal in either data collection, this study would result in a larger estimate of total births to Aboriginal mothers than is actually the case.

TABLE 113

BIRTHS TO ABORIGINAL MOTHERS BY SOURCE OF BIRTH REPORT, YEAR OF BIRTH AND URBAN-RURAL HEALTH AREA OF HOSPITAL, NSW 1994-1998[#]

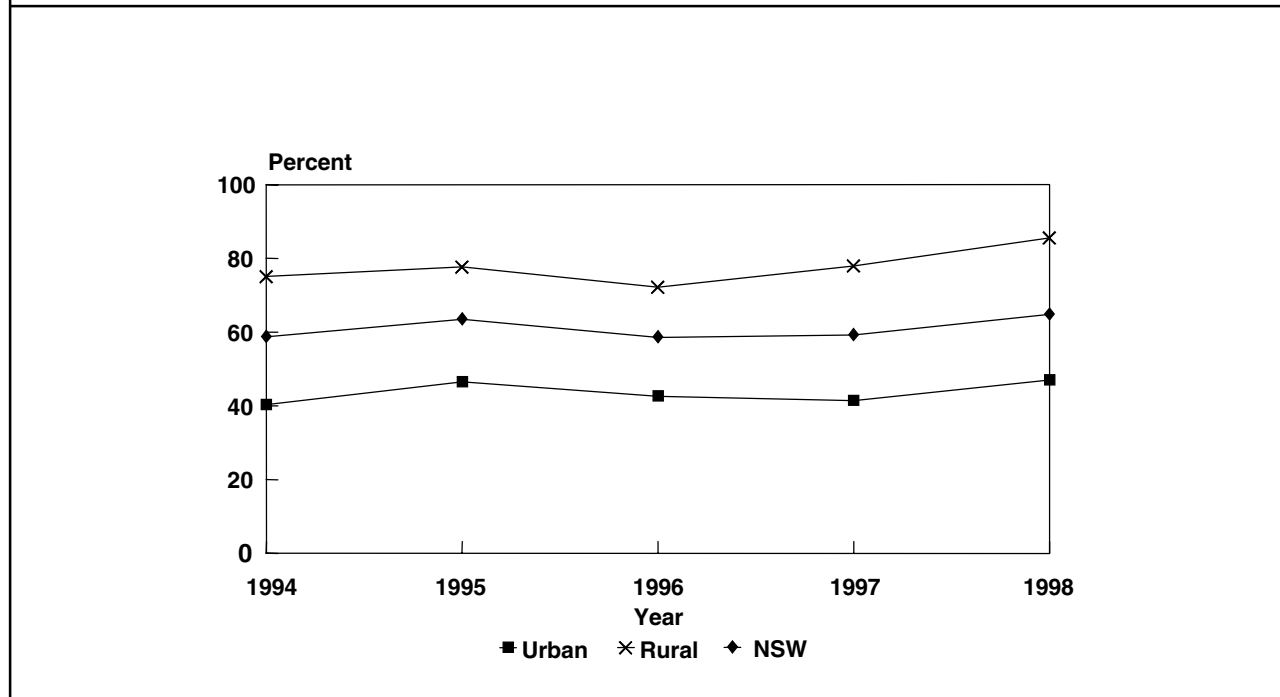
| Urban-Rural locality of hospital and Year | MDC births No. | RBDM births No. | Births reported to both MDC-RBDM No. | Estimated Aboriginal births No. | Estimated Aboriginal births reported % | 95% confidence interval of estimated births reported |
|---|-------------------|--------------------|---|------------------------------------|--|--|
| Urban | | | | | | |
| 1994 | 553 | 665 | 268 | 1371 | 40.3 | 37.7-42.9 |
| 1995 | 642 | 742 | 345 | 1380 | 46.5 | 43.9-49.2 |
| 1996 | 593 | 794 | 338 | 1392 | 42.6 | 40.0-45.2 |
| 1997 | 658 | 1066 | 441 | 1590 | 41.4 | 39.0-43.8 |
| 1998 | 785 | 1053 | 495 | 1669 | 47.0 | 44.6-49.4 |
| Rural | | | | | | |
| 1994 | 990 | 747 | 561 | 1318 | 75.1 | 72.8-77.4 |
| 1995 | 1117 | 887 | 689 | 1438 | 77.7 | 75.5-79.8 |
| 1996 | 1131 | 941 | 679 | 1567 | 72.2 | 70.0-74.4 |
| 1997 | 1196 | 1011 | 789 | 1532 | 78.0 | 76.0-80.1 |
| 1998 | 1280 | 901 | 771 | 1496 | 85.6 | 83.8-87.4 |
| NSW | | | | | | |
| 1994 | 1543 | 1412 | 829 | 2628 | 58.7 | 56.8-60.6 |
| 1995 | 1759 | 1629 | 1034 | 2771 | 63.5 | 61.7-65.3 |
| 1996 | 1724 | 1735 | 1017 | 2941 | 58.6 | 56.8-60.4 |
| 1997 | 1854 | 2077 | 1230 | 3130 | 59.2 | 57.5-60.9 |
| 1998 | 2065 | 1954 | 1266 | 3187 | 64.8 | 63.1-66.5 |

