

NSW PUBLIC HEALTH BULLETIN SUPPLEMENT

NSW Mothers and Babies 2007



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Data collection

NSW Midwives Data Collection	Elvis Maio NSW hospitals' midwives and independent midwives NSW hospitals' medical record departments
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2. Executive summary

This is the eleventh annual report on mothers and babies in New South Wales (NSW). The report draws information from a variety of sources including: the NSW Midwives Data Collection, the NSW Register of Congenital Conditions, and the NSW Admitted Patient Data Collection. Information on causes of maternal deaths in NSW was obtained through the work of the NSW Maternal and Perinatal Committee. From 1 January 2006, confidential reviews of perinatal deaths among all live-born babies, and stillbirths of at least 20 weeks gestation or 400 g birth weight are also carried out by the Committee.

Trends in NSW

In 2003 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% compared with 2004; in 2006, the number of births increased to 92 781, a rise of 7.9% compared with 2004; and in 2007, the number of births increased to 96 030, a rise of 12.2% compared with 2004.

The increase in births occurred mainly in the metropolitan areas, with the Sydney South West and Sydney West Areas reporting over 2000 more births in 2007 than in 2004; and Northern Sydney and Central Coast and South Eastern Sydney and Illawarra Areas reporting over 1000 more births in 2007 than in 2004.

The largest increase in births occurred among mothers aged 35–39 years. Although the number of births to teenage mothers has remained stable, the overall percentage of births to teenage mothers followed the trend of previous years, falling from 4.0% of all births in 2003 to 3.6% in 2007.

The increase in births in 2007 occurred evenly among mothers who were giving birth for the first time and mothers who had given birth previously. The number of women giving birth for the fifth or subsequent time rose by 17.9%, from 1258 in 2003 to 1483 in 2007 – however, these mothers comprised only 1.6% of all mothers in 2007.

Between 2003 and 2007, the vast majority of women gave birth in a hospital labour ward. The proportion of mothers planning to give birth in a birth centre remained stable at 3–4%. The total number of reported planned homebirths rose slightly from 132 in 2003 to 175 in 2007, whereas the reported number of planned homebirths that occurred at home rose from 109 in 2003 to 144 in 2007.

The rate of normal vaginal birth fell from 62.8% in 2003 to 59.9% in 2007. Over the 5 years, the caesarean section rate increased from 26.5 to 29.0% and the rate of instrumental birth remained steady at 10–11%. Caesarean section birth continues to be more common among privately than publicly-insured mothers. The changing pattern in type of birth is evident in both groups between 2003 and 2007. Among privately-insured mothers, the rate of normal vaginal birth decreased from 52.1% in 2003 to 47.7% in 2007 and the caesarean section rate increased from 32.4 to 37.9%. Among publicly insured mothers the rate of normal vaginal birth decreased from 69.5 to 66.5% and the caesarean section rate increased from 21.5 to 24.6%.

Since 2003, the rate of low birth weight (less than 2500 g) has been just over 6%. The rate was 6.1% in 2007. The percentage of babies born prematurely (less than 37 weeks gestation) has remained stable at about 7% and was 7.4% in 2007. The perinatal mortality rate varied from 8.6 to 9.0 per 1000 births over the 5-year period, and was 9.0 in 2007.

In the period 1990–2006, 177 deaths were reported among pregnant women or women who gave birth less than 6 weeks previously. Of these, 55 (31.1%) died of incidental causes not related to the pregnancy or its management, 76 (42.9%) deaths were found to be directly due to pregnancy or its management, and 43 (24.3%) deaths were found to 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 physiological effects of pregnancy).

Aboriginal and Torres Strait Islander mothers and babies

Between 2003 and 2007, the reported number of babies born to Aboriginal and Torres Strait Islander mothers increased from 2190 to 2926, representing 2.5 and 3.0%, respectively, of all babies born in NSW.

Births to teenage mothers followed the same pattern as for non-Aboriginal mothers. The percentage of births to teenage mothers followed the downward trend of previous years, from 21.1% in 2003 to 18.8% in 2007; whereas the percentage of births to mothers aged 35 years and over rose from 7.1% to 9.1% over the same period.

Between 2003 and 2007, the proportion of Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation rose from 70.6 to 79.5%. This compares with 91.1% of non-Aboriginal or

Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation in 2007.

In 2007, 50.1% of Aboriginal and Torres Strait Islander mothers reported smoking at some time during pregnancy, compared with 56.8% in 2003. This compares with 11.2% of non-Aboriginal or Torres Strait Islander mothers who reported smoking at some time during pregnancy in 2007.

Since 2003, the rates of low birth weight (less than 2500 g) and prematurity (less than 37 weeks gestation) in Aboriginal and Torres Strait Islander babies have been over 10%. These rates are about one and a half times higher than those among babies born to non-Aboriginal or Torres Strait Islander mothers. The perinatal mortality rate among babies born to Aboriginal and Torres Strait Islander mothers was 22.6 per 1000 in 2007, compared with a rate of 8.6 per 1000 experienced by babies born to non-Aboriginal or Torres Strait Islander mothers.

Country of birth

Following the pattern of previous years, about 30% of mothers were born overseas in 2007, most commonly in the United Kingdom (2.6%), New Zealand (2.6%), China (2.5%) and Vietnam (1.9%).

Between 2003 and 2007, the percentage of mothers who were born in non-English speaking countries rose slightly from 20.6 to 22.5%. The increase was mainly among mothers born in North-East Asian and Southern Asian countries. There was a decline in the percentage of mothers born in Southern European countries. The proportion of mothers born in non-English speaking countries was highest in the Sydney South West Area (38.8%), followed by the Sydney West Area (32.7%).

In 2007, 90.7% of all mothers commenced antenatal care before 20 weeks gestation. There was some variation among country-of-birth groups, with 91.7% of mothers born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 78.0% of mothers born in Melanesia, Micronesia and Polynesia, and 84.9% of mothers born in the Middle East and Africa.

In 2007, smoking at any time during pregnancy was more common among mothers born in English speaking countries

than mothers born in non-English speaking countries. About one in six mothers born in English speaking countries smoked at some time during pregnancy, compared with fewer than 1 in 10 mothers born in other country-of-birth groups.

The highest rates of low birth weight were in babies of mothers born in Southern Asia (9.1%) and Melanesia, Micronesia and Polynesia (7.4%). Babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States were least likely to be of low birth weight. The highest rate of prematurity was among babies of mothers born in Melanesia, Micronesia and Polynesia (8.3%). Babies of mothers born in North-East Asia were least likely to be premature. The perinatal mortality rate was highest among babies of mothers born in Middle Eastern and African countries (11.3 per 1000) and lowest among babies of mothers born in North-East Asia (5.7 per 1000).

Congenital conditions

About 2% of infants are born with congenital conditions each year in NSW. In 2001–2007, anomalies of the cardiovascular system were most commonly reported, followed by anomalies of the musculoskeletal system and the genito-urinary system. This is a similar pattern to previous years.

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

Perinatal deaths

Confidential reports on 827 perinatal deaths in 2007 were reviewed. Overall, 204 (24.7%) of these deaths were unexplained stillbirths. The next most common obstetric antecedents of death were congenital abnormality (20.7%), spontaneous preterm labour (18.4%) and antepartum haemorrhage (8.5%). The most common cause of neonatal death was extreme prematurity (45.3%), followed by congenital abnormalities (24.1%). Post-mortem examinations were carried out in 34.2% of all perinatal deaths.

3. Methods

Data sources

The NSW Midwives Data Collection

The NSW 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 live births, and stillbirths of at least 20 weeks gestation or at least 400 g 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 in Appendix 4, includes demographical items and items on maternal health, the pregnancy, labour, birth and perinatal outcomes. Completed forms are sent to the Data Collections and Reporting Unit in the Demand and Performance Evaluation Branch of the NSW Department of Health, where they are compiled into the MDC database.

Sixty-nine percent of MDC notifications are received electronically from hospital obstetric information systems. These notifications are received by disk or 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 ObstetriX database, which supplies 41.2% of all MDC records and covers Northern Sydney and Central Coast Area Health Service, South Eastern Sydney and Illawarra Area Health Service, Sydney West Area Health Service, and some hospitals in Hunter and New England Area Health Service. The following systems also supply records to the MDC: Cerner (Sydney South West Area Health Service), 18.1%; Meditech, which supplies data for three Ramsay Private Hospitals (North Shore Private Hospital, Westmead Private Hospital and St George Private Hospital), 6.1%; Sydney Adventist Hospital database, 2.3%; and Newcastle Private Hospital database, 2.0%. A map of NSW health areas is shown in Figure A.

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 NSW Register of Congenital Conditions

The NSW Register of Congenital Conditions, formerly known as the Birth Defects Register, is a population-based surveillance system established to monitor congenital conditions detected during pregnancy or at birth, or diagnosed in infants up to 1 year of age. The Register was established in 1990 and, under the *NSW Public Health Act 1991*, from

1 January 1998, doctors, hospitals and laboratories have been required to notify congenital conditions detected during pregnancy, at birth, or up to 1 year of life. The Register is administered by the Centre for Epidemiology and Research of the NSW Department of Health.

There are three types of conditions that are reported to the Register:

- Conditions that affect the growth, development and health of the baby and that are present before birth, such as cleft lip, dislocated hip and problems with the development of the heart, lungs or other organs
- Conditions due to changes in the number of the baby's chromosomes, such as Down Syndrome
- Four conditions due to changes in the baby's inherited genetic information: cystic fibrosis, phenylketonuria, congenital hypothyroidism and thalassaemia major.

The activities of the Register include the following: annual publication of information on congenital conditions 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 Australian Institute of Health and Welfare (AIHW) National Perinatal Statistics Unit (NPSU) for monitoring of congenital conditions at a national level, and incorporation into the NPSU's Congenital Anomalies in Australia Reports. The NPSU is also responsible for providing Australian information on congenital conditions to the International Clearinghouse for Birth Defects Monitoring Systems, a non-governmental organisation of the World Health Organization.

Sources of notifications to the Register include the MDC, specialist paediatric hospitals, cytogenetic laboratories and individual health-care providers. The Register 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 the following two formats: aggregate information similar to that contained in this report, and data concerning individuals with identifying information removed. All requests for data should be submitted in writing to the Director, Centre for

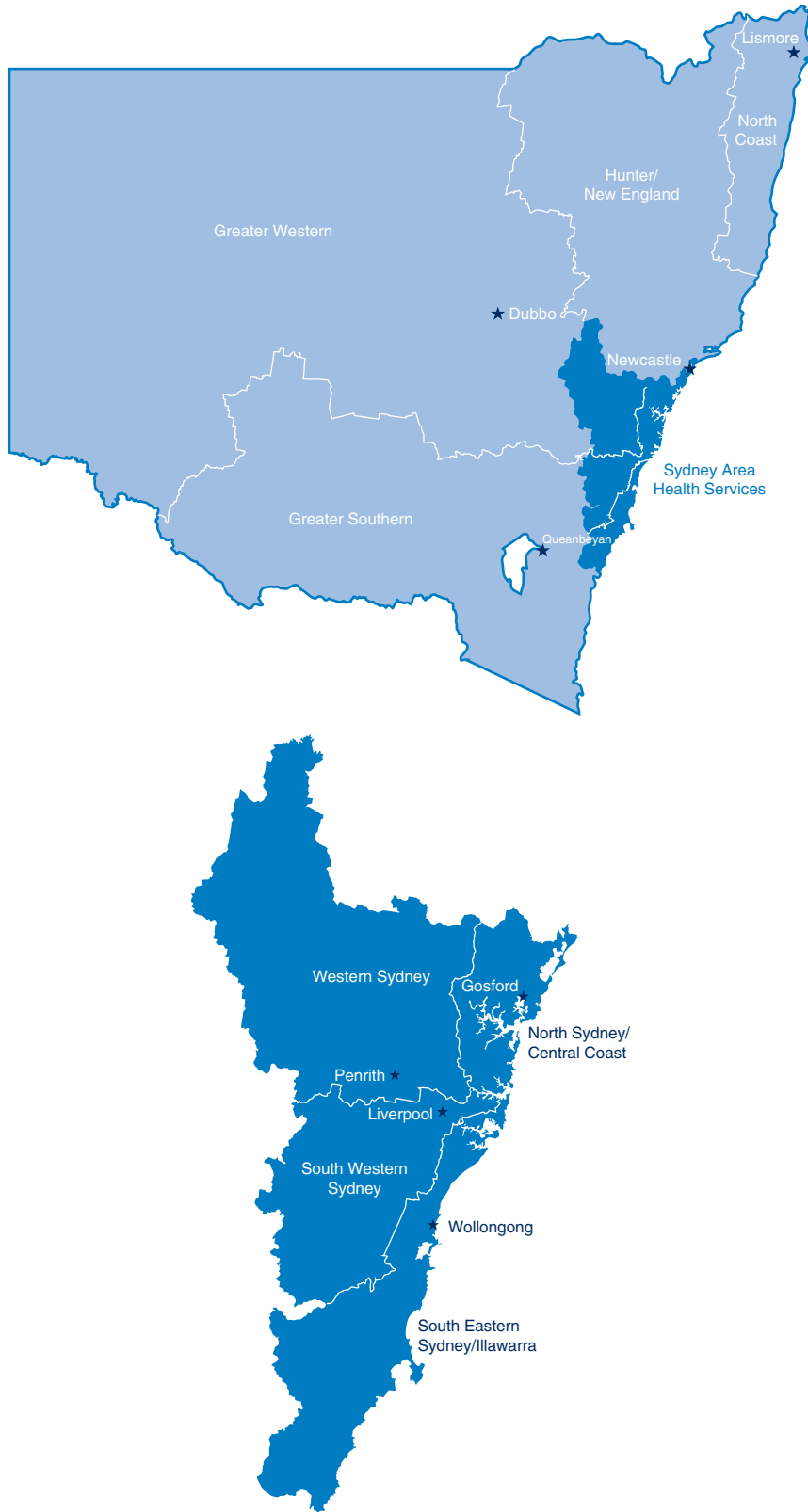


Figure A. Map of NSW health areas.

Epidemiology and Research. Requests for data concerning individuals for sufficiently important research purposes will be referred to the NSW Population and Health Services Research Ethics Committee. Procedures for release of personal information are described in the Department's Policy Directive PD2006-077 *Data Collections – Disclosure of unit record data held for research or management of health services* which is available on the NSW Department of Health's website at www.health.nsw.gov.au.

The NSW Admitted Patient Data Collection

For this report, data from the NSW Admitted Patient Data Collection (APDC) for public and private hospitals in NSW were linked to MDC data to produce information on postnatal length of stay in NSW hospitals, and mother's health insurance status. Approval for the linkage was obtained from the NSW Population and Health Services Research Ethics Committee. Record linkage was carried out by the Centre for Health Record Linkage (www.cherel.org.au).

The APDC covers demographic and episode-related data for every inpatient that 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 APDC is maintained by the Data Collections and Reporting Unit in the Demand and Performance Evaluation Branch 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 among live-born babies, and stillbirths of at least 20 weeks gestation or at least 400 g birth weight. 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. 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 Strait Islander mothers were therefore combined for this analysis. For ease of reference, 'Aboriginal' is used to refer to both Aboriginal and 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 3-year period 2004–2006. Record linkage was carried out at the Centre for Health Record Linkage (www.cherel.org.au). The overall linkage rate was 93.9% of MDC records and 98.5% 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 geographical location were based on health area of residence as reported to the MDC.

Reference

1. McCarty DJ, Tull ES, Moy CS, Kwok CK, LaPorte RE. Ascertainment corrected rates: applications of capture–recapture methods. *Int J Epidemiol* 1993; 22(3): 559–65. doi:10.1093/ije/22.3.559

Definitions

Aboriginal or Torres Strait Islander

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

Apgar score

A numerical scoring system routinely administered 1 and 5 min after birth to evaluate the condition of the baby. The score ranges from 0 to 10 (10 being perfect). It takes account of the following five physical signs, each of which is assigned a component score of 0, 1 or 2: heart rate, respiration, muscle tone, reflexes and colour.

Augmentation

Artificial rupture of the membranes or use of oxytocic drugs after spontaneous onset of labour.

Birth weight

The newborn infant's first bare weight in grams. Low birth weight: birth weight less than 2500 g. Very low birth weight: birth weight less than 1500 g. Extremely low birth weight: birth weight less than 1000 g.

Caesarean section

Birth 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.

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 in this report.

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).

Live birth

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

Neonatal death

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

Neonatal mortality rate

The number of neonatal deaths per 1000 live births.

Parity

The total number of live births 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 1000 total births in a year (live births 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.

Spontaneous abortion

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

Stillbirth

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

Termination of pregnancy

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

Explanatory notes

Breastfeeding

From 2007, the MDC has collected information on infant feeding at the time of discharge from hospital (or discharge from care for home births) for all infants born in NSW. Infant feeding is reported via the following three tick-box categories: breastfeeding, expressed breastmilk and infant formula. More than one type of feeding may be reported by ticking multiple boxes. In this report, infant feeding is classified into the following three categories: full breastfeeding, which includes babies who were reported to be breastfed or to be receiving expressed breast milk and no infant formula; any breastfeeding, which includes babies who were reported to be receiving breast milk and infant formula; and no breastfeeding.

Rates of congenital conditions

The Register of Congenital Conditions collects data pertaining to congenital conditions, regardless of the outcome of pregnancy. This includes notifications of live births, stillbirths, terminations of pregnancy and spontaneous abortions. Rates are calculated using births (that is, live births and stillbirths) as the denominator, because denominator populations for pregnancies of 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 Register of Congenital Conditions.

Differences in rates of conditions published by the Register of Congenital Conditions compared with interstate registers may be due to differences in coding practices, in categories of conditions 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.

Level of obstetric hospitals

Level 1: local maternity service (no births); postnatal, only for women with normal outcomes.

Level 2: small maternity services; normal-risk pregnancy and births only. Staffed by general practitioners and midwives.

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

Level 4: regional referral–metropolitan district services; birth 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: regional referral–metropolitan services; 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 services (supra regional). All functions – normal, moderate and high-risk births. Has Level 3 neonatal intensive care.

Type of birth

The 'vaginal breech' category covers all forms of vaginal breech birth, 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.

4. Trends in NSW

Confinements and births by plurality

There were 96 030 births to 94 602 women reported in 2007 (Table 1). In 2003 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% compared with 2004; in 2006, the number of births

increased to 92 781, a rise of 7.9% compared with 2004; and in 2007, and the number of births increased to 96 030, a rise of 12.2% compared with 2004. The proportion of pregnancies that are multiple (twin and triplet) has remained stable at about 1.6% since 2003.

Table 1. Plurality, NSW, 2003–2007

Plurality	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
Singleton	83 677	98.4	82 983	98.5	87 699	98.4	89 890	98.4	93 194	98.5
Twins	1330	1.6	1274	1.5	1413	1.6	1386	1.5	1388	1.5
Triplets	23	0.0	30	0.0	27	0.0	37	0.0	20	0.0
Quadruplets	2	0.0	1	0.0	1	0.0	2	0.0	0	0.0
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0
Births										
Singleton	83 677	96.8	82 983	96.9	87 699	96.8	89 890	96.9	93 194	97.0
Twins	2660	3.1	2549	3.0	2826	3.1	2772	3.0	2776	2.9
Triplets	69	0.1	90	0.1	81	0.1	111	0.1	60	0.1
Quadruplets	8	0.0	4	0.0	4	0.0	8	0.0	0	0.0
TOTAL	86 414	100.0	85 626	100.0	90 610	100.0	92 781	100.0	96 030	100.0

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

Health area of residence

In 2007, the largest number of births occurred in the Sydney South West Area, followed by Sydney West and

South Eastern Sydney and Illawarra Areas (Table 2). Compared with 2004, there were increases in the

Table 2. Maternal health area of residence, NSW, 2003–2007

Health area	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	19 485	22.9	18 720	22.2	19 713	22.1	20 480	22.4	21 206	22.4
South Eastern Sydney and Illawarra	13 898	16.3	14 121	16.8	14 619	16.4	15 021	16.4	15 597	16.5
Sydney West	15 942	18.7	15 834	18.8	17 019	19.1	17 192	18.8	18 068	19.1
Northern Sydney and Central Coast	13 142	15.5	13 032	15.5	13 697	15.4	14 068	15.4	14 447	15.3
Hunter and New England	9694	11.4	9672	11.5	10 381	11.6	10 561	11.6	10 868	11.5
North Coast	4587	5.4	4690	5.6	4973	5.6	4989	5.5	5199	5.5
Greater Southern	3834	4.5	3838	4.6	3993	4.5	4026	4.4	4052	4.3
Greater Western	3898	4.6	3784	4.5	3985	4.5	4073	4.5	4062	4.3
Other/Not stated	552	0.6	597	0.7	760	0.9	905	1.0	1103	1.2
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

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

numbers of births in all health areas. The increase occurred mainly in the metropolitan areas, with the Sydney South West and Sydney West Areas reporting over 2000 more births in 2007 than in 2004; and Northern Sydney and Central Coast, and South Eastern Sydney and Illawarra Areas reporting over 1000 more births in 2007 than in 2004.

Maternal age

The number of mothers giving birth was stable for teenage mothers and increased across all other age groups in 2007 compared with previous years, with the largest increase among mothers aged 35–39 years. The percentage of mothers who were teenagers fell from 4.0% in 2003 to

3.6% in 2007. The percentage of mothers aged 35 years and over increased from 19.3 to 22.8% of all mothers giving birth (Figure 1, Table 3).

The mean maternal age rose from 30.2 to 30.6 years over the 5 years from 2003 to 2007. The trend towards later childbirth is evident among both primiparous and multiparous mothers; the mean maternal age rose from 28.5 to 29.0 years for primiparous mothers and from 31.4 to 31.8 years for multiparous mothers. The proportion of mothers giving birth for the first time who were aged 35 years or more increased from 12.3 to 15.1% over the 5-year period, and the proportion of multiparous mothers who were aged 35 years or more increased from 24.5 to 28.4%.

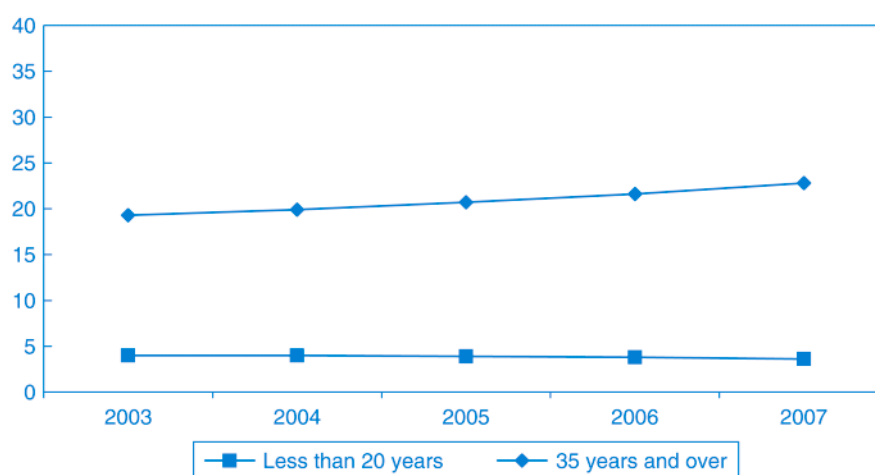


Figure 1. Mothers aged less than 20 years and 35 years and over, NSW, 2003–2007. Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Table 3. Maternal age, NSW, 2003–2007

Maternal age (years)	2003		2004		2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
<15	23	0.0	22	0.0	30	0.0	18	0.0	20	0.0
15–19	3363	4.0	3365	4.0	3410	3.8	3453	3.8	3342	3.5
20–24	12 529	14.7	12 095	14.3	12 739	14.3	12 686	13.9	13 150	13.9
25–29	24 138	28.4	23 113	27.4	24 006	26.9	24 553	26.9	25 361	26.8
30–34	28 522	33.5	28 906	34.3	30 502	34.2	30 785	33.7	31 124	32.9
35–39	13 582	16.0	13 808	16.4	15 275	17.1	16 526	18.1	18 047	19.1
40–44	2752	3.2	2819	3.3	3017	3.4	3073	3.4	3375	3.6
45+	113	0.1	142	0.2	149	0.2	163	0.2	166	0.2
Not stated	10	0.0	18	0.0	12	0.0	58	0.1	17	0.0
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

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

Maternal country of birth

In the period 2003–2007, about 70% of mothers were born in Australia. In 2007, mothers born in the United Kingdom, New Zealand, China, Vietnam and India together

accounted for 11.2% of all mothers (Table 4). Further information on maternal country of birth is shown in Chapter 8.

Table 4. Maternal country of birth, NSW, 2003–2007#

Country of birth	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Australia	61 432	72.2	60 961	72.3	64 246	72.1	65 226	71.4	66 526	70.3
United Kingdom	2368	2.8	2229	2.6	2172	2.4	2288	2.5	2494	2.6
New Zealand	2121	2.5	1989	2.4	2233	2.5	2343	2.6	2450	2.6
China	1586	1.9	1672	2.0	1767	2.0	1787	2.0	2354	2.5
Vietnam	1863	2.2	1684	2.0	1652	1.9	1720	1.9	1752	1.9
India	810	1.0	888	1.1	1094	1.2	1294	1.4	1580	1.7
Lebanon	1696	2.0	1594	1.9	1608	1.8	1547	1.7	1505	1.6
Philippines	1192	1.4	1083	1.3	1160	1.3	1220	1.3	1359	1.4
Iraq	648	0.8	621	0.7	681	0.8	743	0.8	821	0.9
Fiji	691	0.8	686	0.8	670	0.8	697	0.8	749	0.8
Indonesia	489	0.6	519	0.6	541	0.6	578	0.6	653	0.7
South Africa	486	0.6	547	0.6	579	0.6	598	0.7	599	0.6
South Korea	328	0.4	389	0.5	419	0.5	485	0.5	564	0.6
Pakistan	260	0.3	291	0.3	345	0.4	396	0.4	440	0.5
United States of America	355	0.4	372	0.4	359	0.4	428	0.5	407	0.4
Hong Kong	301	0.4	314	0.4	332	0.4	338	0.4	392	0.4
Malaysia	271	0.3	283	0.3	339	0.4	315	0.3	386	0.4
Thailand	253	0.3	277	0.3	290	0.3	309	0.3	382	0.4
Bangladesh	198	0.2	233	0.3	293	0.3	327	0.4	376	0.4
Ireland	333	0.4	281	0.3	325	0.4	299	0.3	367	0.4
Japan	293	0.3	260	0.3	339	0.4	288	0.3	352	0.4
Sri Lanka	299	0.4	310	0.4	320	0.4	324	0.4	339	0.4
Afghanistan	143	0.2	159	0.2	263	0.3	335	0.4	334	0.4
Cambodia	295	0.3	274	0.3	268	0.3	276	0.3	300	0.3
Western Samoa	303	0.4	289	0.3	306	0.3	298	0.3	299	0.3
Sudan	117	0.1	154	0.2	226	0.3	283	0.3	299	0.3
Canada	225	0.3	237	0.3	227	0.3	262	0.3	250	0.3
Germany	237	0.3	205	0.2	211	0.2	240	0.3	236	0.2
Turkey	265	0.3	268	0.3	251	0.3	269	0.3	231	0.2
Chile	187	0.2	172	0.2	194	0.2	189	0.2	218	0.2
Tonga	219	0.3	246	0.3	222	0.2	212	0.2	187	0.2
North Korea	206	0.2	153	0.2	140	0.2	124	0.1	169	0.2
Iran	192	0.2	159	0.2	176	0.2	181	0.2	164	0.2
Syria	154	0.2	159	0.2	147	0.2	132	0.1	163	0.2
Egypt	173	0.2	159	0.2	177	0.2	162	0.2	162	0.2
Poland	116	0.1	130	0.2	127	0.1	163	0.2	152	0.2
France	96	0.1	119	0.1	122	0.1	138	0.2	149	0.2
Russian Federation (not USSR)	106	0.1	115	0.1	151	0.2	121	0.1	144	0.2
Singapore	129	0.2	119	0.1	146	0.2	121	0.1	144	0.2
Serbia and Montenegro	0	0.0	0	0.0	168	0.2	163	0.2	137	0.1
Papua New Guinea	148	0.2	156	0.2	106	0.1	126	0.1	136	0.1
Netherlands	93	0.1	97	0.1	87	0.1	99	0.1	132	0.1
Laos	114	0.1	124	0.1	108	0.1	92	0.1	127	0.1
Taiwan	96	0.1	80	0.1	107	0.1	102	0.1	122	0.1
Nepal	35	0.0	46	0.1	75	0.1	78	0.1	119	0.1
Brazil	53	0.1	63	0.1	86	0.1	81	0.1	117	0.1
Former Yugoslavia	571	0.7	464	0.6	135	0.2	132	0.1	115	0.1
Bosnia-Herzegovina	0	0.0	0	0.0	98	0.1	96	0.1	114	0.1
Macedonia	0	0.0	0	0.0	106	0.1	105	0.1	108	0.1
Zimbabwe	32	0.0	44	0.1	68	0.1	88	0.1	101	0.1
Other/Not stated	2454	2.9	2614	3.1	2878	3.2	3097	3.4	2826	3.0
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
#Countries of birth for which there were 100 or more confinements in 2007.

Maternal Aboriginality

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 2161 in 2003 to 2888 in 2007, an increase from 2.5 to 3.1% of all mothers (Table 5). Further information on maternal Aboriginality and reporting of Aboriginality is shown in Chapter 7.

Table 5. Maternal Aboriginality, NSW, 2003–2007

Aboriginality	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Aboriginal or Torres Strait Islander	2161	2.5	2308	2.7	2474	2.8	2611	2.9	2888	3.1
Non-Aboriginal or Torres Strait Islander	82 831	97.4	81 948	97.2	86 570	97.1	88 176	96.6	91 519	96.7
Not stated	40	0.0	32	0.0	96	0.1	528	0.6	195	0.2
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	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 41–42%, while the proportion of mothers giving birth to a second

to fifth baby has been stable at about 56%. The number of women giving birth for the sixth or subsequent time rose by 17.9% from 1258 in 2003 to 1483 in 2007 – however, these mothers comprised only 1.6% of all mothers in 2007.

Table 6. Previous pregnancies, NSW, 2003–2007

No. previous pregnancies (>20 weeks gestation)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	35 879	42.2	35 796	42.5	37 073	41.6	37 855	41.5	39 188	41.4
1–4	47 847	56.3	47 136	55.9	50 566	56.7	51 443	56.3	53 496	56.5
5+	1258	1.5	1312	1.6	1441	1.6	1579	1.7	1483	1.6
Not stated	48	0.1	44	0.1	60	0.1	438	0.5	435	0.5
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

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

Duration of pregnancy at first antenatal visit

Between 2003 and 2007, the proportion of mothers commencing antenatal care before 20 weeks gestation

rose from 86.6 to 90.7%, while the proportion of mothers starting antenatal care at 20+ weeks gestation declined from 12.9 to 7.2% between 2003 and 2007 (Table 7).

Table 7. Duration of pregnancy at first antenatal visit, NSW, 2003–2007

Duration of pregnancy (weeks)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–19	73 615	86.6	73 775	87.5	78 456	88.0	79 874	87.5	85 781	90.7
20+	10 929	12.9	9934	11.8	10 169	11.4	10 218	11.2	6827	7.2
Not stated	488	0.6	579	0.7	515	0.6	1223	1.3	1994	2.1
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	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 2003 and 2007: in 2003, 12 875 (15.1%) mothers reported smoking in pregnancy, 12 472 (14.8%) in 2004, 12 738 (14.3%) in 2005, 12 307 (13.5%) in 2006 and 12 068 (12.8%) in 2007.

Of mothers who smoked during pregnancy in 2007, 5.6% 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, 2003–2007

Cigarettes smoked in the second half of the pregnancy	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	427	3.3	485	3.9	552	4.3	514	4.2	672	5.6
1–10 per day	6451	50.1	6303	50.5	6483	50.9	6243	50.7	6334	52.5
More than ten per day	5680	44.1	5378	43.1	5129	40.3	5016	40.8	4430	36.7
Smoked, amount not stated	317	2.5	297	2.4	572	4.5	455	3.7	631	5.2
Not stated	0	0.0	9	0.1	2	0.0	79	0.6	1	0.0
TOTAL	12 875	100.0	12 472	100.0	12 738	100.0	12 307	100.0	12 068	100.0

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

Place of birth

In 2007, the majority of mothers planned to give birth in a hospital labour ward, and 4.1% of mothers planned to give birth in a birth centre (Table 9). Sixty-nine percent of mothers who planned to give birth in a birth centre actually

did so. The total number of reported planned homebirths rose slightly from 132 in 2003 to 175 in 2007, while the reported number of planned homebirths that occurred at home rose from 109 in 2003 to 144 in 2007.

Table 9. Maternal place of birth, NSW, 2003–2007

Place of birth	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hospital	81 441	95.8	80 701	95.7	85 660	96.1	87 567	95.9	90 015	95.2
Birth centre	2075	2.4	2003	2.4	1830	2.1	1878	2.1	2714	2.9
Planned birth centre/hospital admission	1029	1.2	1126	1.3	1128	1.3	1240	1.4	1205	1.3
Planned homebirth	109	0.1	93	0.1	112	0.1	125	0.1	144	0.2
Planned homebirth/hospital admission	23	0.0	21	0.0	40	0.0	47	0.1	31	0.0
Born before arrival	355	0.4	344	0.4	369	0.4	388	0.4	490	0.5
Not stated	0	0.0	0	0.0	1	0.0	70	0.1	3	0.0
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

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

Hypertension and diabetes

Reporting of gestational diabetes was stable at 4–5% of mothers between 2003 and 2007, whereas rates of diabetes mellitus have remained stable at about 0.6% over the 5-year period (Table 10). During 2006, there was a change in the format for reporting hypertension in pregnancy

where reporting of pre-eclampsia was replaced with reporting of proteinuric and non-proteinuric pregnancy-induced hypertension. Overall, hypertension in pregnancy was reported among 6.6% of mothers in 2007, compared with 6.5% in 2003.

Table 10. Maternal hypertension or diabetes, NSW, 2003–2007[#]

Condition	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	505	0.6	464	0.6	503	0.6	541	0.6	546	0.6
Gestational diabetes	3792	4.5	3592	4.3	4165	4.7	4375	4.8	4091	4.3
Essential hypertension	879	1.0	940	1.1	842	0.9	804	0.9	721	0.8
Pre-eclampsia	4645	5.5	4606	5.5	4553	5.1	3198	3.5	–	–
Pregnancy induced hypertension [#]										
– proteinuric	–	–	–	–	–	–	612	0.7	1625	1.7
– non-proteinuric	–	–	–	–	–	–	626	0.7	3904	4.1
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

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

[#]During 2006, the reporting format changed so that reporting of pre-eclampsia ceased and reporting of pregnancy-induced hypertension commenced. This transition meant that in 2006, pre-eclampsia was reported in 3198 of 55 078 mothers; and pregnancy-induced hypertension was reported in 1238 of 36 237 mothers.

Labour

The rate of spontaneous onset of labour fell from 60.4% in 2003 to 57.3% in 2007 (Table 11). The rate of induction of labour was 25.9% in 2007, similar to previous years. The most common reported reason for induction of labour in

2007 was prolonged pregnancy (41 or more weeks) (28.2%), followed by prelabour rupture of membranes (11.5%), hypertensive disease (7.9%), diabetes (5.8%), suspected intrauterine growth retardation (3.9%), fetal distress (1.7%) and fetal death (1.2%).

Table 11. Onset and augmentation of labour, NSW, 2003–2007

Onset of labour	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	38 110	44.8	37 137	44.1	38 027	42.7	38 706	42.4	38 291	40.5
Spontaneous augmented with ARM [*]	5992	7.0	6090	7.2	6152	6.9	6318	6.9	7339	7.8
Spontaneous augmented with oxytocics/ prostaglandins [#]	7258	8.5	7580	9.0	7812	8.8	8146	8.9	8553	9.0
No labour	12 820	15.1	12 930	15.3	14 467	16.2	15 516	17.0	15 878	16.8
Induced – oxytocics/prostaglandins	7265	8.5	7049	8.4	7417	8.3	7306	8.0	8607	9.1
Induced – ARM only	1331	1.6	1267	1.5	1595	1.8	1447	1.6	1648	1.7
Induced – ARM + oxytocics/prostaglandins	11 965	14.1	11 912	14.1	13 273	14.9	13 389	14.7	14 003	14.8
Induced – other [#]	289	0.3	322	0.4	384	0.4	417	0.5	263	0.3
Not stated	2	0.0	1	0.0	13	0.0	70	0.1	20	0.0
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0

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

^{*}ARM: artificial rupture of membranes.

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

Birth

Among NSW mothers, the rate of normal vaginal birth decreased from 62.8% in 2003 to 59.9% in 2007 (Table 12). The caesarean section rate increased from 26.5 to 29.0%. The rate of instrumental birth remained steady at 10 to 11%.

Operative and instrumental births are more common among privately than publicly-insured mothers (Table 13).

Among privately insured mothers, the rate of normal vaginal birth fell from 52.1% in 2003 to 47.7% in 2007 and the caesarean section rate increased from 32.4 to 37.9%. Among publicly insured mothers, the rate of normal vaginal birth fell from 69.5 to 66.5% and the caesarean section rate rose from 21.5 to 24.6%.

