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New South Wales Mothers and Babies 2005

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Editors

Lee Taylor and Barbara Bajuk.

2. EXECUTIVE SUMMARY

This is the ninth 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 (NICUS), and the NSW Birth Defects Register (BDR).

In view of the substantial increase in births observed in 2005, this report includes a supplementary chapter (Chapter 13) on demographic trends in births in NSW.

Information on causes of maternal deaths in NSW was obtained through the work of the NSW Maternal and Perinatal Committee. From 1 January 2000, confidential reviews of perinatal deaths among babies of at least 22 weeks gestation or 500 grams birthweight are also carried out by the Committee. Chapter 12 describes the results of the review for deaths occurring in 2005.

Trends in NSW

Between 2001 and 2004, the numbers of births in NSW remained stable at about 86,000 per annum. In 2005, the number of births increased to 90,610, a rise of 5.8 per cent compared to 2004.

The increase in births occurred mainly in the Sydney area, with both the Sydney South West and Sydney West Areas reporting over 1,000 more births in 2005 than 2004.

The largest increase in births occurred among mothers aged 35–39 years. While the number of births to teenage mothers was slightly higher in 2005 compared to 2004, the rate of increase was less than other maternal age groups, and the overall percentage of births to teenage mothers followed the trend of previous years, falling slightly from 4.0 per cent of all births in 2004 to 3.9 per cent in 2005.

Births to Aboriginal and Torres Strait Islander mothers also increased in 2005, with most of the increase occurring among mothers aged 20–29 years. Births to teenage mothers followed the same pattern as for non-Aboriginal mothers, with the number of births increasing slightly and the overall proportion of births to teenage mothers following the downward trend of previous years.

The increase in births in 2005 occurred fairly evenly among mothers who were giving birth for the first time and mothers who had given birth previously. There was no substantial change in the numbers of previous pregnancies among mothers who gave birth in 2005 compared to previous years.

Following the pattern of previous years, about 28 per cent mothers were born overseas in 2005, most commonly in the United Kingdom (2.7 per cent), New Zealand (2.5 per cent), China (2.0 per cent) and Vietnam (1.9 per cent).

Between 2001 and 2005, the proportion of mothers planning to give birth in a birth centre remained stable at 3–4 per cent, while the reported number of mothers planning a home birth fell from 182 to 152 over the 5 year period.

The rate of normal vaginal birth fell from 65.4 per cent in 2001 to 61.2 per cent in 2005. Over the 5 years, the caesarean section rate increased from 23.6 to 28.1 per cent and the rate of instrumental delivery remained steady at 10 to 11 per cent. Caesarean section delivery continues to be more common among privately than publicly insured mothers. The changing pattern in type of delivery is evident in both groups between 2000 and 2004. Among privately insured mothers the rate of normal vaginal birth decreased from 55.0 to 50.3 per cent and the caesarean section rate increased from 28.2 to 35.0 per cent. Among publicly insured mothers the rate of normal vaginal birth decreased from 71.8 to 67.8 per cent and the caesarean section rate increased from 18.5 to 23.4 per cent.

Since 2001, the rate of low birth weight (less than 2,500 grams) has been steady at about 6 per cent. The rate was 6.3 per cent in 2005. The percentage of babies born prematurely (less than 37 weeks gestation) has remained stable at about 7 per cent and was 7.2 per cent in 2005.

The perinatal mortality rate varied from 8.6 to 9.6 per 1,000 births over the 5 year period. About two-thirds of all perinatal deaths were stillbirths and one-third were neonatal deaths.

In the period 1990–2004, 155 deaths were reported among pregnant women or women who gave birth less than 6 weeks previously. The number of deaths per year has gradually declined with less than 10 deaths per year reported since 2001.

Aboriginal and Torres Strait Islander Mothers and Babies

Between 2001 and 2005, the proportion of Aboriginal and Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation increased from 64.7 to 74.9 per cent. This compares with 88.4 per cent of non-Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation in 2005.

In 2005, 55.3 per cent of Aboriginal and Torres Strait Islander mothers reported smoking at some time during pregnancy, compared with 59.0 per cent in 2001.

Since 2001, the rates of low birth weight (less than 2,500 grams) and prematurity (less than 37 weeks gestation) in Aboriginal and Torres Strait Islander babies have been over 10 per cent. These rates are one and a half times to 2 times higher than the rates for NSW overall. The perinatal mortality rate among babies born to Aboriginal and Torres Strait Islander mothers was 15.2 per 1,000 in 2005, higher than the rate of 8.6 per 1,000 experienced by babies born to non-Aboriginal or Torres Strait Islander mothers.

Neonatal Intensive Care

There were 2,257 infants registered in the Neonatal Intensive Care Units' Data Collection in 2005 representing a registration rate of 23.8 per 1,000 live births.

Antenatal complications were reported for 87.1 per cent of mothers. The proportion of women receiving antenatal corticosteroids for lung maturation has increased each year since 1992, with 87 per cent of mothers receiving steroids in 2005.

Thirty-six per cent of infants registered in 2005 were born following a booked tertiary centre birth and 33.1 per cent were born following maternal transfer. Twenty-nine per cent were transferred to a tertiary centre following birth and 3.2 per cent were transferred from one tertiary centre to another during the first day of life.

Most infants (79 per cent) were from a singleton pregnancy, 18.3 per cent were from a twin pregnancy, 2.3 per cent were from a triplet pregnancy and 0.3 per cent were from a quadruplet pregnancy.

Seventy-four per cent of infants registered during 2005 were preterm (less than 37 weeks gestation), 39.7 per cent were very preterm (less than 32 weeks gestation) and 10.8 per cent were extremely preterm (less than 28 weeks gestation). Nearly one in six (15.6 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 2005 (86.7 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 10.5 per cent of infants. Severe grades (Grade 3 or 4) of retinopathy of prematurity were present in 4.3 per cent of infants less than 32 weeks gestation, of whom 74.2 per cent had laser therapy to prevent retinal detachment. Surfactant was given to 36.5 per cent of infants; the majority (52.4 per cent) of ventilated infants with a diagnosis of Respiratory Distress Syndrome received surfactant.

Overall, 94 per cent of infants without a major congenital anomaly survived to six-months of age. Survival improved with gestational age up to 36 weeks after which it decreased slightly. Of the infants who died, most (68.4 per cent) died at less than one week of age and a further 21.1 per cent died at less than 29 days of age. The six-month survival rate for infants born at all gestational ages was similar for those born in a tertiary centre and those born in a non-tertiary centre.

Extremely Preterm Follow up

From 1998 to 2002, 69.3 per cent of 22 to 28 weeks gestation infants were liveborn. Eighty-nine per cent of liveborn infants were admitted to a neonatal intensive care unit and 77.2 per cent of neonatal intensive care unit admissions survived to hospital discharge. A further 1.7 per cent of children died after hospital discharge and before their follow up appointment.

There were 1,490 children available for follow up at 2–3 years of age, corrected for prematurity. The follow up rate was 79.3 per cent. The median (25th, 75th) age of assessment was 35.6 (29.5, 36.8) months.

Of the 1,182 children with information at 2–3 years of age, corrected for prematurity, 10.8 per cent had cerebral palsy, 0.9 per cent were bilaterally blind, 5.3 per cent were bilaterally deaf and 10.8 per cent had a moderate to severe developmental delay.

Overall 16.8 per cent of children had a moderate to severe functional disability due to cerebral palsy, bilateral blindness, deafness requiring bilateral hearing aids or cochlear implants or developmental delay more than 2 standard deviations below the mean on a standardized psychological assessment.

Birth defects

About 2,000 infants are born with birth defects each year in NSW. In 1999–2005, 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.

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.

Perinatal deaths

Confidential reports on 630 perinatal deaths in 2005 were reviewed. Overall, 174 (27.6 per cent) perinatal deaths reviewed for 2005 were unexplained. The next most common obstetric antecedents of death were spontaneous preterm labour (*n*=119, 18.9 per cent), fetal abnormality (*n*=114, 18.1 per cent) and antepartum haemorrhage (*n*=51, 8.1 per cent). Post-mortem examinations were carried out in 37.7 per cent of all perinatal deaths.

The most common cause of neonatal death was extreme prematurity (*n*=97, 43.1 per cent), followed by congenital abnormalities (*n*=47, 20.9 per cent).

3. METHODS

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 Performance, Analysis and Reporting Branch in the Data Collections and Quality Section of the NSW Department of Health, where they are compiled into the MDC database.

Over 66 per cent of MDC notifications are received electronically from hospital obstetric information systems. These notifications are received on disk or by email and replace the submission of the record on paper. There are several source systems that generate the MDC data. The largest source is the OBSTET database, which supplies 47.7 per cent of all MDC data, followed by: the OIS database (Central Sydney Area Health Service) 6.3 per cent; the Central Coast modified CRS System (2.9 per cent); the Illawarra Shared Care System (2.5 per cent); the Sydney Adventist Hospital database (2.7 per cent); and Medistat (1.3 per cent).

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 and 4 of the level 4 neonatal nurseries 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 32 weeks;
- birth weight less than or equal to 1,500 grams;
- mechanical ventilation for 4 hours or more;
- continuous positive airways pressure (CPAP) for 4 hours or more;
- major surgery (opening of a body cavity) ;
- insertion of a central venous line for 4 hours or more.

In 2004 the 10 neonatal intensive care units in NSW and ACT were situated at the following perinatal centres: John Hunter Children's Hospital (Newcastle), Liverpool Health Service, Nepean Hospital, Royal Hospital for Women, Royal North Shore Hospital, Royal Prince Alfred Mothers and Babies Hospital, The Canberra Hospital (Canberra), Westmead Hospital, and at the 2 paediatric hospitals: Sydney Children's Hospital and The Children's Hospital at Westmead. The 4 level 4 neonatal nurseries that joined NICUS in 2002 were situated at Blacktown Hospital, Gosford Hospital, St George Hospital and Wollongong Hospital.

The neonatal, maternal and perinatal data that comprise the NICUS Data Collection are collected and collated within each neonatal intensive care unit and level 4 nursery 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 Neonatal Intensive Care Units' Follow up Data Collection

The Neonatal Intensive Care Units' Follow up Data Collection is a statewide audit at 2–3 years of age, corrected for prematurity of infants born 22 to 28 weeks gestation and admitted to a neonatal intensive care unit in NSW and the ACT.

All surviving infants were assessed by a developmental assessment team at the following perinatal centres: John Hunter Children's Hospital (Newcastle), Liverpool Health Service, Nepean Hospital, Royal Hospital for Women, Royal North Shore Hospital, Royal Prince Alfred Mothers and Babies Hospital, The Canberra Hospital (Canberra) or Westmead Hospital or at one of the 2 paediatric hospitals: The Children's Hospital at Westmead, and the Sydney Children's Hospital.

The follow up data that comprise the NICUS Follow up Data Collection are collected and collated within each of the above hospitals by a designated member of the developmental assessment team. 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 Centre for Epidemiology and Research of the NSW Department of Health.

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 2 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, Centre for Epidemiology and Research. Requests for data concerning individuals for sufficiently important research purposes will be referred to the NSW Department of Health 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 Department of Health's website 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, and, from 1998, health insurance status.

The ISC covers demographic and episode related data for 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 Performance, Analysis and Reporting Branch in the Data Collections and Quality Section of the NSW Department of Health.

NSW Maternal and Perinatal Committee

The NSW Maternal and Perinatal Committee is a quality assurance committee established under the *NSW Health Administration Act 1982*, and is privileged under the Act to carry out confidential reviews of both maternal and perinatal deaths. Members are appointed by the Minister for Health. The committee reviews each maternal 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 committee also reviews perinatal deaths of at least 22 weeks gestation or at least 500 grams birthweight. 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.

Method for estimating level of reporting of maternal Aboriginality

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.

The number of births reported to Torres Strait Islander mothers is quite small in NSW. Aboriginal and Torres Straight Islander mothers were therefore combined for this analysis. For ease of reference, 'Aboriginal' is used to refer to both Aboriginal or Torres Strait Islander mothers.

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 4–year period 2001–2004. Records from the 2 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 95.0 per cent of MDC records and 99.0 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.[1] Analysis was carried out using SAS version 9.1.3. Analyses concerning geographic location were based on health area of hospital of birth as reported to the MDC. Home births and births for which the hospital of birth was not stated were excluded from the analysis.

References

1. McCarty DJ, Tull ES, Moy CS, Kwoh CK, LaPorte RE. Ascertainment corrected rates: Applications of Capture–Recapture Methods. *Int J Epidemiol* 1993; 22(3): 559–565.

Definitions

Aboriginal and Torres Strait Islander

Women who identify themselves to be of Australian Aboriginal and Torres Strait Islander heritage.

Age corrected for prematurity

Age corrected for prematurity: until the child is 3 years old, the age of the baby is calculated from the due date and not the date of birth.

Apgar score

A numerical scoring system routinely administered one and 5 minutes after birth to evaluate the condition of the baby. The score ranges from 0–10 (10 being perfect). It takes account of 5 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 clicky hips. From 1994, the following 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.
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. In a multiple pregnancy, one confinement will result in more than one birth.

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.

Functional disability[1]:

None–minimal:	No developmental delay: Griffiths Mental Developmental Scales (GMDS) general quotient (GQ) or Bayley Scales of Infant Development-II (BSID-II) mental developmental index (MDI) 1 standard deviation below the mean to 3 standard deviation above the mean;
Mild:	Developmental delay: GMDS or BSID-II between 1 and 2 Standard Deviations below the mean; Mild cerebral palsy: able to walk without aids at 2-3 years of age, corrected for prematurity;
Moderate:	Developmental delay: GMDS or BSID-II between 2 and 3 Standard Deviations below the mean; Moderate cerebral palsy: able to walk with the assistance of aids at 2–3 years of age, corrected for prematurity; Sensorineural or conductive deafness: requiring amplification with bilateral hearing aids or unilateral–bilateral cochlear implant;
Severe:	Developmental delay: GMDS or BSID-II 3 or more standard deviations below the mean; Bilateral blindness: with a visual acuity of <6/60 in the better eye; Severe cerebral palsy: unable to walk with the assistance of aids at 2–3 years of age, corrected for prematurity.

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.

Griffiths Mental Developmental Scales (GMDS)

The mean for the General Quotient (GQ) of the Griffiths Mental Developmental Scales (GMDS) is 100.2 and the standard deviation (SD) is 12.8.

The mean for the mental developmental index (MDI) of the Bayley Scales of Infant Development-II (BSID-II) is 100 and the standard deviation (SD) is 15.

Induction of labour

Oxytocics–prostaglandins: the initiation of labour by the use of oxytocic agents, prostaglandins, or their derivatives (oral, intravaginal or intravenous).

ARM only: the initiation of labour by artificial rupture of membranes.

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.

Livebirth

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

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 4 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 liveborn 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 livebirths.

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.

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 birthweight.

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.

References

1. The Victorian Infant Collaborative Study Group. Postnatal corticosteroids and sensorineural outcome at 5 years of age. *J Paediatr Child Health* 2000; 36:256–261.

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 that can give high-level oxygen, can start mechanical ventilation if necessary, and has paediatric house staff.

Level 2b: Neonatal Care—a unit that 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, 7 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.

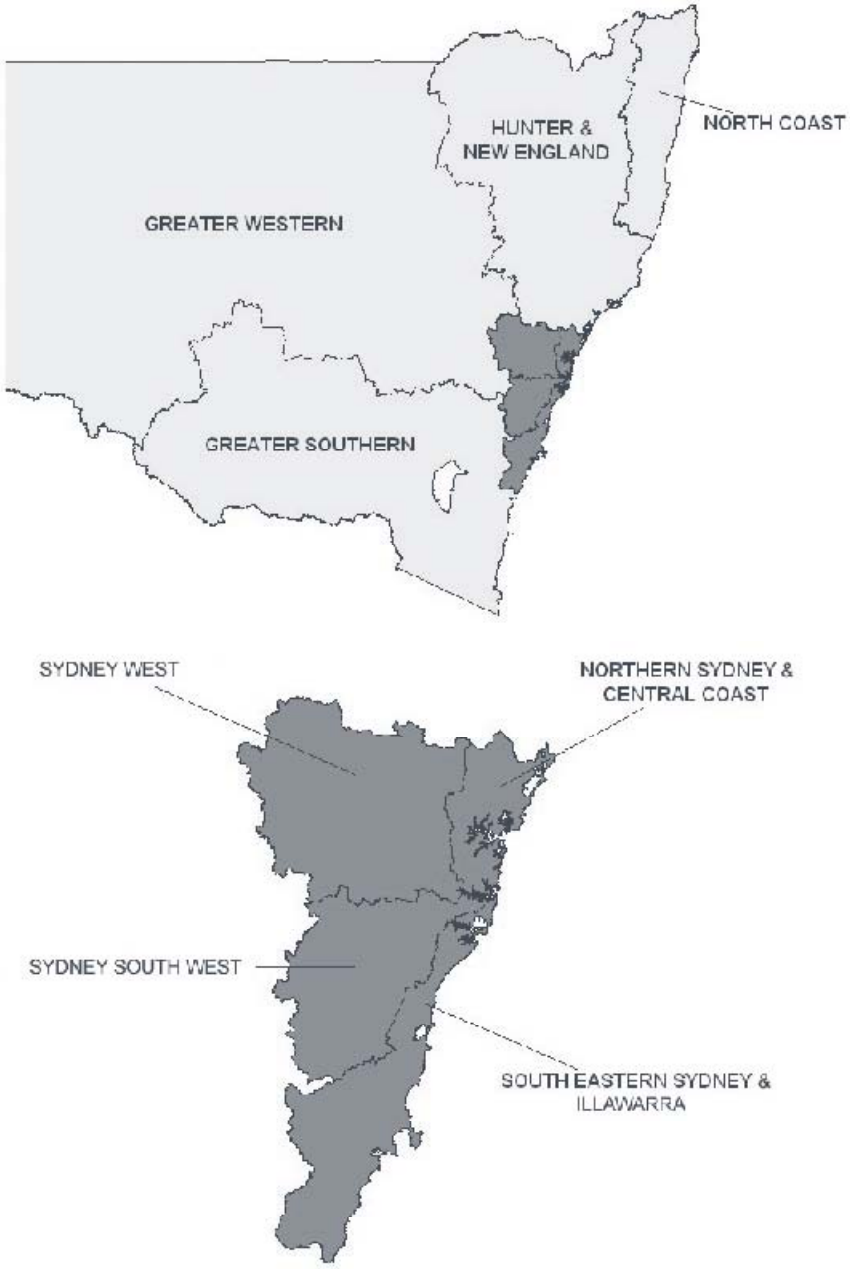
Type of delivery

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.

MAP OF NSW HEALTH AREAS



4. TRENDS IN NEW SOUTH WALES

Confinements and births by plurality

There were 90,610 births to 89,140 women reported in 2005 (Table 1). This represents a 5.8 per cent increase in births compared to 2004. The number of twin pregnancies rose slightly compared to 2004, while the number of triplet pregnancies has remained fairly stable since 2001.

TABLE 1

PLURALITY, NSW 2001–2005

Plurality	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
Singleton	82926	98.3	83190	98.3	83677	98.4	82983	98.5	87699	98.4
Twins	1428	1.7	1375	1.6	1330	1.6	1274	1.5	1413	1.6
Triplets	24	0.0	22	0.0	23	0.0	30	0.0	27	0.0
Quadruplets	1	0.0	0	0.0	2	0.0	1	0.0	1	0.0
Total	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0
Births										
Singleton	82926	96.6	83190	96.7	83677	96.8	82983	96.9	87699	96.8
Twins	2856	3.3	2749	3.2	2660	3.1	2549	3.0	2826	3.1
Triplets	72	0.1	66	0.1	69	0.1	90	0.1	81	0.1
Quadruplets	4	0.0	0	0.0	8	0.0	4	0.0	4	0.0
Total	85858	100.0	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Health area of residence

In 2005, the largest number of births occurred in the Sydney South West Area, followed by Sydney West and South Eastern Sydney & Illawarra Areas (Table 2). Compared to 2004, there were increases in the numbers of births in all health areas.

TABLE 2

MATERNAL HEALTH AREA OF RESIDENCE, NSW 2001–2005

Health Area	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	18775	22.3	19105	22.6	19485	22.9	18720	22.2	19713	22.1
South Eastern Sydney & Illawarra	13590	16.1	13699	16.2	13898	16.3	14121	16.8	14619	16.4
Sydney West	15763	18.7	15883	18.8	15942	18.7	15834	18.8	17019	19.1
Northern Sydney & Central Coast	12856	15.2	12818	15.2	13142	15.5	13032	15.5	13697	15.4
Hunter & New England	9753	11.6	10004	11.8	9694	11.4	9672	11.5	10381	11.6
North Coast	4762	5.6	4656	5.5	4587	5.4	4690	5.6	4973	5.6
Greater Southern	4209	5.0	3969	4.7	3834	4.5	3838	4.6	3993	4.5
Greater Western	4110	4.9	3855	4.6	3898	4.6	3784	4.5	3985	4.5
Other–not stated	561	0.7	598	0.7	552	0.6	597	0.7	760	0.9
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

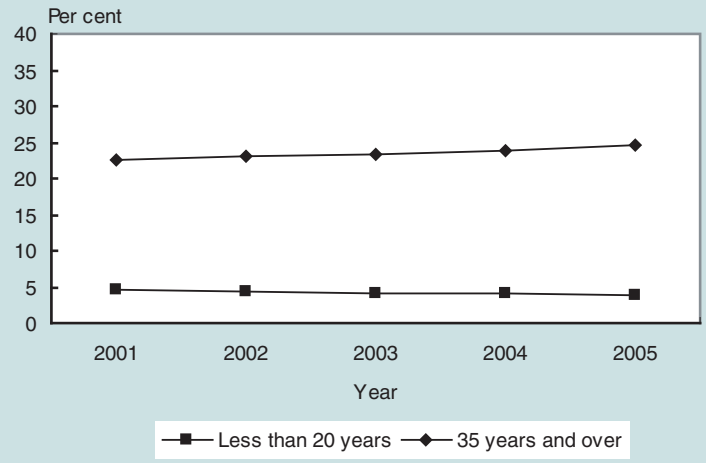
Maternal age

The number of teenage mothers increased from 3,387 in 2004 to 3,440 in 2005. The rate of increase was less than other maternal age groups, and the percentage of births to teenage mothers fell slightly from 4.0 to 3.9 per cent. The number of mothers 35 years of age or over increased from 16,769 in 2004 to 18,441 in 2005, an increase from 19.9 to 20.7 per cent of all confinements (Figure 1, Table 3).

The mean maternal age rose from 29.9 to 30.4 years over the 5 years 2001 to 2005. The trend towards later childbirth is evident among both primiparous and multiparous mothers: the proportion of mothers giving birth for the first time who were aged 35 years or more increased from 11.6 to 13.6 per cent over the 5 year period, and the proportion of multiparous mothers who were aged 35 years or more increased from 22.7 to 25.7 per cent. The mean maternal age rose from 28.3 to 28.8 years for primiparous mothers and from 31.1 to 31.5 years for multiparous mothers.

FIGURE 1

MOTHERS AGED LESS THAN 20 YEARS AND 35 YEARS AND OVER, NSW 2001–2005



Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

TABLE 3

MATERNAL AGE, NSW 2001–2005

Maternal age (years)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Under 15	19	0.0	28	0.0	23	0.0	22	0.0	30	0.0
15–19	3778	4.5	3624	4.3	3363	4.0	3365	4.0	3410	3.8
20–24	13036	15.4	12674	15.0	12529	14.7	12095	14.3	12739	14.3
25–29	25528	30.3	24523	29.0	24138	28.4	23113	27.4	24006	26.9
30–34	26707	31.7	27810	32.9	28522	33.5	28906	34.3	30502	34.2
35–39	12640	15.0	13107	15.5	13582	16.0	13808	16.4	15275	17.1
40–44	2488	2.9	2645	3.1	2752	3.2	2819	3.3	3017	3.4
45+	122	0.1	120	0.1	113	0.1	142	0.2	149	0.2
Not stated	61	0.1	56	0.1	10	0.0	18	0.0	12	0.0
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Maternal country of birth

In the period 2001–2005, about 72 per cent of mothers were born in Australia. In 2005, mothers born in the United Kingdom, New Zealand, China, Vietnam and Lebanon together accounted for 10.6 per cent of all mothers (Table 4). Further information on maternal country of birth is shown in Chapter 7.

TABLE 4

MATERNAL COUNTRY OF BIRTH, NSW 2001–2005#

Country of birth	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Australia	61655	73.1	61640	72.9	61432	72.2	60961	72.3	64246	72.1
United Kingdom	2331	2.8	2344	2.8	2368	2.8	2229	2.6	2367	2.7
New Zealand	2009	2.4	1998	2.4	2121	2.5	1989	2.4	2233	2.5
China	1791	2.1	1830	2.2	1586	1.9	1672	2.0	1767	2.0
Vietnam	1691	2.0	1773	2.1	1863	2.2	1684	2.0	1652	1.9
Lebanon	1667	2.0	1663	2.0	1696	2.0	1594	1.9	1608	1.8
Philippines	1243	1.5	1156	1.4	1192	1.4	1083	1.3	1160	1.3
India	612	0.7	747	0.9	810	1.0	888	1.1	1094	1.2
Iraq	577	0.7	545	0.6	648	0.8	621	0.7	681	0.8
Fiji	652	0.8	655	0.8	691	0.8	686	0.8	670	0.8
South Africa	450	0.5	486	0.6	486	0.6	547	0.6	579	0.6
Indonesia	494	0.6	494	0.6	489	0.6	519	0.6	541	0.6
South Korea	358	0.4	301	0.4	328	0.4	389	0.5	419	0.5
United States of America	332	0.4	346	0.4	355	0.4	372	0.4	359	0.4
Pakistan	276	0.3	266	0.3	260	0.3	291	0.3	345	0.4
Malaysia	251	0.3	262	0.3	271	0.3	283	0.3	339	0.4
Japan	293	0.3	283	0.3	293	0.3	260	0.3	339	0.4
Hong Kong	332	0.4	307	0.4	301	0.4	314	0.4	332	0.4
Ireland	291	0.3	267	0.3	333	0.4	281	0.3	325	0.4
Sri Lanka	291	0.3	324	0.4	299	0.4	310	0.4	320	0.4
Western Samoa	319	0.4	310	0.4	303	0.4	289	0.3	306	0.3
Bangladesh	183	0.2	212	0.3	198	0.2	233	0.3	293	0.3
Thailand	221	0.3	268	0.3	253	0.3	277	0.3	290	0.3
Cambodia	285	0.3	279	0.3	295	0.3	274	0.3	268	0.3
Afghanistan	147	0.2	133	0.2	143	0.2	159	0.2	263	0.3
Turkey	317	0.4	266	0.3	265	0.3	268	0.3	251	0.3
Canada	203	0.2	192	0.2	225	0.3	237	0.3	227	0.3
Sudan	65	0.1	69	0.1	117	0.1	154	0.2	226	0.3
Tonga	278	0.3	271	0.3	219	0.3	246	0.3	222	0.2
Germany	192	0.2	188	0.2	237	0.3	205	0.2	211	0.2
Chile	206	0.2	250	0.3	187	0.2	172	0.2	194	0.2
Egypt	176	0.2	160	0.2	173	0.2	159	0.2	177	0.2
Iran	169	0.2	137	0.2	192	0.2	159	0.2	176	0.2
Serbia and Montenegro	–	–	–	–	–	–	–	–	168	0.2
Russian Federation	63	0.1	105	0.1	106	0.1	115	0.1	151	0.2
Syria	150	0.2	151	0.2	154	0.2	159	0.2	147	0.2
Singapore	119	0.1	117	0.1	129	0.2	119	0.1	146	0.2
North Korea	102	0.1	151	0.2	206	0.2	153	0.2	140	0.2
Former Yugoslavia	607	0.7	531	0.6	571	0.7	464	0.6	135	0.2
Poland	92	0.1	106	0.1	116	0.1	130	0.2	127	0.1
France	99	0.1	109	0.1	96	0.1	119	0.1	122	0.1
Italy	139	0.2	70	0.1	106	0.1	107	0.1	119	0.1
Laos	118	0.1	128	0.2	114	0.1	124	0.1	108	0.1
Taiwan	85	0.1	78	0.1	96	0.1	80	0.1	107	0.1
Papua New Guinea	133	0.2	135	0.2	148	0.2	156	0.2	106	0.1
Macedonia	–	–	–	–	–	–	–	–	106	0.1
Portugal	101	0.1	105	0.1	92	0.1	93	0.1	100	0.1
Other–not stated	2214	2.6	2379	2.8	2469	2.9	2664	3.2	2878	3.2
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Countries of birth for which 100 or more mothers gave birth in 2005.

Maternal Aboriginality

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 2,110 in 2001 to 2,474 in 2005, an increase from 2.5 to 2.8 per cent of all mothers (Table 5). Further information on maternal Aboriginality and reporting of Aborginality is shown in Chapter 6.

TABLE 5

MATERNAL ABORIGINALITY, NSW 2001–2005

Aboriginality	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Aboriginal or Torres Strait Islander	2110	2.5	2155	2.5	2161	2.5	2308	2.7	2474	2.8
Non–Aboriginal or Torres Strait Islander	82223	97.4	82383	97.4	82831	97.4	81948	97.2	86570	97.1
Not stated	46	0.1	49	0.1	40	0.0	32	0.0	96	0.1
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Previous pregnancies

In recent years there were no substantial changes in the reported number of previous pregnancies greater than 20 weeks gestation (Table 6). The proportion of mothers giving birth for the first time has been stable at 41 to 42 per cent, while the proportion of mothers giving birth to a second to fifth baby has been stable at about 56 to 57 per cent. Less than 2 per cent of mothers have previously given birth 5 times or more.

TABLE 6

PREVIOUS PREGNANCIES, NSW 2001–2005

Number of previous pregnancies (>20 weeks gestation)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	35153	41.7	35035	41.4	35879	42.2	35796	42.5	37073	41.6
1–4	47850	56.7	48169	56.9	47847	56.3	47136	55.9	50566	56.7
5+	1329	1.6	1290	1.5	1258	1.5	1312	1.6	1441	1.6
Not stated	47	0.1	93	0.1	48	0.1	44	0.1	60	0.1
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Duration of pregnancy at first antenatal visit

Since 2001, the proportion of mothers starting antenatal care at 20–plus weeks gestation has declined slightly from 12.9 to 11.4 per cent (Table 7).

TABLE 7

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT, NSW 2001–2005

Duration of pregnancy (weeks)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–19	72704	86.2	73116	86.4	73615	86.6	73775	87.5	78456	88.0
20–plus	10878	12.9	10614	12.5	10929	12.9	9934	11.8	10169	11.4
Not stated	797	0.9	857	1.0	488	0.6	579	0.7	515	0.6
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Smoking in pregnancy

The proportion of mothers reporting any smoking during pregnancy declined between 2001 and 2005: in 2001, 14,424 (17.1 per cent) mothers reported smoking in pregnancy, compared to 13,829 (16.3 per cent) in 2002, 12,875 (15.1 per cent) in 2003, 12,472 (14.8 per cent) in 2004 and 12,738 (14.3 per cent) in 2005.

Of mothers who smoked during pregnancy in 2005, 4.3 per cent stopped smoking before the second half of pregnancy. Over the 5–year period, among those who smoked in the second half of pregnancy, there was a trend towards smoking fewer cigarettes per day (Table 8).

TABLE 8

MOTHERS WHO SMOKED AT ALL DURING PREGNANCY BY NUMBER OF CIGARETTES SMOKED IN THE SECOND HALF OF PREGNANCY, NSW 2001–2005

Cigarettes smoked in the second half of pregnancy	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	576	4.0	556	4.0	427	3.3	485	3.9	552	4.3
1–10 per day	6834	47.4	6639	48.0	6451	50.1	6303	50.5	6483	50.9
More than ten per day	6725	46.6	6347	45.9	5680	44.1	5378	43.1	5129	40.3
Smoked, amount not stated	289	2.0	279	2.0	317	2.5	297	2.4	572	4.5
Not stated	0	0.0	8	0.1	0	0.0	9	0.1	2	0.0
TOTAL	14424	100.0	13829	100.0	12875	100.0	12472	100.0	12738	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Place of birth

In 2005, the majority of mothers planned to give birth in a hospital labour ward, and 3.3 per cent of mothers planned to give birth in a birth centre (Table 9). About 60 per cent of mothers who planned to give birth in a birth centre actually did so. The total number of reported planned homebirths declined from 182 in 2001 to 152 in 2005, while the reported number of planned homebirths that occurred at home fell from 144 in 2001 to 112 in 2005.

TABLE 9

MATERNAL PLACE OF BIRTH, NSW 2001–2005

Place of birth	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hospital	80984	96.0	81230	96.0	81441	95.8	80701	95.7	85660	96.1
Birth centre	2038	2.4	2030	2.4	2075	2.4	2003	2.4	1830	2.1
Planned birth centre–hospital admission	822	1.0	881	1.0	1029	1.2	1126	1.3	1128	1.3
Planned homebirth	144	0.2	99	0.1	109	0.1	93	0.1	112	0.1
Planned homebirth–hospital admission	38	0.0	31	0.0	23	0.0	21	0.0	40	0.0
Born before arrival	353	0.4	316	0.4	355	0.4	344	0.4	369	0.4
Not stated	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Hypertension and diabetes

In 2005, pre-eclampsia was reported in 5.1 per cent of mothers, a slight fall from 6.4 per cent in 2001. Essential hypertension was reported in about one per cent of mothers, a rate that has not changed substantially over the last 5 years (Table 10).

In 2005, gestational diabetes was reported in 4.7 per cent of mothers, rising from 3.8 per cent reported in 2001, while rates of diabetes mellitus have remained stable at about 0.6 per cent over the 5–year period.

TABLE 10

MATERNAL HYPERTENSION OR DIABETES, NSW 2001–2005

Condition	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	404	0.5	462	0.5	505	0.6	464	0.6	503	0.6
Gestational diabetes	3213	3.8	3693	4.4	3792	4.5	3592	4.3	4165	4.7
Essential hypertension	823	1.0	940	1.1	879	1.0	940	1.1	842	0.9
Pre-eclampsia	5360	6.4	4839	5.7	4645	5.5	4606	5.5	4553	5.1
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Labour

The rate of spontaneous onset of labour fell from 62.2 per cent in 2001 to 58.3 per cent in 2005 (Table 11). Nine per cent of spontaneous labours were augmented with oxytocics or prostaglandins in 2005. The rate of induction of labour was 25.4 per cent in 2005, similar to previous years. The most common reported reason for induction of labour in 2004 was prolonged pregnancy (41 or more weeks) (32.3 per cent), followed by prelabour rupture of membranes (10.9 per cent), hypertensive disease (10.1 per cent), diabetes (4.4 per cent), suspected intrauterine growth retardation (3.9 per cent), and fetal death (0.9 per cent).

TABLE 11

ONSET AND AUGMENTATION OF LABOUR, NSW 2001–2005

Onset of labour	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	37492	44.4	37615	44.5	38110	44.8	37137	44.1	38027	42.7
Spontaneous augmented with ARM	6684	7.9	6422	7.6	5992	7.0	6090	7.2	6152	6.9
Spontaneous augmented with oxytocics–prostaglandins	8297	9.8	7644	9.0	7258	8.5	7580	9.0	7812	8.8
No labour	10986	13.0	11720	13.9	12820	15.1	12930	15.3	14467	16.2
Induced–oxytocics–prostaglandins	7422	8.8	7414	8.8	7265	8.5	7049	8.4	7417	8.3
Induced–ARM only	1181	1.4	1193	1.4	1331	1.6	1267	1.5	1595	1.8
Induced–ARM+oxytocics–prostaglandins	12033	14.3	12262	14.5	11965	14.1	11912	14.1	13273	14.9
Induced–other#	277	0.3	305	0.4	289	0.3	322	0.4	384	0.4
Not stated	7	0.0	12	0.0	2	0.0	1	0.0	13	0.0
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
This category includes other forms of induction such as Foley's catheter.

Delivery

Among NSW mothers, the rate of normal vaginal birth decreased from 65.4 per cent in 2001 to 61.2 per cent in 2005 (Table 12). The caesarean section rate increased from 23.6 to 28.1 per cent. The rate of instrumental delivery remained steady at 10 to 11 per cent, accompanied by a change in the pattern of instrumental delivery: the rate of vacuum extraction rose from 6.5 to 7.1 per cent and the rate of forceps delivery declined from 4.0 to 3.1 per cent.

Operative and instrumental deliveries are more common among privately than publicly insured mothers (Table 13). Among privately insured mothers the rate of normal vaginal birth fell from 55.0 in 2000 to 50.3 per cent in 2004 and the caesarean section rate increased from 28.2 to 35.0 per cent. Among publicly insured mothers the rate of normal vaginal birth fell from 71.8 to 67.8 per cent and the caesarean section rate rose from 18.5 to 23.4 per cent.

TABLE 12

TYPE OF DELIVERY, NSW 2001–2005

Type of delivery	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	55206	65.4	54271	64.2	53424	62.8	52366	62.1	54568	61.2
Forceps	3398	4.0	3034	3.6	2875	3.4	2762	3.3	2801	3.1
Vacuum extraction	5499	6.5	5855	6.9	5788	6.8	5902	7.0	6372	7.1
Vaginal breech	383	0.5	353	0.4	371	0.4	347	0.4	322	0.4
Elective caesarean section	10986	13.0	11720	13.9	12820	15.1	12930	15.3	14467	16.2
Emergency caesarean section#	8894	10.5	9335	11.0	9744	11.5	9974	11.8	10610	11.9
Not stated	13	0.0	19	0.0	10	0.0	7	0.0	0	0.0
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

TABLE 13

MATERNAL HEALTH INSURANCE STATUS BY TYPE OF DELIVERY, NSW 2000–2004

Insurance status–type of delivery	Year 2000		2001		2002		2003		2004	
	No.	%	No.	%	No.	%	No.	%	No.	%
Public										
Normal vaginal	43462	71.8	39541	71.3	38228	70.4	38976	68.7	37004	67.8
Forceps	2191	3.6	1673	3.0	1430	2.6	1464	2.6	1378	2.5
Vacuum extraction	3100	5.1	2868	5.2	2995	5.5	3205	5.7	3137	5.8
Vaginal breech	505	0.8	286	0.5	253	0.5	283	0.5	257	0.5
Elective caesarean section	5594	9.2	5658	10.2	5854	10.8	6630	11.7	6561	12.0
Emergency caesarean section#	5627	9.3	5438	9.8	5512	10.2	6143	10.8	6218	11.4
Not stated	12	0.0	3	0.0	7	0.0	0	0.0	0	0.0
TOTAL	60491	100.0	55467	100.0	54279	100.0	56701	100.0	54555	100.0
Private										
Normal vaginal	13652	55.5	14715	53.6	15261	52.4	14172	50.8	13739	50.3
Forceps	1669	6.8	1684	6.1	1578	5.4	1405	5.0	1334	4.9
Vacuum extraction	2199	8.9	2558	9.3	2801	9.6	2570	9.2	2628	9.6
Vaginal breech	135	0.5	76	0.3	82	0.3	70	0.3	60	0.2
Elective caesarean section	4159	16.9	5114	18.6	5689	19.5	6128	21.9	6044	22.1
Emergency caesarean section#	2762	11.2	3300	12.0	3683	12.7	3565	12.8	3511	12.8
Not stated	3	0.0	10	0.0	12	0.0	10	0.0	7	0.0
TOTAL	24579	100.0	27457	100.0	29106	100.0	27920	100.0	27323	100.0
TOTAL##										
Normal vaginal	58049	67.1	55206	65.4	54271	64.2	53424	62.8	52366	62.1
Forceps	3904	4.5	3398	4.0	3034	3.6	2875	3.4	2762	3.3
Vacuum extraction	5367	6.2	5499	6.5	5855	6.9	5788	6.8	5902	7.0
Vaginal breech	669	0.8	383	0.5	353	0.4	371	0.4	347	0.4
Elective caesarean section	9926	11.5	10986	13.0	11720	13.9	12820	15.1	12930	15.3
Emergency caesarean section#	8530	9.9	8894	10.5	9335	11.0	9744	11.5	9974	11.8
Not stated	15	0.0	13	0.0	19	0.0	10	0.0	7	0.0
TOTAL	86460	100.0	84379	100.0	84587	100.0	85032	100.0	84288	100.0

Source: Linked data of the NSW Midwives Data Collection and NSW Inpatient Statistics Collection. Centre for Epidemiology and Research, NSW Department of Health.
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.

Pain relief

There has been a trend towards increased use of spinal anaesthetics, from 7.9 per cent in 2001 to 16.9 per cent in 2005. The proportion of mothers having no pain relief during labour or delivery decreased slightly from 11.5 per cent in 2001 to 10.3 per cent in 2005 (Table 14). In 2005, 45.0 per cent of mothers used nitrous oxide for pain relief, 21.6 per cent had an epidural anaesthetic, and 19.2 per cent received intramuscular narcotics.

TABLE 14

MATERNAL PAIN RELIEF, NSW 2001–2005

Type of pain relief#	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Epidural	24572	29.1	23543	27.8	23569	27.7	23487	27.9	19278	21.6
General anaesthetic	4866	5.8	4811	5.7	4636	5.5	4213	5.0	3997	4.5
IM Narcotics	21451	25.4	21038	24.9	21083	24.8	18587	22.1	17159	19.2
Nitrous Oxide	40964	48.5	40729	48.2	39504	46.5	38518	45.7	40087	45.0
Spinal	6677	7.9	8672	10.3	10698	12.6	12336	14.6	15094	16.9
Nil	9674	11.5	9163	10.8	8896	10.5	8584	10.2	9161	10.3
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
More than one type of pain relief may be used.

Baby sex

There were no significant changes in the pattern of baby sex since 2001, with slightly more male babies born than females in each year. In 2005, 46,580 (51.4 per cent) of babies were male, 43,932 (48.5 per cent) were female, 18 were of indeterminate sex, and sex was not reported for 80 babies. This compares with babies born in 2001, when 44,168 (51.4 per cent) of 85,858 babies were male, 41,625 (48.5 per cent) were female, 10 were of indeterminate sex, and sex was not reported for 55 babies.

Gestational age

In 2005, 7.2 per cent of babies were born prematurely (less than 37 weeks gestation), the same rate as for 2001 (Table 15). Over the 5 year period, about 90 per cent of babies were born at term (37–41 weeks gestation), and about 2 per cent were postmature (41–plus weeks gestation).

TABLE 15

BIRTHS BY GESTATIONAL AGE, NSW 2001–2005

Gestational age (weeks)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
20–27	628	0.7	594	0.7	585	0.7	605	0.7	622	0.7
28–31	667	0.8	612	0.7	639	0.7	667	0.8	654	0.7
32–36	4890	5.7	4865	5.7	4810	5.6	4975	5.8	5248	5.8
37–41	77566	90.3	77865	90.5	78241	90.5	77614	90.6	82367	90.9
42 +	2093	2.4	2047	2.4	2128	2.5	1761	2.1	1709	1.9
<20	0	0.0	1	0.0	1	0.0	0	0.0	0	0.0
Not stated	14	0.0	21	0.0	10	0.0	4	0.0	10	0.0
TOTAL	85858	100.0	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Birth weight

Since 2001, the rate of low birth weight (less than 2,500 grams) has been about just over 6 per cent (Table 16). The rate was 6.3 per cent in 2005.

TABLE 16

BIRTHS BY BIRTH WEIGHT, NSW 2001–2005

Birth weight (grams)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 500	243	0.3	212	0.2	223	0.3	214	0.2	227	0.3
500–999	416	0.5	399	0.5	393	0.5	395	0.5	392	0.4
1000–1499	526	0.6	469	0.5	497	0.6	558	0.7	513	0.6
1500–1999	1043	1.2	1083	1.3	1049	1.2	1059	1.2	1100	1.2
2000–2499	3283	3.8	3344	3.9	3221	3.7	3231	3.8	3452	3.8
2500–2999	12783	14.9	12838	14.9	12877	14.9	12797	14.9	13675	15.1
3000–3499	30312	35.3	30504	35.5	30803	35.6	30238	35.3	32451	35.8
3500–3999	26542	30.9	26676	31.0	26982	31.2	26570	31.0	27822	30.7
4000–4499	9060	10.6	8921	10.4	8810	10.2	8931	10.4	9298	10.3
4500+	1607	1.9	1509	1.8	1507	1.7	1584	1.8	1613	1.8
Not stated	43	0.1	50	0.1	52	0.1	49	0.1	67	0.1
TOTAL	85858	100.0	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Apgar score

In 2005, 2.0 per cent of babies were born with an Apgar score of less than 7 at 5 minutes and 1.1 per cent were born with a score less than 4 (Table 17). These rates are similar to those of previous years.

TABLE 17

BIRTHS BY APGAR SCORE AT 5 MINUTES, NSW 2001–2005[#]

Apgar score	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–4	922	1.1	902	1.0	899	1.0	921	1.1	963	1.1
5–6	938	1.1	893	1.0	865	1.0	844	1.0	833	0.9
7+	83797	97.6	84033	97.7	84473	97.8	83653	97.7	88621	97.8
Not stated	201	0.2	177	0.2	177	0.2	208	0.2	193	0.2
TOTAL	85858	100.0	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Includes stillbirths and live births.

Perinatal outcome

In the period 2001–2005 the perinatal mortality rate varied from 8.6 to 9.6 per 1,000 (Table 18). In 2005, 67.6 per cent of all reported perinatal deaths were stillbirths and 32.4 per cent were neonatal deaths.

In 2005, of the 792 perinatal deaths in NSW, 772 (97.5 per cent) were reported among planned hospital births, 5 (0.6 per cent) among planned birth centre births, 1 occurred in a planned home birth, and 14 were among babies born before arrival at hospital.

TABLE 18

BIRTHS BY PERINATAL OUTCOME, NSW 2001–2005[#]

Year	Perinatal Outcome										Perinatal mortality rate/1,000 births
	Liveborn surviving		Stillborn		Neonatal death		Not stated		Total births		
	No.	%	No.	%	No.	%	No.	%	No.	%	
2001	85063	99.1	538	0.6	251	0.3	6	0.0	85858	100.0	9.2
2002	85222	99.1	515	0.6	233	0.3	35	0.0	86005	100.0	8.7
2003	85669	99.1	523	0.6	221	0.3	1	0.0	86414	100.0	8.6
2004	84849	99.1	561	0.7	212	0.2	4	0.0	85626	100.0	9.0
2005	89786	99.1	535	0.6	257	0.3	32	0.0	90610	100.0	8.7

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
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.

Maternal deaths

In the period 1990–2004, 155 deaths were reported among pregnant women or women who gave birth less than 6 weeks previously. The number of maternal deaths per year has gradually declined with less than 10 deaths reported per year since 2001. These reductions have occurred across all three categories of cause of death: deaths that are directly related to pregnancy or its management; deaths that result from pre-existing disease or disease that developed during pregnancy (not due to direct obstetric causes) but which may have been aggravated by the physiologic effects of pregnancy; and deaths due to incidental causes (Table 19). Table 20 shows maternal deaths by cause in NSW for 2004.

TABLE 19

MATERNAL DEATHS BY YEAR, NSW 1990–2004#

Year	Direct		Indirect		Classification Total Direct & Indirect		Incidental		TOTAL	
	No.	Ratio/ 100,000	No.	Ratio/ 100,000	No.	Ratio/ 100,000	No.	Ratio/ 100,000	No.	Ratio/ 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	4	4.7	4	4.7	8	9.4	3	3.5	11	12.9
1999##	4	4.7	1	1.2	5	5.8	6	7.0	12	14.0
2000	4	4.7	5	5.9	9	10.7	1	1.2	10	11.9
2001	4	4.7	4	4.7	8	9.5	1	1.2	9	10.7
2002	2	2.4	2	2.4	4	4.7	1	1.2	5	5.9
2003	1	1.2	3	3.5	4	4.7	3	3.5	7	8.2
2004###	2	2.3	2	2.3	4	4.7	2	2.3	7	8.2

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. Incidental deaths are those where the pregnancy is unlikely to have contributed significantly to the death.[1]
Total for 1999 includes one death of undetermined cause.
Total for 2004 includes one open coronial case

TABLE 20

MATERNAL DEATHS BY CAUSE, NSW 2004#

Year–Classification	Cause	No.
Direct	Pulmonary thromboembolism	1
Direct	Amniotic fluid embolism	1
Indirect	Arrhythmia	1
Indirect	Retroperitoneal haemorrhage	1
Incidental	Motor vehicle accident	1
Incidental	Laryngeal obstruction due to saccular cyst of the larynx	1
	Undetermined##	1
TOTAL		7

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. Incidental deaths are those where the pregnancy is unlikely to have contributed significantly to the death.[1]
Open coronial case

Reference

1. Sullivan EA, King JF (eds). *Maternal deaths in Australia 2000-2002*. AIHW Catalogue no. PER 32. Sydney: AIHW National Perinatal Statistics Unit, 2006.

5. 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 Chapters 6 and 7 respectively.

Confinements

The largest numbers of confinements in 2005 were among mothers resident in the Sydney South West Area (19,713, 22.1 per cent), followed by the Sydney West Area (17,019, 19.1 per cent) and the South Eastern Sydney & Illawarra (14,619, 16.4 per cent) Area (Table 21).

Maternal age

The proportion of women giving birth at less than 20 years of age varied from 2.0 per cent in the Northern Sydney & Central Coast Area to 8.1 per cent in the Greater Western Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 13.9 per cent in the Greater Western Area to 30.0 per cent in the Northern Sydney & Central Coast Area (Table 21).

Maternal country of birth

Seventy–nine per cent of women who gave birth in NSW in 2005 were born in English speaking countries, 11.3 per cent were born in Asian countries, and 4.6 per cent were born in the Middle East or Africa (Table 22).

The highest proportions of mothers born in non–English speaking countries were in the Sydney South West and Sydney West Areas. In the Sydney South West Area, the majority of mothers born in non–English speaking countries were born in South East Asia, and the Middle East and Africa. In the Sydney West Area, the most common maternal countries of birth were in the Middle East and Africa, and in Southern Asia.

Maternal Aboriginality

In 2005, 2.8 per cent of mothers were reported to be Aboriginal or Torres Strait Islander (Table 23). The proportion of Aboriginal or Torres Strait Islander mothers varied from 0.6 per cent in the Northern Sydney & Central Coast Area to 14.1 per cent in the Greater Western Area.

TABLE 21

MATERNAL AGE BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Maternal age (years)																	
	12–19		20–24		25–29		30–34		35–39		40–44		45+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	604	3.1	2958	15.0	5467	27.7	6560	33.3	3409	17.3	667	3.4	47	0.2	1	0.0	19713	100.0
South Eastern Sydney & Illawarra	297	2.0	1425	9.7	3646	24.9	5645	38.6	2981	20.4	599	4.1	22	0.2	4	0.0	14619	100.0
Sydney West	645	3.8	2714	15.9	5193	30.5	5641	33.1	2363	13.9	448	2.6	15	0.1	0	0.0	17019	100.0
Northern Sydney & Central Coast	248	1.8	1019	7.4	2781	20.3	5543	40.5	3371	24.6	701	5.1	34	0.2	0	0.0	13697	100.0
Hunter & New England	694	6.7	1929	18.6	3044	29.3	3118	30.0	1329	12.8	255	2.5	11	0.1	1	0.0	10381	100.0
North Coast	332	6.7	968	19.5	1348	27.1	1468	29.5	707	14.2	135	2.7	12	0.2	3	0.1	4973	100.0
Greater Southern	265	6.6	773	19.4	1120	28.0	1201	30.1	530	13.3	96	2.4	7	0.2	1	0.0	3993	100.0
Greater Western	323	8.1	827	20.8	1189	29.8	1094	27.5	461	11.6	91	2.3	0	0.0	0	0.0	3985	100.0
Other–not stated	32	4.2	126	16.6	218	28.7	232	30.5	124	16.3	25	3.3	1	0.1	2	0.3	760	100.0
TOTAL	3440	3.9	12739	14.3	24006	26.9	30502	34.2	15275	17.1	3017	3.4	149	0.2	12	0.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

TABLE 22

MATERNAL COUNTRY OF BIRTH BY HEALTH AREA OF RESIDENCE, NSW 2005#

Health Area	Country of birth group: 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		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	12274	62.4	283	1.4	624	3.2	410	2.1	108	0.5	150	0.8	1981	10.1	2297	11.7	894	4.5	645	3.3	19666	100.0
South Eastern Sydney & Illawarra	11690	80.5	147	1.0	143	1.0	227	1.6	180	1.2	169	1.2	444	3.1	623	4.3	656	4.5	246	1.7	14525	100.0
Sydney West	11920	70.1	138	0.8	531	3.1	149	0.9	80	0.5	89	0.5	1317	7.7	965	5.7	692	4.1	1115	6.6	16996	100.0
Northern Sydney & Central Coast	11352	83.0	119	0.9	92	0.7	91	0.7	213	1.6	119	0.9	223	1.6	441	3.2	747	5.5	279	2.0	13676	100.0
Hunter & New England	9993	96.5	9	0.1	45	0.4	20	0.2	27	0.3	22	0.2	63	0.6	106	1.0	35	0.3	35	0.3	10355	100.0
North Coast	4766	95.9	16	0.3	11	0.2	11	0.2	44	0.9	7	0.1	12	0.2	57	1.1	22	0.4	25	0.5	4971	100.0
Greater Southern	3841	96.2	2	0.1	26	0.7	12	0.3	16	0.4	10	0.3	20	0.5	26	0.7	13	0.3	25	0.6	3991	100.0
Greater Western	3880	97.4	7	0.2	8	0.2	3	0.1	13	0.3	6	0.2	11	0.3	30	0.8	14	0.4	13	0.3	3985	100.0
Other–not stated	638	84.3	5	0.7	5	0.7	4	0.5	7	0.9	6	0.8	9	1.2	26	3.4	44	5.8	13	1.7	757	100.0
TOTAL	70354	79.1	726	0.8	1485	1.7	927	1.0	688	0.8	578	0.7	4080	4.6	4571	5.1	3117	3.5	2396	2.7	88922	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.
Excludes 218 mothers for which country of birth was not stated. Maternal countries of birth and country of birth groups are shown in Appendix 3.

TABLE 23

MATERNAL ABORIGINALITY BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Aboriginality: Aboriginal Torres Strait Islander		Non–Aboriginal Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	181	0.9	19515	99.0	17	0.1	19713	100.0
South Eastern Sydney & Illawarra	198	1.4	14358	98.2	63	0.4	14619	100.0
Sydney West	269	1.6	16747	98.4	3	0.0	17019	100.0
Northern Sydney & Central Coast	88	0.6	13605	99.3	4	0.0	13697	100.0
Hunter & New England	600	5.8	9779	94.2	2	0.0	10381	100.0
North Coast	350	7.0	4620	92.9	3	0.1	4973	100.0
Greater Southern	209	5.2	3783	94.7	1	0.0	3993	100.0
Greater Western	560	14.1	3423	85.9	2	0.1	3985	100.0
Other–not stated	19	2.5	740	97.4	1	0.1	760	100.0
TOTAL	2474	2.8	86570	97.1	96	0.1	89140	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Duration of pregnancy at first antenatal visit

In 2005, 88.0 per cent of mothers commenced antenatal care prior to 20 weeks gestation. This percentage varied from 82.6 per cent in the Sydney West Area to 95.1 per cent in the Northern Sydney and Central Coast Area (Table 24).

TABLE 24

DURATION OF PREGNANCY AT FIRST ANTENATAL CHECK BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Duration of pregnancy at first antenatal visit							
	0–19		20–plus		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	16149	81.9	3431	17.4	133	0.7	19713	100.0
South Eastern Sydney & Illawarra	3404	91.7	1110	7.6	105	0.7	14619	100.0
Sydney West	14626	85.9	2318	13.6	75	0.4	17019	100.0
Northern Sydney & Central Coast	13047	95.3	627	4.6	23	0.2	13697	100.0
Hunter & New England	8892	85.7	1426	13.7	63	0.6	10381	100.0
North Coast	4528	91.1	404	8.1	41	0.8	4973	100.0
Greater Southern	3597	90.1	370	9.3	26	0.7	3993	100.0
Greater Western	3548	89.0	397	10.0	40	1.0	3985	100.0
Other–not stated	665	87.5	86	11.3	9	1.2	760	100.0
TOTAL	78456	88.0	10169	11.4	515	0.6	89140	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Smoking in pregnancy

In 2005, 13.8 per cent of mothers reported smoking in the second half of pregnancy (Table 25). The lowest reported rate was among mothers resident in the Northern Sydney & Central Coast Area (7.1 per cent) and the highest rate among residents of the Greater Western Area (28.3 per cent).

TABLE 25

NUMBER OF CIGARETTES SMOKED IN THE SECOND HALF OF PREGNANCY BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Cigarettes smoked in the second half of pregnancy											
	None		1–10 per day		More than ten per day		Smoked–amount not stated		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	17595	89.3	1152	5.8	812	4.1	75	0.4	79	0.4	19713	100.0
South Eastern Sydney & Illawarra	13281	90.8	864	5.9	394	2.7	49	0.3	31	0.2	14619	100.0
Sydney West	14842	87.2	1122	6.6	897	5.3	151	0.9	7	0.0	17019	100.0
Northern Sydney & Central Coast	12707	92.8	546	4.0	395	2.9	38	0.3	11	0.1	13697	100.0
Hunter & New England	8091	77.9	1155	11.1	1050	10.1	82	0.8	3	0.0	10381	100.0
North Coast	3834	77.1	567	11.4	515	10.4	56	1.1	1	0.0	4973	100.0
Greater Southern	2980	74.6	510	12.8	493	12.3	10	0.3	0	0.0	3993	100.0
Greater Western	2858	71.7	493	12.4	533	13.4	100	2.5	1	0.0	3985	100.0
Other–not stated	632	83.2	74	9.7	40	5.3	11	1.4	3	0.4	760	100.0
TOTAL	76820	86.2	6483	7.3	5129	5.8	572	0.6	136	0.2	89140	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Place of birth

Ninety–six per cent of mothers chose to deliver in a hospital delivery suite in 2005, compared to 3.3 per cent who planned a birth centre birth and 0.2 per cent who planned a home birth (Table 26). Planned birth centre births were most commonly reported in the Sydney West, South Eastern Sydney & Illawarra, and Sydney South West Areas.