Source: *Linked NSW Midwives Data Collection and Registry of Births, Deaths and Marriages birth registration data.*

'Urban' and 'Rural' refer to urban or rural Health Area of Hospital as reported to the MDC. Urban hospitals include those in the following health

FIGURE 22

BIRTHS TO ABORIGINAL MOTHERS BY YEAR OF BIRTH AND URBAN-RURAL HEALTH AREA OF HOSPITAL, NSW 1994-1998[#]



Source: *Linked NSW Midwives Data Collection and Registry of Births, Deaths and Marriages birth registration data.*

Home births excluded.

A limitation of this study is that it is restricted to an estimation of the number of births to Aboriginal mothers. Paternal Aboriginality also influences the baby's Aboriginality, and when this is not taken into account the number of Aboriginal babies born in NSW is further under-enumerated. For 1998, the linked data set created for this study showed a further 980 births where the father was reported as Aboriginal and the mother was reported as non-Aboriginal both on the MDC and on the birth registration record. Assuming the reporting of paternal Aboriginality on the birth registration record is correct, these 980 births could be added to the 3,187 births to Aboriginal mothers in 1998, estimated by this study, to give an estimated total of 4,167 births of Aboriginal babies born in NSW in 1998. This is 4.8 per cent of all births in NSW in 1998 and double the 2.4 per cent of births to Aboriginal mothers reported to the MDC in 1998. As for maternal Aboriginality, it is likely that paternal Aboriginality is also under-reported and the true number of Aboriginal babies may be even higher.

In summary, while improvements have been made in the reporting of maternal Aboriginality to the MDC, resulting in a rise from 58.7 to 64.8 per cent of births to Aboriginal mothers being reported as Aboriginal over the five years 1994–1998, there is still a need for substantial improvement in reporting of maternal Aboriginality, particularly in urban hospitals. Also, consideration could be given as to whether information on paternal Aboriginality should be obtained from birth registration records on a regular basis and included in reports of the numbers of Aboriginal babies.