Table 12. Type of birth, NSW, 2003–2007

Type of birth	Year									
	2003		2004		2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	53 424	62.8	52 366	62.1	54 568	61.2	55 187	60.4	56 648	59.9
Forceps	2875	3.4	2762	3.3	2801	3.1	2885	3.2	3273	3.5
Vacuum extraction	5788	6.8	5902	7.0	6372	7.1	6332	6.9	6779	7.2
Vaginal breech	371	0.4	347	0.4	322	0.4	366	0.4	381	0.4
Elective caesarean section	12 820	15.1	12 930	15.3	14 467	16.2	15 507	17.0	15 878	16.8
Emergency caesarean section [#]	9744	11.5	9974	11.8	10 610	11.9	10 827	11.9	11 572	12.2
Not stated	10	0.0	7	0.0	0	0.0	211	0.2	71	0.1
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	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 by type of birth, NSW, 2002–2006[#]

Insurance status – type of birth	Year									
	2002		2003		2004		2005		2006	
	No.	%	No.	%	No.	%	No.	%	No.	%
Public										
Normal vaginal	35 698	69.5	35 607	67.8	36 085	67.4	38 652	67.0	39 934	66.5
Forceps	1431	2.8	1435	2.7	1375	2.6	1359	2.4	1517	2.5
Vacuum extraction	2963	5.8	3117	5.9	3161	5.9	3446	6.0	3477	5.8
Vaginal breech	231	0.4	262	0.5	247	0.5	231	0.4	277	0.5
Elective caesarean section	5599	10.9	6186	11.8	6452	12.1	7426	12.9	8053	13.4
Emergency caesarean section ^{##}	5425	10.6	5932	11.3	6202	11.6	6581	11.4	6733	11.2
Not stated	7	0.0	0	0.0	0	0.0	0	0.0	72	0.1
TOTAL	51 354	100.0	52 539	100.0	53 522	100.0	57 695	100.0	60 063	100.0
Private										
Normal vaginal	15 004	52.1	13 863	50.4	13 682	50.2	14 143	48.9	14 107	47.7
Forceps	1576	5.5	1401	5.1	1332	4.9	1388	4.8	1326	4.5
Vacuum extraction	2793	9.7	2558	9.3	2621	9.6	2791	9.7	2755	9.3
Vaginal breech	79	0.3	68	0.2	61	0.2	65	0.2	69	0.2
Elective caesarean section	5648	19.6	6043	22.0	6036	22.2	6747	23.3	7291	24.6
Emergency caesarean section ^{##}	3670	12.8	3545	12.9	3507	12.9	3778	13.1	3918	13.2
Not stated	12	0.0	10	0.0	7	0.0	0	0.0	138	0.5
TOTAL	28 782	100.0	27 488	100.0	27 246	100.0	28 912	100.0	29 604	100.0
TOTAL^{###}										
Normal vaginal	54 271	64.2	53 424	62.8	52 366	62.1	54 568	61.2	55 187	60.4
Forceps	3034	3.6	2875	3.4	2762	3.3	2801	3.1	2885	3.2
Vacuum extraction	5855	6.9	5788	6.8	5902	7.0	6372	7.1	6332	6.9
Vaginal breech	353	0.4	371	0.4	347	0.4	322	0.4	366	0.4
Elective caesarean section	11 720	13.9	12 820	15.1	12 930	15.3	14 467	16.2	15 507	17.0
Emergency caesarean section ^{##}	9335	11.0	9744	11.5	9974	11.8	10 610	11.9	10 827	11.9
Not stated	19	0.0	10	0.0	7	0.0	0	0.0	211	0.2
TOTAL	84 587	100.0	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0

Source: Linked data of the NSW Midwives Data Collection and NSW Admitted Patient Data Collection. Centre for Epidemiology and Research, NSW Department of Health.
[#]Figures for 2002–2005 differ from those reported previously as the linkage has been updated.
^{##}Emergency caesarean section includes cases where caesarean section was reported but type of onset of labour was not reported.
^{###}Total includes mothers where type of health insurance was not stated.

Baby sex

There was no significant change in the pattern of baby sex since 2003, with slightly more male babies born than females in each year. In 2007, 49 313 (51.4%) of babies were male, 46 656 (48.6%) were female, 10 were of indeterminate sex, and sex was not reported for 51 babies. This compares with babies born in 2003, when 44 623 (51.6%) of 86 414 babies were male, 41 722 (48.3%) were female, 19 were of indeterminate sex, and sex was not reported for 50 babies.

Gestational age

In 2007, 7.4% of babies were born prematurely (less than 37 weeks gestation), compared with 7.0% in 2003 (Table 14). Over the 5-year period, about 93% of babies were born at term (37–41 weeks gestation). Over the last 5 years, the percentage of postmature (42+ weeks gestation) has been declining, down from 2.5% in 2003 to 0.9% in 2007.

Table 14. Gestational age of babies, NSW, 2003–2007

Gestational age (weeks)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
<28	586	0.7	605	0.7	622	0.7	674	0.7	707	0.7
28–31	639	0.7	667	0.8	654	0.7	675	0.7	660	0.7
32–36	4810	5.6	4975	5.8	5248	5.8	5490	5.9	5703	5.9
37–41	78 241	90.5	77 614	90.6	82 367	90.9	84 424	91.0	88 011	91.6
42+	2128	2.5	1761	2.1	1709	1.9	1499	1.6	907	0.9
Not stated	10	0.0	4	0.0	10	0.0	19	0.0	42	0.0
TOTAL	86 414	100.0	85 626	100.0	90 610	100.0	92 781	100.0	96 030	100.0

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

Birth weight

Since 2003, the rate of low birth weight (less than 2500 g) has been just over 6% (Table 15). The rate was 6.1% in 2007.

Table 15. Birth weight of babies, NSW, 2003–2007

Birth weight (g)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
<500	223	0.3	214	0.2	227	0.3	239	0.3	255	0.3
500–999	393	0.5	395	0.5	392	0.4	411	0.4	422	0.4
1000–1499	497	0.6	558	0.7	513	0.6	562	0.6	512	0.5
1500–1999	1049	1.2	1059	1.2	1100	1.2	1167	1.3	1119	1.2
2000–2499	3221	3.7	3231	3.8	3452	3.8	3554	3.8	3541	3.7
2500–2999	12 877	14.9	12 797	14.9	13 675	15.1	13 906	15.0	14 265	14.9
3000–3499	30 803	35.6	30 238	35.3	32 451	35.8	33 074	35.6	34 790	36.2
3500–3999	26 982	31.2	26 570	31.0	27 822	30.7	28 705	30.9	29 648	30.9
4000–4499	8810	10.2	8931	10.4	9298	10.3	9389	10.1	9717	10.1
4500+	1507	1.7	1584	1.8	1613	1.8	1649	1.8	1653	1.7
Not stated	52	0.1	49	0.1	67	0.1	125	0.1	108	0.1
TOTAL	86 414	100.0	85 626	100.0	90 610	100.0	92 781	100.0	96 030	100.0

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

Apgar score

In 2007, 2.1% of babies were born with an Apgar score of less than 4 (Table 16). These rates are similar to those of less than 7 at 5 minutes and 1.1% were born with a score previous years.

Table 16. Apgar score at 5 minutes, NSW, 2003–2007#

Apgar score	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–4	899	1.0	921	1.1	963	1.1	1007	1.1	1093	1.1
5–6	865	1.0	844	1.0	833	0.9	890	1.0	910	0.9
7+	84 473	97.8	83 653	97.7	88 621	97.8	90 645	97.7	93 685	97.6
Not stated	177	0.2	208	0.2	193	0.2	239	0.3	342	0.4
TOTAL	86 414	100.0	85 626	100.0	90 610	100.0	92 781	100.0	96 030	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 2003–2007, the perinatal mortality rate varied from 8.6 to 9.0 per 1000 (Table 17). In 2007, 72.5% of all reported perinatal deaths were stillbirths and 27.5% were neonatal deaths.

In 2007, of the 868 perinatal deaths in NSW, 821 (94.6%) were reported among planned hospital births, 24 (2.8%) among planned birth-centre births, two occurred in a planned home birth, and 20 were among babies born before arrival at hospital.

Table 17. Perinatal outcomes, NSW, 2003–2007#

Year	Liveborn surviving		Stillbirth		Neonatal death		Death – age not stated		Not stated		Total births		Perinatal death rate/ 1000 births ^{##}
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2003	85 669	99.1	523	0.6	221	0.3	0	0.0	1	0.0	86 414	100.0	8.6
2004	84 849	99.1	561	0.7	212	0.2	0	0.0	4	0.0	85 626	100.0	9.0
2005	89 786	99.1	535	0.6	257	0.3	0	0.0	32	0.0	90 610	100.0	8.7
2006	91 840	99.0	592	0.6	229	0.2	6	0.0	114	0.1	92 781	100.0	8.8
2007	94 973	98.9	629	0.7	239	0.2	8	0.0	181	0.2	96 030	100.0	9.0

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.
##Perinatal death rate excludes deaths where the age at death was not stated.

Maternal deaths

In the period 1990–2006, 177 deaths were reported among pregnant women or women who gave birth less than 6 weeks previously. Of these, 55 (31.1%) died of incidental causes not related to the pregnancy or its management, 76 (42.9%) deaths were found to be directly due to pregnancy or its management, and 43

(24.3%) deaths were found to result from pre-existing disease or disease which developed during pregnancy (not due to direct obstetric causes), but which may have been aggravated by the physiologic effects of pregnancy (Table 18). Table 19 shows maternal deaths by cause in NSW for 2005 and 2006.

Table 18. Maternal deaths by year, NSW, 1990–2006[#]

Year	Classification									
	Direct		Indirect		Total direct and 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
2005 ^{##}	4	4.5	4	4.5	8	9.0	2	2.2	11	12.3
2006	4	4.4	3	3.3	7	7.7	3	3.3	10	11.0

Source: NSW Maternal and Perinatal Committee.

[#]Includes all deaths of women who were pregnant at the time of death, or who died within 42 days of childbirth. Direct deaths include those resulting from obstetric complications of the pregnant state, including its management. Indirect deaths include those resulting from pre-existing disease or disease which developed during pregnancy and were 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

^{##}Totals for 1999 and 2005 each include one death that was unable to be classified. Information for 2005 has been updated since the publication of the *NSW Mothers and Babies Report 2006*.¹

^{###}Total for 2004 includes one open coronial case.

Table 19. Maternal deaths by cause, NSW, 2005 and 2006[#]

Classification	Cause	No.
2005 ^{##}		
Direct	Suicide by hanging	2
Direct	Ruptured ectopic pregnancy	1
Direct	Thromboembolism	1
Indirect	Arrhythmia of unknown origin	1
Indirect	Suicide by hanging associated with pre-existing depression	1
Indirect	Heart failure associated with infective endocarditis	1
Indirect	Carcinoma of the stomach	1
Incidental	Cardiomyopathy of unknown origin	1
Incidental	Bronchopneumonia associated with cystic fibrosis	1
Unclassifiable	Collapse – cause unknown	1
TOTAL		11
2006		
Direct	Amniotic fluid embolism	3
Direct	Postpartum haemorrhage	1
Indirect	Stroke	1
Indirect	Hypoxic ischaemic encephalopathy following epileptic seizure	1
Indirect	Suicide by hanging associated with pre-existing depression	1
Incidental	Cerebral haemorrhage associated with midbrain arterio-venous malformation	1
Incidental	Hypertensive cardiomyopathy	1
Incidental	Hepatocellular carcinoma	1
TOTAL		10

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 pre-existing disease or disease which developed during pregnancy and were 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.

^{##}Information for 2005 has been updated since the publication of the *NSW Mothers and Babies Report 2006*.¹

Reference

1. Sullivan EA, Hall B, King JF. *Maternal deaths in Australia 2003–2005*. Maternal deaths series no. 3 Cat. No. PER 42. Sydney: AIHW National Perinatal Statistics Unit; 2007.

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 7 and 8, respectively.

Confinements

The largest numbers of mothers who gave birth in 2007 were resident in the Sydney South West Area ($n = 21\,206$, 22.4%), followed by the Sydney West Area ($n = 18\,068$, 19.1%) and the South Eastern Sydney and Illawarra Area ($n = 15\,597$, 16.5%) (Table 20).

Maternal age

The proportion of women giving birth at less than 20 years of age varied from 1.5% in the Northern Sydney and Central Coast Area to 7.8% in the Greater Western Area, whereas the proportion of mothers giving birth at 35 years of age or more ranged from 15.1% in the Greater Western Area to 32.6% in the Northern Sydney and Central Coast Area (Table 20).

Table 20. Maternal age by health area of residence, NSW, 2007

Health area	Maternal age (years)																TOTAL	
	12–19		20–24		25–29		30–34		35–39		40–44		45+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
Sydney South West	548	2.6	2922	13.8	5964	28.1	6889	32.5	4018	18.9	827	3.9	38	0.2	0	0.0	21 206	100.0
South Eastern Sydney and Illawarra	282	1.8	1467	9.4	3725	23.9	5876	37.7	3585	23.0	628	4.0	34	0.2	0	0.0	15 597	100.0
Sydney West	624	3.5	2860	15.8	5412	30.0	5742	31.8	2913	16.1	489	2.7	27	0.1	1	0.0	18 068	100.0
Northern Sydney and Central Coast	222	1.5	976	6.8	2942	20.4	5590	38.7	3900	27.0	783	5.4	32	0.2	2	0.0	14 447	100.0
Hunter and New England	666	6.1	2046	18.8	3162	29.1	3137	28.9	1555	14.3	285	2.6	17	0.2	0	0.0	10 868	100.0
North Coast	388	7.5	1034	19.9	1414	27.2	1372	26.4	824	15.8	155	3.0	7	0.1	5	0.1	5199	100.0
Greater Southern	281	6.9	791	19.5	1185	29.2	1145	28.3	547	13.5	96	2.4	5	0.1	2	0.0	4052	100.0
Greater Western	318	7.8	865	21.3	1230	30.3	1034	25.5	537	13.2	69	1.7	6	0.1	3	0.1	4062	100.0
Other/Not stated	33	3.0	189	17.1	327	29.6	339	30.7	168	15.2	43	3.9	0	0.0	4	0.4	1103	100.0
TOTAL	3362	3.6	13 150	13.9	25 361	26.8	31 124	32.9	18 047	19.1	3375	3.6	166	0.2	17	0.0	94 602	100.0

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

Maternal country of birth

Seventy-seven percent of women who gave birth in NSW in 2007 were born in English speaking countries, 13.0% were born in Asian countries, and 4.6% were born in the Middle East or Africa (Table 21).

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, the Middle East and Africa. In the Sydney West Area, the most common non-English speaking maternal countries of birth were in Southern Asia, the Middle East and Africa.

Table 21. Maternal country of birth by health area of residence, NSW, 2007#

Health area	Country of birth group																					
	English speaking		Central and South America		Melanesia, Micronesia and Polynesia		Southern Europe		Western and Northern Europe		Eastern Europe, Russia, Central Asian and Baltic States		Middle East and Africa		South-East Asia		North-East Asia		Southern Asia		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	12919	61.1	317	1.5	623	2.9	366	1.7	132	0.6	148	0.7	2103	9.9	2534	12.0	1117	5.3	887	4.2	21146	100.0
South Eastern Sydney and Illawarra	12309	79.1	158	1.0	126	0.8	218	1.4	199	1.3	206	1.3	481	3.1	701	4.5	841	5.4	317	2.0	15556	100.0
Sydney West	12115	67.2	143	0.8	565	3.1	136	0.8	84	0.5	122	0.7	1382	7.7	1076	6.0	885	4.9	1531	8.5	18039	100.0
Northern Sydney and Central Coast	11664	81.0	129	0.9	100	0.7	80	0.6	242	1.7	158	1.1	234	1.6	551	3.8	934	6.5	312	2.2	14404	100.0
Hunter and New England	10448	96.2	14	0.1	38	0.3	17	0.2	44	0.4	16	0.1	48	0.4	133	1.2	61	0.6	44	0.4	10863	100.0
North Coast	4951	95.5	11	0.2	25	0.5	10	0.2	35	0.7	8	0.2	29	0.6	73	1.4	18	0.3	22	0.4	5182	100.0
Greater Southern	3874	95.7	5	0.1	24	0.6	9	0.2	15	0.4	8	0.2	26	0.6	26	0.6	21	0.5	42	1.0	4050	100.0
Greater Western	3969	97.8	6	0.1	3	0.1	3	0.1	5	0.1	4	0.1	17	0.4	23	0.6	15	0.4	12	0.3	4057	100.0
Other/Not stated	860	78.0	10	0.9	14	1.3	4	0.4	26	2.4	18	1.6	23	2.1	49	4.4	74	6.7	24	2.2	1102	100.0
TOTAL	73109	77.4	793	0.8	1518	1.6	843	0.9	782	0.8	688	0.7	4343	4.6	5166	5.5	3966	4.2	3191	3.4	94399	100.0

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

#Excludes 203 mothers for which country of birth was not stated. Maternal countries of birth and country of birth groups are shown in Appendix 3.

Maternal Aboriginality

In 2007, 3.1% of mothers were reported to be Aboriginal or Torres Strait Islander (Table 22). The proportion of Aboriginal or Torres Strait Islander mothers varied from

0.9% in the Northern Sydney and Central Coast Area to 13.5% in the Greater Western Area.

Table 22. Maternal Aboriginality by health area of residence, NSW, 2007

Health area	Aboriginality							
	Aboriginal – Torres Strait Islander		Non-Aboriginal – Torres Strait Islander		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	253	1.2	20887	98.5	66	0.3	21206	100.0
South Eastern Sydney and Illawarra	246	1.6	15323	98.2	28	0.2	15597	100.0
Sydney West	363	2.0	17680	97.9	25	0.1	18068	100.0
Northern Sydney and Central Coast	137	0.9	14290	98.9	20	0.1	14447	100.0
Hunter and New England	655	6.0	10193	93.8	20	0.2	10868	100.0
North Coast	420	8.1	4763	91.6	16	0.3	5199	100.0
Greater Southern	235	5.8	3815	94.2	2	0.0	4052	100.0
Greater Western	550	13.5	3497	86.1	15	0.4	4062	100.0
Other/Not stated	29	2.6	1071	97.1	3	0.3	1103	100.0
TOTAL	2888	3.1	91519	96.7	195	0.2	94602	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 2007, 90.7% of mothers commenced antenatal care prior to 20 weeks gestation. This percentage varied from 83.7% in the Sydney South West Area to 95.9% in the Northern Sydney and Central Coast Area (Table 23).

Table 23. Duration of pregnancy at first antenatal visit by health area of residence, NSW, 2007

Health area	Duration of pregnancy at first antenatal visit (weeks)							
	0-19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	17 744	83.7	2245	10.6	1217	5.7	21 206	100.0
South Eastern Sydney and Illawarra	14 245	91.3	1175	7.5	177	1.1	15 597	100.0
Sydney West	17 115	94.7	839	4.6	114	0.6	18 068	100.0
Northern Sydney and Central Coast	13 851	95.9	537	3.7	59	0.4	14 447	100.0
Hunter and New England	9741	89.6	996	9.2	131	1.2	10 868	100.0
North Coast	4791	92.2	339	6.5	69	1.3	5199	100.0
Greater Southern	3709	91.5	281	6.9	62	1.5	4052	100.0
Greater Western	3615	89.0	305	7.5	142	3.5	4062	100.0
Other/Not stated	970	87.9	110	10.0	23	2.1	1103	100.0
TOTAL	85 781	90.7	6827	7.2	1994	2.1	94 602	100.0

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

Smoking in pregnancy

In 2007, 12.0% of mothers reported smoking in the second half of pregnancy (Table 24). The lowest reported rate was among mothers resident in the Northern Sydney and Central Coast Area (5.8%) and the highest rate among residents of the Greater Western Area (25.8%).

Table 24. Cigarettes smoked in the second half of pregnancy by health area of residence, NSW, 2007

Health area	Cigarettes smoked in the second half of pregnancy											
	None		1-10 per day		>10 per day		Smoked - amount not stated		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	18 800	88.7	1275	6.0	703	3.3	64	0.3	364	1.7	21 206	100.0
South Eastern Sydney and Illawarra	14 453	92.7	744	4.8	319	2.0	79	0.5	2	0.0	15 597	100.0
Sydney West	16 144	89.4	1047	5.8	660	3.7	212	1.2	5	0.0	18 068	100.0
Northern Sydney and Central Coast	13 598	94.1	510	3.5	261	1.8	76	0.5	2	0.0	14 447	100.0
Hunter and New England	8668	79.8	1211	11.1	890	8.2	94	0.9	5	0.0	10 868	100.0
North Coast	4055	78.0	602	11.6	473	9.1	63	1.2	6	0.1	5199	100.0
Greater Southern	3128	77.2	437	10.8	469	11.6	15	0.4	3	0.1	4052	100.0
Greater Western	2997	73.8	420	10.3	605	14.9	21	0.5	19	0.5	4062	100.0
Other/Not stated	955	86.6	88	8.0	50	4.5	7	0.6	3	0.3	1103	100.0
TOTAL	82 798	87.5	6334	6.7	4430	4.7	631	0.7	409	0.4	94 602	100.0

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

Place of birth

Ninety-five percent of mothers chose to deliver in a hospital birthing suite in 2007, compared with 4.1% who planned a birth-centre birth and 0.2% who planned a home birth (Table 25). Planned birth-centre births were most commonly reported in the Sydney West, Hunter and New England, and South Eastern Sydney and Illawarra Areas.

Labour

In 2007, the onset of labour was spontaneous in 57.3% of confinements (Table 26). Labour was induced in 25.9% of confinements and no labour (elective caesarean section) was reported in 16.8%. The rate of spontaneous onset of labour was highest among residents of the North Coast Area (64.4%). The highest rate of induction of labour was among residents of the Sydney West Area (29.2%).

Table 25. Place of birth by health area of residence, NSW, 2007

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	20413	96.3	634	3.0	51	0.2	16	0.1	2	0.0	89	0.4	1	0.0	21206	100.0
South Eastern Sydney and Illawarra	14666	94.0	558	3.6	284	1.8	17	0.1	4	0.0	67	0.4	1	0.0	15597	100.0
Sydney West	17031	94.3	475	2.6	459	2.5	14	0.1	4	0.0	85	0.5	0	0.0	18068	100.0
Northern Sydney and Central Coast	14132	97.8	192	1.3	46	0.3	19	0.1	4	0.0	54	0.4	0	0.0	14447	100.0
Hunter and New England	9663	88.9	838	7.7	265	2.4	8	0.1	2	0.0	92	0.8	0	0.0	10868	100.0
North Coast	5071	97.5	5	0.1	37	0.7	43	0.8	11	0.2	32	0.6	0	0.0	5199	100.0
Greater Southern	3975	98.1	3	0.1	26	0.6	14	0.3	1	0.0	33	0.8	0	0.0	4052	100.0
Greater Western	3991	98.3	3	0.1	34	0.8	0	0.0	3	0.1	31	0.8	0	0.0	4062	100.0
Other/Not stated	1073	97.3	6	0.5	3	0.3	13	1.2	0	0.0	7	0.6	1	0.1	1103	100.0
TOTAL	90015	95.2	2714	2.9	1205	1.3	144	0.2	31	0.0	490	0.5	3	0.0	94602	100.0

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

Table 26. Onset and augmentation of labour by health area of residence, NSW, 2007

Health area	Onset of labour																			
	Spontaneous		Spontaneous – augmented with ARM		Spontaneous – augmented with oxytocics/prostaglandins [#]		No labour		Induced – oxytocics/prostaglandins		Induced – ARM only		Induced – ARM + oxytocics/prostaglandins		Induced – other ^{##}		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	8798	41.5	1624	7.7	2382	11.2	3306	15.6	1814	8.6	272	1.3	2957	13.9	47	0.2	6	0.0	21206	100.0
South Eastern Sydney and Illawarra	5520	35.4	1259	8.1	1515	9.7	2946	18.9	1369	8.8	290	1.9	2659	17.0	36	0.2	3	0.0	15597	100.0
Sydney West	7170	39.7	1270	7.0	1455	8.1	2894	16.0	1682	9.3	259	1.4	3308	18.3	29	0.2	1	0.0	18068	100.0
Northern Sydney and Central Coast	5585	38.7	855	5.9	1231	8.5	3030	21.0	1340	9.3	280	1.9	2086	14.4	38	0.3	2	0.0	14447	100.0
Hunter and New England	4942	45.5	771	7.1	831	7.6	1537	14.1	973	9.0	215	2.0	1556	14.3	41	0.4	2	0.0	10868	100.0
North Coast	2384	45.9	566	10.9	398	7.7	749	14.4	448	8.6	111	2.1	516	9.9	26	0.5	1	0.0	5199	100.0
Greater Southern	1776	43.8	430	10.6	301	7.4	613	15.1	544	13.4	86	2.1	286	7.1	16	0.4	0	0.0	4052	100.0
Greater Western	1626	40.0	488	12.0	308	7.6	649	16.0	347	8.5	117	2.9	496	12.2	26	0.6	5	0.1	4062	100.0
Other/Not stated	490	44.4	76	6.9	132	12.0	154	14.0	90	8.2	18	1.6	139	12.6	4	0.4	0	0.0	1103	100.0
TOTAL	38291	40.5	7339	7.8	8553	9.0	15878	16.8	8607	9.1	1648	1.7	14003	14.8	263	0.3	20	0.0	94602	100.0

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

[#]May include artificial rupture of membranes (ARM).

^{##}This category includes other forms of induction such as Foley's catheter.

Birth

Sixty percent of confinements were by normal vaginal birth, 10.6% were instrumental and 29.0% were by caesarean section (Table 27). The highest rate of normal vaginal birth was among residents of the North Coast Area (67.7%), whereas the highest rates of instrumental birth were among residents of the South Eastern Sydney and Illawarra Area (13.1%). The caesarean section rate varied from 25.4% among mothers resident in the Hunter and New England Area to 35.7% in the Northern Sydney and Central Coast Area.

Birth weight

In 2007, 6.1% of births were low birth weight (less than 2500 g). These comprised 0.7% of birth weight less than 1000 g, 0.5% in the 1000–1499-gram range and 4.9% in the 1500–2499-gram range (Table 28). Rates of low birth weight ranged from 4.6% in Greater Southern Area to 7.3% in the Hunter and New England Area.

Table 27. Type of birth by health area of residence, NSW, 2007

Health area	Type of birth															
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section [#]		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	13 294	62.7	636	3.0	1547	7.3	78	0.4	3306	15.6	2335	11.0	10	0.0	21 206	100.0
South Eastern Sydney and Illawarra	8588	55.1	606	3.9	1440	9.2	53	0.3	2946	18.9	1960	12.6	4	0.0	15 597	100.0
Sydney West	10 974	60.7	808	4.5	1037	5.7	66	0.4	2894	16.0	2288	12.7	1	0.0	18 068	100.0
Northern Sydney and Central Coast	7413	51.3	524	3.6	1296	9.0	43	0.3	3030	21.0	2128	14.7	13	0.1	14 447	100.0
Hunter and New England	6971	64.1	372	3.4	679	6.2	79	0.7	1537	14.1	1228	11.3	2	0.0	10 868	100.0
North Coast	3518	67.7	97	1.9	224	4.3	26	0.5	749	14.4	576	11.1	9	0.2	5199	100.0
Greater Southern	2564	63.3	135	3.3	290	7.2	8	0.2	613	15.1	441	10.9	1	0.0	4052	100.0
Greater Western	2616	64.4	70	1.7	195	4.8	22	0.5	649	16.0	483	11.9	27	0.7	4062	100.0
Other/Not stated	710	64.4	25	2.3	71	6.4	6	0.5	154	14.0	133	12.1	4	0.4	1103	100.0
TOTAL	56 648	59.9	3273	3.5	6779	7.2	381	0.4	15 878	16.8	11 572	12.2	71	0.1	94 602	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.

Table 28. Birth weight and health area of residence, NSW, 2007

Health area	Birth weight (g)																							
	<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	51	0.2	112	0.5	132	0.6	253	1.2	793	3.7	3452	16.0	8051	37.4	6351	29.5	1933	9.0	344	1.6	45	0.2	21 517	100.0
South Eastern Sydney and Illawarra	32	0.2	54	0.3	65	0.4	210	1.3	562	3.5	2391	15.1	5912	37.3	4893	30.9	1519	9.6	214	1.3	7	0.0	15 859	100.0
Sydney West	58	0.3	78	0.4	128	0.7	201	1.1	701	3.8	2843	15.5	6635	36.2	5480	29.9	1881	10.3	321	1.8	12	0.1	18 338	100.0
Northern Sydney and Central Coast	35	0.2	46	0.3	64	0.4	146	1.0	459	3.1	1966	13.4	5400	36.8	4787	32.6	1507	10.3	241	1.6	17	0.1	14 668	100.0
Hunter and New England	43	0.4	62	0.6	70	0.6	163	1.5	471	4.3	1517	13.7	3666	33.2	3540	32.1	1268	11.5	229	2.1	8	0.1	11 037	100.0
North Coast	9	0.2	22	0.4	20	0.4	52	1.0	230	4.4	715	13.6	1844	35.0	1673	31.7	589	11.2	112	2.1	6	0.1	5272	100.0
Greater Southern	9	0.2	12	0.3	11	0.3	22	0.5	135	3.3	578	14.1	1414	34.6	1333	32.6	478	11.7	92	2.2	5	0.1	4089	100.0
Greater Western	14	0.3	23	0.6	17	0.4	61	1.5	154	3.7	665	16.1	1483	35.9	1210	29.3	419	10.1	79	1.9	7	0.2	4132	100.0
Other/Not stated	4	0.4	13	1.2	5	0.4	11	1.0	36	3.2	138	12.3	385	34.4	381	34.1	123	11.0	21	1.9	1	0.1	1118	100.0
TOTAL	255	0.3	422	0.4	512	0.5	1119	1.2	3541	3.7	14 265	14.9	34 790	36.2	29 648	30.9	9717	10.1	1653	1.7	108	0.1	96 030	100.0

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

Gestational age

The majority of births (91.6%) were at term, and 0.9% were post-term (42+ weeks). The 7.4% of preterm births comprised 0.7% born at less than 28 weeks, 0.7% at

28–31 weeks, and 5.9% at 32–36 weeks. The highest rate of preterm birth was in the Hunter and New England Area (8.8%), whereas the lowest was 5.1% in the Greater Southern Area (Table 29).

Table 29. Gestational age and health area of residence, NSW, 2007

Health area	Gestational age (weeks)													
	<28		28–31		32–36		37–41		42+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	158	0.7	168	0.8	1217	5.7	19 806	92.0	150	0.7	18	0.1	21 517	100.0
South Eastern Sydney and Illawarra	91	0.6	99	0.6	1021	6.4	14 480	91.3	165	1.0	3	0.0	15 859	100.0
Sydney West	143	0.8	141	0.8	1138	6.2	16 800	91.6	105	0.6	11	0.1	18 338	100.0
Northern Sydney and Central Coast	89	0.6	101	0.7	770	5.2	13 555	92.4	149	1.0	4	0.0	14 668	100.0
Hunter and New England	116	1.1	71	0.6	784	7.1	9910	89.8	153	1.4	3	0.0	11 037	100.0
North Coast	32	0.6	26	0.5	297	5.6	4838	91.8	79	1.5	0	0.0	5272	100.0
Greater Southern	23	0.6	14	0.3	172	4.2	3822	93.5	57	1.4	1	0.0	4089	100.0
Greater Western	40	1.0	31	0.8	249	6.0	3773	91.3	37	0.9	2	0.0	4132	100.0
Other/Not stated	15	1.3	9	0.8	55	4.9	1027	91.9	12	1.1	0	0.0	1118	100.0
TOTAL	707	0.7	660	0.7	5703	5.9	88 011	91.6	907	0.9	42	0.0	96 030	100.0

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

Infant feeding

In 2007, infant feeding on discharge from hospital was reported for 95 212 live births (Table 30). The majority of babies (78.9%) were reported to be fully breastfed, 12.9% were receiving infant formula only, and a further

6.4% were being partially breastfed. Rates of full breast-feeding varied from 72.2% in the Sydney South West Area to 85.8% in the Northern Sydney and Central Coast Area.

Table 30. Live births by infant feeding on discharge and health area of residence, NSW, 2007

Health area	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
	Sydney South West	15 406	72.2	2440	11.4	3075	14.4	413	1.9	21 334
South Eastern Sydney and Illawarra	13 021	82.6	879	5.6	1673	10.6	195	1.2	15 768	100.0
Sydney West	13 819	76.4	1226	6.8	2778	15.4	272	1.5	18 095	100.0
Northern Sydney and Central Coast	12 504	85.8	790	5.4	1120	7.7	157	1.1	14 571	100.0
Hunter and New England	8641	78.9	346	3.2	1749	16.0	221	2.0	10 957	100.0
North Coast	4462	85.2	138	2.6	487	9.3	149	2.8	5236	100.0
Greater Southern	3171	78.2	171	4.2	638	15.7	75	1.8	4055	100.0
Greater Western	3110	76.1	76	1.9	704	17.2	199	4.9	4089	100.0
Other/Not stated	956	86.4	46	4.2	76	6.9	29	2.6	1107	100.0
TOTAL	75 090	78.9	6112	6.4	12 300	12.9	1710	1.8	95 212	100.0

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

Perinatal outcomes

The perinatal mortality rate in 2007 was 9.0 per 1000 births. This rate includes all live births, and stillbirths of at least 400 g birth weight or at least 20 weeks gestation (Table 31). The perinatal mortality rate varied from 7.4 per 1000 in the Northern Sydney and Central Coast Area to 12.1 per 1000 in the Greater Western Area.

Table 31. Perinatal outcomes by health area of residence, NSW, 2007#

Health area	Live born surviving		Stillbirth		Neonatal death		Death – age not stated		Not stated		Total births		Perinatal mortality/1000 births
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Sydney South West	21 280	98.9	146	0.7	54	0.3	0	0.0	37	0.2	21 517	100.0	9.3
South Eastern Sydney	15 724	99.1	82	0.5	44	0.3	0	0.0	9	0.1	15 859	100.0	7.9
Sydney West	18 057	98.5	126	0.7	38	0.2	0	0.0	117	0.6	18 338	100.0	8.9
Northern Sydney and Central Coast	14 553	99.2	90	0.6	18	0.1	2	0.0	5	0.0	14 668	100.0	7.4
Hunter and New England	10 908	98.8	75	0.7	49	0.4	1	0.0	4	0.0	11 037	100.0	11.2
North Coast	5 224	99.1	33	0.6	12	0.2	2	0.0	1	0.0	5 272	100.0	8.5
Greater Southern	4 050	99.0	31	0.8	5	0.1	1	0.0	2	0.0	4 089	100.0	8.8
Greater Western	4 075	98.6	36	0.9	14	0.3	1	0.0	6	0.1	4 132	100.0	12.1
Other/Not stated	1 102	98.6	10	0.9	5	0.4	1	0.1	0	0.0	1 118	100.0	–
TOTAL	94 973	98.9	629	0.7	239	0.2	8	0.0	181	0.2	96 030	100.0	9.0

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.