Labour

In 2005, the onset of labour was spontaneous in 58.3 per cent of confinements (Table 27). Labour was induced in 25.4 per cent of confinements and no labour (elective caesarean section) was reported in 16.2 per cent. The rate of spontaneous onset of labour was highest among residents of the North Coast Area (62.5 per cent). The highest rate of induction of labour was among residents of the Greater Western Area (27.8 per cent).

TABLE 26

PLACE OF BIRTH BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Place of birth: Hospital		Birth Centre		Planned birth centre–hospital admission		Planned home birth		Planned home birth–hospital admission		Born before arrival		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	19352	98.2	214	1.1	57	0.3	7	0.0	4	0.0	79	0.4	0	0.0	19713	100.0
South Eastern Sydney & Illawarra	13823	94.6	403	2.8	326	2.2	16	0.1	1	0.0	49	0.3	1	0.0	14619	100.0
Sydney West	16100	94.6	396	2.3	435	2.6	7	0.0	9	0.1	72	0.4	0	0.0	17019	100.0
Northern Sydney & Central Coast	13376	97.7	171	1.2	94	0.7	13	0.1	1	0.0	42	0.3	0	0.0	13697	100.0
Hunter & New England	9537	91.9	617	5.9	152	1.5	8	0.1	1	0.0	66	0.6	0	0.0	10381	100.0
North Coast	4861	97.7	14	0.3	27	0.5	40	0.8	14	0.3	17	0.3	0	0.0	4973	100.0
Greater Southern	3944	98.8	5	0.1	13	0.3	8	0.2	6	0.2	17	0.4	0	0.0	3993	100.0
Greater Western	3925	98.5	8	0.2	20	0.5	3	0.1	3	0.1	26	0.7	0	0.0	3985	100.0
Other–not stated	742	97.6	2	0.3	4	0.5	10	1.3	1	0.1	1	0.1	0	0.0	760	100.0
TOTAL	85660	96.1	1830	2.1	1128	1.3	112	0.1	40	0.0	369	0.4	1	0.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

TABLE 27

ONSET AND AUGMENTATION OF LABOUR BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Onset of labour: Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented with oxytocics prosta–glandins		No labour		Induced–oxytocics prosta–glandins		Induced ARM only		Induced–ARM+ oxytocics prosta–glandins		Induced–other#		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	9205	46.7	977	5.0	2020	10.2	2877	14.6	1673	8.5	250	1.3	2581	13.1	127	0.6	3	0.0	19713	100.0
South Eastern Sydney & Illawarra	5923	40.5	1010	6.9	1440	9.9	2535	17.3	1131	7.7	247	1.7	2243	15.3	80	0.5	10	0.1	14619	100.0
Sydney West	7234	42.5	1119	6.6	1499	8.8	2553	15.0	1394	8.2	204	1.2	2962	17.4	54	0.3	0	0.0	17019	100.0
Northern Sydney & Central Coast	5248	38.3	853	6.2	1296	9.5	2843	20.8	905	6.6	203	1.5	2313	16.9	36	0.3	0	0.0	13697	100.0
Hunter & New England	4573	44.1	745	7.2	640	6.2	1580	15.2	882	8.5	274	2.6	1640	15.8	47	0.5	0	0.0	10381	100.0
North Coast	2125	42.7	582	11.7	400	8.0	705	14.2	445	8.9	115	2.3	591	11.9	10	0.2	0	0.0	4973	100.0
Greater Southern	1696	42.5	442	11.1	241	6.0	640	16.0	522	13.1	108	2.7	325	8.1	19	0.5	0	0.0	3993	100.0
Greater Western	1693	42.5	369	9.3	192	4.8	625	15.7	404	10.1	177	4.4	514	12.9	11	0.3	0	0.0	3985	100.0
Other–not stated	330	43.4	55	7.2	84	11.1	109	14.3	61	8.0	17	2.2	104	13.7	0	0.0	0	0.0	760	100.0
TOTAL	38027	42.7	6152	6.9	7812	8.8	14467	16.2	7417	8.3	1595	1.8	13273	14.9	384	0.4	13	0.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.
This category includes other forms of induction such as Foley's catheter.

Delivery

Sixty–one per cent of confinements were by normal vaginal birth, 10.3 per cent were instrumental and 28.1 per cent were by caesarean section (Table 28). The highest rate of normal vaginal birth was among residents of the Greater Western Area (65.7 per cent), while the highest rates of instrumental delivery were among residents of South Eastern Sydney and Illawarra (13.6 per cent). The caesarean section rate varied from 25.2 per cent among mothers resident in the Sydney South West Area to 34.1 per cent in the Northern Sydney & Central Coast Area.

TABLE 28

TYPE OF DELIVERY BY HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Type of delivery													
	Normal vaginal birth		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section#		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	12757	64.7	422	2.1	1496	7.6	73	0.4	2877	14.6	2088	10.6	19713	100.0
South Eastern Sydney & Illawarra	8142	55.7	569	3.9	1417	9.7	42	0.3	2535	17.3	1914	13.1	14619	100.0
Sydney West	10719	63.0	723	4.2	902	5.3	60	0.4	2553	15.0	2062	12.1	17019	100.0
Northern Sydney & Central Coast	7330	53.5	439	3.2	1218	8.9	40	0.3	2843	20.8	1827	13.3	13697	100.0
Hunter & New England	6649	64.0	311	3.0	647	6.2	54	0.5	1580	15.2	1140	11.0	10381	100.0
North Coast	3314	66.6	103	2.1	242	4.9	18	0.4	705	14.2	591	11.9	4973	100.0
Greater Southern	2531	63.4	137	3.4	245	6.1	15	0.4	640	16.0	425	10.6	3993	100.0
Greater Western	2617	65.7	87	2.2	166	4.2	16	0.4	625	15.7	474	11.9	3985	100.0
Other–not stated	509	67.0	10	1.3	39	5.1	4	0.5	109	14.3	89	11.7	760	100.0
TOTAL	54568	61.2	2801	3.1	6372	7.1	322	0.4	14467	16.2	10610	11.9	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Emergency caesarean section includes caesarean section where the onset of labour was not stated.

Birth weight

In 2005, 6.3 per cent of births were low birth weight (less than 2,500 grams). These comprised 0.7 per cent of birth weight less than 1,000 grams, 0.6 per cent in the 1,000 to 1,499 gram range, and 5.0 per cent in the 1,500 to 2,499 gram range (Table 29). Rates of low birth weight ranged from 4.6 per cent in Greater Southern Area to 7.6 per cent in the Hunter and New England Area.

TABLE 29

BIRTHS BY BIRTH WEIGHT AND HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Birth weight (grams)																					
	Less than 500		500–999		1000–1499		1500–1999		2000–2499		2500–2999		3000–3499		3500–3999		4000–4499		4500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	56	0.3	98	0.5	107	0.5	244	1.2	747	3.7	3301	16.5	7431	37.1	5786	28.9	1892	9.5	336	1.7	18	0.1	20016	100.0
South Eastern Sydney & Illawarra	36	0.2	58	0.4	78	0.5	193	1.3	550	3.7	2183	14.7	5463	36.7	4592	30.9	1469	9.9	244	1.6	16	0.1	14882	100.0
Sydney West	39	0.2	79	0.5	103	0.6	191	1.1	677	3.9	2686	15.5	6219	36.0	5339	30.9	1684	9.7	279	1.6	3	0.0	17299	100.0
Northern Sydney & Central Coast	27	0.2	39	0.3	81	0.6	153	1.1	491	3.5	1905	13.7	4983	35.7	4465	32.0	1544	11.1	251	1.8	11	0.1	13950	100.0
Hunter & New England	44	0.4	69	0.7	73	0.7	156	1.5	456	4.3	1593	15.1	3502	33.1	3263	30.9	1197	11.3	209	2.0	9	0.1	10571	100.0
North Coast	11	0.2	21	0.4	38	0.8	47	0.9	193	3.8	699	13.9	1704	33.8	1622	32.2	579	11.5	117	2.3	6	0.1	5037	100.0
Greater Southern	4	0.1	10	0.2	12	0.3	39	1.0	121	3.0	599	14.8	1477	36.5	1248	30.9	448	11.1	84	2.1	0	0.0	4042	100.0
Greater Western	9	0.2	14	0.3	16	0.4	71	1.8	190	4.7	598	14.8	1384	34.2	1259	31.1	415	10.3	83	2.1	4	0.1	4043	100.0
Other–not stated	1	0.1	4	0.5	5	0.6	6	0.8	27	3.5	111	14.4	288	37.4	248	32.2	70	9.1	10	1.3	0	0.0	770	100.0
TOTAL	227	0.3	392	0.4	513	0.6	1100	1.2	3452	3.8	13675	15.1	32451	35.8	27822	30.7	9298	10.3	1613	1.8	67	0.1	90610	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.

Gestational age

The majority of births (90.9 per cent) were at term, and 1.9 per cent were post–term (42–plus weeks). The 7.2 per cent of preterm births comprised 0.7 per cent born at less than 28 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 Hunter and New England Area (8.7 per cent), while the lowest was 5.5 per cent in the Greater Southern Area (Table 30).

TABLE 30

BIRTHS BY GESTATIONAL AGE AND HEALTH AREA OF RESIDENCE, NSW 2005

Health Area	Gestational age (weeks)													
	Less than 28		28–31		32–36		37–41		42+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	150	0.7	139	0.7	1051	5.3	18201	90.9	475	2.4	0	0.0	20016	100.0
South Eastern Sydney & Illawarra	94	0.6	100	0.7	910	6.1	13461	90.5	311	2.1	6	0.0	14882	100.0
Sydney West	113	0.7	117	0.7	995	5.8	15856	91.7	216	1.2	2	0.0	17299	100.0
Northern Sydney & Central Coast	69	0.5	102	0.7	784	5.6	12768	91.5	226	1.6	1	0.0	13950	100.0
Hunter & New England	116	1.1	108	1.0	692	6.5	9390	88.8	265	2.5	0	0.0	10571	100.0
North Coast	33	0.7	45	0.9	294	5.8	4581	90.9	84	1.7	0	0.0	5037	100.0
Greater Southern	12	0.3	16	0.4	193	4.8	3752	92.8	69	1.7	0	0.0	4042	100.0
Greater Western	27	0.7	25	0.6	285	7.0	3653	90.4	52	1.3	1	0.0	4043	100.0
Other–not stated	8	1.0	2	0.3	44	5.7	705	91.6	11	1.4	0	0.0	770	100.0
TOTAL	622	0.7	654	0.7	5248	5.8	82367	90.9	1709	1.9	10	0.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Perinatal outcomes

The perinatal mortality rate in 2005 was 8.7 per 1,000 births. This includes all births and deaths of babies of at least 400 grams birthweight or at least 20 weeks gestation (Table 31). The rate varied from 6.4 per 1,000 in the Northern Sydney and Central Coast Areas to 13.1 per 1,000 in the Hunter and New England Area.

TABLE 31

PERINATAL MORTALITY BY HEALTH AREA OF RESIDENCE, NSW 2005#

Health Area	Perinatal outcome										
	Liveborn surviving		Stillborn		Neonatal death		Not stated		Total births		Perinatal mortality rate/1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
Sydney South West	19823	99.0	125	0.6	63	0.3	5	0.0	20016	100.0	9.4
South Eastern Sydney & Illawarra	14748	99.1	82	0.6	39	0.3	13	0.1	14882	100.0	8.1
Sydney West	17141	99.1	104	0.6	46	0.3	8	0.0	17299	100.0	8.7
Northern Sydney & Central Coast	13858	99.3	57	0.4	32	0.2	3	0.0	13950	100.0	6.4
Hunter & New England	10430	98.7	94	0.9	45	0.4	2	0.0	10571	100.0	13.1
North Coast	5000	99.3	26	0.5	10	0.2	1	0.0	5037	100.0	7.1
Greater Southern	4014	99.3	21	0.5	7	0.2	0	0.0	4042	100.0	6.9
Greater Western	4005	99.1	25	0.6	13	0.3	0	0.0	4043	100.0	9.4
Other–not stated	767	99.6	1	0.1	2	0.3	0	0.0	770 1	00.0	–
TOTAL	89786	99.1	535	0.6	257	0.3	32	0.0	90610	100.0	8.7

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.
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.

Livebirths by statistical local areas

TABLE 32

LIVEBIRTHS BY HEALTH AREA AND STATISTICAL LOCAL AREA OF RESIDENCE, NSW 2005

Health Area and Statistical Local Area	No.	%
Sydney South West		
Ashfield	519	2.6
Bankstown–North-East	1110	5.6
Bankstown –North-West	1013	5.1
Bankstown–South	692	3.5
Burwood	310	1.6
Camden	768	3.9
Campbelltown–North	1222	6.1
Campbelltown–South	1024	5.1
Canada Bay–Concord	435	2.2
Canada Bay–Drummoyne	529	2.7
Canterbury	2243	11.3
Fairfield–East	1793	9.0
Fairfield–West	855	4.3
Leichhardt	971	4.9
Liverpool–East	1828	9.2
Liverpool–West	1134	5.7
Marrickville	1136	5.7
Strathfield	335	1.7
Sydney–Inner	5	0.0
Sydney–South	471	2.4
Sydney–West	354	1.8
Wingecarribee	495	2.5
Wollondilly	644	3.2
TOTAL	19886	100.0
South Eastern Sydney & Illawarra		
Botany Bay	506	3.4
Hurstville	1056	7.1
Kiama	194	1.3
Kogarah	708	4.8
Randwick	1724	11.7
Rockdale	1382	9.3
Shellharbour	858	5.8
Shoalhaven–Pt A	396	2.7
Shoalhaven–Pt B	511	3.5
Sutherland Shire–East	1352	9.1
Sutherland Shire–West	1469	9.9
Sydney–Inner	155	1.0
Sydney–South	136	0.9
Sydney–East	367	2.5
Waverley	906	6.1
Wollongong–Inner	1206	8.2
Wollongong–Balance	1206	8.2
Woollahra	651	4.4
Other–not stated	4	0.0
TOTAL	14787	100.0
Sydney West		
Auburn	1153	6.7
Baulkham Hills–Central	863	5.0
Baulkham Hills–North	822	4.8
Baulkham Hills–South	370	2.2
Blacktown–North	1610	9.4
Blacktown–South-East	1546	9.0
Blacktown–South-West	1856	10.8
Blue Mountains	990	5.8
Hawkesbury	930	5.4
Holroyd	1602	9.3
Lithgow	240	1.4
Parramatta–Inner	652	3.8
Parramatta–North-East	520	3.0
Parramatta–North-West	563	3.3
Parramatta–South	628	3.7
Penrith–East	1502	8.7
Penrith–West	1340	7.8
TOTAL	17187	100.0
Northern Sydney & Central Coast		
Gosford–East	670	4.8
Gosford–West	1287	9.3
Hornsby–North	769	5.5
Hornsby–South	1061	7.6
Hunters Hill	156	1.1
Ku–ring–gai	865	6.2
Lane Cove	438	3.2
Manly	635	4.6
Mosman	360	2.6
North Sydney	895	6.4
Pittwater	742	5.3
Ryde	1246	9.0
Warringah	1897	13.7
Willoughby	1002	7.2
Wyong–North–East	997	7.2
Wyong–South and West	870	6.3
TOTAL	13890	100.0
Hunter & New England		
Armidale Dumaresq–City	217	2.1
Armidale Dumaresq–Balance	73	0.7
Cessnock	665	6.3
Dungog	102	1.0
Glen Innes Severn	101	1.0
Gloucester	49	0.5
Greater Taree	498	4.8
Great Lakes	339	3.2
Gunnedah	160	1.5
Guyra	58	0.6
Gwydir	57	0.5
Inverell – Pt A	58	0.6
Inverell – Pt B	131	1.3
Lake Macquarie–East	680	6.5
Lake Macquarie–North	953	9.1
Lake Macquarie–West	585	5.6
Liverpool Plains	102	1.0
Maitland	898	8.6
Moree Plains	239	2.3
Muswellbrook	260	2.5
Narrabri	166	1.6
Newcastle–Inner City	603	5.8
Newcastle–Outer West	616	5.9
Newcastle–Throsby	728	6.9
Port Stephens	748	7.1
Singleton	315	3.0
Tamworth Regional–Pt A	562	5.4
Tamworth Regional–Pt B	180	1.7
Tenterfield	45	0.4
Upper Hunter Shire	191	1.8
Uralla	61	0.6
Walcha	34	0.3
Other–not stated	1	0.0
TOTAL	10475	100.0

TABLE 32 *(continued)*

LIVEBIRTHS BY HEALTH AREA AND STATISTICAL LOCAL AREA OF RESIDENCE, NSW 2005

Health Area and Statistical Local Area	No.	%
North Coast		
Ballina	333	6.6
Bellingen	120	2.4
Byron	331	6.6
Clarence Valley–Coast	170	3.4
Clarence Valley–Grafton	267	5.3
Clarence ValleyBal	123	2.5
Coffs Harbour–Pt A	555	11.1
Coffs Harbour–Pt B	168	3.4
Hastings–Pt A	452	9.0
Hastings–Pt B	298	5.9
Kempsey	372	7.4
Kyogle	76	1.5
Lismore–Pt A	414	8.3
Lismore–Pt B	154	3.1
Nambucca	170	3.4
Richmond Valley–Casino	154	3.1
Richmond Valley Bal	125	2.5
Tweed–Tweed–Heads	401	8.0
Tweed–Tweed Coast	100	2.0
Tweed–Pt B	227	4.5
TOTAL	5010	100.0
Greater Southern		
Albury	9	0.2
Bega Valley	294	7.3
Berrigan	27	0.7
Bland	73	1.8
Bombala	26	0.6
Boorowa	27	0.7
Carrathool	52	1.3
Conargo	16	0.4
Coolamon	52	1.3
Cooma-Monaro	92	2.3
Cootamundra	90	2.2
Deniliquin	87	2.2
Eurobodalla	334	8.3
Goulburn Mulwaree–Goulburn	230	5.7
Goulburn Mulwaree–Balance	20	0.5
Greater Hume Shire–Pt B	26	0.6
Griffith	387	9.6
Gundagai	48	1.2
Harden	45	1.1
Hay	54	1.3
Jerilderie	13	0.3
Junee	69	1.7
Leeton	170	4.2
Lockhart	39	1.0
Murray	12	0.3
Murrumbidgee	40	1.0
Narrandera	80	2.0
Palerang–Pt A	39	1.0
Palerang–Pt B	10	0.2
Queanbeyan	219	5.4
Snowy River	71	1.8
Temora	87	2.2
Tumbarumba	30	0.7
Tumut Shire	140	3.5
Upper Lachlan	83	2.1
Urana	5	0.1
Wagga Wagga–Pt A	706	17.6
Wagga Wagga–Pt B	86	2.1
Wakool	6	0.1
Yass Valley	8	0.2
Young	112	2.8
Other–not stated	7	0.2
TOTAL	4021	100.0
Greater Western		
Bathurst Regional–Pt A	42	10.7
Bathurst Regional–Pt B	43	1.1
Blayney–Pts A & B	96	2.4
Bogan	69	1.7
Bourke	56	1.4
Brewarrina	38	0.9
Broken Hill	235	5.8
Cabonne–Pts A, B & C	96	2.4
Central Darling	27	0.7
Cobar	78	1.9
Coonamble	57	1.4
Cowra	162	4.0
Dubbo–Pt A	565	14.1
Dubbo–Pt B	62	1.5
Forbes	113	2.8
Gilgandra	60	1.5
Lachlan	101	2.5
Mid–Western Regional–Pt A	264	6.6
Mid–Western Regional–Pt B	34	0.8
Narromine	88	2.2
Oberon	133	3.3
Orange	571	14.2
Parkes	206	5.1
Walgett	103	2.6
Warren	53	1.3
Warrumbungle Shire	124	3.1
Weddin	35	0.9
Wellington	107	2.7
Wentworth	7	0.2
Unincorp. Far West	5	0.1
Other–not stated	2	0.0
TOTAL	4018	100.0
Other–not stated	769	100.0
TOTAL NSW	90043	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

6. ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES

Reporting of Aboriginality

Maternal Aboriginality is under–reported on the MDC. One method of assessing the extent of under–reporting and monitoring changes over time is to compare the reporting of maternal Aboriginality to the MDC with reporting of maternal Aboriginality on birth registrations held by the NSW Registry of Births, Deaths and Marriages. Using capture–recapture methods, an estimate of the total number of babies born to Aboriginal mothers was obtained and compared with the number of babies born to Aboriginal mothers as reported to the MDC. The method used here is described in Chapter 3 (page 13).

The percentage of births to Aboriginal and Torres Strait Islander mothers reported to the MDC ranged from 65 to 70 per cent between 2001 and 2004. Reporting varied markedly between area health services, ranging from 43.6 per cent in the Sydney South West Area to 91.1 per cent in the Greater Western Area in 2004 (Table 33, Figure 2).

Under–reporting of Aboriginality on the MDC means that numbers of births presented in this chapter should be interpreted with caution. The total number of babies born to Aboriginal mothers in 2004 is estimated to be 3,396, about one and one third times higher than the number reported to the MDC.

TABLE 33

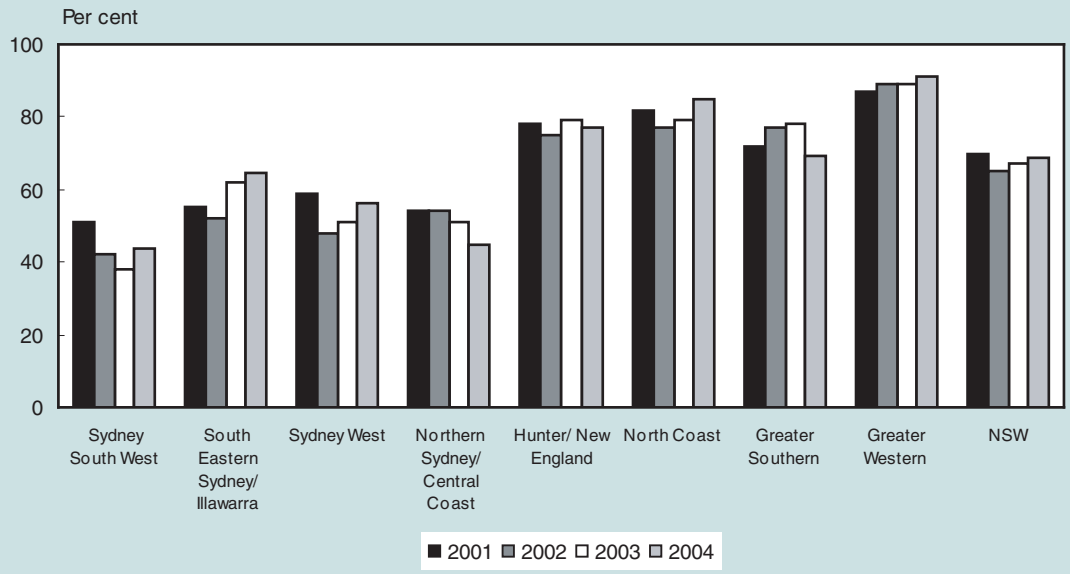
BIRTHS TO ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY SOURCE OF BIRTH REPORT, YEAR OF BIRTH AND HEALTH AREA OF HOSPITAL, NSW 2001–2004#

Year– Area health service of hospital	MDC births No.	RBDM births No.	Births reported to both MDC–RBDM No.	Total estimated Aboriginal births No.	Estimated Aboriginal births reported to MDC %	95% confidence interval of estimated births reported
2001						
Sydney South West	192	272	138	378	50.8	45.7–55.8
South Eastern Sydney & Illawarra	156	182	100	283	55.0	49.2–60.8
Sydney West	223	253	148	381	58.6	53.6–63.5
Northern Sydney & Central Coast	75	97	52	140	53.8	45.5–62.0
Hunter & New England	486	434	339	622	78.1	74.9–81.4
North Coast	336	197	162	408	82.3	78.6–86.0
Greater Southern	178	140	101	246	72.2	66.6–77.8
Greater Western	490	321	278	566	86.6	83.8–89.4
NSW	2136	1896	1318	3072	69.5	67.9–71.1
2002						
Sydney South West	166	269	113	395	42.1	37.2–46.9
South Eastern Sydney & Illawarra	179	203	106	342	52.3	47.0–57.6
Sydney West	224	299	142	471	47.6	43.0–52.1
Northern Sydney & Central Coast	89	105	56	166	53.5	45.9–61.1
Hunter & New England	534	421	317	709	75.3	72.1–78.5
North Coast	336	197	152	435	77.2	73.3–81.2
Greater Southern	165	117	90	214	77.0	71.4–82.6
Greater Western	489	303	268	553	88.5	85.8–91.1
NSW	2182	1914	1244	3357	65.0	63.4–66.6
2003						
Sydney South West	174	275	103	463	37.5	33.1–42.0
South Eastern Sydney & Illawarra	180	180	111	292	61.7	56.2–67.3
Sydney West	242	276	140	476	50.8	46.3–55.3
Northern Sydney & Central Coast	82	110	56	161	51.0	43.3–58.8
Hunter & New England	535	426	336	678	78.9	75.8–82.0
North Coast	319	181	142	406	78.5	74.5–82.5
Greater Southern	176	115	89	227	77.5	72.1–82.9
Greater Western	482	291	260	539	89.4	86.8–92.0
NSW	2190	1854	1237	3282	66.7	65.1–68.3
2004						
Sydney South West	174	280	122	399	43.6	38.8–48.5
South Eastern Sydney & Illawarra	230	214	138	356	64.6	59.6–69.5
Sydney West	259	306	172	460	56.3	51.7–60.8
Northern Sydney & Central Coast	93	114	51	207	45.0	38.2–51.7
Hunter & New England	528	473	364	686	77.0	73.8–80.1
North Coast	393	257	218	463	84.9	81.6–88.1
Greater Southern	187	157	109	269	69.5	64.0–75.0
Greater Western	476	302	275	523	91.1	88.6–93.5
NSW	2340	2103	1449	3396	68.9	67.4–70.5

Source: Linked NSW Midwives Data Collection and Registry of Births, Deaths and Marriages birth registration data.
Births where the hospital of birth was not reported, or where the birth occurred other than in hospital, were excluded.

FIGURE 2

LEVEL OF REPORTING OF ABORIGINALITY TO THE NSW MIDWIVES DATA COLLECTION BY YEAR OF BIRTH AND HEALTH AREA OF HOSPITAL, NSW 2001–2004#



Source:Linked NSW Midwives Data Collection and Registry of Births, Deaths and Marriages birth registration data.
Births where the hospital of birth was not reported or where the birth occurred other than in hospital were excluded.

Information on paternal Aboriginality is not collected by the MDC, but is reported to the NSW Registry of Births, Deaths and Marriages. Of the 85,514 births registered for residents of NSW in 2004, 3,533 (4.1 per cent) were reported to have an Aboriginal or Torres Strait Islander mother or father (Table 34). For 1,243 babies, the mother was reported to be non–Aboriginal or Torres Strait Islander and the father was reported to be Aboriginal or Torres Strait Islander. There are therefore a substantial number of babies with non–indigenous mothers and indigenous fathers who are not represented in the numbers reported in this chapter.

TABLE 34

BIRTH REGISTRATIONS BY MATERNAL AND PATERNAL INDIGENOUS STATUS, NSW 2004#

Mother#	Father	No.	%
Aboriginal or Torres Strait Islander	Aboriginal or Torres Strait Islander	738	0.9
Aboriginal or Torres Strait Islander	Non–Aboriginal or Torres Strait Islander	1552	1.8
Non–Aboriginal or Torres Strait Islander	Aboriginal or Torres Strait Islander	1243	1.5
Non–Aboriginal or Torres Strait Islander	Non–Aboriginal or Torres Strait Islander	81981	95.9
TOTAL	TOTAL	85514	100.0

Source: Australian Bureau of Statistics birth registration data (HOIST), Centre for Epidemiology and Research, NSW Department of Health.
Births registered among NSW residents. Births where indigenous status was not stated were classified as non–Aboriginal or Torres Strait Islander.

Trends in births

In 2005, 2,376 babies were born to Aboriginal mothers, 31 babies were born to Torres Strait Islander mothers and 100 babies were born to mothers of both Aboriginal and Torres Strait Islander background (Table 35).

TABLE 35

ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES BY INDIGENOUS STATUS, NSW 2001–2005#

Plurality	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pregnancies										
Aboriginal	1988	94.2	2041	94.7	2014	93.2	2161	93.6	2347	94.9
Torres Strait Islander	40	1.9	25	1.2	35	1.6	48	2.1	30	1.2
Both Aboriginal and TSI	82	3.9	89	4.1	112	5.2	99	4.3	97	3.9
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0
Births										
Aboriginal	2014	94.2	2069	94.8	2039	93.1	2184	93.6	2376	94.8
Torres Strait Islander	42	2.0	25	1.1	37	1.7	48	2.1	31	1.2
Both Aboriginal and TSI	82	3.8	89	4.1	114	5.2	101	4.3	100	4.0
TOTAL	2138	100.0	2183	100.0	2190	100.0	2333	100.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

Plurality

Between 2001 and 2005, the reported number of babies born to Aboriginal and Torres Strait Islander mothers increased from 2,138 to 2,507 (Table 36), representing 2.5 and 2.8 per cent respectively of all babies born in NSW. Multiple pregnancies (twins, triplets etc.) were reported for about one per cent of mothers.

TABLE 36

ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS AND BABIES BY PLURALITY, NSW 2001–2005#

Plurality	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Pregnancies										
Singleton	2082	98.7	2127	98.7	2134	98.8	2283	98.9	2443	98.7
Twins	28	1.3	28	1.3	26	1.2	25	1.1	29	1.2
Triplets	0	0.0	0	0.0	1	0.0	0	0.0	2	0.1
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0
Births										
Singleton	2082	97.4	2127	97.4	2134	97.4	2283	97.9	2443	97.4
Twins	56	2.6	56	2.6	53	2.4	50	2.1	58	2.3
Triplets	0	0.0	0	0.0	3	0.1	0	0.0	6	0.2
TOTAL	2138	100.0	2183	100.0	2190	100.0	2333	100.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

Previous pregnancies

In 2005, about one–third of Aboriginal and Torres Strait Islander mothers gave birth for the first time (Table 37), about 60 per cent of mothers reported between one and 4 previous births and 8.6 per cent of mothers had given birth to 5 or more babies. This pattern has not changed substantially since 2001.

TABLE 37

NUMBER OF PREVIOUS PREGNANCIES AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 2001–2005#

No. previous pregnancies (>20 weeks)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	634	30.0	664	30.8	668	30.9	759	32.9	787	31.8
1–4	1309	62.0	1302	60.4	1316	60.9	1327	57.5	1472	59.5
5+	164	7.8	183	8.5	177	8.2	221	9.6	214	8.6
Not stated	3	0.1	6	0.3	0	0.0	1	0.0	1	0.0
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

Maternal age

The reported number of babies born to Aboriginal and Torres Strait Islander mothers has increased at all ages. About one in 5 Aboriginal and Torres Strait Islander mothers were teenagers in 2005.

Following statewide trends, the number of mothers giving birth at 35 years of age or more has increased over the last 5 years. The proportion of mothers aged 35–plus years increased from 7.2 per cent in 2001 to 9.3 per cent in 2005 (Table 38).

TABLE 38

AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 2001–2005#

Maternal age (years)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
12–19	439	20.8	481	22.3	455	21.1	493	21.4	504	20.4
20–34	1515	71.8	1524	70.7	1553	71.9	1594	69.1	1739	70.3
35+	152	7.2	146	6.8	153	7.1	221	9.6	231	9.3
Not stated	4	0.2	4	0.2	0	0.0	0	0.0	0	0.0
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

Health area of residence

The reported number of Aboriginal and Torres Strait Islander mothers who gave birth in 2005 ranged from 88 in the Northern Sydney and Central Coast Area to 600 in the Hunter and New England Area (Table 39). The proportion of mothers who were teenagers varied from 13.3 per cent in the Sydney South West Area to 23.5 per cent in the Hunter and New England Area (Table 40).

TABLE 39

HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 2001–2005#

Health Area	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	148	7.0	129	6.0	129	6.0	164	7.1	181	7.3
South Eastern Sydney & Illawarra	146	6.9	169	7.8	173	8.0	221	9.6	198	8.0
Sydney West	212	10.0	204	9.5	237	11.0	238	10.3	269	10.9
Northern Sydney & Central Coast	74	3.5	85	3.9	82	3.8	93	4.0	88	3.6
Hunter & New England	478	22.7	513	23.8	514	23.8	508	22.0	600	24.3
North Coast	329	15.6	327	15.2	304	14.1	390	16.9	350	14.1
Greater Southern	162	7.7	158	7.3	170	7.9	173	7.5	209	8.4
Greater Western	511	24.2	517	24.0	493	22.8	505	21.9	560	22.6
Other–not stated	50	2.4	53	2.5	59	2.7	16	0.7	19	0.8
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers for the total are about one and one third times higher than shown. The level of under–reporting varies between area health services (Table 33).

TABLE 40

HEALTH AREA OF RESIDENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY AGE, NSW 2005#

Health Area	Maternal age (years)					
	Less than 20		20+		TOTAL	
	No.	%	No.	%	No.	%
Sydney South West	24	13.3	157	86.7	181	100.0
South Eastern Sydney & Illawarra	37	18.7	161	81.3	198	100.0
Sydney West	55	20.4	214	79.6	269	100.0
Northern Sydney & Central Coast	18	20.5	70	79.5	88	100.0
Hunter & New England	141	23.5	459	76.5	600	100.0
North Coast	66	18.9	284	81.1	350	100.0
Greater Southern	32	15.3	177	84.7	209	100.0
Greater Western	128	22.9	432	77.1	560	100.0
Other–not stated	3	15.8	16	84.2	19	100.0
TOTAL	504	20.4	1970	79.6	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers for the total are about one and one third times higher than shown. The level of under–reporting varies between area health services (Table 33).

Booking status

In 2005, 91.4 per cent of Aboriginal and Torres Strait Islander mothers were booked into the hospital of birth, a rise from 87.0 per cent in 2001. In 2005, 97.3 per cent of non–Aboriginal or Torres Strait Islander mothers were booked into the hospital of birth.

Duration of pregnancy at first antenatal visit

Between 2001 and 2005, the proportion of mothers who commenced antenatal care at less than 20 weeks gestation rose from 64.7 to 74.9 per cent (Table 41). This compares with 88.4 per cent of non–Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation in 2005.

In 2005, the proportion of Aboriginal and Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation varied from 63.0 per cent in the Sydney South West Area to 90.9 per cent in the Northern Sydney & Central Coast Area (Table 42).

TABLE 41

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 2001–2005#

Duration of pregnancy at first antenatal visit (weeks)	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–19	1365	64.7	1448	67.2	1526	70.6	1618	70.1	1854	74.9
20–plus	615	29.1	560	26.0	547	25.3	573	24.8	561	22.7
Not stated	130	6.2	147	6.8	88	4.1	117	5.1	59	2.4
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

TABLE 42

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY HEALTH AREA OF RESIDENCE, NSW 2005#

Health Area	Duration of pregnancy at first antenatal visit (weeks)							
	0–19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	114	63.0	62	34.3	5	2.8	181	100.0
South Eastern Sydney & Illawarra	152	76.8	43	21.7	3	1.5	198	100.0
Sydney West	196	72.9	68	25.3	5	1.9	269	100.0
Northern Sydney & Central Coast	80	90.9	6	6.8	2	2.3	88	100.0
Hunter & New England	459	76.5	128	21.3	13	2.2	600	100.0
North Coast	260	74.3	77	22.0	13	3.7	350 1	00.0
Greater Southern	162	77.5	46	22.0	1	0.5	209	100.0
Greater Western	416	74.3	128	22.9	16	2.9	560	100.0
Other–not stated	15	78.9	3	15.8	1	5.3	19	100.0
TOTAL	1854	74.9	561	22.7	59	2.4	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers for the total are about one and one third times higher than shown. The level of under–reporting varies between area health services (Table 33).

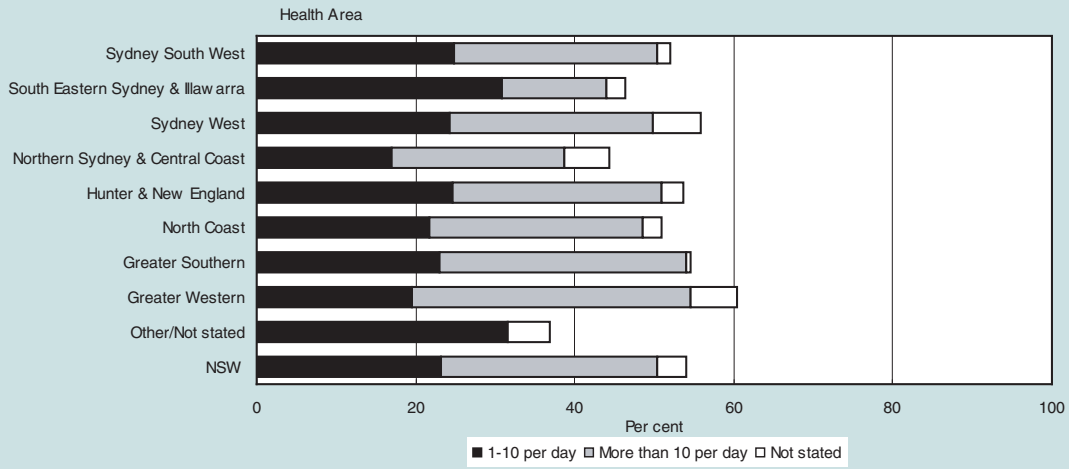
Smoking in pregnancy

In 2005, 55.3 per cent of Aboriginal and Torres Strait Islander mothers reported smoking at some time during pregnancy, compared to 59.0 per cent in 2001. This compares with 13.1 per cent of non–Aboriginal or Torres Strait Islander mothers who reported smoking at some time during pregnancy in 2005.

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. In 2005, 54.0 per cent of Aboriginal and Torres Strait Islander mothers reported smoking in the second half of pregnancy. This percentage varied from 44.3 per cent in the Northern Sydney and Central Coast Area to 60.4 per cent in the Greater Western Area (Figure 3).

FIGURE 3

SMOKING IN THE SECOND HALF OF PREGNANCY AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS BY AMOUNT SMOKED AND HEALTH AREA OF RESIDENCE, NSW 2005#



Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown. The level of under–reporting varies between health areas (Table 33).

Medical conditions and obstetric complications

In 2005, there was a slightly lower rate of gestational diabetes reported among Aboriginal and Torres Strait Islander mothers compared with non–Aboriginal or Torres Strait Islander mothers (Table 43). The number of Aboriginal and Torres Strait Islander mothers with medical conditions and obstetric complications reported to the MDC is low, even after taking into account under–reporting of maternal Aboriginality. This is particularly the case for diabetes. The low numbers may be due to under–detection and/or under–reporting.

TABLE 43

MATERNAL MEDICAL CONDITIONS AND OBSTETRIC COMPLICATIONS BY ABORIGINALITY, NSW 2005#

Condition	Aboriginality							
	Aboriginal and Torres Strait Islander		Non–Aboriginal or Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	11	0.4	492	0.6	0	0.0	503	0.6
Gestational diabetes	82	3.3	4080	4.7	3	3.1	4165	4.7
Essential hypertension	22	0.9	820	0.9	0	0.0	842	0.9
Pre–eclampsia	138	5.6	4415	5.1	0	0.0	4553	5.1
TOTAL CONFINEMENTS	2474	100.0	86570	100.0	96	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

Labour and delivery

The rate of spontaneous onset of labour fell from 70.4 per cent in 2001 to 65.2 per cent in 2005 (Table 44), while the rate of induction of labour among Aboriginal and Torres Strait Islander mothers increased from about 19 to 24 per cent. The rate of induction of labour among Aboriginal and Torres Strait Islander mothers was slightly lower than the rate of 25.5 per cent reported among non–Aboriginal and Torres Strait Islander mothers in 2005.

Between 2001 and 2005, the rate of normal vaginal birth fell from 74.0 to 70.4 per cent. The caesarean section rate rose from 20.2 to 23.3 per cent (Table 45). The rate of forceps delivery remained stable at about 2 per cent, and vaginal breech delivery was about 1 per cent.

TABLE 44

LABOUR ONSET FOR ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 2001–2005[#]

Labour onset	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	1486	70.4	1507	69.9	1469	68.0	1581	68.5	1613	65.2
No labour[##]	207	9.8	223	10.3	250	11.6	260	11.3	277	11.2
Induced	417	19.8	423	19.6	442	20.5	467	20.2	584	23.6
Not stated	0	0.0	2	0.1	0	0.0	0	0.0	0	0.0
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.
No labour indicates elective caesarean section.

TABLE 45

TYPE OF DELIVERY AMONG ABORIGINAL AND TORRES STRAIT ISLANDER MOTHERS, NSW 2001–2005[#]

Type of delivery	Year									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	1562	74.0	1598	74.2	1585	73.3	1647	71.4	1741	70.4
Forceps	39	1.8	30	1.4	35	1.6	60	2.6	42	1.7
Vacuum extraction	66	3.1	68	3.2	67	3.1	74	3.2	91	3.7
Vaginal breech	16	0.8	14	0.6	9	0.4	16	0.7	24	1.0
Elective caesarean section	207	9.8	223	10.3	250	11.6	260	11.3	277	11.2
Emergency caesarean section[##]	220	10.4	222	10.3	215	9.9	251	10.9	299	12.1
TOTAL	2110	100.0	2155	100.0	2161	100.0	2308	100.0	2474	100.0

Source:NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.
Emergency caesarean section includes caesarean section where the onset of labour was not stated.

Birth weight

Since 2001, the rate of low birth weight (less than 2,500 grams) in Aboriginal and Torres Strait Islander babies has been over 10 per cent and was 12.5 per cent in 2005 (Table 46). This is over twice the rate for babies born to non–Aboriginal or Torres Strait Islander mothers, which was 5.9 per cent in 2005. In 2005, the largest number of low birth weight babies were born in the Hunter and New England Area (Table 47).

TABLE 46

WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 2001–2005#

Birth weight (grams)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1,000	27	1.3	21	1.0	31	1.4	23	1.0	36	1.4
1,000–1,499	33	1.5	28	1.3	19	0.9	34	1.5	20	0.8
1,500–2,499	228	10.7	230	10.5	221	10.1	244	10.5	257	10.3
2,500+	1848	86.4	1900	87.0	1917	87.5	2032	87.1	2193	87.5
Not stated	2	0.1	4	0.2	2	0.1	0	0.0	1	0.0
TOTAL	2138	100.0	2183	100.0	2190	100.0	2333	100.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

TABLE 47

WEIGHT OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES BY HEALTH AREA OF RESIDENCE, NSW 2005#

Health Area	Birthweight (grams) Less than 2,500		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	22	12.1	160	87.9	0	0.0	182	100.0
South Eastern Sydney & Illawarra	20	9.9	182	90.1	0	0.0	202	100.0
Sydney West	40	14.8	230	85.2	0	0.0	270	100.0
Northern Sydney & Central Coast	10	11.2	78	87.6	1	1.1	89	100.0
Hunter & New England	83	13.6	528	86.4	0	0.0	611	100.0
North Coast	46	12.9	311	87.1	0	0.0	357	100.0
Greater Southern	19	9.0	193	91.0	0	0.0	212	100.0
Greater Western	71	12.6	494	87.4	0	0.0	565	100.0
Other–not stated	2	10.5	17	89.5	0	0.0	19	100.0
TOTAL	313	12.5	2193	87.5	1	0.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers for the total are about one and one third times higher than shown. The level of under–reporting varies between health areas (Table 33).

Gestational age

Since 2001, over 10 per cent of Aboriginal and Torres Strait Islander babies have been premature (less than 37 weeks gestation) (Table 48). The rate of prematurity was 12.0 per cent in 2005—compared with a rate of 7.1 per cent for babies born to non–Aboriginal or Torres Strait Islander mothers. In 2005, the largest number of premature babies were born in the Hunter and New England Area (Table 49).

TABLE 48

GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 2001–2005#

Gestational age (weeks)	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
20–27	26	1.2	21	1.0	29	1.3	31	1.3	30	1.2
28–31	38	1.8	34	1.6	30	1.4	29	1.2	27	1.1
32–36	201	9.4	212	9.7	206	9.4	212	9.1	244	9.7
37–41	1824	85.3	1868	85.6	1878	85.8	2038	87.4	2180	87.0
42 +	48	2.2	45	2.1	47	2.1	23	1.0	26	1.0
Not stated	1	0.0	3	0.1	0	0.0	0	0.0	0	0.0
TOTAL	2138	100.0	2183	100.0	2190	100.0	2333	100.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

TABLE 49

GESTATIONAL AGE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES BY HEALTH AREA OF RESIDENCE, NSW 2005#

Health Area	Gestational age (weeks) Less than 37		37+		TOTAL	
	No.	%	No.	%	No.	%
Sydney South West	25	13.7	157	86.3	182	100.0
South Eastern Sydney & Illawarra	22	10.9	180	89.1	202	100.0
Sydney West	30	11.1	240	88.9	270	100.0
Northern Sydney & Central Coast	14	15.7	75	84.3	89	100.0
Hunter & New England	81	13.3	530	86.7	611	100.0
North Coast	47	13.2	310	86.8	357	100.0
Greater Southern	17	8.0	195	92.0	212	100.0
Greater Western	64	11.3	501	88.7	565	100.0
Other–not stated	1	5.3	18	94.7	19	100.0
TOTAL	301	12.0	2206	88.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers for the total are about one and one third times higher than shown. The level of under–reporting varies between health areas (Table 33).

Apgar score

In 2005, 3.0 per cent of Aboriginal and Torres Strait Islander babies had an Apgar score less than seven (Table 50), higher than the rate of 1.9 per cent for babies born to non–Aboriginal or Torres Strait Islander mothers.

TABLE 50

APGAR SCORE OF ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 2001–2005#

Apgar score at 5 minutes	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–4	49	2.3	38	1.7	42	1.9	34	1.5	42	1.7
5–6	29	1.4	31	1.4	30	1.4	34	1.5	33	1.3
7+	2048	95.8	2104	96.4	2109	96.3	2256	96.7	2416	96.4
Not stated	12	0.6	10	0.5	9	0.4	9	0.4	16	0.6
TOTAL	2138	100.0	2183	100.0	2190	100.0	2333	100.0	2507	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

Perinatal mortality

Since 2005, the perinatal mortality rate among Aboriginal and Torres Strait Islander babies has varied from 11.0 to 18.2 per 1,000 births (Table 51). The rate of 15.2 per 1,000 in 2005 is substantially higher than the rate of 8.6 per 1,000 experienced by babies born to non–Aboriginal or Torres Strait Islander mothers.

TABLE 51

PERINATAL DEATHS AMONG ABORIGINAL AND TORRES STRAIT ISLANDER BABIES, NSW 2001–2005#

Perinatal deaths	Year 2001		2002		2003		2004		2005	
	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000
Stillbirth	29	13.6	18	8.2	24	11.0	20	8.6	22	8.8
Neonatal death	10	4.7	6	2.7	9	4.1	7	3.0	16	6.4
TOTAL	39	18.2	24	11.0	33	15.1	27	11.6	38	15.2

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
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. Due to under–reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and one third times higher than shown.

7. 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 (page 20).

Trends in confinements

Between 2001 and 2005, about 20 per cent of mothers were born in non–English speaking countries (Table 52). Over the 5 year period, there were slight declines in the percentage of mothers born in Southern Europe, and a slight increases in the percentage of mothers born in Southern Asia.

TABLE 52

COUNTRY OF BIRTH GROUP, NSW 2001–2005

Country of birth	Year 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
English speaking	67275	79.7	67277	79.5	67322	79.2	66621	79.0	70354	78.9
Central & South America	697	0.8	739	0.9	692	0.8	675	0.8	726	0.8
Melanesia, Micronesia & Polynesia	1544	1.8	1534	1.8	1545	1.8	1584	1.9	1485	1.7
Southern Europe	1129	1.3	1001	1.2	1040	1.2	926	1.1	927	1.0
Western & Northern Europe	631	0.7	614	0.7	660	0.8	649	0.8	688	0.8
Eastern Europe, Russia, Central Asian & Baltic States	412	0.5	458	0.5	486	0.6	518	0.6	578	0.6
Middle East & Africa	3688	4.4	3653	4.3	3879	4.6	3876	4.6	4080	4.6
South East Asia	4478	5.3	4557	5.4	4673	5.5	4445	5.3	4571	5.1
North East Asia	2965	3.5	2962	3.5	2819	3.3	2884	3.4	3117	3.5
Southern Asia	1535	1.8	1716	2.0	1746	2.1	1930	2.3	2396	2.7
Other–not stated	25	0.0	76	0.1	170	0.2	180	0.2	218	0.2
TOTAL	84379	100.0	84587	100.0	85032	100.0	84288	100.0	89140	100.0
Births										
English speaking	68524	79.8	68458	79.6	68459	79.2	67735	79.1	71558	79.0
Central & South America	707	0.8	755	0.9	699	0.8	683	0.8	743	0.8
Melanesia, Micronesia & Polynesia	1567	1.8	1555	1.8	1564	1.8	1600	1.9	1508	1.7
Southern Europe	1153	1.3	1022	1.2	1064	1.2	939	1.1	945	1.0
Western & Northern Europe	643	0.7	627	0.7	668	0.8	663	0.8	700	0.8
Eastern Europe, Russia, Central Asian & Baltic States	418	0.5	468	0.5	494	0.6	525	0.6	593	0.7
Middle East & Africa	3758	4.4	3711	4.3	3947	4.6	3941	4.6	4142	4.6
South East Asia	4527	5.3	4595	5.3	4733	5.5	4488	5.2	4626	5.1
North East Asia	2982	3.5	3000	3.5	2846	3.3	2910	3.4	3144	3.5
Southern Asia	1554	1.8	1738	2.0	1766	2.0	1953	2.3	2428	2.7
Other–not stated	25	0.0	76	0.1	174	0.2	189	0.2	223	0.2
TOTAL	85858	100.0	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Maternal age

Births to teenage mothers were more common among mothers born in English–speaking countries than non–English speaking countries (Table 53, Figure 4), while the largest proportions of mothers aged 35 years and over were among mothers born in Western and Northern Europe (40.0 per cent) and North East Asia (33.2 per cent).

TABLE 53

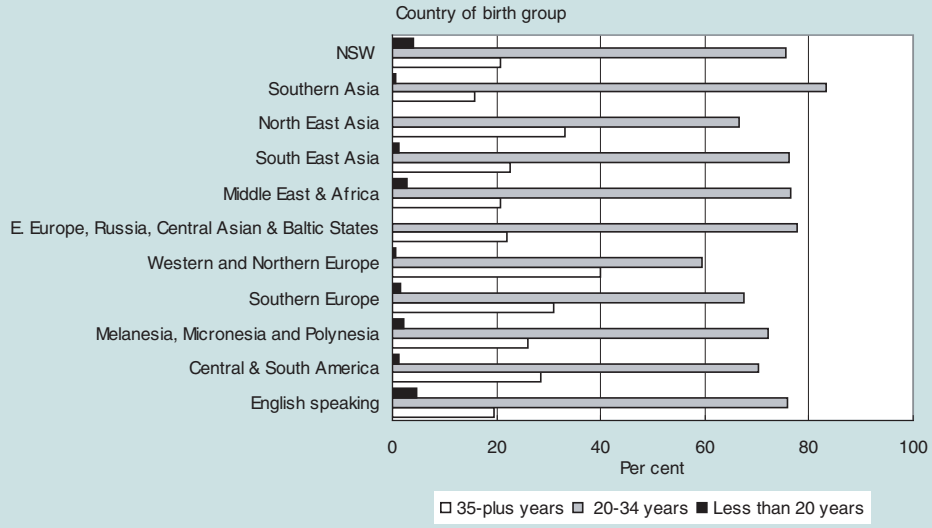
MATERNAL AGE BY COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Maternal age (years) 12–19		20–34		35+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	3187	4.5	53354	75.8	13803	19.6	10	0.0	70354	100.0
Central & South America	9	1.2	511	70.4	206	28.4	0	0.0	726	100.0
Melanesia, Micronesia & Polynesia	32	2.2	1069	72.0	384	25.9	0	0.0	1485	100.0
Southern Europe	13	1.4	627	67.6	287	31.0	0	0.0	927	100.0
Western & Northern Europe	4	0.6	409	59.4	275	40.0	0	0.0	688	100.0
Eastern Europe, Russia, Central Asian & Baltic States	2	0.3	449	77.7	127	22.0	0	0.0	578	100.0
Middle East & Africa	110	2.7	3123	76.5	847	20.8	0	0.0	4080	100.0
South East Asia	53	1.2	3481	76.2	1037	22.7	0	0.0	4571	100.0
North East Asia	7	0.2	2074	66.5	1036	33.2	0	0.0	3117	100.0
Southern Asia	15	0.6	1999	83.4	382	15.9	0	0.0	2396	100.0
Other–not stated	8	3.7	151	69.3	57	26.1	2	0.9	218	100.0
TOTAL	3440	3.9	67247	75.4	18441	20.7	12	0.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 4

MATERNAL AGE BY COUNTRY OF BIRTH GROUP, NSW 2005



Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Health area of residence

In 2005, the proportion of mothers born in non–English speaking countries was highest in the Sydney South West Area (37.5 per cent), followed by the Sydney West Area (29.8 per cent).

Five per cent of mothers were born in South East Asian countries, 50.3 per cent of whom were resident in the Sydney South West Area. Almost 5 per cent of mothers were born in Middle Eastern or African countries and 80.8 per cent of these mothers were resident in the Sydney South West or Sydney West Areas. A further 3.5 per cent of mothers were born in North East Asian countries and 2.7 per cent in Southern Asian countries, with the majority living in metropolitan areas (Table 54).

TABLE 54

HEALTH AREA OF RESIDENCE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 2005#

Health Area	Country of birth group																					
	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		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	12274	62.3	283	1.4	624	3.2	410	2.1	108	0.5	150	0.8	1981	10.0	2297	11.7	894	4.5	645	3.3	47	0.2	19713	100.0
South Eastern Sydney & Illawarra	11690	80.0	147	1.0	143	1.0	227	1.6	180	1.2	169	1.2	444	3.0	623	4.3	656	4.5	246	1.7	94	0.6	14619	100.0
Sydney West	11920	70.0	138	0.8	531	3.1	149	0.9	80	0.5	89	0.5	1317	7.7	965	5.7	692	4.1	1115	6.6	23	0.1	17019	100.0
Northern Sydney & Central Coast	11352	82.9	119	0.9	92	0.7	91	0.7	213	1.6	119	0.9	223	1.6	441	3.2	747	5.5	279	2.0	21	0.2	13697	100.0
Hunter & New England	9993	96.3	9	0.1	45	0.4	20	0.2	27	0.3	22	0.2	63	0.6	106	1.0	35	0.3	35	0.3	26	0.3	10381	100.0
North Coast	4766	95.8	16	0.3	11	0.2	11	0.2	44	0.9	7	0.1	12	0.2	57	1.1	22	0.4	25	0.5	2	0.0	4973	100.0
Greater Southern	3841	96.2	–	–	26	0.7	12	0.3	16	0.4	10	0.3	20	0.5	26	0.7	13	0.3	25	0.6	2	0.1	3993	100.0
Greater Western	3880	97.4	7	0.2	8	0.2	–	–	13	0.3	6	0.2	11	0.3	30	0.8	14	0.4	13	0.3	0	0.0	3985	100.0
Other–not stated	638	83.9	–	–	5	0.7	–	–	7	0.9	6	0.8	9	1.2	26	3.4	44	5.8	13	1.7	3	0.4	760	100.0
TOTAL	70354	78.9	726	0.8	1485	1.7	927	1.0	688	0.8	578	0.6	4080	4.6	4571	5.1	3117	3.5	2396	2.7	218	0.2	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Data not shown for country of birth groups with less than 5 in a group.

Booking status

In 2005, 97.2 per cent of all mothers were booked at the hospital of birth. The lowest rate (96.4 per cent) was in mothers born in Melanesia, Micronesia and Polynesia. This compared with 97.0 per cent of mothers born in English speaking countries and over 97 per cent of mothers in other country of birth groups.

Duration of pregnancy at first antenatal visit

In 2005, 88.0 per cent of all mothers commenced antenatal care before 20 weeks gestation. There was some variation between country of birth groups, with 89.9 per cent of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 66.1 per cent of mothers born in Melanesia, Micronesia, and Polynesia, and 73.4 per cent of mothers born in the Middle East and Africa (Table 55).

TABLE 55

DURATION OF PREGNANCY AT FIRST ANTENATAL VISIT BY COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Duration of pregnancy at first antenatal visit (weeks)							
	0–19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	63276	89.9	6659	9.5	419	0.6	70354	100.0
Central & South America	655	90.2	68	9.4	3	0.4	726	100.0
Melanesia, Micronesia & Polynesia	981	66.1	484	32.6	20	1.3	1485	100.0
Southern Europe	832	89.8	90	9.7	5	0.5	927	100.0
Western & Northern Europe	610	88.7	74	10.8	4	0.6	688	100.0
Eastern Europe, Russia, Central Asian & Baltic States	489	84.6	87	15.1	2	0.3	578	100.0
Middle East & Africa	2993	73.4	1074	26.3	13	0.3	4080	100.0
South East Asia	3846	84.1	704	15.4	21	0.5	4571	100.0
North East Asia	2598	83.3	509	16.3	10	0.3	3117	100.0
Southern Asia	1998	83.4	391	16.3	7	0.3	2396	100.0
Other–not stated	178	81.7	29	13.3	11	5.0	218	100.0
TOTAL	78456	88.0	10169	11.4	515	0.6	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Smoking in pregnancy

In 2005, smoking at any time during pregnancy was more common among mothers born in English speaking countries than mothers born in non–English speaking countries (Table 56). About one in 6 mothers born in English speaking countries smoked at some time during pregnancy, compared to one in 10 or fewer mothers born in other country of birth groups.