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TABLE 114

BIRTHS TO ABORIGINAL MOTHERS BY SOURCE OF BIRTH REPORT, YEAR AND HEALTH AREA OF BIRTH HOSPITAL, NSW 1994-1998

| Health Area of hospital and Year | MDC births | RBDM births | Births reported to both | Estimated Aboriginal births reported | Estimated Aboriginal births % | 95% confidence interval of estimated births reported |
|--|---------------|-----------------|-------------------------------|---|--|--|
| | No. | MDC-RBDM No. | | | | |
| Central Sydney | | | | | | |
| 1994 | 123 | 84 | 65 | 159 | 77.5 | 71.0-84.0 |
| 1995 | 113 | 78 | 63 | 140 | 80.9 | 74.4-87.4 |
| 1996 | 84 | 70 | 51 | 115 | 73.0 | 64.9-81.1 |
| 1997 | 86 | 101 | 56 | 155 | 55.6 | 47.8-63.4 |
| 1998 | 73 | 90 | 51 | 129 | 56.8 | 48.2-65.4 |
| Northern Sydney | | | | | | |
| 1994 | 19 | 23 | 11 | 39 | 48.7 | 33.0-64.4 |
| 1995 | 13 | 24 | 7 | 43 | 30.4 | 16.6-44.2 |
| 1996 | 13 | 27 | 8 | 43 | 30.5 | 16.7-44.4 |
| 1997 | 8 | 35 | 6 | 45 | 17.7 | 6.6-28.8 |
| 1998 | 16 | 29 | 4 | 101 | 15.8 | 8.7-23.0 |
| Western Sydney | | | | | | |
| 1994 | 77 | 93 | 32 | 221 | 34.8 | 28.5-41.1 |
| 1995 | 85 | 102 | 36 | 238 | 35.7 | 29.6-41.7 |
| 1996 | 67 | 130 | 42 | 206 | 32.5 | 26.1-38.9 |
| 1997 | 76 | 144 | 48 | 227 | 33.5 | 27.4-39.6 |
| 1998 | 127 | 162 | 80 | 257 | 49.5 | 43.4-55.6 |
| Wentworth | | | | | | |
| 1994 | 66 | 73 | 31 | 154 | 42.9 | 35.1-50.7 |
| 1995 | 82 | 88 | 44 | 163 | 50.3 | 42.6-57.9 |
| 1996 | 84 | 97 | 40 | 202 | 41.5 | 34.8-48.3 |
| 1997 | 88 | 140 | 55 | 223 | 39.4 | 33.0-45.9 |
| 1998 | 131 | 146 | 80 | 239 | 54.9 | 48.6-61.2 |
| South Western | | | | | | |
| 1994 | 76 | 120 | 25 | 357 | 21.3 | 17.0-25.5 |
| 1995 | 88 | 141 | 52 | 237 | 37.1 | 30.9-43.2 |
| 1996 | 91 | 142 | 48 | 267 | 34.0 | 28.3-39.7 |
| 1997 | 84 | 181 | 47 | 321 | 26.1 | 21.3-30.9 |
| 1998 | 112 | 208 | 63 | 368 | 30.4 | 25.7-35.1 |
| Central Coast | | | | | | |
| 1994 | 15 | 34 | 9 | 55 | 27.3 | 15.5-39.0 |
| 1995 | 20 | 36 | 12 | 59 | 34.0 | 21.9-46.1 |
| 1996 | 27 | 48 | 21 | 61 | 44.0 | 31.6-56.4 |
| 1997 | 36 | 58 | 24 | 86 | 41.7 | 31.3-52.1 |
| 1998 | 42 | 55 | 24 | 95 | 44.1 | 34.1-54.0 |
| Hunter | | | | | | |
| 1994 | 67 | 101 | 32 | 209 | 32.0 | 25.7-38.4 |
| 1995 | 94 | 127 | 52 | 228 | 41.1 | 34.8-47.5 |
| 1996 | 101 | 132 | 56 | 237 | 42.6 | 36.3-48.9 |
| 1997 | 123 | 183 | 92 | 244 | 50.3 | 44.1-56.6 |
| 1998 | 111 | 162 | 78 | 230 | 48.2 | 41.8-54.7 |
| Illawarra | | | | | | |
| 1994 | 81 | 78 | 45 | 140 | 57.9 | 49.7-66.1 |
| 1995 | 112 | 83 | 60 | 155 | 72.4 | 65.4-79.5 |
| 1996 | 101 | 86 | 59 | 147 | 68.8 | 61.3-76.2 |
| 1997 | 124 | 122 | 86 | 176 | 70.6 | 63.8-77.3 |
| 1998 | 113 | 109 | 80 | 154 | 73.5 | 66.5-80.4 |
| South Eastern Sydney | | | | | | |
| 1994 | 29 | 59 | 18 | 94 | 30.9 | 21.6-40.3 |
| 1995 | 35 | 63 | 19 | 114 | 30.6 | 22.2-39.1 |
| 1996 | 25 | 62 | 13 | 116 | 21.6 | 14.1-29.0 |
| 1997 | 33 | 102 | 27 | 124 | 26.6 | 18.8-34.4 |
| 1998 | 60 | 92 | 35 | 157 | 38.3 | 30.7-45.9 |

TABLE 114 (continued)