Live births by statistical local areas (Table 32)

Table 32. Live births by health area and statistical local area of residence, NSW, 2007

Health area/statistical local area	No.	%	Health area/statistical local area	No.	%
Sydney South West			Hawkesbury	882	4.9
Ashfield	579	2.7	Holroyd	1785	9.9
Bankstown – North-East	1224	5.7	Lithgow	287	1.6
Bankstown – North-West	1043	4.9	Parramatta – Inner	873	4.8
Bankstown – South	755	3.5	Parramatta – North-East	571	3.2
Burwood	388	1.8	Parramatta – North-West	558	3.1
Camden	872	4.1	Parramatta – South	686	3.8
Campbelltown – North	1259	5.9	Penrith – East	1536	8.5
Campbelltown – South	1172	5.5	Penrith – West	1286	7.1
Canada Bay – Concord	468	2.2	Other	54	0.3
Canada Bay – Drummoyne	569	2.7	TOTAL	18 095	100.0
Canterbury	2299	10.8	Northern Sydney and Central Coast		
Fairfield – East	1881	8.8	Gosford – East	680	4.7
Fairfield – West	879	4.1	Gosford – West	1263	8.7
Leichhardt	1038	4.9	Hornsby – North	744	5.1
Liverpool – East	1842	8.6	Hornsby – South	1075	7.4
Liverpool – West	1202	5.6	Hunters Hill	146	1.0
Marrickville	1277	6.0	Ku-ring-gai	840	5.8
Strathfield	393	1.8	Lane Cove	438	3.0
Sydney – Inner	5	0.0	Manly	693	4.8
Sydney – South	615	2.9	Mosman	372	2.6
Sydney – West	468	2.2	North Sydney	969	6.6
Wingecarribee	482	2.3	Pittwater	755	5.2
Wollondilly	557	2.6	Ryde	1384	9.5
Other	67	0.3	Warringah	2175	14.9
TOTAL	21 334	100.0	Willoughby	1024	7.0
South Eastern Sydney and Illawarra			Wyong – North-East	1001	6.9
Botany	586	3.7	Wyong – South and West	973	6.7
Hurstville	1062	6.7	Other	41	0.3
Kiama	203	1.3	TOTAL	14 573	100.0
Kogarah	714	4.5	Hunter and New England		
Randwick	1886	12.0	Armidale Dumaresq – City	273	2.5
Rockdale	1480	9.4	Armidale Dumaresq – Balance	30	0.3
Shellharbour	881	5.6	Cessnock	730	6.7
Shoalhaven – Pt A	435	2.8	Dungog	101	0.9
Shoalhaven – Pt B	557	3.5	Glen Innes Severn	106	1.0
Sutherland Shire – East	1440	9.1	Gloucester	54	0.5
Sutherland Shire – West	1533	9.7	Greater Taree	529	4.8
Sydney – Inner	158	1.0	Great Lakes	281	2.6
Sydney (SESAHS)	421	2.7	Gunnedah	177	1.6
Sydney – South	161	1.0	Guyra	52	0.5
Waverley	1034	6.6	Gwydir	45	0.4
Wollongong – Inner	1247	7.9	Inverell – Pt A	49	0.4
Wollongong – Balance	1211	7.7	Inverell – Pt B	175	1.6
Woollahra	696	4.4	Lake Macquarie – East	706	6.4
Other	63	0.4	Lake Macquarie – North	1000	9.1
TOTAL	15 768	100.0	Lake Macquarie – West	556	5.1
Sydney West			Liverpool Plains	82	0.1
Auburn	1326	7.3	Maitland	1014	9.3
Baulkham Hills – Central	895	4.9	Moree Plains	228	2.1
Baulkham Hills – North	783	4.3	Muswellbrook	258	2.4
Blacktown – North	1705	9.4	Narrabri	211	1.9
Blacktown – South-East	1671	9.2	Newcastle – Inner City	661	6.0
Blacktown – South-West	1871	10.3	Newcastle – Outer West	566	5.2
Blue Mountains	948	5.2	Newcastle – Throsby	743	6.8

(Continued)

Table 32. (Continued)

Health area/statistical local area	No.	%	Health area/statistical local area	No.	%
Port Stephens	802	7.3	Juneë	82	2.0
Singleton	317	2.9	Leeton	145	3.6
Tamworth Regional – Pt A	670	6.1	Lockhart	31	0.8
Tamworth Regional – Pt B	120	1.1	Murray	22	0.5
Tenterfield	30	0.3	Murrumbidgee	48	1.2
Upper Hunter Shire	179	1.6	Narrandera	98	2.4
Uralla	79	0.7	Palerang – Pt A	42	1.0
Walcha	34	0.3	Queanbeyan	205	5.1
Other	100	0.9	Snowy River	59	1.5
TOTAL	10 958	100.0	Temora	71	1.8
North Coast			Tumbarumba	24	0.6
Ballina	397	7.6	Tumut	153	3.8
Bellingen	121	2.3	Upper Lachlan	45	1.1
Byron	282	5.4	Urana	5	0.1
Clarence Valley – Coast	208	4.0	Wagga Wagga – Pt A	804	19.8
Clarence Valley – Grafton	305	5.8	Wagga Wagga – Pt B	44	1.1
Clarence Valley – Balance	74	1.4	Wakool	5	0.1
Coffs Harbour – Pt A	625	11.9	Yass Valley	11	0.3
Coffs Harbour – Pt B	182	3.5	Young	155	3.8
Hastings – Pt A	441	8.4	Other	54	1.3
Hastings – Pt B	289	5.5	TOTAL	4056	100.0
Kempsey	330	6.3	Greater Western		
Kyogle	88	1.7	Bathurst Regional – Pt A	431	10.5
Lismore – Pt A	445	8.5	Bathurst Regional – Pt B	45	1.1
Lismore – Pt B	120	2.3	Blayney	86	2.1
Nambucca	215	4.1	Bogan	46	1.1
Richmond Valley – Casino	142	2.7	Bourke	72	1.8
Richmond Valley Bal	134	2.6	Brewarrina	29	0.7
Tweed – Tweed-Heads	444	8.5	Broken Hill	240	5.9
Tweed – Tweed Coast	109	2.1	Cabonne	160	3.9
Tweed – Pt B	222	4.2	Central Darling	25	0.6
Other	65	1.2	Cobar	81	2.0
TOTAL	5238	100.0	Coonamble	56	1.4
Greater Southern			Cowra	160	3.9
Bega Valley	275	6.8	Dubbo – Pt A	551	13.5
Berrigan	23	0.6	Dubbo – Pt B	39	1.0
Bland	83	2.0	Forbes	126	3.1
Bombala	28	0.7	Gilgandra	62	1.5
Boorowa	12	0.3	Lachlan	100	2.4
Carrathool	37	0.9	Mid-Western Regional – Pt A	244	6.0
Conargo	6	0.1	Mid-Western Regional – Pt B	33	0.8
Coolamon	46	1.1	Narromine	101	2.5
Cooma-Monaro	111	2.7	Oberon	69	1.7
Cootamundra	88	2.2	Orange	630	15.4
Deniliquin	79	1.9	Parkes	205	5.0
Eurobodalla	325	8.0	Walgett	123	3.0
Greater Argyle – Goulburn	225	5.5	Warren	47	1.1
Greater Argyle – Balance	57	1.4	Warrumbungle Shire	123	3.0
Greater Hume Shire	24	0.6	Weddin	36	0.9
Griffith	413	10.2	Wellington	118	2.9
Gundagai	43	1.1	Other	52	1.3
Harden	32	0.8	TOTAL	4090	100.0
Hay	40	1.0	Other/Not stated	1108	100.0
Jerilderie	6	0.1	TOTAL NSW	95 220	100.0

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

6. NSW hospitals

Onset and augmentation of labour

Table 33 shows onset or augmentation of labour for area health services, and Table 34 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2007.

Table 33. Onset and augmentation of labour by health area of hospital, NSW, 2007

Health area	Onset and augmentation of labour																			
	Spontaneous		Spontaneous, augmented with ARM		Spontaneous, augmented with oxytocics/prostaglandins [#]		No labour		Induced – oxytocics/prostaglandins		Induced – ARM only		Induced – ARM + oxytocics/prostaglandins		Induced – other ^{##}		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	7750	45.2	1265	7.4	1951	11.4	2341	13.6	1415	8.2	200	1.2	2187	12.8	41	0.2	2	0.0	17 152	100.0
South-Eastern Sydney and Illawarra	4636	41.1	868	7.7	948	8.4	1672	14.8	1110	9.8	214	1.9	1807	16.0	15	0.1	2	0.0	11 272	100.0
Sydney West	5930	43.2	947	6.9	940	6.8	2027	14.8	1370	10.0	207	1.5	2296	16.7	13	0.1	3	0.0	13 733	100.0
Northern Sydney and Central Coast	3627	45.1	493	6.1	705	8.8	1204	15.0	909	11.3	99	1.2	1010	12.5	1	0.0	0	0.0	8048	100.0
Hunter and New England	4227	46.8	691	7.6	736	8.1	1089	12.1	891	9.9	168	1.9	1204	13.3	29	0.3	1	0.0	9036	100.0
North Coast	2627	45.8	605	10.5	482	8.4	805	14.0	492	8.6	113	2.0	582	10.1	28	0.5	1	0.0	5735	100.0
Greater Southern	1557	44.5	405	11.6	271	7.7	473	13.5	439	12.5	86	2.5	254	7.3	14	0.4	0	0.0	3499	100.0
Greater Western	1544	41.0	464	12.3	297	7.9	540	14.3	327	8.7	109	2.9	453	12.0	26	0.7	5	0.1	3765	100.0
Private hospitals	6258	28.2	1597	7.2	2223	10.0	5727	25.8	1653	7.4	452	2.0	4210	18.9	96	0.4	6	0.0	22 222	100.0
TOTAL***	38 291	40.5	7339	7.8	8553	9.0	15 878	16.8	8607	9.1	1648	1.7	14 003	14.8	263	0.3	20	0.0	94 602	100.0

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

[#]May include artificial rupture of membranes (ARM).

^{##}This category includes other forms of induction such as Foley's catheter.

^{***}Total includes mothers who gave birth at home assisted by independent midwives.

Table 34. (Continued)

Maternity service level/hospital	Onset and augmentation of labour																			
	Spontaneous		Spontaneous, augmented with ARM		Spontaneous, augmented oxytocics/prostaglandins ^{##}		No labour		Induced – oxytocics/prostaglandins		Induced – ARM only		Induced – ARM + oxytocics/prostaglandins		Induced – other ^{###}		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cowra	67	33.2	43	21.3	22	10.9	21	10.4	20	9.9	0	0	27	13.4	2	1.0	0	0.0	202	100.0
Lithgow	71	30.7	35	15.2	12	5.2	45	19.5	30	13.0	6	2.6	31	13.4	1	0.4	0	0.0	231	100.0
Moruya	162	46.7	41	11.8	24	6.9	43	12.4	45	13.0	9	2.6	21	6.1	2	0.6	0	0.0	347	100.0
Queanbeyan	153	52.6	23	7.9	10	3.4	35	12.0	55	18.9	4	1.4	8	2.7	3	1.0	0	0.0	291	100.0
Bowral	231	33.3	71	10.2	83	12.0	76	11.0	52	7.5	12	1.7	168	24.2	0	0.0	0	0.0	693	100.0
Shoalhaven	380	46.1	45	5.5	20	2.4	207	25.1	91	11.0	16	1.9	66	8.0	0	0.0	0	0.0	825	100.0
Muswellbrook	145	67.4	12	5.6	6	2.8	22	10.2	12	5.6	11	5.1	7	3.3	0	0.0	0	0.0	215	100.0
Broken Hill Base	136	50.4	23	8.5	20	7.4	40	14.8	42	15.6	1	0.4	8	3.0	0	0.0	0	0.0	270	100.0
Other hospitals	822	42.8	238	12.4	142	7.4	235	12.2	258	13.4	47	2.4	172	8.9	8	0.4	0	0.0	1922	100.0
Total	4534	44.3	1104	10.8	853	8.3	1443	14.1	1107	10.8	158	1.5	1001	9.8	32	0.3	0	0.0	10 232	100.0
Level 2																				
Wyong	231	87.5	24	9.1	5	1.9	1	0.4	0	0	2	0.8	1	0.4	0	0.0	0	0.0	264	100.0
Other hospitals	694	60.6	106	9.3	56	4.9	71	6.2	108	9.4	20	1.7	90	7.9	0	0.0	0	0.0	1145	100.0
Total	925	65.6	130	9.2	61	4.3	72	5.1	108	7.7	22	1.6	91	6.5	0	0.0	0	0.0	1409	100.0
Private																				
Mater, North Sydney	618	27.7	173	7.7	231	10.3	646	28.9	180	8.1	69	3.1	302	13.5	15	0.7	0	0.0	2234	100.0
North Shore Private	713	26.4	208	7.7	330	12.2	793	29.4	151	5.6	81	3.0	412	15.3	10	0.4	0	0.0	2698	100.0
Sydney Adventist	991	45.4	0	0	1	0.0	527	24.2	126	5.8	28	1.3	505	23.2	3	0.1	0	0.0	2181	100.0
North Gosford Private	210	23.9	58	6.6	81	9.2	262	29.8	84	9.5	33	3.8	138	15.7	12	1.4	2	0.2	880	100.0
Hurstville Community	202	23.1	68	7.8	108	12.4	240	27.5	57	6.5	8	0.9	186	21.3	5	0.6	0	0.0	874	100.0
Kareena Private	83	14.9	24	4.3	44	7.9	211	37.8	40	7.2	18	3.2	134	24.0	4	0.7	0	0.0	558	100.0
St George Private	449	24.5	120	6.5	284	15.5	463	25.2	201	11.0	47	2.6	263	14.3	8	0.4	0	0.0	1835	100.0
Prince of Wales Private	454	23.0	258	13.1	212	10.7	573	29.0	141	7.1	55	2.8	273	13.8	9	0.5	1	0.1	1976	100.0
The Hills Private	285	22.0	92	7.1	162	12.5	238	18.4	76	5.9	15	1.2	422	32.6	4	0.3	0	0.0	1294	100.0
Sydney Southwest Private	319	29.4	77	7.1	137	12.6	242	22.3	90	8.3	8	0.7	210	19.3	1	0.1	2	0.2	1086	100.0
Nepean Private	251	29.9	74	8.8	80	9.5	198	23.6	73	8.7	5	0.6	152	18.1	6	0.7	0	0.0	839	100.0
Westmead Private	485	23.4	200	9.7	309	14.9	451	21.8	150	7.2	18	0.9	454	21.9	3	0.1	0	0.0	2070	100.0
Figtree Private	180	18.4	91	9.3	86	8.8	211	21.6	66	6.7	7	0.7	337	34.4	1	0.1	0	0.0	979	100.0
Newcastle Private	720	38.7	79	4.2	108	5.8	443	23.8	90	4.8	47	2.5	359	19.3	14	0.8	1	0.1	1861	100.0
Calvary, Wagga Wagga	234	41.6	32	5.7	27	4.8	133	23.6	106	18.8	3	0.5	27	4.8	1	0.2	0	0.0	563	100.0
Other hospitals	64	21.8	43	14.6	23	7.8	96	32.7	22	7.5	10	3.4	36	12.2	0	0	0	0.0	294	100.0
Total	6258	28.2	1597	7.2	2223	10.0	5727	25.8	1653	7.4	452	2.0	4210	18.9	96	0.4	6	0.0	22 222	100.0
TOTAL NSW**	38 291	40.5	7 339	7.8	8 553	9.0	15 878	16.8	8 607	9.1	1 648	1.7	14 003	14.8	263	0.3	20	0.0	94 602	100.0

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

[#]Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

^{##}May include artificial rupture of membranes (ARM).

^{###}This category includes other forms of induction such as Foleys catheter.

*Royal Prince Alfred Hospital reports augmentation by oxytocin/prostaglandin only.

**Total NSW includes mothers who gave birth at home assisted by independent midwives and mothers who gave birth at Level 1 hospitals.

Type of birth

Table 35 shows type of birth for area health services, and Table 36 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2007.

Table 35. Type of birth by health area of hospital, NSW, 2007

Health area	Type of birth															
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section [#]		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	11 365	66.3	453	2.6	1117	6.5	67	0.4	2341	13.6	1805	10.5	4	0.0	17 152	100.0
South-Eastern Sydney and Illawarra	6785	60.2	419	3.7	932	8.3	46	0.4	1672	14.8	1418	12.6	0	0.0	11 272	100.0
Sydney West	8734	63.6	467	3.4	734	5.3	53	0.4	2027	14.8	1718	12.5	0	0.0	13 733	100.0
Northern Sydney and Central Coast	4750	59.0	304	3.8	593	7.4	27	0.3	1204	15.0	1170	14.5	0	0.0	8048	100.0
Hunter and New England	6123	67.8	311	3.4	476	5.3	90	1.0	1089	12.1	946	10.5	1	0.0	9036	100.0
North Coast	3908	68.1	103	1.8	243	4.2	22	0.4	805	14.0	644	11.2	10	0.2	5735	100.0
Greater Southern	2302	65.8	98	2.8	236	6.7	7	0.2	473	13.5	382	10.9	1	0.0	3499	100.0
Greater Western	2476	65.8	67	1.8	188	5.0	16	0.4	540	14.3	450	12.0	28	0.7	3765	100.0
Private hospitals	10 070	45.3	1051	4.7	2260	10.2	51	0.2	5727	25.8	3039	13.7	24	0.1	22 222	100.0
TOTAL*	56 648	59.9	3273	3.5	6779	7.2	381	0.4	15 878	16.8	11 572	12.2	71	0.1	94 602	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.
*Total includes mothers who gave birth at home assisted by independent midwives.

Table 36. Type of birth by hospital and maternity service level, NSW, 2007[#]

Maternity service level/hospital	Type of birth															
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section ^{##}		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Level 6																
Royal Prince Alfred	2834	56.0	304	6.0	366	7.2	21	0.4	807	15.9	728	14.4	2	0.0	5062	100.0
Royal North Shore	1279	55.8	135	5.9	116	5.1	9	0.4	378	16.5	376	16.4	0	0.0	2293	100.0
Royal Hospital for Women	2146	51.3	272	6.5	388	9.3	22	0.5	756	18.1	602	14.4	0	0.0	4186	100.0
Liverpool	2061	68.2	43	1.4	201	6.6	16	0.5	402	13.3	300	9.9	0	0.0	3023	100.0
Nepean	2205	59.3	83	2.2	250	6.7	14	0.4	634	17.1	531	14.3	0	0.0	3717	100.0
Westmead	2523	60.8	222	5.3	228	5.5	18	0.4	663	16.0	498	12.0	0	0.0	4152	100.0
John Hunter	2469	65.7	184	4.9	186	4.9	71	1.9	426	11.3	424	11.3	0	0.0	3760	100.0
Total	15 517	59.2	1243	4.7	1735	6.6	171	0.7	4066	15.5	3459	13.2	2	0.0	26 193	100.0
Level 5																
Gosford	1384	55.1	45	1.8	219	8.7	9	0.4	424	16.9	429	17.1	0	0.0	2510	100.0
St George	1649	62.7	68	2.6	259	9.9	8	0.3	329	12.5	316	12.0	0	0.0	2629	100.0
Blacktown	2038	65.8	97	3.1	155	5.0	9	0.3	397	12.8	400	12.9	0	0.0	3096	100.0
Lismore Base	864	64.7	36	2.7	35	2.6	5	0.4	213	16.0	178	13.3	4	0.3	1335	100.0
Tweed Heads	820	67.7	17	1.4	71	5.9	7	0.6	159	13.1	137	11.3	1	0.1	1212	100.0
Dubbo Base	805	68.2	25	2.1	45	3.8	3	0.3	162	13.7	120	10.2	21	1.8	1181	100.0
Wollongong	1618	69.1	36	1.5	175	7.5	11	0.5	209	8.9	292	12.5	0	0.0	2341	100.0
Maitland	1044	66.2	44	2.8	86	5.5	8	0.5	206	13.1	188	11.9	0	0.0	1576	100.0
Wagga Wagga Base	502	63.3	26	3.3	50	6.3	3	0.4	107	13.5	105	13.2	0	0.0	793	100.0
Total	10 724	64.3	394	2.4	1095	6.6	63	0.4	2206	13.2	2165	13.0	26	0.2	16 673	100.0
Level 4																
Canterbury	1090	67.6	25	1.5	126	7.8	3	0.2	193	12.0	176	10.9	0	0.0	1613	100.0
Hornsby	744	60.9	63	5.2	82	6.7	2	0.2	174	14.2	157	12.8	0	0.0	1222	100.0
Manly	603	65.8	42	4.6	61	6.7	3	0.3	101	11.0	107	11.7	0	0.0	917	100.0
Mona Vale	406	54.0	17	2.3	108	14.4	2	0.3	126	16.8	93	12.4	0	0.0	752	100.0
Sutherland	799	69.1	15	1.3	86	7.4	5	0.4	151	13.1	100	8.7	0	0.0	1156	100.0
Auburn	1076	76.3	30	2.1	40	2.8	8	0.6	134	9.5	122	8.7	0	0.0	1410	100.0
Campbelltown	1852	71.3	20	0.8	88	3.4	7	0.3	391	15.0	240	9.2	1	0.0	2599	100.0
Bankstown-Lidcombe	1553	72.7	26	1.2	155	7.3	6	0.3	243	11.4	154	7.2	0	0.0	2137	100.0

(Continued)

Table 36. (Continued)

Maternity service level/hospital	Type of birth														TOTAL	
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section [#]		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hawkesbury	541	64.3	29	3.4	33	3.9	3	0.4	120	14.3	115	13.7	0	0.0	841	100.0
Coffs Harbour	579	64.1	9	1.0	51	5.6	3	0.3	160	17.7	97	10.7	4	0.4	903	100.0
Port Macquarie Base	536	68.3	17	2.2	37	4.7	1	0.1	107	13.6	87	11.1	0	0.0	785	100.0
Tamworth Base	544	61.1	53	6.0	61	6.9	1	0.1	111	12.5	119	13.4	1	0.1	890	100.0
Manning Base	504	70.0	6	0.8	48	6.7	5	0.7	95	13.2	62	8.6	0	0.0	720	100.0
Orange Base	536	58.6	25	2.7	74	8.1	3	0.3	145	15.8	127	13.9	5	0.5	915	100.0
Goulburn Base	177	60.6	24	8.2	8	2.7	1	0.3	49	16.8	33	11.3	0	0.0	292	100.0
Griffith Base	306	67.5	10	2.2	33	7.3	2	0.4	64	14.1	38	8.4	0	0.0	453	100.0
Other hospitals	90	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	90	100.0
Total	11 936	67.5	411	2.3	1091	6.2	55	0.3	2364	13.4	1827	10.3	11	0.1	17 695	100.0
Level 3																
Other hospitals	1292	67.2	25	1.3	154	8.0	4	0.2	235	12.2	211	11.0	1	0.1	1922	100.0
Blue Mountains	198	69.2	1	0.3	24	8.4	1	0.3	34	11.9	28	9.8	0	0.0	286	100.0
Fairfield	1530	75.6	11	0.5	93	4.6	13	0.6	229	11.3	149	7.4	0	0.0	2025	100.0
Grafton Base	337	66.1	13	2.5	23	4.5	2	0.4	79	15.5	56	11.0	0	0.0	510	100.0
Kempsey	224	77.2	2	0.7	5	1.7	1	0.3	25	8.6	32	11.0	1	0.3	290	100.0
Murwillumbah	242	63.9	5	1.3	14	3.7	2	0.5	61	16.1	55	14.5	0	0.0	379	100.0
Armidale	308	68.0	7	1.5	12	2.6	1	0.2	73	16.1	52	11.5	0	0.0	453	100.0
Inverell	160	59.3	14	5.2	5	1.9	0	0	67	24.8	24	8.9	0	0.0	270	100.0
Moree	177	78.0	1	0.4	9	4.0	2	0.9	19	8.4	19	8.4	0	0.0	227	100.0
Mudgee	165	65.7	3	1.2	23	9.2	1	0.4	37	14.7	22	8.8	0	0.0	251	100.0
Bathurst Base	353	64.8	6	1.1	9	1.7	2	0.4	95	17.4	79	14.5	1	0.2	545	100.0
Cowra	154	76.2	3	1.5	9	4.5	1	0.5	21	10.4	13	6.4	1	0.5	202	100.0
Lithgow	153	66.2	5	2.2	4	1.7	0	0	45	19.5	24	10.4	0	0.0	231	100.0
Moruya	229	66.0	12	3.5	24	6.9	0	0	43	12.4	39	11.2	0	0.0	347	100.0
Queanbeyan	214	73.5	4	1.4	17	5.8	0	0	35	12.0	21	7.2	0	0.0	291	100.0
Bowral	445	64.2	24	3.5	88	12.7	1	0.1	76	11.0	58	8.4	1	0.1	693	100.0
Shoalhaven	480	58.2	25	3.0	17	2.1	0	0	207	25.1	96	11.6	0	0.0	825	100.0
Muswellbrook	167	77.7	0	0	13	6.0	0	0	22	10.2	13	6.0	0	0.0	215	100.0
Broken Hill Base	181	67.0	5	1.9	8	3.0	1	0.4	40	14.8	35	13.0	0	0.0	270	100.0
Total	7009	68.5	166	1.6	551	5.4	32	0.3	1443	14.1	1026	10.0	5	0.0	10 232	100.0
Level 2																
Other hospitals	978	85.4	6	0.5	40	3.5	3	0.3	71	6.2	47	4.1	0	0.0	1145	100.0
Wyong	244	92.4	2	0.8	7	2.7	2	0.8	1	0.4	8	3.0	0	0.0	264	100.0
Total	1222	86.7	8	0.6	47	3.3	5	0.4	72	5.1	55	3.9	0	0.0	1409	100.0
Private																
Other hospitals	117	39.8	13	4.4	36	12.2	1	0.3	96	32.7	30	10.2	1	0.3	294	100.0
Mater, North Sydney	816	36.5	71	3.2	359	16.1	4	0.2	646	28.9	324	14.5	14	0.6	2234	100.0
North Shore Private	1095	40.6	90	3.3	301	11.2	2	0.1	793	29.4	417	15.5	0	0.0	2698	100.0
Sydney Adventist	1065	48.8	90	4.1	153	7.0	4	0.2	527	24.2	342	15.7	0	0.0	2181	100.0
North Gosford Private	376	42.7	10	1.1	94	10.7	3	0.3	262	29.8	133	15.1	2	0.2	880	100.0
Hurstville Community	352	40.3	22	2.5	114	13.0	0	0	240	27.5	139	15.9	7	0.8	874	100.0
Kareena Private	183	32.8	61	10.9	45	8.1	1	0.2	211	37.8	57	10.2	0	0.0	558	100.0
St George Private	808	44.0	109	5.9	193	10.5	9	0.5	463	25.2	253	13.8	0	0.0	1835	100.0
Prince of Wales Private	839	42.5	68	3.4	211	10.7	2	0.1	573	29.0	283	14.3	0	0.0	1976	100.0
The Hills Private	704	54.4	141	10.9	70	5.4	4	0.3	238	18.4	137	10.6	0	0.0	1294	100.0
Sydney Southwest Private	608	56.0	23	2.1	107	9.9	3	0.3	242	22.3	103	9.5	0	0.0	1086	100.0
Nepean Private	414	49.3	39	4.6	66	7.9	3	0.4	198	23.6	119	14.2	0	0.0	839	100.0
Westmead Private	1032	49.9	200	9.7	133	6.4	7	0.3	451	21.8	247	11.9	0	0.0	2070	100.0
Figtree Private	496	50.7	18	1.8	146	14.9	4	0.4	211	21.6	104	10.6	0	0.0	979	100.0
Newcastle Private	885	47.6	59	3.2	183	9.8	3	0.2	443	23.8	288	15.5	0	0.0	1861	100.0
Calvary, Wagga Wagga	280	49.7	37	6.6	49	8.7	1	0.2	133	23.6	63	11.2	0	0.0	563	100.0
Total	10 070	45.3	1051	4.7	2260	10.2	51	0.2	5727	25.8	3039	13.7	24	0.1	22 222	100.0
TOTAL NSW*	56 648	59.9	3273	3.5	6779	7.2	381	0.4	15 878	16.8	11 572	12.2	71	0.1	94 602	100.0

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

[#]Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.^{**}Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

*Total NSW includes mothers who gave birth at home assisted by independent midwives and mothers who gave birth at Level 1 hospitals.

Pain relief

Table 37 shows type of pain relief provided to women during labour or delivery for area health services, and Table 38 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2007.

In addition to the types of pain relief shown in the tables, a further 23 655 (25%) women were reported to have received local anaesthetic to the perineum, and 765 (0.8%) received a pudendal block.

Table 37. Pain relief by health area of hospital, NSW, 2007

Health area	Pain relief											
	Epidural – spinal**		General anaesthetic		IM narcotics		Nitrous oxide		Nil		Total#	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	5664	33.0	842	4.9	3495	20.4	7784	45.4	2472	14.4	17 152	100.0
South-Eastern Sydney and Illawarra	5227	46.4	325	2.9	1554	13.8	5055	44.8	1240	11.0	11 272	100.0
Sydney West	5464	39.8	869	6.3	2381	17.3	6443	46.9	1128	8.2	13 733	100.0
Northern Sydney and Central Coast	3571	44.4	289	3.6	1793	22.3	3566	44.3	761	9.5	8048	100.0
Hunter and New England	2729	30.2	430	4.8	2092	23.2	4262	47.2	1302	14.4	9036	100.0
North Coast	1944	33.9	171	3.0	1155	20.1	2765	48.2	1122	19.6	5735	100.0
Greater Southern	1015	29.0	140	4.0	914	26.1	1814	51.8	656	18.7	3499	100.0
Greater Western	1157	30.7	196	5.2	772	20.5	1868	49.6	638	16.9	3765	100.0
Private hospitals	15 108	68.0	477	2.1	2060	9.3	7427	33.4	1012	4.6	22 222	100.0
TOTAL*	41 879	44.3	3739	4.0	16 216	17.1	40 984	43.3	10 457	11.1	94 602	100.0

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

*Row percentages do not sum to 100 per cent as a woman may have more than one type of analgesia.

**This category includes epidural, spinal, combined epidural and spinal, and caudal pain relief.

*Total includes mothers who gave birth at home assisted by independent midwives.

Table 38. Pain relief by hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	Pain relief											
	Epidural – spinal***		General anaesthetic		IM narcotics		Nitrous oxide		Nil		Total##	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Level 6												
Royal Prince Alfred*	2531	50.0	212	4.2	523	10.3	1991	39.3	556	11.0	5062	100.0
Royal North Shore	1203	52.5	72	3.1	415	18.1	1082	47.2	122	5.3	2293	100.0
Royal Hospital for Women	2458	58.7	82	2.0	560	13.4	1514	36.2	398	9.5	4186	100.0
Liverpool	969	32.1	167	5.5	994	32.9	1229	40.7	380	12.6	3023	100.0
Nepean	1564	42.1	315	8.5	831	22.4	1908	51.3	308	8.3	3717	100.0
Westmead	2128	51.3	256	6.2	517	12.5	1618	39.0	133	3.2	4152	100.0
John Hunter	1221	32.5	235	6.3	1042	27.7	1661	44.2	477	12.7	3760	100.0
Total	12 074	46.1	1339	5.1	4882	18.6	11 003	42.0	2374	9.1	26 193	100.0
Level 5												
Gosford	1108	44.1	129	5.1	640	25.5	1074	42.8	277	11.0	2510	100.0
St George	1101	41.9	92	3.5	351	13.4	1274	48.5	326	12.4	2629	100.0
Blacktown	1074	34.7	166	5.4	530	17.1	1528	49.4	250	8.1	3096	100.0
Lismore Base	593	44.4	34	2.5	197	14.8	598	44.8	177	13.3	1335	100.0
Tweed Heads	427	35.2	33	2.7	280	23.1	666	55.0	219	18.1	1212	100.0
Dubbo Base	391	33.1	74	6.3	341	28.9	574	48.6	157	13.3	1181	100.0
Wollongong	842	36.0	82	3.5	339	14.5	1364	58.3	259	11.1	2341	100.0
Maitland	489	31.0	71	4.5	251	15.9	770	48.9	245	15.5	1576	100.0
Wagga Wagga Base	290	36.6	27	3.4	188	23.7	404	50.9	147	18.5	793	100.0
Total	6315	37.9	708	4.2	3117	18.7	8252	49.5	2057	12.3	16 673	100.0
Level 4												
Canterbury	527	32.7	54	3.3	207	12.8	776	48.1	214	13.3	1613	100.0
Hornsby	542	44.4	37	3.0	249	20.4	603	49.3	85	7.0	1222	100.0
Manly	365	39.8	27	2.9	175	19.1	385	42.0	93	10.1	917	100.0
Mona Vale	349	46.4	16	2.1	287	38.2	306	40.7	61	8.1	752	100.0
Sutherland	473	40.9	24	2.1	100	8.7	545	47.1	131	11.3	1156	100.0
Auburn	269	19.1	77	5.5	225	16.0	731	51.8	273	19.4	1410	100.0

(Continued)

Table 38. (Continued)

Maternity service level/hospital	Epidural – spinal ^{###}		General anaesthetic		IM narcotics		Nitrous oxide		Nil		Total ^{##}	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Campbelltown	724	27.9	86	3.3	667	25.7	1288	49.6	515	19.8	2599	100.0
Bankstown–Lidcombe	453	21.2	99	4.6	358	16.8	1217	56.9	298	13.9	2137	100.0
Hawkesbury	270	32.1	42	5.0	169	20.1	432	51.4	95	11.3	841	100.0
Coffs Harbour	302	33.4	32	3.5	133	14.7	396	43.9	187	20.7	903	100.0
Port Macquarie Base	246	31.3	21	2.7	197	25.1	396	50.4	143	18.2	785	100.0
Tamworth Base	422	47.4	32	3.6	91	10.2	486	54.6	98	11.0	890	100.0
Manning Base	180	25.0	38	5.3	222	30.8	377	52.4	95	13.2	720	100.0
Orange Base	344	37.6	35	3.8	159	17.4	460	50.3	125	13.7	915	100.0
Goulburn Base	85	29.1	27	9.2	46	15.8	179	61.3	23	7.9	292	100.0
Griffith Base	118	26.0	19	4.2	242	53.4	240	53.0	55	12.1	453	100.0
Other hospitals	0	0.0	0	0.0	6	6.7	29	32.2	31	34.4	90	100.0
Total	5669	32.0	666	3.8	3533	20.0	8846	50.0	2522	14.3	17 695	100.0
Level 3												
Blue Mountains	76	26.6	6	2.1	60	21.0	125	43.7	36	12.6	286	100.0
Fairfield	220	10.9	200	9.9	488	24.1	934	46.1	431	21.3	2025	100.0
Grafton Base	159	31.2	38	7.5	116	22.7	261	51.2	94	18.4	510	100.0
Kempsey	74	25.5	5	1.7	111	38.3	156	53.8	57	19.7	290	100.0
Murwillumbah	140	36.9	8	2.1	102	26.9	181	47.8	65	17.2	379	100.0
Armidale	134	29.6	6	1.3	121	26.7	214	47.2	47	10.4	453	100.0
Inverell	89	33.0	4	1.5	45	16.7	113	41.9	49	18.1	270	100.0
Moree	50	22.0	4	1.8	56	24.7	116	51.1	61	26.9	227	100.0
Mudgee	54	21.5	15	6.0	62	24.7	146	58.2	36	14.3	251	100.0
Bathurst Base	176	32.3	20	3.7	23	4.2	232	42.6	128	23.5	545	100.0
Cowra	37	18.3	5	2.5	54	26.7	118	58.4	39	19.3	202	100.0
Lithgow	83	35.9	7	3.0	49	21.2	101	43.7	33	14.3	231	100.0
Moruya	111	32.0	19	5.5	72	20.7	166	47.8	80	23.1	347	100.0
Queanbeyan	68	23.4	6	2.1	48	16.5	117	40.2	99	34.0	291	100.0
Bowral	240	34.6	24	3.5	258	37.2	349	50.4	78	11.3	693	100.0
Shoalhaven	319	38.7	41	5.0	165	20.0	301	36.5	97	11.8	825	100.0
Muswellbrook	36	16.7	1	0.5	50	23.3	87	40.5	36	16.7	215	100.0
Broken Hill Base	75	27.8	15	5.6	53	19.6	148	54.8	41	15.2	270	100.0
Other hospitals	453	23.6	79	4.1	460	23.9	1016	52.9	385	20.0	1922	100.0
Total	2594	25.4	503	4.9	2393	23.4	4881	47.7	1892	18.5	10 232	100.0
Level 2												
Wyong	4	1.5	8	3.0	21	8.0	87	33.0	92	34.8	264	100.0
Other hospitals	114	10.0	38	3.3	210	18.3	483	42.2	352	30.7	1145	100.0
Total	118	8.4	46	3.3	231	16.4	570	40.5	444	31.5	1409	100.0
Private												
Mater, North Sydney	1561	69.9	43	1.9	118	5.3	686	30.7	115	5.1	2234	100.0
North Shore Private	2008	74.4	30	1.1	85	3.2	696	25.8	118	4.4	2698	100.0
Sydney Adventist	1493	68.5	54	2.5	177	8.1	771	35.4	52	2.4	2181	100.0
North Gosford Private	488	55.5	22	2.5	105	11.9	285	32.4	116	13.2	880	100.0
Hurstville Community	676	77.3	18	2.1	29	3.3	188	21.5	34	3.9	874	100.0
Kareena Private	489	87.6	13	2.3	9	1.6	65	11.6	14	2.5	558	100.0
St George Private	1442	78.6	32	1.7	87	4.7	446	24.3	65	3.5	1835	100.0
Prince of Wales Private	1689	85.5	4	0.2	41	2.1	500	25.3	43	2.2	1976	100.0
The Hills Private	839	64.8	32	2.5	127	9.8	381	29.4	67	5.2	1294	100.0
Sydney Southwest Private	480	44.2	37	3.4	356	32.8	606	55.8	41	3.8	1086	100.0
Nepean Private	443	52.8	25	3.0	198	23.6	442	52.7	42	5.0	839	100.0
Westmead Private	1305	63.0	67	3.2	211	10.2	788	38.1	85	4.1	2070	100.0
Figtree Private	615	62.8	25	2.6	54	5.5	411	42.0	38	3.9	979	100.0
Newcastle Private	1120	60.2	55	3.0	295	15.9	818	44.0	90	4.8	1861	100.0
Calvary, Wagga Wagga	294	52.2	5	0.9	134	23.8	233	41.4	64	11.4	563	100.0
Other hospitals	166	56.5	15	5.1	34	11.6	111	37.8	28	9.5	294	100.0
Total	15 108	68.0	477	2.1	2060	9.3	7427	33.4	1012	4.6	22 222	100.0
TOTAL NSW**	41 879	44.3	3739	4.0	16 216	17.1	40 984	43.3	10 457	11.1	94 602	100.0

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

[#]Hospitals with more than 200 births are identified individually. Maternity service levels are described on page 13 of the Methods chapter.

^{##}Row percentages do not sum to 100% as one woman may have more than one type of analgesia.

^{###}This category includes epidural, spinal, combined epidural and spinal, and caudal pain relief.

*Royal Prince Alfred hospital does not report pain relief with intramuscular (IM) narcotics.

**Total NSW includes mothers who gave birth at home assisted by independent midwives and mothers who gave birth at Level 1 hospitals.

Perineal status

Table 39 shows the perineal status in vaginal births for area health services, and Table 40 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2007.

There were 1477 cases of third-degree tear and 144 cases of fourth-degree tear reported among women who gave birth vaginally in 2007, including tears associated with an episiotomy.