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. Four per cent of mothers who smoked during pregnancy quit before the second half of pregnancy. Of mothers who did smoke in the second half of pregnancy, mothers born in English speaking countries were more likely to smoke more than 10 cigarettes per day compared to mothers born in other country of birth groups (Table 57).

TABLE 56

SMOKING IN PREGNANCY BY COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Smoking in pregnancy							
	No		Yes		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	58203	82.7	12060	17.1	91	0.1	70354	100.0
Central & South America	694	95.6	30	4.1	2	0.3	726	100.0
Melanesia, Micronesia & Polynesia	1354	91.2	128	8.6	3	0.2	1485	100.0
Southern Europe	839	90.5	84	9.1	4	0.4	927	100.0
Western & Northern Europe	641	93.2	46	6.7	1	0.1	688	100.0
Eastern Europe, Russia, Central Asian & Baltic States	546	94.5	31	5.4	1	0.2	578	100.0
Middle East & Africa	3875	95.0	198	4.9	7	0.2	4080	100.0
South East Asia	4461	97.6	105	2.3	5	0.1	4571	100.0
North East Asia	3072	98.6	31	1.0	14	0.4	3117	100.0
Southern Asia	2382	99.4	11	0.5	3	0.1	2396	100.0
Other–not stated	201	92.2	14	6.4	3	1.4	218	100.0
TOTAL	76268	85.6	12738	14.3	134	0.2	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

TABLE 57

MOTHERS WHO SMOKED AT ALL DURING PREGNANCY BY NUMBER OF CIGARETTES SMOKED IN THE SECOND HALF OF PREGNANCY AND COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Cigarettes smoked in the second half of pregnancy											
	None		1–10 per day		More than 10 per day		Smoked, amount not stated		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	521	4.3	6059	50.2	4940	41.0	538	4.5	2	0.0	12060	100.0
Central & South America	3	10.0	20	66.7	6	20.0	1	3.3	0	0.0	30	100.0
Melanesia, Micronesia & Polynesia	4	3.1	87	68.0	31	24.2	6	4.7	0	0.0	128	100.0
Southern Europe	4	4.8	47	56.0	28	33.3	5	6.0	0	0.0	84	100.0
Western & Northern Europe	4	8.7	32	69.6	7	15.2	3	6.5	0	0.0	46	100.0
Eastern Europe, Russia, Central Asian & Baltic States	0	0.0	19	61.3	10	32.3	2	6.5	0	0.0	31	100.0
Middle East & Africa	5	2.5	110	55.6	73	36.9	10	5.1	0	0.0	198	100.0
South East Asia	8	7.6	71	67.6	23	21.9	3	2.9	0	0.0	105	100.0
North East Asia	1	3.2	20	64.5	7	22.6	3	9.7	0	0.0	31	100.0
Southern Asia	1	9.1	10	90.9	0	0.0	0	0.0	0	0.0	11	100.0
Other–not stated	1	7.1	8	57.1	4	28.6	1	7.1	0	0.0	14	100.0
TOTAL	552	4.3	6483	50.9	5129	40.3	572	4.5	2	0.0	12738	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Medical conditions and obstetric complications

In 2005, 1.6 per cent of mothers born in Melanesia, Micronesia, and Polynesia were reported to have diabetes mellitus, over twice the rate for all mothers in NSW, though the number of mothers is small (Table 58). The rates of gestational diabetes in mothers born in Asian countries and Melanesia, Micronesia, and Polynesia were at least twice the rate for all mothers in NSW.

Overall, 0.9 per cent of mothers were reported to have essential hypertension, and 5.1 per cent were reported to have pre-eclampsia. Rates of reported pre-eclampsia were lower among mothers born in North East Asian countries than other country of birth groups.

TABLE 58

MATERNAL MEDICAL CONDITIONS BY OBSTETRIC COMPLICATIONS AND COUNTRY OF BIRTH GROUP, NSW 2005

Condition	Country of birth group																							
	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		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	362	0.5	6	0.8	24	1.6	9	1.0	1	0.1	4	0.7	27	0.7	30	0.7	18	0.6	20	0.8	2	0.9	503	0.6
Gestational diabetes	2389	3.4	46	6.3	148	10.0	71	7.7	18	2.6	23	4.0	324	7.9	493	10.8	346	11.1	298	12.4	9	4.1	4165	4.7
Essential hypertension	731	1.0	10	1.4	18	1.2	3	0.3	5	0.7	2	0.3	20	0.5	29	0.6	7	0.2	14	0.6	3	1.4	842	0.9
Pre-eclampsia	3817	5.4	40	5.5	84	5.7	38	4.1	35	5.1	25	4.3	126	3.1	197	4.3	81	2.6	94	3.9	16	7.3	4553	5.1
TOTAL#	70354	100.0	726	100.0	1485	100.0	927	100.0	688	100.0	578	100.0	4080	100.0	4571	100.0	3117	100.0	2396	100.0	218	100.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Total refers to total confinements in NSW.

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 were less likely to be induced (Table 59).

Mothers born in the Middle East and Africa and Melanesia, Micronesia and Polynesia were more likely to have a normal vaginal delivery than mothers in other country of birth groups (Table 60). The highest caesarean section rates were among mothers born in Southern Asia (32.2 per cent) and Central and South America (31.8 per cent).

TABLE 59

LABOUR ONSET BY COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Onset of labour: Spontaneous		No labour#		Induced		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	39748	56.5	11698	16.6	18898	26.9	10	0.0	70354	100.0
Central & South America	457	62.9	126	17.4	143	19.7	0	0.0	726	100.0
Melanesia, Micronesia & Polynesia	916	61.7	220	14.8	348	23.4	1	0.1	1485	100.0
Southern Europe	562	60.6	149	16.1	216	23.3	0	0.0	927	100.0
Western & Northern Europe	401	58.3	117	17.0	170	24.7	0	0.0	688	100.0
Eastern Europe, Russia, Central Asian & Baltic States	373	64.5	84	14.5	121	20.9	0	0.0	578	100.0
Middle East & Africa	2682	65.7	528	12.9	870	21.3	0	0.0	4080	100.0
South East Asia	3178	69.5	637	13.9	755	16.5	1	0.0	4571	100.0
North East Asia	2099	67.3	468	15.0	549	17.6	1	0.0	3117	100.0
Southern Asia	1455	60.7	390	16.3	551	23.0	0	0.0	2396	100.0
Other–not stated	120	55.0	50	22.9	48	22.0	0	0.0	218	100.0
TOTAL	51991	58.3	14467	16.2	22669	25.4	13	0.0	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
No labour indicates elective caesarean section.

TABLE 60

TYPE OF DELIVERY BY COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Type of delivery: Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section#		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	42879	60.9	2259	3.2	4945	7.0	261	0.4	11698	16.6	8312	11.8	70354	100.0
Central & South America	408	56.2	33	4.5	51	7.0	3	0.4	126	17.4	105	14.5	726	100.0
Melanesia Micronesia & Polynesia	992	66.8	27	1.8	78	5.3	5	0.3	220	14.8	163	11.0	1485	100.0
Southern Europe	577	62.2	20	2.2	74	8.0	1	0.1	149	16.1	106	11.4	927	100.0
Western &Northern Europe	415	60.3	27	3.9	58	8.4	3	0.4	117	17.0	68	9.9	688	100.0
Eastern Europe, Russia, Central Asian & Baltic States	352	60.9	25	4.3	43	7.4	1	0.2	84	14.5	73	12.6	578	100.0
Middle East & Africa	2955	72.4	62	1.5	178	4.4	21	0.5	528	12.9	336	8.2	4080	100.0
South East Asia	2798	61.2	120	2.6	388	8.5	8	0.2	637	13.9	620	13.6	4571	100.0
North East Asia	1780	57.1	118	3.8	332	10.7	9	0.3	468	15.0	410	13.2	3117	100.0
Southern Asia	1302	54.3	105	4.4	208	8.7	9	0.4	390	16.3	382	15.9	2396	100.0
Othern–not stated	110	50.5	5	2.3	17	7.8	1	0.5	50	22.9	35	16.1	218	100.0
TOTAL	54568	61.2	2801	3.1	6372	7.1	322	0.4	14467	16.2	10610	11.9	89140	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

Birth weight

The rate of low birth weight (less than 2,500 grams) in 2005 was 6.3 per cent in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asian and Central and South American countries (8.3 per cent) (Table 61). Babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States were least likely to be low birth weight.

TABLE 61

BIRTH WEIGHT BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Birth weight (grams)							
	Less than 2,500		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	4514	6.3	66992	93.6	52	0.1	71558	100.
Central & South America	62	8.3	681	91.7	0	0.0	743	100.0
Melanesia, Micronesia & Polynesia	96	6.4	1411	93.6	1	0.1	1508	100.0
Southern Europe	51	5.4	892	94.4	2	0.2	945	100.0
Western & Northern Europe	35	5.0	665	95.0	0	0.0	700	100.0
Eastern Europe, Russia, Central Asian & Baltic States	26	4.4	566	95.4	1	0.2	593	100.0
Middle East & Africa	224	5.4	3916	94.5	2	0.0	4142	100.0
South East Asia	295	6.4	4326	93.5	5	0.1	4626	100.0
North East Asia	157	5.0	2986	95.0	1	0.0	3144	100.0
Southern Asia	201	8.3	2224	91.6	3	0.1	2428	100.0
Other–not stated	23	10.3	200	89.7	0	0.0	223	100.0
TOTAL	5684	6.3	84859	93.7	67	0.1	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Gestational age

The rate of prematurity (less than 37 weeks gestation) in 2005 was 7.2 per cent in NSW. The highest rates of prematurity were in babies of mothers born in Central and South America (9.3 per cent). Babies of mothers born in Western and Northern Europe were least likely to be premature (Table 62).

TABLE 62

GESTATIONAL AGE BY MATERNAL COUNTRY OF BIRTH GROUP, NSW 2005

Country of birth group	Gestational age (weeks)							
	Less than 37		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	5298	7.4	66253	92.6	7	0.0	71558	100.0
Central & South America	69	9.3	674	90.7	0	0.0	743	100.0
Melanesia, Micronesia & Polynesia	113	7.5	1394	92.4	1	0.1	1508	100.0
Southern Europe	66	7.0	878	92.9	1	0.1	945	100.0
Western & Northern Europe	35	5.0	665	95.0	0	0.0	700	100.0
Eastern Europe, Russia, Central Asian & Baltic States	36	6.1	557	93.9	0	0.0	593	100.0
Middle East & Africa	258	6.2	3884	93.8	0	0.0	4142	100.0
South East Asia	307	6.6	4319	93.4	0	0.0	4626	100.0
North East Asia	172	5.5	2971	94.5	1	0.0	3144	100.0
Southern Asia	140	5.8	2288	94.2	0	0.0	2428	100.0
Other–not stated	30	13.5	193	86.5	0	0.0	223	100.0
TOTAL	6524	7.2	84076	92.8	10	0.0	90610	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Apgar score

In 2005, 2.0 per cent of all babies (including stillborn babies) had an Apgar score of 7 or less at 5 minutes and 1.1 per cent had a score of less than 4 (Table 63). The rate of Apgar scores of less than 7 was highest among babies of mothers born in Melanesia, Micronesia and Polynesia (3.2 per cent).

TABLE 63

BIRTHS BY COUNTRY OF BIRTH GROUP AND APGAR SCORE AT FIVE MINUTES, NSW 2005#

Country of birth group	Apgar score 0-4		5-6		7+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	734	1.0	681	1.0	69993	97.8	150	0.2	71558	100.0
Central & South America	10	1.3	7	0.9	725	97.6	1	0.1	743	100.0
Melanesia, Micronesia & Polynesia	28	1.9	21	1.4	1451	96.2	8	0.5	1508	100.0
Southern Europe	13	1.4	6	0.6	924	97.8	2	0.2	945	100.0
Western & Northern Europe	11	1.6	5	0.7	682	97.4	2	0.3	700	100.0
Eastern Europe, Russia, Central Asian & Baltic States	4	0.7	2	0.3	587	99.0	0	0.0	593	100.0
Middle East & Africa	56	1.4	30	0.7	4050	97.8	6	0.1	4142	100.0
South East Asia	47	1.0	41	0.9	4527	97.9	11	0.2	4626	100.0
North East Asia	21	0.7	19	0.6	3097	98.5	7	0.2	3144	100.0
Southern Asia	34	1.4	19	0.8	2371	97.7	4	0.2	2428	100.0
Other–not stated	5	2.2	2	0.9	214	96.0	2	0.9	223	100.0
TOTAL	963	1.1	833	0.9	88621	97.8	193	0.2	90610	100.0

Source: NSW Midwives Data Collection, Centre for Epidemiology and Research, NSW Department of Health.
Births include stillbirths

Perinatal outcomes

In 2005, 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 64). The majority of perinatal deaths occurred among babies of mothers born in English speaking countries (n=614, 77.5 per cent). There were a further 52 deaths among babies of mothers born in the Middle East and Africa and 37 deaths among babies of mothers born in South East Asian countries—comprising 6.6 and 4.7 per cent respectively of all perinatal deaths reported to the MDC.

TABLE 64

PERINATAL OUTCOMES BY COUNTRY OF BIRTH GROUP, NSW 2005#

Country of birth group	Perinatal outcome: Liveborn surviving		Stillborn		Neonatal death		Not stated		Total births		Perinatal mortality rate/1,000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	
English speaking	70918	99.1	406	0.6	208	0.3	26	0.0	71558	100.0	8.6
Central & South America	736	99.1	1	0.1	6	0.8	0	0.0	743	100.0	9.4
Melanesia, Micronesia & Polynesia	1491	98.9	13	0.9	4	0.3	0	0.0	1508	100.0	11.3
Southern Europe	931	98.5	8	0.8	5	0.5	1	0.1	945	100.0	13.8
Western & Northern Europe	694	99.1	3	0.4	2	0.3	1	0.1	700	100.0	7.1
Eastern Europe, Russia, Central Asian & Baltic States	590	99.5	1	0.2	2	0.3	0	0.0	593	100.0	5.1
Middle East & Africa	4088	98.7	41	1.0	11	0.3	2	0.0	4142	100.0	12.6
South East Asia	4588	99.2	28	0.6	9	0.2	1	0.0	4626	100.0	8.0
North East Asia	3128	99.5	12	0.4	4	0.1	0	0.0	3144	100.0	5.1
Southern Asia	2402	98.9	21	0.9	5	0.2	0	0.0	2428	100.0	10.7
Other–not stated	220	98.7	1	0.4	1	0.4	1	0.4	223	100.0	–
TOTAL	89786	99.1	535	0.6	257	0.3	32	0.0	90610	100.0	8.7

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
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.

8. NEONATAL INTENSIVE CARE

The information presented in this chapter was obtained from the Neonatal Intensive Care Units' (NICUS) Data Collection (see Chapter 3, Data sources).

Registration rate

There were 2,257 infants registered in NICUS in 2005. The most common reasons for registration of an infant were assisted ventilation for four hours or more (47.4 percent) and gestational age less than 29 weeks (16.2 percent). Infants generally met more than one of the registration criteria.

The NICUS registration rate in 2005 was 23.8 per 1,000 livebirths, which decreased slightly since 2004 (24.8 per 1,000 live births). Table 65 shows 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.

Eighty–three of the 2,257 infants (3.7 per cent) registered in NICUS were born to Aboriginal or Torres Strait Islander mothers. There were 2,558 livebirths to Aboriginal or Torres Strait Islander women recorded by the NSW and ACT Midwives Data Collections for 2005. The registration rate for these infants was 32.4 per 1,000 livebirths and has decreased since 2004. Seventy–eight of the 2,070 mothers (3.8 per cent) were Aboriginal or Torres Strait Islander, of whom 17 (21.4 per cent) were residents of the Greater Western and North Coast Health Areas (Table 66). Seventeen of the 349 mothers (4.9 per cent) of infants less than 29 weeks and/or less than 1,000 grams were Aboriginal or Torres Strait Islander.

Maternal characteristics

There were 2,070 mothers of the 2,257 infants registered in NICUS during 2005. Nearly 90 per cent of the mothers were residents of the Sydney South West, Sydney West, Hunter & New England, Northern Sydney & Central Coast and South Eastern Sydney & 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 348 mothers of infants in this group just over three quarters (78.7 per cent) were residents of the Sydney South West, Sydney West, Hunter & New England, Northern Sydney & Central Coast, and South Eastern Sydney & Illawarra Health Areas.

The age of mothers of NICUS infants ranged from 15 to 54 years, with a mean age of 29.9 years. The mean maternal age was similar across all gestational age groups and has remained constant since 1992. In 2005, 23.2 percent of mothers were aged 35 years or more (range 13.7 per cent in 1992 to 23.2 per cent in 2005). In 2005, 4.9 per cent of mothers were aged less than 20 years (range 4.7 per cent in 2004 to 6.8 per cent in 2000) (Table 67). The health area of residence with the highest proportion of teenage mothers was Hunter & New England.

There were 1,804 mothers (87.1 per cent) who had an antenatal complication. The most common antenatal complications were preterm labour (43.6 per cent), pregnancy induced hypertension (16.9 per cent), fetal distress (17.2 per cent), antepartum haemorrhage (17.2 per cent), and intrauterine growth restriction (9.6 percent). Antenatal complications were more frequent in mothers delivering at less than 37 weeks compared with at term. Even so, 56 per cent of mothers giving birth at term had an antenatal complication (Table 68).

TABLE 65

NICUS REGISTRATIONS BY HEALTH AREA OF RESIDENCE, NSW & ACT 2005

Health Area	Total NICUS registrants		Total NSW & ACT live births	Registrants per 1,000 live births
	No.	%	No.	
Sydney South West	474	21.0	19846	23.9
South Eastern Sydney & Illawarra	295	13.1	14770	20.0
Sydney West	435	19.3	17246	25.2
Northern Sydney & Central Coast	263	11.7	13876	19.0
Hunter & New England	361	16.0	10497	34.4
North Coast	93	4.1	4870	19.1
Greater Southern	123	5.5	4826	25.5
Greater Western	76	3.4	4002	19.0
ACT	118	5.2	4120	28.6
Overseas	6	0.3	0	0.0
Interstate	13	0.6	770	16.9
Not Stated	0	0.0	113	0.0
TOTAL	2257	100.0	94936#	23.8

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 2005. Centre for Epidemiology and Research, NSW Department of Health. ACT Maternal Perinatal Data Collection 2004, ACT Health.
Excludes 32 babies reported to the MDC in 2005 for whom the birth outcome was not known.

Administration of corticosteroids to the mother prior to preterm birth improves the outcome for the infant. In 2005, 87 per cent of mothers of infants born at less than 28 weeks received corticosteroids (Figure 5, Table 69). Nearly 90 per cent of mothers of 28–31 weeks gestation infants received antenatal corticosteroids. The overall proportion of mothers receiving antenatal corticosteroids increased from 45 per cent in 1992 to 74.1 per cent in 2001.

TABLE 66

MOTHERS OF NICUS REGISTRANTS BY HEALTH AREA OF RESIDENCE AND ABORIGINALITY, NSW & ACT 2005

Health Area	Non–Aboriginal		Aboriginal		TOTAL	
	No.	%	No.	%	No.	%
Sydney South West	423	98.1	8	1.9	431	20.8
South Eastern Sydney & Illawarra	265	98.1	5	1.9	270	13.0
Sydney West	397	99.0	4	1.0	401	19.4
Northern Sydney & Central Coast	235	99.6	1	0.4	236	11.4
Hunter & New England	307	91.1	30	8.9	337	16.3
North Coast	76	89.4	9	10.6	85	4.1
Greater Southern	105	93.8	7	6.3	112	5.4
Greater Western	66	89.2	8	10.8	74	3.6
ACT	104	96.3	4	3.7	108	5.2
Interstate	8	80.0	2	20.0	10	0.5
Overseas	6	100.0	0	0.0	6	0.3
TOTAL	1992	96.2	78	3.8	2070	100.0

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

TABLE 67

MOTHERS OF NICUS REGISTRANTS BY HEALTH AREA OF RESIDENCE AND MATERNAL AGE, NSW & ACT 2005

Health Area	Maternal age (years)							
	Less than 20		20–34		35+		TOTAL#	
Sydney South West	15	3.5	306	71.0	110	25.5	431	20.9
South Eastern Sydney & Illawarra	5	1.9	186	69.1	78	29.0	269	13.0
Sydney West	20	5.0	304	76.0	76	19.0	400	19.4
Northern Sydney & Central Coast	3	1.3	161	68.2	72	30.5	236	11.4
Hunter & New England	33	9.8	245	72.7	59	17.5	337	16.3
North Coast	4	4.7	61	71.8	20	23.5	85	4.1
Greater Southern	5	4.5	83	74.1	24	21.4	112	5.4
Greater Western	4	5.5	57	78.1	12	16.4	73	3.5
ACT	6	5.6	77	71.3	25	23.1	108	5.2
Interstate	2	20.0	5	50.0	3	30.0	10	0.5
Overseas	0	0.0	5	83.3	1	16.7	6	0.3
Not stated	0	0.0	0	0.0	0	0.0	3	0.1
TOTAL	97	4.7	1490	72.1	480	23.2	2070	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research
Total includes 3 mothers where the maternal age was not stated..

TABLE 68

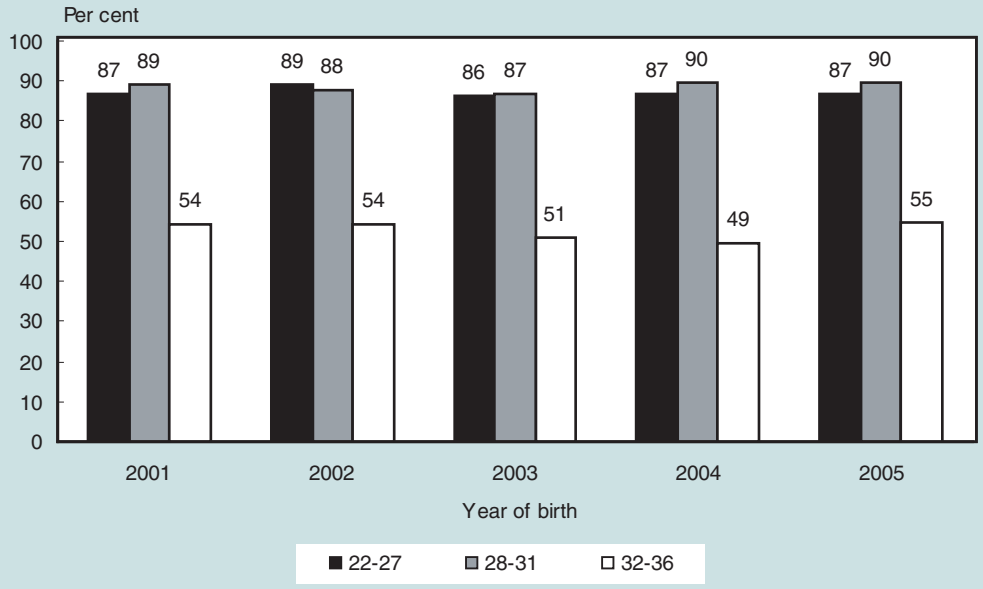
MOTHERS OF NICUS REGISTRANTS BY ANTENATAL COMPLICATIONS AND GESTATIONAL AGE, NSW & ACT 2005

Antenatal complication	Gestational age (weeks)											
	22–27		28–31		32–36		37–41		42+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Preterm labour	166	76.9	335	61.8	392	53.8	10	1.7	0	0.0	903	43.6
Pregnancy induced hypertension	33	15.3	113	20.8	157	21.6	46	8.0	0	0.0	349	16.9
Antepartum haemorrhage	77	35.6	140	25.8	122	16.8	18	3.1	0	0.0	357	17.2
Intrauterine growth restriction	20	9.3	60	11.1	93	12.8	26	4.5	0	0.0	199	9.6
Fetal distress	29	13.4	90	16.6	119	16.3	118	20.5	0	0.0	356	17.2
Fetal diagnosis of anomaly	1	0.5	11	2.0	58	8.0	90	15.6	0	0.0	160	7.7
Gestational diabetes	6	2.8	38	7.0	47	6.5	33	5.7	1	12.5	125	6.0
Chorioamnionitis	53	24.4	56	10.3	40	5.5	12	2.1	0	0.0	161	7.8
Any complication	216	100.0	542	100.0	719	98.8	326	56.6	1	12.5	1804	87.1
TOTAL MOTHERS	216	100.0	542	100.0	728	100.0	576	100.0	8	100.0	2070	100.0

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

FIGURE 5

MOTHERS OF NICUS REGISTRANTS BY ANTENATAL CORTICOSTEROID ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 2001–2005



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

TABLE 69

MOTHERS OF NICUS REGISTRANTS BY ANTENATAL CORTICOSTEROID ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 2001–2005

Year	Corticosteroid Administration	Gestational age (weeks) 22–27 No.	22–27 %	28–31 No.	28–31 %	32–36 No.	32–36 %	TOTAL No.	TOTAL %
2001	No	33	13.3	57	10.8	260	45.6	350	25.9
	Yes	216	86.7	473	89.2	310	54.4	999	74.1
	TOTAL	249	100.0	530	100.0	570	100.0	1349	100.0
2002	No	27	10.7	63	12.3	279	45.8	369	26.9
	Yes	225	89.3	449	87.7	330	54.2	1004	73.1
	TOTAL	252	100.0	512	100.0	609	100.0	1373	100.0
2003	No	31	13.9	68	13.1	311	49.1	410	29.8
	Yes	192	86.1	451	86.9	322	50.9	965	70.2
	TOTAL	223	100.0	519	100.0	633	100.0	1375	100.0
2004	No	30	13.2	56	10.3	361	50.7	447	30.1
	Yes	197	86.8	490	89.7	351	49.3	1038	69.9
	TOTAL	227	100.0	546	100.0	712	100.0	1485	100.0
2005	No	28	13.0	57	10.5	328	45.1	413	27.8
	Yes	188	87.0	485	89.5	400	54.9	1073	72.2
	TOTAL	216	100.0	542	100.0	728	100.0	1486	100.0

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

Transfer status, labour and delivery

Infants are admitted to a neonatal intensive care unit after:

- delivery that 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 36.2 per cent for the 22–27 week gestational age group to 39.6 per cent for the 32–36 weeks gestational age group (Table 70). 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 (52.7 per cent) and for those born at 28–31 weeks gestation (56.1 per cent). The overall rate of maternal transfer was 33.1 per cent.

Nearly 30 per cent of infants were transferred to a tertiary centre following birth. There were 4.4 per cent (73/2,257) of infants transferred from one tertiary centre to another during the first day of life for assisted ventilation and/or major surgery. Transfer following birth was most common in the 37–plus weeks gestational age group (60.1 per cent). Forty–seven infants (47/1,362; 3.5 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 6 and Table 71. The proportion of infants born in a tertiary centre increased from 60 per cent in 1992 to 74.8 per cent 2000. In 2005, 88.9 per cent of infants less than 32 weeks gestation were born in a tertiary centre compared with 71.2 per cent of 32–36 week gestation infants and 50 per cent of term infants.

The pattern of transfer status (Table 72) and place of birth by birth weight (Table 73) is similar to that of gestational age, with the majority (89 per cent) of the very low birth weight 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 (Table74). Augmentation and induction of labour were most common in term and post–term births. Similarly spontaneous onset of labour occurred in the majority (60.1 per cent) of all mothers of infants less than 2,500 grams birthweight (Table 75). As expected, augmentation, or induction of labour was most common in mothers of infants with a birthweight of 2,500 grams or more (27.7 per cent).

Prolonged rupture of membranes (greater than 24 hours) was more common at lower gestations, affecting 24.7 per cent of infants less than 28 weeks gestation (Table 76).

The proportion of mothers who gave birth by elective caesarean section (caesarean section without labour) was 40.3 per cent in 2005, previously ranging from 27 per cent in 1992 to 38.4 per cent in 2003 (Tables 77 and 78). The most common type of delivery was caesarean section (58.5 per cent in 1993 to 59.7 per cent in 2004), followed by 33.7 per cent for normal vaginal delivery (previously 41.9 per cent in 1993 to 35.6 per cent in 2003) and 3.2 per cent for vaginal breech delivery (7 per cent in 1998 to 4.2 per cent in 2003). 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 44.3 per cent, compared with 30.3 per cent for all livebirths in NSW and the ACT in 2005.

Continued on page 62

TABLE 70

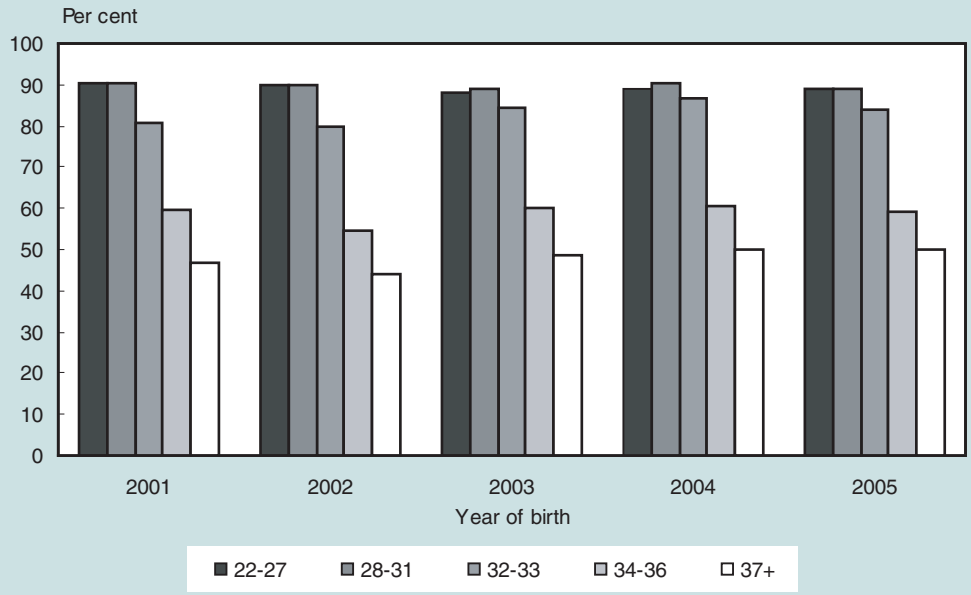
NICUS REGISTRANTS BY BOOKING STATUS, TRANSFER STATUS AND GESTATIONAL AGE, NSW & ACT 2005

Booking status and transfer status	Gestational age (weeks) 22–27		28–31		32–36		37–41		42+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Booked at tertiary hosp	88	36.2	215	33.0	308	39.6	184	31.9	6	75.0	801	35.5
Transfer before birth	128	52.7	366	56.1	227	29.2	26	4.5	0	0.0	747	33.1
Transfer after birth	27	11.1	67	10.3	220	28.3	349	60.6	2	25.0	665	29.5
Booked at non tertiary hosp	0	0.0	4	0.6	23	3.0	17	3.0	0	0.0	44	1.9
TOTAL	243	100.0	652	100.0	778	100.0	576	100.0	8	100.0	2257	100.0

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

FIGURE 6

NICUS REGISTRANTS BY TERTIARY HOSPITAL BIRTH AND GESTATIONAL AGE, NSW & ACT 2001–2005



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

TABLE 71

NICUS REGISTRANTS BY PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) AND GESTATIONAL AGE, NSW & ACT 2005

Place of birth	Gestational age (weeks) 22–27		28–31		32–33		34–36		37+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Level 1	1	0.4	0	0.0	2	0.5	0	0.0	1	0.2	4	0.2
Level 2	0	0.0	3	0.5	1	0.3	3	0.8	9	1.5	16	0.7
Level 3	0	0.0	11	1.7	7	1.8	10	2.5	29	5.0	57	2.5
Level 4	8	3.3	24	3.7	14	3.7	39	9.9	92	15.8	177	7.8
Level 5	10	4.1	23	3.5	20	5.2	40	10.1	68	11.6	161	7.1
Level 6	216	88.9	580#	89.0	321	83.8	233	59.0	292	50.0	1642	72.8
Private hospital	3	1.2	9	1.4	13	3.4	64	16.2	80	13.7	169	7.5
Born before arrival	0	0.0	2	0.3	3	0.8	2	0.5	2	0.3	9	0.4
Interstate–Overseas	5	2.1	0	0.0	2	0.5	4	1.0	11	2.0	22	1.0
TOTAL	243	100.0	652	100.0	383	100.0	395	100.0	584	100.0	2257	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research.
368/580 (63.4%) babies not born in a level 6 hospital were 30–31 weeks gestation.

TABLE 72

NICUS REGISTRANTS BY BOOKING STATUS, TRANSFER STATUS AND BIRTH WEIGHT, NSW & ACT 2005

Booking status and transfer status	Birth weight (grams) Less than 1,000		1,000–1,499		1,500–2,499		2,500+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Booked at tertiary hosp	92	36.5	164	34.3	281	36.9	264	34.5	801	35.5
Transfer before birth	137	54.4	258	54.0	289	37.9	63	8.2	747	33.1
Transfer after birth	23	9.1	51	10.7	177	23.2	414	54.1	665	29.5
Booked at non tertiary hosp	0	0.0	5	1.0	15	2.0	24	3.1	44	1.9
TOTAL	252	100.0	478	100.0	762	100.0	765	100.0	2257	100.0

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

TABLE 73

NICUS REGISTRANTS BY PLACE OF BIRTH (LEVEL OF OBSTETRIC HOSPITAL) AND BIRTH WEIGHT, NSW & ACT 2005

Place of birth	Birth weight (grams) <1,000		1,000–1,499		1,500–2,499		2,500+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Level 1	1	0.4	0	0.0	2	0.3	1	0.1	4	0.2
Level 2	0	0.0	2	0.4	5	0.7	9	1.2	16	0.7
Level 3	0	0.0	7	1.5	20	2.6	30	3.9	57	2.5
Level 4	5	2.0	18	3.8	49	6.4	105	13.7	177	7.8
Level 5	11	4.4	18	3.8	51	6.7	81	10.6	161	7.1
Level 6	229	90.9	421	88.1	588	77.2	404	52.8	1642	72.8
Private hospital	2	0.8	10	2.1	37	4.9	120	15.7	169	7.5
Born before arrival	1	0.4	0	0.0	6	0.8	2	0.3	9	0.4
Interstate–Overseas	3	1.2	2	0.4	4	0.5	13	1.7	22	1.0
TOTAL	252	100.0	478	100.0	762	100.0	765	100.0	2257	100.0

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

TABLE 74

MOTHERS OF NICUS REGISTRANTS BY ONSET OF LABOUR AND GESTATIONAL AGE, NSW & ACT 2005

Onset of labour	Gestational age (weeks) 22–27		28–31		32–36		37–41		42+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	134	62.0	270	49.8	318	43.7	230	39.9	4	50.0	956	46.2
Augmented	12	5.6	19	3.5	26	3.6	46	8.0	0	0.0	103	5.0
Induced	3	1.4	3	0.6	47	6.5	143	24.8	4	50.0	200	9.7
No labour	67	31.0	250	46.1	337	46.3	157	27.3	0	0.0	811	39.2
TOTAL	216	100.0	542	100.0	728	100.0	576	100.0	8	100.0	2070	100.0

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

TABLE 75

MOTHERS OF NICUS REGISTRANTS BY ONSET OF LABOUR AND BIRTH WEIGHT, NSW & ACT 2005

Onset of labour	Birth weight (grams) Less than 1,000		1,000–1,499		1,500–2,499		2,500+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	111	49.8	181	44.6	361	53.0	303	39.9	956	46.2
Augmented	10	4.5	12	3.0	31	4.5	50	6.6	103	5.0
Induced	2	0.9	6	1.5	32	4.7	160	21.1	200	9.7
No labour	100	44.8	207	51.0	257	37.7	247	32.5	811	39.2
TOTAL	223	100.0	406	100.0	681	100.0	760	100.0	2070	100.0

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

TABLE 76

NICUS REGISTRANTS BY DURATION OF RUPTURE OF MEMBRANES AND GESTATIONAL AGE, NSW & ACT 2005

Duration of rupture of membranes	Gestational age (weeks) 22–27		28–31		32–36		37–41		42+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 24 hours	183	75.3	519	79.6	694	89.2	554	96.2	8	100.0	1958	86.8
24 hours–7 days	35	14.4	70	10.7	45	5.8	20	3.5	0	0.0	170	7.5
8+ days	25	10.3	63	9.7	39	5.0	2	0.3	0	0.0	129	5.7
TOTAL	243	100.0	652	100.0	778	100.0	576	100.0	8	100.0	2257	100.0

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

TABLE 77

NICUS REGISTRANTS BY TYPE OF DELIVERY AND GESTATIONAL AGE, NSW & ACT 2005

Type of delivery	Gestational age (weeks) 22–27		28–31		32–36		37–41		42+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	92	37.9	190	29.1	212	27.2	262	45.5	4	50.0	760	33.7
Forceps	7	2.9	9	1.4	14	1.8	19	3.3	0	0.0	49	2.2
Forceps rotation	0	0.0	2	0.3	0	0.0	2	0.3	0	0.0	4	0.2
Vacuum extraction	1	0.4	1	0.2	13	1.7	33	5.7	3	37.5	51	2.3
Vaginal breech	20	8.2	30	4.6	20	2.6	2	0.3	0	0.0	72	3.2
Elective Caesarean	75	30.9	296	45.4	379	48.7	160	27.8	0	0.0	910	40.3
Emergency Caesarean	48	19.8	124	19.0	140	18.0	98	17.0	1	12.5	411	18.2
TOTAL	243	100.0	652	100.0	778	100.0	576	100.0	8	100.0	2257	100.0

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

TABLE 78

NICUS REGISTRANTS BY TYPE OF DELIVERY AND BIRTH WEIGHT, NSW & ACT 2005

Type of delivery	Birth weight (grams) Less than 1,000		1,000–1,499		1,500–2,499		2,500+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	72	28.6	115	24.1	266	34.9	307	40.1	760	33.7
Forceps	6	2.4	4	0.8	13	1.7	26	3.4	49	2.2
Forceps rotation	0	0.0	0	0.0	2	0.3	2	0.3	4	0.2
Vacuum extraction	1	0.4	1	0.2	5	0.7	44	5.8	51	2.3
Vaginal breech	19	7.5	20	4.2	28	3.7	5	0.7	72	3.2
Elective Caesarean	113	44.8	247	51.7	292	38.3	258	33.7	910	40.3
Emergency Caesarean	41	16.3	91	19.0	156	20.5	123	16.1	411	18.2
TOTAL	252	100.0	478	100.0	762	100.0	765	100.0	2257	100.0

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

(Continued from page 59)

Infant characteristics

Three quarters of the infants (74.1 per cent) were preterm (less than 37 weeks gestation), 39.7 per cent were very preterm (less than 32 weeks gestation) and 10.8 per cent were extremely preterm (less than 28 weeks gestation) (Figure 7). The proportion of infants in each gestational age group has remained relatively constant (Table 79). Almost all liveborn infants at 25–31 weeks gestation were admitted to a NICU, nearly two–thirds at 32 weeks gestation, and one–fifth at 33–34 weeks gestation (Table 80).

Sixty–six per cent of infants had a low birth weight (less than 2,500 grams), 32.3 per cent had a very low birth weight (less than 1,500 grams) and 11.2 per cent had an extremely low birth weight (less than 1,000 grams). The proportion of infants in each birth weight group has remained relatively constant (Table 81). Almost all liveborn infants 600–1500 grams birth weight were admitted to a NICU (Table 82).

Overall, 58.2 per cent of infants were male. The ratio of males to females remains at 3:2 in most gestational age groups (Table 83).

The overall proportion of the infants who had a major congenital anomaly decreased from 22 per cent in 1992 to 15.6 per cent in 2005. Congenital anomalies were more common among term infants (37–plus weeks gestational age), of whom 34.8 per cent had a major congenital anomaly and 3.1 per cent had a minor congenital anomaly (Table 84).

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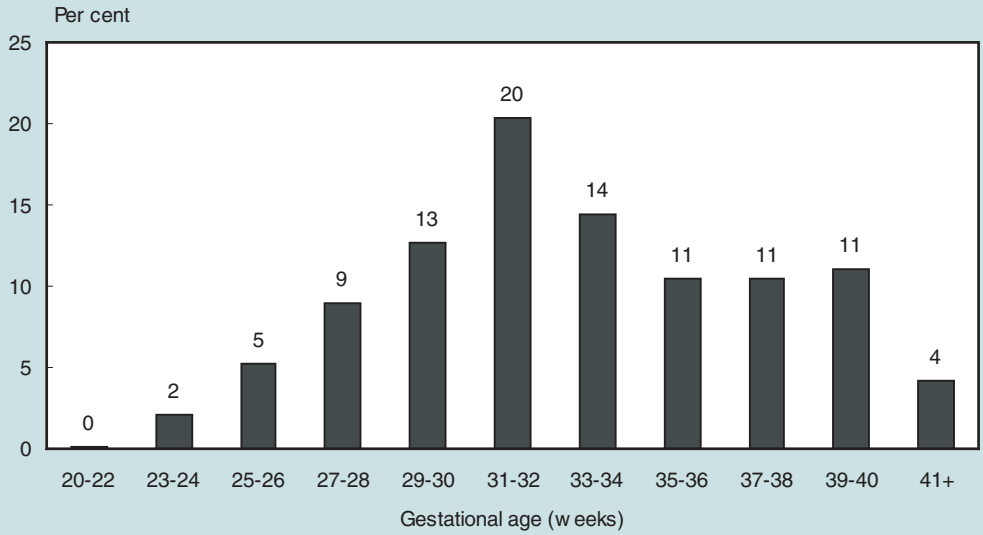
FIGURE 7

NICUS REGISTRANTS BY GESTATIONAL AGE, NSW & ACT 2005



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

TABLE 79

NICUS REGISTRANTS BY GESTATIONAL AGE, NSW & ACT 2001–2005

Gestational age (weeks)	Year of birth									
	2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
22–27	277	13.8	282	14.0	253	12.0	264	11.8	243	10.8
28–31	640	31.8	604	30.0	608	28.8	649	29.0	652	28.9
32–36	611	30.4	640	31.8	678	32.1	764	34.2	778	34.5
37–41	473	23.5	480	23.8	561	26.5	555	24.8	576	25.5
42+	9	0.4	8	0.4	14	0.7	4	0.2	8	0.4
TOTAL	2010	100.0	2014	100.0	2114	100.0	2236	100.0	2257	100.0

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

TABLE 80

BIRTHS BY NICUS REGISTRATION AND GESTATIONAL AGE, NSW & ACT 2005

Gestational age (weeks)	NSW & ACT NICUS Stillbirths No.	Live births No.	Registrations No.	Rate per 1,000 live births	% of cohort
Less than 21	62	11	0	0.0	0.0
21	69	26	0	0.0	0.0
22	48	40	1	25.0	0.1
23	31	39	7	179.5	0.3
24	29	60	40	666.7	1.8
25	25	55	53	963.6	2.4
26	29	45	65	1444.4	2.9
27	14	86	77	895.3	3.4
28	12	124	123	991.9	5.5
29	13	117	117	1000.0	5.2
30	11	168	169	1006.0	7.5
31	18	247	243	983.8	10.8
32	16	369	215	582.7	9.5
33	13	486	168	345.7	7.4
34	19	889	158	177.7	7.0
35	14	1359	122	89.8	5.4
36	17	2448	115	47.0	5.1
37	20	5471	95	17.4	4.2
38	24	15377	143	9.3	6.3
39	30	23044	120	5.2	5.3
40	30	27150	131	4.8	5.8
41	21	15535	87	5.6	3.9
42	2	1640	8	4.9	0.4
43	0	135	0	0.0	0.0
44	0	3	0	0.0	0.0
45	0	1	0	0.0	0.0
46	0	1	0	0.0	0.0
Not stated	1	10	0	0.0	0.0
TOTAL	568	94936#	2257	23.8	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research 2005 NSW Midwives Data Collection 2005. Centre for Epidemiology and Research, NSW Department of Health. ACT Maternal Perinatal Data Collection 2004, ACT Health.
Excludes 32 babies reported to the MDC in 2005 for whom the birth outcome was not known.

TABLE 81

NICUS REGISTRANTS BY BIRTH WEIGHT, NSW & ACT 2001–2005

Birth weight (grams)	Year of birth 2001		2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 400	2	0.1	2	0.1	2	0.1	1	0.0	0	0.0
400–499	5	0.2	7	0.3	9	0.4	5	0.2	5	0.2
500–599	30	1.5	21	1.0	24	1.1	25	1.1	19	0.8
600–699	49	2.4	53	2.6	38	1.8	35	1.6	51	2.3
700–799	49	2.4	63	3.1	54	2.6	54	2.4	53	2.3
800–899	72	3.6	58	2.9	60	2.8	66	3.0	54	2.4
900–999	63	3.1	81	4.0	80	3.8	77	3.4	70	3.1
1,000–1,249	219	10.9	181	9.0	197	9.3	232	10.4	233	10.3
1,250–1,499	274	13.6	264	13.1	257	12.2	279	12.5	245	10.9
1,500–1,749	231	11.5	228	11.3	215	10.2	257	11.5	244	10.8
1,750–1,999	159	7.9	163	8.1	185	8.8	174	7.8	211	9.3
2,000–2,499	251	12.5	273	13.6	258	12.2	280	12.5	307	13.6
2,500–2,999	215	10.7	205	10.2	244	11.5	280	12.5	249	11.0
3,000–3,499	195	9.7	195	9.7	228	10.8	227	10.2	277	12.3
3,500–3,999	132	6.6	158	7.8	176	8.3	153	6.8	147	6.5
4,000+	64	3.2	62	3.1	87	4.1	91	4.1	92	4.1
TOTAL	2010	100.0	2014	100.0	2114	100.0	2236	100.0	2257	100.0

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

TABLE 82

BIRTHS BY NICUS REGISTRATION AND BIRTH WEIGHT, NSW & ACT 2005

Birth weight (grams)	NSW & ACT Stillbirths No.	NSW & ACT Live births No.	NICUS Registrations No.	NICUS Rate per 1,000 live births	NICUS % of cohort
Less than 400	151	53	0	0.0	0.0
400–499	61	41	5	122.0	0.2
500–599	37	61	19	311.5	0.8
600–699	34	69	51	739.1	2.3
700–799	18	55	53	963.6	2.4
800–899	12	55	54	981.8	2.4
900–999	15	68	70	1029.4	3.1
1,000–1,249	23	238	233	979.0	10.3
1,250–1,499	19	275	245	890.9	10.9
1,500–1,749	13	462	244	528.1	10.8
1,750–1,999	19	704	211	299.7	9.4
2,000–2,499	49	3631	307	84.5	13.6
2,500–2,999	45	14303	249	17.4	11.0
3,000–3,499	36	33954	277	8.2	12.3
3,500–3,999	25	29367	147	5.0	6.5
4,000+	11	11600	92	7.9	4.1
TOTAL	568	94936#	2257	23.8	100.0

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 2005. Centre for Epidemiology and Research, NSW Department of Health ACT Maternal Perinatal Data Collection 2004, ACT Health.
Excludes 32 babies reported to the MDC in 2005 for whom the birth outcome was not known.

TABLE 83

NICUS REGISTRANTS BY GENDER AND GESTATIONAL AGE, NSW & ACT 2005

Sex	Gestational age (weeks) 22–27 No.	22–27 %	28–31 No.	28–31 %	32–36 No.	32–36 %	37–41 No.	37–41 %	42+ No.	42+ %	TOTAL No.	TOTAL %
Male	129	53.1	369	56.6	455	58.5	355	61.6	6	75.0	1314	58.2
Female	114	46.9	283	43.4	323	41.5	221	38.4	2	25.0	943	41.8
TOTAL	243	100.0	652	100.0	778	100.0	576	100.0	8	100.0	2257	100.0

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

TABLE 84

NICUS REGISTRANTS BY CONGENITAL ANOMALIES AND GESTATIONAL AGE, NSW & ACT 2005

Congenital anomaly	Gestational age (weeks) 22–27 No.	22–27 %	28–31 No.	28–31 %	32–36 No.	32–36 %	37–41 No.	37–41 %	42+ No.	42+ %	TOTAL No.	TOTAL %
None	222	91.4	614	94.2	665	85.5	356	61.8	7	87.5	1864	82.6
Minor	4	1.6	6	0.9	13	1.7	18	3.1	0	0.0	41	1.8
Major	17	7.0	32	4.9	100	12.9	202	35.1	1	12.5	352	15.6
TOTAL	243	100.0	652	100.0	778	100.0	576	100.0	8	100.0	2257	100.0

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

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The overall proportion of infants born following a multiple pregnancy was 21 per cent in 2005 (range 14.5 per cent in 1993 to 22.4 per cent in 2001). In 2005, most of the infants (79 per cent) were from a singleton pregnancy, 18.3 per cent were from a twin pregnancy, 2.3 per cent were from a triplet pregnancy and 0.3 per cent were from a quadruplet pregnancy. The higher than expected rate of multiple births among the 2005 NICUS cohort reflects the high proportion of multiple pregnancies resulting in preterm birth with 20.2 per cent of infants less than 37 weeks gestation (Table 85). Multiple births represented 3.3 per cent of all NSW/ACT livebirths in 2005.

Table 86 shows the median, 25th and 75th percentiles for one– and five–minute Apgar scores according to gestational age groups. For infants 28–42 weeks gestational age, the median one–minute Apgar score was seven. The median five–minute score was nine for infants 28–42 weeks gestational age. The proportion of infants with a one–minute Apgar score of 0–4 has decreased from 38.7 per cent in 1992 to 23.5 per cent in 2005. Similarly the proportion of infants with a five–minute Apgar score of 0–4 has decreased from 10.8 per cent in 1992 to 6.2 per cent in 2005 (Table 87).

Infants with major congenital anomalies (n=352) were excluded from the analysis of morbidity and mortality.

The majority of infants without a major congenital anomaly (1,651/1,905; 86.7 per cent) in the 2005 NICUS cohort received assisted ventilation (intermittent mandatory ventilation and/or continuous positive airways pressure) (Table 88).

The main indication for assisted ventilation for most infants was respiratory distress syndrome (Figure 8). The 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 (Figure 8, Table 89).

The overall proportion of ventilated infants who received surfactant was 36.5 in 2005 (range 33.8 per cent in 1992 to 51.8 per cent in 1998) (Table 90). In 2005, 52.1 per cent of the infants who received surfactant were less than 32 weeks gestational age. Nearly half (52.4 per cent) of ventilated infants with a diagnosis of respiratory distress syndrome received surfactant.

Proven systemic infection has decreased from 21.5 per cent in 1992 to 10.4 per cent of infants in 2005. Infection was most common among infants less than 28 weeks gestation (35.8 per cent) (Table 91).

Overall, the incidence of treated patent ductus arteriosus (PDA) was 14.2 per cent in 2005 (range 10.7 in 1994 to15.6 per cent in 2004). In 2005, 96.3 per cent of the infants treated for PDA were less than 32 weeks gestational age (Table 92). The majority of infants with a PDA requiring treatment received indomethacin only (12.6 per cent). Surgical treatment of PDA was predominantly performed on infants less than 28 weeks gestation (6.7 per cent). Some infants (5.8 per cent) were treated with both indomethacin and surgery.

Continued on page 70

TABLE 85

NICUS REGISTRANTS BY PLURALITY AND GESTATIONAL AGE, NSW & ACT 2005

Plurality	Gestational age (weeks)											
	22–27		28–31		32–36		37–41		42+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Singleton	180	74.1	438	67.2	598	76.9	560	97.2	8	100.0	1784	79.0
Twins	55	22.6	177	27.1	166	21.3	16	2.8	0	0.0	414	18.3
Triplets	8	3.3	33	5.1	12	1.5	0	0.0	0	0.0	53	2.3
Quads	0	0.0	4	0.6	2	0.3	0	0.0	0	0.0	6	0.3
TOTAL	243	100.0	652	100.0	778	100.0	576	100.0	8	100.0	2257	100.0

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

TABLE 86

NICUS REGISTRANTS BY APGAR SCORE AND GESTATIONAL AGE, NSW & ACT 2005

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	(3,7)	7	(5,8)	7	(5,9)	7	(5,9)
Five–minute Apgar	8	(6,8)	9	(8,9)	9	(8,9)	9	(7,9)

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

TABLE 87

NICUS REGISTRANTS BY APGAR SCORE AT ONE AND FIVE MINUTES, NSW & ACT 2001–2005

Apgar score	Year of birth 2001 No.	2001 %	2002 No.	2002 %	2003 No.	2003 %	2004 No.	2004 %	2005 No.	2005 %
ONE MINUTE										
0–4	516	25.7	475	23.6	475	22.5	533	23.8	531	23.5
5–7	744	37.0	692	34.4	750	35.5	735	32.9	759	33.6
8+	735	36.6	830	41.2	886	41.9	959	42.9	960	42.5
Not stated	15	0.7	17	0.8	3	0.1	9	0.4	7	0.3
TOTAL	2010	100.0	2014	100.0	2114	100.0	2236	100.0	2257	100.0
FIVE MINUTES										
0–4	143	7.1	139	6.9	110	5.2	135	6.0	141	6.2
5–7	425	21.1	394	19.6	382	18.1	437	19.5	437	19.4
8+	1429	71.1	1469	72.9	1618	76.5	1656	74.1	1673	74.1
Not stated	13	0.6	12	0.6	4	0.2	8	0.4	6	0.3
TOTAL	2010	100.0	2014	100.0	2114	100.0	2236	100.0	2257	100.0

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

TABLE 88

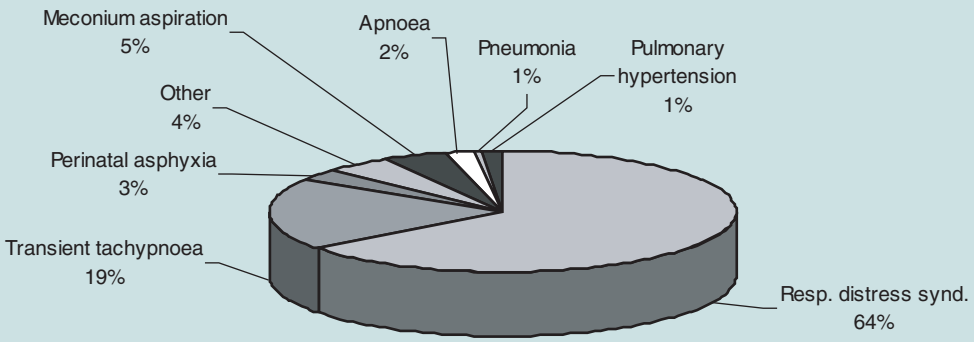
NICUS REGISTRANTS BY ASSISTED VENTILATION AND GESTATIONAL AGE, NSW & ACT 2001–2005[#]

Year	Assisted ventilation	Gestational age (weeks) 22–27 No.	22–27 %	28–31 No.	28–31 %	32–36 No.	32–36 %	37+ No.	37+ %	TOTAL No.	TOTAL %
2001	No	2	0.7	126	20.7	61	11.6	3	1.1	192	11.4
	Yes	265	99.3	482	79.3	464	88.4	277	98.9	1488	88.6
	TOTAL	267	100.0	608	100.0	525	100.0	280	100.0	1680	100.0
2002	No	2	0.7	90	16.3	50	9.0	4	1.4	146	8.8
	Yes	267	99.3	463	83.7	504	91.0	284	98.6	1518	91.2
	TOTAL	269	100.0	553	100.0	554	100.0	288	100.0	1664	100.0
2003	No	1	0.4	104	17.9	98	16.0	75	20.1	278	15.4
	Yes	234	99.6	476	82.1	515	84.0	298	79.9	1523	84.6
	TOTAL	235	100.0	580	100.0	613	100.0	373	100.0	1801	100.0
2004	No	0	0.0	78	12.9	83	12.8	62	17.2	223	12.1
	Yes	239	100.0	525	87.1	563	87.2	298	82.8	1625	87.9
	TOTAL	239	100.0	603	100.0	646	100.0	360	100.0	1848	100.0
2005	No	1	0.4	115	18.5	90	13.3	48	12.6	254	13.3
	Yes	225	99.6	505	81.5	588	86.7	333	87.4	1651	86.7
	TOTAL	226	100.0	620	100.0	678	100.0	381	100.0	1905	100.0

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

FIGURE 8

NICUS REGISTRANTS BY MAIN INDICATION FOR ASSISTED VENTILATION, NSW & ACT 2005#



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

TABLE 89

NICUS REGISTRANTS BY MAIN INDICATION FOR ASSISTED VENTILATION AND GESTATIONAL AGE, NSW & ACT 2005#

Indication	Gestational age (weeks) 22–27		28–31		32–36		37+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Transient tachypnoea of newborn	2	0.9	79	15.6	167	28.4	69	20.7	317	19.2
Hyaline membrane disease	221	98.2	393	77.8	368	62.6	82	24.6	1064	64.4
Meconium aspiration	0	0.0	1	0.2	4	0.7	70	21.0	75	4.5
Pneumonia	0	0.0	0	0.0	3	0.5	9	2.7	12	0.7
Pulmonary hypertension	0	0.0	2	0.4	5	0.9	15	4.5	22	1.3
Immature lung	2	0.9	11	2.2	7	1.2	0	0.0	20	1.2
Apnoea	0	0.0	9	1.8	12	2.0	9	2.7	30	1.8
Congenital anomaly	0	0.0	0	0.0	2	0.3	1	0.3	3	0.2
Other	0	0.0	5	1.0	10	1.7	25	7.5	40	2.4
Perinatal	0	0.0	2	0.4	2	0.3	10	3.0	14	0.8
Newborn encephalopathy	0	0.0	3	0.6	8	1.4	43	12.9	54	3.3
TOTAL	225	100.0	505	100.0	588	100.0	333	100.0	1651	100.0

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

TABLE 90

NICUS REGISTRANTS BY SURFACTANT ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 2001–2005[#]

Year	Surfactant administration	Gestational age (weeks) 22–27 No.	%	28–31 No.	%	32–36 No.	%	37+ No.	%	TOTAL No.	%
2001	No	56	21.1	275	57.1	326	70.3	222	80.1	879	59.1
	Yes	209	78.9	207	42.9	138	29.7	55	19.9	609	40.9
	TOTAL	265	100.0	482	100.0	464	100.0	277	100.0	1488	100.0
2002	No	66	24.7	275	59.4	366	72.6	241	84.9	948	62.5
	Yes	201	75.3	188	40.6	138	27.4	43	15.1	570	37.5
	TOTAL	267	100.0	463	100.0	504	100.0	284	100.0	1518	100.0
2003	No	45	19.2	257	54.0	354	68.7	239	80.2	895	58.8
	Yes	189	80.8	219	46.0	161	31.3	59	19.8	628	41.2
	TOTAL	234	100.0	476	100.0	515	100.0	298	100.0	1523	100.0
2004	No	41	17.2	303	57.7	406	72.1	248	83.2	998	61.4
	Yes	198	82.8	222	42.3	157	27.9	50	16.8	627	38.6
	TOTAL	239	100.0	525	100.0	563	100.0	298	100.0	1625	100.0
2005	No	42	18.7	308	61.0	430	73.1	268	80.5	1048	63.5
	Yes	183	81.3	197	39.0	158	26.9	65	19.5	603	36.5
	TOTAL	225	100.0	505	100.0	588	100.0	333	100.0	1651	100.0

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

TABLE 91

NICUS REGISTRANTS BY PROVEN SYSTEMIC INFECTION AND GESTATIONAL AGE, NSW & ACT 2005[#]

Infection	Gestational age (weeks) 22–27 No.	%	28–31 No.	%	32–36 No.	%	37+ No.	%	TOTAL No.	%
No	145	64.2	542	87.4	656	96.8	363	95.3	1706	89.6
Yes	81	35.8	78	12.6	22	3.2	18	4.7	199	10.4
TOTAL	226	100.0	620	100.0	678	100.0	381	100.0	1905	100.0

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

TABLE 92

NICUS REGISTRANTS BY TREATED PATENT DUCTUS ARTERIOSUS (PDA) AND GESTATIONAL AGE, NSW & ACT 2005[#]

PDA–Treatment for PDA	Gestational age (weeks) 22–27 No.	%	28–31 No.	%	32–36 No.	%	TOTAL No.	%
No treated PDA	103	45.6	534	86.1	670	98.8	1307	85.8
Indomethacin only	108	47.8	76	12.3	8	1.2	192	12.6
Surgery only	2	0.9	1	0.2	0	0.0	3	0.2
Indomethacin & surgery	13	5.8	9	1.5	0	0.0	22	1.4
TOTAL	226	100.0	620	100.0	678	100.0	1524	100.0

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

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Overall, the incidence of necrotising enterocolitis (NEC) was 2.9 per cent in 2005 (range 9.8 per cent in 1992 to 2.2 per cent in 2000). The diagnosis of NEC was made radiologically or at surgery in 53.6 per cent of infants and clinically in the remainder. NEC was more common at the lower gestational age groups and 87.5 per cent of the infants with NEC were born at less than 32 weeks gestation (Table 93).