BIRTHS TO ABORIGINAL MOTHERS BY SOURCE OF BIRTH REPORT, YEAR AND HEALTH AREA OF BIRTH HOSPITAL, NSW 1994–1998

| Health Area of hospital and Year | MDC births | RBDM births | Births reported to both MDC–RBDM | Estimated Aboriginal births | Estimated Aboriginal births reported % | 95% confidence interval of estimated births reported |
|--|---------------|----------------|---|-----------------------------------|--|--|
| | No. | No. | No. | No. | | |
| Northern Rivers | | | | | | |
| 1994 | 122 | 111 | 74 | 183 | 66.8 | 60.0–73.6 |
| 1995 | 165 | 120 | 95 | 208 | 79.2 | 73.7–84.7 |
| 1996 | 143 | 104 | 76 | 195 | 73.2 | 67.0–79.4 |
| 1997 | 160 | 151 | 111 | 218 | 73.6 | 67.7–79.4 |
| 1998 | 180 | 131 | 102 | 231 | 77.9 | 72.6–83.3 |
| Mid North Coast | | | | | | |
| 1994 | 141 | 108 | 77 | 197 | 71.4 | 65.1–77.7 |
| 1995 | 158 | 121 | 92 | 208 | 76.1 | 70.3–81.9 |
| 1996 | 159 | 135 | 94 | 228 | 69.7 | 63.8–75.7 |
| 1997 | 174 | 148 | 104 | 247 | 70.4 | 64.7–76.0 |
| 1998 | 168 | 99 | 82 | 203 | 82.9 | 77.7–88.1 |
| New England | | | | | | |
| 1994 | 199 | 154 | 122 | 251 | 79.3 | 74.3–84.3 |
| 1995 | 212 | 163 | 144 | 240 | 88.4 | 84.3–92.4 |
| 1996 | 246 | 178 | 149 | 294 | 83.7 | 79.5–88.0 |
| 1997 | 267 | 227 | 197 | 308 | 86.8 | 83.0–90.6 |
| 1998 | 283 | 208 | 194 | 303 | 93.3 | 90.5–96.1 |
| Macquarie | | | | | | |
| 1994 | 193 | 143 | 117 | 236 | 81.9 | 76.9–86.8 |
| 1995 | 185 | 159 | 114 | 258 | 71.8 | 66.3–77.3 |
| 1996 | 238 | 210 | 149 | 335 | 71.0 | 66.1–75.9 |
| 1997 | 261 | 184 | 157 | 306 | 85.4 | 81.4–89.3 |
| 1998 | 257 | 181 | 164 | 284 | 90.6 | 87.2–94.0 |
| Mid Western | | | | | | |
| 1994 | 100 | 74 | 53 | 139 | 71.8 | 64.3–79.3 |
| 1995 | 102 | 90 | 64 | 143 | 71.2 | 63.8–78.6 |
| 1996 | 103 | 111 | 68 | 168 | 61.4 | 54.0–68.7 |
| 1997 | 93 | 93 | 66 | 131 | 71.1 | 63.3–78.8 |
| 1998 | 106 | 91 | 67 | 144 | 73.7 | 66.5–80.9 |
| Far West | | | | | | |
| 1994 | 93 | 56 | 51 | 102 | 91.1 | 85.6–96.7 |
| 1995 | 122 | 77 | 73 | 129 | 94.8 | 91.0–98.7 |
| 1996 | 76 | 46 | 41 | 85 | 89.2 | 82.7–95.8 |
| 1997 | 77 | 47 | 39 | 93 | 83.2 | 75.5–90.8 |
| 1998 | 90 | 52 | 46 | 102 | 88.6 | 82.4–94.8 |
| Greater Murray | | | | | | |
| 1994 | 101 | 72 | 46 | 157 | 64.2 | 56.7–71.6 |
| 1995 | 107 | 107 | 69 | 166 | 64.6 | 57.3–71.9 |
| 1996 | 128 | 121 | 83 | 186 | 68.7 | 62.0–75.3 |
| 1997 | 113 | 118 | 86 | 155 | 72.9 | 65.9–79.9 |
| 1998 | 132 | 101 | 86 | 155 | 85.2 | 79.6–90.8 |
| Southern | | | | | | |
| 1994 | 41 | 29 | 21 | 56 | 72.9 | 61.2–84.5 |
| 1995 | 66 | 50 | 38 | 87 | 76.2 | 67.2–85.2 |
| 1996 | 38 | 36 | 19 | 71 | 53.4 | 41.8–65.0 |
| 1997 | 51 | 43 | 29 | 75 | 67.8 | 57.2–78.3 |
| 1998 | 64 | 38 | 30 | 81 | 79.2 | 70.4–88.1 |

Source: *Linked NSW Midwives Data Collection and Registry of Births, Deaths and Marriages birth registration data.*

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, p.16).

| | |
|---|---|
| Abnormal palmar creases | Inborn errors of metabolism other than phenylketonuria, galactosemia and congenital hypothyroidism. |
| 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 infections (unless occurring with structural defects) | Muscular dystrophies & myopathies |
| Congenital neoplasms/tumours (exception: cystic hygroma) | Oesophageal reflux |
| Cystic fibrosis | Patent ductus arteriosus (less than 37 weeks gestation) |
| Developmental disability | Pilonidal sinus |
| Deviated nasal septum | Sacral dimples |
| Fetal alcohol syndrome | Single umbilical artery (unless occurring with structural defects) |
| Glucose-6-phosphate dehydrogenase (G6PD) deficiency | Skin tag |
| Haemophilia | Strabismus |
| Heart murmurs (functional) | Talipes (exception: those requiring surgery) |
| Hernia (epigastric, hiatus, inguinal, umbilical) | Tongue tie |
| Hydrocele (testis) | Undescended testes (exception: those requiring surgery) |
| Hydrops fetalis 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
Cocos (Keeling) Islands
Norfolk Island
New Zealand
United Kingdom
Channel Islands
Isle of Man
Ireland
Bermuda
Canada
United States of America
South Africa

Central and South America

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

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

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

**Melanesia, Micronesia and
Polynesia**

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

Middle East and Africa

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

North East Asia

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

South East Asia

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

Southern Asia

Afghanistan
Bangladesh
Bhutan
India
Maldives
Nepal
Pakistan
Sri Lanka

Southern Europe

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

Western and Northern Europe

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

APPENDIX 4

MAP OF NSW HEALTH AREAS