Table 39. Perineal status among vaginal births by health area of hospital, NSW, 2007

Health area	Perineal status																TOTAL	
	Intact		1st-degree tear/graze		2nd-degree tear		3rd- or 4th-degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Sydney South West	3342	25.7	3412	26.2	3637	28.0	263	2.0	1589	12.2	276	2.1	483	3.7	0	0.0	13 002	100.0
South-Eastern Sydney and Illawarra	2012	24.6	2559	31.3	2175	26.6	158	1.9	928	11.3	260	3.2	90	1.1	0	0.0	8182	100.0
Sydney West	2494	25.0	3268	32.7	2186	21.9	110	1.1	1371	13.7	436	4.4	117	1.2	6	0.1	9988	100.0
Northern Sydney and Central Coast	1245	21.9	2037	35.9	1482	26.1	148	2.6	417	7.3	259	4.6	86	1.5	0	0.0	5674	100.0
Hunter and New England	2128	30.4	2568	36.7	1333	19.0	134	1.9	486	6.9	238	3.4	113	1.6	0	0.0	7000	100.0
North Coast	1642	38.4	1159	27.1	971	22.7	54	1.3	289	6.8	58	1.4	97	2.3	6	0.1	4276	100.0
Greater Southern	1041	39.4	705	26.7	492	18.6	37	1.4	274	10.4	35	1.3	58	2.2	1	0.0	2643	100.0
Greater Western	1054	38.4	767	27.9	508	18.5	37	1.3	235	8.6	67	2.4	74	2.7	5	0.2	2747	100.0
Private hospitals	2683	20.0	2754	20.5	3832	28.5	103	0.8	3495	26.0	337	2.5	222	1.7	6	0.0	13 432	100.0
TOTAL*	17 719	26.4	19 266	28.7	16 636	24.8	1044	1.6	9086	13.5	1966	2.9	1340	2.0	24	0.0	67 081	100.0

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

*Total includes mothers who gave birth at home assisted by independent midwives.

Table 40. Perineal status among vaginal births by hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	Perineal status																TOTAL	
	Intact		1st-degree tear/graze		2nd-degree tear		3rd- or 4th-degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Level 6																		
Royal Prince Alfred	531	15.1	983	27.9	1283	36.4	126	3.6	388	11.0	111	3.1	103	2.9	0	0.0	3525	100.0
Royal North Shore	303	19.7	482	31.3	447	29.0	53	3.4	132	8.6	106	6.9	16	1.0	0	0.0	1539	100.0
Royal Hospital for Women	535	18.9	799	28.3	783	27.7	35	1.2	529	18.7	125	4.4	22	0.8	0	0.0	2828	100.0
Liverpool	705	30.4	495	21.3	535	23.1	25	1.1	398	17.1	48	2.1	115	5.0	0	0.0	2321	100.0
Nepean	709	27.8	903	35.4	494	19.4	24	0.9	276	10.8	100	3.9	40	1.6	6	0.2	2552	100.0
Westmead	596	19.9	793	26.5	756	25.3	34	1.1	601	20.1	169	5.7	42	1.4	0	0.0	2991	100.0
John Hunter	695	23.9	1223	42.0	599	20.6	80	2.7	143	4.9	142	4.9	28	1.0	0	0.0	2910	100.0
Total	4074	21.8	5678	30.4	4897	26.2	377	2.0	2467	13.2	801	4.3	366	2.0	6	0.0	18 666	100.0
Level 5																		
Gosford	389	23.5	667	40.3	358	21.6	43	2.6	94	5.7	70	4.2	36	2.2	0	0.0	1657	100.0
St George	497	25.1	526	26.5	620	31.3	69	3.5	153	7.7	87	4.4	32	1.6	0	0.0	1984	100.0
Blacktown	481	20.9	852	37.1	485	21.1	28	1.2	339	14.7	97	4.2	17	0.7	0	0.0	2299	100.0
Lismore Base	292	31.1	329	35.0	211	22.4	7	0.7	78	8.3	16	1.7	5	0.5	2	0.2	940	100.0
Tweed Heads	307	33.6	278	30.4	209	22.8	13	1.4	77	8.4	10	1.1	21	2.3	0	0.0	915	100.0
Dubbo Base	306	34.9	266	30.3	132	15.0	10	1.1	117	13.3	23	2.6	24	2.7	0	0.0	878	100.0
Wollongong	492	26.7	703	38.2	440	23.9	28	1.5	144	7.8	23	1.3	10	0.5	0	0.0	1840	100.0
Maitland	313	26.5	506	42.8	228	19.3	29	2.5	66	5.6	20	1.7	20	1.7	0	0.0	1182	100.0
Wagga Wagga Base	215	37.0	175	30.1	100	17.2	11	1.9	45	7.7	10	1.7	25	4.3	0	0.0	581	100.0
Total	3292	26.8	4302	35.0	2783	22.7	238	1.9	1113	9.1	356	2.9	190	1.5	2	0.0	12 276	100.0
Level 4																		
Canterbury	317	25.5	319	25.6	362	29.1	39	3.1	111	8.9	37	3.0	59	4.7	0	0.0	1244	100.0
Hornsby	179	20.1	289	32.4	260	29.2	21	2.4	102	11.4	28	3.1	12	1.3	0	0.0	891	100.0
Manly	120	16.9	291	41.0	191	26.9	11	1.6	51	7.2	33	4.7	12	1.7	0	0.0	709	100.0
Mona Vale	150	28.1	173	32.5	139	26.1	17	3.2	31	5.8	19	3.6	4	0.8	0	0.0	533	100.0
Sutherland	263	29.1	296	32.7	246	27.2	16	1.8	59	6.5	14	1.5	11	1.2	0	0.0	905	100.0

(Continued)

Table 40. (Continued)

Maternity service level/hospital	Perineal status																TOTAL	
	Intact		1st-degree tear/graze		2nd-degree tear		3rd- or 4th-degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Auburn	426	36.9	355	30.8	226	19.6	7	0.6	85	7.4	46	4.0	9	0.8	0	0.0	1154	100.0
Campbelltown	657	33.4	535	27.2	500	25.4	30	1.5	149	7.6	18	0.9	78	4.0	0	0.0	1967	100.0
Bankstown-Lidcombe	453	26.0	515	29.6	414	23.8	11	0.6	244	14.0	36	2.1	67	3.9	0	0.0	1740	100.0
Hawkesbury	179	29.5	229	37.8	131	21.6	9	1.5	37	6.1	18	3.0	3	0.5	0	0.0	606	100.0
Coffs Harbour	268	41.7	132	20.6	150	23.4	9	1.4	31	4.8	12	1.9	36	5.6	4	0.6	642	100.0
Port Macquarie Base	237	40.1	103	17.4	177	29.9	12	2.0	39	6.6	9	1.5	14	2.4	0	0.0	591	100.0
Tamworth Base	201	30.5	205	31.1	110	16.7	12	1.8	94	14.3	24	3.6	13	2.0	0	0.0	659	100.0
Manning Base	242	43.0	139	24.7	130	23.1	4	0.7	25	4.4	7	1.2	16	2.8	0	0.0	563	100.0
Orange Base	234	36.7	151	23.7	137	21.5	14	2.2	44	6.9	22	3.4	31	4.9	5	0.8	638	100.0
Goulburn Base	62	29.5	10	4.8	40	19.0	3	1.4	83	39.5	4	1.9	8	3.8	0	0.0	210	100.0
Griffith Base	133	37.9	107	30.5	60	17.1	7	2.0	34	9.7	3	0.9	7	2.0	0	0.0	351	100.0
Other hospitals	30	33.3	33	36.7	26	28.9	0	0.0	0	0.0	0	0.0	1	1.1	0	0.0	90	100.0
Total	4151	30.8	3882	28.8	3299	24.4	222	1.6	1219	9.0	330	2.4	381	2.8	9	0.1	13 493	100.0
Level 3																		
Blue Mountains	42	18.8	93	41.5	69	30.8	7	3.1	7	3.1	3	1.3	3	1.3	0	0.0	224	100.0
Fairfield	500	30.4	417	25.3	371	22.5	27	1.6	265	16.1	23	1.4	44	2.7	0	0.0	1647	100.0
Grafton Base	177	47.2	97	25.9	60	16.0	4	1.1	23	6.1	5	1.3	9	2.4	0	0.0	375	100.0
Kempsey	117	50.4	47	20.3	56	24.1	3	1.3	7	3.0	1	0.4	1	0.4	0	0.0	232	100.0
Murwillumbah	111	42.2	62	23.6	54	20.5	5	1.9	20	7.6	3	1.1	8	3.0	0	0.0	263	100.0
Armidale	130	39.6	67	20.4	61	18.6	0	0.0	43	13.1	15	4.6	12	3.7	0	0.0	328	100.0
Inverell	75	41.9	36	20.1	20	11.2	0	0.0	44	24.6	3	1.7	1	0.6	0	0.0	179	100.0
Moree	87	46.0	43	22.8	39	20.6	0	0.0	9	4.8	9	4.8	2	1.1	0	0.0	189	100.0
Mudgee	61	31.8	47	24.5	54	28.1	0	0.0	24	12.5	2	1.0	4	2.1	0	0.0	192	100.0
Bathurst Base	141	38.1	140	37.8	60	16.2	2	0.5	11	3.0	7	1.9	9	2.4	0	0.0	370	100.0
Cowra	82	49.1	16	9.6	52	31.1	4	2.4	9	5.4	3	1.8	1	0.6	0	0.0	167	100.0
Lithgow	61	37.7	43	26.5	25	15.4	1	0.6	26	16.0	3	1.9	3	1.9	0	0.0	162	100.0
Moruya	116	43.8	68	25.7	53	20.0	4	1.5	19	7.2	3	1.1	1	0.4	1	0.4	265	100.0
Queanbeyan	85	36.2	90	38.3	45	19.1	2	0.9	8	3.4	2	0.9	3	1.3	0	0.0	235	100.0
Bowral	179	32.1	148	26.5	172	30.8	5	0.9	34	6.1	3	0.5	17	3.0	0	0.0	558	100.0
Shoalhaven	173	33.1	211	40.4	74	14.2	7	1.3	36	6.9	8	1.5	13	2.5	0	0.0	522	100.0
Muswellbrook	67	37.2	75	41.7	26	14.4	2	1.1	2	1.1	3	1.7	5	2.8	0	0.0	180	100.0
Broken Hill Base	98	50.3	61	31.3	22	11.3	1	0.5	11	5.6	1	0.5	1	0.5	0	0.0	195	100.0
Other hospitals	611	41.4	386	26.2	261	17.7	16	1.1	146	9.9	30	2.0	25	1.7	0	0.0	1475	100.0
Total	2913	37.5	2147	27.7	1574	20.3	90	1.2	744	9.6	127	1.6	162	2.1	1	0.0	7758	100.0
Level 2																		
Wyong	74	29.0	102	40.0	61	23.9	3	1.2	7	2.7	3	1.2	5	2.0	0	0.0	255	100.0
Other hospitals	431	42.0	357	34.8	165	16.1	11	1.1	38	3.7	12	1.2	13	1.3	0	0.0	1027	100.0
Total	505	39.4	459	35.8	226	17.6	14	1.1	45	3.5	15	1.2	18	1.4	0	0.0	1282	100.0
Private																		
Mater, North Sydney	202	16.2	210	16.8	331	26.5	13	1.0	359	28.7	95	7.6	36	2.9	4	0.3	1250	100.0
North Shore Private	239	16.1	317	21.3	433	29.1	11	0.7	447	30.0	16	1.1	25	1.7	0	0.0	1488	100.0
Sydney Adventist	221	16.8	334	25.5	353	26.9	3	0.2	332	25.3	66	5.0	3	0.2	0	0.0	1312	100.0
North Gosford Private	135	28.0	106	21.9	135	28.0	1	0.2	80	16.6	20	4.1	5	1.0	1	0.2	483	100.0
Hurstville Community	59	12.1	129	26.4	101	20.7	4	0.8	159	32.6	27	5.5	9	1.8	0	0.0	488	100.0
Kareena Private	58	20.0	42	14.5	109	37.6	2	0.7	71	24.5	1	0.3	6	2.1	1	0.3	290	100.0
St George Private	281	25.1	234	20.9	346	30.9	12	1.1	212	18.9	26	2.3	8	0.7	0	0.0	1119	100.0
Prince of Wales Private	216	19.3	243	21.7	337	30.1	4	0.4	279	24.9	16	1.4	25	2.2	0	0.0	1120	100.0
The Hills Private	219	23.8	165	18.0	270	29.4	8	0.9	215	23.4	17	1.8	25	2.7	0	0.0	919	100.0
Sydney Southwest Private	169	22.8	155	20.9	158	21.3	9	1.2	217	29.3	15	2.0	18	2.4	0	0.0	741	100.0
Nepean Private	90	17.2	61	11.7	166	31.8	5	1.0	173	33.1	5	1.0	22	4.2	0	0.0	522	100.0
Westmead Private	266	19.4	318	23.2	331	24.1	5	0.4	441	32.1	4	0.3	7	0.5	0	0.0	1372	100.0
Figtree Private	124	18.7	97	14.6	212	31.9	6	0.9	200	30.1	6	0.9	19	2.9	0	0.0	664	100.0
Newcastle Private	271	24.0	244	21.6	372	32.9	13	1.2	224	19.8	0	0.0	6	0.5	0	0.0	1130	100.0
Calvary, Wagga Wagga	99	27.0	63	17.2	123	33.5	7	1.9	51	13.9	16	4.4	8	2.2	0	0.0	367	100.0
Other hospitals	34	20.4	36	21.6	55	32.9	0	0.0	35	21.0	7	4.2	0	0.0	0	0.0	167	100.0
Total	2683	20.0	2754	20.5	3832	28.5	103	0.8	3495	26.0	337	2.5	222	1.7	6	0.0	13 432	100.0
TOTAL NSW*	17 719	26.4	19 266	28.7	16 636	24.8	1 044	1.6	9 086	13.5	1 966	2.9	1 340	2.0	24	0.0	67 081	100.0

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

*Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

*Total NSW includes mothers who gave birth at home assisted by independent midwives and births at Level 1 hospitals.

Birth weight

Table 41 shows the birth weight of babies for area health service level where at least 200 mothers gave birth in services, and Table 42 for individual hospitals by maternity 2007.

Table 41. Births by birth weight and health area of hospital, NSW, 2007

Health area	Birth weight (g)										TOTAL	
	<1000		1000–1499		1500–2499		2500+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	151	0.9	121	0.7	929	5.3	16 164	92.8	46	0.3	17 411	100.0
South-Eastern Sydney and Illawarra	95	0.8	63	0.5	628	5.5	10 678	93.1	9	0.1	11 473	100.0
Sydney West	145	1.0	146	1.0	800	5.7	12 875	92.1	10	0.1	13 976	100.0
Northern Sydney and Central Coast	58	0.7	60	0.7	398	4.9	7 658	93.6	4	0.0	8 178	100.0
Hunter and New England	118	1.3	87	0.9	591	6.4	8 377	91.2	10	0.1	9 183	100.0
North Coast	23	0.4	9	0.2	266	4.6	5 501	94.7	7	0.1	5 806	100.0
Greater Southern	19	0.5	5	0.1	136	3.9	3 360	95.4	3	0.1	3 523	100.0
Greater Western	17	0.4	4	0.1	164	4.3	3 620	95.0	5	0.1	3 810	100.0
Private hospitals	51	0.2	17	0.1	748	3.3	21 700	96.3	13	0.1	22 529	100.0
TOTAL*	677	0.7	512	0.5	4660	4.9	90 073	93.8	108	0.1	96 030	100.0

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

*Total includes births at home assisted by independent midwives.

Table 42. Births by birth weight, hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	Birth weight (g)										TOTAL	
	<1000		1000–1499		1500–2499		2500+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Level 6												
Royal Prince Alfred	60	1.2	51	1.0	296	5.7	4 768	92.0	7	0.1	5 182	100.0
Royal North Shore	41	1.7	53	2.2	175	7.4	2 089	88.4	4	0.2	2 362	100.0
Royal Hospital for Women	60	1.4	47	1.1	296	6.9	3 886	90.5	6	0.1	4 295	100.0
Liverpool	55	1.8	57	1.8	287	9.2	2 703	87.0	5	0.2	3 107	100.0
Nepean	54	1.4	59	1.6	271	7.2	3 398	89.8	4	0.1	3 786	100.0
Westmead	62	1.5	75	1.8	328	7.7	3 803	89.0	3	0.1	4 271	100.0
John Hunter	100	2.6	74	1.9	337	8.7	3 339	86.6	6	0.2	3 856	100.0
Total	432	1.6	416	1.5	1 990	7.4	23 986	89.3	35	0.1	26 859	100.0
Level 5												
Gosford	10	0.4	7	0.3	136	5.3	2 392	94.0	0	0.0	2 545	100.0
St. George	10	0.4	2	0.1	133	5.0	2 531	94.6	0	0.0	2 676	100.0
Blacktown	19	0.6	9	0.3	133	4.2	2 972	94.8	1	0.0	3 134	100.0
Lismore Base	7	0.5	5	0.4	81	6.0	1 264	93.1	1	0.1	1 358	100.0
Tweed Heads	8	0.7	0	0.0	39	3.2	1 176	96.2	0	0.0	1 223	100.0
Dubbo Base	6	0.5	2	0.2	51	4.3	1 139	95.1	0	0.0	1 198	100.0
Wollongong	21	0.9	13	0.5	128	5.4	2 207	93.0	3	0.1	2 372	100.0
Maitland	5	0.3	2	0.1	72	4.5	1 503	94.8	3	0.2	1 585	100.0
Wagga Wagga Base	10	1.2	2	0.2	52	6.5	741	92.0	0	0.0	805	100.0
Total	96	0.6	42	0.2	825	4.9	15 925	94.3	8	0.0	16 896	100.0
Level 4												
Canterbury	4	0.2	2	0.1	59	3.6	1 547	95.6	7	0.4	1 619	100.0
Hornsby	3	0.2	0	0.0	40	3.2	1 190	96.5	0	0.0	1 233	100.0
Manly	1	0.1	0	0.0	21	2.3	902	97.6	0	0.0	924	100.0
Mona Vale	2	0.3	0	0.0	22	2.9	736	96.8	0	0.0	760	100.0
Sutherland	1	0.1	0	0.0	23	2.0	1 132	97.9	0	0.0	1 156	100.0
Auburn	6	0.4	0	0.0	30	2.1	1 377	97.3	2	0.1	1 415	100.0
Campbelltown	11	0.4	5	0.2	100	3.8	2 500	95.3	7	0.3	2 623	100.0
Bankstown-Lidcombe	9	0.4	3	0.1	99	4.6	2 036	94.7	3	0.1	2 150	100.0
Hawkesbury	4	0.5	1	0.1	24	2.8	821	96.6	0	0.0	850	100.0
Coffs Harbour	2	0.2	2	0.2	39	4.2	877	95.0	3	0.3	923	100.0

(Continued)

Table 42. (Continued)

Maternity service level/hospital	Birth weight (g)										TOTAL	
	<1000		1000–1499		1500–2499		2500+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Port Macquarie Base	2	0.3	1	0.1	38	4.8	758	94.9	0	0.0	799	100.0
Tamworth Base	2	0.2	3	0.3	59	6.5	844	93.0	0	0.0	908	100.0
Manning Base	6	0.8	3	0.4	33	4.5	688	94.1	1	0.1	731	100.0
Orange Base	3	0.3	2	0.2	52	5.6	873	93.6	3	0.3	933	100.0
Goulburn Base	0	0	1	0.3	12	4.1	280	95.6	0	0.0	293	100.0
Griffith Base	4	0.9	0	0.0	28	6.1	428	93.0	0	0.0	460	100.0
Other hospitals	0	0	0	0.0	1	1.1	89	98.9	0	0.0	90	100.0
Total	60	0.3	23	0.1	680	3.8	17 078	95.6	26	0.1	17 867	100.0
Level 3												
Blue Mountains	0	0.0	0	0.0	4	1.4	283	98.6	0	0.0	287	100.0
Fairfield	11	0.5	2	0.1	67	3.3	1950	96.0	2	0.1	2032	100.0
Grafton Base	3	0.6	1	0.2	31	6.1	477	93.2	0	0.0	512	100.0
Kempsey	0	0.0	0	0.0	16	5.5	274	94.5	0	0.0	290	100.0
Murwillumbah	1	0.3	0	0.0	11	2.9	367	96.8	0	0.0	379	100.0
Armidale	1	0.2	3	0.7	33	7.2	423	92.0	0	0.0	460	100.0
Inverell	0	0	2	0.7	16	5.9	254	93.4	0	0.0	272	100.0
Moree	2	0.9	0	0.0	7	3.1	219	96.1	0	0.0	228	100.0
Mudgee	1	0.4	0	0.0	5	2.0	245	97.6	0	0.0	251	100.0
Bathurst Base	1	0.2	0	0.0	27	4.9	522	94.9	0	0.0	550	100.0
Cowra	1	0.5	0	0.0	5	2.5	194	96.0	2	1.0	202	100.0
Lithgow	0	0.0	2	0.9	10	4.3	221	94.8	0	0.0	233	100.0
Moruya	0	0.0	1	0.3	9	2.6	338	97.1	0	0.0	348	100.0
Queanbeyan	0	0.0	0	0.0	2	0.7	289	99.3	0	0.0	291	100.0
Bowral	1	0.1	1	0.1	21	3.0	660	94.6	15	2.1	698	100.0
Shoalhaven	3	0.4	1	0.1	43	5.1	792	94.4	0	0.0	839	100.0
Muswellbrook	0	0.0	0	0.0	6	2.8	211	97.2	0	0.0	217	100.0
Broken Hill Base	0	0.0	0	0.0	12	4.4	261	95.6	0	0.0	273	100.0
Other hospitals	10	0.5	1	0.1	48	2.5	1865	96.7	4	0.2	1928	100.0
Total	35	0.3	14	0.1	373	3.6	9845	95.7	23	0.2	10 290	100.0
Level 2												
Wyong	1	0.4	0	0.0	3	1.1	260	98.5	0	0.0	264	100.0
Other hospitals	1	0.1	0	0.0	37	3.2	1106	96.5	2	0.2	1146	100.0
Total	2	0.1	0	0.0	40	2.8	1366	96.9	2	0.1	1410	100.0
Private												
Mater, North Sydney	2	0.1	2	0.1	81	3.6	2166	96.1	2	0.1	2253	100.0
North Shore Private	7	0.3	1	0.0	92	3.4	2643	96.3	1	0.0	2744	100.0
Sydney Adventist	5	0.2	2	0.1	70	3.2	2133	96.4	3	0.1	2213	100.0
North Gosford Private	0	0.0	0	0.0	29	3.3	857	96.4	3	0.3	889	100.0
Hurstville Community	1	0.1	4	0.4	27	3.0	858	96.4	0	0.0	890	100.0
Kareena Private	0	0.0	0	0.0	18	3.2	549	96.8	0	0.0	567	100.0
St. George Private	8	0.4	2	0.1	64	3.4	1798	96.0	0	0.0	1872	100.0
Prince of Wales Private	1	0.1	0	0.0	73	3.7	1922	96.2	1	0.1	1997	100.0
The Hills Private	6	0.5	2	0.2	37	2.8	1265	96.6	0	0.0	1310	100.0
Sydney Southwest Private	1	0.1	0	0.0	26	2.4	1071	97.5	0	0.0	1098	100.0
Nepean Private	0	0.0	0	0.0	29	3.4	820	96.6	0	0.0	849	100.0
Westmead Private	7	0.3	2	0.1	73	3.5	2005	96.1	0	0.0	2087	100.0
Figtree Private	2	0.2	0	0.0	22	2.2	968	97.4	2	0.2	994	100.0
Newcastle Private	9	0.5	1	0.1	82	4.3	1807	95.2	0	0.0	1899	100.0
Calvary, Wagga Wagga	2	0.4	1	0.2	17	3.0	550	96.3	1	0.2	571	100.0
Other hospitals	0	0.0	0	0.0	8	2.7	288	97.3	0	0.0	296	100.0
Total	51	0.2	17	0.1	748	3.3	21 700	96.3	13	0.1	22 529	100.0
TOTAL NSW*	677	0.7	512	0.5	4660	4.9	90 073	93.8	108	0.1	96 030	100.0

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

*Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

*Total NSW includes births at home assisted by independent midwives and babies born at Level 1 hospitals.

Gestational age

Table 43 shows the gestational age of babies for area health services, and Table 44 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2007.

Table 43. Births by gestational age and health area of hospital, NSW, 2007

Health area	Gestational age (weeks)										TOTAL	
	<32		32–33		34–36		37+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	314	1.8	180	1.0	830	4.8	16 070	92.3	17	0.1	17 411	100.0
South-Eastern Sydney and Illawarra	196	1.7	137	1.2	687	6.0	10 450	91.1	3	0.0	11 473	100.0
Sydney West	317	2.3	202	1.4	768	5.5	12 678	90.7	11	0.1	13 976	100.0
Northern Sydney and Central Coast	148	1.8	93	1.1	360	4.4	7 573	92.6	4	0.0	8 178	100.0
Hunter and New England	226	2.5	129	1.4	551	6.0	8 273	90.1	4	0.0	9 183	100.0
North Coast	37	0.6	23	0.4	269	4.6	5 477	94.3	0	0.0	5 806	100.0
Greater Southern	28	0.8	9	0.3	127	3.6	3 358	95.3	1	0.0	3 523	100.0
Greater Western	26	0.7	11	0.3	194	5.1	3 578	93.9	1	0.0	3 810	100.0
Private hospitals	75	0.3	72	0.3	1 056	4.7	21 326	94.7	0	0.0	22 529	100.0
Other	0	0.0	0	0.0	5	3.5	135	95.7	1	0.7	141	100.0
TOTAL*	1367	1.4	856	0.9	4 847	5.0	88 918	92.6	42	0.0	96 030	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.
*Total includes births at home assisted by independent midwives.

Table 44. Births by gestational age, hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	Gestational age (weeks)										TOTAL	
	<32		32–33		34–36		37+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Level 6												
Royal Prince Alfred	127	2.5	64	1.2	271	5.2	4 719	91.1	1	0.0	5 182	100.0
Royal North Shore	117	5.0	61	2.6	117	5.0	2 067	87.5	0	0.0	2 362	100.0
Royal Hospital for Women	146	3.4	74	1.7	264	6.1	3 810	88.7	1	0.0	4 295	100.0
Liverpool	132	4.2	90	2.9	189	6.1	2 695	86.7	1	0.0	3 107	100.0
Nepean	139	3.7	81	2.1	269	7.1	3 288	86.8	9	0.2	3 786	100.0
Westmead	134	3.1	97	2.3	270	6.3	3 768	88.2	2	0.0	4 271	100.0
John Hunter	194	5.0	110	2.9	287	7.4	3 264	84.6	1	0.0	3 856	100.0
Total	989	3.7	577	2.1	1 667	6.2	23 611	87.9	15	0.1	26 859	100.0
Level 5												
Gosford	20	0.8	23	0.9	139	5.5	2 363	92.8	0	0.0	2 545	100.0
St George	13	0.5	19	0.7	167	6.2	2 476	92.5	1	0.0	2 676	100.0
Blacktown	28	0.9	20	0.6	152	4.9	2 934	93.6	0	0.0	3 134	100.0
Lismore Base	11	0.8	8	0.6	78	5.7	1 261	92.9	0	0.0	1 358	100.0
Tweed Heads	10	0.8	5	0.4	46	3.8	1 162	95.0	0	0.0	1 223	100.0
Dubbo Base	11	0.9	8	0.7	66	5.5	1 113	92.9	0	0.0	1 198	100.0
Wollongong	30	1.3	38	1.6	170	7.2	2 134	90.0	0	0.0	2 372	100.0
Maitland	8	0.5	1	0.1	91	5.7	1 485	93.7	0	0.0	1 585	100.0
Wagga Wagga Base	14	1.7	3	0.4	56	7.0	731	90.8	1	0.1	805	100.0
Total	145	0.9	125	0.7	965	5.7	15 659	92.7	2	0.0	16 896	100.0
Level 4												
Canterbury	5	0.3	3	0.2	64	4.0	1 547	95.6	0	0.0	1 619	100.0
Hornsby	4	0.3	3	0.2	47	3.8	1 179	95.6	0	0.0	1 233	100.0
Manly	2	0.2	0	0	34	3.7	885	95.8	3	0.3	924	100.0
Mona Vale	3	0.4	4	0.5	19	2.5	733	96.4	1	0.1	760	100.0
Sutherland	1	0.1	4	0.3	31	2.7	1 120	96.9	0	0.0	1 156	100.0
Auburn	8	0.6	3	0.2	34	2.4	1 370	96.8	0	0.0	1 415	100.0
Campbelltown	15	0.6	13	0.5	127	4.8	2 460	93.8	8	0.3	2 623	100.0
Bankstown–Lidcombe	16	0.7	6	0.3	90	4.2	2 037	94.7	1	0.0	2 150	100.0
Hawkesbury	6	0.7	1	0.1	27	3.2	816	96.0	0	0.0	850	100.0

(Continued)

Table 44. (Continued)

Maternity service level/hospital	Gestational age (weeks)										TOTAL	
	<32		32–33		34–36		37+		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Coffs Harbour	7	0.8	2	0.2	45	4.9	869	94.1	0	0.0	923	100.0
Port Macquarie Base	3	0.4	4	0.5	51	6.4	741	92.7	0	0.0	799	100.0
Tamworth Base	5	0.6	2	0.2	66	7.3	835	92.0	0	0.0	908	100.0
Manning Base	7	1.0	6	0.8	35	4.8	683	93.4	0	0.0	731	100.0
Orange Base	6	0.6	3	0.3	62	6.6	861	92.3	1	0.1	933	100.0
Goulburn Base	1	0.3	0	0.0	10	3.4	282	96.2	0	0.0	293	100.0
Griffith Base	4	0.9	1	0.2	18	3.9	437	95.0	0	0.0	460	100.0
Other hospitals	0	0.0	0	0.0	1	1.1	89	98.9	0	0.0	90	100.0
Total	93	0.5	55	0.3	761	4.3	16 944	94.8	14	0.1	17 867	100.0
Level 3												
Blue Mountains	0	0.0	0	0.0	3	1.0	284	99.0	0	0.0	287	100.0
Fairfield	16	0.8	3	0.1	72	3.5	1941	95.5	0	0.0	2032	100.0
Grafton Base	4	0.8	3	0.6	23	4.5	482	94.1	0	0.0	512	100.0
Kempsey	0	0.0	0	0.0	4	1.4	286	98.6	0	0.0	290	100.0
Murwillumbah	1	0.3	0	0.0	12	3.2	366	96.6	0	0.0	379	100.0
Armidale	2	0.4	3	0.7	25	5.4	430	93.5	0	0.0	460	100.0
Inverell	2	0.7	3	1.1	22	8.1	245	90.1	0	0.0	272	100.0
Moree	4	1.8	0	0.0	8	3.5	216	94.7	0	0.0	228	100.0
Mudgee	1	0.4	0	0.0	3	1.2	247	98.4	0	0.0	251	100.0
Bathurst Base	1	0.2	0	0.0	27	4.9	522	94.9	0	0.0	550	100.0
Cowra	2	1.0	0	0.0	4	2.0	196	97.0	0	0.0	202	100.0
Lithgow	2	0.9	0	0.0	13	5.6	218	93.6	0	0.0	233	100.0
Moruya	1	0.3	1	0.3	7	2.0	339	97.4	0	0.0	348	100.0
Queanbeyan	0	0.0	0	0.0	6	2.1	285	97.9	0	0.0	291	100.0
Bowral	3	0.4	1	0.1	17	2.4	671	96.1	6	0.9	698	100.0
Shoalhaven	6	0.7	2	0.2	49	5.8	781	93.1	1	0.1	839	100.0
Muswellbrook	2	0.9	1	0.5	4	1.8	209	96.3	1	0.5	217	100.0
Broken Hill Base	0	0.0	0	0.0	20	7.3	253	92.7	0	0.0	273	100.0
Other hospitals	14	0.7	3	0.2	41	2.1	1870	97.0	0	0.0	1928	100.0
Total	61	0.6	20	0.2	360	3.5	9841	95.6	8	0.1	10 290	100.0
Level 2												
Wyong	2	0.8	2	0.8	3	1.1	257	97.3	0	0.0	264	100.0
Other hospitals	1	0.1	4	0.3	25	2.2	1114	97.2	2	0.2	1146	100.0
Total	3	0.2	6	0.4	28	2.0	1371	97.2	2	0.1	1410	100.0
Private												
Mater, North Sydney	5	0.2	10	0.4	84	3.7	2154	95.6	0	0.0	2253	100.0
North Shore Private	8	0.3	13	0.5	122	4.4	2601	94.8	0	0.0	2744	100.0
Sydney Adventist	12	0.5	7	0.3	111	5.0	2083	94.1	0	0.0	2213	100.0
North Gosford Private	1	0.1	3	0.3	41	4.6	844	94.9	0	0.0	889	100.0
Hurstville Community	6	0.7	4	0.4	44	4.9	836	93.9	0	0.0	890	100.0
Kareena Private	1	0.2	5	0.9	24	4.2	537	94.7	0	0.0	567	100.0
St George Private	8	0.4	6	0.3	97	5.2	1761	94.1	0	0.0	1872	100.0
Prince of Wales Private	1	0.1	5	0.3	92	4.6	1899	95.1	0	0.0	1997	100.0
The Hills Private	7	0.5	6	0.5	50	3.8	1247	95.2	0	0.0	1310	100.0
Sydney Southwest Private	2	0.2	0	0.0	44	4.0	1052	95.8	0	0.0	1098	100.0
Nepean Private	0	0.0	0	0.0	51	6.0	798	94.0	0	0.0	849	100.0
Westmead Private	9	0.4	8	0.4	85	4.1	1985	95.1	0	0.0	2087	100.0
Figtree Private	3	0.3	0	0.0	38	3.8	953	95.9	0	0.0	994	100.0
Newcastle Private	9	0.5	5	0.3	142	7.5	1743	91.8	0	0.0	1899	100.0
Calvary, Wagga Wagga	3	0.5	0	0.0	25	4.4	543	95.1	0	0.0	571	100.0
Other hospitals	0	0.0	0	0.0	6	2.0	290	98.0	0	0.0	296	100.0
Total	75	0.3	72	0.3	1056	4.7	21 326	94.7	0	0.0	22 529	100.0
TOTAL NSW*	1367	1.4	856	0.9	4847	5.0	88 918	92.6	42	0.0	96 030	100.0

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

*Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

*Total NSW includes births at home assisted by independent midwives and babies born at Level 1 hospitals.

Neonatal resuscitation

Table 45 shows the type of neonatal resuscitation for area maternity service level where at least 200 mothers gave health services, and Table 46 for individual hospitals by birth in 2007.

Table 45. Births by type of resuscitation and health area of hospital, NSW, 2007

Health area	None		Suction		Resuscitation								Not stated		TOTAL	
	No.	%	No.	%	Oxygen therapy		IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		No.	%	No.	%
					No.	%	No.	%	No.	%	No.	%				
Sydney South West	13 172	75.7	1 453	8.3	1 266	7.3	1 046	6.0	115	0.7	93	0.5	266	1.5	17 411	100.0
South-Eastern Sydney and Illawarra	8 175	71.3	1 297	11.3	1 296	11.3	607	5.3	53	0.5	39	0.3	6	0.1	11 473	100.0
Sydney West	9 101	65.1	2 245	16.1	1 695	12.1	721	5.2	170	1.2	38	0.3	6	0.0	13 976	100.0
Northern Sydney and Central Coast	5 630	68.8	1 012	12.4	1 027	12.6	423	5.2	63	0.8	23	0.3	0	0.0	8 178	100.0
Hunter and New England	6 275	68.3	516	5.6	1 445	15.7	843	9.2	61	0.7	38	0.4	5	0.1	9 183	100.0
North Coast	3 907	67.3	612	10.5	814	14.0	423	7.3	21	0.4	15	0.3	14	0.2	5 806	100.0
Greater Southern	2 351	66.7	408	11.6	540	15.3	187	5.3	15	0.4	13	0.4	9	0.3	3 523	100.0
Greater Western	2 508	65.8	422	11.1	595	15.6	225	5.9	11	0.3	22	0.6	27	0.7	3 810	100.0
Private hospitals	11 999	53.3	5 839	25.9	3 497	15.5	1 021	4.5	31	0.1	21	0.1	121	0.5	22 529	100.0
TOTAL*	63 244	65.9	13 808	14.4	12 181	12.7	5 500	5.7	540	0.6	303	0.3	454	0.5	96 030	100.0

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

*Total includes births at home assisted by independent midwives.

IPPR: intermittent positive pressure respiration.