The overall incidence of major surgery was 3.5 per cent in 2005 (range 7.7 per cent in 1992 to 3.1 per cent in 2000). In 2005, 87.5 per cent of the infants who required major surgery were less than 32 weeks gestation (Table 94). The most common surgical procedures amongst these infants were for patent ductus arteriosus and necrotising enterocolitis.

In 2005, the incidence of intraventricular haemorrhage (IVH) among preterm infants (less than 37 weeks gestational age) was 14 per cent (range 20.5 per cent in 1993 to 12.9 per cent in 2003). In 2005, confirmed IVH was most common among infants less than 28 weeks gestation (42 per cent); 29.5 per cent of these infants had severe IVH (grade 3 or 4). Four infants less than 32 weeks gestation with severe IVH required surgical drainage for post haemorrhagic hydrocephalus (4/53, 7.5 per cent). Of the surviving infants born before 32 weeks gestation, 95 per cent had a head ultrasound examination to detect IVH (Table 95).

The proportion of infants with severe grades (Grades 3, 4 or 5) of retinopathy of prematurity (ROP) was 4.3 per cent in 2005 (range 7.5 per cent in 1992 to 2.8 per cent in 2004). In 2005, five infants with Grade 3 ROP were 28–31 weeks gestation and 74.2 per cent of the infants less than 28 weeks gestation with severe ROP received laser therapy. Importantly, 25.2 per cent of surviving infants of 28–31 weeks gestational age did not have an eye examination recorded (Table 96).

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TABLE 93

NICUS REGISTRANTS BY NECROTISING ENTEROCOLITIS (NEC) AND GESTATIONAL AGE, NSW & ACT 2005#

NEC–Treatment for NEC	Gestational age (weeks) 22–27		28–31		32–36		37+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
No NEC	194	85.8	603	97.3	672	99.1	380	99.7	1849	97.1
Clinical diagnosis	12	5.3	9	1.5	4	0.6	1	0.3	26	1.4
X–ray diagnosis	6	2.7	3	0.5	1	0.1	0	0.0	10	0.5
Surgery for NEC	14	6.2	5	0.8	1	0.1	0	0.0	20	1.1
TOTAL	226	100.0	620	100.0	678	100.0	381	100.0	1905	100.0

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

TABLE 94

NICUS REGISTRANTS BY MAJOR SURGERY AND GESTATIONAL AGE, NSW & ACT 2005#

Major surgery	Gestational age (weeks) 22–27		28–31		32–36		37+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
No	197	87.2	604	97.4	670	98.8	368	96.6	1839	96.5
Yes	29	12.8	16	2.6	8	1.2	13	3.4	66	3.5
TOTAL	226	100.0	620	100.0	678	100.0	381	100.0	1905	100.0

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

TABLE 95

NICUS REGISTRANTS BY INTRAVENTRICULAR HAEMORRHAGE (IVH) AND GESTATIONAL AGE, NSW & ACT 2005#

Head ultrasound	Gestational age (weeks) 22–27		28–31		32–36		TOTAL	
	No.	%	No.	%	No.	%	No.	%
No IVH	121	50.8	485	80.7	250	38.7	856	57.6
Grade 1	43	18.1	59	9.8	19	2.9	121	8.1
Grade 2	21	8.8	6	1.0	2	0.3	29	2.0
Grade 3	15	6.3	10	1.7	2	0.3	27	1.8
Grade 4	25	10.5	3	0.5	1	0.2	29	2.0
Hydrocephalus requiring drainage	3	1.3	1	0.2	2	0.3	6	0.4
Not examined & lived	0	0.0	35	5.8	370	57.3	405	27.3
Not examined & died	13	5.5	3	0.5	2	0.3	18	1.2
TOTAL	238	100.0	601	100.0	646	100.0	1485	100.0

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

TABLE 96

NICUS REGISTRANTS BY RETINOPATHY OF PREMATURITY (ROP) AND GESTATIONAL AGE, NSW & ACT 2005#

Retinopathy of prematurity (ROP)	Gestational age (weeks) 22–27		28–31		TOTAL	
	No.	%	No.	%	No.	%
No ROP	64	28.3	415	66.9	479	56.6
Grade 1	37	16.4	13	2.1	50	5.9
Grade 2	34	15.0	13	2.1	47	5.6
Grade 3	28	12.4	5	0.8	33	3.9
Grade 4	1	0.4	0	0.0	1	0.1
Grade 5	2	0.9	0	0.0	2	0.2
Treatment with laser therapy	23	10.2	3	0.5	26	3.1
Not examined & lived	2	0.9	156	25.2	158	18.7
Not examined & died	58	25.7	18	3.1	76	9.0
TOTAL	226	100.0	620	100.0	846	100.0

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

(Continued from page 70)

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 9, 10 and 11 and Table 97). 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. In 2005, the total cohort used 62,761 bed days in a tertiary centre in NSW and the ACT (range 46,090 in 1993 to 62,852 in 2004); as well as 19,497 in a non–tertiary centre (level 2 neonatal unit) in NSW and the ACT (14,288 in 1992 to 21,352 in 2004). Even when these infants leave the neonatal intensive care unit, they still require substantial resources.

In 2005, NICUS registrants used 17,750 days of assisted ventilation (range 15,282 in 1993 to 18,557 in 2004) and 24,436 days of oxygen therapy (range 22,526 in 1992 to 30,802 in 2001). In 2005, 44 (2.3 per cent) infants were discharged home on oxygen therapy (range 2.1 per cent in 1992 to 5.1 per cent in 1998). The proportion of infants less than 28 weeks gestation discharged home on oxygen therapy was 10.6 per cent (range 7.5 per cent in1992 to 21.3 per cent in 2002) (Table 98).

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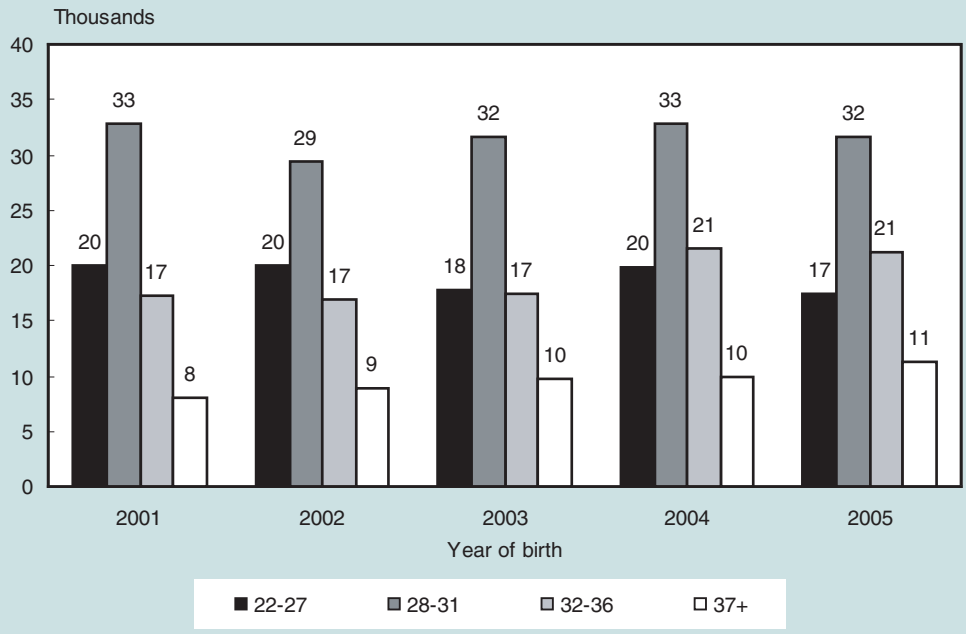
FIGURE 9

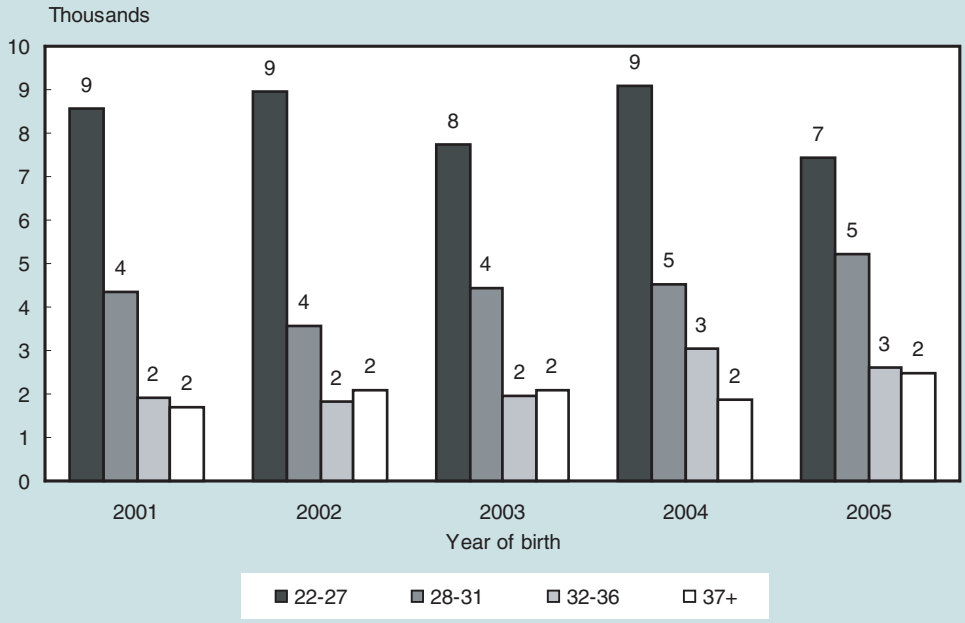
NICUS REGISTRANTS BY TOTAL NUMBER OF DAYS IN HOSPITAL AND GESTATIONAL AGE, NSW & ACT 2005



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

FIGURE 10

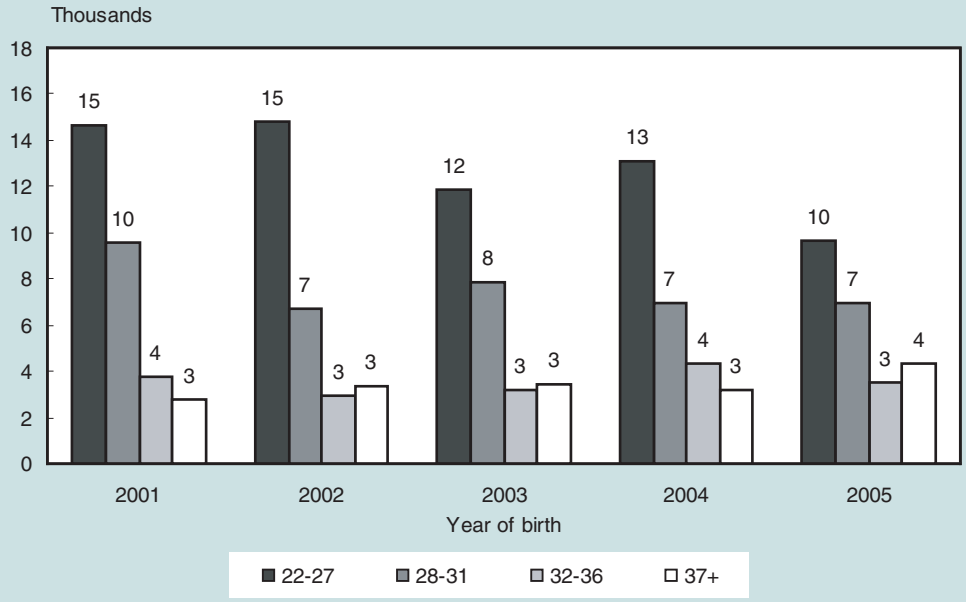
NICUS REGISTRANTS BY TOTAL NUMBER OF DAYS OF ASSISTED VENTILATION AND GESTATIONAL AGE, NSW & ACT 2001–2005



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

FIGURE 11

NICUS REGISTRANTS BY TOTAL NUMBER OF DAYS OF OXYGEN THERAPY AND GESTATIONAL AGE, NSW & ACT 2001–2005



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

TABLE 97

NICUS REGISTRANTS BY SERVICE UTILISATION INDICATORS AND GESTATIONAL AGE, NSW & ACT 2005

Indicators	Gestational age (weeks) 22–27	28–31	32–36	37+	TOTAL
Non–tertiary hospital stay (days)					
Minimum	0	0	0	0	0
Maximum	190	366	69	51	366
Sum	2218	9566	6669	1044	19497
Median	0	13	4	0	0
25th percentile	0	0	0	0	0
75th percentile	14	27	15	2	15
Tertiary hospital stay (days)					
Minimum	1	0	0	0	0
Maximum	251	660	345	700	700
Sum	15252	22796	14516	10197	62761
Median	66	31	12	9	16
25th percentile	27	15	7	5	7
75th percentile	91	47	22	17	36
Total hospital stay (days)					
Minimum	1	0	0	0	0
Maximum	363	562	345	700	700
Sum	17406	31602	21137	11241	81386
Median	77	46	23	10	27
25th percentile	32	37	15	6	12
75th percentile	98	59	32	20	47
Mechanical ventilation (days)					
Minimum	0	0	0	0	0
Maximum	89	115	89	236	236
Sum	2309	1239	1161	1988	6696
Median	3	0	0	1	0
25th percentile	1	0	0	0	0
75th percentile	12	1	1	3	2
Continuous Positive Airways Pressure (days)					
Minimum	0	0	0	0	0
Maximum	77	224	139	32	224
Sum	5122	3991	1458	482	11054
Median	20	2	1	0	1
25th percentile	3	0	0	0	0
75th percentile	36	7	2	1	4
Assisted ventilation (days)					
Minimum	0	0	0	0	0
Maximum	115	297	154	256	297
Sum	7430	5230	2619	2471	17750
Median	27	3	1	2	2
25th percentile	8	1	0	0	1
75th percentile	46	8	3	4	6
Oxygen (days)					
Minimum	0	0	0	0	0
Maximum	324	365	177	534	534
Sum	9681	6918	3482	4355	24436
Median	19	2	1	2	2
25th percentile	4	1	1	1	1
75th percentile	66	7	4	6	7

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

TABLE 98

NICUS REGISTRANTS BY HOME OXYGEN ADMINISTRATION AND GESTATIONAL AGE, NSW & ACT 2001–2005#

Year	Home oxygen	Gestational age (weeks) 22–27		28–31		32–36		37+		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
2001	No	217	81.3	579	95.2	524	99.8	277	98.9	1597	95.1
	Yes	50	18.7	29	4.8	1	0.2	3	1.1	83	4.9
	TOTAL	267	100.0	608	100.0	525	100.0	280	100.0	1680	100.0
2002	No	211	78.4	540	97.6	551	99.5	283	98.3	1585	95.3
	Yes	58	21.6	13	2.4	3	0.5	5	1.7	79	4.7
	TOTAL	269	100.0	553	100.0	554	100.0	288	100.0	1664	100.0
2003	No	200	85.1	556	95.9	611	99.7	371	99.5	1738	96.5
	Yes	35	14.9	24	4.1	2	0.3	2	0.5	63	3.5
	TOTAL	235	100.0	580	100.0	613	100.0	373	100.0	1801	100.0
2004	No	194	81.2	591	98.0	644	99.7	358	99.4	1787	96.7
	Yes	45	18.8	12	2.0	2	0.3	2	0.6	61	3.3
	TOTAL	239	100.0	603	100.0	646	100.0	360	100.0	1848	100.0
2005	No	202	89.4	603	97.3	677	99.9	379	99.5	1861	97.7
	Yes	24	10.6	17	2.7	1	0.1	2	0.5	44	2.3
	TOTAL	226	100.0	620	100.0	678	100.0	381	100.0	1905	100.0

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

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Survival

Infants with a major congenital anomaly have been excluded from the analysis of survival, with the exception of data reported in Table 102.

The six–month survival rate for all infants without a major congenital anomaly in the 2005 cohort was 94 per cent (range 87.8 per cent in 1992 to 94.4 per cent in 2004). Survival of infants born at less than 25 weeks gestation was 38.3 per cent (range 33.3 per cent in 2003 to 54.8 per cent in 1993). There was a trend for survival to improve with gestational age (Figure 12 and Table 99). There was no difference in the survival rate between term (94.8 per cent) and preterm infants (93.8 per cent). Among infants who died, 68.4 per cent of deaths occurred during the first week of life (range 62.5 per cent in 1998 to 76.2 per cent in 2002) with a further 21.1 per cent occurring during the first month of life (Table 99).

The six–month survival rate improved with increasing birth weight, ranging from 31.3 per cent for infants in the 500–599 gram group to 93.5 per cent for the 900–999 gram group. Six–month survival continued to improve with increasing birth weight to a maximum of 98.7 per cent for infants of 1,500–1,749 grams birth weight and then decreased slightly (Table 100).

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 2005, the six–month survival rate for 22–27 week infants born in a tertiary centre (74.4 per cent) was significantly higher than for those born in a non–tertiary centre (60.9 per cent). Place of birth did not significantly affect survival for infants in any of the other gestational age groups (Table 101).

The six–month survival rate was similar for males (94.4 per cent) and females (93.5 per cent) overall, and for all gestational age groups: less than 28 weeks (70.3 per cent versus 75.9 per cent); 28–31 weeks (96.5 per cent versus 95.9 per cent); 32–36 weeks (98.5 per cent versus 98.6 per cent); and 37–41 weeks gestation groups (96.2 percent versus 92 per cent).

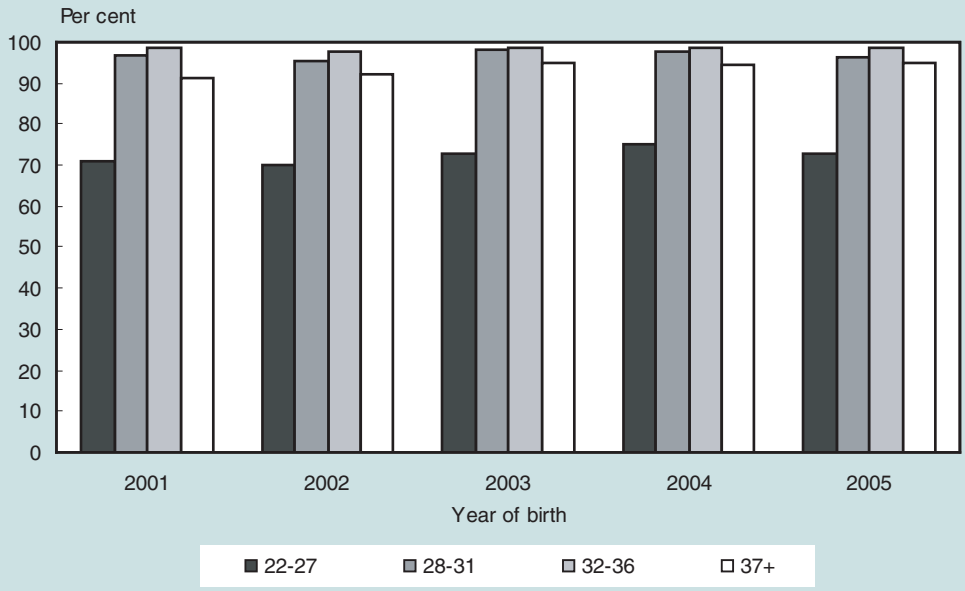
The six–month survival rate was 94 per cent (n=1,384) for singleton infants and 93.8 per cent (n=433) for multiple gestation infants. In 2005 plurality did not significantly influence survival in any of the gestational age groups.

As expected the overall survival rate was generally lower (92.3 per cent) in the presence of a major congenital anomaly (Table 102).

Post–mortem examinations were performed on 29/114 infants (25.4 per cent) who died in the 2005 cohort (Figure 13 and Table 103). Post–mortem examinations were

FIGURE 12

NICUS REGISTRANTS BY 6–MONTHS SURVIVAL AND GESTATIONAL AGE, NSW & ACT 2001–2005#



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

most commonly not requested for infants 22–27 weeks gestation (57.4 per cent). The highest rate of refusal was in the 28–31 week group (30.4 per cent) and the highest rate of post–mortems done was in the 32–36 week (60 per cent).

TABLE 99

NICUS REGISTRANTS BY DURATION OF SURVIVAL AND GESTATIONAL AGE, NSW & ACT 2005#

Gestational age (weeks)	Alive at 6 months		Age at death (days) 0–7		8–28		28+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
22	0	0.0	1	100.0	0	0.0	0	0.0	1	0.1
23	2	28.6	4	57.1	1	14.3	0	0.0	7	0.4
24	16	41.0	16	41.0	4	10.3	3	7.7	39	2.0
25	31	66.0	11	23.4	3	6.4	2	4.3	47	2.5
26	50	84.7	6	10.2	3	5.1	0	0.0	59	3.1
27	66	90.4	4	5.5	2	2.7	1	1.4	73	3.8
28	107	93.9	5	4.4	1	0.9	1	0.9	114	6.0
29	106	93.0	4	3.5	3	2.6	1	0.9	114	6.0
30	158	97.5	1	0.6	1	0.6	2	1.2	162	8.5
31	226	98.3	4	1.7	0	0.0	0	0.0	230	12.1
32	198	97.5	3	1.5	0	0.0	2	1.0	203	10.7
33	144	98.6	2	1.4	0	0.0	0	0.0	146	7.7
34	139	98.6	2	1.4	0	0.0	0	0.0	141	7.4
35	98	99.0	1	1.0	0	0.0	0	0.0	99	5.2
36	89	100.0	0	0.0	0	0.0	0	0.0	89	4.7
37	61	98.4	0	0.0	1	1.6	0	0.0	62	3.3
38	82	93.2	5	5.7	1	1.1	0	0.0	88	4.6
39	70	97.2	1	1.4	1	1.4	0	0.0	72	3.8
40	85	93.4	5	5.5	1	1.1	0	0.0	91	4.8
41	56	91.8	3	4.9	2	3.3	0	0.0	61	3.2
42	7	100.0	0	0.0	0	0	0	0.0	7	0.4
TOTAL	1791	94.0	78	4.1	24	1.3	12	0.6	1905	100.0

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

TABLE 100

NICUS REGISTRANTS BY DURATION OF SURVIVAL AND BIRTH WEIGHT, NSW & ACT 2005#

Birth weight (grams)	Alive at 5 months		Age at death (days) 0–7		8–28		28+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 400	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
400–499	2	40.0	3	60.0	0	0.0	0	0.0	5	0.3
500–599	5	31.3	7	43.8	2	12.5	2	12.5	16	0.8
600–699	25	50.0	17	34.0	5	10.0	3	6.0	50	2.6
700–799	33	73.3	9	20.0	2	4.4	1	2.2	45	2.4
800–899	39	84.8	4	8.7	2	4.3	1	2.2	46	2.4
900–999	58	93.5	3	4.8	1	1.6	0	0.0	62	3.3
1,000–1,249	210	94.6	5	2.3	5	2.3	2	0.9	222	11.7
1,250–1,499	226	97.0	5	2.2	1	0.4	1	0.4	233	12.2
1,500–1,749	227	98.7	2	0.9	0	0.0	1	0.4	230	12.1
1,750–1,999	184	97.4	4	2.1	0	0.0	1	0.5	189	9.9
2,000–2,499	260	97.4	7	2.6	0	0.0	0	0.0	267	14.0
2,500–2,999	172	97.7	3	1.7	1	0.6	0	0.0	176	9.2
3,000–3,499	180	97.8	1	0.5	3	1.6	0	0.0	184	9.7
3,500–3,999	98	93.3	6	5.7	1	1.0	0	0.0	105	5.5
4,000+	72	96.0	2	2.7	1	1.3	0	0.0	75	3.9
TOTAL	1791	94.0	78	4.1	24	1.3	12	0.6	1905	100.0

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

TABLE 101

NICUS REGISTRANTS BY DURATION OF SURVIVAL, PLACE OF BIRTH AND GESTATIONAL AGE, NSW & ACT 2005#

Gestational age (weeks)	Place of birth	Alive at 6 months		Age at death (days) 0–7		8–28		28+		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
22–27	Non tertiary	14	60.9	7	30.4	1	4.3	1	4.3	23	10.2
	Tertiary	151	74.4	35	17.2	12	5.9	5	2.5	203	89.8
	Sub–total	165	73.0	42	18.6	13	5.8	6	2.7	226	100.0
28–31	Non tertiary	65	100.0	0	0.0	0	0.0	0	0.0	65	10.5
	Tertiary	530	95.8	14	2.5	5	0.9	4	0.7	553	89.5
	Sub–total	595	96.3	14	2.3	5	0.8	4	0.7	618	100.0
32–36	Non tertiary	186	98.4	3	1.6	0	0.0	0	0.0	189	28.0
	Tertiary	479	98.8	4	0.8	0	0.0	2	0.4	485	72.0
	Sub–total	665	98.7	7	1.0	0	0.0	2	0.3	674	100.0
37–41	Non tertiary	190	93.1	10	4.9	4	2.0	0	0.0	204	54.8
	Tertiary	162	96.4	4	2.4	2	1.2	0	0.0	168	45.2
	Sub–total	352	94.6	14	3.8	6	1.6	0	0.0	372	100.0
42+	Tertiary	6	100.0	0	0.0	0	0.0	0	0.0	6	100.0
	Sub–total	6	100.0	0	0.0	0	0.0	0	0.0	6	100.0
TOTAL		1783	94.0	77	4.1	24	1.3	12	0.6	1896	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 102

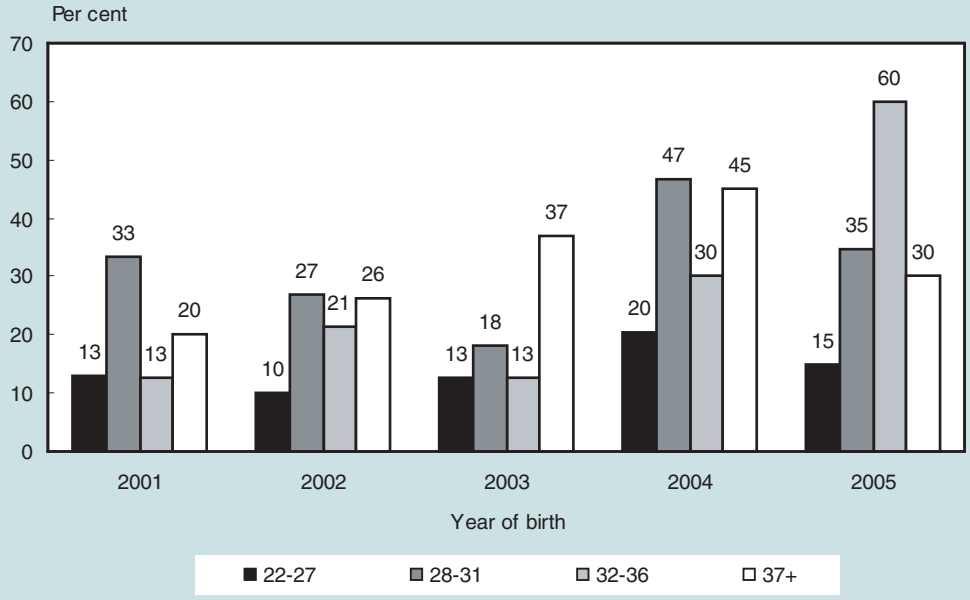
NICUS REGISTRANTS BY DURATION OF SURVIVAL, MAJOR CONGENITAL ANOMALY AND GESTATIONAL AGE, NSW & ACT 2005

Gestational age (weeks)	Major congenital anomaly	Alive at 6 months		Age at death (days) 0–7		8–28		28+		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
22–27	No	165	73.0	42	18.6	13	5.8	6	2.7	226	93.0
	Yes	14	82.4	3	17.6	0	0.0	0	0.0	17	7.0
	Sub–total	179	73.7	45	18.5	13	5.3	6	2.5	243	100.0
28–31	No	597	96.3	14	2.3	5	0.8	4	0.6	620	95.1
	Yes	21	65.6	6	18.8	3	9.4	2	6.3	32	4.9
	Sub–total	618	94.8	20	3.1	8	1.2	6	0.9	652	100.0
32–36	No	668	98.5	8	1.2	0	0.0	2	0.3	678	87.1
	Yes	81	81.0	9	9.0	7	7.0	3	3.0	100	12.9
	Sub–total	749	96.3	17	2.2	7	0.9	5	0.6	778	100.0
37–41	No	354	94.7	14	3.7	6	1.6	0	0.0	374	64.9
	Yes	175	86.6	16	7.9	9	4.5	2	1.0	202	35.1
	Sub–total	529	91.8	30	5.2	15	2.6	2	0.3	576	100.0
42+	No	7	100.0	0	0.0	0	0.0	0	0.0	7	87.5
	Yes	1	100.0	0	0.0	0	0.0	0	0.0	1	12.5
	Sub–total	8	100.0	0	0.0	0	0.0	0	0.0	8	100.0
TOTAL		2083	92.3	112	5.0	43	1.9	19	0.8	2257	100.0

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

FIGURE 13

NICUS REGISTRANT DEATHS BY POST–MORTEM EXAMINATION AND GESTATIONAL AGE, NSW & ACT 2001–2005#



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

TABLE 103

NICUS REGISTRANTS BY POST–MORTEM EXAMINATION AND GESTATIONAL AGE, NSW & ACT 2005#

Post–mortem	Gestational age (weeks)									
	22–27		28–31		32–36		37+		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Not requested	35	57.4	8	34.8	2	20.0	10	50.0	55	48.2
Refused	17	27.9	7	30.4	2	20.0	4	20.0	30	26.3
Done	9	14.8	8	34.8	6	60.0	6	30.0	29	25.4
TOTAL	61	100.0	23	100.0	10	100.0	20	100.0	114	100.0

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

9. EXTREMELY PRE-TERM FOLLOW UP

This is the second time that follow up of infants 22–28 weeks gestation has been reported in the Mothers and Babies Report. The information presented in this chapter was obtained from the Neonatal Intensive Care Units' (NICUS) Follow-up Data Collection (see Chapter 3, Data Sources).

Registration rate

All infants of 22–28 weeks gestation admitted to a neonatal intensive care unit in New South Wales (NSW) or the Australian Capital Territory (ACT) who survived to hospital discharge were enrolled in the follow up clinic at their registration hospital. Table 104 shows the Health Area of mother's residence at birth of the 1964 infants who were born between 1998 and 2002. The majority of liveborn infants were admitted to a neonatal intensive care unit in all Health Areas.

Overall 2217/3201 (69.3 per cent) infants were liveborn,1964/2217 (88.6 per cent) were admitted to a neonatal intensive care unit, 1516/1964 (77.2 per cent) survived to hospital discharge, 26/1516 (1.7 per cent) died post-discharge. Live births increased with increasing gestational age from 36.8 per cent at 22 weeks gestation to 87.3 per cent at 28 weeks gestation. Similarly admission to a neonatal intensive care unit increased from 3.5 per cent at 22 weeks gestation to nearly 100.0 per cent at 28 weeks gestation. As expected hospital survival also increased with increasing gestational age from 0 per cent at 22 weeks gestation to 91.7 per cent at 28 weeks gestation (Table 105).

The major causes of death for the children who died after hospital discharge were sudden infant death syndrome, chronic lung disease, pneumonia, suffocation by overlying and degenerative disease of the nervous system.

There were 1490 children available for follow up at 2–3 years of age, corrected for prematurity, of these 308 children were not followed up (17 families moved overseas, 24 families moved interstate, and 267 were either lost to follow up or refused the appointment). The follow up rate at 2–3 years of age, corrected for prematurity was 1182 (79.3 per cent) children (Table 105).

TABLE 104

NICUS REGISTRATIONS BY HEALTH AREA OF RESIDENCE, NSW & ACT 1998–2002

Health Area	Total NICUS Registrants		Total NSW & ACT Live births	Registrants per 1,000 live births
	No.	%	No.	
Sydney South West	446	22.7	501	890.2
South Eastern Sydney & Illawarra	266	13.5	299	889.6
Sydney West	326	16.6	364	895.6
Northern Sydney & Central Coast	279	14.2	304	917.8
Hunter & New England	284	14.5	300	946.7
North Coast	48	2.4	73	657.5
Greater Southern	110	5.6	129	852.7
Greater Western	97	4.9	115	843.5
ACT	96	4.9	114	842.1
Overseas	2	0.1	0	0.0
Interstate	10	0.5	18	555.6
TOTAL	1964	100.0	2217#	885.9

Source: NICUS Data Collection. NICUS Follow-up Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 1998–2002. Centre for Epidemiology and Research, NSW Department of Health. ACT Maternal Perinatal Data Collection 1998–2002, ACT Health.
Excludes 21 babies for whom the birth outcome was not known.

TABLE 105

BIRTHS BY NICUS REGISTRATION, HOSPITAL SURVIVAL AND GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Total births	NSW & ACT Stillbirths		Live births		NICUS Registrations		Hospital Survival		Died Post-discharge		Available 2–3 years	Refused/ Lost	Assessed Available	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.	No.	%
22	391	247	63.2	144	36.8	5	3.5	0	0.0	0	0.0	0	0	0	0.0
23	330	186	56.4	144	43.6	77	53.5	23	29.9	1	4.3	22	4	18	81.8
24	422	158	37.4	264	62.6	229	86.7	111	48.5	1	0.9	110	14	96	87.3
25	395	104	26.3	291	73.7	281	96.6	179	63.7	0	0.0	179	15	164	91.6
26	510	119	23.3	391	76.7	399		316	79.2	10	3.2	306	57	249	81.4
27	524	90	17.2	434	82.8	419	96.5	379	90.5	8	2.1	371	85	286	77.1
28	629	80	12.7	549	87.3	554		508	91.7	6	1.2	502	133	369	73.5
TOTAL	3201	984	30.7	2217#	69.3	1964	88.6	1516	77.2	26	1.7	1490	308	1182	79.3

Source: NICUS Data Collection. NSW Centre for Perinatal Health Services Research. NSW Midwives Data Collection 1998–2002. Centre for Epidemiology and Research, NSW Department of Health. ACT Maternal Perinatal Data Collection 1998-2002, ACT Health.
Excludes 21 babies for whom the birth outcome was not known.

Assessment and tools

Children were assessed by the developmental assessment team (91 per cent) at the tertiary hospital in which they received their neonatal care or the closest tertiary hospital to their current place of residence. If the parents were unable to travel to a tertiary hospital then the local paediatrician (7 per cent) or General Practitioner (0.2 per cent) examined the child. The median (25th, 75th) age of assessment was 35.6 (29.5, 36.8) months of age, corrected for prematurity.

A formal developmental assessment comprised hearing by an audiologist, vision by an ophthalmologist or optometrist, neurological examination by a developmental paediatrician or physiotherapist, and a developmental assessment using the Griffiths Mental Developmental Scales or Bayley Scales of Infant Development-II performed by a psychologist or a developmental paediatrician.

Developmental outcome

Of the 1182 children with information at 2–3 years of age, corrected for prematurity, 1167 (98.7 per cent) had a neurological examination performed. Of these 126 (10.8 per cent) had cerebral palsy. A further 85 (7.3 per cent) children had motor incoordination. The proportion of children with cerebral palsy (minimal/mild n=55, moderate n=34 or severe n=37) and motor incoordination decreased with increasing gestational age (Table 106). Of the 1182 children with information at 2–3 years of age, corrected for prematurity, 950 (80.4 per cent) had their eyes examined by an ophthalmologist or optometrist post discharge from hospital. Of these 9 (0.9 per cent) children were bilaterally blind with a visual acuity of less than 6/60 in the better eye. Another 101 (10.6 per cent) children had visual problems including unilateral blindness, or required eye surgery, eye patching, eye drops or corrective lenses. The proportion of children who were blind or who were diagnosed with visual problems decreased with increasing gestational age (Table 107).

TABLE 106

NEUROLOGICAL STATUS AT 2–3 YEAR FOLLOW UP BY GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Neurological examination Performed		Normal		Motor Incoordination		Cerebral Palsy		Total Infants	
	No.	%	No.	%	No.	%	No.	%	No.	%
23	18	100.0	10	55.6	5	27.8	3	16.7	18	100.0
24	96	100.0	73	76.0	12	12.5	11	11.5	96	100.0
25	164	100.0	120	73.2	18	11.0	26	15.9	164	100.0
26	246	98.8	193	78.5	19	7.7	34	13.8	249	100.0
27	280	97.9	248	88.6	11	3.9	21	7.5	286	100.0
28	363	98.4	312	86.0	20	5.5	31	8.5	369	100.0
TOTAL	1167	98.7	956	81.9	85	7.3	126	10.8	1182	100.0

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

TABLE 107

VISUAL STATUS AT 2–3 YEAR FOLLOW UP BY GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Visual examination Performed		Visual Problems#		Bilateral Blind		Total Infants	
	No.	%	No.	%	No.	%	No.	%
23	17	94.4	5	29.4	2	1.2	18	100.0
24	88	91.7	18	20.5	1	1.1	96	100.0
25	141	86.0	25	17.7	2	1.4	164	100.0
26	207	83.1	23	11.1	1	0.5	249	100.0
27	218	76.2	13	6.0	0	0.0	286	100.0
28	279	75.6	17	6.1	3	1.1	369	100.0
TOTAL	950	80.4	101	10.6	9	0.9	1182	100.0

Source: NICUS Follow-up Data Collection. NSW Centre for Perinatal Health Services Research.
Visual problems include unilateral blindness, eye surgery, eye patching, eye drops, and corrective lenses

Of the 1182 children with information at 2–3 years of age, corrected for prematurity, 992 (83.9 per cent) had their hearing tested by an audiologist post discharge from hospital. Of these 53 (5.3 per cent) required bilateral hearing aids or unilateral/bilateral cochlear implants. Another 97 (9.8 per cent) children had hearing problems including unilateral deafness, high frequency deafness or insertion of grommets. The proportion of children who were deaf or had a hearing problem decreased with increasing gestational age (Table 108).

Of the 1182 children with information at 2–3 years of age, corrected for prematurity, 1062 (89.8 per cent) had a standardised psychological test performed. The majority of children, 990 (83.8 per cent) were assessed using the Griffiths Mental Development Scales, 27 (2.0 per cent) using the Bayley Scales of Development-II and 48 using the Reynell-Zinkin Scales for Visually Impaired Children, Vineland Adaptive Behaviour Scales, Denver Developmental Scales, Peabody. The proportion of children with a mild (n=138, 13 per cent), moderate (n=61, 5.7 per cent) or severe (n=54, 5.1 percent) developmental delay decreased with increasing gestational age (Table 109).

Table 110 shows the proportion of children with any degree of functional disability amongst children assessed at 2–3 years of age, corrected for prematurity. With increasing gestational age the proportion of children diagnosed with mild (n=150, 12.7 per cent), moderate (113, n=9.6 per cent) or severe (n=86, 7.3 per cent) functional disability decreased and concomitantly the proportion of children with no apparent disability increased.

TABLE 108

HEARING STATUS AT 2–3 YEAR FOLLOW UP BY GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Hearing examination Performed		Hearing Problems#		Bilateral Deafness		Total Infants	
	No.	%	No.	%	No.	%	No.	%
23	16	88.9	1	6.3	1	6.3	18	100.0
24	88	91.7	10	11.4	13	14.8	96	100.0
25	145	88.4	16	11.0	6	4.1	164	100.0
26	211	84.7	28	13.3	17	8.1	249	100.0
27	234	81.8	19	8.1	8	3.4	286	100.0
28	298	80.8	23	7.7	8	2.7	369	100.0
TOTAL	992	83.9	97	9.8	53	5.3	1182	100.0

Source: NICUS Follow-up Data Collection. NSW Centre for Perinatal Health Services Research.
Hearing problems include unilateral deafness, insertion of grommets, high frequency hearing loss, abnormal hearing test.

TABLE 109

DEVELOPMENTAL STATUS AT 2–3 YEAR FOLLOW UP BY GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Psychological assessment				Developmental delay						Total Infants	
	Performed		No Scores		None		Mild		Moderate		Severe			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
23	15	83.3	1	6.7	8	53.3	1	6.7	4	26.7	1	6.7	18	100.0
24	89	92.7	3	3.4	47	52.8	19	21.3	8	9.0	12	13.5	96	100.0
25	155	94.5	10	6.5	88	56.8	30	19.4	11	7.1	16	10.3	164	100.0
26	223	89.6	13	5.8	161	72.2	21	9.4	17	7.6	11	4.9	249	100.0
27	254	88.8	16	6.3	187	73.6	34	13.4	10	3.9	7	2.8	286	100.0
28	326	88.3	17	5.2	258	79.1	33	10.1	11	3.4	7	2.1	369	100.0
TOTAL	1062	89.8	60	5.6	749	70.5	138	13.0	61	5.7	54	5.1	1182	100.0

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

Of the 1182 children with information at 2–3 years of age, corrected for prematurity, 199 (16.8 per cent) had a moderate or severe functional disability due to cerebral palsy, bilateral blindness, deafness requiring bilateral hearing aids or unilateral/bilateral cochlear implants or developmental delay more than 2 standard deviations below the mean.

When children 23–28 weeks gestation were compared to a group of 460 randomly selected singleton term infants without a major congenital anomaly born during 1996 in NSW and assessed at 3 years of age using the same assessments methods, the extremely premature children were more likely to have had a mild (12.7 per cent v 2 per cent), moderate (9.6 per cent v 1 per cent) or severe (7.3 per cent v 0.5 per cent) functional disability than the term control children. This represented an increased risk of mild (6 times higher), moderate (9 times higher) or severe (14 times higher) functional disability in 23–28 week prematurely born children.

Weight for age

Of the children with a weight recorded 101 (9.4 per cent) were less than 3rd centile, 120 (11.2 per cent) were between the 3rd and 9th centile, 727 (67.9 per cent) were appropriately grown and 122 (11.4 per cent) had a weight above the 90th centile for sex and age (Table 111).

Reference

1. Vincent T, Bajuk B, Sutton L, Berry G, Henderson-Smart DJ. Study of antecedents and outcomes of severe morbidity in term neonates in New South Wales: A comparison of major disability at 1 and 3 years. *Proceedings of the 5th Annual Congress of the Perinatal Society of Australia and New Zealand.* Canberra, Australia. 2001: P139).

TABLE 110

SEVERITY OF FUNCTIONAL DISABILITY AT 2–3 YEAR FOLLOW UP BY GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Severity of functional disability									
	None		Mild		Moderate		Severe		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
23	8	44.4	2	11.1	2	11.1	6	33.3	18	100.0
24	49	51.0	14	14.6	15	15.6	18	18.8	96	100.0
25	98	59.8	32	19.5	15	9.1	19	11.6	164	100.0
26	169	67.9	26	10.4	33	13.3	21	8.4	249	100.0
27	217	75.9	39	13.6	19	6.6	11	3.8	286	100.0
28	292	79.1	37	10.0	29	7.9	11	3.0	369	100.0
TOTAL	833	70.5	150	12.7	113	9.6	86	7.3	1182	100.0

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

TABLE 111

WEIGHT FOR AGE AT 2–3 YEAR FOLLOW UP BY GESTATIONAL AGE, NSW & ACT 1998–2002

Gestational age (weeks)	Weight for age centile									
	<3		3–9		10–90		>90		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	% with weight
23	1	7.1	2	14.3	9	64.3	2	14.3	14	1.3
24	11	13.3	16	19.3	52	62.7	4	4.8	83	7.8
25	20	13.2	22	14.6	96	63.6	13	8.6	151	14.1
26	30	13.1	34	14.8	140	61.1	25	10.9	229	21.4
27	14	5.6	24	9.6	182	72.8	30	12.0	250	23.4
28	25	7.3	22	6.4	248	72.3	48	14.0	343	32.1
TOTAL	101	9.4	120	11.2	727	67.9	122	11.4	1070	100.0

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

10. BIRTH DEFECTS

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, positional talipes, birthmarks, or clicky hips. Descriptions of some common birth defects are shown in Appendix 1. A list of common exclusions is shown in Appendix 2.

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 the *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.

This chapter reports birth defects detected during pregnancy or in the first year of life for 1999–2004 and birth defects detected during pregnancy or at birth for 2005.

Trends in reported birth defects

Between 1999 and 2004, the reported number of infants with birth defects has remained stable at just over 2 per cent (Table 112). In 2005, 817 cases of birth defects detected during pregnancy or at birth were reported.

TABLE 112

BIRTH DEFECT CASES, NSW 1999–2005#

Year	Birth defect cases	Births	Rate/1,000 births
1999	1828	86468	21.1
2000	1858	87140	21.3
2001	1775	85286	20.8
2002	1739	85398	20.4
2003	1761	85853	20.5
2004	1758	85016	20.7
2005	817	89840	9.1

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

Birth defects by diagnostic category

The most common categories of birth defects for births of more than 20 weeks gestation or with a birth weight greater than 400 grams are presented in Table 113. Birth defects are classified using the British Paediatric Association (BPA) Classification of Diseases, which is primarily organised by body system. For infants with more than one defect, each defect is counted separately. The number of birth defects reported therefore exceeds the number of affected infants.

In 1999–2005, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genito–urinary system (Table 113). This is a similar pattern to previous years. In 2004, the overall rate of defects was similar to the previous 5 years (37.3 versus 36.7 per 1,000).

TABLE 113

BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1999–2005

Diagnostic category	No. defects				Rate/1,000 births			
	1999–2003	2004	2005	1999–2005	1999–2003	2004	2005	1999–2005
Defects of nervous system								
Anencephaly	49	7	10	66	0.1	0.1	0.1	0.1
Spina Bifida	137	23	20	180	0.3	0.3	0.2	0.3
Encephalocele	28	8	3	39	0.1	0.1	0.0	0.1
Microcephaly	111	24	5	140	0.3	0.3	0.1	0.2
Congenital hydrocephalus	174	43	22	239	0.4	0.5	0.2	0.4
Other nervous system defects	334	61	19	414	0.8	0.7	0.2	0.7
TOTAL	833	166	79	1078	1.9	2.0	0.9	1.8
Defects of eye								
Anophthalmos–microphthalmos	54	20	4	78	0.1	0.2	0.0	0.1
Buphthalmos–congenital glaucoma	27	4	3	34	0.1	0.0	0.0	0.1
Congenital cataract	75	15	5	95	0.2	0.2	0.1	0.2
Other eye defects	161	40	12	213	0.4	0.5	0.1	0.4
TOTAL	317	79	24	420	0.7	0.9	0.3	0.7
Defects of ear, face and neck								
Absence/ stricture auditory canal	54	7	10	71	0.1	0.1	0.1	0.1
Absent auricle	8	1	1	10	0.0	0.0	0.0	0.0
Defects of face and neck	40	8	3	51	0.1	0.1	0.0	0.1
Other ear defects	79	11	8	98	0.2	0.1	0.1	0.2
TOTAL	181	27	22	230	0.4	0.3	0.2	0.4
Defects of cardiovascular system								
Transposition of great vessels	215	44	39	298	0.5	0.5	0.4	0.5
Tetralogy of Fallot	147	31	13	191	0.3	0.4	0.1	0.3
Ventricular septal defect	853	178	79	1110	2.0	2.1	0.9	1.8
Atrial septal defect	821	172	67	1060	1.9	2.0	0.7	1.8

TABLE 113 *(continued)*

BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1999–2005#

Diagnostic category	No. defects				Rate/1,000 births			
	1999–2003	2004	2005	1999–2005	1999–2003	2004	2005	1999–2005
Defects of cardiovascular system (cont.)								
Heart valve defects	595	108	52	755	1.4	1.3	0.6	1.2
Patent ductus arteriosus > 37 weeks	446	106	50	602	1.0	1.2	0.6	1.0
Coarctation of aorta	199	43	20	262	0.5	0.5	0.2	0.4
Other defects of aorta	107	22	14	143	0.2	0.3	0.2	0.2
Defects of pulmonary artery	140	30	21	191	0.3	0.4	0.2	0.3
Other cardiovascular defects	754	154	97	1005	1.8	1.8	1.1	1.7
TOTAL	4277	888	452	5617	9.9	10.4	5.0	9.3
Defects of respiratory system								
Defects of nose	66	9	6	81	0.2	0.1	0.1	0.1
Defects of larynx, trachea and bronchus	45	12	1	58	0.1	0.1	0.0	0.1
Defects of lung	79	18	8	105	0.2	0.2	0.1	0.2
TOTAL	190	39	15	244	0.4	0.5	0.2	0.4
Defects of gastrointestinal system								
Cleft palate only	391	84	67	542	0.9	1.0	0.7	0.9
Cleft lip only	147	34	19	200	0.3	0.4	0.2	0.3
Cleft palate and cleft lip	228	42	31	301	0.5	0.5	0.3	0.5
Oesophageal atresia only	11	2	3	16	0.0	0.0	0.0	0.0
Oesophageal atresia with TOF	82	12	11	105	0.2	0.1	0.1	0.2
Tracheo–oesophageal fistula (TOF) only	22	2	2	26	0.1	0.0	0.0	0.0
Atresia–stenosis of small intestine	144	18	15	177	0.3	0.2	0.2	0.3
Atresia–stenosis of anus	127	24	20	171	0.3	0.3	0.2	0.3
Other gastrointestinal defects	468	96	20	584	1.1	1.1	0.2	1.0
TOTAL	1620	314	188	2122	3.8	3.7	2.1	3.5
Defects of genitourinary system								
Defects of female genitals	43	17	5	65	0.1	0.2	0.1	0.1
Undescended testis	313	63	9	385	0.7	0.7	0.1	0.6
Hypospadias	865	150	111	1126	2.0	1.8	1.2	1.9
Epispadias	13	0	0	13	0.0	0.0	0.0	0.0
Chordee	136	22	19	177	0.3	0.3	0.2	0.3
Indeterminate sex–ambiguous genitalia	51	11	4	66	0.1	0.1	0.0	0.1
Renal agenesis–dysgenesis	193	42	21	256	0.4	0.5	0.2	0.4
Obstructive defects of renal pelvis and ureter	716	152	29	897	1.7	1.8	0.3	1.5
Other genitourinary system defects	599	126	57	782	1.4	1.5	0.6	1.3
TOTAL	2929	583	255	3767	6.8	6.9	2.8	6.2
Defects of musculoskeletal system								
Congenital dislocation of the hips	670	133	34	837	1.6	1.6	0.4	1.4
Talipes equinovarus	326	73	21	420	0.8	0.9	0.2	0.7
Polydactyly	482	96	78	656	1.1	1.1	0.9	1.1
Syndactyly	90	19	21	130	0.2	0.2	0.2	0.2
Reduction deformities of limbs	234	51	45	330	0.5	0.6	0.5	0.5
Craniosynostosis	304	41	3	348	0.7	0.5	0.0	0.6
Diaphragmatic hernia	127	31	21	179	0.3	0.4	0.2	0.3
Exomphalos	72	16	11	99	0.2	0.2	0.1	0.2
Gastroschisis	93	16	17	126	0.2	0.2	0.2	0.2
Other musculoskeletal defects	818	159	95	1072	1.9	1.9	1.1	1.8
TOTAL	3216	635	346	4197	7.5	7.5	3.9	6.9
Defects of the integumentary system	323	57	12	392	0.8	0.7	0.1	0.6
Cystic hygroma	49	9	7	65	0.1	0.1	0.1	0.1
Chromosomal defects								
Trisomy 21	505	98	49	652	1.2	1.2	0.5	1.1
Trisomy 13	36	7	6	49	0.1	0.1	0.1	0.1
Trisomy 18	89	18	12	119	0.2	0.2	0.1	0.2
Turner syndrome	69	13	8	90	0.2	0.2	0.1	0.1
Other chromosomal defects	293	67	31	391	0.7	0.8	0.3	0.6
TOTAL	992	203	106	1301	2.3	2.4	1.2	2.2
Situs inversus	27	4	3	34	0.1	0.0	0.0	0.1
Congenital malformation syndromes	190	44	19	253	0.4	0.5	0.2	0.4
Congenital cytomegalovirus infection	2	1	0	3	0.0	0.0	0.0	0.0
Congenital toxoplasmosis	1	0	0	1	0.0	0.0	0.0	0.0
Non–immune hydrops foetalis	115	23	14	152	0.3	0.3	0.2	0.3
Other and unspecified birth defects	508	98	15	621	1.2	1.2	0.2	1.0
TOTAL	15770	3170	1557	20497	36.7	37.3	17.3	33.9

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

Infant characteristics

In the period 1999–2005, a single defect was reported in 64.1 per cent of infants, 2 defects in 18.0 per cent, 3 defects in 8.2 per cent, and 4 or more defects in 9.8 per cent of cases.

The sex was male in 57.8 per cent of infants, female in 41.8 per cent, indeterminate in 0.3 per cent of infants, and was not stated for 0.2 per cent.

Birth defects were more common in preterm and post–term infants than infants born at term (Table 114). Birth defects were also more common in infants born of a multiple pregnancy than a singleton pregnancy: in 1999–2005, 1.9 per cent of singleton babies, 2.5 per cent of twins, and 4.0 per cent of triplets were born with a birth defect.

About 11 per cent of infants born with birth defects died in the perinatal period, over half of which were stillbirths (Table 115). 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 less than one per cent in 2005 (see Chapter 4).

TABLE 114

BIRTH DEFECT CASES BY GESTATIONAL AGE, NSW 1999–2005#

Gestational age (weeks)	Year								
	1999–2003		2004		2005		1999–2005		
	No.	%	No.	%	No.	%	No.	%	Rate/1,000 births
20–27	569	6.3	125	7.1	79	9.7	773	6.7	184.5
28–31	262	2.9	65	3.7	19	2.3	346	3.0	76.9
32–36	1065	11.9	233	13.3	126	15.4	1424	12.3	41.1
37–41	6498	72.5	1241	70.6	580	71.0	8319	72.1	15.2
42+	194	2.2	31	1.8	13	1.6	238	2.1	17.4
Not stated	373	4.2	63	3.6	0	0.0	436	3.8	–
TOTAL	8961	100.0	1758	100.0	817	100.0	11536	100.0	19.1

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

TABLE 115

BIRTH DEFECT CASES BY PREGNANCY OUTCOME, NSW 1999–2005#

Pregnancy outcome	Year							
	1999–2003		2004		2005		1999–2005	
	No.	%	No.	%	No.	%	No.	%
Stillbirth	547	6.1	125	7.1	91	11.1	763	6.6
Liveborn/neonatal death	384	4.3	68	3.9	45	5.5	497	4.3
Liveborn/ postneonatal death	76	0.8	9	0.5	3	0.4	88	0.8
Liveborn surviving	7954	88.8	1556	88.5	678	83.0	10188	88.3
TOTAL	8961	100.0	1758	100.0	817	100.0	11536	100.0

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported. Postneonatal deaths are likely to be under–reported.

Maternal characteristics

After 35 years of age, the incidence of birth defects increased with increasing maternal age (Table 116). While the rate of birth defects is higher in older women, the majority of births occur in younger women. In 1999–2005, 73.5 per cent of babies with birth defects were born to women aged less than 35 years.

In 1999–2005, 292 babies of Aboriginal or Torres Strait Islander mothers were reported to have birth defects. The rate of birth defects among these babies was 18.9 per 1,000 compared with 18.0 per 1,000 for non–Aboriginal mothers.

TABLE 116

BIRTH DEFECT CASES BY MATERNAL AGE, NSW 1999–2005#

Maternal age (years)	Year								
	1999–2005		2004		2005		1999–2005		
	No.	%	No.	%	No.	%	No.	%	Rate/1,000 births
Under 20	380	4.2	68	3.9	40	4.9	488	4.2	19.1
20–24	1270	14.2	238	13.5	135	16.5	1643	14.2	18.2
25–29	2454	27.4	436	24.8	192	23.5	3082	26.7	17.4
30–34	2485	27.7	538	30.6	241	29.5	3264	28.3	16.6
35–39	1323	14.8	282	16.0	152	18.6	1757	15.2	18.5
40–44	330	3.7	62	3.5	52	6.4	444	3.8	24.0
45+	21	0.2	7	0.4	5	0.6	33	0.3	37.5
Not stated	698	7.8	127	7.2	0	0.0	825	7.2	–
TOTAL	8961	100.0	1758	100.0	817	100.0	11536	100.0	19.1

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

Birth defects among terminations of pregnancy, spontaneous abortions and unknown outcomes of pregnancy

In the period 1999–2005, on average about 300 terminations of pregnancy per year were reported to the NSW Birth Defects Register (Table 117). To date, 152 terminations of pregnancy have been reported to the Register for 2005. This number is expected to increase as outcomes for mothers with defects detected during pregnancy in 2005 continue to be reported. Of the 1,881 terminations of pregnancy reported in 1999–2005, 1,435 (76.3 per cent) were associated with a chromosomal abnormality, the most common of which was Trisomy 21 (Down syndrome), and 212 (11.3 per cent) were associated with a neural tube defect (Tables 117 and 118).

For spontaneous abortions, cytogenetic analysis is only carried out in cases of habitual abortion; the numbers presented, therefore, underestimate the number of spontaneous abortions that occur due to birth defects. Descriptions of some diagnostic terms used here are included in Appendix 1.

TABLE 117

PREGNANCIES WITH FETUSES AFFECTED BY BIRTH DEFECTS AND RESULTING IN SPONTANEOUS ABORTION, TERMINATION OF PREGNANCY OR UNKNOWN OUTCOME, NSW 1999–2005

Pregnancy outcome	Year							
	1999 No.	2000 No.	2001 No.	2002 No.	2003 No.	2004 No.	2005 No.	1999–2005 No.
Spontaneous abortion	119	124	171	202	232	298	308	1454
Termination of pregnancy less than 20 weeks gestation	310	262	257	285	312	303	152	1881
Unknown outcome	16	22	19	7	18	41	0	123
TOTAL	445	408	447	494	562	642	460	3458

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.

TABLE 118

BIRTH DEFECTS AMONG SPONTANEOUS ABORTIONS, TERMINATIONS OF PREGNANCY AND UNKNOWN OUTCOME OF PREGNANCY BY DIAGNOSTIC CATEGORY, NSW 1999–2005

Diagnostic category	Year 1999–2003			2004			2005		1999–2005		
	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Defects of nervous system											
Neural tube defects	5	169	3	1	21	1	1	22	7	212	4
Other nervous system defects	5	122	6	1	22	0	2	23	8	167	6
TOTAL	10	291	9	2	43	1	3	45	15	379	10
Defects of eye	0	3	0	0	0	0	0	2	0	5	0
Defects of ear, face and neck	1	10	1	0	2	0	0	3	1	15	1
Defects of cardiovascular system	11	180	7	1	28	2	4	70	16	278	9
Defects of respiratory system	2	20	3	0	4	1	2	9	4	33	4
Defects of gastrointestinal system	7	121	4	2	25	0	2	29	11	175	4
Defects of musculoskeletal system	25	289	9	7	61	2	3	58	35	408	11
Defects of genitourinary system	11	148	4	2	27	0	2	17	15	192	4
Defects of integumentary system	0	2	0	1	0	0	0	0	1	2	0
Cystic hygroma	9	99	3	7	30	2	4	8	20	137	5
Chromosomal defects											
Trisomy 21	64	538	22	26	132	15	26	49	116	719	37
Trisomy 13	35	79	11	9	16	3	18	8	62	103	14
Trisomy 18	43	193	7	16	37	2	11	11	70	241	9
Turner syndrome	81	91	2	35	23	7	39	9	155	123	9
Other chromosomal defects	609	200	26	206	36	10	212	13	1027	249	36
TOTAL	832	1101	68	292	244	37	306	90	1430	1435	105
Situs inversus	0	4	0	0	0	0	0	1	0	5	0
Congenital malformation syndromes	2	11	0	0	0	0	0	3	2	14	0
Non–immune hydrops foetalis	7	48	3	3	11	0	3	7	13	66	3
Other and unspecified birth defects	4	28	3	1	6	1	0	9	5	43	4
TOTAL	921	2355	114	318	481	46	329	351	1568	3187	160

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.

Trends in selected birth defects

Trends in a selection of common birth defects are shown in Table 119 and Figures 14 to 17. For 1999–2004, malformations reported up to one year of age are included; for 2005, malformations reported during pregnancy or at birth are included.

The reported number of liveborn and stillborn infants with neural tube defects was 85 in 1999 and 58 in 2004, and 54 have been reported for 2005 to date. The number of reported terminations of pregnancy was 44 in 1999, 21 in 2004, and 21 in 2005 (Figure 14).

Over the period 1999–2005, the number of cases of isolated cleft palate ranged from 60 to 88 per year, and for total cleft lip (including cases of cleft lip and cleft palate) from 71 to 88 per year. 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 reported number of liveborn and stillborn infants with chromosomal defects was 191 in 1999 and 202 in 2004, and the number of reported terminations of pregnancy associated with chromosomal defects rose from 221 in 1999 to 243 in 2004. The number of infants born with Down syndrome was 93 in 1999 and 98 in 2004, while the number of reported terminations of pregnancy associated with Down syndrome rose from 106 in 1999 to 132 in 2004.

In 1999, 37 liveborn infants and 1 stillborn infant had a diaphragmatic hernia, and there were 3 terminations of pregnancy for this condition. In 2004, there were 28 liveborn infants and 3 stillborn infants who had a diaphragmatic hernia, and there were no terminations of pregnancy (Figure 17).

TABLE 119

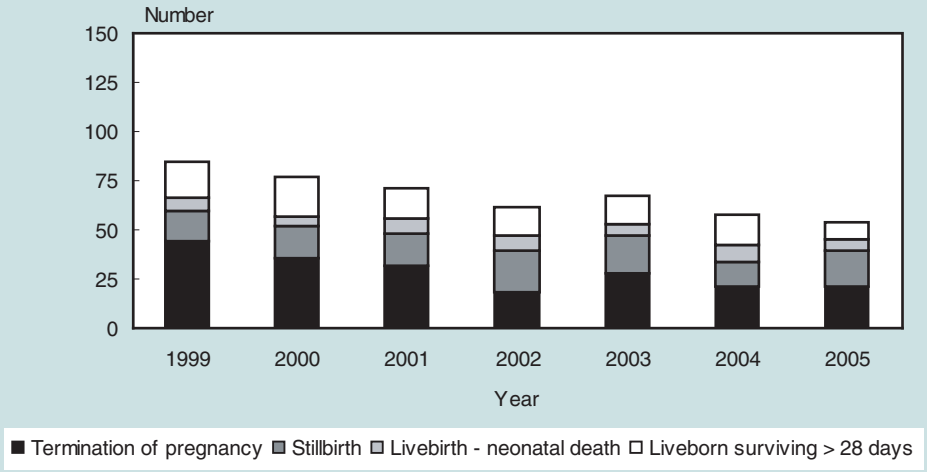
SELECTED BIRTH DEFECT CASES BY YEAR, NSW 1999–2005#

Birth defect	Year													
	1999		2000		2001		2002		2003		2004		2005	
	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000
Neural tube defects	85	1.0	77	0.9	71	0.8	62	0.7	67	0.8	58	0.7	54	0.6
Anencephalus	24	0.3	29	0.3	25	0.3	20	0.2	18	0.2	16	0.2	18	0.2
Spina bifida	57	0.7	42	0.5	39	0.5	33	0.4	46	0.5	35	0.4	32	0.4
Encephalocele	8	0.1	13	0.1	8	0.1	10	0.1	7	0.1	8	0.1	5	0.1
Cleft palate	67	0.8	79	0.9	67	0.8	60	0.7	88	1.0	74	0.9	67	0.7
Total cleft lip	84	1.0	71	0.8	88	1.0	76	0.9	85	1.0	80	0.9	57	0.6
Hypospadias	199	2.3	191	2.2	173	2.0	133	1.6	171	2.0	150	1.8	111	1.2
Limb reduction defects	56	0.6	61	0.7	42	0.5	21	0.2	31	0.4	36	0.4	33	0.4
Chromosomal abnormalities	412	4.8	412	4.7	370	4.3	441	5.2	451	5.3	445	5.2	196	2.2
Down syndrome	199	2.3	214	2.5	180	2.1	221	2.6	227	2.6	230	2.7	98	1.1
Renal agenesis and dysgenesis	80	0.9	82	0.9	75	0.9	63	0.7	68	0.8	82	1.0	49	0.5
Exomphalos	17	0.2	28	0.3	22	0.3	22	0.3	20	0.2	28	0.3	15	0.2
Gastroschisis	18	0.2	20	0.2	23	0.3	18	0.2	19	0.2	17	0.2	19	0.2
Diaphragmatic hernia	41	0.5	22	0.3	28	0.3	23	0.3	21	0.2	31	0.4	21	0.2

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
Includes terminations of pregnancy, stillbirths and livebirths. From 1 January 1998 birth defects became notifiable under the *NSW Public Health Act 1991*. This resulted in increased reporting of birth defects, particularly those associated with termination of pregnancy. For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

FIGURE 14

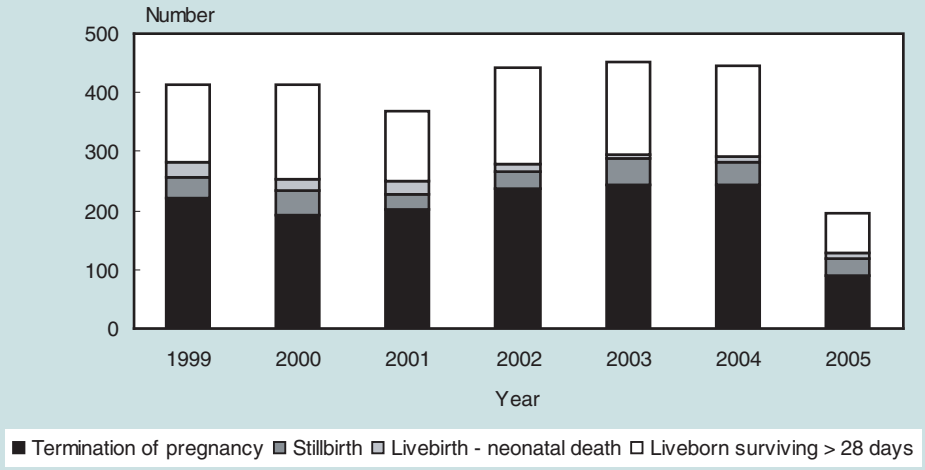
NEURAL TUBE DEFECTS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1999–2005#



Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

FIGURE 15

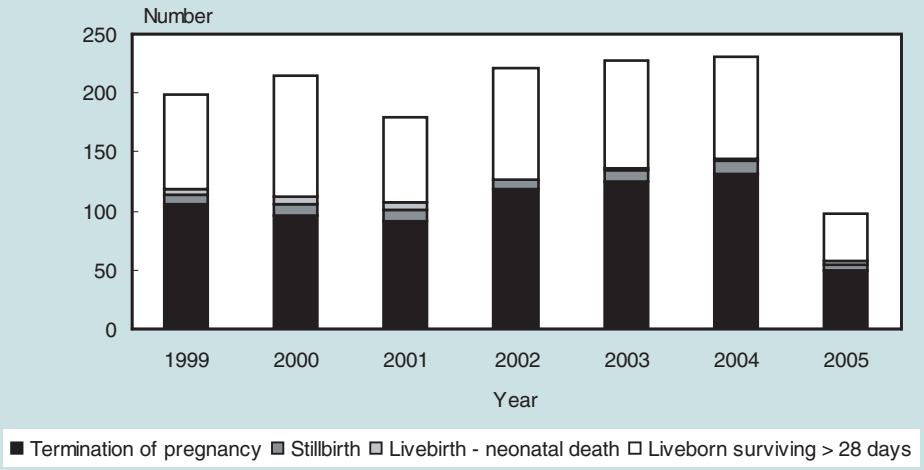
CHROMOSOMAL ABNORMALITIES: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1999–2005#



Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

FIGURE 16

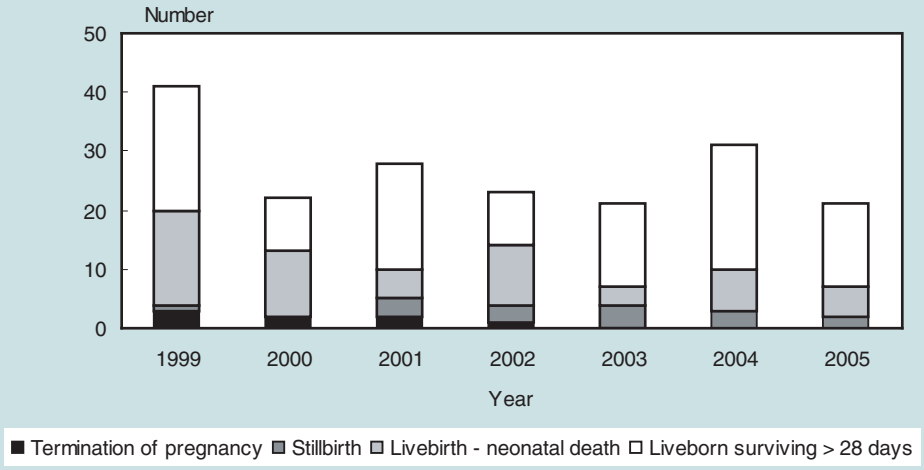
DOWN SYNDROME: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1999–2005#



Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

FIGURE 17

DIAPHRAGMATIC HERNIA: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1999–2005#



Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

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 120. The denominator population includes livebirths and stillbirths among NSW residents as reported to the MDC. The rate of birth defects increases with increasing maternal age (Table 116). In order to allow direct comparison of geographic areas, rates have been standardised to the maternal age distribution of births in NSW in 1991.

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 1999–2005, standardised rates of reported birth defects were lowest in the Greater Southern Area and highest in the Hunter & New England Area. Review of cases showed slightly increased reported rates of a range of birth defects in the Hunter & New England Area compared to NSW overall including: unstable hips (but not dislocated hips), first degree hypospadias, neural tube defects and a variety of chromosomal abnormalities. The range and pattern of these defects suggests that enumeration of congential abnormalities is better in the Hunter & New England Health Area compared with NSW as a whole.

TABLE 120

BIRTH DEFECTS IN NSW HEALTH AREAS, 1999–2005#

Health Area	Year												
	1999–2003			2004			2005			1999–2005			
	No.	Crude rate per 1,000 births	Standar–dised rate per 1,000 births	No.	Crude rate per 1,000 births	Standar–dised rate per 1,000 births	No.	Crude rate per 1,000 births	Standar–dised rate per 1,000 births	No.	Crude rate per 1,000 births	Standar–dised rate per 1,000 births	99% confidence intervals
Sydney South West	2196	22.6	20.5	436	23.0	20.7	177	8.8	8.4	2809	20.6	18.8	17.8–19.8
South Eastern Sydney & Illawarra	1685	23.9	20.9	295	20.5	17.1	167	11.2	11.7	2147	21.6	19.0	17.8–20.3
Sydney West	1855	23.0	21.2	356	22.1	20.9	154	8.9	8.3	2365	20.7	19.2	18.1–20.3
Northern Sydney & Central Coast	1488	22.5	18.8	303	22.8	19.8	152	10.9	8.7	1943	20.8	17.5	16.1–18.8
Hunter & New England	1375	27.2	25.3	302	30.8	27.5	150	14.2	12.6	1827	25.8	23.7	22.2–25.3
North Coast	482	20.1	19.4	87	18.3	16.6	54	10.7	10.1	623	18.4	17.6	15.8–19.6
Greater Southern	370	17.6	16.1	77	19.8	17.0	38	9.4	9.6	485	16.8	15.3	13.5–17.3
Greater Western	414	20.2	19.2	93	24.2	22.3	43	10.6	10.5	550	19.4	18.4	16.4–20.7
TOTAL NSW	9865	22.9	20.8	1949	22.9	20.6	935	10.4	9.6	12749	21.1	19.1	18.6–19.6

Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.
Cases exclude terminations of pregnancy, stillbirths and livebirths where the place of residence is unknown. For 1999–2004, cases reported during pregnancy and up to one year of age are included. For 2005, cases reported during pregnancy or at birth are reported.

11. NSW HOSPITALS

Onset and augmentation of labour in selected hospitals

Table 121 gives onset or augmentation of labour for individual hospitals where the number of reported deliveries exceeded 200 in 2005, totals for all hospitals within each health area, and the NSW total.

TABLE 121

ONSET AND AUGMENTATION OF LABOUR BY HOSPITAL, NSW 2005[#]

Health Area and Hospital	Onset and augmentation of labour																			
	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented oxytocics–prostagl.[##]		No Labour		Induced oxytocics–prostagl.		Induced ARM only		Induced ARM+ oxytocics–prostagl.		Induced other[###]		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West																				
Canterbury	901	58.1	0	0.0	172	11.1	199	12.8	268	17.3	11	0.7	0	0.0	1	0.1	0	0.0	1552	100.0
Royal Prince Alfred	2306	50.8	0	0.0	616	13.6	631	13.9	368	8.1	46	1.0	565	12.4	8	0.2	0	0.0	4540	100.0
Fairfield	876	51.7	87	5.1	192	11.3	209	12.3	96	5.7	4	0.2	219	12.9	10	0.6	0	0.0	1693	100.0
Liverpool	1341	44.8	294	9.8	300	10.0	408	13.6	277	9.2	27	0.9	328	10.9	21	0.7	0	0.0	2996	100.0
Campbelltown	1199	52.0	135	5.9	133	5.8	287	12.4	159	6.9	45	2.0	301	13.1	47	2.0	0	0.0	2306	100.0
Bankstown–Lidcombe	1080	57.1	79	4.2	132	7.0	206	10.9	113	6.0	13	0.7	255	13.5	13	0.7	0	0.0	1891	100.0
Sydney Southwest Private	299	25.4	91	7.7	152	12.9	226	19.2	112	9.5	23	2.0	272	23.1	3	0.3	0	0.0	1178	100.0
Bowral	343	49.1	12	1.7	49	7.0	85	12.2	57	8.2	15	2.1	129	18.5	9	1.3	0	0.0	699	100.0
Other Area hospitals	45	66.2	7	10.3	3	4.4	0	0.0	3	4.4	4	5.9	6	8.8	0	0.0	0	0.0	68	100.0
ALL HOSPITALS	8390	49.6	705	4.2	1749	10.3	2251	13.3	1453	8.6	188	1.1	2075	12.3	112	0.7	0	0.0	16923	100.0
South Eastern Sydney & Illawarra																				
St. George	1309	56.8	110	4.8	173	7.5	242	10.5	190	8.2	32	1.4	233	10.1	15	0.7	0	0.0	2304	100.0
Sutherland	556	53.2	23	2.2	73	7.0	117	11.2	74	7.1	13	1.2	184	17.6	6	0.6	0	0.0	1046	100.0
Royal Hospital for Women	2033	52.8	70	1.8	266	6.9	656	17.1	292	7.6	59	1.5	445	11.6	26	0.7	0	0.0	3847	100.0
Hurstville Community	181	20.3	82	9.2	123	13.8	230	25.8	46	5.2	15	1.7	215	24.1	0	0.0	0	0.0	892	100.0
Kareena Private	103	16.3	39	6.2	64	10.1	206	32.6	85	13.4	13	2.1	119	18.8	3	0.5	0	0.0	632	100.0
St. George Private	453	25.9	153	8.8	231	13.2	422	24.2	192	11.0	49	2.8	237	13.6	8	0.5	1	0.1	1746	100.0
Prince of Wales Private	380	23.9	159	10.0	167	10.5	442	27.8	128	8.1	58	3.7	225	14.2	17	1.1	12	0.8	1588	100.0
Shoalhaven	447	55.4	16	2.0	31	3.8	171	21.2	56	6.9	8	1.0	69	8.6	9	1.1	0	0.0	807	100.0
Wollongong	661	29.2	425	18.8	303	13.4	223	9.8	134	5.9	36	1.6	479	21.2	3	0.1	0	0.0	2264	100.0
Figtree Private	221	22.7	80	8.2	122	12.5	199	20.5	58	6.0	17	1.7	275	28.3	1	0.1	0	0.0	973	100.0
Other Area hospitals	42	48.8	0	0.0	5	5.8	12	14.0	10	11.6	0	0.0	14	16.3	3	3.5	0	0.0	86	100.0
ALL HOSPITALS	6386	39.5	1157	7.1	1558	9.6	2920	18.0	1265	7.8	300	1.9	2495	15.4	91	0.6	13	0.1	16185	100.0
Sydney West																				
Auburn	699	57.8	49	4.1	100	8.3	112	9.3	72	6.0	5	0.4	168	13.9	4	0.3	0	0.0	1209	100.0
Blacktown	1478	52.2	123	4.3	251	8.9	335	11.8	155	5.5	23	0.8	464	16.4	5	0.2	0	0.0	2834	100.0
Blue Mountains	167	62.1	8	3.0	13	4.8	24	8.9	31	11.5	4	1.5	22	8.2	0	0.0	0	0.0	269	100.0
Nepean	1504	43.7	208	6.0	129	3.8	542	15.8	419	12.2	71	2.1	557	16.2	9	0.3	0	0.0	3439	100.0
Westmead	1763	41.3	350	8.2	578	13.5	635	14.9	266	6.2	12	0.3	640	15.0	22	0.5	0	0.0	4266	100.0
The Hills Private	295	22.9	114	8.8	120	9.3	217	16.8	90	7.0	13	1.0	438	34.0	3	0.2	0	0.0	1290	100.0
Hawkesbury	443	51.6	36	4.2	16	1.9	119	13.9	118	13.7	30	3.5	96	11.2	1	0.1	0	0.0	859	100.0
Nepean Private	260	27.6	106	11.3	70	7.4	204	21.7	81	8.6	17	1.8	201	21.3	3	0.3	0	0.0	942	100.0
Westmead Private	446	25.0	168	9.4	282	15.8	334	18.7	149	8.4	14	0.8	378	21.2	13	0.7	0	0.0	1784	100.0
Other Area hospitals	78	32.1	36	14.8	25	10.3	40	16.5	37	15.2	6	2.5	21	8.6	0	0.0	0	0.0	243	100.0
ALL HOSPITALS	7133	41.6	1198	7.0	1584	9.2	2562	15.0	1418	8.3	195	1.1	2985	17.4	60	0.4	0	0.0	17135	100.0
Northern Sydney & Central Coast																				
Gosford	839	34.6	355	14.6	301	12.4	340	14.0	193	8.0	18	0.7	379	15.6	1	0.0	0	0.0	2426	100.0
Wyong	172	77.1	33	14.8	11	4.9	1	0.4	2	0.9	1	0.4	3	1.3	0	0.0	0	0.0	223	100.0
Hornsby	463	51.5	27	3.0	77	8.6	149	16.6	63	7.0	8	0.9	111	12.3	1	0.1	0	0.0	899	100.0
Manly	340	51.4	17	2.6	44	6.7	103	15.6	54	8.2	10	1.5	92	13.9	1	0.2	0	0.0	661	100.0
Mona Vale	295	46.0	20	3.1	76	11.8	85	13.2	45	7.0	2	0.3	119	18.5	0	0.0	0	0.0	642	100.0
Royal North Shore	1048	43.7	139	5.8	286	11.9	418	17.4	151	6.3	16	0.7	341	14.2	0	0.0	0	0.0	2399	100.0
Mater, North Sydney	605	27.3	168	7.6	252	11.4	630	28.4	195	8.8	67	3.0	299	13.5	3	0.1	0	0.0	2219	100.0
North Shore Private	764	29.9	117	4.6	296	11.6	767	30.0	98	3.8	50	2.0	445	17.4	18	0.7	0	0.0	2555	100.0
Sydney Adventist	970	44.2	0	0.0	1	0.0	477	21.7	111	5.1	33	1.5	601	27.4	2	0.1	0	0.0	2195	100.0
North Gosford Private	191	22.2	42	4.9	64	7.4	225	26.2	87	10.1	14	1.6	229	26.6	8	0.9	0	0.0	860	100.0
Other Area hospitals	132	99.2	1	0.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	133	100.0
ALL HOSPITALS	5819	38.3	919	6.0	1408	9.3	3195	21.0	999	6.6	219	1.4	2619	17.2	34	0.2	0	0.0	15212	100.0

TABLE 121 *(continued)*

ONSET AND AUGMENTATION OF LABOUR BY HOSPITAL, NSW 2005[#]

Health Area and Hospital	Onset and augmentation of labour																			
	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented oxytocics–prostagl.[##]		No Labour		Induced oxytocics–prostagl.		Induced ARM only		Induced ARM+ oxytocics–prostagl.		Induced other[###]		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England																				
Armidale	123	30.4	69	17.0	29	7.2	55	13.6	50	12.3	10	2.5	68	16.8	1	0.2	0	0.0	405	100.0
Inverell	55	22.7	23	9.5	34	14.0	44	18.2	31	12.8	8	3.3	45	18.6	2	0.8	0	0.0	242	100.0
Moree	108	45.0	18	7.5	24	10.0	29	12.1	18	7.5	2	0.8	37	15.4	4	1.7	0	0.0	240	100.0
Tamworth Base	254	32.1	133	16.8	64	8.1	113	14.3	69	8.7	19	2.4	136	17.2	4	0.5	0	0.0	792	100.0
Manning Base	262	37.5	97	13.9	50	7.2	92	13.2	44	6.3	12	1.7	140	20.1	1	0.1	0	0.0	698	100.0
Maitland	815	52.0	35	2.2	52	3.3	263	16.8	148	9.4	44	2.8	208	13.3	3	0.2	0	0.0	1568	100.0
Muswellbrook	128	53.1	15	6.2	9	3.7	32	13.3	26	10.8	13	5.4	18	7.5	0	0.0	0	0.0	241	100.0
Belmont	202	62.9	12	3.7	10	3.1	37	11.5	18	5.6	6	1.9	35	10.9	1	0.3	0	0.0	321	100.0
John Hunter	1666	49.2	176	5.2	208	6.1	476	14.1	240	7.1	93	2.7	498	14.7	27	0.8	0	0.0	3384	100.0
Newcastle Private	658	39.7	52	3.1	86	5.2	360	21.7	113	6.8	51	3.1	333	20.1	6	0.4	0	0.0	1659	100.0
Other Area hospitals	318	36.4	106	12.1	60	6.9	114	13.1	134	15.3	25	2.9	114	13.1	2	0.2	0	0.0	873	100.0
ALL HOSPITALS	4589	44.0	736	7.1	626	6.0	1615	15.5	891	8.5	283	2.7	1632	15.7	51	0.5	0	0.0	10423	100.0
North Coast																				
Coffs Harbour	330	39.1	109	12.9	68	8.1	131	15.5	67	7.9	19	2.3	120	14.2	0	0.0	0	0.0	844	100.0
Grafton Base	174	39.7	35	8.0	40	9.1	82	18.7	73	16.7	2	0.5	29	6.6	3	0.7	0	0.0	438	100.0
Kempsey	134	44.2	36	11.9	10	3.3	29	9.6	57	18.8	9	3.0	26	8.6	2	0.7	0	0.0	303	100.0
Lismore Base	534	42.5	157	12.5	102	8.1	186	14.8	96	7.6	40	3.2	139	11.1	2	0.2	0	0.0	1256	100.0
Murwillumbah	146	36.2	32	7.9	48	11.9	65	16.1	49	12.2	11	2.7	52	12.9	0	0.0	0	0.0	403	100.0
Tweed Heads	443	42.4	83	7.9	122	11.7	136	13.0	77	7.4	28	2.7	157	15.0	0	0.0	0	0.0	1046	100.0
Port Macquarie Base	286	38.0	115	15.3	52	6.9	120	16.0	54	7.2	10	1.3	115	15.3	0	0.0	0	0.0	752	100.0
Other Area hospitals	256	59.1	73	16.9	26	6.0	9	2.1	21	4.8	13	3.0	35	8.1	0	0.0	0	0.0	433	100.0
ALL HOSPITALS	2303	42.1	640	11.7	468	8.5	758	13.8	494	9.0	132	2.4	673	12.3	7	0.1	0	0.0	5475	100.0
Greater Southern																				
Goulburn Base	122	42.7	39	13.6	41	14.3	54	18.9	22	7.7	2	0.7	4	1.4	2	0.7	0	0.0	286	100.0
Moruya	148	44.8	42	12.7	15	4.5	45	13.6	39	11.8	8	2.4	32	9.7	1	0.3	0	0.0	330	100.0
Queanbeyan	139	50.2	24	8.7	12	4.3	29	10.5	56	20.2	2	0.7	15	5.4	0	0.0	0	0.0	277	100.0
Griffith Base	230	51.8	28	6.3	21	4.7	74	16.7	43	9.7	17	3.8	30	6.8	1	0.2	0	0.0	444	100.0
Wagga Wagga Base	325	45.9	91	12.9	43	6.1	94	13.3	64	9.0	23	3.2	66	9.3	2	0.3	0	0.0	708	100.0
Calvary, Wagga Wagga	204	36.7	40	7.2	33	5.9	133	23.9	84	15.1	14	2.5	40	7.2	8	1.4	0	0.0	556	100.0
Other Area hospitals	535	39.2	185	13.6	73	5.3	187	13.7	212	15.5	39	2.9	128	9.4	6	0.4	0	0.0	1365	100.0
ALL HOSPITALS	1703	42.9	449	11.3	238	6.0	616	15.5	520	13.1	105	2.6	315	7.9	20	0.5	0	0.0	3966	100.0
Greater Western																				
Dubbo Base	448	37.3	108	9.0	46	3.8	143	11.9	103	8.6	121	10.1	227	18.9	4	0.3	0	0.0	1200	100.0
Mudgee	112	48.3	9	3.9	10	4.3	38	16.4	32	13.8	5	2.2	26	11.2	0	0.0	0	0.0	232	100.0
Bathurst Base	301	51.7	32	5.5	28	4.8	106	18.2	76	13.1	12	2.1	27	4.6	0	0.0	0	0.0	582	100.0
Orange Base	284	36.1	114	14.5	51	6.5	130	16.5	46	5.8	27	3.4	133	16.9	2	0.3	0	0.0	787	100.0
Broken Hill Base	143	53.0	23	8.5	10	3.7	35	13.0	40	14.8	0	0.0	18	6.7	1	0.4	0	0.0	270	100.0
Other Area hospitals	308	48.1	62	9.7	34	5.3	98	15.3	80	12.5	8	1.3	48	7.5	2	0.3	0	0.0	640	100.0
ALL HOSPITALS	1596	43.0	348	9.4	179	4.8	550	14.8	377	10.2	173	4.7	479	12.9	9	0.2	0	0.0	3711	00.0
TOTAL NSW	38027	42.7	6152	6.9	7812	8.8	14467	16.2	7417	8.3	1595	1.8	13273	14.9	384	0.4	13	0.0	89140	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.
May include artificial rupture of membranes.
This category includes other forms of induction such as Foley's catheter.
*Royal Prince Alfred and Royal North Shore Hospitals supply data electronically and report augmentation by oxytocin/prostaglandin only..

Type of delivery in selected hospitals

Table 122 gives type of delivery for individual hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area, and the NSW total.

TABLE 122

TYPE OF DELIVERY BY HOSPITAL, NSW 2005[#]

Health Area and Hospital	Type of delivery													
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section##		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West														
Canterbury	1061	68.4	15	1.0	122	7.9	4	0.3	199	12.8	151	9.7	1552	100.0
Royal Prince Alfred	2749	60.6	122	2.7	359	7.9	23	0.5	631	13.9	656	14.4	4540	100.0
Fairfield	1263	74.6	6	0.4	96	5.7	4	0.2	209	12.3	115	6.8	1693	100.0
Liverpool	2047	68.3	33	1.1	210	7.0	17	0.6	408	13.6	281	9.4	2996	100.0
Campbelltown	1724	74.8	15	0.7	64	2.8	8	0.3	287	12.4	208	9.0	2306	100.0
Bankstown–Lidcombe	1438	76.0	21	1.1	105	5.6	3	0.2	206	10.9	118	6.2	1891	100.0
Sydney Southwest Private	661	56.1	20	1.7	153	13.0	2	0.2	226	19.2	116	9.8	1178	100.0
Bowral	421	60.2	28	4.0	101	14.4	2	0.3	85	12.2	62	8.9	699	100.0
Other Area hospitals	50	73.5	3	4.4	6	8.8	2	2.9	0	0.0	7	10.3	68	100.0
ALL HOSPITALS	11414	67.4	263	1.6	1216	7.2	65	0.4	2251	13.3	1714	10.1	16923	100.0
South Eastern Sydney &Illawarra														
St. George	1453	63.1	73	3.2	226	9.8	4	0.2	242	10.5	306	13.3	2304	100.0
Sutherland	694	66.3	15	1.4	107	10.2	3	0.3	117	11.2	110	10.5	1046	100.0
Royal Hospital for Women	2048	53.2	213	5.5	358	9.3	23	0.6	656	17.1	549	14.3	3847	100.0
Hurstville Community	395	44.3	30	3.4	116	13.0	2	0.2	230	25.8	119	13.3	892	100.0
Kareena Private	208	32.9	91	14.4	39	6.2	1	0.2	206	32.6	87	13.8	632	100.0
St. George Private	787	45.1	78	4.5	184	10.5	1	0.1	422	24.2	274	15.7	1746	100.0
Prince of Wales Private	677	42.6	61	3.8	193	12.2	1	0.1	442	27.8	214	13.5	1588	100.0
Shoalhaven	485	60.1	34	4.2	20	2.5	5	0.6	171	21.2	92	11.4	807	100.0
Wollongong	1544	68.2	34	1.5	199	8.8	6	0.3	223	9.8	258	11.4	2264	100.0
Figtree Private	522	53.6	13	1.3	158	16.2	0	0.0	199	20.5	81	8.3	973	100.0
Other Area hospitals	62	72.1	2	2.3	3	3.5	0	0.0	12	14.0	7	8.1	86	100.0
ALL HOSPITALS	8875	54.8	644	4.0	1603	9.9	46	0.3	2920	18.0	2097	13.0	16185	100.0
Sydney West														
Auburn	957	79.2	26	2.2	30	2.5	6	0.5	112	9.3	78	6.5	1209	100.0
Blacktown	1946	68.7	87	3.1	167	5.9	8	0.3	335	11.8	291	10.3	2834	100.0
Blue Mountains	192	71.4	2	0.7	24	8.9	2	0.7	24	8.9	25	9.3	269	100.0
Nepean	2162	62.9	46	1.3	221	6.4	10	0.3	542	15.8	458	13.3	3439	100.0
Westmead	2702	63.3	145	3.4	149	3.5	28	0.7	635	14.9	607	14.2	4266	100.0
The Hills Private	727	56.4	166	12.9	64	5.0	4	0.3	217	16.8	112	8.7	1290	100.0
Hawkesbury	569	66.2	29	3.4	27	3.1	1	0.1	119	13.9	114	13.3	859	100.0
Nepean Private	460	48.8	55	5.8	68	7.2	4	0.4	204	21.7	151	16.0	942	100.0
Westmead Private	927	52.0	160	9.0	112	6.3	4	0.2	334	18.7	247	13.8	1784	100.0
Other Area hospitals	151	62.1	3	1.2	19	7.8	0	0.0	40	16.5	30	12.3	243	100.0
ALL HOSPITALS	10793	63.0	719	4.2	881	5.1	67	0.4	2562	15.0	2113	12.3	17135	100.0
Northern Sydney & Central Coast														
Gosford	1436	59.2	25	1.0	236	9.7	9	0.4	340	14.0	380	15.7	2426	100.0
Wyong	209	93.7	0	0.0	9	4.0	0	0.0	1	0.4	4	1.8	223	100.0
Hornsby	551	61.3	41	4.6	57	6.3	4	0.4	149	16.6	97	10.8	899	100.0
Manly	415	62.8	19	2.9	53	8.0	4	0.6	103	15.6	67	10.1	661	100.0
Mona Vale	381	59.3	8	1.2	81	12.6	2	0.3	85	13.2	85	13.2	642	100.0
Royal North Shore	1357	56.6	140	5.8	122	5.1	9	0.4	418	17.4	353	14.7	2399	100.0
Mater, North Sydney	942	42.5	75	3.4	278	12.5	0	0.0	630	28.4	294	13.2	2219	100.0
North Shore Private	1054	41.3	92	3.6	270	10.6	5	0.2	767	30.0	367	14.4	2555	100.0
Sydney Adventist	1192	54.3	114	5.2	136	6.2	6	0.3	477	21.7	270	12.3	2195	100.0
North Gosford Private	372	43.3	21	2.4	121	14.1	0	0.0	225	26.2	121	14.1	860	100.0
Other Area hospitals	133	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	133	100.0
ALL HOSPITALS	8042	52.9	535	3.5	1363	9.0	39	0.3	3195	21.0	2038	13.4	15212	100.0

TABLE 122 *(continued)*

TYPE OF DELIVERY BY HOSPITAL, NSW 2005[#]

Health Area and Hospital	Type of delivery: Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section##		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England														
Armidale	283	69.9	23	5.7	9	2.2	2	0.5	55	13.6	33	8.1	405	100.0
Inverell	149	61.6	18	7.4	0	0.0	0	0.0	44	18.2	31	12.8	242	100.0
Moree	166	69.2	4	1.7	13	5.4	1	0.4	29	12.1	27	11.3	240	100.0
Tamworth Base	511	64.5	9	1.1	41	5.2	3	0.4	113	14.3	115	14.5	792	100.0
Manning Base	466	66.8	5	0.7	51	7.3	3	0.4	92	13.2	81	11.6	698	100.0
Maitland	1028	65.6	24	1.5	69	4.4	8	0.5	263	16.8	176	11.2	1568	100.0
Muswellbrook	160	66.4	1	0.4	23	9.5	0	0.0	32	13.3	25	10.4	241	100.0
Belmont	249	77.6	3	0.9	13	4.0	0	0.0	37	11.5	19	5.9	321	100.0
John Hunter	2203	65.1	125	3.7	204	6.0	33	1.0	476	14.1	343	10.1	3384	100.0
Newcastle Private	819	49.4	71	4.3	172	10.4	4	0.2	360	21.7	233	14.0	1659	100.0
Other Area hospitals	615	70.4	29	3.3	48	5.5	2	0.2	114	13.1	65	7.4	873	100.0
ALL HOSPITALS	6649	63.8	312	3.0	643	6.2	56	0.5	1615	15.5	1148	11.0	10423	100.0
North Coast														
Coffs Harbour	558	66.1	19	2.3	40	4.7	1	0.1	131	15.5	95	11.3	844	100.0
Grafton Base	262	59.8	9	2.1	24	5.5	2	0.5	82	18.7	59	13.5	438	100.0
Kempsey	237	78.2	1	0.3	5	1.7	0	0.0	29	9.6	31	10.2	303	100.0
Lismore Base	814	64.8	32	2.5	38	3.0	4	0.3	186	14.8	182	14.5	1256	100.0
Murwillumbah	230	57.1	5	1.2	31	7.7	0	0.0	65	16.1	72	17.9	403	100.0
Tweed Heads	711	68.0	12	1.1	53	5.1	7	0.7	136	13.0	127	12.1	1046	100.0
Port Macquarie Base	481	64.0	24	3.2	47	6.3	1	0.1	120	16.0	79	10.5	752	100.0
Other Area hospitals	373	86.1	9	2.1	32	7.4	3	0.7	9	2.1	7	1.6	433	100.0
ALL HOSPITALS	3666	67.0	111	2.0	270	4.9	18	0.3	758	13.8	652	11.9	5475	100.0
Greater Southern														
Goulburn Base	161	56.3	35	12.2	10	3.5	0	0.0	54	18.9	26	9.1	286	100.0
Moruya	221	67.0	11	3.3	25	7.6	3	0.9	45	13.6	25	7.6	330	100.0
Queanbeyan	208	75.1	3	1.1	13	4.7	0	0.0	29	10.5	24	8.7	277	100.0
Griffith Base	291	65.5	15	3.4	18	4.1	2	0.5	74	16.7	44	9.9	444	100.0
Wagga Wagga Base	453	64.0	25	3.5	42	5.9	5	0.7	94	13.3	89	12.6	708	100.0
Calvary, Wagga Wagga	272	48.9	26	4.7	54	9.7	1	0.2	133	23.9	70	12.6	556	100.0
Other Area hospitals	937	68.6	22	1.6	85	6.2	3	0.2	187	13.7	131	9.6	1365	100.0
ALL HOSPITALS	2543	64.1	137	3.5	247	6.2	14	0.4	616	15.5	409	10.3	3966	100.0
Greater Western														
Dubbo Base	860	71.7	45	3.8	25	2.1	10	0.8	143	11.9	117	9.8	1200	100.0
Mudgee	155	66.8	0	0.0	17	7.3	0	0.0	38	16.4	22	9.5	232	100.0
Bathurst Base	345	59.3	8	1.4	29	5.0	1	0.2	106	18.2	93	16.0	582	100.0
Orange Base	474	60.2	25	3.2	48	6.1	4	0.5	130	16.5	106	13.5	787	100.0
Broken Hill Base	194	71.9	2	0.7	10	3.7	0	0.0	35	13.0	29	10.7	270	100.0
Other Area hospitals	448	70.0	0	0.0	20	3.1	2	0.3	98	15.3	72	11.3	640	100.0
ALL HOSPITALS	2476	66.7	80	2.2	149	4.0	17	0.5	550	14.8	439	11.8	3711	100.0
TOTAL NSW	54568	61.2	2801	3.1	6372	7.1	322	0.4	14467	16.2	10610	11.9	89140	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.
##Emergency caesarean section includes caesarean sections where the onset of labour was not stated

Pain relief in selected hospitals

Table 123 gives type of pain relief provided to women for individual hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area and the NSW total. In addition to the types of pain relief listed a further 24,834 (27.9 per cent) women were reported to have received local anaesthetic to the perineum, and 6,147 (6.9 per cent) received a pudendal block.

TABLE 123

PAIN RELIEF BY HOSPITAL, NSW 2005[#]

Health Area and Hospital	Type of pain relief													
	Epidural		General anaesthetic		IM narcotics		Nitrous oxide		Spinal		Nil		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West														
Canterbury	231	14.9	95	6.1	448	28.9	631	40.7	197	12.7	204	13.1	1552	100.0
Royal Prince Alfred	1516	33.4	242	5.3	0	0.0	1899	41.8	715	15.7	514	11.3	4540	100.0
Fairfield	38	2.2	181	10.7	479	28.3	781	46.1	143	8.4	283	16.7	1693	100.0
Liverpool	548	18.3	193	6.4	1190	39.7	1345	44.9	412	13.8	263	8.8	2996	100.0
Campbelltown	230	10.0	131	5.7	736	31.9	1306	56.6	344	14.9	294	12.7	2306	100.0
Bankstown/Lidcombe	118	6.2	100	5.3	381	20.1	1072	56.7	214	11.3	251	13.3	1891	100.0
Sydney Southwest Private	129	11.0	52	4.4	409	34.7	702	59.6	191	16.2	36	3.1	1178	100.0
Bowral	169	24.2	25	3.6	281	40.2	334	47.8	75	10.7	58	8.3	699	100.0
Other Area hospitals	2	2.9	1	1.5	17	25.0	42	61.8	5	7.4	13	19.1	68	100.0
ALL HOSPITALS	2981	17.6	1020	6.0	3941	23.3	8112	47.9	2296	13.6	1916	11.3	16923	100.0
South Eastern Sydney &Illawarra														
St. George	667	28.9	73	3.2	362	15.7	1009	43.8	333	14.5	318	13.8	2304	100.0
Sutherland	332	31.7	31	3.0	93	8.9	472	45.1	168	16.1	113	10.8	1046	100.0
Royal Hospital for Women	2090	54.3	57	1.5	533	13.9	1152	29.9	647	16.8	378	9.8	3847	100.0
Hurstville Community	225	25.2	25	2.8	53	5.9	257	28.8	162	18.2	39	4.4	892	100.0
Kareena Private	160	25.3	15	2.4	15	2.4	102	16.1	134	21.2	25	4.0	632	100.0
St. George Private	542	31.0	61	3.5	121	6.9	702	40.2	188	10.8	72	4.1	1746	100.0
Prince of Wales Private	625	39.4	18	1.1	54	3.4	415	26.1	76	4.8	71	4.5	1588	100.0
Shoalhaven	78	9.7	36	4.5	208	25.8	329	40.8	230	28.5	92	11.4	807	100.0
Wollongong	477	21.1	96	4.2	425	18.8	1351	59.7	292	12.9	247	10.9	2264	100.0
Figtree Private	71	7.3	31	3.2	73	7.5	435	44.7	198	20.3	40	4.1	973	100.0
Other Area hospitals	8	9.3	1	1.2	18	20.9	15	17.4	16	18.6	23	26.7	86	100.
ALL HOSPITALS	5275	32.6	444	2.7	1955	12.1	6239	38.5	2444	15.1	1418	8.8	16185	100.0
Sydney West														
Auburn	99	8.2	81	6.7	254	21.0	589	48.7	90	7.4	275	22.7	1209	100.0
Blacktown	583	20.6	147	5.2	561	19.8	1412	49.8	376	13.3	364	12.8	2834	100.0
Blue Mountains	42	15.6	7	2.6	57	21.2	122	45.4	37	13.8	45	16.7	269	100.0
Nepean	822	23.9	247	7.2	847	24.6	1846	53.7	625	18.2	268	7.8	3439	100.0
Westmead	1428	33.5	317	7.4	666	15.6	1913	44.8	677	15.9	341	8.0	4266	100.0
The Hills Private	281	21.8	27	2.1	167	12.9	441	34.2	55	4.3	79	6.1	1290	100.0
Hawkesbury	84	9.8	55	6.4	172	20.0	430	50.1	167	19.4	122	14.2	859	100.0
Nepean Private	104	11.0	37	3.9	255	27.1	536	56.9	239	25.4	36	3.8	942	100.0
Westmead Private	181	10.1	51	2.9	253	14.2	783	43.9	395	22.1	77	4.3	1784	100.0
Other Area hospitals	27	11.1	9	3.7	47	19.3	109	44.9	38	15.6	39	16.0	243	100.0
ALL HOSPITALS	3651	21.3	978	5.7	3279	19.1	8181	47.7	2699	15.8	1646	9.6	17135	100.0
Northern Sydney & Central Coast														
Gosford	475	19.6	115	4.7	725	29.9	1095	45.1	529	21.8	96	4.0	2426	100.0
Wyong	0	0.0	5	2.2	31	13.9	90	40.4	3	1.3	22	9.9	223	100.0
Hornsby	320	35.6	37	4.1	191	21.2	456	50.7	86	9.6	44	4.9	899	100.0
Manly	157	23.8	17	2.6	123	18.6	276	41.8	124	18.8	72	10.9	661	100.0
Mona Vale	204	31.8	9	1.4	255	39.7	253	39.4	119	18.5	59	9.2	642	100.0
Royal North Shore	760	31.7	79	3.3	448	18.7	1114	46.4	572	23.8	124	5.2	2399	100.0
Mater, North Sydney	504	22.7	33	1.5	229	10.3	766	34.5	482	21.7	55	2.5	2219	100.0
North Shore Private	1276	49.9	44	1.7	156	6.1	728	28.5	852	33.3	56	2.2	2555	100.0
Sydney Adventist	1152	52.5	70	3.2	235	10.7	822	37.4	326	14.9	66	3.0	2195	100.0
North Gosford Private	55	6.4	24	2.8	128	14.9	322	37.4	297	34.5	64	7.4	860	100.0
Other Area hospitals	0	0.0	0	0.0	6	4.5	47	35.3	1	0.8	46	34.6	133	100.0
ALL HOSPITALS	4903	32.2	433	2.8	2527	16.6	5969	39.2	3391	22.3	704	4.6	15212	100.0

TABLE 123 *(continued)*

PAIN RELIEF BY HOSPITAL, NSW 2005[#]

Health Area and Hospital	Type of pain relief													
	Epidural		General anaesthetic		IM narcotics		Nitrous oxide		Spinal		Nil		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England														
Armidale	17	4.2	25	6.2	127	31.4	212	52.3	64	15.8	27	6.7	405	100.0
Inverell	0	0.0	3	1.2	46	19.0	102	42.1	73	30.2	58	24.0	242	100.0
Moree	10	4.2	5	2.1	53	22.1	108	45.0	51	21.3	45	18.8	240	100.0
Tamworth Base	80	10.1	81	10.2	182	23.0	450	56.8	98	12.4	67	8.5	792	100.0
Manning Base	22	3.2	41	5.9	271	38.8	372	53.3	122	17.5	72	10.3	698	100.0
Maitland	128	8.2	76	4.8	245	15.6	785	50.1	348	22.2	221	14.1	1568	100.0
Muswellbrook	2	0.8	1	0.4	57	23.7	119	49.4	56	23.2	53	22.0	241	100.0
Belmont	19	5.9	16	5.0	96	29.9	147	45.8	42	13.1	60	18.7	321	100.0
John Hunter	670	19.8	205	6.1	802	23.7	1512	44.7	601	17.8	420	12.4	3384	100.0
Newcastle Private	539	32.5	43	2.6	255	15.4	661	39.8	435	26.2	101	6.1	1659	100.0
Other Area hospitals	44	5.0	47	5.4	201	23.0	498	57.0	104	11.9	125	14.3	873	100.0
ALL HOSPITALS	1531	14.7	543	5.2	2335	22.4	4966	47.6	1994	19.1	1249	12.0	10423	100.0
North Coast														
Coffs Harbour	40	4.7	41	4.9	136	16.1	404	47.9	169	20.0	171	20.3	844	100.0
Grafton Base	55	12.6	35	8.0	77	17.6	224	51.1	72	16.4	67	15.3	438	100.0
Kempsey	39	12.9	8	2.6	111	36.6	159	52.5	16	5.3	55	18.2	303	100.0
Lismore Base	126	10.0	44	3.5	212	16.9	576	45.9	245	19.5	122	9.7	1256	100.0
Murwillumbah	25	6.2	15	3.7	131	32.5	180	44.7	111	27.5	46	11.4	403	100.0
Tweed Heads	51	4.9	34	3.3	284	27.2	558	53.3	201	19.2	140	13.4	1046	100.0
Port Macquarie Base	49	6.5	26	3.5	207	27.5	388	51.6	147	19.5	115	15.3	752	100.0
Other Area hospitals	10	2.3	1	0.2	64	14.8	178	41.1	13	3.0	178	41.1	433	100.0
ALL HOSPITALS	395	7.2	204	3.7	1222	22.3	2667	48.7	974	17.8	894	16.3	5475	100.0
Greater Southern														
Goulburn Base	49	17.1	20	7.0	51	17.8	172	60.1	18	6.3	22	7.7	286	100.0
Moruya	17	5.2	23	7.0	79	23.9	150	45.5	51	15.5	76	23.0	330	100.0
Queanbeyan	31	11.2	14	5.1	65	23.5	141	50.9	19	6.9	70	25.3	277	100.0
Griffith Base	14	3.2	6	1.4	199	44.8	228	51.4	107	24.1	51	11.5	444	100.0
Wagga Wagga Base	43	6.1	19	2.7	197	27.8	372	52.5	140	19.8	115	16.2	708	100.0
Calvary, Wagga Wagga	22	4.0	14	2.5	141	25.4	218	39.2	174	31.3	54	9.7	556	100.0
Other Area hospitals	70	5.1	32	2.3	384	28.1	742	54.4	255	18.7	243	17.8	1365	100.0
ALL HOSPITALS	246	6.2	128	3.2	1116	28.1	2023	51.0	764	19.3	631	15.9	3966	100.0
Greater Western														
Dubbo Base	80	6.7	96	8.0	349	29.1	672	56.0	115	9.6	157	13.1	1200	100.0
Mudgee	3	1.3	18	7.8	62	26.7	133	57.3	42	18.1	36	15.5	232	100.0
Bathurst Base	103	17.7	31	5.3	34	5.8	273	46.9	83	14.3	88	15.1	582	100.0
Orange Base	74	9.4	68	8.6	149	18.9	421	53.5	117	14.9	119	15.1	787	100.0
Broken Hill Base	4	1.5	9	3.3	59	21.9	145	53.7	54	20.0	50	18.5	270	100.0
Other Area hospitals	32	5.0	25	3.9	131	20.5	285	44.5	121	18.9	157	24.5	640	100.0
ALL HOSPITALS	296	8.0	247	6.7	784	21.1	1929	52.0	532	14.3	607	16.4	3711	100.0
TOTAL	19278	21.6	3997	4.5	17159	19.3	40087	45.0	15094	17.0	9161	10.3	89140	100.0

Source: NSW Midwives Data Collection. Cemtre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Perineal status in selected hospitals

Table 124 show the perineal status in vaginal births for individual hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area and the NSW total.

In addition to the perinatal outcomes described in the table there were a total of 96 cases of fourth degree tear reported in 2005.