Table 46. Births by type of resuscitation, hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	None		Suction		Resuscitation								Not stated		TOTAL	
	No.	%	No.	%	Oxygen therapy		IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		No.	%	No.	%
					No.	%	No.	%	No.	%	No.	%				
Level 6																
Royal Prince Alfred	3 822	73.8	265	5.1	395	7.6	482	9.3	74	1.4	15	0.3	129	2.5	5 182	100.0
Royal North Shore	1 536	65.0	384	16.3	241	10.2	143	6.1	51	2.2	7	0.3	0	0.0	2 362	100.0
Royal Hospital for Women	3 192	74.3	290	6.8	480	11.2	273	6.4	38	0.9	22	0.5	0	0.0	4 295	100.0
Liverpool	2 106	67.8	498	16.0	189	6.1	236	7.6	27	0.9	22	0.7	29	0.9	3 107	100.0
Nepean	2 390	63.1	654	17.3	463	12.2	202	5.3	63	1.7	13	0.3	1	0.0	3 786	100.0
Westmead	2 858	66.9	559	13.1	492	11.5	257	6.0	91	2.1	12	0.3	2	0.0	4 271	100.0
John Hunter	2 735	70.9	193	5.0	362	9.4	485	12.6	52	1.3	29	0.8	0	0.0	3 856	100.0
Total	18 639	69.4	2 843	10.6	2 622	9.8	2 078	7.7	396	1.5	120	0.4	161	0.6	26 859	100.0
Level 5																
Gosford	1 900	74.7	129	5.1	383	15.0	118	4.6	4	0.2	11	0.4	0	0.0	2 545	100.0
St George	2 004	74.9	181	6.8	307	11.5	170	6.4	7	0.3	7	0.3	0	0.0	2 676	100.0
Blacktown	1 859	59.3	719	22.9	405	12.9	130	4.1	12	0.4	9	0.3	0	0.0	3 134	100.0
Lismore Base	985	72.5	93	6.8	160	11.8	107	7.9	6	0.4	3	0.2	4	0.3	1 358	100.0
Tweed Heads	854	69.8	24	2.0	235	19.2	102	8.3	5	0.4	0	0	3	0.2	1 223	100.0
Dubbo Base	856	71.5	84	7.0	172	14.4	61	5.1	5	0.4	7	0.6	13	1.1	1 198	100.0
Wollongong	1 423	60.0	556	23.4	297	12.5	81	3.4	5	0.2	4	0.2	6	0.3	2 372	100.0
Maitland	1 265	79.8	28	1.8	148	9.3	136	8.6	5	0.3	3	0.2	0	0.0	1 585	100.0
Wagga Wagga Base	522	64.8	88	10.9	129	16.0	58	7.2	5	0.6	2	0.2	1	0.1	805	100.0
Total	11 668	69.1	1 902	11.3	2 236	13.2	963	5.7	54	0.3	46	0.3	27	0.2	16 896	100.0
Level 4																
Canterbury	1 291	79.7	95	5.9	171	10.6	27	1.7	4	0.2	8	0.5	23	1.4	1 619	100.0
Hornsby	892	72.3	101	8.2	172	13.9	65	5.3	0	0.0	3	0.2	0	0.0	1 233	100.0
Manly	695	75.2	57	6.2	108	11.7	59	6.4	3	0.3	2	0.2	0	0.0	924	100.0
Mona Vale	304	40.0	332	43.7	94	12.4	25	3.3	5	0.7	0	0.0	0	0.0	760	100.0
Sutherland	911	78.8	118	10.2	89	7.7	33	2.9	2	0.2	3	0.3	0	0.0	1 156	100.0
Auburn	1 166	82.4	85	6.0	85	6.0	74	5.2	3	0.2	2	0.1	0	0.0	1 415	100.0
Campbelltown	2 018	76.9	265	10.1	192	7.3	104	4.0	0	0.0	18	0.7	26	1.0	2 623	100.0
Bankstown-Lidcombe	1 740	80.9	174	8.1	125	5.8	79	3.7	4	0.2	15	0.7	13	0.6	2 150	100.0

(Continued)

Table 46. (Continued)

Maternity service level/hospital	Resuscitation														TOTAL	
	None		Suction		Oxygen therapy		IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hawkesbury	572	67.3	110	12.9	136	16.0	27	3.2	1	0.1	2	0.2	2	0.2	850	100.0
Coffs Harbour	631	68.4	113	12.2	122	13.2	51	5.5	1	0.1	3	0.3	2	0.2	923	100.0
Port Macquarie Base	572	71.6	52	6.5	116	14.5	52	6.5	3	0.4	4	0.5	0	0.0	799	100.0
Tamworth Base	547	60.2	56	6.2	223	24.6	80	8.8	1	0.1	1	0.1	0	0.0	908	100.0
Manning Base	568	77.7	55	7.5	60	8.2	45	6.2	1	0.1	1	0.1	1	0.1	731	100.0
Orange Base	636	68.2	71	7.6	160	17.1	51	5.5	2	0.2	4	0.4	9	1.0	933	100.0
Goulburn Base	195	66.6	22	7.5	55	18.8	15	5.1	2	0.7	1	0.3	3	1.0	293	100.0
Griffith Base	225	48.9	69	15.0	140	30.4	23	5.0	2	0.4	0	0.0	1	0.2	460	100.0
Other hospitals	87	96.7	0	0.0	1	1.1	2	2.2	0	0.0	0	0.0	0	0.0	90	100.0
Total	13 050	73.0	1775	9.9	2049	11.5	812	4.5	34	0.2	67	0.4	80	0.4	17 867	100.0
Level 3																
Blue Mountains	189	65.9	42	14.6	40	13.9	16	5.6	0	0.0	0	0.0	0	0.0	287	100.0
Fairfield	1645	81.0	136	6.7	129	6.3	94	4.6	2	0.1	4	0.2	22	1.1	2032	100.0
Grafton Base	230	44.9	186	36.3	37	7.2	53	10.4	3	0.6	1	0.2	2	0.4	512	100.0
Kempsey	228	78.6	7	2.4	24	8.3	28	9.7	0	0.0	2	0.7	1	0.3	290	100.0
Murwillumbah	200	52.8	97	25.6	60	15.8	17	4.5	2	0.5	1	0.3	2	0.5	379	100.0
Armidale	285	62.0	23	5.0	133	28.9	18	3.9	0	0.0	0	0.0	1	0.2	460	100.0
Inverell	33	12.1	14	5.1	204	75.0	20	7.4	1	0.4	0	0.0	0	0.0	272	100.0
Moree	120	52.6	45	19.7	52	22.8	9	3.9	0	0.0	2	0.9	0	0.0	228	100.0
Mudgee	175	69.7	14	5.6	38	15.1	20	8.0	1	0.4	1	0.4	2	0.8	251	100.0
Bathurst Base	231	42.0	186	33.8	92	16.7	34	6.2	3	0.5	3	0.5	1	0.2	550	100.0
Cowra	157	77.7	4	2.0	35	17.3	4	2.0	0	0.0	1	0.5	1	0.5	202	100.0
Lithgow	67	28.8	76	32.6	74	31.8	15	6.4	0	0.0	0	0.0	1	0.4	233	100.0
Moruya	258	74.1	30	8.6	42	12.1	17	4.9	0	0.0	1	0.3	0	0.0	348	100.0
Queanbeyan	252	86.6	4	1.4	25	8.6	5	1.7	1	0.3	2	0.7	2	0.7	291	100.0
Bowral	550	78.8	20	2.9	65	9.3	24	3.4	4	0.6	11	1.6	24	3.4	698	100.0
Shoalhaven	554	66.0	138	16.4	102	12.2	42	5.0	1	0.1	2	0.2	0	0.0	839	100.0
Muswellbrook	182	83.9	3	1.4	13	6.0	19	8.8	0	0.0	0	0.0	0	0.0	217	100.0
Broken Hill Base	188	68.9	37	13.6	27	9.9	20	7.3	0	0.0	1	0.4	0	0.0	273	100.0
Other hospitals	1197	62.1	278	14.4	322	16.7	110	5.7	5	0.3	12	0.6	4	0.2	1928	100.0
Total	6741	65.5	1340	13.0	1514	14.7	565	5.5	23	0.2	44	0.4	63	0.6	10 290	100.0
Level 2																
Wyong	216	81.8	9	3.4	28	10.6	11	4.2	0	0.0	0	0.0	0	0.0	264	100.0
Other hospitals	781	68.2	89	7.8	223	19.5	45	3.9	2	0.2	4	0.3	2	0.2	1146	100.0
Total	997	70.7	98	7.0	251	17.8	56	4.0	2	0.1	4	0.3	2	0.1	1410	100.0
Private																
Mater, North Sydney	1342	59.6	357	15.8	390	17.3	150	6.7	4	0.2	3	0.1	7	0.3	2253	100.0
North Shore Private	1629	59.4	550	20.0	418	15.2	101	3.7	1	0.0	3	0.1	42	1.5	2744	100.0
Sydney Adventist	1228	55.5	664	30.0	189	8.5	121	5.5	2	0.1	1	0.0	8	0.4	2213	100.0
North Gosford Private	570	64.1	129	14.5	155	17.4	27	3.0	0	0.0	4	0.4	4	0.4	889	100.0
Hurstville Community	116	13.0	478	53.7	246	27.6	46	5.2	0	0.0	0	0.0	4	0.4	890	100.0
Kareena Private	81	14.3	325	57.3	135	23.8	25	4.4	1	0.2	0	0.0	0	0.0	567	100.0
St George Private	517	27.6	885	47.3	371	19.8	70	3.7	4	0.2	4	0.2	21	1.1	1872	100.0
Prince of Wales Private	815	40.8	727	36.4	353	17.7	89	4.5	4	0.2	2	0.1	7	0.4	1997	100.0
The Hills Private	993	75.8	133	10.2	130	9.9	51	3.9	0	0.0	1	0.1	2	0.2	1310	100.0
Sydney Southwest Private	754	68.7	184	16.8	104	9.5	47	4.3	1	0.1	0	0.0	8	0.7	1098	100.0
Nepean Private	539	63.5	66	7.8	200	23.6	38	4.5	1	0.1	0	0.0	5	0.6	849	100.0
Westmead Private	1428	68.4	399	19.1	178	8.5	68	3.3	2	0.1	1	0.0	11	0.5	2087	100.0
Figtree Private	141	14.2	597	60.1	216	21.7	38	3.8	1	0.1	1	0.1	0	0.0	994	100.0
Newcastle Private	1383	72.8	146	7.7	265	14.0	99	5.2	5	0.3	1	0.1	0	0.0	1899	100.0
Calvary, Wagga Wagga	298	52.2	136	23.8	89	15.6	43	7.5	4	0.7	0	0.0	1	0.2	571	100.0
Other hospitals	165	55.7	63	21.3	58	19.6	8	2.7	1	0.3	0	0.0	1	0.3	296	100.0
Total	11 999	53.3	5839	25.9	3497	15.5	1021	4.5	31	0.1	21	0.1	121	0.5	22 529	100.0
TOTAL NSW*	63 244	65.9	13 808	14.4	12 181	12.7	5500	5.7	540	0.6	303	0.3	454	0.5	96 030	100.0

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

*Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

*Total NSW includes births at home assisted by independent midwives and babies born at Level 1 hospitals.

IPPR: intermittent positive pressure respiration.

Admission to special care or neonatal intensive care

Tables 47 shows admissions of liveborn babies to special care or neonatal intensive care for area health

services, and Table 48 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2007.

Table 47. Live births by admission to special care or neonatal intensive care by health area of hospital, NSW, 2007

Health area	No		Admission to special care or NICU				TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	15 065	87.4	2180	12.6	0	0.0	17 245	100.0
South-Eastern Sydney and Illawarra	9557	83.9	1836	16.1	0	0.0	11 393	100.0
Sydney West	10 892	79.3	2847	20.7	0	0.0	13 739	100.0
Northern Sydney and Central Coast	6884	84.8	1238	15.2	0	0.0	8122	100.0
Hunter and New England	7535	82.8	1555	17.1	7	0.1	9097	100.0
North Coast	4938	85.6	800	13.9	33	0.6	5771	100.0
Greater Southern	3061	87.7	417	11.9	13	0.4	3491	100.0
Greater Western	3271	86.6	443	11.7	65	1.7	3779	100.0
Private hospitals	20 136	89.7	2296	10.2	11	0.0	22 443	100.0
Other	140	100.0	0	0.0	0	0.0	140	100.0
TOTAL*	81 479	85.6	13 612	14.3	129	0.1	95 220	100.0

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

*Total includes live births at home assisted by independent midwives.

NICU: neonatal intensive care unit.

Table 48. Live births by admission to special care of neonatal intensive care, hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	No		Admission to special care or NICU				TOTAL	
	No.	%	No.	%	No.	%	No.	%
Level 6								
Royal Prince Alfred	4485	87.2	659	12.8	0	0.0	5144	100.0
Royal North Shore	2047	87.7	288	12.3	0	0.0	2335	100.0
Royal Hospital for Women	3514	82.4	750	17.6	0	0.0	4264	100.0
Liverpool	2656	87.5	381	12.5	0	0.0	3037	100.0
Nepean	2714	74.7	918	25.3	0	0.0	3632	100.0
Westmead	3361	79.5	869	20.5	0	0.0	4230	100.0
John Hunter	2970	78.2	827	21.8	0	0.0	3797	100.0
Total	21 747	82.3	4692	17.7	0	0.0	26 439	100.0
Level 5								
Gosford	2125	83.9	407	16.1	0	0.0	2532	100.0
St George	2209	83.0	452	17.0	0	0.0	2661	100.0
Blacktown	2551	82.1	558	17.9	0	0.0	3109	100.0
Lismore Base	1093	81.2	228	16.9	25	1.9	1346	100.0
Tweed Heads	1021	84.0	189	15.5	6	0.5	1216	100.0
Dubbo Base	966	81.4	217	18.3	4	0.3	1187	100.0
Wollongong	1915	81.6	433	18.4	0	0.0	2348	100.0
Maitland	1342	85.3	231	14.7	0	0.0	1573	100.0
Wagga Wagga Base	627	79.1	164	20.7	2	0.3	793	100.0
Total	13 849	82.6	2879	17.2	37	0.2	16 765	100.0
Level 4								
Canterbury	1456	90.5	152	9.5	0	0.0	1608	100.0
Hornsby	973	79.3	254	20.7	0	0.0	1227	100.0
Manly	780	84.6	142	15.4	0	0.0	922	100.0
Mona Vale	617	81.8	137	18.2	0	0.0	754	100.0
Sutherland	1041	90.4	111	9.6	0	0.0	1152	100.0
Auburn	1067	75.9	339	24.1	0	0.0	1406	100.0
Campbelltown	2271	87.1	335	12.9	0	0.0	2606	100.0
Bankstown-Lidcombe	1850	86.7	284	13.3	0	0.0	2134	100.0
Hawkesbury	712	84.5	131	15.5	0	0.0	843	100.0

(Continued)

Table 48. (Continued)

Maternity service level/hospital	No		Admission to special care or NICU				TOTAL	
	No.	%	No.	%	No.	%	No.	%
Coffs Harbour	773	84.5	140	15.3	2	0.2	915	100.0
Port Macquarie Base	680	85.4	116	14.6	0	0.0	796	100.0
Tamworth Base	603	66.9	298	33.0	1	0.1	902	100.0
Manning Base	645	88.6	83	11.4	0	0.0	728	100.0
Orange Base	757	82.0	125	13.5	41	4.4	923	100.0
Goulburn Base	270	92.8	21	7.2	0	0.0	291	100.0
Griffith Base	313	68.6	143	31.4	0	0.0	456	100.0
Other hospitals	89	98.9	1	1.1	0	0.0	90	100.0
Total	14 897	83.9	2 812	15.8	44	0.2	17 753	100.0
Level 3								
Blue Mountains	264	92.0	23	8.0	0	0.0	287	100.0
Fairfield	1707	84.5	313	15.5	0	0.0	2020	100.0
Grafton Base	440	86.4	69	13.6	0	0.0	509	100.0
Kempsey	271	93.4	19	6.6	0	0.0	290	100.0
Murwillumbah	356	94.2	22	5.8	0	0.0	378	100.0
Armidale	422	92.1	36	7.9	0	0.0	458	100.0
Inverell	255	93.8	16	5.9	1	0.4	272	100.0
Moree	194	86.2	27	12.0	4	1.8	225	100.0
Mudgee	242	96.8	8	3.2	0	0.0	250	100.0
Bathurst Base	499	91.1	43	7.8	6	1.1	548	100.0
Cowra	178	88.6	9	4.5	14	7.0	201	100.0
Lithgow	223	96.1	9	3.9	0	0.0	232	100.0
Moruya	333	96.5	12	3.5	0	0.0	345	100.0
Queanbeyan	280	96.6	10	3.4	0	0.0	290	100.0
Bowral	640	92.0	56	8.0	0	0.0	696	100.0
Shoalhaven	746	89.3	89	10.7	0	0.0	835	100.0
Muswellbrook	208	95.9	9	4.1	0	0.0	217	100.0
Broken Hill Base	252	92.3	21	7.7	0	0.0	273	100.0
Other hospitals	1814	94.8	88	4.6	11	0.6	1913	100.0
Total	9 324	91.1	879	8.6	36	0.4	10 239	100.0
Level 2								
Wyong	253	96.6	9	3.4	0	0.0	262	100.0
Other hospitals	1104	96.6	38	3.3	1	0.1	1143	100.0
Total	1 357	96.6	47	3.3	1	0.1	1 405	100.0
Private								
Mater, North Sydney	2045	91.0	197	8.8	6	0.3	2248	100.0
North Shore Private	2687	98.4	44	1.6	0	0.0	2731	100.0
Sydney Adventist	1793	81.5	407	18.5	0	0.0	2200	100.0
North Gosford Private	698	78.8	183	20.7	5	0.6	886	100.0
Hurstville Community	766	86.2	123	13.8	0	0.0	889	100.0
Kareena Private	484	85.4	83	14.6	0	0.0	567	100.0
St George Private	1785	95.7	80	4.3	0	0.0	1865	100.0
Prince of Wales Private	1766	88.6	228	11.4	0	0.0	1994	100.0
The Hills Private	1138	87.3	165	12.7	0	0.0	1303	100.0
Sydney Southwest Private	906	82.6	191	17.4	0	0.0	1097	100.0
Nepean Private	661	77.9	187	22.1	0	0.0	848	100.0
Westmead Private	2060	99.4	13	0.6	0	0.0	2073	100.0
Figtree Private	898	91.0	89	9.0	0	0.0	987	100.0
Newcastle Private	1665	88.0	226	12.0	0	0.0	1891	100.0
Calvary, Wagga Wagga	510	89.6	59	10.4	0	0.0	569	100.0
Other hospitals	274	92.9	21	7.1	0	0.0	295	100.0
Total	20 136	89.7	2 296	10.2	11	0.0	22 443	100.0
TOTAL NSW*	81 479	85.6	13 612	14.3	129	0.1	95 220	100.0

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

*Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

*Total NSW includes live births at home assisted by independent midwives and live births at Level 1 hospitals.

NICU: neonatal intensive care unit.

Infant feeding

Table 49 shows infant feeding at discharge from the individual hospitals by maternity service level where at hospital of birth for area health services, and Table 50 for least 200 mothers gave birth in 2007.

Table 49. Live births by type of infant feeding and health area of hospital, NSW, 2007

Health area	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
	Sydney South West	12 183	70.6	2153	12.5	2523	14.6	386	2.2	17 245
South-Eastern Sydney and Illawarra	9395	82.5	622	5.5	1234	10.8	142	1.2	11 393	100.0
Sydney West	10 295	74.9	842	6.1	2306	16.8	296	2.2	13 739	100.0
Northern Sydney and Central Coast	6845	84.3	489	6.0	727	9.0	61	0.8	8122	100.0
Hunter and New England	6892	75.8	368	4.0	1603	17.6	234	2.6	9097	100.0
North Coast	4966	86.1	136	2.4	527	9.1	142	2.5	5771	100.0
Greater Southern	2694	77.2	136	3.9	599	17.2	62	1.8	3491	100.0
Greater Western	2886	76.4	62	1.6	653	17.3	178	4.7	3779	100.0
Private hospitals	18 829	83.9	1304	5.8	2128	9.5	182	0.8	22 443	100.0
TOTAL*	75 092	78.9	6113	6.4	12 300	12.9	1715	1.8	95 220	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
*Total includes live births at home assisted by independent midwives

Table 50. Live births by type of infant feeding, hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
	Level 6									
Royal Prince Alfred	4078	79.3	660	12.8	344	6.7	62	1.2	5144	100.0
Royal North Shore	1959	83.9	248	10.6	118	5.1	10	0.4	2335	100.0
Royal Hospital for Women	3731	87.5	238	5.6	245	5.7	50	1.2	4264	100.0
Liverpool	1726	56.8	525	17.3	620	20.4	166	5.5	3037	100.0
Nepean	2519	69.4	163	4.5	907	25.0	43	1.2	3632	100.0
Westmead	3214	76.0	339	8.0	506	12.0	171	4.0	4230	100.0
John Hunter	2839	74.8	162	4.3	736	19.4	60	1.6	3797	100.0
Total	20 066	75.9	2335	8.8	3476	13.1	562	2.1	26 439	100.0
Level 5										
Gosford	2053	81.1	53	2.1	409	16.2	17	0.7	2532	100.0
St George	2079	78.1	284	10.7	267	10.0	31	1.2	2661	100.0
Blacktown	2352	75.7	221	7.1	495	15.9	41	1.3	3109	100.0
Lismore Base	1165	86.6	48	3.6	101	7.5	32	2.4	1346	100.0
Tweed Heads	1111	91.4	19	1.6	70	5.8	16	1.3	1216	100.0
Dubbo Base	860	72.5	19	1.6	276	23.3	32	2.7	1187	100.0
Wollongong	1794	76.4	40	1.7	475	20.2	39	1.7	2348	100.0
Maitland	1123	71.4	76	4.8	358	22.8	16	1.0	1573	100.0
Wagga Wagga Base	564	71.1	56	7.1	163	20.6	10	1.3	793	100.0
Total	13 101	78.1	816	4.9	2614	15.6	234	1.4	16 765	100.0
Level 4										
Canterbury	1309	81.4	129	8.0	151	9.4	19	1.2	1608	100.0
Hornsby	1062	86.6	97	7.9	64	5.2	4	0.3	1227	100.0
Manly	815	88.4	51	5.5	50	5.4	6	0.7	922	100.0
Mona Vale	650	86.2	31	4.1	59	7.8	14	1.9	754	100.0
Sutherland	1009	87.6	30	2.6	103	8.9	10	0.9	1152	100.0
Auburn	1156	82.2	78	5.5	148	10.5	24	1.7	1406	100.0
Campbelltown	1704	65.4	177	6.8	670	25.7	55	2.1	2606	100.0
Bankstown-Lidcombe	1717	80.5	105	4.9	285	13.4	27	1.3	2134	100.0

(Continued)

Table 50. (Continued)

Maternity service level/hospital	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hawkesbury	634	75.2	23	2.7	175	20.8	11	1.3	843	100.0
Coffs Harbour	754	82.4	9	1.0	89	9.7	63	6.9	915	100.0
Port Macquarie Base	689	86.6	10	1.3	94	11.8	3	0.4	796	100.0
Tamworth Base	623	69.1	33	3.7	139	15.4	107	11.9	902	100.0
Manning Base	614	84.3	17	2.3	87	12.0	10	1.4	728	100.0
Orange Base	706	76.5	14	1.5	121	13.1	82	8.9	923	100.0
Goulburn Base	221	75.9	7	2.4	58	19.9	5	1.7	291	100.0
Griffith Base	309	67.8	33	7.2	111	24.3	3	0.7	456	100.0
Other hospitals	86	95.6	1	1.1	2	2.2	1	1.1	90	100.0
Total	14 058	79.2	845	4.8	2 406	13.6	444	2.5	17 753	100.0
Level 3										
Blue Mountains	243	84.7	14	4.9	26	9.1	4	1.4	287	100.0
Fairfield	1088	53.9	518	25.6	385	19.1	29	1.4	2020	100.0
Grafton Base	389	76.4	32	6.3	87	17.1	1	0.2	509	100.0
Kempsey	232	80.0	5	1.7	44	15.2	9	3.1	290	100.0
Murwillumbah	336	88.9	11	2.9	28	7.4	3	0.8	378	100.0
Armidale	370	80.8	24	5.2	59	12.9	5	1.1	458	100.0
Inverell	211	77.6	19	7.0	36	13.2	6	2.2	272	100.0
Moree	170	75.6	16	7.1	32	14.2	7	3.1	225	100.0
Mudgee	215	86.0	3	1.2	29	11.6	3	1.2	250	100.0
Bathurst Base	461	84.1	4	0.7	59	10.8	24	4.4	548	100.0
Cowra	137	68.2	8	4.0	32	15.9	24	11.9	201	100.0
Lithgow	177	76.3	4	1.7	49	21.1	2	0.9	232	100.0
Moruya	301	87.2	5	1.4	35	10.1	4	1.2	345	100.0
Queanbeyan	246	84.8	7	2.4	33	11.4	4	1.4	290	100.0
Bowral	561	80.6	39	5.6	68	9.8	28	4.0	696	100.0
Shoalhaven	670	80.2	28	3.4	127	15.2	10	1.2	835	100.0
Muswellbrook	179	82.5	1	0.5	34	15.7	3	1.4	217	100.0
Broken Hill Base	211	77.3	3	1.1	59	21.6	0	0.0	273	100.0
Other hospitals	1515	79.2	43	2.2	298	15.6	57	3.0	1913	100.0
Total	7 712	75.3	784	7.7	1 520	14.8	223	2.2	10 239	100.0
Level 2										
Wyong	220	84.0	8	3.1	25	9.5	9	3.4	262	100.0
Other hospitals	982	85.9	17	1.5	123	10.8	21	1.8	1143	100.0
Total	1 202	85.6	25	1.8	148	10.5	30	2.1	1 405	100.0
Private										
Mater, North Sydney	2000	89.0	128	5.7	92	4.1	28	1.2	2248	100.0
North Shore Private	2366	86.6	196	7.2	153	5.6	16	0.6	2731	100.0
Sydney Adventist	2014	91.5	0	0	176	8.0	10	0.5	2200	100.0
North Gosford Private	788	88.9	21	2.4	52	5.9	25	2.8	886	100.0
Hurstville Community	691	77.7	71	8.0	119	13.4	8	0.9	889	100.0
Kareena Private	475	83.8	21	3.7	65	11.5	6	1.1	567	100.0
St George Private	1435	76.9	192	10.3	221	11.8	17	0.9	1865	100.0
Prince of Wales Private	1789	89.7	91	4.6	85	4.3	29	1.5	1994	100.0
The Hills Private	1038	79.7	82	6.3	175	13.4	8	0.6	1303	100.0
Sydney Southwest Private	820	74.7	75	6.8	199	18.1	3	0.3	1097	100.0
Nepean Private	648	76.4	65	7.7	132	15.6	3	0.4	848	100.0
Westmead Private	1508	72.7	293	14.1	261	12.6	11	0.5	2073	100.0
Figtree Private	793	80.3	27	2.7	162	16.4	5	0.5	987	100.0
Newcastle Private	1713	90.6	0	0	171	9.0	7	0.4	1891	100.0
Calvary, Wagga Wagga	487	85.6	33	5.8	46	8.1	3	0.5	569	100.0
Other hospitals	264	89.5	9	3.1	19	6.4	3	1.0	295	100.0
Total	18 829	83.9	1 304	5.8	2 128	9.5	182	0.8	22 443	100.0
TOTAL NSW*	75 092	78.9	6 113	6.4	12 300	12.9	1 715	1.8	95 220	100.0

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

#Hospitals with more than 200 births are identified individually. Maternity service levels are described on page 13 of the Methods chapter.

*Total NSW includes live births at home assisted by independent midwives and live births at Level 1 hospitals.

Baby discharge status

Table 51 shows the discharge status of babies for area maternity service level where at least 200 mothers gave health services, and Table 52 for individual hospitals by birth in 2007.

Table 51. Baby discharge status by health area of hospital, NSW, 2007

Health area	Baby discharge status												TOTAL	
	Discharged		Transferred		Stillborn		Died		Transferred and died		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	16 752	96.2	442	2.5	127	0.7	51	0.3	0	0.0	39	0.2	17 411	100.0
South-Eastern Sydney and Illawarra	10 922	95.2	427	3.7	75	0.7	44	0.4	0	0.0	5	0.0	11 473	100.0
Sydney West	13 235	94.7	459	3.3	113	0.8	45	0.3	0	0.0	124	0.9	13 976	100.0
Northern Sydney and Central Coast	7 381	90.3	729	8.9	56	0.7	12	0.1	0	0.0	0	0.0	8 178	100.0
Hunter and New England	8 386	91.3	645	7.0	84	0.9	65	0.7	1	0.0	2	0.0	9 183	100.0
North Coast	5 576	96.0	186	3.2	35	0.6	6	0.1	3	0.1	0	0.0	5 806	100.0
Greater Southern	3 297	93.6	188	5.3	30	0.9	5	0.1	1	0.0	2	0.1	3 523	100.0
Greater Western	3 293	86.4	479	12.6	27	0.7	6	0.2	1	0.0	4	0.1	3 810	100.0
Private hospitals	22 196	98.5	229	1.0	81	0.4	16	0.1	2	0.0	5	0.0	22 529	100.0
TOTAL*	91 176	94.9	3 786	3.9	629	0.7	250	0.3	8	0.0	181	0.2	96 030	100.0

Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
*Total NSW includes births at home assisted by independent midwives.

Table 52. Baby discharge status by hospital and maternity service level, NSW, 2007#

Maternity service level/hospital	Baby discharge status												TOTAL	
	Discharged		Transferred		Stillborn		Died		Transferred and died		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Level 6														
Royal Prince Alfred	5 029	97.0	101	1.9	38	0.7	14	0.3	0	0.0	0	0.0	5 182	100.0
Royal North Shore	2 209	93.5	117	5.0	27	1.1	9	0.4	0	0.0	0	0.0	2 362	100.0
Royal Hospital for Women	4 123	96.0	114	2.7	31	0.7	27	0.6	0	0.0	0	0.0	4 295	100.0
Liverpool	2 868	92.3	148	4.8	38	1.2	21	0.7	0	0.0	32	1.0	3 107	100.0
Nepean	3 429	90.6	181	4.8	35	0.9	22	0.6	0	0.0	119	3.1	3 786	100.0
Westmead	4 029	94.3	185	4.3	37	0.9	16	0.4	0	0.0	4	0.1	4 271	100.0
John Hunter	3 529	91.5	214	5.5	58	1.5	54	1.4	0	0.0	1	0.0	3 856	100.0
Total	25 216	93.9	1 060	3.9	264	1.0	163	0.6	0	0.0	156	0.6	26 859	100.0
Level 5														
Gosford	1 966	77.2	564	22.2	13	0.5	2	0.1	0	0.0	0	0.0	2 545	100.0
St George	2 605	97.3	50	1.9	13	0.5	6	0.2	0	0.0	2	0.1	2 676	100.0
Blacktown	3 051	97.4	52	1.7	25	0.8	6	0.2	0	0.0	0	0.0	3 134	100.0
Lismore Base	1 295	95.4	48	3.5	12	0.9	2	0.1	1	0.1	0	0.0	1 358	100.0
Tweed Heads	1 193	97.5	20	1.6	7	0.6	1	0.1	2	0.2	0	0.0	1 223	100.0
Dubbo Base	914	76.3	270	22.5	11	0.9	3	0.3	0	0.0	0	0.0	1 198	100.0
Wollongong	2 102	88.6	240	10.1	23	1.0	6	0.3	0	0.0	1	0.0	2 372	100.0
Maitland	1 458	92.0	111	7.0	12	0.8	4	0.3	0	0.0	0	0.0	1 585	100.0
Wagga Wagga Base	695	86.3	93	11.6	10	1.2	4	0.5	1	0.1	2	0.2	805	100.0
Total	15 279	90.4	1 448	8.6	126	0.7	34	0.2	4	0.0	5	0.0	16 896	100.0
Level 4														
Canterbury	1 593	98.4	13	0.8	5	0.3	2	0.1	0	0.0	6	0.4	1 619	100.0
Hornsby	1 219	98.9	8	0.6	6	0.5	0	0	0	0.0	0	0.0	1 233	100.0
Manly	910	98.5	11	1.2	2	0.2	1	0.1	0	0.0	0	0.0	924	100.0
Mona Vale	737	97.0	17	2.2	6	0.8	0	0	0	0.0	0	0.0	760	100.0
Sutherland	1 141	98.7	9	0.8	2	0.2	2	0.2	0	0.0	2	0.2	1 156	100.0
Auburn	1 384	97.8	21	1.5	9	0.6	1	0.1	0	0.0	0	0.0	1 415	100.0
Campbelltown	2 563	97.7	39	1.5	17	0.6	4	0.2	0	0.0	0	0.0	2 623	100.0
Bankstown-Lidcombe	2 108	98.0	21	1.0	15	0.7	5	0.2	0	0.0	1	0.0	2 150	100.0

(Continued)

Table 52. (Continued)

Maternity service level/hospital	Baby discharge status												TOTAL	
	Discharged		Transferred		Stillborn		Died		Transferred and died		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Hawkesbury	833	98.0	10	1.2	6	0.7	0	0	0	0.0	1	0.1	850	100.0
Coffs Harbour	867	93.9	47	5.1	8	0.9	1	0.1	0	0.0	0	0.0	923	100.0
Port Macquarie Base	773	96.7	22	2.8	3	0.4	1	0.1	0	0.0	0	0.0	799	100.0
Tamworth Base	707	77.9	194	21.4	6	0.7	0	0	1	0.1	0	0.0	908	100.0
Manning Base	701	95.9	23	3.1	3	0.4	4	0.5	0	0.0	0	0.0	731	100.0
Orange Base	858	92.0	64	6.9	7	0.8	1	0.1	0	0.0	3	0.3	933	100.0
Goulburn Base	281	95.9	10	3.4	2	0.7	0	0	0	0.0	0	0.0	293	100.0
Griffith Base	452	98.3	3	0.7	4	0.9	1	0.2	0	0.0	0	0.0	460	100.0
Other hospitals	87	96.7	3	3.3	0	0	0	0	0	0.0	0	0.0	90	100.0
Total	17 214	96.3	515	2.9	101	0.6	23	0.1	1	0.0	13	0.1	17 867	100.0
Level 3														
Blue Mountains	282	98.3	5	1.7	0	0.0	0	0.0	0	0.0	0	0.0	287	100.0
Fairfield	1997	98.3	19	0.9	12	0.6	4	0.2	0	0.0	0	0.0	2032	100.0
Grafton Base	500	97.7	8	1.6	3	0.6	1	0.2	0	0.0	0	0.0	512	100.0
Kempsey	278	95.9	12	4.1	0	0.0	0	0.0	0	0.0	0	0.0	290	100.0
Murwillumbah	375	98.9	3	0.8	1	0.3	0	0.0	0	0.0	0	0.0	379	100.0
Armidale	443	96.3	14	3.0	2	0.4	1	0.2	0	0.0	0	0.0	460	100.0
Inverell	259	95.2	13	4.8	0	0.0	0	0.0	0	0.0	0	0.0	272	100.0
Moree	214	93.9	11	4.8	3	1.3	0	0.0	0	0.0	0	0.0	228	100.0
Mudgee	240	95.6	9	3.6	1	0.4	1	0.4	0	0.0	0	0.0	251	100.0
Bathurst Base	461	83.8	85	15.5	1	0.2	1	0.2	1	0.2	1	0.2	550	100.0
Cowra	192	95.0	9	4.5	1	0.5	0	0.0	0	0.0	0	0.0	202	100.0
Lithgow	227	97.4	5	2.1	1	0.4	0	0.0	0	0.0	0	0.0	233	100.0
Moruya	338	97.1	7	2.0	3	0.9	0	0.0	0	0.0	0	0.0	348	100.0
Queanbeyan	281	96.6	9	3.1	1	0.3	0	0.0	0	0.0	0	0.0	291	100.0
Bowral	594	85.1	101	14.5	2	0.3	1	0.1	0	0.0	0	0.0	698	100.0
Shoalhaven	821	97.9	11	1.3	4	0.5	3	0.4	0	0.0	0	0.0	839	100.0
Muswellbrook	207	95.4	10	4.6	0	0.0	0	0.0	0	0.0	0	0.0	217	100.0
Broken Hill Base	270	98.9	3	1.1	0	0.0	0	0.0	0	0.0	0	0.0	273	100.0
Other hospitals	1809	93.8	103	5.3	15	0.8	1	0.1	0	0.0	0	0.0	1928	100.0
Total	9788	95.1	437	4.2	50	0.5	13	0.1	1	0.0	1	0.0	10 290	100.0
Level 2														
Wyang	253	95.8	9	3.4	2	0.8	0	0.0	0	0.0	0	0.0	264	100.0
Other hospitals	1071	93.5	71	6.2	2	0.2	1	0.1	0	0.0	1	0.1	1146	100.0
Total	1324	93.9	80	5.7	4	0.3	1	0.1	0	0.0	1	0.1	1410	100.0
Private														
Mater, North Sydney	2229	98.9	17	0.8	5	0.2	0	0.0	2	0.1	0	0.0	2253	100.0
North Shore Private	2711	98.8	17	0.6	11	0.4	3	0.1	0	0.0	2	0.1	2744	100.0
Sydney Adventist	2185	98.7	15	0.7	13	0.6	0	0.0	0	0.0	0	0.0	2213	100.0
North Gosford Private	876	98.5	10	1.1	3	0.3	0	0.0	0	0.0	0	0.0	889	100.0
Hurstville Community	870	97.8	18	2.0	1	0.1	1	0.1	0	0.0	0	0.0	890	100.0
Kareena Private	561	98.9	6	1.1	0	0.0	0	0.0	0	0.0	0	0.0	567	100.0
St George Private	1858	99.3	4	0.2	7	0.4	3	0.2	0	0.0	0	0.0	1872	100.0
Prince of Wales Private	1982	99.2	10	0.5	2	0.1	2	0.1	0	0.0	1	0.1	1997	100.0
The Hills Private	1291	98.5	9	0.7	7	0.5	3	0.2	0	0.0	0	0.0	1310	100.0
Sydney Southwest Private	1087	99.0	10	0.9	1	0.1	0	0.0	0	0.0	0	0.0	1098	100.0
Nepean Private	838	98.7	10	1.2	1	0.1	0	0.0	0	0.0	0	0.0	849	100.0
Westmead Private	2048	98.1	25	1.2	12	0.6	0	0.0	0	0.0	2	0.1	2087	100.0
Figtree Private	974	98.0	11	1.1	7	0.7	2	0.2	0	0.0	0	0.0	994	100.0
Newcastle Private	1839	96.8	50	2.6	8	0.4	2	0.1	0	0.0	0	0.0	1899	100.0
Calvary, Wagga Wagga	554	97.0	15	2.6	2	0.4	0	0.0	0	0.0	0	0.0	571	100.0
Other hospitals	293	99.0	2	0.7	1	0.3	0	0.0	0	0.0	0	0.0	296	100.0
Total	22 196	98.5	229	1.0	81	0.4	16	0.1	2	0.0	5	0.0	22 529	100.0
TOTAL NSW*	91 176	94.9	3786	3.9	629	0.7	250	0.3	8	0.0	181	0.2	96 030	100.0

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

*Hospitals with more than 200 births are identified individually. Obstetric service levels are described on page 13 of the Methods chapter.