TABLE 124

VAGINAL BIRTHS BY PERINEAL STATUS AND HOSPITAL, NSW 2005[#]

Health Area and Hospital	Perineal status																	
	Intact		1st degree tear–graze		2nd degree tear		3rd or 4th degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West																		
Canterbury	327	27.2	381	31.7	360	30.0	35	2.9	72	6.0	4	0.3	23	1.9	0	0.0	1202	100.0
Royal Prince Alfred	735	22.6	468	14.4	1117	34.3	136	4.2	263	8.1	0	0.0	534	16.4	0	0.0	3253	100.0
Fairfield	433	31.6	365	26.7	314	22.9	16	1.2	164	12.0	0	0.0	77	5.6	0	0.0	1369	100.0
Liverpool	651	28.2	580	25.1	500	21.7	46	2.0	383	16.6	3	0.1	144	6.2	0	0.0	2307	100.0
Campbelltown	579	32.0	505	27.9	446	24.6	21	1.2	100	5.5	1	0.1	159	8.8	0	0.0	1811	100.0
Bankstown/Lidcombe	397	25.3	469	29.9	321	20.5	22	1.4	202	12.9	4	0.3	152	9.7	0	0.0	1567	100.0
Sydney Southwest Private	187	22.4	149	17.8	202	24.2	9	1.1	258	30.9	12	1.4	19	2.3	0	0.0	836	100.0
Bowral	165	29.9	134	24.3	164	29.7	6	1.1	34	6.2	0	0.0	49	8.9	0	0.0	552	100.0
Other Area hospitals	20	32.8	17	27.9	14	23.0	1	1.6	4	6.6	0	0.0	5	8.2	0	0.0	61	100.0
ALL HOSPITALS	3494	27.0	3068	23.7	3438	26.5	292	2.3	1480	11.4	24	0.2	1162	9.0	0	0.0	12958	100.0
South Eastern Sydney &Illawarra																		
St. George	407	23.2	559	31.8	503	28.6	56	3.2	119	6.8	2	0.1	110	6.3	0	0.0	1756	100.0
Sutherland	203	24.8	258	31.5	203	24.8	33	4.0	57	7.0	0	0.0	65	7.9	0	0.0	819	100.0
Royal Hospital for Women	485	18.4	796	30.1	703	26.6	45	1.7	457	17.3	6	0.2	150	5.7	0	0.0	2642	100.0
Hurstville Community	71	13.1	137	25.2	144	26.5	4	0.7	165	30.4	12	2.2	10	1.8	0	0.0	543	100.0
Kareena Private	88	26.0	65	19.2	100	29.5	3	0.9	71	20.9	5	1.5	7	2.1	0	0.0	339	100.0
St. George Private	238	22.7	234	22.3	335	31.9	19	1.8	163	15.5	27	2.6	34	3.2	0	0.0	1050	100.0
Prince of Wales Private	165	17.7	218	23.4	250	26.8	4	0.4	237	25.4	19	2.0	22	2.4	17	1.8	932	100.0
Shoalhaven	153	28.1	208	38.2	93	17.1	10	1.8	43	7.9	2	0.4	35	6.4	0	0.0	544	100.0
Wollongong	430	24.1	737	41.3	407	22.8	35	2.0	174	9.8	0	0.0	0	0.0	0	0.0	1783	100.0
Figtree Private	133	19.2	117	16.9	239	34.5	6	0.9	182	26.3	7	1.0	9	1.3	0	0.0	693	100.0
Other Area hospitals	31	46.3	17	25.4	13	19.4	0	0.0	5	7.5	0	0.0	1	1.5	0	0.0	67	100.0
ALL HOSPITALS	2404	21.5	3346	30.0	2990	26.8	215	1.9	1673	15.0	80	0.7	443	4.0	17	0.2	11168	100.0
Sydney West																		
Auburn	471	46.2	236	23.2	176	17.3	12	1.2	71	7.0	0	0.0	53	5.2	0	0.0	1019	100.0
Blacktown	467	21.2	772	35.0	368	16.7	50	2.3	360	16.3	18	0.8	173	7.8	0	0.0	2208	100.0
Blue Mountains	66	30.0	59	26.8	50	22.7	2	0.9	15	6.8	4	1.8	24	10.9	0	0.0	220	100.0
Nepean	579	23.7	712	29.2	553	22.7	47	1.9	268	11.0	38	1.6	242	9.9	0	0.0	2439	100.0
Westmead	618	20.4	896	29.6	705	23.3	59	2.0	503	16.6	11	0.4	232	7.7	0	0.0	3024	100.0
The Hills Private	245	25.5	157	16.3	299	31.1	8	0.8	218	22.7	13	1.4	21	2.2	0	0.0	961	100.0
Hawkesbury	203	32.4	192	30.7	124	19.8	7	1.1	38	6.1	18	2.9	44	7.0	0	0.0	626	100.0
Nepean Private	88	15.0	80	13.6	193	32.9	7	1.2	180	30.7	24	4.1	15	2.6	0	0.0	587	100.0
Westmead Private	247	20.5	212	17.6	348	28.9	10	0.8	361	30.0	14	1.2	11	0.9	0	0.0	1203	100.0
Other Area hospitals	60	34.7	45	26.0	38	22.0	1	0.6	21	12.1	5	2.9	3	1.7	0	0.0	173	100.0
ALL HOSPITALS	3044	24.4	3361	27.0	2854	22.9	203	1.6	2035	16.3	145	1.2	818	6.6	0	0.0	1246	100.0
Northern Sydney & Central Coast																		
Gosford	620	36.3	465	27.3	531	31.1	56	3.3	9	0.5	23	1.3	2	0.1	0	0.0	1706	100.0
Wyong	116	53.2	50	22.9	47	21.6	5	2.3	0	0.0	0	0.0	0	0.0	0	0.0	218	100.0
Hornsby	93	14.2	181	27.7	215	32.9	38	5.8	75	11.5	1	0.2	50	7.7	0	0.0	653	100.0
Manly	99	20.2	149	30.3	133	27.1	16	3.3	53	10.8	2	0.4	39	7.9	0	0.0	491	100.0
Mona Vale	112	23.7	185	39.2	110	23.3	3	0.6	25	5.3	1	0.2	36	7.6	0	0.0	472	100.0
Royal North Shore	233	14.3	428	26.3	544	33.4	42	2.6	198	12.2	1	0.1	182	11.2	0	0.0	1628	100.0
Mater, North Sydney	184	14.2	217	16.8	414	32.0	18	1.4	381	29.4	23	1.8	58	4.5	0	0.0	1295	100.0
North Shore Private	217	15.3	278	19.6	426	30.0	26	1.8	408	28.7	2	0.1	64	4.5	0	0.0	1421	100.0
Sydney Adventist	236	16.3	394	27.2	329	22.7	7	0.5	458	31.6	18	1.2	6	0.4	0	0.0	1448	100.0
North Gosford Private	120	23.3	119	23.2	128	24.9	7	1.4	113	22.0	13	2.5	14	2.7	0	0.0	514	100.0
Other Area hospitals	34	25.6	44	33.1	38	28.6	1	0.8	1	0.8	0	0.0	15	11.3	0	0.0	133	100.0
ALL HOSPITALS	2064	20.7	2510	25.2	2915	29.2	219	2.2	1721	17.2	84	0.8	466	4.7	0	0.0	9979	100.0

TABLE 124 *(continued)*

VAGINAL BIRTHS BY PERINEAL STATUS AND HOSPITAL, NSW 2005#

Health Area and Hospital	Perineal status																	
	Intact		1st degree tear–graze		2nd degree tear		3rd or 4th degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England																		
Armidale	105	33.1	61	19.2	73	23.0	0	0.0	52	16.4	15	4.7	11	3.5	0	0.0	317	100.0
Inverell	68	40.7	39	23.4	10	6.0	5	3.0	38	22.8	5	3.0	2	1.2	0	0.0	167	100.0
Moree	82	44.6	33	17.9	55	29.9	4	2.2	6	3.3	2	1.1	2	1.1	0	0.0	184	100.0
Tamworth Base	166	29.4	169	30.0	147	26.1	7	1.2	33	5.9	11	2.0	31	5.5	0	0.0	564	100.0
Manning Base	238	45.3	115	21.9	104	19.8	2	0.4	30	5.7	5	1.0	31	5.9	0	0.0	525	100.0
Maitland	388	34.4	363	32.2	178	15.8	14	1.2	62	5.5	4	0.4	120	10.6	0	0.0	1129	100.0
Muswellbrook	58	31.5	55	29.9	43	23.4	1	0.5	7	3.8	10	5.4	10	5.4	0	0.0	184	100.0
Belmont	91	34.3	91	34.3	54	20.4	6	2.3	10	3.8	0	0.0	13	4.9	0	0.0	265	100.0
John Hunter	607	23.7	951	37.1	556	21.7	79	3.1	140	5.5	43	1.7	189	7.4	0	0.0	2565	100.0
Newcastle Private	275	25.8	213	20.0	354	33.2	20	1.9	185	17.4	6	0.6	13	1.2	0	0.0	1066	100.0
Other Area hospitals	274	39.5	154	22.2	143	20.6	4	0.6	91	13.1	10	1.4	18	2.6	0	0.0	694	100.0
ALL HOSPITALS	2352	30.7	2244	29.3	1717	22.4	142	1.9	654	8.5	111	1.4	440	5.7	0	0.0	7660	100.0
North Coast																		
Coffs Harbour	252	40.8	143	23.1	132	21.4	3	0.5	54	8.7	5	0.8	29	4.7	0	0.0	618	100.0
Grafton Base	115	38.7	74	24.9	60	20.2	4	1.3	36	12.1	5	1.7	3	1.0	0	0.0	297	100.0
Kempsey	119	49.0	60	24.7	59	24.3	0	0.0	4	1.6	0	0.0	1	0.4	0	0.0	243	100.0
Lismore Base	269	30.3	283	31.9	225	25.3	12	1.4	80	9.0	17	1.9	2	0.2	0	0.0	888	100.0
Murwillumbah	88	33.1	70	26.3	52	19.5	3	1.1	36	13.5	9	3.4	8	3.0	0	0.0	266	100.0
Tweed Heads	313	40.0	246	31.4	167	21.3	3	0.4	32	4.1	5	0.6	16	2.0	1	0.1	783	100.0
Port Macquarie Base	220	39.8	126	22.8	130	23.5	4	0.7	49	8.9	9	1.6	15	2.7	0	0.0	553	100.0
Other Area hospitals	149	35.7	134	32.1	76	18.2	5	1.2	43	10.3	7	1.7	3	0.7	0	0.0	417	100.0
ALL HOSPITALS	1525	37.5	1136	27.9	901	22.2	34	0.8	334	8.2	57	1.4	77	1.9	1	0.0	4065	100.0
Greater Southern																		
Goulburn Base	57	27.7	18	8.7	31	15.0	8	3.9	74	35.9	8	3.9	10	4.9	0	0.0	206	100.0
Moruya	111	42.7	76	29.2	53	20.4	1	0.4	17	6.5	0	0.0	2	0.8	0	0.0	260	100.0
Queanbeyan	109	48.7	62	27.7	43	19.2	3	1.3	6	2.7	0	0.0	1	0.4	0	0.0	224	100.0
Griffith Base	119	36.5	138	42.3	43	13.2	1	0.3	17	5.2	4	1.2	4	1.2	0	0.0	326	100.0
Wagga Wagga Base	188	35.8	141	26.9	114	21.7	6	1.1	54	10.3	6	1.1	16	3.0	0	0.0	525	100.0
Calvary, Wagga Wagga	80	22.7	73	20.7	138	39.1	7	2.0	47	13.3	8	2.3	0	0.0	0	0.0	353	100.0
Other Area hospitals	449	42.9	237	22.6	211	20.2	13	1.2	105	10.0	19	1.8	13	1.2	0	0.0	1047	100.0
ALL HOSPITALS	1113	37.8	745	25.3	633	21.5	39	1.3	320	10.9	45	1.5	46	1.6	0	0.0	2941	100.0
Greater Western																		
Dubbo Base	312	33.2	263	28.0	156	16.6	13	1.4	153	16.3	15	1.6	28	3.0	0	0.0	940	100.0
Mudgee	54	31.4	65	37.8	34	19.8	5	2.9	12	7.0	1	0.6	1	0.6	0	0.0	172	100.0
Bathurst Base	145	37.9	122	31.9	76	19.8	6	1.6	26	6.8	2	0.5	6	1.6	0	0.0	383	100.0
Orange Base	197	35.8	125	22.7	155	28.1	11	2.0	35	6.4	10	1.8	18	3.3	0	0.0	551	100.0
Broken Hill Base	115	55.8	55	26.7	26	12.6	1	0.5	6	2.9	2	1.0	1	0.5	0	0.0	206	100.0
Other Area hospitals	212	45.1	93	19.8	112	23.8	9	1.9	32	6.8	6	1.3	6	1.3	0	0.0	470	100.0
ALL HOSPITALS	1035	38.0	723	26.6	559	20.5	45	1.7	264	9.7	36	1.3	60	2.2	0	0.0	2722	100.0
TOTAL NSW	17100	26.7	17154	26.8	16020	25.0	1190	1.9	8482	13.2	582	0.9	3516	5.5	19	0.0	64063	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Birth weight in selected hospitals

Table 125 shows the birth weight of babies for individual hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area and the NSW total.

TABLE 125

BIRTHS BY BABY BIRTH WEIGHT AND HOSPITAL, NSW 2005#

Health Area and Hospital	Birth weight (grams)											
	Less than 1,000		1,000–1,499		1,500–2,499		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West												
Fairfield	7	0.4	1	0.1	59	3.5	1633	96.1	0	0.0	1700	100.0
Bankstown–Lidcombe	9	0.5	3	0.2	78	4.1	1818	95.2	2	0.1	1910	100.0
Liverpool	52	1.7	67	2.2	254	8.3	2697	87.7	5	0.2	3075	100.0
Campbelltown	9	0.4	1	0.0	106	4.6	2206	94.8	6	0.3	2328	100.0
Royal Prince Alfred	59	1.3	54	1.2	286	6.2	4230	91.3	2	0.0	4631	100.0
Canterbury	4	0.3	0	0.0	56	3.6	1503	96.2	0	0.0	1563	100.0
Sydney Southwest Private	3	0.3	0	0.0	37	3.1	1148	96.6	0	0.0	1188	100.0
Bowral	3	0.4	1	0.1	28	3.9	678	95.4	1	0.1	711	00.0
Other Area hospitals	0	0.0	0	0.0	2	2.9	66	97.1	0	0.0	68	100.0
ALL HOSPITALS	146	0.9	127	0.7	906	5.3	15979	93.0	16	0.1	17174	100.0
South Eastern Sydney & Illawarra												
St. George	12	0.5	6	0.3	124	5.3	2198	93.9	2	0.1	2342	100.0
St. George Private	5	0.3	1	0.1	89	5.0	1698	94.6	1	0.1	1794	100.0
Royal Hospital for Women	64	1.6	40	1.0	246	6.2	3581	91.0	6	0.2	3937	100.0
Wollongong	15	0.7	8	0.3	145	6.3	2134	92.6	3	0.1	2305	100.0
Hurstville Community	1	0.1	3	0.3	30	3.3	872	96.2	0	0.0	906	100.0
Sutherland	3	0.3	0	0.0	30	2.8	1021	96.8	1	0.1	1055	100.0
Shoalhaven	7	0.9	3	0.4	43	5.3	763	93.3	2	0.2	818	100.0
Kareena Private	1	0.2	2	0.3	26	4.1	610	95.5	0	0.0	639	100.0
Prince of Wales Private	1	0.1	1	0.1	39	2.4	1565	97.3	3	0.2	1609	100.0
Figtree Private	0	0.0	0	0.0	15	1.5	973	98.5	0	0.0	988	100.0
Other Area hospitals	0	0.0	0	0.0	3	3.5	81	94.2	2	2.3	86	100.0
ALL HOSPITALS	109	0.7	64	0.4	790	4.8	15496	94.0	20	0.1	16479	100.0
Sydney West												
Nepean	44	1.3	34	1.0	257	7.3	3172	90.4	0	0.0	3507	100.0
Blacktown	9	0.3	7	0.2	138	4.8	2710	94.6	0	0.0	2864	100.0
Westmead	64	1.5	84	1.9	358	8.1	3901	88.5	1	0.0	4408	100.0
The Hills Private	2	0.2	2	0.2	47	3.6	1266	96.1	0	0.0	1317	100.0
Nepean Private	3	0.3	0	0.0	32	3.3	924	96.3	1	0.1	960	100.0
Blue Mountains	1	0.4	0	0.0	3	1.1	265	98.5	0	0.0	269	100.0
Westmead Private	3	0.2	2	0.1	54	3.0	1745	96.7	0	0.0	1804	100.0
Hawkesbury	2	0.2	2	0.2	28	3.2	833	96.3	0	0.0	865	100.0
Auburn	4	0.3	1	0.1	33	2.7	1171	96.7	2	0.2	1211	100.0
Other Area hospitals	2	0.8	1	0.4	13	5.3	229	93.5	0	0.0	245	100.0
ALL HOSPITALS	134	0.8	133	0.8	963	5.5	16216	92.9	4	0.0	17450	100.0
Northern Sydney & Central Coast												
Manly	3	0.5	0	0.0	20	3.0	639	96.4	1	0.2	663	100.0
Gosford	9	0.4	3	0.1	119	4.9	2315	94.6	2	0.1	2448	100.0
Sydney Adventist	3	0.1	1	0.0	65	2.9	2156	96.9	1	0.0	2226	100.0
North Shore Private	13	0.5	5	0.2	96	3.7	2490	95.6	0	0.0	2604	100.0
Royal North Shore	37	1.5	63	2.5	186	7.5	2187	88.4	2	0.1	2475	100.0
Hornsby	2	0.2	5	0.5	33	3.6	875	95.6	0	0.0	915	100.0
Mona Vale	1	0.2	0	0.0	15	2.3	633	97.5	0	0.0	649	100.0
Mater, North Sydney	2	0.1	2	0.1	99	4.4	2163	95.5	0	0.0	2266	100.0
North Gosford Private	0	0.0	2	0.2	45	5.1	830	94.6	0	0.0	877	00.0
Wyong	0	0.0	0	0.0	3	1.3	220	98.7	0	0.0	223	100.0
Other Area hospitals	0	0.0	0	0.0	1	0.8	132	99.2	0	0.0	133	100.0
ALL HOSPITALS	70	0.5	81	0.5	682	4.4	14640	94.6	6	0.0	15479	100.0

TABLE 125 *(continued)*

BIRTHS BY BABY BIRTH WEIGHT AND HOSPITAL, NSW 2005[#]

Health Area and Hospital	Birth weight (grams)											
	Less than 1,000		1,000–1,499		1,500–2,499		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England												
John Hunter	83	2.4	63	1.8	291	8.4	3037	87.4	1	0.0	3475	100.0
Newcastle Private	12	0.7	3	0.2	63	3.7	1614	95.2	4	0.2	1696	100.0
Maitland	8	0.5	2	0.1	81	5.1	1498	94.3	0	0.0	1589	100.0
Tamworth Base	5	0.6	4	0.5	49	6.1	741	92.6	1	0.1	800	100.0
Muswellbrook	1	0.4	0	0.0	7	2.9	237	96.7	0	0.0	245	100.0
Armidale	2	0.5	0	0.0	34	8.3	374	91.0	1	0.2	411	100.0
Moree	1	0.4	1	0.4	11	4.6	228	94.6	0	0.0	241	100.0
Manning Base	3	0.4	0	0.0	23	3.3	678	96.3	0	0.0	704	100.0
Inverell	0	0.0	0	0.0	21	8.4	229	91.2	1	0.4	251	100.0
Belmont	0	0.0	0	0.0	9	2.8	313	97.2	0	0.0	322	100.0
Other Area hospitals	2	0.2	0	0.0	27	3.1	847	96.6	1	0.1	877	100.0
ALL HOSPITALS	117	1.1	73	0.7	616	5.8	9796	92.3	9	0.1	10611	100.0
North Coast												
Tweed Heads	4	0.4	5	0.5	41	3.9	1006	95.3	0	0.0	1056	100.0
Lismore Base	7	0.5	7	0.5	62	4.8	1202	94.0	1	0.1	1279	100.0
Kempsey	3	1.0	0	0.0	9	3.0	291	96.0	0	0.0	303	100.0
Grafton Base	1	0.2	1	0.2	16	3.6	421	95.7	1	0.2	440	100.0
Port Macquarie Base	1	0.1	1	0.1	33	4.3	727	95.4	0	0.0	762	100.0
Coffs Harbour	0	0.0	7	0.8	40	4.7	805	94.5	0	0.0	852	100.0
Murwillumbah	0	0.0	2	0.5	15	3.7	390	95.8	0	0.0	407	100.0
Other Area hospitals	1	0.2	0	0.0	5	1.2	424	97.9	3	0.7	433	100.0
ALL HOSPITALS	17	0.3	23	0.4	221	4.0	5266	95.2	5	0.1	5532	100.0
Greater Southern												
Goulburn Base	2	0.7	0	0.0	18	6.2	272	93.2	0	0.0	292	100.0
Griffith Base	2	0.4	0	0.0	13	2.9	434	96.7	0	0.0	449	100.0
Wagga Wagga Base	3	0.4	3	0.4	37	5.1	679	94.0	0	0.0	722	100.0
Calvary, Wagga Wagga	0	0.0	1	0.2	20	3.5	549	96.3	0	0.0	570	100.0
Moruya	0	0.0	0	0.0	22	6.6	313	93.4	0	0.0	335	100.0
Queanbeyan	0	0.0	0	0.0	5	1.8	272	98.2	0	0.0	277	100.0
Other Area hospitals	3	0.2	2	0.1	36	2.6	1327	97.0	0	0.0	1368	100.0
ALL HOSPITALS	10	0.2	6	0.1	151	3.8	3846	95.8	0	0.0	4013	100.0
Greater Western												
Bathurst Base	2	0.3	0	0.0	39	6.6	552	93.1	0	0.0	593	100.0
Dubbo Base	10	0.8	1	0.1	87	7.1	1119	91.7	3	0.2	1220	100.0
Broken Hill Base	1	0.4	0	0.0	11	4.1	259	95.6	0	0.0	271	100.0
Orange Base	1	0.1	2	0.3	49	6.1	747	93.4	1	0.1	800	100.0
Mudgee	0	0.0	0	0.0	4	1.7	228	98.3	0	0.0	232	100.0
Other Area hospitals	2	0.3	3	0.5	31	4.8	608	94.4	0	0.0	644	100.0
ALL HOSPITALS	16	0.4	6	0.2	221	5.9	3513	93.4	4	0.1	3760	100.0
TOTAL NSW	619	0.7	513	0.6	4552	5.0	84859	93.7	67	0.1	90610	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Gestational age in selected hospitals

Table 126 shows the gestational age of babies for individual hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area, and the NSW total.

TABLE 126

BIRTHS BY GESTATIONAL AGE AND HOSPITAL, NSW 2005#

Health Area and Hospital	Gestational age (weeks) <31		32–33		34–36		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West												
Canterbury	6	0.4	3	0.2	53	3.4	1501	96.0	0	0.0	1563	100.0
Royal Prince Alfred	143	3.1	81	1.7	245	5.3	4162	89.9	0	0.0	4631	100.0
Fairfield	11	0.6	2	0.1	54	3.2	1633	96.1	0	0.0	1700	100.0
Campbelltown	12	0.5	13	0.6	96	4.1	2207	94.8	0	0.0	2328	100.0
Bankstown–Lidcombe	12	0.6	5	0.3	66	3.5	1827	95.7	0	0.0	1910	100.0
Liverpool	127	4.1	93	3.0	165	5.4	2690	87.5	0	0.0	3075	100.0
Sydney Southwest Private	3	0.3	2	0.2	57	4.8	1126	94.8	0	0.0	1188	100.0
Bowral	5	0.7	2	0.3	20	2.8	684	96.2	0	0.0	711	100.0
Other Area hospitals	0	0.0	0	0.0	2	2.9	66	97.1	0	0.0	68	100.0
ALL HOSPITALS	319	1.9	201	1.2	758	4.4	15896	92.6	0	0.0	17174	100.0
South Eastern Sydney &Illawarra												
St. George	16	0.7	18	0.8	121	5.2	2186	93.3	1	0.0	2342	100.0
Royal Hospital for Women	112	2.8	78	2.0	206	5.2	3541	89.9	0	0.0	3937	100.0
Hurstville Community	2	0.2	3	0.3	40	4.4	861	95.0	0	0.0	906	100.0
St. George Private	5	0.3	3	0.2	96	5.4	1690	94.2	0	0.0	1794	100.0
Wollongong	25	1.1	29	1.3	171	7.4	2079	90.2	1	0.0	2305	100.0
Kareena Private	2	0.3	2	0.3	45	7.0	590	92.3	0	0.0	639	100.0
Shoalhaven	13	1.6	7	0.9	40	4.9	758	92.7	0	0.0	818	100.0
Sutherland	4	0.4	3	0.3	36	3.4	1012	95.9	0	0.0	1055	100.0
Prince of Wales Private	2	0.1	1	0.1	64	4.0	1537	95.5	5	0.3	1609	100.0
Figtree Private	0	0.0	1	0.1	30	3.0	957	96.9	0	0.0	988	100.0
Other Area hospitals	0	0.0	0	0.0	3	3.5	83	96.5	0	0.0	86	100.0
ALL HOSPITALS	181	1.1	145	0.9	852	5.2	15294	92.8	7	0.0	16479	100.0
Sydney West												
Blacktown	14	0.5	13	0.5	129	4.5	2708	94.6	0	0.0	2864	100.0
Nepean	89	2.5	64	1.8	257	7.3	3097	88.3	0	0.0	3507	100.0
Westmead	146	3.3	117	2.7	221	5.0	3924	89.0	0	0.0	4408	100.0
Westmead Private	4	0.2	5	0.3	74	4.1	1721	95.4	0	0.0	1804	100.0
Auburn	6	0.5	2	0.2	26	2.1	1177	97.2	0	0.0	1211	100.0
The Hills Private	7	0.5	3	0.2	61	4.6	1246	94.6	0	0.0	1317	100.0
Hawkesbury	5	0.6	1	0.1	37	4.3	820	94.8	2	0.2	865	100.0
Nepean Private	3	0.3	0	0.0	54	5.6	903	94.1	0	0.0	960	100.0
Blue Mountains	1	0.4	0	0.0	6	2.2	262	97.4	0	0.0	269	100.0
Other Area hospitals	3	1.2	0	0.0	12	4.9	230	93.9	0	0.0	245	100.0
ALL HOSPITALS	278	1.6	205	1.2	877	5.0	16088	92.2	2	0.0	17450	100.0
Northern Sydney & Central Coast												
Gosford	18	0.7	18	0.7	146	6.0	2266	92.6	0	0.0	2448	100.0
Royal North Shore	116	4.7	55	2.2	120	4.8	2184	88.2	0	0.0	2475	100.0
North Shore Private	15	0.6	6	0.2	101	3.9	2482	95.3	0	0.0	2604	100.0
Sydney Adventist	9	0.4	4	0.2	107	4.8	2106	94.6	0	0.0	2226	100.0
Manly	4	0.6	0	0.0	22	3.3	637	96.1	0	0.0	663	100.0
Hornsby	7	0.8	0	0.0	38	4.2	870	95.1	0	0.0	915	100.0
Mona Vale	1	0.2	1	0.2	16	2.5	631	97.2	0	0.0	649	100.0
Mater, North Sydney	5	0.2	17	0.8	98	4.3	2146	94.7	0	0.0	2266	100.0
North Gosford Private	1	0.1	3	0.3	61	7.0	812	92.6	0	0.0	877	100.0
Wyong	0	0.0	0	0.0	6	2.7	217	97.3	0	0.0	223	100.0
Other Area hospitals	0	0.0	0	0.0	1	0.8	132	99.2	0	0.0	133	100.0
ALL HOSPITALS	176	1.1	104	0.7	716	4.6	14483	93.6	0	0.0	15479	100.0

TABLE 126 *(continued)*

BIRTHS BY GESTATIONAL AGE AND HOSPITAL, NSW 2005#

Health Area and Hospital	Gestational age (weeks) <31		32–33		34–36		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England												
Tamworth Base	11	1.4	3	0.4	51	6.4	735	91.9	0	0.0	800	100.0
John Hunter	170	4.9	94	2.7	235	6.8	2976	85.6	0	0.0	3475	100.0
Maitland	12	0.8	2	0.1	92	5.8	1483	93.3	0	0.0	1589	100.0
Muswellbrook	1	0.4	0	0.0	14	5.7	230	93.9	0	0.0	245	100.0
Newcastle Private	17	1.0	5	0.3	104	6.1	1570	92.6	0	0.0	1696	100.0
Armidale	4	1.0	1	0.2	25	6.1	381	92.7	0	0.0	411	100.0
Moree	1	0.4	0	0.0	10	4.1	230	95.4	0	0.0	241	100.0
Manning Base	4	0.6	0	0.0	32	4.5	668	94.9	0	0.0	704	100.0
Inverell	1	0.4	0	0.0	15	6.0	235	93.6	0	0.0	251	100.0
Belmont	0	0.0	1	0.3	5	1.6	316	98.1	0	0.0	322	100.0
Other Area hospitals	2	0.2	1	0.1	11	1.3	863	98.4	0	0.0	877	100.0
ALL HOSPITALS	223	2.1	107	1.0	594	5.6	9687	91.3	0	0.0	10611	100.0
North Coast												
Lismore Base	16	1.3	7	0.5	81	6.3	1175	91.9	0	0.0	1279	100.0
Tweed Heads	10	0.9	2	0.2	42	4.0	1002	94.9	0	0.0	1056	100.0
Kempsey	3	1.0	0	0.0	11	3.6	289	95.4	0	0.0	303	100.0
Port Macquarie Base	2	0.3	6	0.8	42	5.5	712	93.4	0	0.0	762	100.0
Grafton Base	3	0.7	3	0.7	13	3.0	421	95.7	0	0.0	440	100.0
Coffs Harbour	7	0.8	2	0.2	37	4.3	806	94.6	0	0.0	852	100.0
Murwillumbah	3	0.7	2	0.5	14	3.4	388	95.3	0	0.0	407	100.0
Other Area hospitals	1	0.2	0	0.0	9	2.1	423	97.7	0	0.0	433	100.0
ALL HOSPITALS	45	0.8	22	0.4	249	4.5	5216	94.3	0	0.0	5532	100.0
Greater Southern												
Griffith Base	3	0.7	4	0.9	20	4.5	422	94.0	0	0.0	449	100.0
Wagga Wagga Base	5	0.7	6	0.8	38	5.3	673	93.2	0	0.0	722	100.0
Goulburn Base	4	1.4	0	0.0	17	5.8	271	92.8	0	0.0	292	100.0
Calvary, Wagga Wagga	2	0.4	0	0.0	37	6.5	531	93.2	0	0.0	570	100.0
Moruya	0	0.0	3	0.9	20	6.0	312	93.1	0	0.0	335	100.0
Queanbeyan	0	0.0	0	0.0	8	2.9	269	97.1	0	0.0	277	100.0
Other Area hospitals	7	0.5	4	0.3	21	1.5	1336	97.7	0	0.0	1368	100.0
ALL HOSPITALS	21	0.5	17	0.4	161	4.0	3814	95.0	0	0.0	4013	100.0
Greater Western												
Dubbo Base	18	1.5	11	0.9	86	7.0	1105	90.6	0	0.0	1220	100.0
Bathurst Base	3	0.5	2	0.3	40	6.7	548	92.4	0	0.0	593	100.0
Broken Hill Base	2	0.7	1	0.4	13	4.8	255	94.1	0	0.0	271	100.0
Orange Base	4	0.5	8	1.0	52	6.5	736	92.0	0	0.0	800	100.0
Mudgee	0	0.0	1	0.4	3	1.3	228	98.3	0	0.0	232	100.0
Other Area hospitals	6	0.9	1	0.2	21	3.3	615	95.5	1	0.2	644	100.0
ALL HOSPITALS	33	0.9	24	0.6	215	5.7	3487	92.7	1	0.0	3760	100.0
TOTAL NSW	1276	1.4	826	0.9	4422	4.9	84076	92.8	10	0.0	90610	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Neonatal resuscitation in selected hospitals

Table 127 shows the type of neonatal resuscitation for individual hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area, and the NSW total.

TABLE 127

BIRTHS BY TYPE OF RESUSCITATION AND HOSPITAL, NSW 2005[#]

Health Area and Hospital	Resuscitation																	
	None		Suction		Oxygen therapy		IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		Other		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West																		
Fairfield	1168	68.7	295	17.4	190	11.2	43	2.5	2	0.1	2	0.1	0	0.0	0	0.0	1700	100.0
Bankstown–Lidcombe	1451	76.0	265	13.9	117	6.1	68	3.6	3	0.2	6	0.3	0	0.0	0	0.0	1910	100.0
Royal Prince Alfred	2711	58.5	881	19.0	499	10.8	496	10.7	0	0.0	7	0.2	36	0.8	1	0.0	4631	100.0
Campbelltown	1886	81.0	199	8.5	209	9.0	25	1.1	2	0.1	6	0.3	1	0.0	0	0.0	2328	100.0
Canterbury	1041	66.6	404	25.8	84	5.4	21	1.3	10	0.6	2	0.1	1	0.1	0	0.0	1563	100.0
Liverpool	1993	64.8	569	18.5	288	9.4	179	5.8	30	1.0	16	0.5	0	0.0	0	0.0	3075	100.0
Sydney Southwest Private	703	59.2	254	21.4	153	12.9	70	5.9	1	0.1	0	0.0	7	0.6	0	0.0	1188	100.0
Bowral	562	79.0	64	9.0	53	7.5	29	4.1	3	0.4	0	0.0	0	0.0	0	0.0	711	100.0
Other Area hospitals	52	76.5	6	8.8	5	7.4	5	7.4	0	0.0	0	0.0	0	0.0	0	0.0	68	100.0
ALL HOSPITALS	11567	67.4	2937	17.1	1598	9.3	936	5.5	51	0.3	39	0.2	45	0.3	1	0.0	17174	100.0
South Eastern Sydney &Illawarra																		
St. George Private	159	8.9	619	34.5	461	25.7	68	3.8	0	0.0	2	0.1	485	27.0	0	0.0	1794	100.0
Wollongong	1262	54.8	602	26.1	337	14.6	92	4.0	11	0.5	1	0.0	0	0.0	0	0.0	2305	100.0
Hurstville Community	29	3.2	462	51.0	314	34.7	33	3.6	2	0.2	1	0.1	65	7.2	0	0.0	906	100.0
Royal Hospital for Women	2899	73.6	435	11.0	366	9.3	177	4.5	45	1.1	15	0.4	0	0.0	0	0.0	3937	100.0
St. George	1743	74.4	194	8.3	319	13.6	78	3.3	5	0.2	3	0.1	0	0.0	0	0.0	2342	100.0
Shoalhaven	580	70.9	94	11.5	115	14.1	23	2.8	3	0.4	3	0.4	0	0.0	0	0.0	818	100.0
Kareena Private	38	5.9	351	54.9	138	21.6	21	3.3	0	0.0	0	0.0	91	14.2	0	0.0	639	100.0
Prince of Wales Private	481	29.9	770	47.9	244	15.2	73	4.5	2	0.1	0	0.0	17	1.1	22	1.4	1609	100.0
Sutherland	661	62.7	227	21.5	135	12.8	26	2.5	1	0.1	5	0.5	0	0.0	0	0.0	1055	100.0
Figtree Private	41	4.1	700	70.9	206	20.9	37	3.7	3	0.3	0	0.0	1	0.1	0	0.0	988	100.0
Other Area hospitals	70	81.4	4	4.7	10	11.6	1	1.2	1	1.2	0	0.0	0	0.0	0	0.0	86	100.0
ALL HOSPITALS	7963	48.3	4458	27.1	2645	16.1	629	3.8	73	0.4	30	0.2	659	4.0	22	0.1	16479	100.0
Sydney West																		
Nepean	1975	56.3	744	21.2	538	15.3	184	5.2	63	1.8	1	0.0	2	0.1	0	0.0	3507	100.0
Blacktown	1594	55.7	772	27.0	385	13.4	96	3.4	9	0.3	8	0.3	0	0.0	0	0.0	2864	100.0
Westmead	3177	72.1	448	10.2	488	11.1	173	3.9	102	2.3	20	0.5	0	0.0	0	0.0	4408	100.0
Westmead Private	1042	57.8	389	21.6	269	14.9	84	4.7	0	0.0	4	0.2	15	0.8	1	0.1	1804	100.0
Nepean Private	448	46.7	113	11.8	297	30.9	67	7.0	9	0.9	1	0.1	25	2.6	0	0.0	960	100.0
The Hills Private	897	68.1	208	15.8	168	12.8	36	2.7	3	0.2	5	0.4	0	0.0	0	0.0	1317	100.0
Hawkesbury	561	64.9	143	16.5	116	13.4	42	4.9	3	0.3	0	0.0	0	0.0	0	0.0	865	100.0
Auburn	988	81.6	91	7.5	63	5.2	61	5.0	4	0.3	4	0.3	0	0.0	0	0.0	1211	100.0
Blue Mountains	166	61.7	63	23.4	24	8.9	15	5.6	1	0.4	0	0.0	0	0.0	0	0.0	269	100.0
Other Area hospitals	33	13.5	95	38.8	101	41.2	15	6.1	1	0.4	0	0.0	0	0.0	0	0.0	245	100.0
ALL HOSPITALS	10881	62.4	3066	17.6	2449	14.0	773	4.4	195	1.1	43	0.2	42	0.2	1	0.0	17450	100.0
Northern Sydney & Central Coast																		
Gosford	1472	60.1	387	15.8	450	18.4	122	5.0	4	0.2	11	0.4	2	0.1	0	0.0	2448	100.0
North Shore Private	1270	48.8	806	31.0	415	15.9	112	4.3	1	0.0	0	0.0	0	0.0	0	0.0	2604	100.0
Royal North Shore	1287	52.0	714	28.8	266	10.7	151	6.1	53	2.1	4	0.2	0	0.0	0	0.0	2475	100.0
Sydney Adventist	642	28.8	1174	52.7	250	11.2	149	6.7	2	0.1	1	0.0	8	0.4	0	0.0	2226	100.0
Manly	355	53.5	204	30.8	83	12.5	20	3.0	0	0.0	1	0.2	0	0.0	0	0.0	663	100.0
Hornsby	629	68.7	103	11.3	148	16.2	31	3.4	1	0.1	3	0.3	0	0.0	0	0.0	915	100.0
Mona Vale	336	51.8	250	38.5	49	7.6	14	2.2	0	0.0	0	0.0	0	0.0	0	0.0	649	100.0
Mater, North Sydney	1123	49.6	582	25.7	345	15.2	104	4.6	1	0.0	0	0.0	109	4.8	2	0.1	2266	100.0
North Gosford Private	460	52.5	189	21.6	172	19.6	43	4.9	2	0.2	1	0.1	10	1.1	0	0.0	877	100.0
Wyong	169	75.8	26	11.7	21	9.4	6	2.7	0	0.0	0	0.0	1	0.4	0	0.0	223	100.0
Other Area hospitals	114	85.7	14	10.5	5	3.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	133	100.0
ALL HOSPITALS	7857	50.8	4449	28.7	2204	14.2	752	4.9	64	0.4	21	0.1	130	0.8	2	0.0	15479	100.0

TABLE 127 *(continued)*

BIRTHS BY TYPE OF RESUSCITATION AND HOSPITAL, NSW 2005#

Health Area and Hospital	None		Suction		Oxygen therapy		Resuscitatoin IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		Other		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England																		
John Hunter	2185	62.9	518	14.9	365	10.5	363	10.4	41	1.2	3	0.1	0	0.0	0	0.0	3475	100.0
Tamworth Base	302	37.8	155	19.4	186	23.3	66	8.3	6	0.8	2	0.3	83	10.4	0	0.0	800	100.0
Newcastle Private	1100	64.9	310	18.3	220	13.0	59	3.5	5	0.3	2	0.1	0	0.0	0	0.0	1696	100.0
Maitland	1247	78.5	109	6.9	172	10.8	55	3.5	4	0.3	2	0.1	0	0.0	0	0.0	1589	100.0
Armidale	116	28.2	66	16.1	194	47.2	27	6.6	0	0.0	1	0.2	6	1.5	1	0.2	411	100.0
Moree	108	44.8	41	17.0	78	32.4	12	5.0	1	0.4	0	0.0	1	0.4	0	0.0	241	100.0
Manning Base	378	53.7	148	21.0	100	14.2	50	7.1	2	0.3	3	0.4	23	3.3	0	0.0	704	100.0
Belmont	216	67.1	58	18.0	28	8.7	20	6.2	0	0.0	0	0.0	0	0.0	0	0.0	322	100.0
Muswellbrook	177	72.2	29	11.8	25	10.2	12	4.9	0	0.0	0	0.0	2	0.8	0	0.0	245	100.0
Inverell	15	6.0	12	4.8	212	84.5	12	4.8	0	0.0	0	0.0	0	0.0	0	0.0	251	100.0
Other Area hospitals	273	31.1	312	35.6	244	27.8	29	3.3	1	0.1	5	0.6	13	1.5	0	0.0	877	100.0
ALL HOSPITALS	6117	57.6	1758	16.6	1824	17.2	705	6.6	60	0.6	18	0.2	128	1.2	1	0.0	10611	100.0
North Coast																		
Tweed Heads	533	50.5	117	11.1	282	26.7	115	10.9	5	0.5	3	0.3	1	0.1	0	0.0	1056	100.0
Lismore Base	366	28.6	461	36.0	260	20.3	65	5.1	9	0.7	2	0.2	116	9.1	0	0.0	1279	100.0
Kempsey	207	68.3	17	5.6	40	13.2	30	9.9	3	1.0	5	1.7	1	0.3	0	0.0	303	100.0
Grafton Base	90	20.5	253	57.5	47	10.7	39	8.9	8	1.8	2	0.5	1	0.2	0	0.0	440	100.0
Coffs Harbour	460	54.0	196	23.0	125	14.7	53	6.2	0	0.0	1	0.1	17	2.0	0	0.0	852	100.0
Port Macquarie Base	361	47.4	159	20.9	144	18.9	39	5.1	2	0.3	4	0.5	53	7.0	0	0.0	762	100.0
Murwillumbah	38	9.3	228	56.0	122	30.0	19	4.7	0	0.0	0	0.0	0	0.0	0	0.0	407	100.0
Other Area hospitals	216	49.9	77	17.8	97	22.4	27	6.2	0	0.0	1	0.2	15	3.5	0	0.0	433	100.0
ALL HOSPITALS	2271	41.1	1508	27.3	1117	20.2	387	7.0	27	0.5	18	0.3	204	3.7	0	0.0	5532	100.0
Greater Southern																		
Griffith Base	158	35.2	120	26.7	83	18.5	22	4.9	2	0.4	0	0.0	64	14.3	0	0.0	449	100.0
Wagga Wagga Base	221	30.6	101	14.0	100	13.9	65	9.0	4	0.6	2	0.3	229	31.7	0	0.0	722	100.0
Goulburn Base	137	46.9	59	20.2	79	27.1	14	4.8	2	0.7	1	0.3	0	0.0	0	0.0	292	100.0
Moruya	214	63.9	54	16.1	40	11.9	21	6.3	2	0.6	4	1.2	0	0.0	0	0.0	335	100.0
Calvary, Wagga Wagga	257	45.1	124	21.8	136	23.9	43	7.5	4	0.7	0	0.0	6	1.1	0	0.0	570	100.0
Queanbeyan	180	65.0	44	15.9	38	13.7	10	3.6	0	0.0	0	0.0	5	1.8	0	0.0	277	100.0
Other Area hospitals	839	61.3	268	19.6	154	11.3	73	5.3	8	0.6	7	0.5	19	1.4	0	0.0	1368	100.0
ALL HOSPITALS	2006	50.0	770	19.2	630	15.7	248	6.2	22	0.5	14	0.3	323	8.0	0	0.0	4013	100.0
Greater Western																		
Dubbo Base	601	49.3	130	10.7	235	19.3	53	4.3	0	0.0	4	0.3	196	16.1	1	0.1	1220	100.0
Bathurst Base	138	23.3	280	47.2	102	17.2	68	11.5	3	0.5	1	0.2	1	0.2	0	0.0	593	100.0
Broken Hill Base	175	64.6	37	13.7	43	15.9	15	5.5	0	0.0	1	0.4	0	0.0	0	0.0	271	100.0
Orange Base	442	55.3	79	9.9	194	24.3	74	9.3	7	0.9	1	0.1	3	0.4	0	0.0	800	100.0
Mudgee	98	42.2	58	25.0	54	23.3	18	7.8	2	0.9	1	0.4	1	0.4	0	0.0	232	100.0
Other Area hospitals	351	54.5	77	12.0	165	25.6	28	4.3	4	0.6	5	0.8	14	2.2	0	0.0	644	100.0
ALL HOSPITALS	1805	48.0	661	17.6	793	21.1	256	6.8	16	0.4	13	0.3	215	5.7	1	0.0	3760	100.0
TOTAL NSW	50564	55.8	19610	21.6	13265	14.6	4689	5.2	508	0.6	196	0.2	1749	1.9	29	0.0	90610	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Baby discharge status in selected hospitals

Table 128 shows the discharge status of babies born in hospitals where the number of reported confinements exceeded 200 in 2005, totals for all hospitals within each health area, and the NSW total.

TABLE 128

CONFINEMENTS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 2005[#]

Health Area and Hospital	Baby discharge status											
	Discharged		Stillborn		Neonatal Death		Transferred		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West												
Canterbury	1548	99.0	3	0.2	1	0.1	11	0.7	0	0.0	1563	100.0
Fairfield	1667	98.1	10	0.6	2	0.1	21	1.2	0	0.0	1700	100.0
Campbelltown	2289	98.3	16	0.7	6	0.3	17	0.7	0	0.0	2328	100.0
Liverpool	2835	92.2	25	0.8	23	0.7	192	6.2	0	0.0	3075	100.0
Bowral	563	79.2	4	0.6	1	0.1	143	20.1	0	0.0	711	100.0
Bankstown–Lidcombe	1872	98.0	18	0.9	1	0.1	19	1.0	0	0.0	1910	100.0
Sydney Southwest Private	1172	98.7	5	0.4	0	0.0	11	0.9	0	0.0	1188	100.0
Royal Prince Alfred	4442	95.9	28	0.6	25	0.5	136	2.9	0	0.0	4631	100.0
Other Area hospitals	67	98.5	0	0.0	0	0.0	1	1.5	0	0.0	68	100.0
ALL HOSPITALS	16455	95.8	109	0.6	59	0.3	551	3.2	0	0.0	17174	100.0
South Eastern Sydney &Illawarra												
Sutherland	1047	99.2	3	0.3	1	0.1	4	0.4	0	0.0	1055	100.0
Royal Hospital for Women	3787	96.2	35	0.9	31	0.8	84	2.1	0	0.0	3937	100.0
St. George	2303	98.3	15	0.6	4	0.2	20	0.9	0	0.0	2342	100.0
Wollongong	1662	72.1	16	0.7	9	0.4	618	26.8	0	0.0	2305	100.0
Prince of Wales Private	1576	97.9	5	0.3	0	0.0	7	0.4	21	1.3	1609	100.0
St. George Private	1772	98.8	5	0.3	0	0.0	17	0.9	0	0.0	1794	100.0
Shoalhaven	740	90.5	10	1.2	2	0.2	66	8.1	0	0.0	818	100.0
Kareena Private	628	98.3	3	0.5	0	0.0	8	1.3	0	0.0	639	100.0
Figtree Private	973	98.5	2	0.2	0	0.0	13	1.3	0	0.0	988	100.0
Hurstville Community	897	99.0	2	0.2	0	0.0	7	0.8	0	0.0	906	100.0
Other Area hospitals	78	90.7	1	1.2	1	1.2	6	7.0	0	0.0	86	100.0
ALL HOSPITALS	15463	93.8	97	0.6	48	0.3	850	5.2	21	0.1	16479	100.0
Sydney West												
Hawkesbury	834	96.4	2	0.2	1	0.1	22	2.5	6	0.7	865	100.0
The Hills Private	1296	98.4	3	0.2	2	0.2	16	1.2	0	0.0	1317	100.0
Nepean	3319	94.6	31	0.9	21	0.6	135	3.8	1	0.0	3507	100.0
Blacktown	2819	98.4	13	0.5	3	0.1	29	1.0	0	0.0	2864	100.0
Westmead	4072	92.4	32	0.7	24	0.5	280	6.4	0	0.0	4408	100.0
Auburn	1184	97.8	11	0.9	1	0.1	15	1.2	0	0.0	1211	100.0
Westmead Private	1775	98.4	9	0.5	0	0.0	20	1.1	0	0.0	1804	100.0
Nepean Private	946	98.5	6	0.6	1	0.1	7	0.7	0	0.0	960	100.0
Blue Mountains	263	97.8	1	0.4	0	0.0	5	1.9	0	0.0	269	100.0
Other Area hospitals	237	96.7	2	0.8	0	0.0	6	2.4	0	0.0	245	100.0
ALL HOSPITALS	16745	96.0	110	0.6	53	0.3	535	3.1	7	0.0	17450	100.0
Northern Sydney & Central Coast												
Gosford	2036	83.2	13	0.5	2	0.1	397	16.2	0	0.0	2448	100.0
Royal North Shore	2282	92.2	12	0.5	23	0.9	158	6.4	0	0.0	2475	100.0
Mater, North Sydney	2251	99.3	5	0.2	0	0.0	10	0.4	0	0.0	2266	100.0
North Shore Private	2578	99.0	8	0.3	7	0.3	11	0.4	0	0.0	2604	100.0
North Gosford Private	868	99.0	2	0.2	0	0.0	7	0.8	0	0.0	877	100.0
Manly	652	98.3	3	0.5	1	0.2	7	1.1	0	0.0	663	100.0
Wyong	219	98.2	0	0.0	1	0.4	3	1.3	0	0.0	223	100.0
Hornsby	897	98.0	3	0.3	2	0.2	13	1.4	0	0.0	915	100.0
Mona Vale	626	96.5	1	0.2	0	0.0	22	3.4	0	0.0	649	100.0
Sydney Adventist	2206	99.1	8	0.4	0	0.0	12	0.5	0	0.0	2226	100.0
Other Area hospitals	130	97.7	0	0.0	0	0.0	1	0.8	2	1.5	133	100.0
ALL HOSPITALS	14745	95.3	55	0.4	36	0.2	641	4.1	2	0.0	15479	100.0

TABLE 128 *(continued)*

CONFINEMENTS BY BABY DISCHARGE STATUS AND HOSPITAL, NSW 2005#

Health Area and Hospital	Baby discharge status: Discharged		Stillborn		Neonatal Death		Transferred		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hunter & New England												
John Hunter	3140	90.4	50	1.4	28	0.8	257	7.4	0	0.0	3475	100.0
Manning Base	668	94.9	2	0.3	2	0.3	32	4.5	0	0.0	704	100.0
Maitland	1340	84.3	8	0.5	6	0.4	235	14.8	0	0.0	1589	100.0
Muswellbrook	230	93.9	0	0.0	1	0.4	14	5.7	0	0.0	245	100.0
Newcastle Private	1566	92.3	17	1.0	3	0.2	110	6.5	0	0.0	1696	100.0
Belmont	312	96.9	1	0.3	0	0.0	9	2.8	0	0.0	322	100.0
Armidale	387	94.2	3	0.7	1	0.2	20	4.9	0	0.0	411	100.0
Inverell	243	96.8	2	0.8	1	0.4	5	2.0	0	0.0	251	100.0
Tamworth Base	653	81.6	6	0.8	3	0.4	138	17.3	0	0.0	800	100.0
Moree	233	96.7	5	2.1	0	0.0	3	1.2	0	0.0	241	100.0
Other Area hospitals	820	93.5	4	0.5	1	0.1	51	5.8	1	0.1	877	100.0
ALL HOSPITALS	9592	90.4	98	0.9	46	0.4	874	8.2	1	0.0	10611	100.0
North Coast												
Grafton Base	432	98.2	2	0.5	0	0.0	6	1.4	0	0.0	440	100.0
Coffs Harbour	783	91.9	3	0.4	0	0.0	66	7.7	0	0.0	852	100.0
Kempsey	283	93.4	3	1.0	1	0.3	16	5.3	0	0.0	303	100.0
Lismore Base	1072	83.8	9	0.7	2	0.2	196	15.3	0	0.0	1279	100.0
Tweed Heads	1035	98.0	5	0.5	1	0.1	15	1.4	0	0.0	1056	100.0
Port Macquarie Base	743	97.5	1	0.1	1	0.1	17	2.2	0	0.0	762	100.0
Murwillumbah	400	98.3	1	0.2	0	0.0	6	1.5	0	0.0	407	100.0
Other Area hospitals	403	93.1	1	0.2	0	0.0	29	6.7	0	0.0	433	100.0
ALL HOSPITALS	5151	93.1	25	0.5	5	0.1	351	6.3	0	0.0	5532	100.0
Greater Southern												
Queanbeyan	269	97.1	0	0.0	0	0.0	8	2.9	0	0.0	277	100.0
Moruya	322	96.1	1	0.3	0	0.0	12	3.6	0	0.0	335	100.0
Wagga Wagga Base	636	88.1	4	0.6	3	0.4	79	10.9	0	0.0	722	100.0
Calvary, Wagga Wagga	555	97.4	1	0.2	1	0.2	13	2.3	0	0.0	570	100.0
Goulburn Base	279	95.5	4	1.4	0	0.0	9	3.1	0	0.0	292	100.0
Griffith Base	440	98.0	3	0.7	0	0.0	6	1.3	0	0.0	449	100.0
Other Area hospitals	1313	96.0	3	0.2	0	0.0	52	3.8	0	0.0	1368	100.0
ALL HOSPITALS	3814	95.0	16	0.4	4	0.1	179	4.5	0	0.0	4013	100.0
Greater Western												
Dubbo Base	870	71.3	13	1.1	5	0.4	332	27.2	0	0.0	1220	100.0
Bathurst Base	456	76.9	3	0.5	0	0.0	134	22.6	0	0.0	593	100.0
Broken Hill Base	263	97.0	2	0.7	0	0.0	6	2.2	0	0.0	271	100.0
Mudgee	226	97.4	0	0.0	0	0.0	6	2.6	0	0.0	232	100.0
Orange Base	652	81.5	2	0.3	0	0.0	146	18.3	0	0.0	800	100.0
Other Area hospitals	575	89.3	5	0.8	2	0.3	62	9.6	0	0.0	644	100.0
ALL HOSPITALS	3042	80.9	25	0.7	7	0.2	686	1	8.2	0	0.0	3760	100.0
Other/Not stated	110	98.2	0	0.0	0	0.0	1	0.9	1	0.9	112	100.0
TOTAL NSW	85117	93.9	535	0.6	258	0.3	4	668	5.2	32	0.0	90610	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Postnatal length of stay in selected hospitals

Table 129 shows the mother's postnatal length of stay in the hospital of birth for hospitals where the number of reported confinements exceeded 200 in 2004, totals for all hospitals within each health area, and the NSW total.

TABLE 129

AVERAGE MATERNAL POSTNATAL LENGTH OF STAY IN HOSPITAL OF BIRTH, NSW 2000–2004#

Health Area and Hospital	Average postnatal length of stay (days)				
	2000	2001	2002	2003	2004
Sydney South West					
Canterbury	2.8	2.7	2.9	3.0	3.0
Royal Prince Alfred	3.6	3.7	3.8	3.3	3.9
Camden	–	–	–	2.7	2.8
Fairfield	2.6	2.6	2.5	2.5	2.6
Liverpool	2.8	2.7	2.6	2.1	2.8
Campbelltown	2.5	2.5	2.6	2.3	2.5
Bankstown/Lidcombe	2.8	2.8	2.7	2.4	2.7
Sydney Southwest Private	4.9	4.6	4.3	3.8	4.3
Bowral	2.7	2.6	2.4	1.7	2.2
Other Area hospitals	4.5	–	–	5.0	–
ALL HOSPITALS	3.0	3.0	3.0	2.7	3.1
South Eastern Sydney &Illawarra					
Royal Hospital for Women	3.5	3.6	3.6	3.4	3.5
St. George	3.3	2.9	2.7	2.7	2.7
Sutherland	3.2	3.0	3.1	3.1	3.1
Hurstville Community	4.5	4.4	4.4	4.4	4.5
Kareena Private	5.7	5.2	5.0	4.8	4.5
St. George Private	5.1	5.2	4.9	4.6	4.6
Prince of Wales Private	4.9	4.6	4.8	4.8	4.6
Shoalhaven	2.6	2.5	2.3	1.4	2.5
Figtree Private	5.6	5.4	5.5	5.3	5.2
Other Area hospitals	2.3	2.7	2.7	2.6	2.5
ALL HOSPITALS	3.7	3.8	3.7	3.6	3.6
Sydney West					
Auburn	2.8	2.8	2.8	2.5	2.8
Blacktown	3.0	3.0	2.9	2.8	3.1
Blue Mountains	3.5	3.7	3.6	3.4	3.0
Nepean	3.3	3.2	3.0	2.8	3.2
Westmead	3.3	3.2	3.2	3.0	3.2
The Hills Private	5.2	5.0	4.8	4.7	4.6
Hawkesbury	3.3	3.2	3.4	2.6	3.4
Nepean Private	4.3	4.8	4.7	4.7	4.6
Westmead Private	4.8	4.9	4.7	4.1	4.0
Other Area hospitals	4.3	4.0	3.1	3.5	3.5
ALL HOSPITALS	3.4	3.5	3.4	3.2	3.4
Northern Sydney & Central Coast					
Gosford	2.4	2.3	2.5	2.2	2.4
Wyong	2.3	2.2	2.1	2.1	2.0
Hornsby	3.6	3.5	3.0	2.9	2.9
Manly	3.8	3.6	3.5	3.6	3.8
Mona Vale	3.8	3.5	3.5	3.3	3.2
Royal North Shore	3.9	3.7	3.6	3.4	3.3
Ryde	3.3	3.1	3.4	3.0	3.1
Mater, North Sydney	5.2	4.8	4.5	4.3	4.5
North Shore Private	4.7	4.6	4.5	4.3	4.4
Sydney Adventist	5.2	4.7	4.6	4.5	4.6
North Gosford Private	5.3	4.9	4.8	4.7	4.6
ALL HOSPITALS	4.1	3.9	3.9	3.7	3.8
Hunter & New England					
Armidale	3.9	3.7	3.7	3.7	3.8
Inverell	3.2	3.0	3.1	2.6	3.3
Moree	3.6	3.3	3.5	3.5	3.4
Tamworth Base	3.6	3.5	3.3	2.8	3.5
Manning Base	3.6	3.1	3.0	3.1	3.2
Maitland	2.9	2.6	2.5	2.4	2.4
Muswellbrook	3.4	3.3	3.2	3.2	2.8
Belmont	3.1	3.3	3.1	3.1	2.9
John Hunter	3.3	3.3	3.2	2.9	3.2
Christo Road Private	4.9	4.9	4.7	4.5	4.6
Newcastle Private	6.0	6.8	5.2	5.8	4.3
Other Area hospitals	3.7	3.8	3.6	3.2	3.7
ALL HOSPITALS	3.5	3.5	3.3	3.1	3.4
North Coast					
Coffs Harbour	4.0	3.8	3.8	3.7	3.9
Grafton Base	3.8	3.5	3.6	3.6	3.6
Kempsey	3.6	3.2	3.0	2.0	3.1
Lismore Base	3.2	3.1	3.2	2.9	3.5
Murwillumbah	3.7	3.6	3.6	3.4	3.7
Tweed Heads	3.0	3.0	3.1	3.0	3.1
Port Macquarie Base	3.8	3.7	3.8	3.5	3.7
Other Area hospitals	3.7	3.7	3.5	3.5	3.4
ALL HOSPITALS	3.6	3.4	3.4	3.2	3.5
Greater Southern					
Cooma	3.9	3.9	4.0	3.8	3.8
Goulburn Base	3.5	3.4	3.4	2.4	3.5
Moruya	2.9	2.8	2.9	0.9	2.7
Queanbeyan	3.2	3.1	3.2	3.0	3.1
Griffith Base	3.1	3.1	3.1	2.5	3.2
Wagga Wagga Base	3.1	2.9	3.0	2.9	2.9
Calvary, Wagga Wagga	4.7	4.9	4.6	4.9	5.1
Other Area hospitals	3.7	3.8	3.7	3.5	3.5
ALL HOSPITALS	3.5	3.6	3.6	3.3	3.5
Greater Western					
Dubbo Base	2.7	2.5	2.4	1.9	2.4
Bathurst Base	3.2	3.1	3.1	2.9	3.0
Cowra	3.9	3.8	3.7	1.8	3.3
Orange Base	3.2	3.2	3.3	3.0	3.0
Broken Hill Base	3.4	3.6	3.4	3.1	3.6
Other Area hospitals	3.4	3.3	3.1	2.9	3.1
ALL HOSPITALS	3.1	3.0	3.0	2.5	2.9
TOTAL NSW	3.5	3.5	3.5	3.2	3.4

Source: Linked data of the NSW Midwives Data Collection and NSW Inpatient Statistics Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Induction of labour for other than defined indications, Indicator 1.1

Definition: The number of patients undergoing induction of labour other than for defined indications (excluding augmentation of labour) as a percentage of the total number of patients undergoing induction of labour for any reason (excluding augmentation of labour).

Table 130 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area and the NSW total.