*Total NSW includes births at home assisted by independent midwives and babies born at Level 1 hospitals.

Postnatal length of stay

Table 53 shows the mother's postnatal length of stay in the hospital of birth for hospitals where at least 200 mothers gave birth in 2007.

Table 53. Average maternal postnatal length of stay in hospital of birth, NSW, 2002–2006#

Health area/hospital	Average postnatal length of stay (days)				
	2002	2003	2004	2005	2006
Sydney South West					
Canterbury	2.9	3.0	3.0	2.9	2.8
Royal Prince Alfred	3.8	3.7	3.9	3.7	3.6
Fairfield	2.6	2.6	2.6	2.7	2.6
Liverpool	2.6	2.7	2.8	2.9	2.9
Campbelltown	2.7	2.6	2.5	2.7	2.8
Bankstown–Lidcombe	2.8	2.8	2.7	2.7	2.7
Bowral	2.3	2.3	2.2	2.4	2.2
Other hospitals	–	2.7	2.8	2.8	–
ALL HOSPITALS	2.9	3.0	3.0	3.0	3.0
South-Eastern Sydney and Illawarra					
St George	2.7	2.8	2.7	2.5	2.5
Sutherland	3.1	3.1	3.1	2.9	3.1
Royal Hospital for Women	3.6	3.5	3.5	3.4	3.4
Shoalhaven	2.3	2.4	2.6	2.6	2.9
Wollongong	2.6	2.7	2.5	2.2	2.3
Other hospitals	2.9	2.6	2.3	2.4	2.8
ALL HOSPITALS	3.0	3.0	3.0	2.8	2.9
Sydney West					
Auburn	2.9	2.8	2.9	2.8	2.8
Blacktown	2.9	3.1	3.1	3.0	3.0
Blue Mountains	3.7	3.4	3.0	3.0	3.3
Nepean	3.0	3.2	3.3	3.1	3.0
Westmead	3.2	3.3	3.2	3.1	2.8
Hawkesbury	3.3	3.2	3.4	3.3	3.4
Lithgow	3.0	3.5	3.5	3.0	3.0
ALL HOSPITALS	3.1	3.2	3.2	3.0	2.9
Northern Sydney and Central Coast					
Gosford	2.5	2.5	2.5	2.1	2.1
Wyong	2.1	2.1	2.1	2.0	2.0
Hornsby	3.1	2.9	2.9	2.8	2.6
Manly	3.6	3.6	3.8	3.6	3.5
Mona Vale	3.5	3.3	3.2	3.0	2.9
Royal North Shore	3.6	3.5	3.3	3.4	3.3
Other hospitals	3.4	3.3	3.1	1.9	1.0
ALL HOSPITALS	3.1	3.0	3.0	2.8	2.7
Hunter and New England					
Armidale	3.7	3.8	3.8	3.4	3.3
Inverell	3.0	3.0	3.3	3.4	3.3
Moree	3.5	3.5	3.4	3.3	3.4
Tamworth Base	3.3	3.4	3.5	3.2	3.0
Manning Base	3.0	3.2	3.3	3.1	3.2
Maitland	2.5	2.4	2.5	2.4	2.4
Muswellbrook	3.2	3.1	2.9	3.0	2.8
Singleton	2.8	2.6	2.5	2.7	2.6
John Hunter	3.2	3.2	3.2	3.3	3.1
Other hospitals	3.2	3.3	3.1	2.8	2.6
ALL HOSPITALS	3.1	3.1	3.1	3.1	2.9

(Continued)

Table 53. (Continued)

Health area/hospital	Average postnatal length of stay (days)				
	2002	2003	2004	2005	2006
North Coast					
Coffs Harbour	3.8	3.9	3.9	3.7	3.6
Grafton Base	3.6	3.6	3.6	3.5	3.4
Kempsey	3.0	3.1	3.1	2.9	2.9
Lismore Base	3.1	3.2	3.5	3.2	3.4
Murwillumbah	3.5	3.4	3.7	3.7	3.3
Tweed Heads	3.1	3.0	3.2	3.1	3.0
Port Macquarie Base	3.8	3.5	3.6	3.5	3.3
Other hospitals	2.6	2.5	2.6	2.6	2.4
ALL HOSPITALS	3.3	3.3	3.5	3.3	3.2
Greater Southern					
Goulburn Base	3.5	3.4	3.5	3.4	3.5
Moruya	2.9	2.8	2.7	2.7	2.7
Queanbeyan	3.3	3.1	3.0	3.2	3.0
Griffith Base	3.1	3.2	3.2	3.1	3.0
Wagga Wagga Base	3.0	3.1	2.9	2.7	2.7
Other hospitals	3.6	3.7	3.6	3.5	3.5
ALL HOSPITALS	3.3	3.4	3.3	3.1	3.1
Greater Western					
Dubbo Base	2.5	2.4	2.4	2.8	2.4
Mudgee	3.2	3.2	3.0	2.9	2.8
Bathurst Base	3.1	2.9	3.0	3.0	2.8
Orange Base	3.2	3.1	3.0	2.9	2.8
Parkes	3.4	3.5	3.4	3.4	3.3
Broken Hill Base	3.4	3.3	3.6	3.5	3.6
Other hospitals	3.1	3.3	2.9	2.8	3.0
ALL HOSPITALS	3.0	2.9	2.9	2.9	2.8
Private hospitals					
Mater, North Sydney	4.5	4.4	4.5	4.4	4.5
North Shore Private	4.5	4.4	4.4	4.4	4.4
Sydney Adventist	4.6	4.6	4.6	4.6	4.7
North Gosford Private	4.7	4.7	4.7	4.8	4.6
Hurstville Community	4.5	4.5	4.5	4.5	4.5
Kareena Private	5.0	4.8	4.5	4.5	4.5
St George Private	4.9	4.6	4.6	4.6	4.3
Prince of Wales Private	4.7	4.6	4.6	4.5	4.5
The Hills Private	4.8	4.7	4.6	4.6	4.5
Sydney Southwest Private	4.3	4.4	4.4	4.3	4.3
Nepean Private	4.5	4.6	4.6	4.6	4.6
Westmead Private	4.5	4.2	4.0	4.0	4.0
Figtree Private	5.5	5.3	5.2	5.2	5.3
Newcastle Private	5.5	5.9	4.3	4.3	4.0
Calvary, Wagga Wagga	4.6	4.8	4.7	4.8	4.8
Other private hospitals	4.9	4.8	4.9	4.9	5.1
ALL HOSPITALS	4.7	4.6	4.5	4.5	4.5
TOTAL NSW*	3.5	3.5	3.4	3.4	3.3

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

*Hospitals with more than 200 births are identified individually.

*Total NSW includes births at home assisted by independent midwives.

Clinical indicators

Selected clinical indicators for obstetrics are reported in this section. The definitions of the clinical indicators follow those described in Version 6 of the Australian Council on Healthcare Standards Clinical Indicator User's Manual.¹

Reference

1. Australian Council on Healthcare Standards. Obstetrics Indicators – Clinical Indicator Users' Manual, Version 6. Sydney: ACHS; 2008.

Outcome of selected primipara, Indicator 1.1

Definition: the number of selected primipara who have a spontaneous vaginal birth as a percentage of the total number of selected primipara who give birth.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 54 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 54. 1.1 Selected primipara who have a spontaneous vaginal birth by hospital, NSW, 2007[#]

Health area–hospital	%	Health area–hospital	%	
Sydney South West	Canterbury		73.5	
	Royal Prince Alfred		60.3	
	Fairfield		61.7	
	Liverpool		65.2	
	Campbelltown		62.4	
	Bankstown–Lidcombe		87.0	
	Bowral		63.4	
South-Eastern Sydney and Illawarra	Total	Greater Southern	Total	
	St. George		Goulburn Base	52.0
	Sutherland		Moruya	58.2
	Royal Hospital for Women		Queanbeyan	68.0
	Shoalhaven		Griffith Base	64.2
	Wollongong		Wagga Wagga Base	54.3
	Other hospitals		Other hospitals	55.4
Sydney West	Total	Greater Western	Total	
	Auburn		Dubbo Base	54.8
	Blacktown		Mudgee	56.7
	Blue Mountains		Bathurst Base	64.9
	Nepean		Cowra	67.4
	Westmead		Orange Base	50.6
	Hawkesbury		Broken Hill Base	53.8
Northern Sydney and Central Coast	Total	Private hospitals	Other hospitals	
	Gosford		Total	55.5
	Wyong		Mater, North Sydney	29.8
	Hornsby		North Shore Private	33.9
	Manly		Sydney Adventist	44.0
	Mona Vale		North Gosford Private	34.1
	Royal North Shore		Hurstville Community	35.5
Hunter and New England	Other hospitals		Kareena Private	21.9
	Total		St. George Private	35.1
	Armidale		Prince of Wales Private	39.7
	Inverell		The Hills Private	41.9
	Moree		Sydney Southwest Private	55.2
	Tamworth Base		Nepean Private	44.1
	Manning Base		Westmead Private	43.5
North Coast	Maitland		Figtree Private	41.7
	Muswellbrook		Newcastle Private	41.8
	John Hunter		Calvary, Wagga Wagga	36.8
	Other hospitals		Other hospitals	31.9
	Total	TOTAL NSW*	Total	38.9
	Coffs Harbour		TOTAL NSW*	52.7
	Grafton Base			

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Outcome of selected primipara, Indicator 1.2

Definition: the number of selected primipara who undergo induction of labour as a percentage of the total number of selected primipara who give birth.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton

pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 55 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 55. 1.2 Selected primipara who undergo induction of labour by hospital, NSW, 2003–2007[#]

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	28.5	Kempsey	8.2	
	Royal Prince Alfred	25.7		Lismore Base	33.9
	Fairfield	23.7		Murwillumbah	20.2
	Liverpool	27.3		Tweed Heads	27.8
	Campbelltown	30.6		Port Macquarie Base	32.5
	Bankstown–Lidcombe	33.5		Other hospitals	0.0
	Bowral	35.1		Total	26.7
	Total	27.8		Greater Southern	Goulburn Base
South-Eastern Sydney and Illawarra	St. George	35.1	Moruya		27.8
	Sutherland	30.5	Queanbeyan		26.7
	Royal Hospital for Women	35.2	Griffith Base		19.5
	Shoalhaven	28.9	Wagga Wagga Base		31.4
	Wollongong	39.7	Other hospitals		29.8
	Other hospitals	54.8	Total		26.3
	Total	35.3	Greater Western		Dubbo Base
	Sydney West	Auburn		32.3	Mudgee
Blacktown		43.2		Bathurst Base	23.9
Blue Mountains		35.4		Cowra	39.5
Nepean		37.9		Orange Base	35.9
Westmead		43.0		Broken Hill Base	24.6
Hawkesbury		43.0		Other hospitals	33.3
Lithgow		41.3		Total	31.2
Total		40.5	Private hospitals	Mater, North Sydney	29.7
Northern Sydney and Central Coast	Gosford	36.4		North Shore Private	27.2
	Wyong	0.0		Sydney Adventist	35.8
	Hornsby	28.8		North Gosford Private	31.8
	Manly	32.8		Hurstville Community	36.2
	Mona Vale	46.5		Kareena Private	36.3
	Royal North Shore	33.0		St. George Private	35.5
	Other hospitals	0.0		Prince of Wales Private	28.1
	Total	33.1	The Hills Private	46.1	
Hunter and New England	Armidale	33.3	Sydney Southwest Private	33.4	
	Inverell	31.4	Nepean Private	34.0	
	Moree	26.5	Westmead Private	37.2	
	Tamworth Base	37.5	Figtree Private	51.0	
	Manning Base	23.7	Newcastle Private	30.1	
	Maitland	39.1	Calvary, Wagga Wagga	27.1	
	Muswellbrook	7.5	Other hospitals	33.3	
	John Hunter	28.5	Total	33.9	
Other hospitals	26.3	TOTAL NSW*	TOTAL NSW*	32.8	
Total	30.8				
North Coast	Coffs Harbour	20.8			
	Grafton Base	32.5			

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Outcome of selected primipara, Indicator 1.3

Definition: the number of selected primipara who undergo an instrumental vaginal birth as a percentage of the total number of selected primipara who give birth.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton

pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 56 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 56. 1.3 Selected primipara who undergo an instrumental vaginal birth by hospital, NSW, 2007#

Health area–hospital	%	Health area–hospital	%	
Sydney South West	Canterbury	22.1	Kempsey	6.1
	Royal Prince Alfred	22.7	Lismore Base	12.4
	Fairfield	11.9	Murwillumbah	11.7
	Liverpool	19.8	Tweed Heads	15.8
	Campbelltown	9.7	Port Macquarie Base	17.3
	Bankstown–Lidcombe	21.4	Other hospitals	13.0
	Bowral	30.5	Total	14.7
	Total	19.6	Greater Southern	
South-Eastern Sydney and Illawarra	St. George	23.6	Goulburn Base	18.7
	Sutherland	16.4	Moruya	21.5
	Royal Hospital for Women	26.0	Queanbeyan	18.7
	Shoalhaven	15.7	Griffith Base	23.6
	Wollongong	20.3	Wagga Wagga Base	20.0
	Other hospitals	22.6	Other hospitals	19.4
	Total	22.8	Total	20.2
	Sydney West		Greater Western	
Auburn	13.7	Dubbo Base	17.6	
Blacktown	20.0	Mudgee	26.7	
Blue Mountains	22.8	Bathurst Base	7.5	
Nepean	22.1	Cowra	16.3	
Westmead	22.0	Orange Base	21.2	
Hawkesbury	15.2	Broken Hill Base	12.3	
Lithgow	10.9	Other hospitals	17.3	
Total	20.1	Total	17.1	
Northern Sydney and Central Coast	Gosford	21.0	Private hospitals	
	Wyong	10.3	Mater, North Sydney	35.9
	Hornsby	24.0	North Shore Private	28.1
	Manly	18.8	Sydney Adventist	22.1
	Mona Vale	35.0	North Gosford Private	22.4
	Royal North Shore	19.5	Hurstville Community	29.1
	Other hospitals	0.0	Kareena Private	33.6
	Total	21.5	St. George Private	29.6
	Hunter and New England		Prince of Wales Private	24.6
	Armidale	11.8	The Hills Private	35.6
Inverell	19.6	Sydney Southwest Private	22.1	
Moree	16.3	Nepean Private	26.5	
Tamworth Base	31.3	Westmead Private	28.7	
Manning Base	21.6	Figtree Private	31.1	
Maitland	19.4	Newcastle Private	24.5	
Muswellbrook	17.5	Calvary, Wagga Wagga	33.3	
John Hunter	22.2	Other hospitals	34.8	
Other hospitals	18.2	Total	28.2	
Total	21.4	TOTAL NSW*	TOTAL NSW*	
North Coast			22.3	
Coffs Harbour	16.3			
Grafton Base	17.5			

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

#Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Outcome of selected primipara, Indicator 1.4

Definition: the number of selected primipara undergoing caesarean section birth as a percentage of the total number of selected primipara who give birth.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton

pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 57 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 57. 1.4 Selected primipara undergoing caesarean section by hospital, NSW, 2007[#]

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	19.9	Greater Southern	Kempsey	20.4
	Royal Prince Alfred	23.3		Lismore Base	27.0
	Fairfield	14.7		Murwillumbah	26.6
	Liverpool	17.6		Tweed Heads	19.0
	Campbelltown	22.8		Port Macquarie Base	20.3
	Bankstown–Lidcombe	16.5		Other hospitals	0.0
	Bowral	20.1		Total	21.8
	Total	20.1		Goulburn Base	29.3
South-Eastern Sydney and Illawarra	St. George	18.8	Moruya	20.3	
	Sutherland	17.4	Queanbeyan	13.3	
	Royal Hospital for Women	24.5	Griffith Base	12.2	
	Shoalhaven	27.1	Wagga Wagga Base	25.7	
	Wollongong	23.8	Other hospitals	25.2	
	Other hospitals	19.4	Total	22.3	
	Total	22.2	Greater Western	Dubbo Base	25.1
	Sydney West	Auburn		17.1	Mudgee
Blacktown		25.2		Bathurst Base	27.6
Blue Mountains		21.5		Cowra	16.3
Nepean		28.9		Orange Base	27.7
Westmead		20.8		Broken Hill Base	33.8
Hawkesbury		34.8		Other hospitals	32.1
Lithgow		26.1		Total	26.4
Total		24.2	Private hospitals	Mater, North Sydney	34.2
Northern Sydney and Central Coast	Gosford	35.3		North Shore Private	37.8
	Wyong	5.9		Sydney Adventist	33.9
	Hornsby	23.8		North Gosford Private	43.1
	Manly	17.8		Hurstville Community	35.1
	Mona Vale	20.7		Kareena Private	44.5
	Royal North Shore	26.0		St. George Private	34.8
	Other hospitals	0.0		Prince of Wales Private	35.5
	Total	25.7	The Hills Private	22.5	
Hunter and New England	Armidale	16.7	Sydney Southwest Private	22.4	
	Inverell	37.3	Nepean Private	29.4	
	Moree	16.3	Westmead Private	27.6	
	Tamworth Base	22.3	Figtree Private	26.8	
	Manning Base	18.0	Newcastle Private	33.8	
	Maitland	22.5	Calvary, Wagga Wagga	29.9	
	Muswellbrook	17.5	Other hospitals	31.9	
	John Hunter	17.4	Total	32.7	
	Other hospitals	11.0	TOTAL NSW*	TOTAL NSW*	24.9
	Total	18.7			
North Coast	Coffs Harbour	23.5			
	Grafton Base	25.0			

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Vaginal birth following caesarean section, Indicator 2.1

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

Table 58 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 58. 2.1 Vaginal delivery after previous primary caesarean section by hospital, NSW, 2007#

Health area-hospital	%	Health area-hospital	%		
Sydney South West	Canterbury	16.9	Greater Southern	Kempsey	30.4
	Royal Prince Alfred	13.5		Lismore Base	20.1
	Fairfield	5.4		Murwillumbah	23.3
	Liverpool	20.5		Tweed Heads	19.1
	Campbelltown	15.6		Port Macquarie Base	21.3
	Bankstown-Lidcombe	11.0		Other hospitals	100.0
	Bowral	20.7		Total	18.7
South-Eastern Sydney and Illawarra	Total	14.9	Goulburn Base	26.5	
	St. George	23.0	Moruya	12.5	
	Sutherland	6.7	Queanbeyan	5.3	
	Royal Hospital for Women	8.3	Griffith Base	12.8	
	Shoalhaven	6.3	Wagga Wagga Base	8.7	
	Wollongong	25.3	Other hospitals	8.1	
	Other hospitals	9.1	Total	11.2	
Sydney West	Total	14.6	Greater Western	Dubbo Base	25.3
	Auburn	4.0		Mudgee	0.0
	Blacktown	18.4		Bathurst Base	24.4
	Blue Mountains	0.0		Cowra	20.0
	Nepean	14.8		Orange Base	8.9
	Westmead	20.8		Broken Hill Base	6.5
	Hawkesbury	14.1		Other hospitals	15.8
Northern Sydney and Central Coast	Lithgow	15.6	Total	16.5	
	Total	16.9	Private hospitals	Mater, North Sydney	3.6
	Gosford	5.7		North Shore Private	3.8
	Wyong	100.0		Sydney Adventist	6.4
	Hornsby	9.4		North Gosford Private	6.8
	Manly	17.3		Hurstville Community	2.9
	Mona Vale	4.2		Kareena Private	1.9
Royal North Shore	11.2	St. George Private		6.4	
Hunter and New England	Total	8.9	Prince of Wales Private	4.8	
	Armidale	16.3	The Hills Private	11.7	
	Inverell	13.5	Sydney Southwest Private	5.1	
	Moree	14.3	Nepean Private	10.4	
	Tamworth Base	13.1	Westmead Private	8.3	
	Manning Base	29.5	Figtree Private	6.4	
	Maitland	16.4	Newcastle Private	9.3	
North Coast	Muswellbrook	30.0	Calvary, Wagga Wagga	14.3	
	John Hunter	21.7	Other hospitals	2.0	
	Other hospitals	17.1	Total	6.2	
	Total	19.6	TOTAL NSW*	12.3	
	Coffs Harbour	10.0			
	Grafton Base	12.2			

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

#Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Major perineal tears and surgical repair of the perineum, Indicator 3.1

Definition: total number of selected primipara with an intact perineum as a percentage of the total number of selected primipara delivering vaginally.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton

pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 59 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 59. 3.1 Selected primipara delivering vaginally with an intact perineum by hospital, NSW, 2007[#]

Health area–hospital	%	Health area–hospital	%			
Sydney South West	Canterbury	5.0	Kempsey	25.6		
	Royal Prince Alfred	4.7		Lismore Base	11.7	
	Fairfield	10.0		Murwillumbah	21.7	
	Liverpool	7.5		Tweed Heads	20.8	
	Campbelltown	8.1		Port Macquarie Base	20.4	
	Bankstown–Lidcombe	5.5		Other hospitals	18.8	
	Bowral	15.9		Total	18.3	
Total	6.7	Greater Southern		Goulburn Base	13.2	
South-Eastern Sydney and Illawarra	St. George			11.6	Moruya	22.2
	Sutherland			16.1	Queanbeyan	15.4
	Royal Hospital for Women		9.1	Griffith Base	13.9	
	Shoalhaven		9.9	Wagga Wagga Base	18.5	
	Wollongong	6.7	Other hospitals	24.7		
Total	28.0	Total	19.6			
Sydney West	Total	10.4	Greater Western	Dubbo Base	13.4	
	Auburn	13.6		Mudgee	6.0	
	Blacktown	6.6		Bathurst Base	19.6	
	Blue Mountains	4.8		Cowra	22.2	
	Nepean	8.0		Orange Base	18.7	
	Westmead	5.2	Broken Hill Base	23.3		
	Hawkesbury	13.3	Other hospitals	16.4		
Lithgow	23.5	Total	16.5			
Total	7.7	Private hospitals	Mater, North Sydney	7.3		
Northern Sydney and Central Coast	Gosford		8.4	North Shore Private	10.3	
	Wyong		7.8	Sydney Adventist	7.1	
	Hornsby		8.2	North Gosford Private	16.6	
	Manly		8.1	Hurstville Community	4.1	
	Mona Vale		14.0	Kareena Private	4.9	
	Royal North Shore		9.2	St. George Private	12.9	
	Other hospitals		8.0	Prince of Wales Private	12.5	
Total	9.1		The Hills Private	9.8		
Hunter and New England	Armidale		20.0	Sydney Southwest Private	12.0	
	Inverell	15.6	Nepean Private	5.4		
	Moree	19.5	Westmead Private	7.1		
	Tamworth Base	13.8	Figtree Private	5.9		
	Manning Base	19.3	Newcastle Private	11.8		
	Maitland	9.0	Calvary, Wagga Wagga	10.9		
	Muswellbrook	18.2	Other hospitals	8.7		
	John Hunter	6.9	Total	9.4		
	Other hospitals	15.1	TOTAL NSW*	TOTAL NSW*	10.0	
	Total	11.1				
North Coast	Coffs Harbour	18.9				
	Grafton Base	16.7				

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Major perineal tears and surgical repair of the perineum, Indicator 3.2

Definition: total number of selected primipara undergoing episiotomy and no perineal tear while giving birth vaginally as a percentage of the total number of selected primipara delivering vaginally.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the

first time at greater than 20 weeks gestation; singleton pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 60 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 60. 3.2 Selected primipara undergoing episiotomy and no perineal tear by hospital, NSW, 2007[#]

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	17.3	Kempsey	7.7	
	Royal Prince Alfred	16.6	Lismore Base	17.5	
	Fairfield	32.6	Murwillumbah	8.7	
	Liverpool	33.5	Tweed Heads	18.5	
	Campbelltown	16.9	Port Macquarie Base	17.2	
	Bankstown–Lidcombe	29.2	Other hospitals	10.1	
	Bowral	13.0	Total	15.6	
	Total	22.7	Greater Southern		
South-Eastern Sydney and Illawarra	St. George	14.1	Goulburn Base	50.9	
	Sutherland	9.3	Moruya	15.9	
	Royal Hospital for Women	26.3	Queanbeyan	10.8	
	Shoalhaven	18.2	Griffith Base	23.1	
	Wollongong	18.5	Wagga Wagga Base	18.5	
	Other hospitals	8.0	Other hospitals	16.9	
	Total	19.2	Total	20.2	
Sydney West	Auburn	19.2	Greater Western		
	Blacktown	32.8	Dubbo Base	32.2	
	Blue Mountains	8.1	Mudgee	30.0	
	Nepean	25.0	Bathurst Base	8.2	
	Westmead	34.3	Cowra	16.7	
	Hawkesbury	14.7	Orange Base	14.5	
	Lithgow	32.4	Broken Hill Base	16.3	
	Total	28.5	Other hospitals	18.2	
	Northern Sydney and Central Coast	Gosford	11.4	Total	20.8
		Wyong	7.8	Private hospitals	
Hornsby		22.3	Mater, North Sydney	40.5	
Manly		11.2	North Shore Private	42.9	
Mona Vale		10.5	Sydney Adventist	37.3	
Royal North Shore		13.4	North Gosford Private	31.7	
Other hospitals		0.0	Hurstville Community	43.9	
Total		13.5	Kareena Private	45.7	
Hunter and New England	Armidale	20.0	St. George Private	24.7	
	Inverell	53.1	Prince of Wales Private	34.7	
	Moree	9.8	The Hills Private	39.2	
	Tamworth Base	31.0	Sydney Southwest Private	43.1	
	Manning Base	10.5	Nepean Private	52.4	
	Maitland	14.4	Westmead Private	51.2	
	Muswellbrook	3.0	Figtree Private	48.9	
	John Hunter	11.1	Newcastle Private	32.2	
	Other hospitals	20.4	Calvary, Wagga Wagga	27.7	
	Total	15.8	Other hospitals	30.4	
North Coast	Coffs Harbour	11.2	Total	39.7	
	Grafton Base	18.9	TOTAL NSW*	24.9	

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Major perineal tears and surgical repair of the perineum, Indicator 3.3

Definition: total number of selected primipara sustaining a perineal tear and no episiotomy as a percentage of the total number of selected primipara delivering vaginally.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton

pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 61 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 61. 3.3 Selected primipara sustaining a perineal tear and no episiotomy by hospital, NSW, 2007[#]

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	65.7	Kempsey	66.7	
	Royal Prince Alfred	70.6		Lismore Base	64.6
	Fairfield	52.3		Murwillumbah	59.4
	Liverpool	51.1		Tweed Heads	54.5
	Campbelltown	68.2		Port Macquarie Base	54.8
	Bankstown–Lidcombe	57.2		Other hospitals	65.2
	Bowral	67.4		Total	57.8
South-Eastern Sydney and Illawarra	Total	62.8	Greater Southern	Goulburn Base	28.3
	St. George	64.4		Moruya	58.7
	Sutherland	70.5		Queanbeyan	69.2
	Royal Hospital for Women	57.4		Griffith Base	58.3
	Shoalhaven	66.1		Wagga Wagga Base	52.3
	Wollongong	70.6		Other hospitals	52.7
	Other hospitals	44.0		Total	53.8
Sydney West	Total	63.3	Greater Western	Dubbo Base	45.0
	Auburn	55.5		Mudgee	56.0
	Blacktown	49.2		Bathurst Base	62.9
	Blue Mountains	82.3		Cowra	52.8
	Nepean	54.9		Orange Base	50.6
	Westmead	47.8		Broken Hill Base	58.1
	Hawkesbury	63.3		Other hospitals	54.5
Northern Sydney and Central Coast	Lithgow	41.2	Private hospitals	Total	52.1
	Total	52.1		Mater, North Sydney	37.4
	Gosford	65.8		North Shore Private	41.8
	Wyong	79.7		Sydney Adventist	47.7
	Hornsby	59.3		North Gosford Private	41.4
	Manly	72.9		Hurstville Community	39.8
	Mona Vale	68.6		Kareena Private	45.7
Royal North Shore	65.0	St. George Private	56.7		
Hunter and New England	Other hospitals	92.0	Prince of Wales Private	47.9	
	Total	66.6	The Hills Private	41.2	
	Armidale	45.9	Sydney Southwest Private	38.2	
	Inverell	25.0	Nepean Private	36.3	
	Moree	48.8	Westmead Private	39.9	
	Tamworth Base	47.1	Figtree Private	41.6	
	Manning Base	59.6	Newcastle Private	55.4	
North Coast	Maitland	72.6	Calvary, Wagga Wagga	47.5	
	Muswellbrook	75.8	Other hospitals	52.2	
	John Hunter	69.4	Total	44.3	
	Other hospitals	58.6	TOTAL NSW*	56.6	
	Total	63.4			
	Coffs Harbour	53.8			
	Grafton Base	53.3			

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Major perineal tears and surgical repair of the perineum, Indicator 3.4

Definition: total number of selected primipara undergoing episiotomy and sustaining a perineal tear while giving birth vaginally as a percentage of the total number of selected primipara delivering vaginally.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the first time at greater than 20 weeks gestation; singleton

pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 62 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 62. 3.4 Selected primipara undergoing episiotomy and sustaining a perineal tear by hospital, NSW, 2007#

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	7.77	Greater Southern	Kempsey	0.00
	Royal Prince Alfred	5.42		Lismore Base	5.00
	Fairfield	3.73		Murwillumbah	1.45
	Liverpool	4.07		Tweed Heads	1.98
	Campbelltown	2.32		Port Macquarie Base	2.55
	Bankstown–Lidcombe	4.82		Other hospitals	2.90
	Bowral	0.00		Total	3.43
	Total	4.63		Goulburn Base	1.89
South-Eastern Sydney and Illawarra	St. George	8.24	Moruya	3.17	
	Sutherland	2.80	Queanbeyan	3.08	
	Royal Hospital for Women	6.12	Griffith Base	0.93	
	Shoalhaven	3.31	Wagga Wagga Base	4.62	
	Wollongong	2.92	Other hospitals	3.29	
	Other hospitals	12.00	Total	3.02	
	Total	5.65	Greater Western	Dubbo Base	6.93
Sydney West	Auburn	10.62		Mudgee	2.00
	Blacktown	10.82		Bathurst Base	4.12
	Blue Mountains	3.23		Cowra	5.56
	Nepean	10.19		Orange Base	7.23
	Westmead	11.10		Broken Hill Base	2.33
	Hawkesbury	8.00		Other hospitals	7.27
	Lithgow	2.94	Total	5.86	
	Total	10.35	Private hospitals	Mater, North Sydney	11.01
Northern Sydney and Central Coast	Gosford	11.66		North Shore Private	1.88
	Wyong	4.69		Sydney Adventist	7.84
	Hornsby	7.54		North Gosford Private	9.66
	Manly	5.81		Hurstville Community	9.94
	Mona Vale	5.81		Kareena Private	1.23
	Royal North Shore	11.32		St. George Private	3.87
	Other hospitals	0.00		Prince of Wales Private	2.20
	Total	9.05		The Hills Private	4.05
Hunter and New England	Armidale	5.88		Sydney Southwest Private	2.62
	Inverell	6.25	Nepean Private	1.79	
	Moree	19.51	Westmead Private	0.73	
	Tamworth Base	6.32	Figtree Private	0.90	
	Manning Base	3.51	Newcastle Private	0.00	
	Maitland	3.34	Calvary, Wagga Wagga	7.92	
	Muswellbrook	3.03	Other hospitals	8.70	
	John Hunter	11.08	Total	4.13	
	Other hospitals	3.23	TOTAL NSW*	TOTAL NSW*	6.02
	Total	7.51			
	North Coast	Coffs Harbour	5.92		
Grafton Base		4.44			

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

#Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Major perineal tears and surgical repair of the perineum, Indicator 3.5

Definition: total number of selected primipara undergoing surgical repair of the perineum for third-degree tear as a percentage of the total number of selected primipara delivering vaginally.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the

first time at greater than 20 weeks gestation; singleton pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 63 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 63. 3.5 Selected primipara undergoing surgical repair of the perineum for third-degree tear by hospital, NSW, 2007#

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	9.02	Greater Southern	Kempsey	2.56
	Royal Prince Alfred	7.84		Lismore Base	2.92
	Fairfield	5.60		Murwillumbah	1.45
	Liverpool	3.74		Tweed Heads	4.29
	Campbelltown	3.94		Port Macquarie Base	5.10
	Bankstown–Lidcombe	2.19		Other hospitals	1.45
	Bowral	2.90		Total	3.70
	Total	5.76		Goulburn Base	7.55
South-Eastern Sydney and Illawarra	St. George	6.56	Moruya	4.76	
	Sutherland	3.11	Queanbeyan	1.54	
	Royal Hospital for Women	3.71	Griffith Base	3.70	
	Shoalhaven	3.31	Wagga Wagga Base	6.15	
	Wollongong	3.13	Other hospitals	4.53	
	Other hospitals	16.00	Total	4.68	
	Total	4.38	Greater Western	Dubbo Base	8.42
	Sydney West	Auburn		4.13	Mudgee
Blacktown		5.76		Bathurst Base	0.00
Blue Mountains		6.45		Cowra	5.56
Nepean		4.78		Orange Base	7.23
Westmead		4.59		Broken Hill Base	2.33
Hawkesbury		4.00		Other hospitals	7.27
Lithgow		2.94		Total	5.70
Total		4.80	Private hospitals	Mater, North Sydney	3.30
Northern Sydney and Central Coast	Gosford	7.94		North Shore Private	1.46
	Wyong	1.56		Sydney Adventist	1.90
	Hornsby	6.56		North Gosford Private	2.76
	Manly	1.94		Hurstville Community	1.17
	Mona Vale	4.65		Kareena Private	1.23
	Royal North Shore	8.19		St. George Private	2.84
	Other hospitals	0.00		Prince of Wales Private	1.47
	Total	6.27	The Hills Private	4.05	
Hunter and New England	Armidale	0.00	Sydney Southwest Private	3.75	
	Inverell	0.00	Nepean Private	1.79	
	Moree	2.44	Westmead Private	0.91	
	Tamworth Base	5.17	Figtree Private	0.45	
	Manning Base	5.26	Newcastle Private	2.20	
	Maitland	4.35	Calvary, Wagga Wagga	5.94	
	Muswellbrook	3.03	Other hospitals	0.00	
	John Hunter	7.85	Total	2.17	
	Other hospitals	3.23	TOTAL NSW*	TOTAL NSW*	4.48
	Total	5.49			
	North Coast	Coffs Harbour	4.73		
Grafton Base		3.33			

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

#Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Major perineal tears and surgical repair of the perineum, Indicator 3.6

Definition: total number of selected primipara undergoing surgical repair of the perineum for fourth-degree tear as a percentage of the total number of selected primipara delivering vaginally.

A selected primipara is defined as a woman who is 20–34 years of age at the time of giving birth; giving birth for the

first time at greater than 20 weeks gestation; singleton pregnancy; cephalic presentation; and at 37⁰ to 41⁰ weeks gestation.

Table 64 shows aggregate information for hospitals where at least 200 mothers gave birth in 2007, totals for hospitals within each health area, and the NSW total.

Table 64. 3.6 Selected primipara undergoing surgical repair of the perineum for fourth-degree tear by hospital, NSW, 2007#

Health area–hospital	%	Health area–hospital	%		
Sydney South West	Canterbury	0.75	Greater Southern	Kempsey	0.00
	Royal Prince Alfred	0.22		Lismore Base	0.00
	Fairfield	0.21		Murwillumbah	0.00
	Liverpool	0.33		Tweed Heads	0.33
	Campbelltown	0.70		Port Macquarie Base	0.00
	Bankstown–Lidcombe	0.22		Other hospitals	0.00
	Bowral	0.00		Total	0.26
South-Eastern Sydney and Illawarra	Total	0.33	Goulburn Base	0.00	
	St. George	0.84	Moruya	0.00	
	Sutherland	0.31	Queanbeyan	0.00	
	Royal Hospital for Women	0.28	Griffith Base	0.93	
	Shoalhaven	0.83	Wagga Wagga Base	0.00	
	Wollongong	0.42	Other hospitals	0.41	
	Other hospitals	4.00	Total	0.30	
Sydney West	Total	0.51	Greater Western	Dubbo Base	0.00
	Auburn	0.29		Mudgee	0.00
	Blacktown	0.35		Bathurst Base	1.03
	Blue Mountains	0.00		Cowra	0.00
	Nepean	0.64		Orange Base	0.60
	Westmead	0.29		Broken Hill Base	0.00
	Hawkesbury	0.00		Other hospitals	0.00
Northern Sydney and Central Coast	Lithgow	0.00	Total	0.31	
	Total	0.35	Private hospitals	Mater, North Sydney	0.66
	Gosford	0.50		North Shore Private	0.21
	Wyong	1.56		Sydney Adventist	0.24
	Hornsby	0.33		North Gosford Private	0.00
	Manly	0.00		Hurstville Community	0.58
	Mona Vale	0.58		Kareena Private	0.00
Royal North Shore	0.87	St. George Private		1.29	
Hunter and New England	Other hospitals	0.00	Prince of Wales Private	0.24	
	Total	0.56	The Hills Private	0.00	
	Armidale	0.00	Sydney Southwest Private	0.00	
	Inverell	0.00	Nepean Private	0.00	
	Moree	0.00	Westmead Private	0.37	
	Tamworth Base	0.00	Figtree Private	0.00	
	Manning Base	0.00	Newcastle Private	0.00	
North Coast	Maitland	0.67	Calvary, Wagga Wagga	0.00	
	Muswellbrook	0.00	Other hospitals	2.17	
	John Hunter	0.70	Total	0.33	
	Other hospitals	0.00	TOTAL NSW*	0.38	
	Total	0.42			
	Coffs Harbour	0.00			
	Grafton Base	2.22			

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

#Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Intrauterine growth restriction, Indicator 8.1

Definition: total number of deliveries with birth weight less than 2750 g at 40⁰ weeks gestation or beyond as a percentage of the total number of deliveries at 40⁰ weeks gestation or beyond.

Table 65 shows aggregate information for hospitals where at least 200 babies were born in 2007, totals for hospitals within each health area, and the NSW total.

Table 65. 8.1 Intrauterine growth restriction at 40 weeks gestation or more by hospital, NSW, 2007[#]

Health area–hospital	%	Health area–hospital	%			
Sydney South West	Canterbury	2.59	Greater Southern	Kempsey	3.76	
	Royal Prince Alfred	1.13		Lismore Base	1.73	
	Fairfield	2.01		Murwillumbah	1.79	
	Liverpool	2.87		Tweed Heads	0.77	
	Campbelltown	2.16		Port Macquarie Base	2.10	
	Bankstown–Lidcombe	1.69		Other hospitals	3.29	
	Bowral	2.26		Total	1.77	
	Total	1.93		Goulburn Base	4.19	
South-Eastern Sydney and Illawarra	St. George	2.10	Moruya	1.63		
	Sutherland	1.80	Queanbeyan	2.58		
	Royal Hospital for Women	1.49	Griffith Base	3.33		
	Shoalhaven	2.28	Wagga Wagga Base	3.10		
	Wollongong	1.63	Other hospitals	1.98		
	Other hospitals	3.57	Total	2.59		
Sydney West	Total	1.78	Greater Western	Dubbo Base	3.03	
	Auburn	1.98		Mudgee	1.95	
	Blacktown	1.97		Bathurst Base	3.34	
	Blue Mountains	0.62		Cowra	0.00	
	Nepean	1.53		Orange Base	2.40	
	Westmead	2.16		Broken Hill Base	2.21	
	Hawkesbury	1.39		Other hospitals	2.49	
	Lithgow	3.30		Total	2.57	
	Total	1.86		Private hospitals	Mater, North Sydney	1.59
	Northern Sydney and Central Coast	Gosford			1.51	North Shore Private
Wyong		0.66	Sydney Adventist		0.68	
Hornsby		1.81	North Gosford Private		2.45	
Manly		1.00	Hurstville Community		1.52	
Mona Vale		2.02	Kareena Private		0.70	
Royal North Shore		1.70	St. George Private		2.03	
Other hospitals		2.22	Prince of Wales Private		2.28	
Total		1.56	The Hills Private		1.21	
Hunter and New England		Armidale	5.22		Sydney Southwest Private	0.95
		Inverell	5.68	Nepean Private	0.64	
	Moree	5.08	Westmead Private	2.46		
	Tamworth Base	2.26	Figtree Private	1.18		
	Manning Base	1.31	Newcastle Private	0.81		
	Maitland	0.68	Calvary, Wagga Wagga	0.76		
	Muswellbrook	2.56	Other hospitals	1.55		
	John Hunter	2.65	Total	1.45		
	Other hospitals	2.54	TOTAL NSW*	TOTAL NSW*	1.87	
	Total	2.42				
North Coast	Coffs Harbour	1.89				
	Grafton Base	1.08				

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

[#]Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

Apgar score, Indicator 9.1

Definition: total number of term babies born with an Apgar score of less than 7 at 5 min post delivery as a percentage of the total number of term babies born.

Table 66 shows aggregate information for hospitals where at least 200 babies were born in 2007, totals for hospitals within each health area, and the NSW total.

Table 66. 9.1 Apgar score of 7 or less in term babies by hospital#, NSW, 2007#

Health area-hospital	%	Health area-hospital	%			
Sydney South West	Canterbury	0.78	Kempsey	2.80		
	Royal Prince Alfred	1.09		Lismore Base	1.85	
	Fairfield	1.24		Murwillumbah	0.82	
	Liverpool	1.10		Tweed Heads	0.43	
	Campbelltown	1.07		Port Macquarie Base	2.46	
	Bankstown-Lidcombe	0.84		Other hospitals	0.97	
	Bowral	0.75		Total	1.36	
	Total	1.03		Greater Southern	Goulburn Base	1.07
South-Eastern Sydney and Illawarra	St. George	1.31	Moruya		1.78	
	Sutherland	0.54	Queanbeyan		1.06	
	Royal Hospital for Women	1.27	Griffith Base		1.39	
	Shoalhaven	0.78	Wagga Wagga Base		1.65	
	Wollongong	0.61	Other hospitals		0.63	
	Other hospitals	4.69	Total	1.14		
Sydney West	Total	1.07	Greater Western	Dubbo Base	1.81	
	Auburn	0.51		Mudgee	2.03	
		Blacktown		1.10	Bathurst Base	1.16
		Blue Mountains		0.35	Cowra	1.02
		Nepean		0.53	Orange Base	0.95
		Westmead	0.97	Broken Hill Base	1.20	
	Northern Sydney and Central Coast	Hawkesbury	0.99	Other hospitals	1.55	
		Lithgow	1.38	Total	1.41	
		Total	0.83	Private hospitals	Mater, North Sydney	0.51
		Gosford	1.28		North Shore Private	0.51
Wyong		0.00	Sydney Adventist		0.82	
Hornsby		0.51	North Gosford Private		0.60	
Manly		1.25	Hurstville Community		0.73	
Mona Vale		2.76	Kareena Private		0.19	
Royal North Shore		0.78	St. George Private		0.69	
Other hospitals		0.00	Prince of Wales Private		0.95	
Total	1.11	The Hills Private	0.32			
Hunter and New England	Armidale	1.41	Sydney Southwest Private		0.86	
	Inverell	0.41	Nepean Private	0.51		
	Moree	1.87	Westmead Private	0.81		
	Tamworth Base	0.85	Figtree Private	0.11		
	Manning Base	1.34	Newcastle Private	0.46		
	Maitland	1.83	Calvary, Wagga Wagga	1.48		
	Muswellbrook	0.48	Other hospitals	0.70		
	John Hunter	1.77	Total	0.64		
	Other hospitals	1.32	TOTAL NSW*	1.00		
	Total	1.51				
North Coast	Coffs Harbour	0.94				
	Grafton Base	1.25				

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

#Hospitals with more than 200 births are identified individually.

*Total NSW includes homebirths assisted by independent midwives.

7. 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 (Table 67). An estimate of the total number of babies born to Aboriginal mothers or fathers was also obtained and compared with the number of babies born to Aboriginal mothers as

reported to the MDC (Table 69). The method used here is described in Chapter 3 (p. 13).

For NSW overall, the percentage of births to Aboriginal and Torres Strait Islander mothers reported to the MDC was stable at about 68–70% between 2004 and 2006. In 2006, reporting varied markedly among health areas, ranging from 38.0% in the Sydney South West Area to 87.0% in the Greater Western Area, with reporting generally better in rural than in urban areas (Table 67, 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 2006 is estimated to be 3896, about one and a half times higher than the number reported to the MDC.

Table 67. Births to Aboriginal mothers by source of birth report, year of birth and health area of residence, NSW, 2004–2006[#]

Year of birth and health area of residence	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
2004						
Sydney South West	164	274	107	419	39.1	34.5–43.8
South-Eastern Sydney and Illawarra	224	214	145	330	67.8	62.8–72.8
Sydney West	242	287	162	428	56.5	51.8–61.2
Northern Sydney and Central Coast	94	119	54	206	45.6	38.8–52.4
Hunter and New England	514	450	337	686	74.9	71.7–78.2
North Coast	398	257	222	461	86.4	83.3–89.5
Greater Southern	175	152	102	260	67.2	61.5–72.9
Greater Western	506	317	283	567	89.3	86.7–91.8
Other/Not stated	16	16	11	23	69.3	50.5–88.1
TOTAL	2333	2086	1423	3420	68.2	66.7–69.8
2005						
Sydney South West	163	251	103	396	41.1	36.3–46.0
South-Eastern Sydney and Illawarra	201	183	121	304	66.2	60.9–71.5
Sydney West	270	283	166	460	58.7	54.2–63.2
Northern Sydney and Central Coast	88	119	59	177	49.7	42.4–57.1
Hunter and New England	611	438	351	762	80.2	77.3–83.0
North Coast	357	209	173	431	82.8	79.3–86.4
Greater Southern	212	147	118	264	80.3	75.5–85.1
Greater Western	565	361	314	649	87.0	84.4–89.6
Other/Not stated	39	33	29	44	88.0	78.4–97.5
TOTAL	2506	2024	1434	3537	70.9	69.4–72.4

(Continued)

Table 67. (Continued)

Year of birth and health area of residence	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
2006						
Sydney South West	188	293	111	495	38.0	33.7–42.2
South-Eastern Sydney and Illawarra	229	226	150	345	66.4	61.4–71.4
Sydney West	285	284	164	493	57.8	53.4–62.2
Northern Sydney and Central Coast	104	140	67	217	48.0	41.3–54.6
Hunter and New England	598	472	338	835	71.6	68.6–74.7
North Coast	395	245	203	477	82.9	79.5–86.3
Greater Southern	191	125	97	246	77.7	72.5–82.9
Greater Western	571	393	342	656	87.0	84.5–89.6
Other/Not stated	85	59	47	107	79.8	72.2–87.4
TOTAL	2646	2237	1519	3896	67.9	66.4–69.4

Source: Linked records of the NSW Midwives Data Collection (MDC) and Registry of Births, Deaths and Marriages (RBDM) birth registration data.
 *Figures for 2004 and 2005 differ slightly from those reported previously because the linkage has been updated.

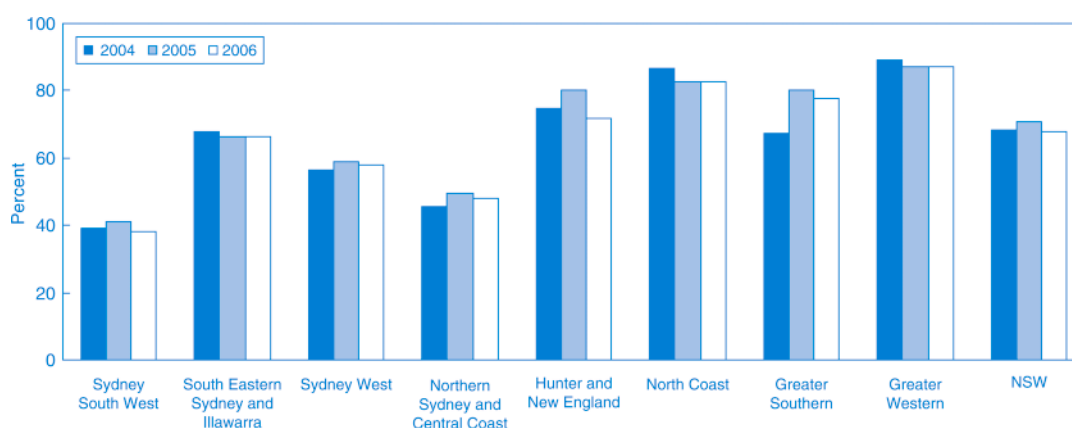


Figure 2. Level of reporting of maternal Aboriginality to the NSW Midwives Data Collection by year of birth and health area of residence, NSW, 2003–2006.

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

Information on paternal Aboriginality is not collected by the MDC, but is reported to the NSW Registry of Births, Deaths and Marriages. Of the 86 988 births registered for residents of NSW in 2006, 3508 (4.0%) were reported to have an Aboriginal or Torres Strait Islander mother or father (Table 68). For 1290 babies, the father was reported

Table 68. Birth registrations by maternal and paternal Aboriginality, NSW, 2007

Mother	Father	No.	%
Aboriginal or Torres Strait Islander	Aboriginal or Torres Strait Islander	726	0.8
Non-Aboriginal	Aboriginal or Torres Strait Islander	119	0.1
Not stated	Aboriginal or Torres Strait Islander	1171	1.3
Aboriginal or Torres Strait Islander	Non-Aboriginal	164	0.2
Non-Aboriginal	Non-Aboriginal	81 120	93.3
Not stated	Non-Aboriginal	34	0.0
Aboriginal or Torres Strait Islander	Not stated	1328	1.5
Non-Aboriginal	Not stated	2275	2.6
Not stated	Not stated	51	0.1
TOTAL		86 988	100.0

Source: Australian Bureau of Statistics birth registration data (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

to be Aboriginal or Torres Strait Islander and either the mother was reported to be non-Aboriginal or Torres Strait Islander or the mother's Aboriginality was not stated.

Table 69 shows the number of babies born to Aboriginal mothers as reported to the MDC and the number of babies born to Aboriginal mothers or fathers as reported to the NSW Registry of Births, Deaths and Marriages between 2004 and 2006. Using capture–recapture methods, an estimate of the total number of babies born to Aboriginal

mothers or fathers was obtained from both data sources. For NSW overall, the percentage of births to Aboriginal and Torres Strait Islander mothers or fathers that were reported to the MDC was stable at about 44–46% between 2004 and 2006. In 2006, this percentage ranged from 27.0% in the Sydney South West Area to 63.5% in the Greater Western Area (Table 69). There are therefore a substantial number of babies with non-Aboriginal mothers and Aboriginal fathers who are not represented in the numbers reported in this chapter.

Table 69. Births to Aboriginal mothers and fathers by source of birth report, year of birth and health area of residence, NSW, 2004–2006[#]

Year of birth and health area of residence	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
2004						
Sydney South West	164	420	111	619	26.5	23.0–30.0
South-Eastern Sydney and Illawarra	224	359	148	543	41.3	37.1–45.4
Sydney West	242	476	163	706	34.3	30.8–37.8
Northern Sydney and Central Coast	94	228	56	381	24.7	20.4–29.0
Hunter and New England	514	697	342	1047	49.1	46.1–52.1
North Coast	398	389	233	664	59.9	56.2–63.7
Greater Southern	175	243	105	404	43.3	38.5–48.1
Greater Western	506	472	293	815	62.1	58.8–65.4
Other/Not stated	16	25	11	36	44.7	28.4–60.9
TOTAL	2333	3309	1462	5280	44.2	42.8–45.5
2005						
Sydney South West	163	398	106	611	26.7	23.2–30.2
South-Eastern Sydney and Illawarra	201	325	124	526	38.2	34.1–42.4
Sydney West	270	457	171	721	37.5	33.9–41.0
Northern Sydney and Central Coast	88	207	60	302	29.1	24.0–34.2
Hunter and New England	611	718	365	1201	50.9	48.0–53.7
North Coast	357	344	182	674	53.0	49.2–56.7
Greater Southern	212	230	125	390	54.4	49.5–59.4
Greater Western	565	530	322	929	60.8	57.6–63.9
Other/Not stated	39	42	29	56	69.2	57.2–81.3
TOTAL	2506	3251	1484	5489	45.7	44.3–47.0
2006						
Sydney South West	188	416	112	696	27.0	23.7–30.3
South-Eastern Sydney and Illawarra	229	373	152	561	40.8	36.7–44.9
Sydney West	285	484	168	820	34.8	31.5–38.0
Northern Sydney and Central Coast	104	230	69	346	30.1	25.3–34.9
Hunter and New England	598	796	348	1367	43.7	41.1–46.4
North Coast	395	378	205	728	54.3	50.7–57.9
Greater Southern	191	226	101	426	44.8	40.1–49.5
Greater Western	571	542	344	899	63.5	60.3–66.6
Other/Not stated	85	93	49	161	52.9	45.2–60.6
TOTAL	2646	3538	1548	6047	43.8	42.5–45.0

Source: Linked records of the NSW Midwives Data Collection (MDC) and Registry of Births, Deaths and Marriages (RBDM) birth registration data.
[#]Figures for 2004 and 2005 differ from those reported previously because the linkage has been updated.

Trends in births

In 2007, 2736 babies were born to Aboriginal mothers, 136 babies were born to mothers of both Aboriginal and Torres Strait Islander background (Table 70). 54 babies were born to Torres Strait Islander mothers and

Table 70. Aboriginal and Torres Strait Islander mothers and babies by Aboriginality, NSW, 2003–2007[#]

Aboriginality	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
Aboriginal but not Torres Strait Islander	2014	93.2	2161	93.6	2347	94.9	2429	93.0	2700	93.5
Torres Strait Islander but not Aboriginal	35	1.6	48	2.1	30	1.2	50	1.9	53	1.8
Both Aboriginal and Torres Strait Islander	112	5.2	99	4.3	97	3.9	132	5.1	135	4.7
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0
Births										
Aboriginal but not Torres Strait Islander	2039	93.1	2184	93.6	2376	94.8	2463	93.0	2736	93.5
Torres Strait Islander but not Aboriginal	37	1.7	48	2.1	31	1.2	51	1.9	54	1.8
Both Aboriginal and Torres Strait Islander	114	5.2	101	4.3	100	4.0	135	5.1	136	4.6
TOTAL	2190	100.0	2333	100.0	2507	100.0	2649	100.0	2926	100.0

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

[#]Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers of confinements are about one and a half times higher than shown, and the number of births are about two times higher than shown.

Plurality

Between 2003 and 2007, the reported number of babies born to Aboriginal and Torres Strait Islander mothers increased from 2190 to 2926 (Table 71), representing 2.5 and 3.0%, respectively, of all babies born in NSW. Multiple pregnancies (e.g. twins, triplets) were reported for about 1% of mothers.

Table 71. Aboriginal and Torres Strait Islander mothers and babies by plurality, NSW, 2003–2007[#]

Plurality	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
Singleton	2134	98.8	2283	98.9	2443	98.7	2574	98.6	2851	98.7
Twins	26	1.2	25	1.1	29	1.2	36	1.4	36	1.2
Triplets	1	0.0	0	0.0	2	0.1	1	0.0	1	0.0
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0
Births										
Singleton	2134	97.4	2283	97.9	2443	97.4	2574	97.2	2851	97.4
Twins	53	2.4	50	2.1	58	2.3	72	2.7	72	2.5
Triplets	3	0.1	0	0.0	6	0.2	3	0.1	3	0.1
TOTAL	2190	100.0	2333	100.0	2507	100.0	2649	100.0	2926	100.0

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

[#]Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers of confinements are about one and a half times higher than shown, and the number of births are about two times higher than shown.

Previous pregnancies

In 2007, one-third of Aboriginal and Torres Strait Islander mothers gave birth for the first time (Table 72), 58.3% of mothers reported between one and four previous births

and 8.2% of mothers had given birth to five or more babies. This pattern has not changed substantially since 2003.

Table 72. Previous pregnancies among Aboriginal and Torres Strait Islander mothers, NSW, 2003–2007#

No. of previous pregnancies (>20 weeks)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	668	30.9	759	32.9	787	31.8	844	32.3	952	33.0
1–4	1316	60.9	1327	57.5	1472	59.5	1551	59.4	1683	58.3
5+	177	8.2	221	9.6	214	8.6	199	7.6	237	8.2
Not stated	0	0.0	1	0.0	1	0.0	17	0.7	16	0.6
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown.

Maternal age

The percentage of Aboriginal and Torres Strait Islander mothers who were teenagers fell from 21.1% in 2003 to 18.8% in 2007. Following state-wide trends, the number of

mothers giving birth at 35 years of age or more has increased during the last 5 years – from 153 in 2003 to 264 in 2007 (Table 73).

Table 73. Age of Aboriginal and Torres Strait Islander mothers, NSW, 2003–2007#

Maternal age (years)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
12–19	455	21.1	493	21.4	504	20.4	534	20.5	543	18.8
20–34	1553	71.9	1594	69.1	1739	70.3	1851	70.9	2080	72.0
35+	153	7.1	221	9.6	231	9.3	222	8.5	264	9.1
Not stated	0	0.0	0	0.0	0	0.0	4	0.2	1	0.0
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown.

Health area of residence

The reported number of Aboriginal and Torres Strait Islander mothers has increased in all health areas between 2003 and 2007. The reported number of Aboriginal and Torres Strait Islander mothers who gave birth in 2007 ranged from 137 in the Northern Sydney and Central

Coast Area to 655 in the Hunter and New England Area (Table 74). The proportion of mothers who were teenagers varied from 12.4% in the Northern Sydney and Central Coast Area to 21.9% in the North Coast Area (Table 75).

Table 74. Health area of residence of Aboriginal and Torres Strait Islander mothers, NSW, 2003–2007#

Health area	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney South West	160	7.4	164	7.1	181	7.3	212	8.1	253	8.8
South-Eastern Sydney and Illawarra	178	8.2	221	9.6	198	8.0	226	8.7	246	8.5
Sydney West	237	11.0	238	10.3	269	10.9	284	10.9	363	12.6
Northern Sydney and Central Coast	82	3.8	93	4.0	88	3.6	104	4.0	137	4.7
Hunter and New England	514	23.8	508	22.0	600	24.3	596	22.8	655	22.7
North Coast	304	14.1	390	16.9	350	14.1	394	15.1	420	14.5
Greater Southern	170	7.9	173	7.5	209	8.4	190	7.3	235	8.1
Greater Western	493	22.8	505	21.9	560	22.6	570	21.8	550	19.0
Other/Not stated	23	1.1	16	0.7	19	0.8	35	1.3	29	1.0
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown. The level of under-reporting varies among health areas (see Table 67).

Table 75. Health area of residence of Aboriginal and Torres Strait Islander mothers by age, NSW, 2007#

Health area	Maternal age (years)						TOTAL	
	<20		20+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%
Sydney South West	36	14.2	217	85.8	0	0.0	253	100.0
South-Eastern Sydney and Illawarra	31	12.6	215	87.4	0	0.0	246	100.0
Sydney West	69	19.0	294	81.0	0	0.0	363	100.0
Northern Sydney and Central Coast	17	12.4	120	87.6	0	0.0	137	100.0
Hunter and New England	133	20.3	522	79.7	0	0.0	655	100.0
North Coast	92	21.9	328	78.1	0	0.0	420	100.0
Greater Southern	45	19.1	190	80.9	0	0.0	235	100.0
Greater Western	118	21.5	431	78.4	1	0.2	550	100.0
Other/Not stated	2	6.9	27	93.1	0	0.0	29	100.0
TOTAL	543	18.8	2344	81.2	1	0.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown. The level of under-reporting varies among health areas (see Table 67).

Duration of pregnancy at first antenatal visit

Between 2003 and 2007, the proportion of Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation rose from 70.6 to 79.5% (Table 76). This compares with 91.1% of non-Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation in 2007.

In 2007, the proportion of Aboriginal and Torres Strait Islander mothers who commenced antenatal care at less than 20 weeks gestation varied from 69.6% in the Sydney South West Area to 86.9% in the Northern Sydney and Central Coast Area (Table 77).

Table 76. Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers, NSW, 2003–2007#

Duration of pregnancy (weeks)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–19	1526	70.6	1618	70.1	1854	74.9	1952	74.8	2296	79.5
20+	547	25.3	573	24.8	561	22.7	550	21.1	461	16.0
Not stated	88	4.1	117	5.1	59	2.4	109	4.2	131	4.5
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown.

Table 77. Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers by health area of residence, NSW, 2007#

Health area	Duration of pregnancy (weeks)							
	0–19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	176	69.6	47	18.6	30	11.9	253	100.0
South-Eastern Sydney and Illawarra	204	82.9	36	14.6	6	2.4	246	100.0
Sydney West	308	84.8	40	11.0	15	4.1	363	100.0
Northern Sydney and Central Coast	119	86.9	16	11.7	2	1.5	137	100.0
Hunter and New England	520	79.4	109	16.6	26	4.0	655	100.0
North Coast	332	79.0	77	18.3	11	2.6	420	100.0
Greater Southern	189	80.4	36	15.3	10	4.3	235	100.0
Greater Western	423	76.9	96	17.5	31	5.6	550	100.0
Other/Not stated	25	86.2	4	13.8	0	0.0	29	100.0
TOTAL	2296	79.5	461	16.0	131	4.5	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown. The level of under-reporting varies among health areas (see Table 67).

Smoking in pregnancy

In 2007, 50.1% of Aboriginal and Torres Strait Islander mothers reported smoking at some time during pregnancy, compared with 56.8% in 2003. This compares with 11.2% of non-Aboriginal or Torres Strait Islander mothers who reported smoking at some time during pregnancy in 2007.

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. In 2007, 48.6% of Aboriginal and Torres Strait Islander mothers reported smoking in the second half of pregnancy. This percentage varied from 35.0% in the Northern Sydney and Central Coast Area to 54.2% in the Greater Western Area (Figure 3).

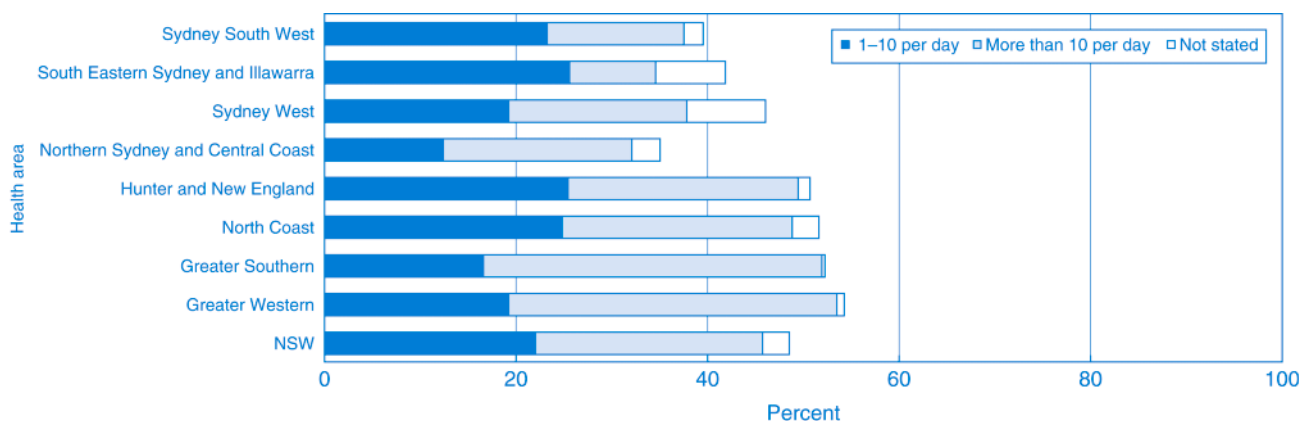


Figure 3. Smoking in the second half of pregnancy among Aboriginal and Torres Strait Islander mothers by amount smoked and health area of residence, NSW, 2007#.

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

#Because of under-reporting of Aboriginality of the MDC, it is likely that the true numbers are about one and a half times higher than shown. The level of reporting varies among health areas (see Table 67).

Medical conditions and obstetric complications

In 2007, there was a lower rate of gestational diabetes and pre-eclampsia reported among Aboriginal and Torres Strait Islander mothers than with non-Aboriginal or Torres Strait Islander mothers (Table 78). 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 78. Maternal medical conditions and obstetric complications by Aboriginality, NSW, 2007#

Condition	Aboriginality						TOTAL	
	Aboriginal or Torres Strait Islander		Non-Aboriginal		Not stated		No.	%
	No.	%	No.	%	No.	%		
Diabetes mellitus	17	0.6	526	0.6	3	1.5	546	0.6
Gestational diabetes	100	3.5	3985	4.4	6	3.1	4091	4.3
Essential hypertension	19	0.7	700	0.8	2	1.0	721	0.8
Pregnancy-induced hypertension	123	4.3	5387	5.9	12	6.2	5522	5.8
TOTAL	2888	100.0	91 519	100.0	195	100.0	94 602	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown.

Labour and birth

The rate of spontaneous onset of labour among Aboriginal and Torres Strait Islander mothers fell from 68.0% in 2003 to 65.2% in 2007 (Table 79), whereas the rate of induction of labour increased from 20.5 to 23.8%. The rate of induction of labour among Aboriginal and Torres Strait Islander mothers was slightly lower than the rate of 26.0% reported among non-Aboriginal and Torres Strait Islander mothers in 2007.

Between 2003 and 2007, the rate of normal vaginal birth fell from 73.3 to 69.8%. The caesarean section rate rose from 21.5 to 23.5% (Table 80). The rate of instrumental birth (forceps and vacuum extraction) rose slightly from 4.7 to 5.6%, and vaginal breech births contributed about 1% of all births.

Table 79. Labour onset for Aboriginal and Torres Strait Islander mothers, NSW, 2003–2007#

Labour onset	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	1469	68.0	1581	68.5	1613	65.2	1728	66.2	1884	65.2
No labour##	250	11.6	260	11.3	277	11.2	329	12.6	315	10.9
Induced	442	20.5	467	20.2	584	23.6	552	21.1	688	23.8
Not stated	0	0.0	0	0.0	0	0.0	2	0.1	1	0.0
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown.

##No labour indicates elective caesarean section.

Table 80. Type of birth among Aboriginal and Torres Strait Islander mothers, NSW, 2003–2007#

Type of birth	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	1585	73.3	1647	71.4	1741	70.4	1868	71.5	2015	69.8
Forceps	35	1.6	60	2.6	42	1.7	46	1.8	42	1.5
Vacuum extraction	67	3.1	74	3.2	91	3.7	84	3.2	121	4.2
Vaginal breech	9	0.4	16	0.7	24	1.0	17	0.7	27	0.9
Elective caesarean section	250	11.6	260	11.3	277	11.2	329	12.6	315	10.9
Emergency caesarean section##	215	9.9	251	10.9	299	12.1	259	9.9	365	12.6
Not stated	0	0.0	0	0.0	0	0.0	8	0.3	3	0.1
TOTAL	2161	100.0	2308	100.0	2474	100.0	2611	100.0	2888	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about one and a half times higher than shown.

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

Birth weight

Since 2003, the rate of low birth weight (less than 2500 g) in Aboriginal and Torres Strait Islander babies has been over 10% and was 12.2% in 2007 (Table 81). This is about one and a half times the rate for babies born to

non-Aboriginal or Torres Strait Islander mothers, which was 5.9% in 2007. In 2007, the largest number of low birth weight babies was born in the Hunter and New England Area (Table 82).

Table 81. Weight of Aboriginal and Torres Strait Islander babies, NSW, 2003–2007#

Birth weight (g)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
<1000	31	1.4	23	1.0	36	1.4	26	1.0	57	1.9
1000–1499	19	0.9	34	1.5	20	0.8	29	1.1	23	0.8
1500–2499	221	10.1	244	10.5	257	10.3	273	10.3	276	9.4
2500+	1917	87.5	2032	87.1	2193	87.5	2318	87.5	2563	87.6
Not stated	2	0.1	0	0.0	1	0.0	3	0.1	7	0.2
TOTAL	2190	100.0	2333	100.0	2507	100.0	2649	100.0	2926	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown.

Table 82. Weight of Aboriginal and Torres Strait Islander babies by health area of residence, NSW, 2007#

Health area	Birth weight (g)							
	<2500		2500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	34	13.2	223	86.4	1	0.4	258	100.0
South-Eastern Sydney and Illawarra	18	7.2	232	92.8	0	0.0	250	100.0
Sydney West	49	13.4	315	86.3	1	0.3	365	100.0
Northern Sydney and Central Coast	17	12.2	121	87.1	1	0.7	139	100.0
Hunter and New England	91	13.7	572	86.1	1	0.2	664	100.0
North Coast	58	13.6	368	86.4	0	0.0	426	100.0
Greater Southern	18	7.6	219	92.4	0	0.0	237	100.0
Greater Western	70	12.5	486	87.1	2	0.4	558	100.0
Other/Not stated	1	3.4	27	93.1	1	3.4	29	100.0
TOTAL	356	12.2	2563	87.6	7	0.2	2926	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown. The level of under-reporting varies among health areas (see Table 69).

Gestational age

Since 2003, over 10% of Aboriginal and Torres Strait Islander babies have been premature (less than 37 weeks gestation) (Table 83). The rate of prematurity was 12.8% in 2007, compared with a rate of 7.2% for babies born to

non-Aboriginal or Torres Strait Islander mothers. In 2007, the largest number of premature babies was born in the Hunter and New England Area (Table 84).

Table 83. Gestational age of Aboriginal and Torres Strait Islander babies, NSW, 2003–2007#

Gestational age (weeks)	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
<28	29	1.3	31	1.3	30	1.2	25	0.9	56	1.9
28–31	30	1.4	29	1.2	27	1.1	26	1.0	28	1.0
32–36	206	9.4	212	9.1	244	9.7	235	8.9	289	9.9
37–41	1878	85.8	2038	87.4	2180	87.0	2330	88.0	2518	86.1
42+	47	2.1	23	1.0	26	1.0	31	1.2	32	1.1
Not stated	0	0.0	0	0.0	0	0.0	2	0.1	3	0.1
TOTAL	2190	100.0	2333	100.0	2507	100.0	2649	100.0	2926	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown.

Table 84. Gestational age of Aboriginal and Torres Strait Islander babies by health area of residence, NSW, 2007#

Health area	Gestational age (weeks)							
	<37		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney South West	40	15.5	217	84.1	1	0.4	258	100.0
South-Eastern Sydney and Illawarra	29	11.6	221	88.4	0	0.0	250	100.0
Sydney West	50	13.7	314	86.0	1	0.3	365	100.0
Northern Sydney and Central Coast	17	12.2	122	87.8	0	0.0	139	100.0
Hunter and New England	99	14.9	564	84.9	1	0.2	664	100.0
North Coast	52	12.2	374	87.8	0	0.0	426	100.0
Greater Southern	13	5.5	224	94.5	0	0.0	237	100.0
Greater Western	72	12.9	486	87.1	0	0.0	558	100.0
Other/Not stated	1	3.4	28	96.6	0	0.0	29	100.0
TOTAL	373	12.7	2550	87.1	3	0.1	2926	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown. The level of under-reporting varies among health areas (see Table 69).

Apgar score

In 2007, 3.9% of Aboriginal and Torres Strait Islander babies had an Apgar score less than seven (Table 85), slightly higher than the rate of 2.0% for babies born to non-Aboriginal or Torres Strait Islander mothers.

Table 85. Apgar score of Aboriginal and Torres Strait Islander babies, NSW, 2003–2007#

Apgar score at 5 min	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–4	42	1.9	34	1.5	42	1.7	36	1.4	73	2.5
5–6	30	1.4	34	1.5	33	1.3	24	0.9	42	1.4
7+	2109	96.3	2256	96.7	2416	96.4	2571	97.1	2794	95.5
Not stated	9	0.4	9	0.4	16	0.6	18	0.7	17	0.6
TOTAL	2190	100.0	2333	100.0	2507	100.0	2649	100.0	2926	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown.

Infant feeding

In 2007, 60.8% of babies born to Aboriginal and Torres Strait Islander mothers were fully breastfed, 4.4% were partially breastfed and 29.3% received infant formula only (Table 86). This compares with 78.8% of babies born to non-Aboriginal or Torres Strait Islander mothers who were fully breastfed in 2007. Rates of full breastfeeding ranged from 52.9% in Sydney West Area and Greater Western Area to 73.2% in the North Coast Area.

Table 86. Infant feeding among Aboriginal and Torres Strait Islander liveborn babies by health area of residence, NSW, 2007#

Health area	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
	Sydney South West	144	55.8	16	6.2	82	31.8	16	6.2	258
South-Eastern Sydney and Illawarra	165	66.0	4	1.6	69	27.6	12	4.8	250	100.0
Sydney West	193	52.9	18	4.9	130	35.6	24	6.6	365	100.0
Northern Sydney and Central Coast	99	71.2	8	5.8	28	20.1	4	2.9	139	100.0
Hunter and New England	396	59.6	34	5.1	189	28.5	45	6.8	664	100.0
North Coast	312	73.2	17	4.0	79	18.5	18	4.2	426	100.0
Greater Southern	152	64.1	12	5.1	65	27.4	8	3.4	237	100.0
Greater Western	295	52.9	19	3.4	208	37.3	36	6.5	558	100.0
Other/Not stated	22	75.9	0	0.0	7	24.1	0	0.0	29	100.0
TOTAL	1778	60.8	128	4.4	857	29.3	163	5.6	2926	100.0

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

#Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown. The level of under-reporting varies among health areas (Table 69).

Perinatal mortality

Since 2007, the perinatal mortality rate among Aboriginal and Torres Strait Islander babies has varied from 11.6 to 22.6 per 1000 births (Table 87). The rate of 22.6 per 1000

in 2007 is substantially higher than the rate of 8.6 per 1000 experienced by babies born to non-Aboriginal or Torres Strait Islander mothers.