TABLE 130

INDICATOR 1.1: INDUCTION OF LABOUR FOR OTHER THAN DEFINED INDICATIONS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	15.2	19.3	20.6	23.0	25.4
Royal Prince Alfred	21.9	23.6	27.8	25.6	32.3
Fairfield	12.9	16.9	20.6	22.6	20.7
Liverpool	27.9	31.5	27.6	25.8	27.9
Campbelltown	23.5	22.3	19.9	25.3	17.8
Bankstown–Lidcombe	18.3	19.4	20.2	19.5	25.4
Sydney Southwest Private	45.1	47.9	50.2	50.6	55.4
Bowral	26.3	44.1	39.5	42.5	41.4
Other Area hospitals	–	–	21.1	23.3	38.5
ALL HOSPITALS	23.8	27.0	27.8	27.9	30.2
South Eastern Sydney &Illawarra					
Royal Hospital for Women	21.2	24.2	25.2	28.6	27.1
St. George	18.6	20.9	21.2	16.9	25.1
Sutherland	20.6	24.2	17.9	26.3	25.6
Hurstville Community	61.3	55.5	63.2	60.9	60.9
Kareena Private	60.4	62.6	64.7	71.7	70.0
St. George Private	44.6	41.4	40.2	53.6	55.1
Prince of Wales Private	49.0	40.4	40.6	48.1	44.4
Shoalhaven	31.2	30.4	30.5	34.5	29.6
Wollongong	20.6	26.0	23.3	29.8	34.0
Figtree Private	38.9	40.5	35.8	45.6	52.1
Other Area hospitals	19.0	22.7	19.5	50.0	44.4
ALL HOSPITALS	34.1	34.3	34.2	39.4	39.8
Sydney West					
Auburn	20.0	14.5	10.9	12.0	14.9
Blacktown	24.8	34.3	30.6	25.6	27.8
Blue Mountains	26.0	17.9	26.6	20.4	31.6
Nepean	25.3	29.8	30.4	32.5	27.8
Westmead	21.9	24.2	22.2	21.5	23.3
The Hills Private	53.3	55.0	58.7	67.2	66.0
Hawkesbury	22.5	26.1	18.6	19.2	27.3
Nepean Private	30.7	35.2	31.6	39.9	39.4
Westmead Private	33.3	37.3	50.9	50.4	55.1
Other Area hospitals	28.6	25.0	28.1	25.5	28.1
ALL HOSPITALS	28.5	32.5	33.4	34.3	34.7
Northern Sydney & Central Coast					
Gosford	22.5	25.2	21.3	23.9	21.8
Wyong	11.1	12.5	25.0	33.3	33.3
Hornsby	25.9	29.7	32.5	34.1	27.9
Manly	31.0	24.9	19.7	22.2	25.5
Mona Vale	36.8	26.3	25.3	28.7	32.5
Royal North Shore	26.3	24.1	25.8	22.1	23.4
Mater, North Sydney	42.5	47.5	45.9	50.8	52.5
North Shore Private	48.8	47.5	48.4	51.8	50.9
Sydney Adventist	65.9	57.2	61.3	67.8	64.4
North Gosford Private	51.5	52.6	60.8	60.2	65.7
Other Area hospitals	27.0	30.7	14.3	21.4	–
ALL HOSPITALS	42.1	41.3	41.0	43.6	44.0

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2004 %
Hunter & New England					
Armidale	36.6	35.7	51.5	38.9	21.7
Inverell	42.0	38.5	52.2	52.5	54.7
Moree	34.9	36.6	49.0	32.3	31.1
Tamworth Base	24.9	27.2	18.4	15.3	25.4
Manning Base	43.3	43.9	49.0	55.2	54.8
Maitland	29.0	29.4	29.8	30.1	26.3
Muswellbrook	27.6	27.5	16.4	28.4	21.1
Belmont	27.7	27.0	24.5	27.5	30.0
John Hunter	24.9	27.2	24.1	27.1	27.0
Newcastle Private	–	–	–	40.6	41.2
Other Area hospitals	32.7	36.3	39.8	37.6	46.2
ALL HOSPITALS	30.1	31.7	32.7	33.6	33.7
North Coast					
Coffs Harbour	45.5	41.5	44.0	44.6	44.7
Grafton Base	25.2	28.3	23.5	11.6	21.5
Kempsey	26.8	26.9	17.2	22.5	25.5
Lismore Base	19.9	19.0	21.2	15.2	18.1
Murwillumbah	28.4	23.8	34.9	33.3	20.5
Tweed Heads	21.9	32.3	31.8	27.5	21.0
Port Macquarie Base	24.3	24.7	24.8	26.8	29.1
Other Area hospitals	31.3	29.6	29.8	32.1	43.5
ALL HOSPITALS	28.6	28.5	29.7	26.7	26.7
Greater Southern					
Goulburn Base	29.6	7.1	24.0	35.3	36.7
Moruya	35.0	28.0	18.8	44.8	26.3
Queanbeyan	33.9	26.7	24.2	25.5	23.3
Griffith Base	30.9	22.4	23.9	23.8	25.3
Wagga Wagga Base	18.6	25.1	21.4	20.8	20.0
Calvary, Wagga Wagga	56.5	62.9	60.3	49.5	52.1
Other Area hospitals	31.6	33.0	31.8	31.0	39.7
ALL HOSPITALS	33.6	35.6	33.8	33.0	34.6
Greater Western					
Dubbo Base	31.9	39.3	39.1	47.0	55.6
Mudgee	21.7	14.7	25.0	25.9	31.7
Bathurst Base	30.0	15.0	18.4	12.1	17.4
Orange Base	22.8	17.5	25.9	29.6	32.2
Broken Hill Base	24.4	15.9	26.7	35.7	49.2
Other Area hospitals	32.0	38.3	37.8	22.8	26.8
ALL HOSPITALS	29.0	29.3	32.2	33.7	41.0
TOTAL NSW	31.7	33.1	33.5	35.1	36.2

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals. 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.

Induction of labour for other than defined indications, Indicator 1.2

Definition: The number of patients undergoing induction of labour other than for defined indications (excluding augmentation of labour) as a percentage of the total number of patients delivering (excluding augmentation of labour).

Table 131 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 131

INDICATOR 1.2: INDUCTION OF LABOUR FOR OTHER THAN DEFINED INDICATIONS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	3.2	4.3	4.5	4.8	4.6
Royal Prince Alfred	4.6	5.2	5.9	5.3	7.0
Fairfield	2.6	3.2	3.9	4.4	4.0
Liverpool	6.8	7.5	7.0	5.7	6.1
Campbelltown	5.9	5.3	5.3	7.5	4.2
Bankstown–Lidcombe	3.5	4.1	4.0	4.4	5.3
Sydney Southwest Private	17.3	19.1	20.1	19.1	19.3
Bowral	6.5	11.6	10.7	11.6	12.4
Other Area hospitals	–	–	3.6	4.4	7.4
ALL HOSPITALS	5.5	6.4	6.6	6.6	6.8
South Eastern Sydney &Illawarra					
Royal Hospital for Women	4.4	5.5	5.6	5.8	5.8
St. George	3.5	4.2	4.2	3.2	5.1
Sutherland	5.4	6.3	4.1	6.7	6.8
Hurstville Community	20.0	16.0	18.9	17.3	18.8
Kareena Private	22.8	23.6	22.5	26.7	24.4
St. George Private	12.8	10.0	10.4	14.9	15.3
Prince of Wales Private	11.2	10.1	9.1	11.7	12.0
Shoalhaven	6.3	6.1	5.6	5.8	5.2
Wollongong	5.8	7.1	5.5	7.2	9.8
Figtree Private	13.1	14.1	13.9	17.7	18.8
Other Area hospitals	4.3	4.3	4.4	10.4	14.0
ALL HOSPITALS	8.5	8.6	8.4	9.6	10.2
Sydney West					
Auburn	3.6	2.6	1.9	2.1	3.1
Blacktown	6.4	8.4	6.7	5.7	6.4
Blue Mountains	5.0	5.0	6.7	4.0	6.7
Nepean	6.7	7.8	8.7	8.6	8.5
Westmead	4.2	4.7	4.2	4.5	5.1
The Hills Private	19.7	20.6	22.6	25.6	27.8
Hawkesbury	5.5	5.7	3.7	4.2	7.8
Nepean Private	10.5	10.3	10.0	12.6	12.6
Westmead Private	9.1	10.4	15.3	14.8	17.1
Other Area hospitals	6.0	6.0	7.6	6.9	7.4
ALL HOSPITALS	7.1	8.0	8.3	8.6	9.4
Northern Sydney & Central Coast					
Gosford	5.7	6.6	5.2	5.2	5.3
Wyong	0.3	0.3	0.8	1.8	0.9
Hornsby	7.3	7.3	7.5	7.6	5.7
Manly	9.0	6.5	4.9	6.0	6.1
Mona Vale	10.1	7.2	6.3	5.7	8.4
Royal North Shore	6.0	5.1	5.8	4.9	5.0
Mater, North Sydney	11.4	13.1	11.3	13.6	13.3
North Shore Private	14.1	13.2	12.7	12.9	12.2
Sydney Adventist	23.1	18.3	19.1	20.7	21.9
North Gosford Private	15.9	15.8	18.2	16.8	25.8
Other Area hospitals	6.6	6.5	2.7	2.3	0.0
ALL HOSPITALS	11.6	11.0	10.3	10.6	11.2
Hunter & New England					
Armidale	11.1	13.9	15.7	12.0	6.9
Inverell	11.2	11.5	17.1	18.1	19.4
Moree	9.4	10.3	13.0	10.3	7.9
Tamworth Base	6.9	8.3	5.4	4.3	7.3
Manning Base	10.2	11.4	14.8	17.0	15.5
Maitland	6.5	8.5	6.5	6.9	6.8
Muswellbrook	7.8	6.3	4.4	8.5	5.0
Belmont	7.3	7.3	6.2	6.5	5.6
John Hunter	5.6	6.8	5.8	6.3	6.9
Newcastle Private	–	–	–	12.4	12.5
Other Area hospitals	9.1	10.5	11.8	10.3	14.5
ALL HOSPITALS	7.5	8.7	8.6	8.9	9.2
North Coast					
Coffs Harbour	12.5	10.4	12.0	10.0	10.9
Grafton Base	6.4	6.8	6.0	2.8	5.3
Kempsey	6.7	5.8	4.0	5.0	7.9
Lismore Base	4.3	4.6	4.8	3.6	4.0
Murwillumbah	6.7	5.9	8.1	7.5	5.7
Tweed Heads	5.2	7.3	7.5	6.8	5.3
Port Macquarie Base	6.5	7.0	5.5	5.7	6.9
Other Area hospitals	6.1	6.6	5.3	6.1	6.9
ALL HOSPITALS	6.5	6.7	6.7	6.0	6.4
Greater Southern					
Goulburn Base	2.5	0.7	2.0	2.1	3.8
Moruya	4.2	4.5	3.3	10.4	6.4
Queanbeyan	5.9	4.7	5.9	5.3	6.1
Griffith Base	6.0	4.9	4.7	4.4	5.2
Wagga Wagga Base	4.6	6.0	4.7	4.9	4.4
Calvary, Wagga Wagga	20.8	22.5	19.6	16.1	13.7
Other Area hospitals	8.9	9.3	8.9	8.9	11.2
ALL HOSPITALS	8.2	9.0	8.2	8.2	8.4
Greater Western					
Dubbo Base	10.4	10.8	10.9	13.7	21.1
Mudgee	4.6	2.3	4.9	3.7	8.6
Bathurst Base	5.2	2.8	3.3	2.1	3.4
Orange Base	5.6	4.1	6.5	8.0	8.5
Broken Hill Base	3.7	2.7	2.9	3.9	10.7
Other Area hospitals	6.4	7.5	7.3	5.0	5.8
ALL HOSPITALS	7.0	6.6	7.3	7.9	11.5
TOTAL NSW	7.9	8.3	8.2	8.6	9.2

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals. 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.

Vaginal delivery following primary caesarean section, Indicator 2.1

Definition: The number of patients delivering vaginally following previous primary caesarean section as a percentage of the total number of patients delivering who have had a previous primary caesarean section with no intervening pregnancies greater than 20 weeks gestation.

Table 132 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 132

INDICATOR 2.1: VAGINAL DELIVERY AFTER CAESAREAN SECTION BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	34.3	24.8	22.1	27.5	19.9
Royal Prince Alfred	26.6	23.5	22.5	22.5	18.6
Fairfield	17.4	34.1	18.6	20.2	2.4
Liverpool	22.6	20.8	13.4	15.5	20.3
Campbelltown	18.8	16.7	24.7	18.1	17.9
Bankstown–Lidcombe	20.6	25.6	20.5	18.9	20.0
Sydney Southwest Private	10.8	11.6	12.6	9.8	4.3
Bowral	22.4	25.0	10.4	24.5	9.6
Other Area hospitals	–	–	50.0	–	.
ALL HOSPITALS	22.8	22.1	19.2	19.6	16.1
South Eastern Sydney &Illawarra					
Royal Hospital for Women	11.9	13.1	13.3	10.6	8.9
St. George	12.9	19.7	22.2	15.2	14.8
Sutherland	22.4	14.3	15.7	16.2	15.4
Hurstville Community	9.6	7.1	6.7	6.1	3.6
Kareena Private	4.1	4.1	2.8	3.0	1.6
St. George Private	11.4	11.6	6.8	4.4	6.8
Prince of Wales Private	6.7	7.9	4.6	3.5	5.5
Shoalhaven	18.4	19.1	23.4	15.2	8.7
Wollongong	26.7	25.2	21.6	31.0	14.9
Figtree Private	11.5	12.8	7.5	11.6	16.0
Other Area hospitals	13.6	12.5	18.8	100.0	0.0
ALL HOSPITALS	12.4	12.9	11.7	11.0	9.3
Sydney West					
Auburn	31.7	26.5	30.0	6.8	0.0
Blacktown	29.3	23.2	21.8	18.0	22.9
Blue Mountains	39.1	12.5	33.3	33.3	20.0
Nepean	22.8	18.6	16.9	16.6	14.0
Westmead	28.5	28.2	20.9	17.5	19.1
The Hills Private	15.1	14.6	11.2	11.4	10.8
Hawkesbury	28.6	26.3	14.8	14.5	16.9
Nepean Private	19.8	16.7	8.4	11.5	6.1
Westmead Private	18.5	22.5	17.9	16.6	9.6
Other Area hospitals	14.3	5.3	20.8	23.1	21.6
ALL HOSPITALS	24.7	22.1	18.4	15.8	14.8
Northern Sydney & Central Coast					
Gosford	23.4	22.7	16.9	10.5	13.9
Wyong	100.0	–	–	–	–
Hornsby	9.6	6.2	12.7	11.0	9.0
Manly	14.3	4.4	7.0	12.1	10.6
Mona Vale	6.8	11.5	12.9	11.4	13.0
Royal North Shore	13.8	7.5	11.2	16.1	10.6
Mater, North Sydney	7.8	5.8	6.4	5.5	7.3
North Shore Private	8.5	6.6	6.8	5.4	4.2
Sydney Adventist	9.9	7.0	3.6	7.1	3.2
North Gosford Private	9.1	6.2	3.8	8.0	3.6
Other Area hospitals	12.1	23.3	5.3	5.3	.
ALL HOSPITALS	11.4	9.1	7.8	8.3	7.2
Hunter & New England					
Armidale	19.0	46.4	33.3	25.6	14.7
Inverell	8.3	8.3	9.5	11.1	7.1
Moree	35.7	33.3	34.6	13.6	23.8
Tamworth Base	13.3	24.3	8.3	14.8	16.5
Manning Base	18.4	40.8	35.7	21.7	14.9
Maitland	14.0	11.0	16.4	10.9	15.0
Muswellbrook	33.3	27.8	25.0	46.2	13.8
Belmont	26.2	14.5	11.8	19.6	18.2
John Hunter	25.2	28.0	25.9	21.9	16.7
Newcastle Private	–	–	–	7.6	12.4
Other Area hospitals	11.8	10.9	11.6	10.4	9.5
ALL HOSPITALS	17.7	20.1	19.5	16.1	14.6
North Coast					
Coffs Harbour	13.8	13.5	9.5	13.1	10.7
Grafton Base	22.2	17.5	9.1	16.7	6.3
Kempsey	33.3	55.0	40.7	15.4	16.7
Lismore Base	31.3	28.4	17.6	24.8	12.0
Murwillumbah	13.8	22.4	11.5	9.3	17.6
Tweed Heads	38.3	26.3	16.0	21.1	16.2
Port Macquarie Base	20.0	14.5	14.3	21.5	13.7
Other Area hospitals	14.6	14.3	13.5	19.5	33.3
ALL HOSPITALS	24.0	21.7	15.1	18.6	13.4
Greater Southern					
Goulburn Base	36.4	36.7	13.0	28.9	19.4
Moruya	18.2	20.0	0.0	16.7	11.4
Queanbeyan	26.9	30.0	21.7	52.4	15.8
Griffith Base	32.1	9.8	24.3	25.6	9.8
Wagga Wagga Base	26.8	16.0	17.5	17.8	15.5
Calvary, Wagga Wagga	16.3	18.2	15.6	19.7	17.2
Other Area hospitals	16.2	20.8	11.8	19.1	18.0
ALL HOSPITALS	22.5	19.8	15.0	22.6	16.1
Greater Western					
Dubbo Base	37.3	29.5	34.4	31.1	21.3
Mudgee	11.8	10.0	9.5	11.8	0.0
Bathurst Base	15.0	7.7	14.8	17.8	12.2
Orange Base	18.8	18.5	20.8	16.3	12.3
Broken Hill Base	12.5	22.2	26.3	32.0	16.0
Other Area hospitals	14.7	19.2	8.1	21.3	16.4
ALL HOSPITALS	21.4	18.8	20.4	22.2	15.0
TOTAL NSW	18.3	17.2	14.8	14.6	12.4

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Primary caesarean section for failure to progress, Indicator 3.1

Definition: The number of patients 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 the total number of patients undergoing primary non–elective Caesarean section.

Table 133 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 133

INDICATOR 3.1: PRIMARY CAESAREAN SECTION FOR FAILURE TO PROGRESS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	13.7	9.1	9.1	10.1	3.4
Royal Prince Alfred	5.7	6.5	8.5	5.5	6.1
Fairfield	10.0	13.0	11.5	10.3	9.7
Liverpool	9.2	12.4	5.0	9.1	5.7
Campbelltown	7.8	7.0	11.5	8.6	9.8
Bankstown–Lidcombe	8.0	3.4	6.2	16.1	6.2
Sydney Southwest Private	13.2	18.1	6.3	11.4	4.3
Bowral	7.7	8.1	18.2	4.8	4.8
Other Area hospitals	–	–	16.3	14.3	0.0
ALL HOSPITALS	8.4	8.8	8.8	8.8	6.3
South Eastern Sydney &Illawarra					
Royal Hospital for Women	4.0	5.4	6.3	6.7	8.5
St. George	9.3	6.6	9.8	4.6	8.7
Sutherland	12.9	16.1	9.4	8.2	15.5
Hurstville Community	20.5	17.1	16.4	10.9	11.5
Kareena Private	14.5	18.5	11.1	8.9	10.8
St. George Private	13.5	19.9	13.3	13.5	16.5
Prince of Wales Private	11.0	9.4	7.7	11.3	9.8
Shoalhaven	8.8	9.2	9.7	13.5	7.2
Wollongong	7.1	6.9	7.3	5.3	7.1
Figtree Private	15.8	11.5	19.2	9.1	14.9
Other Area hospitals	11.8	2.4	3.8	0.0	28.6
ALL HOSPITALS	9.8	10.1	9.8	8.2	10.4
Sydney West					
Auburn	6.3	4.9	4.1	7.6	12.5
Blacktown	9.9	14.2	4.3	8.7	7.1
Blue Mountains	6.3	11.1	12.0	8.7	8.7
Nepean	6.9	5.9	10.4	9.2	6.7
Westmead	11.2	8.9	8.0	8.3	5.6
The Hills Private	9.8	19.6	21.7	16.3	15.4
Hawkesbury	11.4	12.5	16.5	10.0	15.4
Nepean Private	9.1	13.2	12.7	14.1	14.5
Westmead Private	11.3	9.0	17.5	14.8	12.9
Other Area hospitals	14.3	12.5	16.7	10.0	26.9
ALL HOSPITALS	9.5	10.2	10.8	10.3	9.2
Northern Sydney & Central Coast					
Gosford	9.5	9.9	6.2	7.2	7.7
Wyong	7.1	0.0	0.0	0.0	0.0
Hornsby	8.2	14.8	15.2	1.9	6.6
Manly	9.1	12.5	4.3	8.6	8.8
Mona Vale	14.5	2.0	5.5	9.4	17.7
Royal North Shore	6.6	12.7	6.4	8.4	4.8
Mater, North Sydney	9.9	11.3	10.3	12.6	8.7
North Shore Private	15.5	13.5	9.6	11.1	13.7
Sydney Adventist	10.6	11.4	5.6	5.0	5.6
North Gosford Private	18.2	19.6	22.5	18.8	14.8
Other Area hospitals	0.0	0.0	12.5	0.0	.
ALL HOSPITALS	10.7	11.8	8.5	8.8	9.0
Hunter & New England					
Armidale	2.9	5.4	0.0	6.7	4.5
Inverell	0.0	12.5	0.0	12.5	15.0
Moree	0.0	12.0	12.5	26.7	4.5
Tamworth Base	15.4	9.5	7.1	3.4	4.7
Manning Base	17.1	14.0	15.7	15.8	18.5
Maitland	8.7	8.0	10.0	9.8	9.2
Muswellbrook	14.3	4.8	0.0	0.0	19.0
Belmont	8.3	11.9	18.5	4.5	0.0
John Hunter	8.7	13.1	9.2	10.3	11.3
Newcastle Private	–	–	–	1.1	5.3
Other Area hospitals	13.7	8.0	5.4	8.2	14.5
ALL HOSPITALS	10.2	10.4	8.8	8.4	9.6
North Coast					
Coffs Harbour	13.6	16.4	15.4	7.5	14.1
Grafton Base	16.3	10.4	5.8	21.4	2.2
Kempsey	11.8	0.0	11.5	6.3	7.7
Lismore Base	10.1	7.8	9.4	12.0	4.6
Murwillumbah	7.9	19.1	19.1	20.0	19.1
Tweed Heads	16.7	10.7	14.5	7.7	11.2
Port Macquarie Base	6.8	5.8	2.3	5.1	7.6
Other Area hospitals	7.7	5.2	2.1	7.2	20.0
ALL HOSPITALS	11.4	10.2	10.0	11.9	9.6
Greater Southern					
Goulburn Base	8.7	10.5	0.0	0.0	5.3
Moruya	9.5	15.0	17.6	20.0	5.6
Queanbeyan	0.0	11.8	0.0	25.0	5.6
Griffith Base	24.4	12.5	14.3	9.5	10.0
Wagga Wagga Base	5.7	9.2	5.9	10.0	15.1
Calvary, Wagga Wagga	8.6	16.4	22.0	12.3	13.2
Other Area hospitals	21.8	14.3	9.3	13.7	22.2
ALL HOSPITALS	14.4	13.1	10.9	12.4	15.0
Greater Western					
Dubbo Base	9.9	11.2	8.7	14.1	10.5
Mudgee	5.6	0.0	22.2	33.3	30.0
Bathurst Base	17.5	14.8	12.1	6.9	6.8
Orange Base	18.6	17.1	9.5	7.7	8.9
Broken Hill Base	5.7	21.7	13.6	12.9	29.2
Other Area hospitals	17.5	14.0	7.7	10.2	12.5
ALL HOSPITALS	13.9	13.9	10.4	11.3	12.0
TOTAL NSW	10.2	10.6	9.6	9.3	9.3

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Primary caesarean section for failure to progress, Indicator 3.2

Definition: The number of patients 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 the total number of patients undergoing primary non–elective Caesarean section.

Table 134 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 134

INDICATOR 3.2: PRIMARY CAESAREAN SECTION FOR FAILURE TO PROGRESS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	27.5	33.3	41.4	30.3	33.6
Royal Prince Alfred	32.3	38.2	37.1	37.9	30.3
Fairfield	16.3	30.4	24.0	39.7	31.1
Liverpool	33.9	30.3	28.2	36.9	35.7
Campbelltown	37.2	40.3	32.8	47.1	57.9
Bankstown–Lidcombe	25.7	28.4	30.9	38.7	25.8
Sydney Southwest Private	19.1	31.3	24.2	29.5	26.6
Bowral	43.6	32.4	29.5	40.5	47.6
Other Area hospitals	–	–	53.5	47.6	71.4
ALL HOSPITALS	30.8	34.9	33.1	38.1	34.9
South Eastern Sydney &Illawarra					
Royal Hospital for Women	40.9	41.4	49.4	56.6	57.1
St. George	37.1	43.1	37.9	43.3	40.7
Sutherland	44.3	30.6	34.0	36.5	40.2
Hurstville Community	26.5	31.1	34.3	38.0	27.1
Kareena Private	10.1	13.6	22.2	19.6	20.0
St. George Private	29.4	26.5	25.0	25.5	24.3
Prince of Wales Private	26.7	20.6	22.5	30.5	17.9
Shoalhaven	41.2	28.9	33.3	43.2	30.4
Wollongong	26.2	23.7	25.4	28.9	25.8
Figtree Private	38.2	33.3	20.2	20.5	22.4
Other Area hospitals	47.1	39.0	42.3	100.0	28.6
ALL HOSPITALS	33.9	32.6	34.0	39.2	36.4
Sydney West					
Auburn	20.6	37.0	20.3	30.3	33.3
Blacktown	16.5	28.4	26.1	38.6	33.3
Blue Mountains	37.5	38.9	44.0	39.1	39.1
Nepean	43.4	38.9	48.0	46.4	44.4
Westmead	36.9	35.3	35.4	39.6	48.3
The Hills Private	33.0	12.7	24.3	25.0	25.3
Hawkesbury	45.7	36.1	40.2	41.3	36.5
Nepean Private	34.1	33.3	37.3	46.5	45.2
Westmead Private	16.3	21.5	25.7	31.4	24.9
Other Area hospitals	10.7	33.3	20.8	40.0	34.6
ALL HOSPITALS	31.6	32.2	34.3	39.2	39.6
Northern Sydney & Central Coast					
Gosford	45.2	36.8	45.0	36.5	39.3
Wyong	64.3	45.5	87.5	72.7	50.0
Hornsby	42.5	51.9	27.3	36.9	40.8
Manly	50.0	33.3	43.0	37.1	38.6
Mona Vale	36.4	38.8	41.8	43.8	34.2
Royal North Shore	34.2	26.9	37.0	37.3	45.7
Mater, North Sydney	22.8	26.8	25.7	31.8	23.7
North Shore Private	26.8	24.3	33.2	31.1	27.2
Sydney Adventist	18.2	16.5	12.6	6.9	7.0
North Gosford Private	37.5	37.4	33.8	45.0	44.3
Other Area hospitals	31.0	23.1	29.2	44.4	.
ALL HOSPITALS	31.7	29.1	32.5	32.3	31.9
Hunter & New England					
Armidale	23.5	24.3	28.6	26.7	40.9
Inverell	25.0	25.0	12.5	25.0	20.0
Moree	37.5	24.0	12.5	20.0	31.8
Tamworth Base	11.5	28.6	16.7	28.8	37.2
Manning Base	31.7	31.6	29.4	40.4	33.8
Maitland	30.1	33.3	30.8	34.1	38.2
Muswellbrook	42.9	66.7	60.0	58.8	38.1
Belmont	36.1	22.0	18.5	38.6	31.3
John Hunter	36.6	34.7	42.3	41.4	45.3
Newcastle Private	–	–	–	4.3	15.4
Other Area hospitals	27.4	25.1	10.2	24.5	34.5
ALL HOSPITALS	30.9	31.1	28.0	31.9	34.4
North Coast					
Coffs Harbour	47.0	40.0	38.5	43.4	31.0
Grafton Base	37.2	12.5	15.4	33.9	48.9
Kempsey	41.2	20.0	30.8	25.0	38.5
Lismore Base	42.6	43.1	45.6	46.4	35.9
Murwillumbah	31.6	34.0	42.6	25.0	39.7
Tweed Heads	23.8	37.5	30.4	21.8	31.8
Port Macquarie Base	30.1	21.2	31.4	32.9	45.5
Other Area hospitals	29.5	22.4	34.0	31.3	60.0
ALL HOSPITALS	37.3	34.5	36.2	34.4	37.6
Greater Southern					
Goulburn Base	30.4	36.8	13.3	15.0	15.8
Moruya	33.3	25.0	17.6	48.0	11.1
Queanbeyan	40.0	17.6	44.4	31.3	50.0
Griffith Base	17.8	15.0	16.3	23.8	23.3
Wagga Wagga Base	18.6	23.1	26.5	22.9	19.2
Calvary, Wagga Wagga	22.9	30.9	32.2	20.0	37.7
Other Area hospitals	33.6	26.8	45.8	33.3	24.1
ALL HOSPITALS	27.3	25.3	31.0	27.6	25.4
Greater Western					
Dubbo Base	24.7	23.5	26.9	24.2	23.2
Mudgee	33.3	27.8	38.9	33.3	45.0
Bathurst Base	32.5	37.0	24.1	37.9	44.6
Orange Base	25.4	35.5	20.6	23.1	17.8
Broken Hill Base	14.3	47.8	36.4	29.0	16.7
Other Area hospitals	40.4	41.9	48.1	46.9	46.4
ALL HOSPITALS	28.8	33.6	30.0	30.9	30.6
TOTAL NSW	31.9	31.9	32.9	35.8	35.2

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Primary caesarean section for fetal distress, Indicator 4.1

Definition: The number of patients undergoing primary Caesarean section for fetal distress as a percentage of the total number of patients delivering.

Table 135 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 135

INDICATOR 4.1: PRIMARY CAESAREAN SECTION FOR FETAL DISTRESS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	2.9	3.1	2.7	3.2	2.8
Royal Prince Alfred	4.4	4.3	3.5	4.0	3.5
Fairfield	2.7	1.7	3.2	1.5	2.1
Liverpool	3.7	3.7	4.9	4.0	4.7
Campbelltown	2.1	3.2	3.0	3.0	1.6
Bankstown–Lidcombe	3.7	2.5	2.5	2.5	2.5
Sydney Southwest Private	3.5	3.4	3.7	3.3	3.7
Bowral	0.6	2.0	1.2	1.7	1.9
Other Area hospitals	–	–	1.1	1.5	1.5
ALL HOSPITALS	3.3	3.2	3.3	3.2	3.1
South Eastern Sydney &Illawarra					
Royal Hospital for Women	3.3	3.5	3.9	4.1	4.3
St. George	4.1	4.0	3.9	4.2	5.0
Sutherland	2.3	2.9	3.2	3.3	1.5
Hurstville Community	2.7	3.6	2.8	3.5	3.5
Kareena Private	5.3	3.6	4.1	3.2	3.2
St. George Private	3.4	3.0	4.1	3.3	3.6
Prince of Wales Private	3.5	3.7	2.6	2.7	1.7
Shoalhaven	3.5	2.9	4.3	1.6	3.1
Wollongong	4.6	4.7	3.6	3.2	3.6
Figtree Private	2.9	4.7	5.7	4.9	3.1
Other Area hospitals	1.8	2.1	1.9	0.0	1.2
ALL HOSPITALS	3.5	3.7	3.7	3.5	3.6
Sydney West					
Auburn	3.1	3.1	3.9	2.2	2.5
Blacktown	5.7	4.7	5.9	4.5	4.5
Blue Mountains	3.7	3.5	2.2	2.4	5.2
Nepean	3.9	4.6	4.6	4.8	5.1
Westmead	5.7	5.0	5.9	6.8	6.2
The Hills Private	3.0	2.9	3.3	2.3	2.8
Hawkesbury	1.6	2.1	3.7	3.4	4.2
Nepean Private	2.1	2.5	3.6	2.0	3.1
Westmead Private	3.3	2.7	3.1	4.6	2.9
Other Area hospitals	6.5	2.8	6.7	3.4	2.9
ALL HOSPITALS	4.2	4.0	4.7	4.6	4.5
Northern Sydney & Central Coast					
Gosford	2.8	3.5	3.6	5.9	4.4
Wyong	0.8	1.5	0.6	0.0	0.0
Hornsby	3.1	3.0	3.7	4.4	2.6
Manly	2.0	2.7	2.7	3.8	3.6
Mona Vale	2.2	2.2	3.3	2.6	2.0
Royal North Shore	3.4	3.8	6.6	4.7	3.8
Mater, North Sydney	4.5	4.1	4.2	3.6	2.9
North Shore Private	2.6	3.7	3.7	3.7	3.4
Sydney Adventist	3.2	3.0	2.3	2.3	2.9
North Gosford Private	2.4	2.0	1.3	1.8	1.6
Other Area hospitals	3.0	4.2	2.3	0.8	0.0
ALL HOSPITALS	3.0	3.3	3.5	3.7	3.2
Hunter & New England					
Armidale	2.8	2.6	0.9	3.8	2.5
Inverell	1.9	2.3	2.4	2.2	2.9
Moree	3.4	3.6	0.5	2.0	2.9
Tamworth Base	2.5	2.4	3.1	2.4	3.3
Manning Base	1.5	2.5	1.9	1.9	3.0
Maitland	4.1	5.4	4.6	3.5	4.3
Muswellbrook	1.5	2.2	0.9	1.8	2.1
Belmont	1.3	4.1	3.2	2.1	2.8
John Hunter	3.6	3.9	3.0	3.4	3.4
Newcastle Private	–	–	–	3.5	4.6
Other Area hospitals	2.5	2.1	2.1	2.5	1.7
ALL HOSPITALS	2.9	3.4	2.8	3.0	3.5
North Coast					
Coffs Harbour	0.6	0.9	1.6	2.1	2.1
Grafton Base	1.4	8.5	5.0	4.4	2.1
Kempsey	0.7	1.6	2.2	2.8	2.6
Lismore Base	2.4	3.9	3.5	2.5	4.3
Murwillumbah	4.0	3.8	2.2	7.0	2.0
Tweed Heads	2.5	2.6	3.3	3.5	3.4
Port Macquarie Base	3.9	3.1	3.9	3.8	2.7
Other Area hospitals	2.3	1.7	2.4	2.4	0.0
ALL HOSPITALS	2.1	3.0	2.9	3.1	2.8
Greater Southern					
Goulburn Base	0.9	2.3	3.3	1.1	1.4
Moruya	1.8	3.9	3.3	1.2	1.5
Queanbeyan	4.0	1.6	1.6	0.8	1.4
Griffith Base	3.3	3.3	4.7	4.0	4.1
Wagga Wagga Base	4.0	3.0	4.0	4.4	4.4
Calvary, Wagga Wagga	1.8	3.6	1.2	3.5	1.4
Other Area hospitals	1.6	1.7	1.8	2.1	1.6
ALL HOSPITALS	2.4	2.5	2.6	2.7	2.3
Greater Western					
Dubbo Base	2.7	2.1	2.5	3.5	3.2
Mudgee	3.2	2.8	1.0	0.5	0.4
Bathurst Base	2.3	4.1	3.5	2.5	2.1
Orange Base	2.9	2.5	2.1	3.3	4.7
Broken Hill Base	3.0	0.8	1.5	3.5	2.2
Other Area hospitals	1.4	1.0	1.9	2.3	1.1
ALL HOSPITALS	2.5	2.2	2.3	2.9	2.7
TOTAL NSW	3.3	3.4	3.5	3.5	3.4

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Primary caesarean section for fetal distress, Indicator 4.2

Definition: The number of patients undergoing primary caesarean section for fetal distress as a percentage of the total number of patients delivering by primary caesarean section.

Table 136 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 136

INDICATOR 4.2: PRIMARY CAESAREAN SECTION FOR FETAL DISTRESS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	26.0	25.3	19.3	23.8	20.5
Royal Prince Alfred	23.7	21.0	17.6	20.0	15.9
Fairfield	25.1	17.8	30.8	17.2	16.7
Liverpool	24.2	29.1	32.2	21.6	27.3
Campbelltown	15.9	23.8	19.4	16.1	12.5
Bankstown–Lidcombe	28.9	23.1	20.7	18.6	23.6
Sydney Southwest Private	18.4	19.7	20.0	18.8	19.8
Bowral	4.7	18.2	9.7	16.2	17.9
Other Area hospitals	–	–	12.2	25.9	14.3
ALL HOSPITALS	22.5	22.8	21.6	19.7	18.8
South Eastern Sydney &Illawarra					
Royal Hospital for Women	16.1	16.9	17.7	17.2	18.0
St. George	26.0	25.7	21.8	24.8	27.7
Sutherland	13.6	16.9	20.5	18.0	9.7
Hurstville Community	13.1	14.7	12.3	14.5	16.7
Kareena Private	17.4	13.4	14.3	13.2	12.7
St. George Private	14.3	13.7	17.6	13.4	13.4
Prince of Wales Private	15.8	15.6	10.2	11.3	6.3
Shoalhaven	19.0	16.9	18.8	9.1	14.1
Wollongong	27.4	29.6	21.1	18.3	21.3
Figtree Private	16.2	25.6	28.3	28.6	18.9
Other Area hospitals	13.0	15.1	12.5	0.0	8.3
ALL HOSPITALS	18.0	18.4	17.5	17.0	16.4
Sydney West					
Auburn	31.1	27.9	38.6	22.0	25.7
Blacktown	38.6	31.5	35.9	27.3	28.4
Blue Mountains	19.6	21.2	12.5	17.1	37.8
Nepean	20.0	24.3	21.4	20.3	25.0
Westmead	31.7	26.9	27.1	30.5	26.3
The Hills Private	17.3	20.7	20.6	14.8	19.0
Hawkesbury	13.5	14.4	19.3	15.8	19.0
Nepean Private	11.9	11.0	12.7	9.8	14.7
Westmead Private	15.5	13.2	14.1	20.8	12.2
Other Area hospitals	31.9	12.8	39.4	29.2	16.7
ALL HOSPITALS	25.0	22.9	24.1	23.0	22.9
Northern Sydney & Central Coast					
Gosford	16.2	19.4	19.5	27.0	21.4
Wyong	18.8	35.7	16.7	0.0	0.0
Hornsby	20.0	17.5	24.0	24.1	12.7
Manly	12.6	16.4	14.7	22.9	17.5
Mona Vale	15.7	14.8	20.2	17.0	11.3
Royal North Shore	16.2	16.7	24.5	18.6	16.6
Mater, North Sydney	16.8	14.0	14.9	13.9	11.1
North Shore Private	10.0	12.9	14.2	13.5	12.0
Sydney Adventist	17.7	15.7	12.7	11.8	13.8
North Gosford Private	10.1	8.5	5.5	8.3	7.4
Other Area hospitals	30.9	30.8	20.4	11.8	.
ALL HOSPITALS	15.4	15.4	16.3	16.8	14.1
Hunter & New England					
Armidale	16.5	21.4	9.5	20.0	15.6
Inverell	11.5	18.5	14.7	12.1	15.8
Moree	25.0	22.2	5.9	21.1	21.9
Tamworth Base	15.8	19.4	21.2	16.5	16.3
Manning Base	11.9	17.7	13.9	12.8	19.4
Maitland	26.7	25.8	21.9	18.2	25.8
Muswellbrook	16.7	14.7	8.7	13.6	13.8
Belmont	12.5	22.6	23.2	13.4	30.0
John Hunter	22.2	21.7	16.9	18.0	18.5
Newcastle Private	–	–	–	13.3	20.6
Other Area hospitals	15.2	13.4	11.7	15.9	15.1
ALL HOSPITALS	18.7	19.7	16.3	16.4	19.8
North Coast					
Coffs Harbour	3.6	5.4	8.1	13.6	11.6
Grafton Base	6.4	41.9	25.7	20.7	10.7
Kempsey	9.1	19.0	18.2	31.8	20.0
Lismore Base	15.2	19.0	17.4	13.2	20.2
Murwillumbah	27.1	18.6	10.8	28.9	8.0
Tweed Heads	20.8	17.5	19.5	21.9	20.5
Port Macquarie Base	20.8	18.0	19.5	20.9	16.4
Other Area hospitals	18.0	14.1	17.4	19.4	0.0
ALL HOSPITALS	14.4	18.1	16.8	19.0	15.9
Greater Southern					
Goulburn Base	3.8	12.0	13.3	4.8	9.3
Moruya	7.7	16.7	20.8	5.4	12.9
Queanbeyan	31.0	14.3	15.8	7.7	13.3
Griffith Base	20.0	15.9	27.3	22.7	25.9
Wagga Wagga Base	25.4	20.2	26.4	25.2	22.9
Calvary, Wagga Wagga	10.7	18.0	5.9	13.4	7.9
Other Area hospitals	13.4	14.4	14.5	15.2	11.1
ALL HOSPITALS	16.5	16.2	16.8	15.8	14.6
Greater Western					
Dubbo Base	19.7	13.9	19.7	23.7	23.4
Mudgee	26.1	28.6	8.0	8.3	3.0
Bathurst Base	10.9	17.4	21.1	13.3	9.6
Orange Base	17.0	12.1	13.8	22.0	24.3
Broken Hill Base	17.4	3.3	8.9	13.3	17.6
Other Area hospitals	11.7	7.4	13.4	14.5	8.8
ALL HOSPITALS	15.9	13.4	16.1	18.8	17.4
TOTAL NSW	19.2	19.1	18.9	18.6	17.8

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Intact lower genital tract in primiparous patients delivering vaginally, Indicator 5.1

Definition: The number of primiparous patients not requiring surgical repair of the lower genital tract as a percentage of the total number of primiparous patients delivering vaginally.

Table 137 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 137

INDICATOR 5.1: INTACT LOWER GENITAL TRACT IN PRIMIPAROUS PATIENTS DELIVERING VAGINALLY BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	28.4	28.9	31.2	24.4	23.3
Royal Prince Alfred	29.3	28.0	31.0	31.8	31.7
Fairfield	31.2	31.1	33.9	31.3	29.6
Liverpool	28.1	27.0	23.7	27.0	25.3
Campbelltown	28.6	30.5	28.8	29.5	29.3
Bankstown–Lidcombe	25.1	26.7	24.7	22.6	26.8
Sydney Southwest Private	25.4	17.4	26.7	20.9	20.7
Bowral	40.1	44.5	27.2	40.5	35.9
Other Area hospitals	–	–	56.3	58.4	68.8
ALL HOSPITALS	28.9	28.5	29.7	29.7	28.6
South Eastern Sydney &Illawarra					
Royal Hospital for Women	23.9	24.4	25.9	28.8	27.3
St. George	30.7	34.4	38.5	28.8	33.2
Sutherland	27.8	28.7	27.6	24.9	22.9
Hurstville Community	15.4	14.4	12.0	10.4	5.7
Kareena Private	20.7	23.2	23.2	23.8	31.4
St. George Private	17.3	17.7	23.9	17.9	19.4
Prince of Wales Private	13.5	13.3	12.5	14.5	18.9
Shoalhaven	34.2	33.8	32.5	33.9	30.9
Wollongong	35.5	29.6	27.4	21.9	26.8
Figtree Private	19.7	14.1	10.6	13.8	26.0
Other Area hospitals	29.5	32.2	25.0	57.1	35.0
ALL HOSPITALS	25.2	25.1	25.8	24.1	26.1
Sydney West					
Auburn	28.9	29.7	35.8	36.5	33.6
Blacktown	22.5	31.2	25.3	25.9	19.2
Blue Mountains	43.0	46.9	51.5	35.3	48.2
Nepean	38.6	42.1	34.3	35.2	30.7
Westmead	27.2	27.7	23.4	18.5	18.9
The Hills Private	18.8	24.6	23.5	14.8	22.3
Hawkesbury	46.8	47.6	55.3	47.3	50.9
Nepean Private	19.7	18.5	14.7	12.7	10.3
Westmead Private	26.5	18.9	17.1	15.5	15.6
Other Area hospitals	13.5	25.0	26.3	30.0	38.8
ALL HOSPITALS	29.5	31.2	28.3	25.5	24.3
Northern Sydney & Central Coast					
Gosford	25.9	30.4	33.3	29.4	26.7
Wyong	50.0	45.3	42.0	34.0	49.1
Hornsby	15.1	14.0	18.6	20.5	17.9
Manly	27.2	22.1	21.4	18.9	27.0
Mona Vale	26.3	41.4	30.9	36.8	42.5
Royal North Shore	20.7	15.6	20.0	21.3	23.0
Mater, North Sydney	11.0	9.7	11.6	14.3	16.6
North Shore Private	12.3	7.5	10.7	13.0	13.8
Sydney Adventist	12.5	11.5	12.9	12.5	10.8
North Gosford Private	14.6	19.2	21.5	14.2	23.2
Other Area hospitals	21.5	19.3	20.0	34.2	44.4
ALL HOSPITALS	19.0	17.9	20.2	20.1	21.6
Hunter & New England					
Armidale	16.5	21.2	22.6	14.3	22.0
Inverell	39.2	48.9	23.3	19.4	24.1
Moree	55.8	53.4	50.0	51.0	42.6
Tamworth Base	23.6	46.5	42.9	34.6	28.8
Manning Base	31.8	36.7	42.0	32.8	39.6
Maitland	43.0	39.2	35.7	39.3	34.8
Muswellbrook	42.0	53.2	36.0	42.0	31.6
Belmont	43.4	38.7	45.6	47.2	40.6
John Hunter	41.4	38.3	38.5	27.8	34.6
Newcastle Private	–	–	–	30.1	33.3
Other Area hospitals	36.6	35.0	36.1	38.4	38.0
ALL HOSPITALS	38.3	38.4	37.7	33.3	34.2
North Coast					
Coffs Harbour	31.6	41.3	42.7	31.2	37.7
Grafton Base	29.6	46.8	45.0	36.7	46.8
Kempsey	44.8	55.2	58.6	54.3	45.6
Lismore Base	38.9	35.1	35.0	22.5	28.4
Murwillumbah	22.1	25.9	18.3	29.6	17.4
Tweed Heads	34.5	47.4	40.0	34.1	40.0
Port Macquarie Base	26.4	23.0	36.4	36.9	42.0
Other Area hospitals	36.3	27.9	35.5	38.6	38.2
ALL HOSPITALS	35.1	37.9	38.3	33.1	37.0
Greater Southern					
Goulburn Base	30.2	27.8	17.9	11.4	8.1
Moruya	52.0	66.7	54.5	46.2	59.1
Queanbeyan	66.7	67.8	67.3	66.1	65.8
Griffith Base	66.0	63.4	64.7	49.4	59.6
Wagga Wagga Base	47.1	43.3	44.6	42.3	38.4
Calvary, Wagga Wagga	32.3	27.3	27.0	22.2	21.3
Other Area hospitals	42.6	45.5	40.8	50.3	40.2
ALL HOSPITALS	47.3	46.5	44.2	45.3	42.7
Greater Western					
Dubbo Base	34.5	39.0	34.4	29.7	33.9
Mudgee	40.9	29.8	33.3	24.4	36.0
Bathurst Base	43.4	42.4	36.9	36.0	40.3
Orange Base	28.8	31.4	33.3	37.0	50.8
Broken Hill Base	65.1	63.2	58.3	51.7	62.3
Other Area hospitals	50.0	39.3	49.5	40.0	39.0
ALL HOSPITALS	40.5	39.2	38.6	35.2	41.0
TOTAL NSW	29.7	29.8	29.6	27.9	28.6

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

Apgar scores, Indicator 6.1

Definition: The number of babies born with an Apgar score of four or below at five minutes post delivery as a percentage of the total number of babies born.

Table 138 shows aggregate information for hospitals where the reported confinements exceeded 200 in 2005, totals for hospitals within each health area, and the NSW total.

TABLE 138

INDICATOR 6.1: APGAR SCORE OF 4 OR LESS BY HOSPITAL, NSW 2001–2005#

Health Area/ Hospital	2001 %	2002 %	2003 %	2004 %	2005 %
Sydney South West					
Canterbury	0.9	1.2	1.1	0.8	0.7
Royal Prince Alfred	1.5	1.6	1.4	1.6	1.7
Fairfield	0.9	1.3	1.0	1.8	0.9
Liverpool	1.6	1.4	1.5	2.1	1.5
Campbelltown	1.3	1.3	1.4	1.0	1.2
Bankstown–Lidcombe	1.4	1.1	1.0	1.1	1.0
Sydney Southwest Private	0.7	0.4	0.3	0.7	0.6
Bowral	1.0	0.8	0.8	0.9	0.6
Other Area hospitals	–	–	0.9	0.0	0.0
ALL HOSPITALS	1.3	1.3	1.2	1.4	1.2
South Eastern Sydney&Illawarra					
Royal Hospital for Women	1.3	1.8	1.4	1.6	1.6
St. George	1.2	1.2	1.2	1.2	1.0
Sutherland	0.7	0.1	0.6	0.2	0.5
Hurstville Community	0.7	0.0	0.3	0.6	0.3
Kareena Private	0.7	0.1	0.4	0.5	0.5
St. George Private	0.3	0.6	0.5	0.4	0.4
Prince of Wales Private	0.5	0.6	0.2	0.4	0.6
Shoalhaven	0.7	0.6	1.4	1.8	1.5
Wollongong	1.1	1.0	0.7	0.5	1.2
Figtree Private	0.4	0.6	0.2	0.4	0.2
Other Area hospitals	0.4	0.0	0.8	2.1	4.7
ALL HOSPITALS	0.9	0.9	0.8	0.9	1.0
Sydney West					
Auburn	1.3	0.7	1.3	1.2	1.2
Blacktown	1.2	1.2	1.1	0.7	0.7
Blue Mountains	1.3	0.0	0.9	0.0	0.4
Nepean	1.3	1.2	1.0	0.9	1.5
Westmead	2.2	1.8	1.8	2.1	1.7
The Hills Private	0.3	0.6	0.3	0.7	0.5
Hawkesbury	1.1	0.4	0.9	0.5	0.7
Nepean Private	0.4	0.4	0.7	0.3	0.9
Westmead Private	0.7	0.9	0.6	0.9	0.6
Other Area hospitals	0.0	0.5	0.5	2.5	1.2
ALL HOSPITALS	1.3	1.1	1.1	1.1	1.1
Northern Sydney & CentralCoast					
Gosford	0.8	1.1	0.5	0.9	0.9
Wyong	0.3	0.3	0.0	0.4	0.4
Hornsby	0.6	0.9	0.8	1.0	0.8
Manly	1.0	1.1	0.8	0.6	0.9
Mona Vale	0.8	0.7	0.3	0.5	0.2
Royal North Shore	1.5	1.0	1.3	1.5	1.3
Mater, North Sydney	0.4	0.7	0.4	0.4	0.5
North Shore Private	0.8	0.7	1.0	0.6	0.7
Sydney Adventist	0.3	0.7	0.8	0.6	0.4
North Gosford Private	0.8	0.4	0.2	0.4	0.5
Other Area hospitals	0.7	1.0	1.4	0.0	0.8
ALL HOSPITALS	0.7	0.8	0.7	0.8	0.7
Hunter & New England					
Armidale	1.3	0.6	1.3	0.9	1.0
Inverell	0.8	0.0	0.5	0.9	0.8
Moree	2.1	1.2	2.2	2.0	2.5
Tamworth Base	1.8	2.0	1.8	1.7	1.8
Manning Base	1.5	1.4	2.0	1.4	1.0
Maitland	0.9	0.8	0.8	0.9	1.4
Muswellbrook	0.0	0.0	0.0	0.9	0.4
Belmont	0.3	0.9	0.6	0.5	0.6
John Hunter	1.9	1.9	2.3	2.1	2.4
Newcastle Private	–	–	–	0.4	1.4
Other Area hospitals	0.7	0.7	0.4	0.7	0.8
ALL HOSPITALS	1.3	1.2	1.4	1.3	1.6
North Coast					
Coffs Harbour	1.2	0.6	0.9	0.9	0.6
Grafton Base	1.4	1.0	1.2	0.8	0.7
Kempsey	2.5	0.0	1.8	0.3	1.7
Lismore Base	1.2	1.4	1.7	1.3	0.9
Murwillumbah	1.0	0.2	0.8	1.0	0.2
Tweed Heads	1.9	1.3	1.5	1.2	0.7
Port Macquarie Base	1.1	1.0	1.4	0.5	1.0
Other Area hospitals	0.6	0.9	1.2	0.5	0.5
ALL HOSPITALS	1.2	0.9	1.3	0.9	0.8
Greater Southern					
Goulburn Base	0.6	1.3	2.3	0.4	1.7
Moruya	2.9	0.6	1.6	1.6	0.9
Queanbeyan	1.5	0.4	0.4	0.4	0.4
Griffith Base	1.8	1.4	1.3	0.7	0.7
Wagga Wagga Base	2.0	2.2	1.1	1.8	1.8
Calvary, Wagga Wagga	0.4	1.0	0.3	1.9	0.5
Other Area hospitals	0.4	0.4	0.5	0.2	0.5
ALL HOSPITALS	1.1	1.0	0.9	0.9	0.9
Greater Western					
Dubbo Base	1.1	1.4	2.0	1.1	1.8
Mudgee	0.5	0.0	0.5	1.1	0.0
Bathurst Base	0.3	0.6	0.5	1.7	1.0
Orange Base	1.1	1.2	0.7	2.1	0.3
Broken Hill Base	1.6	0.8	1.1	0.8	0.7
Other Area hospitals	0.8	1.3	0.6	1.0	1.1
ALL HOSPITALS	0.9	1.1	1.1	1.4	1.0
TOTAL NSW	1.1	1.0	1.0	1.1	1.1

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Health Department.
Hospitals with more than 200 deliveries are identified individually. All hospitals include all public and private hospitals.

12. PERINATAL DEATHS

Review of perinatal deaths 2005

This chapter presents the results of perinatal death reviews carried out by the NSW Maternal and Perinatal Committee, which is a quality assurance committee established under the *NSW Health Administration Act 1982*. The Committee is privileged under the Act to carry out confidential reviews of maternal and perinatal deaths.

NSW Department of Health Policy Directive No. 2006_006 describes hospital procedures for review and reporting of perinatal deaths.[1] In 2005, the Maternal and Perinatal Committee carried out reviews of perinatal deaths occurring among fetuses or infants of at least 22 weeks gestation or at least 500 grams birthweight. For 2006 the Committee will carry out reviews of perinatal deaths occurring among fetuses or infants of at least 20 weeks gestation or at least 400 grams birthweight, bringing the Committee's review process in line with the criteria used by the NSW Midwives Data Collection (MDC) for reporting of births.

Perinatal deaths in 2005 were reviewed by the Committee's Perinatal Outcomes Working Party. Both stillbirths and neonatal deaths were classified according to an obstetric cause–specific classification, the Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ–PDC). Neonatal deaths were also classified by neonatal cause according to the Perinatal Society of Australia and New Zealand Neonatal Death Classification (PSANZ–NDC).[2]

There were 643 perinatal deaths of at least 22 weeks gestation or at least 500 grams birth weight reported to the MDC in 2005. Confidential reports on 630 deaths were reviewed. Of the 416 stillbirths reported to the MDC, reviews were carried out on 405 (97.4 per cent). The MDC was notified of 227 neonatal deaths. Reviews were carried out on 225 neonatal deaths. Comparative information is also presented for previous years.

Trends in obstetric antecedents of perinatal death

The pattern of antecedent causes of death between 2002 and 2005 is shown in Table 139. The proportion of deaths attributed to hypertension fell over the 4–year period, while the proportion of deaths attributed to fetal growth restriction increased due to improved reporting of serial antenatal ultrasound findings.

In 2005, unexplained antepartum deaths comprised the largest category in 2005 (Figure 18), as for previous years. The next most common categories were fetal abnormalities followed by spontaneous preterm birth.

Obstetric antecedents of perinatal death 2005

1. Congenital abnormality

In 2005, congenital abnormalities were the underlying cause for 114 deaths (Table 140). The most common abnormalities were chromosomal (*n*=29, 25.4 per cent). Of these, 12 were trisomy 18, 5 were trisomy 21, 5 were trisomy 13, 3 were Turner syndrome, and there were 6 other abnormalities.

Twenty deaths were associated with abnormalities of the central nervous system (17.5 per cent): 11 were neural tube defects and 4 were congenital hydrocephalus. Nineteen deaths were associated with abnormalities of the cardiovascular system, of which 3 were cases of transposition of the great vessels, 4 were cases of hypoplastic left heart syndrome, and there were 2 cases of coarctation of the aorta. Two deaths were associated with congenital diaphragmatic hernia, 1 with pulmonary hypoplasia at term, while 23 deaths were due to multiple abnormalities not associated with a chromosomal abnormality.

2. Perinatal infection

Twenty–two deaths were found to be due to infection, of which 9 were stillbirths and 13 were neonatal deaths. In 10 deaths there was an associated chorioamnionitis. The most common infective organism was group B streptococcus, which was considered responsible for 3 deaths. Three deaths were caused by *Escherichia coli* infection. Other bacterial infections included *Staphylococcus aureus, Streptococcus pneumoniae, Haemophilus influenzae* and *Proteus Mirabilis* infection. Two perinatal deaths followed congenital cytomegalovirus infection.

3. Hypertension

Sixteen deaths (2.5 per cent) were considered to be due to maternal hypertension. There were 11 stillbirths and 5 neonatal deaths. The majority (*n*=12) occurred in mothers with pre-eclampsia. There were 2 deaths attributed to gestational hypertension, 1 to chronic hypertension and in 1 case the type of hypertension was not specified.

4. Antepartum haemorrhage

Fifty–one deaths were due to antepartum haemorrhage, of which 35 were due to placental abruption, 3 were due to placenta praevia, and 2 due to vasa praevia.

5. Maternal disease

Thirty–five deaths were attributed to other maternal conditions including: diabetes (12), maternal injury (5), termination of pregnancy (6), sepsis (4), antiphospholipid syndrome (2), systemic lupus erythematosis (1), peritonitis (1), Graves' disease (1), Crohn's disease (1), glomerulonephritis (1), and maternal death (1).

TABLE 139

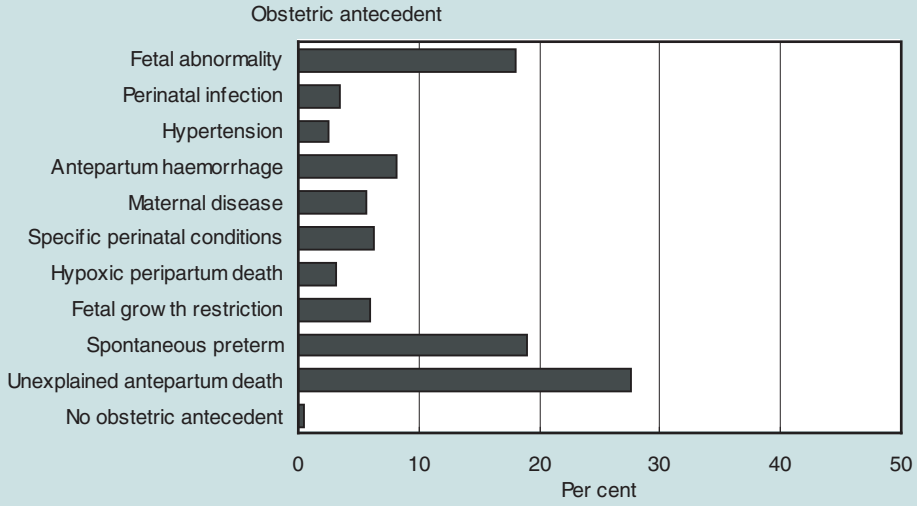
PERINATAL DEATHS BY OBSTETRIC ANTECEDENT AND YEAR, NSW 2002–2005#

Obstetric antecedent	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
1. Fetal abnormality	102	16.2	97	16.1	127	19.5	114	18.1
2. Perinatal infection	28	4.4	30	5.0	15	2.3	22	3.5
3. Hypertension	34	5.4	33	5.5	30	4.6	16	2.5
4. Antepartum haemorrhage	49	7.8	44	7.3	59	9.1	51	8.1
5. Maternal disease	27	4.3	28	4.6	21	3.2	35	5.6
6. Specific perinatal conditions	45	7.1	52	8.6	43	6.6	39	6.2
7. Hypoxic peripartum death	25	4.0	22	3.6	20	3.1	20	3.2
8. Fetal growth restriction	30	4.8	11	1.8	17	2.6	37	5.9
9. Spontaneous preterm	133	21.1	95	15.8	123	18.9	119	18.9
10. Unexplained antepartum death	152	24.1	185	30.7	192	29.5	174	27.6
11. No obstetric antecedent	6	1.0	6	1.0	3	0.5	3	0.5
TOTAL	631	100.0	603	100.0	650	100.0	630	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.
Figures may differ from previous reports due to additional information being received after publication.

FIGURE 18

PERINATAL DEATHS BY OBSTETRIC ANTECEDENT, NSW 2005



Source: NSW Maternal and Perinatal Committee, NSW Department of Health.

TABLE 140

PERINATAL DEATHS BY OBSTETRIC ANTECEDENT AND PERINATAL OUTCOME, NSW 2005

Obstetric antecedent	Perinatal outcome					
	Stillbirth		Neonatal death		TOTAL	
	No.	%	No.	%	No.	%
1. Fetal abnormality						
Central nervous system	11	2.7	9	4.0	20	3.2
Cardiovascular system	9	2.2	10	4.4	19	3.0
Urinary tract	4	1.0	4	1.8	8	1.3
Gastrointestinal system	1	0.2	4	1.8	5	0.8
Chromosomal	20	4.9	9	4.0	29	4.6
Multiple	10	2.5	13	5.8	23	3.7
Other	3	0.7	7	3.1	10	1.6
Total	58	14.3	56	24.9	114	18.1
2. Perinatal infection						
Group B Streptococcus	2	0.5	1	0.4	3	0.5
E Coli	1	0.2	2	0.9	3	0.5
Other bacterial	1	0.2	3	1.3	4	0.6
Unspecified bacterial	2	0.5	5	2.2	7	1.1
Cytomegalovirus	1	0.2	1	0.4	2	0.3
Parvovirus	1	0.2	0	0.0	1	0.2
Fungal	0	0.0	1	0.4	1	0.2
Unspecified organism	1	0.2	0	0.0	1	0.2
Total	9	2.2	13	5.8	22	3.5
3. Hypertension						
Chronic: Essential	1	0.2	0	0.0	1	0.2
Chronic: Unspecified	1	0.2	0	0.0	1	0.2
Gestational	2	0.5	0	0.0	2	0.3
Pre-eclampsia	7	1.7	5	2.2	12	1.9
Total	11	2.7	5	2.2	16	2.5
4. Antepartum haemorrhage						
Placental abruption	8	4.4	17	7.6	35	5.6
Placenta praevia	1	0.2	2	0.9	3	0.5
Vasa praevia	1	0.2	1	0.4	2	0.3
Undetermined origin	5	1.2	2	0.9	7	1.1
Other	1	0.2	3	1.3	4	0.6
Total	26	6.4	25	11.1	51	8.1
5. Maternal disease						
Termination of pregnancy other than for fetal abnormality	5	1.2	1	0.4	6	1.0
Diabetes/gestational diabetes	12	3.0	0	0.0	12	1.9
Maternal injury: Accidental	3	0.7	2	0.9	5	0.8
Sepsis	4	1.0	0	0.0	4	0.6
Other	6	1.5	2	0.9	8	1.3
Total	30	7.4	5	2.2	35	5.6
6. Specific perinatal conditions						
Twin–to–twin transfusion	13	3.2	4	1.8	17	2.7
Fetomaternal haemorrhage	3	0.7	0	0.0	3	0.5
Antepartum cord complications	7	1.7	0	0.0	7	1.1
Uterine abnormality	0	0.0	2	0.9	2	0.3
Idiopathic hydrops	4	1.0	4	1.8	8	1.3
Other	1	0.2	1	0.4	2	0.3
Total	28	6.9	11	4.9	39	6.2
7. Hypoxic peripartum death						
Uterine rupture	1	0.2	1	0.4	2	0.3
Cord prolapse	2	0.5	0	0.0	2	0.3
Other intrapartum complication	1	0.2	1	0.4	2	0.3
No intrapartum complication	3	0.7	2	0.9	5	0.8
Unspecified	5	1.2	4	1.8	9	1.4
Total	12	3.0	8	3.6	20	3.2
8. Fetal growth restriction						
With evidence of uteroplacental insufficiency	13	3.2	5	2.2	18	2.9
With chronic villitis	3	0.7	2	0.9	5	0.8
Without the above placental pathology	9	2.2	1	0.4	10	1.6
No placental examination	1	0.2	2	0.9	3	0.5
Unspecified placental examination	1	0.2	0	0.0	1	0.2
Total	27	6.7	10	4.4	37	5.9

TABLE 140 *(continued)*

PERINATAL DEATHS BY OBSTETRIC ANTECEDENT AND PERINATAL OUTCOME, NSW 2005

Obstetric antecedent	Perinatal outcome: Stillbirth No.	Stillbirth %	Neonatal death No.	Neonatal death %	TOTAL No.	TOTAL %
9. Spontaneous preterm						
Intact membranes or membrane rupture less than 24 hours:						
with chorioamnionitis	8	2.0	27	12.0	35	5.6
Intact membranes or membrane rupture less than 24 hours:						
without chorioamnionitis	3	0.7	30	13.3	33	5.2
no placental examination	1	0.2	8	3.6	9	1.4
Membrane rupture 24 hours or more:						
with chorioamnionitis	13	3.2	16	7.1	29	4.6
without chorioamnionitis	1	0.2	4	1.8	5	0.8
no placental examination	1	0.2	1	0.4	2	0.3
Membrane rupture unknown duration:						
with chorioamnionitis	1	0.2	2	0.9	3	0.5
without chorioamnionitis	1	0.2	0	0.0	1	0.2
no placental examination	2	0.5	0	0.0	2	0.3
Total	31	7.7	88	39.1	119	18.9
10. Unexplained antepartum death						
With evidence of uteroplacental insufficiency	44	10.9	1	0.4	45	7.1
With chronic villitis	3	0.7	0	0.0	3	0.5
Without the above placental pathology	112	27.7	0	0.0	112	17.8
No placental examination	7	1.7	0	0.0	7	1.1
Unspecified placental examination	7	1.7	0	0.0	7	1.1
Total	173	42.7	1	0.4	174	27.6
11. No obstetric antecedent						
Possible SIDS	0	0.0	1	0.4	1	0.2
Unknown–unexplained	0	0.0	2	0.9	2	0.3
Total	0	0.0	3	1.3	3	0.5
TOTAL	405	100.0	225	100.0	630	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.

6. Specific perinatal conditions

Twin–to–twin transfusion accounted for 17 of the 39 deaths in this group, followed by idiopathic hydrops (8), antepartum cord complications (7) and fetomaternal haemorrhage (3). Other causes were: uterine abnormality (2), severe erythroblastosis in the fetus (1), and chorangioma of the placenta (1).

7. Hypoxic peripartum death

There were 20 deaths associated with peripartum hypoxia. Two deaths followed uterine rupture and two deaths followed cord prolapse.

Four deaths occurred before the onset of labour, 6 during labour and 2 at an unspecified time prior to birth. The remaining 8 deaths occurred in the neonatal period.

8. Fetal growth restriction

In 37 cases, the main obstetric cause of death was considered to be fetal growth restriction (FGR). Of these, 8 were stillbirths and 8 were neonatal deaths.

FGR is defined as less than the tenth percentile of birthweight for gestational age with no major congenital abnormalities. If a maternal or fetal cause of FGR was known then the cause of death was classified to the underlying cause of the FGR. Stillbirths with evidence of maceration were not classified as FGR unless there was evidence of growth restriction on serial ultrasound during pregnancy.

9. Spontaneous preterm

There were 119 perinatal deaths associated with spontaneous preterm birth, which comprises normally formed and appropriately grown babies born before 37 weeks gestation. Of these, 31 (26.1 per cent) were stillbirths and 88 (73.9 per cent) were neonatal deaths.

Thirty–five deaths (29.4 per cent) were at less than 23 weeks gestation, 63 (52.9 per cent) were at 23–25 weeks gestation, and 21 (17.6 per cent) occurred between 26 and 36 weeks gestation. Thirty–six deaths (30.3 per cent) were associated with membrane rupture of 24 hours or more.

10. Unexplained antepartum death

Of the 174 unexplained stillbirths, 112 (64.4 per cent) were low birth weight babies and 106 (60.9 per cent) were premature. A variety of associated maternal conditions were reported in this group including: multiple pregnancy (7 deaths), maternal hypertension (19), diabetes (3), asthma (3), epilepsy (1), and thyroid disease (2). Placental histopathology results were provided for 160 unexplained antepartum deaths (92.0 per cent) and evidence of uteroplacental insufficiency was found in 45.

11. No obstetric antecedent

No obstetric cause of death was identified for 3 neonatal deaths. One newborn died following meconium aspiration. In the remaining two cases, no post–mortem was carried out. One death was considered to be a possible SIDS, and in the remaining case no cause of death was identified.

Obstetric cause of perinatal death by hospital service level 2005

Obstetric service levels are described in the Explanatory Notes of the Methods section (page 16). The majority of perinatal deaths occurred in level 6 hospitals (52.7 per cent, Table 141). The proportion of unexplained intrauterine deaths was substantially lower in level 6 hospitals than other hospitals, possibly due to better access to perinatal post–mortem services. The proportion of deaths associated with congenital abnormalities was highest in level 6 hospitals, reflecting patterns of referral for diagnosis and treatment.

Time of death 2005

Of the 630 perinatal deaths reviewed for 2005, 282 (44.7 per cent) occurred before the onset of labour, 48 (7.6 per cent) occurred during labour, 75 (11.9 per cent) occurred at an unknown time before birth, and 225 (35.7 per cent) were neonatal deaths.

Of the 48 deaths that occurred during labour, 23 (47.9 per cent) occurred in level 6 hospitals, 8 (16.7 per cent) occurred in level 5 hospitals, 6 (12.5 per cent) occurred in level 4 hospitals, 6 occurred in level 3 hospitals, 3 (6.3 per cent) occurred in level 2 hospitals, and 2 (4.2 per cent) occurred in private hospitals.

Neonatal causes of death

Between 2002 and 2005 extreme prematurity was the most common cause of neonatal death, accounting for over 40 per cent of all neonatal deaths in 2005 (Table 142). Congenital abnormalities were the next most common cause of neonatal death over the four years, accounting for about one in five deaths.

Of the 225 neonatal deaths reviewed for 2005, 184 (81.8 per cent) were less than 37 weeks gestation (Table 143). The most common neonatal cause of death was extreme prematurity (*n*=97, 43.1 per cent). Forty–seven infants died from a congenital abnormality. There were 16 deaths due to hypoxic ischaemic encephalopathy and 6 deaths due to intracranial haemorrhage.

Perinatal deaths associated with maternal drug dependency–abuse 2005

No perinatal deaths were directly attributed to maternal drug dependency or drug abuse. Five deaths occurred among mothers who had a history of drug dependency or abuse, but drug use was not considered to be the main cause of death.

Post–mortem examination 2005

Postmortem examination is valuable in ascertaining or confirming the cause of death, identifying additional factors that may have contributed to the death, and counselling parents about the cause of death. Postmortem examinations were carried out for 238 (37.7 per cent) deaths: 182 stillborn infants (44.9 per cent of all reported stillbirths) and 56 neonatal deaths (24.7 per cent of all reported neonatal deaths). Placental histopathology was carried out in 535 perinatal deaths (84.9 per cent)

References

1. NSW Department of Health. *Hospital procedures for Review and Reporting of Perinatal Deaths*. Available at www.health.nsw.gov.au/policies/pd/2006/PD2006_006.html.
2. Perinatal Society of Australia and New Zealand. *Clinical Practice Guideline for Perinatal Mortality Audit*. PSANZ, 2005. Available at: www.psanz.org.au.

TABLE 141

PERINATAL DEATHS BY OBSTETRIC ANTECEDENT AND HOSPITAL SERVICE LEVEL, NSW 2005

Obstetric antecedent	Hospital service level											
	Level 2		Level 3		Level 4		Level 5		Level 6		Private		TOTAL#	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Fetal abnormality	2	22.2	3	5.9	8	11.6	11	10.9	84	24.7	4	7.3	113	18.0
2. Perinatal infection	0	0.0	2	3.9	2	2.9	4	4.0	13	3.8	1	1.8	22	3.5
3. Hypertension	0	0.0	0	0.0	2	2.9	2	2.0	10	2.9	2	3.6	16	2.6
4. Antepartum haemorrhage	0	0.0	5	9.8	6	8.7	6	5.9	30	8.8	3	5.5	50	8.0
5. Maternal disease	0	0.0	2	3.9	8	11.6	6	5.9	17	5.0	2	3.6	35	5.6
6. Specific perinatal conditions	0	0.0	2	3.9	0	0.0	10	9.9	23	6.8	4	7.3	39	6.2
7. Hypoxic peripartum death	3	33.3	2	3.9	2	2.9	3	3.0	7	2.1	3	5.5	20	3.2
8. Fetal growth restriction	0	0.0	4	7.8	1	1.4	3	3.0	24	7.1	5	9.1	37	5.9
9. Spontaneous preterm	1	11.1	5	9.8	13	18.8	19	18.8	77	22.6	2	3.6	118	18.8
10. Unexplained antepartum death	3	33.3	26	51.0	27	39.1	36	35.6	53	15.6	29	52.7	174	27.8
11. No obstetric antecedent	0	0.0	0	0.0	0	0.0	1	1.0	2	0.6	0	0.0	3	0.5
TOTAL	9	100.0	51	100.0	69	100.0	101	100.0	340	100.0	55	100.0	627	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.
The fetal abnormality and spontaneous preterm groups each include one perinatal death that occurred in a level 1 hospital.

TABLE 142

NEONATAL DEATHS BY CAUSE AND YEAR, NSW 2002–2005#

Neonatal cause	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
1. Congenital abnormality								
Central nervous system	6	2.9	10	5.2	12	6.1	6	2.7
Cardiovascular system	2	1.0	11	5.7	6	3.1	9	4.0
Urinary tract	2	1.0	3	1.5	3	1.5	5	2.2
Gastrointestinal tract	2	1.0	2	1.0	4	2.0	1	0.4
Chromosomal	9	4.3	3	1.5	11	5.6	5	2.2
Metabolic	1	0.5	0	0.0	2	1.0	0	0.0
Multiple	5	2.4	2	1.0	9	4.6	11	4.9
Other	12	5.7	7	3.6	7	3.6	10	4.4
Unspecified	1	0.5	0	0.0	2	1.0	0	0.0
Total	40	19.1	38	19.6	56	28.6	47	20.9
2. Extreme prematurity								
Not resuscitated	44	21.1	45	23.2	37	18.9	54	24.0
Unsuccessful resuscitation	36	17.2	22	11.3	23	11.7	27	12.0
Resuscitation unspecified or unknown	9	4.3	20	10.3	8	4.1	16	7.1
Total	89	42.6	87	44.8	68	34.7	97	43.1
3. Cardio–respiratory disorders								
Hyaline membrane disease–respiratory distress syndrome	4	1.9	6	3.1	3	1.5	5	2.2
Meconium aspiration syndrome	1	0.5	1	0.5	1	0.5	1	0.4
Primary persistent pulmonary hypertension	2	1.0	1	0.5	3	1.5	1	0.4
Pulmonary hypoplasia	7	3.3	5	2.6	5	2.6	4	1.8
Chronic neonatal lung disease	0	0.0	2	1.0	0	0.0	1	0.4
Other	7	3.3	6	3.1	4	2.0	10	4.4
Total	21	10.0	21	10.8	16	8.2	22	9.8
4. Infection								
Congenital bacterial	9	4.3	3	1.5	6	3.1	6	2.7
Acquired bacterial	7	3.3	6	3.1	3	1.5	9	4.0
Fungal	1	0.5	1	0.5	0	0.0	1	0.4
Congenital viral	0	0.0	0	0.0	1	0.5	1	0.4
Unspecified organism	0	0.0	0	0.0	1	0.5	0	0.0
Other	1	0.5	1	0.5	2	1.0	4	1.8
Total	18	8.6	11	5.7	13	6.6	21	9.3
5. Neurological								
Hypoxic ischaemic encephalopathy–perinatal asphyxia	15	7.2	13	6.7	20	10.2	16	7.1
Intracranial haemorrhage	10	4.8	10	5.2	12	6.1	6	2.7
Other	2	1.0	1	0.5	0	0.0	2	0.9
Total	27	12.9	24	12.4	32	16.3	24	10.7
6. Gastrointestinal								
Necrotising enterocolitis	5	2.4	5	2.6	2	1.0	4	1.8
Other	0	0.0	1	0.5	1	0.5	1	0.4
Total	5	2.4	6	3.1	3	1.5	5	2.2
7. Other								
Trauma	1	0.5	0	0.0	0	0.0	0	0.0
Consistent with SIDS	0	0.0	1	0.5	0	0.0	0	0.0
Possible SIDS	0	0.0	0	0.0	0	0.0	2	0.9
Multisystem failure	0	0.0	0	0.0	0	0.0	1	0.4
Other	5	2.4	5	2.6	7	3.6	4	1.8
Undetermined–unknown	3	1.4	1	0.5	1	0.5	2	0.9
Total	9	4.3	7	3.6	8	4.1	9	4.0
TOTAL	209	100.0	194	100.0	196	100.0	225	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.
Figures may differ from previous reports due to additional information being received after publication.

TABLE 143

NEONATAL DEATHS BY CAUSE AND GESTATIONAL AGE, NSW 2005

Neonatal cause	Gestational age (weeks)					
	Less than 37		37+		TOTAL	
	No.	%	No.	%	No.	%
1. Congenital abnormality						
Central nervous system	4	2.2	2	4.9	6	2.7
Cardiovascular system	1	0.5	8	19.5	9	4.0
Urinary tract	4	2.2	1	2.4	5	2.2
Gastrointestinal tract	1	0.5	0	0.0	1	0.4
Chromosomal	4	2.2	1	2.4	5	2.2
Multiple	10	5.4	1	2.4	11	4.9
Other	4	2.2	6	14.6	10	4.4
Total	28	15.2	19	46.3	47	20.9
2. Extreme prematurity						
Not resuscitated	54	29.3	0	0.0	54	24.0
Unsuccessful resuscitation	27	14.7	0	0.0	27	12.0
Resuscitation unspecified or unknown	16	8.7	0	0.0	16	7.1
Total	97	52.7	0	0.0	97	43.1
3. Cardio–respiratory disorders						
Hyaline membrane disease – respiratory distress syndrome	5	2.7	0	0.0	5	2.2
Meconium aspiration syndrome	0	0.0	1	2.4	1	0.4
Primary persistent pulmonary hypertension	0	0.0	1	2.4	1	0.4
Pulmonary hypoplasia	3	1.6	1	2.4	4	1.8
Chronic neonatal lung disease	1	0.5	0	0.0	1	0.4
Other	7	3.8	3	7.3	10	4.4
Total	16	8.7	6	14.6	22	9.8
4. Infection						
Congenital bacterial	5	2.7	1	2.4	6	2.7
Acquired bacterial	9	4.9	0	0.0	9	4.0
Congenital viral	1	0.5	0	0.0	1	0.4
Fungal	1	0.5	0	0.0	1	0.4
Other	4	2.2	0	0.0	4	1.8
Total	20	10.9	1	2.4	21	9.3
5. Neurological						
Hypoxic ischaemic encephalopathy– perinatal asphyxia	5	2.7	11	26.8	16	7.1
Intracranial haemorrhage	5	2.7	1	2.4	6	2.7
Other	2	1.1	0	0.0	2	0.9
Total	12	6.5	12	29.3	24	10.7
6. Gastrointestinal						
Necrotising enterocolitis	3	1.6	1	2.4	4	1.8
Other	1	0.5	0	0.0	1	0.4
Total	4	2.2	1	2.4	5	2.2
7. Other						
Possible SIDS	0	0.0	2	4.9	2	0.9
Multisystem failure	1	0.5	0	0.0	1	0.4
Other	4	2.2	0	0.0	4	1.8
Undetermined–unknown	2	1.1	0	0.0	2	0.9
Total	7	3.8	2	4.9	9	4.0
TOTAL	184	100.0	41	100.0	225	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.

13. DEMOGRAPHIC TRENDS 2002-2005

Introduction

Between 2002 and 2004, the number of births in NSW remained stable at about 86,000 per annum. Between 2004 and 2005, the number of births in NSW increased by 5.8 per cent from 85,626 to 90,610. This chapter describes the demographic changes that accompanied this rapid increase in births.

Year and month of birth

The increase in numbers of births first appears in February–March 2005, when there were about 400 more births in NSW compared to February–March 2004 (Table 144). From March 2005 onwards the number of births each month was consistently higher than the same month in previous years.

Area of residence

While the increase in the numbers of births is apparent across the state, the increase in births was most apparent in the Sydney area (Table 145). In both the Sydney South West and Sydney West Areas the numbers of births increased by over 1,000 in 2005 compared to previous years. In the Sydney metropolitan area there were over 100 more births in 2005 compared to 2004 in the following Statistical Local Areas: Bankstown, Campbelltown, Liverpool, Blacktown, Holroyd, Parramatta, Penrith, Blue Mountains, Sydney (Central and South), Marrickville, Leichhardt, Randwick, North Sydney and Willoughby. Outside Sydney similar increases were reported in Lake Macquarie, Newcastle, Port Stephens, and Lismore.

TABLE 144

BIRTHS BY MONTH AND YEAR, NSW 2002–2005

Month	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
January	7198	8.4	7063	8.2	7395	8.6	7266	8.0
February	6806	7.9	6573	7.6	6742	7.9	6853	7.6
March	7393	8.6	7295	8.4	7535	8.8	7895	8.7
January-March	21397	24.9	20931	24.2	21672	25.3	22014	24.3
April	7006	8.1	7062	8.2	7140	8.3	7665	8.5
May	7357	8.6	7345	8.5	7049	8.2	7540	8.3
June	6882	8.0	7236	8.4	6528	7.6	7431	8.2
April-June	21245	24.7	21643	25.0	20717	24.2	22636	25.0
July	7256	8.4	7379	8.5	7561	8.8	7709	8.5
August	7280	8.5	7354	8.5	7136	8.3	7677	8.5
September	7357	8.6	7559	8.7	7404	8.6	8027	8.9
July-September	21893	25.5	22292	25.8	22101	25.8	23413	25.8
October	7608	8.8	7682	8.9	7248	8.5	7817	8.6
November	6886	8.0	6739	7.8	7006	8.2	7257	8.0
December	6976	8.1	7127	8.2	6882	8.0	7473	8.2
October-December	21470	25.0	21548	24.9	21136	24.7	22547	24.9
TOTAL	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection, Centre for Epidemiology and Research, NSW Department of Health.

TABLE 145

BIRTHS BY HEALTH AREA AND STATISTICAL LOCAL AREA OF RESIDENCE, NSW 2002–2005[#]

Health Area–Statistical Local Area	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
Sydney South West								
Ashfield	507	2.6	500	2.5	496	2.6	523	2.6
Bankstown	2701	13.9	2802	14.2	2654	14.0	2838	14.2
Burwood	368	1.9	331	1.7	317	1.7	315	1.6
Camden	866	4.5	822	4.2	813	4.3	772	3.9
Campbelltown	2283	11.8	2342	11.8	2124	11.2	2272	11.4
Canterbury	2146	11.1	2135	10.8	2173	11.5	2257	11.3
Concord	357	1.8	364	1.8	396	2.1	437	2.2
Drummoyne	469	2.4	471	2.4	499	2.6	531	2.7
Fairfield	2721	14.0	2826	14.3	2643	13.9	2662	13.3
Leichhardt	1002	5.2	997	5.0	1004	5.3	1123	5.6
Liverpool	3013	15.5	3041	15.4	2860	15.1	2974	14.9
Marrickville	1029	5.3	1081	5.5	1072	5.6	1144	5.7
Strathfield	278	1.4	297	1.5	297	1.6	336	1.7
Sydney–Central and South	550	2.8	611	3.1	531	2.8	686	3.4
Wingecarribee	497	2.6	517	2.6	460	2.4	498	2.5
Wollondilly	617	3.2	638	3.2	639	3.4	647	3.2
Other–not stated	0	0.0	0	0.0	0	0.0	1	0.0
TOTAL	19404	100.0	19775	100.0	18978	100.0	20016	100.0
South Eastern Sydney & Illawarra								
Botany	505	3.6	500	3.5	485	3.4	508	3.4
Hurstville	970	7.0	961	6.8	978	6.8	1060	7.1
Kiama	196	1.4	198	1.4	181	1.3	196	1.3
Kogarah	629	4.5	685	4.8	691	4.8	710	4.8
Randwick	1496	10.7	1548	10.9	1523	10.6	1737	11.7
Rockdale	1352	9.7	1371	9.7	1308	9.1	1392	9.4
Shellharbour	856	6.1	821	5.8	845	5.9	859	5.8
Shoalhaven–Pt A	448	3.2	372	2.6	403	2.8	400	2.7
Shoalhaven–Pt B	462	3.3	526	3.7	575	4.0	515	3.5
Sutherland Shire East	1259	9.0	1219	8.6	1273	8.9	1357	9.1
Sutherland Shire West	1458	10.5	1537	10.9	1471	10.2	1474	9.9
Sydney – Central and South	521	3.7	590	4.2	711	4.9	659	4.4
Waverley	799	5.7	785	5.6	895	6.2	909	6.1
Wollongong	2432	17.4	2395	16.9	2344	16.3	2429	16.3
Woollahra	563	4.0	633	4.5	689	4.8	672	4.5
Other–not stated	0	0.0	3	0.0	1	0.0	5	0.0
TOTAL	13946	100.0	14144	100.0	14373	100.0	14882	100.0
Sydney West								
Auburn	1059	6.6	1085	6.7	1119	7.0	1163	6.7
Baulkham Hills	1835	11.4	1925	11.9	1997	12.4	2062	11.9
Blacktown–North	1470	9.1	1555	9.6	1558	9.7	1613	9.3
Blacktown–South-East	1434	8.9	1464	9.0	1387	8.6	1555	9.0
Blacktown–South-West	1823	11.3	1704	10.5	1662	10.3	1872	10.8
Blue Mountains	917	5.7	938	5.8	877	5.5	997	5.8
Greater Lithgow	234	1.4	228	1.4	223	1.4	241	1.4
Hawkesbury	937	5.8	971	6.0	909	5.7	942	5.4
Holroyd	1423	8.8	1371	8.5	1450	9.0	1610	9.3
Parramatta	2196	13.6	2176	13.4	2227	13.8	2378	13.7
Penrith	2828	17.5	2781	17.2	2675	16.6	2862	16.5
Other–not stated	0	0.0	0	0.0	0	0.0	2	0.0
TOTAL	16156	100.0	16198	100.0	16084	100.0	17299	100.0
Northern Sydney & Central Coast								
Gosford	1905	14.6	1936	14.5	1927	14.5	1963	14.1
Hornsby	1829	14.0	1734	13.0	1787	13.5	1844	13.2
Hunters Hill	145	1.1	154	1.2	147	1.1	158	1.1
Ku-ring-gai	882	6.7	880	6.6	860	6.5	868	6.2
Lane Cove	382	2.9	429	3.2	389	2.9	439	3.1
Manly	533	4.1	570	4.3	552	4.2	643	4.6
Mosman	340	2.6	370	2.8	379	2.9	363	2.6
North Sydney	756	5.8	780	5.8	785	5.9	896	6.4
Pittwater	682	5.2	768	5.7	716	5.4	744	5.3
Ryde	1238	9.5	1250	9.3	1225	9.2	1248	8.9
Warringah	1851	14.2	1884	14.1	1839	13.8	1900	13.6
Willoughby	812	6.2	818	6.1	893	6.7	1006	7.2
Wyong	1713	13.1	1803	13.5	1779	13.4	1877	13.5
Other–not stated	0	0.0	0	0.0	0	0.0	1	0.0
TOTAL	13068	100.0	13376	100.0	13278	100.0	13950	100.0

TABLE 145 *(continued)*

BIRTHS BY HEALTH AREA AND STATISTICAL LOCAL AREA OF RESIDENCE, NSW 2002–2005[#]

Health Area–Statistical Local Area	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
Hunter & New England								
Armidale–City	237	2.3	236	2.4	225	2.3	220	2.1
Armidale–Balance	97	1.0	79	0.8	72	0.7	73	0.7
Barraba	15	0.1	20	0.2	21	0.2	18	0.2
Bingara	12	0.1	17	0.2	19	0.2	23	0.2
Cessnock	614	6.0	613	6.2	624	6.4	671	6.3
Dungog	105	1.0	92	0.9	83	0.8	103	1.0
Glen Innes	99	1.0	71	0.7	80	0.8	86	0.8
Gloucester	38	0.4	51	0.5	38	0.4	49	0.5
Greater Taree	509	5.0	464	4.7	499	5.1	501	4.7
Great Lakes	290	2.9	331	3.4	337	3.4	343	3.2
Gunnedah	158	1.6	170	1.7	125	1.3	162	1.5
Guyra	47	0.5	60	0.6	59	0.6	59	0.6
Inverell–Pt A	71	0.7	67	0.7	62	0.6	59	0.6
Inverell–Pt B	129	1.3	119	1.2	136	1.4	131	1.2
Lake Macquarie	2180	21.4	2088	21.2	2101	21.4	2231	21.1
Maitland	812	8.0	811	8.2	849	8.6	908	8.6
Manilla	46	0.5	37	0.4	39	0.4	38	0.4
Merriwa	24	0.2	17	0.2	28	0.3	25	0.2
Moree Plains	254	2.5	196	2.0	205	2.1	243	2.3
Murrurundi	26	0.3	26	0.3	34	0.3	29	0.3
Muswellbrook	236	2.3	255	2.6	244	2.5	266	2.5
Narrabri	196	1.9	181	1.8	162	1.7	168	1.6
Newcastle–Inner	48	0.5	49	0.5	33	0.3	71	0.7
Newcastle–Remainder	1782	17.5	1782	18.1	1700	17.3	1892	17.9
Nundle	8	0.1	8	0.1	15	0.2	15	0.1
Parry–Pt A	57	0.6	52	0.5	51	0.5	46	0.4
Parry–Pt B	138	1.4	125	1.3	129	1.3	147	1.4
Port Stephens	719	7.1	714	7.2	629	6.4	756	7.2
Quirindi	79	0.8	59	0.6	68	0.7	63	0.6
Scone	141	1.4	134	1.4	143	1.5	149	1.4
Severn	32	0.3	30	0.3	36	0.4	20	0.2
Singleton	345	3.4	307	3.1	321	3.3	319	3.0
Tamworth	423	4.2	463	4.7	494	5.0	520	4.9
Tenterfield	53	0.5	25	0.3	27	0.3	42	0.4
Uralla	66	0.6	52	0.5	61	0.6	61	0.6
Walcha	46	0.5	29	0.3	39	0.4	34	0.3
Yallaroi	35	0.3	33	0.3	28	0.3	28	0.3
Other–not stated	0	0.0	0	0.0	0	0.0	1	0.0
TOTAL	10167	100.0	9863	100.0	9816	100.0	10571	100.0
North Coast								
Ballina	383	8.1	340	7.3	385	8.1	334	6.6
Bellingen	125	2.6	107	2.3	109	2.3	120	2.4
Byron	303	6.4	304	6.5	285	6.0	332	6.6
Coffs Harbour–Pt A	549	11.6	505	10.9	507	10.7	539	10.7
Coffs Harbour–Pt B	164	3.5	121	2.6	138	2.9	144	2.9
Copmanhurst	49	1.0	42	0.9	39	0.8	53	1.1
Grafton	201	4.3	194	4.2	197	4.1	204	4.1
Hastings–Pt A	345	7.3	418	9.0	413	8.7	452	9.0
Hastings–Pt B	247	5.2	265	5.7	299	6.3	299	5.9
Kempsey	355	7.5	330	7.1	384	8.1	375	7.4
Kyogle	82	1.7	89	1.9	71	1.5	76	1.5
Lismore–Pt A	373	7.9	388	8.3	363	7.6	419	8.3
Lismore–Pt B	150	3.2	153	3.3	156	3.3	153	3.0
Maclean	149	3.2	154	3.3	153	3.2	158	3.1
Nambucca	178	3.8	170	3.7	179	3.8	172	3.4
Pristine Waters Nymboida	92	1.9	60	1.3	72	1.5	109	2.2
Pristine Waters Ulmarra	72	1.5	62	1.3	66	1.4	82	1.6
Richmond Valley Casino	143	3.0	140	3.0	126	2.6	156	3.1
Richmond Valley Bal	123	2.6	117	2.5	116	2.4	126	2.5
Tweed–Pt A	347	7.3	406	8.7	407	8.6	404	8.0
Tweed–Pt B	292	6.2	284	6.1	292	6.1	330	6.6
TOTAL	4722	100.0	4649	100.0	4757	100.0	5037	100.0

TABLE 145 *(continued)*

BIRTHS BY HEALTH AREA AND STATISTICAL LOCAL AREA OF RESIDENCE, NSW 2002–2005[#]

Health Area–Statistical Local Area	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
Greater Southern								
Albury	6	0.1	11	0.3	13	0.3	8	0.2
Bega Valley	279	6.9	275	7.1	261	6.7	294	7.3
Berrigan	25	0.6	25	0.6	26	0.7	27	0.7
Bland	81	2.0	80	2.1	86	2.2	73	1.8
Bombala	17	0.4	12	0.3	31	0.8	26	0.6
Boorowa	14	0.3	7	0.2	18	0.5	26	0.6
Carrathool	77	1.9	56	1.4	67	1.7	50	1.2
Conargo	8	0.2	10	0.3	5	0.1	10	0.2
Coolamon	52	1.3	32	0.8	33	0.8	52	1.3
Cooma–Monaro	81	2.0	84	2.2	106	2.7	92	2.3
Cootamundra	80	2.0	81	2.1	98	2.5	90	2.2
Crookwell	23	0.6	31	0.8	25	0.6	38	0.9
Culcairn	32	0.8	24	0.6	22	0.6	22	0.5
Deniliquin	77	1.9	86	2.2	87	2.2	88	2.2
Eurobodalla	261	6.5	319	8.2	318	8.2	335	8.3
Goulburn	239	6.0	250	6.4	210	5.4	233	5.8
Griffith	408	10.2	366	9.4	383	9.9	391	9.7
Gundagai	67	1.7	60	1.5	50	1.3	48	1.2
Gunning	9	0.2	14	0.4	10	0.3	11	0.3
Harden	34	0.8	25	0.6	43	1.1	45	1.1
Hay	59	1.5	58	1.5	42	1.1	54	1.3
Jerilderie	5	0.1	9	0.2	13	0.3	13	0.3
Junee	67	1.7	73	1.9	64	1.6	70	1.7
Leeton	153	3.8	168	4.3	187	4.8	174	4.3
Lockhart	36	0.9	40	1.0	30	0.8	39	1.0
Mulwaree	66	1.6	57	1.5	79	2.0	63	1.6
Murray	6	0.1	11	0.3	7	0.2	12	0.3
Murrumbidgee	37	0.9	35	0.9	27	0.7	40	1.0
Narrandera	102	2.5	93	2.4	78	2.0	80	2.0
Queanbeyan	203	5.1	170	4.4	179	4.6	172	4.3
Snowy River	59	1.5	48	1.2	76	2.0	70	1.7
Tallaganda	11	0.3	11	0.3	6	0.2	10	0.2
Temora	79	2.0	70	1.8	66	1.7	88	2.2
Tumbarumba	20	0.5	28	0.7	26	0.7	31	0.8
Tumut	136	3.4	140	3.6	138	3.6	143	3.5
Wagga Wagga–Pt A	744	18.5	733	18.9	681	17.5	708	17.5
Wagga Wagga–Pt B	90	2.2	90	2.3	89	2.3	88	2.2
Windouran	12	0.3	17	0.4	10	0.3	6	0.1
Yarrowlumla–Pt A	22	0.5	35	0.9	36	0.9	67	1.7
Yass	29	0.7	14	0.4	5	0.1	10	0.2
Young	149	3.7	112	2.9	128	3.3	113	2.8
Other–not stated	61	1.51	28	0.7	24	0.6	32	0.8
TOTAL	4016	100.0	3888	100.0	3883	100.0	4042	100.0

TABLE 145 *(continued)*

BIRTHS BY HEALTH AREA AND STATISTICAL LOCAL AREA OF RESIDENCE, NSW 2002–2005#

Health Area / Statistical Local Area	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
Greater Western								
Bathurst	366	9.3	404	10.2	377	9.8	431	10.7
Blayney–Pt A	69	1.8	58	1.5	75	1.9	72	1.8
Blayney–Pt B	16	0.4	23	0.6	16	0.4	24	0.6
Bogan	56	1.4	55	1.4	56	1.5	69	1.7
Bourke	86	2.2	44	1.1	53	1.4	58	1.4
Brewarrina	42	1.1	35	0.9	34	0.9	38	0.9
Broken Hill	218	5.6	238	6.0	224	5.8	222	5.5
Cabonne–Pt A	12	0.3	15	0.4	16	0.4	14	0.3
Cabonne–Pts B&C	112	2.9	91	2.3	110	2.9	82	2.0
Central Darling	31	0.8	24	0.6	23	0.6	27	0.7
Cobar	81	2.1	84	2.1	83	2.2	78	1.9
Coolah	46	1.2	46	1.2	44	1.1	51	1.3
Coonabarabran	64	1.6	68	1.7	78	2.0	73	1.8
Coonamble	85	2.2	83	2.1	66	1.7	58	1.4
Cowra	154	3.9	147	3.7	151	3.9	163	4.0
Dubbo–Pt A	556	14.2	581	14.7	548	14.2	574	14.2
Dubbo–Pt B	49	1.3	68	1.7	77	2.0	61	1.5
Evans–Pt A	13	0.3	7	0.2	13	0.3	7	0.2
Evans–Pt B	30	0.8	26	0.7	32	0.8	42	1.0
Forbes	120	3.1	121	3.1	104	2.7	113	2.8
Gilgandra	56	1.4	60	1.5	51	1.3	61	1.5
Lachlan	95	2.4	96	2.4	99	2.6	102	2.5
Mudgee	220	5.6	219	5.5	199	5.2	263	6.5
Narromine	126	3.2	125	3.2	114	3.0	89	2.2
Oberon	111	2.8	100	2.5	107	2.8	127	3.1
Orange	533	13.6	596	15.1	562	14.6	572	14.1
Parkes	195	5.0	213	5.4	197	5.1	207	5.1
Rylstone	49	1.3	37	0.9	32	0.8	34	0.8
Walgett	116	3.0	92	2.3	114	3.0	103	2.5
Warren	54	1.4	49	1.2	39	1.0	53	1.3
Weddin	35	0.9	29	0.7	33	0.9	35	0.9
Wellington	113	2.9	112	2.8	105	2.7	109	2.7
Unincorporated Far West	9	0.2	9	0.2	8	0.2	20	0.5
Other–not stated	1	0.0	5	0.1	7	0.2	11	0.3
TOTAL	3919	100.0	3960	100.0	3847	100.0	4043	100.0
Other–Not stated	607	100.0	561	100.0	610	100.0	770	100.0
TOTAL NSW	86005	100.0	86414	100.0	85626	100.0	90610	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Department of Health.
Numbers not shown where less than 20 births were reported in a Statistical Local Area over the 5–year period. ABS Statistical Local Area boundaries for 2001 were used. Figures refer to all births (stillbirths and live births).

Maternal age

There was an increase in births among mothers of all ages (Table 146). Between 2004 and 2005, the largest increase was reported among mothers aged 35–39 years (n=1,596), followed by mothers aged 35–39 years (n=1,467) and mothers aged 35–39 years (n=893). While the number of births to teenage mothers was slightly higher in 2005 compared to 2004, the rate of increase was less than other age groups, and the overall proportion of births that occurred to teenage mothers followed the trend of previous years, falling slightly from 4.0 per cent in 2004 to 3.9 per cent in 2005.

Maternal country of birth

The increase in births observed in 2005 occurred among mothers born in wide range of countries (Table 4, page 20). Overall, the pattern of births by mother's country of birth remained similar to 2004.

TABLE 146

CONFINEMENTS BY MATERNAL AGE, NSW 2002–2005

Age (years)	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
12–17	1056	1.2	954	1.1	995	1.2	967	1.1
18	1003	1.2	945	1.1	976	1.2	982	1.1
19	1593	1.9	1487	1.7	1416	1.7	1491	1.7
12–19	3652	4.3	3386	4.0	3387	4.0	3440	3.9
20	1908	2.3	1795	2.1	1723	2.0	1821	2.0
21	2245	2.7	2136	2.5	2134	2.5	2132	2.4
22	2417	2.9	2568	3.0	2353	2.8	2465	2.8
23	2890	3.4	2764	3.3	2830	3.4	2993	3.4
24	3214	3.8	3266	3.8	3055	3.6	3328	3.7
20–24	12674	15.0	12529	14.7	12095	14.3	12739	14.3
25	3607	4.3	3793	4.5	3563	4.2	3781	4.2
26	4286	5.1	4222	5.0	4098	4.9	4231	4.7
27	5022	5.9	4800	5.6	4567	5.4	4802	5.4
28	5549	6.6	5431	6.4	5240	6.2	5274	5.9
29	6059	7.2	5892	6.9	5645	6.7	5918	6.6
25–29	24523	29.0	24138	28.4	23113	27.4	24006	26.9
30	6394	7.6	6103	7.2	5905	7.0	6114	6.9
31	6334	7.5	6461	7.6	6225	7.4	6401	7.2
32	5583	6.6	5991	7.0	6092	7.2	6365	7.1
33	5079	6.0	5316	6.3	5700	6.8	6025	6.8
34	4420	5.2	4651	5.5	4984	5.9	5597	6.3
30–34	27810	32.9	28522	33.5	28906	34.3	30502	34.2
35	3758	4.4	4006	4.7	4165	4.9	4533	5.1
36	3147	3.7	3245	3.8	3427	4.1	3825	4.3
37	2543	3.0	2625	3.1	2613	3.1	2938	3.3
38	2080	2.5	2100	2.5	2017	2.4	2340	2.6
39	1579	1.9	1606	1.9	1586	1.9	1639	1.8
35–39	13107	15.5	13582	16.0	13808	16.4	15275	17.1
40	1131	1.3	1158	1.4	1148	1.4	1200	1.3
41	687	0.8	789	0.9	788	0.9	880	1.0
42	449	0.5	450	0.5	481	0.6	497	0.6
43	238	0.3	234	0.3	265	0.3	283	0.3
44	140	0.2	121	0.1	137	0.2	157	0.2
40–44	2645	3.1	2752	3.2	2819	3.3	3017	3.4
45–plus	120	0.1	113	0.1	143	0.2	149	0.2
Not stated	56	0.1	10	0.0	17	0.0	12	0.0
TOTAL NSW	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Department of Health

Aboriginal and Torres Strait Islander mothers

In 2005, the number of Aboriginal mothers reported giving birth also increased (Table 147), although some of this increase could be due to improved reporting of maternal Aboriginality between 2004 and 2005 (see Chapter 6). Most of the increase in births occurred among mothers aged 20–29 years. Births to teenage mothers followed the same pattern as for non-Aboriginal mothers, with the number of births to teenage mothers increasing slightly, but the overall proportion of births to teenage mothers following the downward trend of previous years.

Number of previous pregnancies

The increase in births in 2005 occurred fairly evenly among mothers who were giving birth for the first time and mothers who had given birth previously (Table 148). There was no substantial change in the pattern of numbers of previous pregnancies among mothers who gave birth in 2005 compared to previous years.

TABLE 147

CONFINEMENTS BY INDIGENOUS STATUS AND MATERNAL AGE, NSW 2002–2005#

Aboriginality–age (years)	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
Aboriginal or Torres Strait Islander								
12–19	481	22.3	455	21.1	493	21.4	504	20.4
20–24	671	31.1	678	31.4	701	30.4	775	31.3
25–29	513	23.8	512	23.7	504	21.8	555	22.4
30–34	340	15.8	363	16.8	389	16.9	409	16.5
35–39	128	5.9	124	5.7	185	8.0	197	8.0
40 +	18	0.8	27	1.2	35	1.5	29	1.2
Not stated	4	0.2	2	0.1	1	0.0	5	0.2
Total	2155	100.0	2161	100.0	2308	100.0	2474	100.0
Non-Aboriginal or Torres Strait Islander								
12–19	3169	3.8	2930	3.5	2893	3.5	2936	3.4
20–24	11999	14.6	11849	14.3	11393	13.9	11963	13.8
25–29	24001	29.1	23624	28.5	22602	27.6	23444	27.1
30–34	27451	33.3	28141	34.0	28506	34.8	30053	34.7
35–39	12969	15.7	13444	16.2	13613	16.6	15042	17.4
40 +	2624	3.2	2723	3.3	2784	3.4	2980	3.4
Not stated	170	0.2	120	0.1	157	0.2	152	0.2
Total	82383	100.0	82831	100.0	81948	100.0	86570	100.0
TOTAL								
12–19	3652	4.3	3386	4.0	3387	4.0	3440	3.9
20–24	12674	15.0	12529	14.7	12095	14.3	12739	14.3
25–29	24523	29.0	24138	28.4	23113	27.4	24006	26.9
30–34	27810	32.9	28522	33.5	28906	34.3	30502	34.2
35–39	13107	15.5	13582	16.0	13808	16.4	15275	17.1
40 +	2645	3.1	2752	3.2	2819	3.3	3017	3.4
Not stated	176	0.2	123	0.1	160	0.2	161	0.2
TOTAL NSW	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Department of Health
Total NSW includes mothers where Aboriginality was not stated.

TABLE 148

CONFINEMENTS BY NUMBER OF PREVIOUS PREGNANCIES, NSW 2002–2005

No. previous pregnancies (>20 weeks gestation)	Year							
	2002		2003		2004		2005	
	No.	%	No.	%	No.	%	No.	%
0	35035	41.4	35879	42.2	35796	42.5	37073	41.6
1	28723	34.0	28764	33.8	28324	33.6	29882	33.5
2	12940	15.3	12811	15.1	12628	15.0	13798	15.5
3	4747	5.6	4589	5.4	4548	5.4	5090	5.7
4	1759	2.1	1683	2.0	1636	1.9	1796	2.0
5–plus	1290	1.5	1258	1.5	1312	1.6	1441	1.6
Not stated	93	0.1	48	0.1	44	0.1	60	0.1
TOTAL	84587	100.0	85032	100.0	84288	100.0	89140	100.0

Source: NSW Midwives Data Collection. Centre for Epidemiology and Research, NSW Department of Health

14. APPENDICES

APPENDIX 1

DESCRIPTION OF SELECTED BIRTH DEFECTS

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

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

Abnormal palmar creases

Accessory nipples

Balanced chromosomal translocation (unless occurring with structural defects)

Birthmarks (single, < 4 cms diameter)

Bronchopulmonary dysplasia

Cerebral palsy

Clicky hips

Congenital infections (unless occurring with structural defects)

Congenital neoplasms/tumours (exception: cystic hygroma)

Developmental disability

Deviated nasal septum

Fetal alcohol syndrome

Glucose-6-phosphate dehydrogenase (G6PD) deficiency

Haemophilia

Heart murmurs (functional)

Hernia (epigastric, hiatus, inguinal, umbilical)

Hydrocele (testis)

Hypoplastic lung (less than 37 weeks gestation)

Imperforate hymen

Inborn errors of metabolism other than phenylketonuria, galactosemia and congential hypothyroidism.

Intrauterine growth retardation

Low birthweight

Meconium ileus

Minor ear anomalies

Minor finger/hand anomalies

Minor toe/foot anomalies

Muscular dystrophies & myopathies

Oesophageal reflux

Patent ductus arteriosus (less than 37 weeks gestation)

Pilonidal sinus

Sacral dimples

Single umbilical artery (unless occurring with structural defects)

Skin tag

Strabismus

Talipes (exception: those requiring surgery)

Tongue tie

Undescended testes (exception: those requiring surgery)

Webbing of 2nd & 3rd toes

Wide sutures

APPENDIX 3

MATERNAL COUNTRIES OF BIRTH AND COUNTRY OF BIRTH GROUPS

English speaking

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

Central and South America

Bahrain
Argentina
Bolivia
Brazil
Chile
Colombia
Ecuador
Falkland Islands
French Guiana
Guyana
Paraguay
Peru
Surinam
Uruguay
Venezuela
Belize
Costa Rica
El Salvador
Guatamala
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
Kazakhstan
Kyrgystan

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
Eritrea
Ethiopia

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

Afganistan
Bangladesh
Bhutan
India
Maldives
Nepal
PakistanSri Lanka

Southern Europe

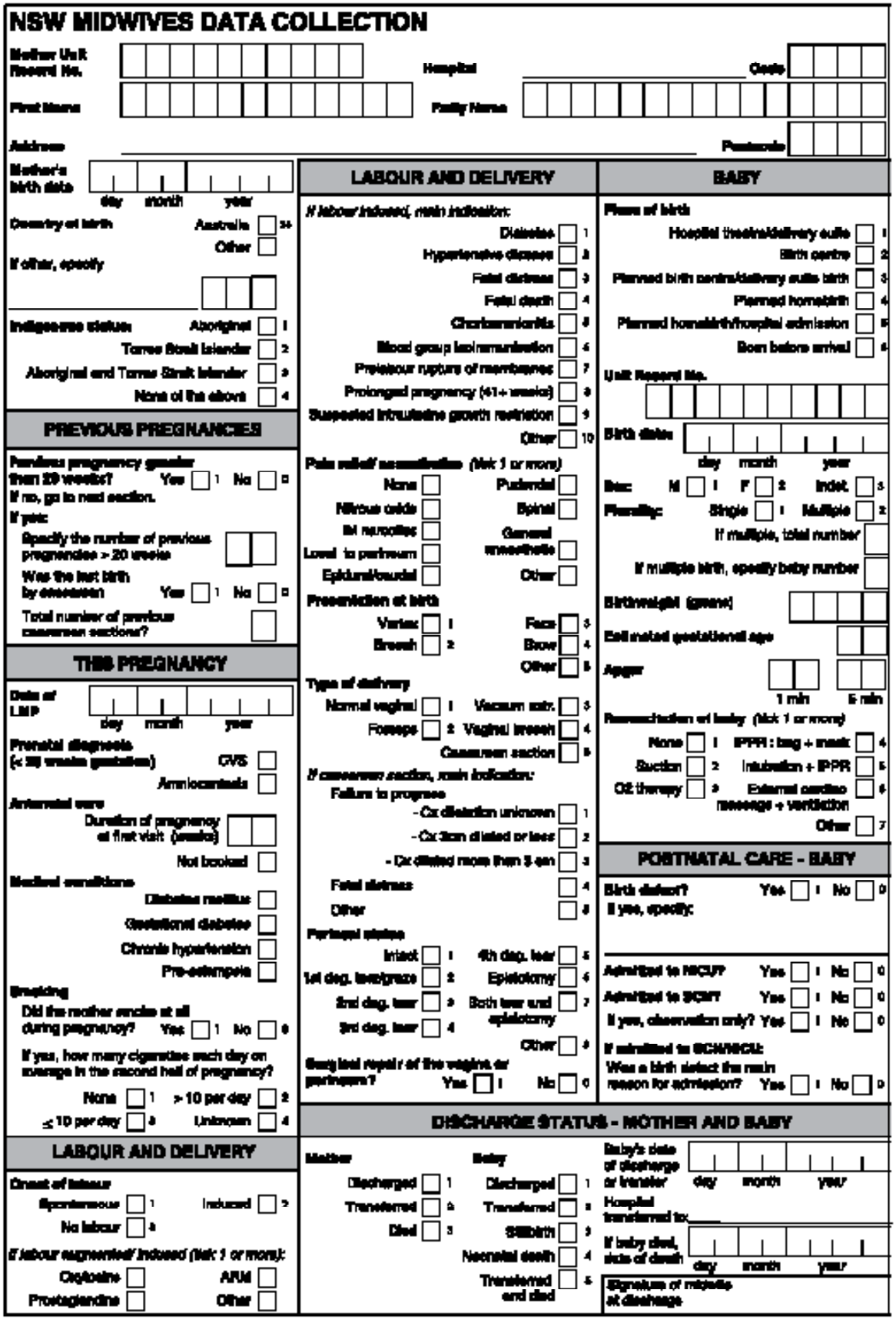
Albania
Andorra
Cyprus
Gibraltar
Greece
Italy
Malta
Portugal
Spain
Bosnia-Herzegovina
Croatia
Macedonia
Slovenia
Serbia and Montenegro
Former Yugoslavia (not otherwise defined)

Western and Northern Europe

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

APPENDIX 4

NSW MIDWIVES DATA COLLECTION FORM



NSW MIDWIVES DATA COLLECTION

Mother Unit Record No. | Hospital | Code
First Name | Family Name
Address | Postcode
Mother's birth date (day / month / year)
Country of birth: Australia 34 / Other
If other, specify
Indigenous status: Aboriginal 1 / Torres Strait Islander 2 / Aboriginal and Torres Strait Islander 3 / None of the above 4

PREVIOUS PREGNANCIES

Previous pregnancy greater than 20 weeks? Yes 1 No 0
If no, go to next section.
If yes:
Specify the number of previous pregnancies > 20 weeks
Was the last birth by caesarean Yes 1 No 0
Total number of previous caesarean sections?

THIS PREGNANCY

Date of LMP (day / month / year)
Prenatal diagnosis (< 20 weeks gestation): CVS / Amniocentesis
Antenatal care: Duration of pregnancy at first visit (weeks) / Not booked
Medical conditions: Diabetes mellitus / Gestational diabetes / Chronic hypertension / Pre-eclampsia
Smoking: Did the mother smoke at all during pregnancy? Yes 1 No 0
If yes, how many cigarettes each day on average in the second half of pregnancy?
None 1 / > 10 per day 2 / ≤ 10 per day 3 / Unknown 4

LABOUR AND DELIVERY

Onset of labour: Spontaneous 1 / Induced 2 / No labour 3
If labour augmented/ induced (tick 1 or more): Oxytocins / ARM / Prostaglandins / Other

LABOUR AND DELIVERY

If labour induced, main indication: Diabetes 1 / Hypertensive disease 2 / Fetal distress 3 / Fetal death 4 / Chorioamnionitis 5 / Blood group isoimmunisation 6 / Previous rupture of membranes 7 / Prolonged pregnancy (41+ weeks) 8 / Suspected intrauterine growth restriction 9 / Other 10

Pain relief/ anaesthetics (tick 1 or more): None / Nitrous oxide / IM narcotics / Local to perineum / Epidural/caudal / Pudendal / Spinal / General anaesthetic / Other

Presentation at birth: Vertex 1 / Breech 2 / Face 3 / Brow 4 / Other 5

Type of delivery: Normal vaginal 1 / Forceps 2 / Vacuum extr. 3 / Vaginal breech 4 / Caesarean section 5

If caesarean section, main indication: Failure to progress - Cx dilation unknown 1 / - Cx 3cm dilated or less 2 / - Cx dilated more than 3 cm 3 / Fetal distress 4 / Other 5

Perineal status: Intact 1 / 1st deg. tear/graze 2 / 2nd deg. tear 3 / 3rd deg. tear 4 / 4th deg. tear 5 / Episiotomy 6 / Both tear and episiotomy 7 / Other 8

Surgical repair of the vagina or perineum? Yes 1 No 0

BABY

Place of birth: Hospital theatre/delivery suite 1 / Birth centre 2 / Planned birth centre/delivery suite birth 3 / Planned homebirth 4 / Planned homebirth/hospital admission 5 / Born before arrival 6

Unit Record No.
Birth date (day / month / year)
Sex: M 1 / F 2 / Indet. 3
Plurality: Single 1 / Multiple 2
If multiple, total number
If multiple birth, specify baby number
Birthweight (grams)
Estimated gestational age
Apgar: 1 min / 5 min
Resuscitation of baby (tick 1 or more): None 1 / Suction 2 / O2 therapy 3 / IPPR : bag + mask 4 / Intubation + IPPR 5 / External cardiac massage + ventilation 6 / Other 7

POSTNATAL CARE - BABY

Birth defect? Yes 1 No 0
If yes, specify:
Admitted to NICU? Yes 1 No 0
Admitted to SCN? Yes 1 No 0
If yes, observation only? Yes 1 No 0
If admitted to SCN/NICU: Was a birth defect the main reason for admission? Yes 1 No 0

DISCHARGE STATUS - MOTHER AND BABY

Mother: Discharged 1 / Transferred 2 / Died 3
Baby: Discharged 1 / Transferred 2 / Stillbirth 3 / Neonatal death 4 / Transferred and died 5
Baby's date of discharge or transfer (day / month / year)
Hospital transferred to:
If baby died, date of death (day / month / year)
Signature of midwife at discharge

Health Department Copy

Please complete and forward to: NSW Midwives Data Collection
Patient Data Management Unit, Level 4
Locked Bag 961, North Sydney, NSW 2059