Table 87. Perinatal deaths among Aboriginal and Torres Strait Islander babies, NSW, 2003–2007[#]

Perinatal deaths	Year									
	2003		2004		2005		2006		2007	
	No.	Rate/1000	No.	Rate/1000	No.	Rate/1000	No.	Rate/1000	No.	Rate/1000
Stillbirth	24	11.0	20	8.6	22	8.8	16	6.0	41	14.0
Neonatal death	9	4.1	7	3.0	16	6.4	16	6.0	25	8.5
TOTAL	33	15.1	27	11.6	38	15.2	32	12.1	66	22.6

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

[#]Perinatal deaths include deaths reported to the MDC only. Because the MDC form is completed at discharge or transfer of the baby, deaths occurring after this time may not be reported to the MDC. Because of under-reporting of Aboriginality to the MDC, it is likely that the true numbers are about two times higher than shown.

8. 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 (p. 18).

Trends in confinements

Between 2003 and 2007, the percentage of mothers who were born in non-English speaking countries rose slightly, from 20.6 to 22.5% (Table 88). The increase was mainly among mothers born in North-East Asian and Southern Asian countries. There was a decline in the percentage of mothers born in Southern European countries.

Table 88. Births and confinements by country-of-birth group, NSW, 2003–2007

Country-of-birth group	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
Confinements										
English speaking	67 322	79.2	66 621	79.0	70 354	78.9	71 515	78.3	73 109	77.3
Central and South America	692	0.8	675	0.8	726	0.8	765	0.8	793	0.8
Melanesia, Micronesia and Polynesia	1545	1.8	1584	1.9	1485	1.7	1538	1.7	1518	1.6
Southern Europe	1040	1.2	926	1.1	927	1.0	901	1.0	843	0.9
Western and Northern Europe	660	0.8	649	0.8	688	0.8	725	0.8	782	0.8
Eastern Europe, Russia, Central Asian and Baltic States	486	0.6	518	0.6	578	0.6	564	0.6	688	0.7
Middle East and Africa	3879	4.6	3876	4.6	4080	4.6	4216	4.6	4343	4.6
South-East Asia	4673	5.5	4445	5.3	4571	5.1	4698	5.1	5166	5.5
North-East Asia	2819	3.3	2884	3.4	3117	3.5	3143	3.4	3966	4.2
Southern Asia	1746	2.1	1930	2.3	2396	2.7	2759	3.0	3191	3.4
Other/Not stated	170	0.2	180	0.2	218	0.2	491	0.5	203	0.2
TOTAL	85 032	100.0	84 288	100.0	89 140	100.0	91 315	100.0	94 602	100.0
Births										
English speaking	68 459	79.2	67 735	79.1	71 558	79.0	72 699	78.4	74 266	77.3
Central and South America	699	0.8	683	0.8	743	0.8	779	0.8	809	0.8
Melanesia, Micronesia and Polynesia	1564	1.8	1600	1.9	1508	1.7	1564	1.7	1546	1.6
Southern Europe	1064	1.2	939	1.1	945	1.0	920	1.0	858	0.9
Western and Northern Europe	668	0.8	663	0.8	700	0.8	737	0.8	795	0.8
Eastern Europe, Russia, Central Asian and Baltic States	494	0.6	525	0.6	593	0.7	573	0.6	701	0.7
Middle East and Africa	3947	4.6	3941	4.6	4142	4.6	4287	4.6	4410	4.6
South-East Asia	4733	5.5	4488	5.2	4626	5.1	4746	5.1	5206	5.4
North-East Asia	2846	3.3	2910	3.4	3144	3.5	3172	3.4	4006	4.2
Southern Asia	1766	2.0	1953	2.3	2428	2.7	2801	3.0	3225	3.4
Other/Not stated	174	0.2	189	0.2	223	0.2	503	0.5	208	0.2
TOTAL	86 414	100.0	85 626	100.0	90 610	100.0	92 781	100.0	96 030	100.0

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

Maternal age

In 2007, births to teenage mothers were more common among mothers born in English-speaking countries than in non-English speaking countries (Table 89, Figure 4), whereas the largest proportions of mothers aged 35 years

and over were among mothers born in Western and Northern Europe (35.2%) and Central and South America (31.8%).

Table 89. Age of mother by country-of-birth group and maternal age, NSW, 2007

Country-of-birth group	Maternal age (years)									
	12-19		20-34		35+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	3138	4.3	53 696	73.4	16 259	22.2	16	0.0	73 109	100.0
Central and South America	8	1.0	533	67.2	252	31.8	0	0.0	793	100.0
Melanesia, Micronesia and Polynesia	26	1.7	1086	71.5	406	26.7	0	0.0	1518	100.0
Southern Europe	5	0.6	579	68.7	259	30.7	0	0.0	843	100.0
Western and Northern Europe	0	0.0	507	64.8	275	35.2	0	0.0	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	4	0.6	536	77.9	148	21.5	0	0.0	688	100.0
Middle East and Africa	102	2.3	3327	76.6	914	21.0	0	0.0	4343	100.0
South-East Asia	43	0.8	3767	72.9	1356	26.2	0	0.0	5166	100.0
North-East Asia	16	0.4	2773	69.9	1177	29.7	0	0.0	3966	100.0
Southern Asia	14	0.4	2709	84.9	468	14.7	0	0.0	3191	100.0
Other/Not stated	6	3.0	122	60.1	74	36.5	1	0.5	203	100.0
TOTAL	3362	3.6	69 635	73.6	21 588	22.8	17	0.0	94 602	100.0

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

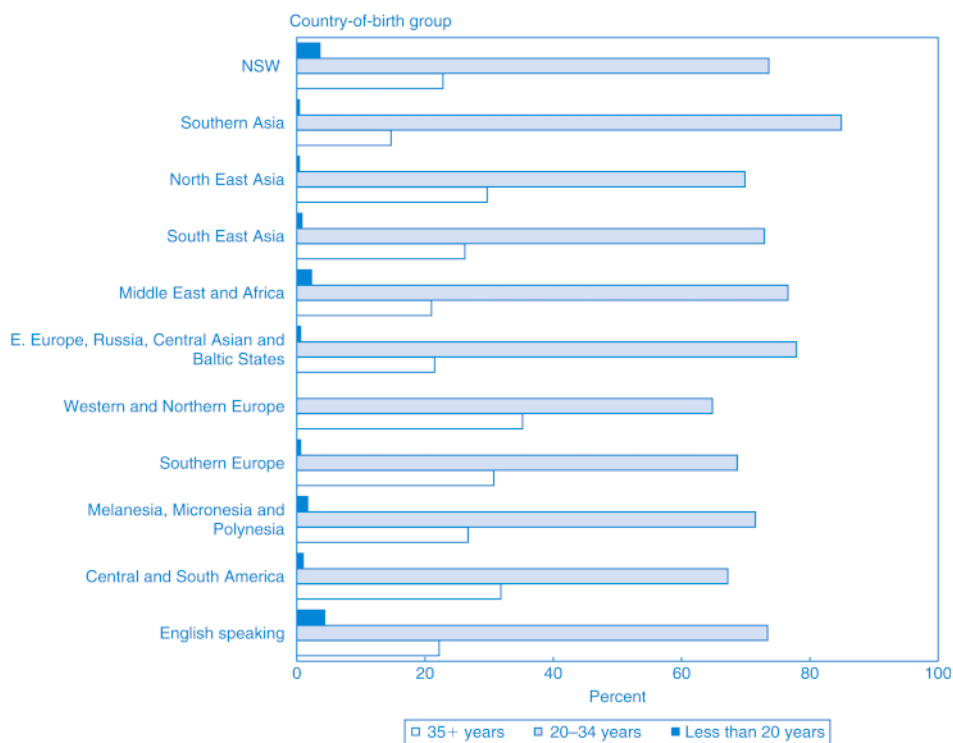


Figure 4. Maternal age by country-of-birth group, NSW, 2006.

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

Health area of residence

In 2007, the proportion of mothers born in non-English speaking countries was highest in the Sydney South West Area (38.8%), followed by the Sydney West Area (32.7%). Six percent of mothers were born in South-East Asian countries, 49.1% of whom were resident in the Sydney South West Area. Almost 5% of mothers were

born in Middle Eastern or African countries and 80.2% of these mothers were resident in the Sydney South West or Sydney West Areas. A further 4.2% of mothers were born in North-East Asian countries and 3.4% in Southern Asian countries, with the majority living in metropolitan areas (Table 90).

Table 90. Health area of residence by maternal country-of-birth group, NSW, 2007[#]

Health area	Country-of-birth group																						TOTAL	
	English speaking		Central and South America		Melanesia, Micronesia and Polynesia		Southern Europe		Western and Northern Europe		Eastern Europe, Russia, Central Asian and Baltic States		Middle East and Africa		South-East Asia		North-East Asia		Southern Asia		Other/Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Sydney South West	12 919	60.9	317	1.5	623	2.9	366	1.7	132	0.6	148	0.7	2103	9.9	2534	11.9	1117	5.3	887	4.2	60	0.3	21 206	100.0
South-Eastern Sydney and Illawarra	12 309	78.9	158	1.0	126	0.8	218	1.4	199	1.3	206	1.3	481	3.1	701	4.5	841	5.4	317	2.0	41	0.3	15 597	100.0
Sydney West	12 115	67.1	143	0.8	565	3.1	136	0.8	84	0.5	122	0.7	1382	7.6	1076	6.0	885	4.9	1531	8.5	29	0.2	18 068	100.0
Northern Sydney and Central Coast	11 664	80.7	129	0.9	100	0.7	80	0.6	242	1.7	158	1.1	234	1.6	551	3.8	934	6.5	312	2.2	43	0.3	14 447	100.0
Hunter and New England	10 448	96.1	14	0.1	38	0.3	17	0.2	44	0.4	16	0.1	48	0.4	133	1.2	61	0.6	44	0.4	5	0.0	10 868	100.0
North Coast	4 951	95.2	11	0.2	25	0.5	10	0.2	35	0.7	8	0.2	29	0.6	73	1.4	18	0.3	22	0.4	17	0.3	5 199	100.0
Greater Southern	3 874	95.6	5	0.1	24	0.6	9	0.2	15	0.4	8	0.2	26	0.6	26	0.6	21	0.5	42	1.0	2	0.0	4 052	100.0
Greater Western	3 969	97.7	6	0.1	–	–	–	–	5	0.1	–	–	17	0.4	23	0.6	15	0.4	12	0.3	5	0.1	4 062	100.0
Other/Not stated	860	78.0	10	0.9	–	–	–	–	26	2.4	–	–	23	2.1	49	4.4	74	6.7	24	2.2	1	0.1	1 103	100.0
TOTAL	73 109	77.3	793	0.8	1 518	1.6	843	0.9	782	0.8	688	0.7	4 343	4.6	5 166	5.5	3 966	4.2	3 191	3.4	203	0.2	94 602	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 five in a group.

Duration of pregnancy at first antenatal visit

In 2007, 90.7% of all mothers commenced antenatal care before 20 weeks gestation. There was some variation among country-of-birth groups, with 91.7% of mothers born in English speaking countries commencing antenatal

care before 20 weeks gestation, compared with 78.0% of mothers born in Melanesia, Micronesia, and Polynesia, and 84.9% of mothers born in the Middle East and Africa (Table 91).

Table 91. Duration of pregnancy at first antenatal visit by country-of-birth group, NSW, 2007

Country-of-birth group	Duration of pregnancy at first antenatal visit (weeks)							
	0-19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	67 056	91.7	4595	6.3	1458	2.0	73 109	100.0
Central and South America	720	90.8	50	6.3	23	2.9	793	100.0
Melanesia, Micronesia and Polynesia	1184	78.0	263	17.3	71	4.7	1518	100.0
Southern Europe	761	90.3	57	6.8	25	3.0	843	100.0
Western and Northern Europe	740	94.6	33	4.2	9	1.2	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	626	91.0	54	7.8	8	1.2	688	100.0
Middle East and Africa	3687	84.9	514	11.8	142	3.3	4343	100.0
South-East Asia	4468	86.5	534	10.3	164	3.2	5166	100.0
North-East Asia	3440	86.7	480	12.1	46	1.2	3966	100.0
Southern Asia	2921	91.5	233	7.3	37	1.2	3191	100.0
Other/Not stated	178	87.7	14	6.9	11	5.4	203	100.0
TOTAL	85 781	90.7	6827	7.2	1994	2.1	94 602	100.0

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

Smoking in pregnancy

In 2007, smoking at any time during pregnancy was more common among mothers born in English speaking countries than among mothers born in non-English speaking countries (Table 92). About one in six mothers born in English speaking countries smoked at some time during pregnancy, compared with <1 in 10 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. Six percent 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 with mothers born in other country-of-birth groups (Table 93).

Table 92. Smoking in pregnancy by country-of-birth group, NSW, 2007

Country-of-birth group	Smoking in pregnancy							
	No		Yes		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	61 360	83.9	11 435	15.6	314	0.4	73 109	100.0
Central and South America	756	95.3	31	3.9	6	0.8	793	100.0
Melanesia, Micronesia and Polynesia	1376	90.6	124	8.2	18	1.2	1518	100.0
Southern Europe	789	93.6	51	6.0	3	0.4	843	100.0
Western and Northern Europe	746	95.4	35	4.5	1	0.1	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	661	96.1	25	3.6	2	0.3	688	100.0
Middle East and Africa	4131	95.1	193	4.4	19	0.4	4343	100.0
South-East Asia	5023	97.2	118	2.3	25	0.5	5166	100.0
North-East Asia	3924	98.9	36	0.9	6	0.2	3966	100.0
Southern Asia	3172	99.4	8	0.3	11	0.3	3191	100.0
Other/Not stated	188	92.6	12	5.9	3	1.5	203	100.0
TOTAL	82 126	86.8	12 068	12.8	408	0.4	94 602	100.0

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

Table 93. Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy and country-of-birth group, NSW, 2007

Country-of-birth group	Cigarettes per day in the second half of pregnancy											
	None		1–10 per day		>10 per day		Smoked, amount not stated		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	609	5.3	5954	52.1	4277	37.4	594	5.2	1	0.0	11 435	100.0
Central and South America	6	19.4	19	61.3	5	16.1	1	3.2	0	0.0	31	100.0
Melanesia, Micronesia and Polynesia	9	7.3	84	67.7	22	17.7	9	7.3	0	0.0	124	100.0
Southern Europe	2	3.9	31	60.8	17	33.3	1	2.0	0	0.0	51	100.0
Western and Northern Europe	3	8.6	19	54.3	12	34.3	1	2.9	0	0.0	35	100.0
Eastern Europe, Russia, Central Asian and Baltic States	0	0.0	22	88.0	3	12.0	0	0.0	0	0.0	25	100.0
Middle East and Africa	11	5.7	112	58.0	57	29.5	13	6.7	0	0.0	193	100.0
South-East Asia	22	18.6	60	50.8	26	22.0	10	8.5	0	0.0	118	100.0
North-East Asia	9	25.0	21	58.3	4	11.1	2	5.6	0	0.0	36	100.0
Southern Asia	1	12.5	6	75.0	1	12.5	0	0.0	0	0.0	8	100.0
Other/Not stated	0	0.0	6	50.0	6	50.0	0	0.0	0	0.0	12	100.0
TOTAL	672	5.6	6334	52.5	4430	36.7	631	5.2	1	0.0	12 068	100.0

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

Medical conditions and obstetric complications

In 2007, 1.6% of mothers born in Melanesia, Micronesia and Polynesia were reported to have diabetes mellitus – two and a half times the rate for all mothers in NSW, though the number of mothers is small (Table 94). The rates of gestational diabetes in mothers born in North-East Asia, Southern Asia and Melanesia, Micronesia and

Polynesia were more than twice the rate for all mothers in NSW.

Overall, 0.8% of mothers were reported to have essential hypertension, and 5.8% were reported to have pregnancy-induced hypertension.

Table 94. Maternal medical conditions and obstetric complications by country-of-birth group, NSW, 2007

Country-of-birth group	Condition									
	Diabetes mellitus		Gestational diabetes		Essential hypertension		Pregnancy-induced hypertension		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	399	0.5	2361	3.2	591	0.8	4873	6.7	73 109	100.0
Central and South America	1	0.1	36	4.5	9	1.1	26	3.3	793	100.0
Melanesia, Micronesia and Polynesia	24	1.6	132	8.7	20	1.3	67	4.4	1518	100.0
Southern Europe	5	0.6	46	5.5	9	1.1	24	2.8	843	100.0
Western and Northern Europe	5	0.6	25	3.2	3	0.4	38	4.9	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	2	0.3	31	4.5	1	0.1	26	3.8	688	100.0
Middle East and Africa	33	0.8	266	6.1	21	0.5	94	2.2	4343	100.0
South-East Asia	27	0.5	407	7.9	34	0.7	172	3.3	5166	100.0
North-East Asia	14	0.4	398	10.0	12	0.3	68	1.7	3966	100.0
Southern Asia	36	1.1	380	11.9	19	0.6	129	4.0	3191	100.0
Other/Not stated	0	0	9	4.4	2	1.0	5	2.5	203	100.0
TOTAL [#]	546	0.6	4091	4.3	721	0.8	5522	5.8	94 602	100.0

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

[#]Total refers to total mothers giving birth in NSW.

Labour and birth

Mothers born in non-English speaking countries were more likely to have a spontaneous onset of labour than mothers born in English speaking countries (Table 95). Rates of induction of labour varied from 18.3% among mothers born in South-East Asia to 28.6% among mothers born in Southern Asia.

Mothers born in the Middle East and Africa and Melanesia, Micronesia and Polynesia were more likely to have a normal vaginal birth than mothers in other country-of-birth groups (Table 96). The highest caesarean section rates were among mothers born in Central and South America (37.2%) and Southern Asia (32.4%).

Table 95. Labour onset by country-of-birth group, NSW, 2007

Country-of-birth group	Onset of labour									
	Spontaneous		No labour [#]		Induced		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	40 826	55.8	12 621	17.3	19 645	26.9	17	0.0	73 109	100.0
Central and South America	453	57.1	156	19.7	184	23.2	0	0.0	793	100.0
Melanesia, Micronesia and Polynesia	893	58.8	241	15.9	384	25.3	0	0.0	1518	100.0
Southern Europe	480	56.9	134	15.9	229	27.2	0	0.0	843	100.0
Western and Northern Europe	481	61.5	130	16.6	171	21.9	0	0.0	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	425	61.8	87	12.6	176	25.6	0	0.0	688	100.0
Middle East and Africa	2763	63.6	603	13.9	976	22.5	1	0.0	4343	100.0
South-East Asia	3473	67.2	748	14.5	945	18.3	0	0.0	5166	100.0
North-East Asia	2480	62.5	632	15.9	853	21.5	1	0.0	3966	100.0
Southern Asia	1788	56.0	489	15.3	914	28.6	0	0.0	3191	100.0
Other/Not stated	121	59.6	37	18.2	44	21.7	1	0.5	203	100.0
TOTAL	54 183	57.3	15 878	16.8	24 521	25.9	20	0.0	94 602	100.0

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

Table 96. Type of birth by country-of-birth group, NSW, 2007

Country-of-birth group	Type of delivery															
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section [#]		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	43 859	60.0	2415	3.3	5002	6.8	294	0.4	12 621	17.3	8853	12.1	65	0.1	73 109	100.0
Central and South America	394	49.7	32	4.0	69	8.7	2	0.3	156	19.7	139	17.5	1	0.1	793	100.0
Melanesia, Micronesia and Polynesia	978	64.4	40	2.6	65	4.3	7	0.5	241	15.9	186	12.3	1	0.1	1518	100.0
Southern Europe	513	60.9	35	4.2	61	7.2	5	0.6	134	15.9	95	11.3	0	0.0	843	100.0
Western and Northern Europe	468	59.8	29	3.7	71	9.1	2	0.3	130	16.6	82	10.5	0	0.0	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	428	62.2	39	5.7	69	10.0	1	0.1	87	12.6	64	9.3	0	0.0	688	100.0
Middle East and Africa	3002	69.1	88	2.0	227	5.2	16	0.4	603	13.9	406	9.3	1	0.0	4343	100.0
South-East Asia	3078	59.6	227	4.4	432	8.4	27	0.5	748	14.5	653	12.6	1	0.0	5166	100.0
North-East Asia	2182	55.0	173	4.4	458	11.5	11	0.3	632	15.9	510	12.9	0	0.0	3966	100.0
Southern Asia	1644	51.5	185	5.8	313	9.8	14	0.4	489	15.3	546	17.1	0	0.0	3191	100.0
Other/Not stated	102	50.2	10	4.9	12	5.9	2	1.0	37	18.2	38	18.7	2	1.0	203	100.0
TOTAL	56 648	59.9	3273	3.5	6779	7.2	381	0.4	15 878	16.8	11 572	12.2	71	0.1	94 602	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 (<2500 g) in 2007 was 6.1% in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asia (9.1%) and Melanesia,

Micronesia and Polynesia (7.4%) (Table 97). Babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States were least likely to be of low birth weight.

Table 97. Birth weight by maternal country-of-birth group, NSW, 2007

Country-of-birth group	Birth weight (g)							
	<2500		2500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	4482	6.0	69 697	93.8	87	0.1	74 266	100.0
Central and South America	38	4.7	771	95.3	0	0.0	809	100.0
Melanesia, Micronesia and Polynesia	114	7.4	1431	92.6	1	0.1	1546	100.0
Southern Europe	51	5.9	807	94.1	0	0.0	858	100.0
Western and Northern Europe	33	4.2	761	95.7	1	0.1	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	26	3.7	675	96.3	0	0.0	701	100.0
Middle East and Africa	253	5.7	4153	94.2	4	0.1	4410	100.0
South-East Asia	326	6.3	4871	93.6	9	0.2	5206	100.0
North-East Asia	191	4.8	3812	95.2	3	0.1	4006	100.0
Southern Asia	293	9.1	2930	90.9	2	0.1	3225	100.0
Other/Not stated	42	20.2	165	79.3	1	0.5	208	100.0
TOTAL	5849	6.1	90 073	93.8	108	0.1	96 030	100.0

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

Gestational age

The rate of prematurity (<37 weeks gestation) in 2007 was 7.4% in NSW. The highest rate of prematurity was among babies of mothers born in Melanesia, Micronesia and

Polynesia (8.3%). Babies of mothers born in North-East Asia were least likely to be premature (Table 98).

Table 98. Gestational age by maternal country-of-birth group, NSW, 2007

Country-of-birth group	Gestational age (weeks)							
	<37		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	5577	7.5	68 654	92.4	35	0.0	74 266	100.0
Central and South America	57	7.0	752	93.0	0	0.0	809	100.0
Melanesia, Micronesia and Polynesia	128	8.3	1417	91.7	1	0.1	1546	100.0
Southern Europe	61	7.1	797	92.9	0	0.0	858	100.0
Western and Northern Europe	51	6.4	743	93.5	1	0.1	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	37	5.3	664	94.7	0	0.0	701	100.0
Middle East and Africa	300	6.8	4108	93.2	2	0.0	4410	100.0
South-East Asia	390	7.5	4814	92.5	2	0.0	5206	100.0
North-East Asia	190	4.7	3815	95.2	1	0.0	4006	100.0
Southern Asia	240	7.4	2985	92.6	0	0.0	3225	100.0
Other/Not stated	39	18.8	169	81.3	0	0.0	208	100.0
TOTAL	7070	7.4	88 918	92.6	42	0.0	96 030	100.0

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

Apgar score

In 2007, 2.1% of all babies (including stillborn babies) had an Apgar score of <7 at 5 min and 1.1% had a score of <4 (Table 99). The rate of Apgar scores of <7 was highest

among babies of mothers born in Western and Northern Europe (2.5%) and Melanesia, Micronesia and Polynesia (2.4%).

Table 99. Apgar score at 5 min by maternal country-of-birth group, NSW, 2007#

Country-of-birth group	0-4		5-6		Apgar score 7+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	836	1.1	721	1.0	72 431	97.5	278	0.4	74 266	100.0
Central and South America	7	0.9	8	1.0	793	98.0	1	0.1	809	100.0
Melanesia, Micronesia and Polynesia	24	1.6	13	0.8	1501	97.1	8	0.5	1546	100.0
Southern Europe	9	1.0	6	0.7	840	97.9	3	0.3	858	100.0
Western and Northern Europe	12	1.5	8	1.0	774	97.4	1	0.1	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	4	0.6	5	0.7	689	98.3	3	0.4	701	100.0
Middle East and Africa	65	1.5	31	0.7	4297	97.4	17	0.4	4410	100.0
South-East Asia	65	1.2	53	1.0	5074	97.5	14	0.3	5206	100.0
North-East Asia	30	0.7	23	0.6	3946	98.5	7	0.2	4006	100.0
Southern Asia	35	1.1	39	1.2	3142	97.4	9	0.3	3225	100.0
Other/Not stated	6	2.9	3	1.4	198	95.2	1	0.5	208	100.0
TOTAL	1093	1.1	910	0.9	93 685	97.6	342	0.4	96 030	100.0

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

Infant feeding

The highest rates of full breastfeeding in 2007 were among babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States (87.2%), followed by babies of mothers born in Western and Northern Europe (85.2%).

The lowest rates of full breastfeeding were among babies of mothers born in North-East Asia (71.3%) and Melanesia, Micronesia and Polynesia (71.5%) (Table 100).

Table 100. Infant feeding among live born babies by country-of-birth group, NSW, 2007

Country-of-birth group	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	58 604	78.9	3213	4.3	10 455	14.1	1994	2.7	74 266	100.0
Central and South America	669	82.7	79	9.8	50	6.2	11	1.4	809	100.0
Melanesia, Micronesia and Polynesia	1106	71.5	179	11.6	217	14.0	44	2.8	1546	100.0
Southern Europe	653	76.1	78	9.1	110	12.8	17	2.0	858	100.0
Western and Northern Europe	677	85.2	43	5.4	49	6.2	26	3.3	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	611	87.2	46	6.6	35	5.0	9	1.3	701	100.0
Middle East and Africa	3489	79.1	430	9.8	363	8.2	128	2.9	4410	100.0
South-East Asia	3578	68.7	917	17.6	577	11.1	134	2.6	5206	100.0
North-East Asia	2856	71.3	768	19.2	323	8.1	59	1.5	4006	100.0
Southern Asia	2696	83.6	347	10.8	101	3.1	81	2.5	3225	100.0
Other/Not stated	154	74.0	13	6.3	21	10.1	20	9.6	208	100.0
TOTAL	75 093	78.2	6113	6.4	12 301	12.8	2523	2.6	96 030	100.0

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

Perinatal outcomes

In 2007, 99% of babies born in NSW and reported to the MDC were born alive and survived until discharge from the hospital of birth (Table 101). The perinatal mortality rate was highest among babies of mothers born in Middle Eastern and African countries (11.3 per 1000) and lowest among babies of mothers born in North East Asia (5.7 per 1000). However, because the majority of births were to

mothers born in English speaking countries, the majority of perinatal deaths occurred among these babies ($n = 666$, 76.7%). There were further 55 deaths among babies of mothers born in South-East Asia and 50 deaths among babies of mothers born in Middle East and African countries – comprising 6.3 and 5.8%, respectively, of all perinatal deaths reported to the MDC.

Table 101. Perinatal outcomes by country-of-birth group, NSW, 2007#

Country-of-birth group	Live born surviving		Stillbirth		Perinatal outcome						Total		Perinatal mortality/1000 births##
	No.	%	No.	%	Neonatal death		Death – age not stated		Not stated		No.	%	
					No.	%	No.	%	No.	%			
English speaking	73 443	98.9	475	0.6	191	0.3	8	0.0	149	0.2	74 266	100.0	9.0
Central and South America	804	99.4	3	0.4	2	0.2	0	0.0	0	0.0	809	100.0	6.2
Melanesia, Micronesia and Polynesia	1525	98.6	10	0.6	6	0.4	0	0.0	5	0.3	1546	100.0	10.3
Southern Europe	851	99.2	5	0.6	2	0.2	0	0.0	0	0.0	858	100.0	8.2
Western and Northern Europe	787	99.0	5	0.6	3	0.4	0	0.0	0	0.0	795	100.0	10.1
Eastern Europe, Russia, Central Asian and Baltic States	697	99.4	4	0.6	0	0.0	0	0.0	0	0.0	701	100.0	–
Middle East and Africa	4351	98.7	37	0.8	13	0.3	0	0.0	9	0.2	4410	100.0	11.3
South-East Asia	5141	98.8	43	0.8	12	0.2	0	0.0	10	0.2	5206	100.0	10.6
North-East Asia	3978	99.3	19	0.5	4	0.1	0	0.0	5	0.1	4006	100.0	5.7
Southern Asia	3195	99.1	22	0.7	6	0.2	0	0.0	2	0.1	3225	100.0	8.7
Other/Not stated	201	96.6	6	2.9	0	0.0	0	0.0	1	0.5	208	100.0	–
TOTAL	94 973	98.9	629	0.7	239	0.2	8	0.0	181	0.2	96 030	100.0	9.0

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

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

##Perinatal mortality rate not calculated for country-of-birth groups with <5 perinatal deaths.

9. Congenital conditions

Congenital conditions among stillborn and live born infants

From 1 January 1998, doctors, hospitals and laboratories are required under the *NSW Public Health Act 1991* to notify certain congenital conditions detected during pregnancy or in a baby up to 1 year of age. Information reported is included in the NSW Register of Congenital Conditions, formerly known as the NSW Birth Defects Register.

There are three types of conditions that are reported to the Register:

- Conditions that affect the growth, development and health of the baby that are present before birth, such as cleft lip, dislocated hip and problems with the development of the heart, lungs or other organs
- Conditions due to changes in the number of the baby's chromosomes, such as Down syndrome
- Four conditions due to changes in the baby's inherited genetic information: cystic fibrosis, phenylketonuria, congenital hypothyroidism and thalassemia major.

Descriptions of some common congenital conditions are shown in Appendix 1. A list of common exclusions is shown in Appendix 2.

This chapter reports congenital conditions detected during pregnancy or in the first year of life for 2001–2006 and congenital conditions detected during pregnancy or at birth for 2007.

Trends in reported congenital conditions

Between 2001 and 2004, the reported proportion of infants with congenital conditions has remained stable at about 2%, with a slight decline in 2005 and 2006 to 1.8 and 1.9%, respectively (Table 102). In 2007, 816 cases of congenital

conditions detected during pregnancy or at birth were reported.

Congenital conditions by diagnostic category

The most common categories of congenital conditions for births of more than 20 weeks gestation or with a birth weight greater than 400 g are presented in Table 103. Congenital conditions are classified using the British Paediatric Association (BPA) Classification of Diseases, which is primarily organised by body system. For infants with more than one condition, each condition is counted separately. The number of congenital conditions reported therefore exceeds the number of affected infants.

In 2001–2007, conditions of the cardiovascular system were most commonly reported, followed by conditions of the musculoskeletal system and conditions of the genitourinary system (Table 103). This is a pattern similar to that in previous years. In 2006, the overall rate of conditions was similar to that in the previous 5 years (34.2 versus 34.6 per 1000, respectively).

Table 102. Cases of congenital conditions, NSW, 2001–2007[#]

Year	No. of cases of congenital conditions	Births	No. of cases/1000 births
2001	1773	85 286	20.8
2002	1736	85 398	20.3
2003	1756	85 853	20.5
2004	1750	85 016	20.6
2005	1621	89 840	18.0
2006	1762	91 858	19.2
2007	816	94 912	8.6

Source: NSW Register of Congenital conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

[#]For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

Table 103. Congenital conditions among stillbirths and live born infants by diagnostic category, NSW, 2001–2007[#]

Diagnostic category [#]	No. of conditions			No. of conditions/1000 births				
	2001–2005	2006	2007	2001–2007	2001–2005	2006	2007	2001–2007
Nervous system								
Anencephaly	51	9	13	73	0.1	0.1	0.1	0.1
Spina bifida	123	29	18	170	0.3	0.3	0.2	0.3
Encephalocele	30	5	5	40	0.1	0.1	0.1	0.1
Microcephaly	107	19	6	132	0.2	0.2	0.1	0.2
Congenital hydrocephalus	167	28	23	218	0.4	0.3	0.2	0.4
Other nervous system anomalies	265	55	39	359	0.6	0.6	0.4	0.6
TOTAL	743	145	104	992	1.7	1.6	1.1	1.6
Eye								
Anophthalmos-microphthalmos	55	5	4	64	0.1	0.1	0.0	0.1
Buphthalmos-congenital glaucoma	30	6	1	37	0.1	0.1	0.0	0.1
Congenital cataract	75	18	4	97	0.2	0.2	0.0	0.2
Other eye anomalies	175	37	15	227	0.4	0.4	0.2	0.4
TOTAL	335	66	24	425	0.8	0.7	0.3	0.7

(Continued)

Table 103. (Continued)

Diagnostic category [#]	No. of conditions				No. of conditions/1000 births			
	2001–2005	2006	2007	2001–2007	2001–2005	2006	2007	2001–2007
Ear, face and neck								
Absence-structure auditory canal	54	13	8	75	0.1	0.1	0.1	0.1
Absent auricle	6	1	0	7	0.0	0.0	0.0	0.0
Anomalies of face and neck	36	5	8	49	0.1	0.1	0.1	0.1
Other ear anomalies	71	20	11	102	0.2	0.2	0.1	0.2
TOTAL	167	39	27	233	0.4	0.4	0.3	0.4
Cardiovascular system								
Transposition of great vessels	235	39	25	299	0.5	0.4	0.3	0.5
Tetralogy of Fallot	148	37	12	197	0.3	0.4	0.1	0.3
Ventricular septal defect	815	156	64	1035	1.9	1.7	0.7	1.7
Atrial septal defect	769	195	63	1027	1.8	2.1	0.7	1.7
Heart valve anomalies	531	90	48	669	1.2	1.0	0.5	1.1
Patent ductus arteriosus >37 weeks	432	80	44	556	1.0	0.9	0.5	0.9
Coarctation of aorta	207	51	20	278	0.5	0.6	0.2	0.4
Other anomalies of aorta	109	34	7	150	0.3	0.4	0.1	0.2
Anomalies of pulmonary artery	136	38	12	186	0.3	0.4	0.1	0.3
Other cardiovascular anomalies	680	148	78	906	1.6	1.6	0.8	1.5
TOTAL	4062	868	373	5303	9.4	9.4	3.9	8.6
Respiratory system								
Nose	56	20	6	82	0.1	0.2	0.1	0.1
Larynx, trachea and bronchus	42	6	2	50	0.1	0.1	0.0	0.1
Lungs	76	25	11	112	0.2	0.3	0.1	0.2
TOTAL	174	51	19	244	0.4	0.6	0.2	0.4
Gastrointestinal system								
Cleft palate only	417	68	55	540	1.0	0.7	0.6	0.9
Cleft lip only	147	36	13	196	0.3	0.4	0.1	0.3
Cleft palate and cleft lip	216	47	39	302	0.5	0.5	0.4	0.5
Oesophageal atresia only	14	4	4	22	0.0	0.0	0.0	0.0
Tracheo-oesophageal fistula (TOF) only	17	7	3	27	0.0	0.1	0.0	0.0
Oesophageal atresia with TOF	69	20	13	102	0.2	0.2	0.1	0.2
Atresia-stenosis of small intestine	134	31	11	176	0.3	0.3	0.1	0.3
Atresia-stenosis of anus	119	30	21	170	0.3	0.3	0.2	0.3
Other gastrointestinal anomalies	458	107	21	586	1.1	1.2	0.2	0.9
TOTAL	1591	350	180	2121	3.7	3.8	1.9	3.4
Genitourinary system								
Anomalies of female genitals	60	11	8	79	0.1	0.1	0.1	0.1
Undescended testis	278	69	20	367	0.6	0.8	0.2	0.6
Hypospadias	771	149	92	1012	1.8	1.6	1.0	1.6
Epispadias	7	3	0	10	0.0	0.0	0.0	0.0
Chordee	136	33	15	184	0.3	0.4	0.2	0.3
Indeterminate sex-ambiguous genitalia	52	14	9	75	0.1	0.2	0.1	0.1
Renal agenesis-dysgenesis	176	40	28	244	0.4	0.4	0.3	0.4
Obstructive anomalies of renal pelvis and ureter	660	149	40	849	1.5	1.6	0.4	1.4
Other genitourinary system anomalies	611	169	55	835	1.4	1.8	0.6	1.4
TOTAL	2751	637	267	3655	6.4	6.9	2.8	5.9
Musculoskeletal system								
Congenital dislocation of the hips	673	105	31	809	1.6	1.1	0.3	1.3
Talipes equinovarus	358	76	32	466	0.8	0.8	0.3	0.8
Polydactyly	476	104	64	644	1.1	1.1	0.7	1.0
Syndactyly	93	26	21	140	0.2	0.3	0.2	0.2
Reduction deformities of limbs	212	53	53	318	0.5	0.6	0.6	0.5
Craniosynostosis	239	33	5	277	0.6	0.4	0.1	0.4
Diaphragmatic hernia	127	24	19	170	0.3	0.3	0.2	0.3
Exomphalos	69	9	13	91	0.2	0.1	0.1	0.1
Gastroschisis	86	20	27	133	0.2	0.2	0.3	0.2
Other musculoskeletal anomalies	703	150	109	962	1.6	1.6	1.1	1.6
TOTAL	3036	600	374	4010	7.0	6.5	3.9	6.5
Integumentary system								
Cystic hygroma	273	35	15	323	0.6	0.4	0.2	0.5
Cystic hygroma	55	7	9	71	0.1	0.1	0.1	0.1
Chromosomal anomalies								
Trisomy 21	466	90	48	604	1.1	1.0	0.5	1.0
Trisomy 13	31	10	5	46	0.1	0.1	0.1	0.1
Trisomy 18	84	21	11	116	0.2	0.2	0.1	0.2
Turner syndrome	67	16	7	90	0.2	0.2	0.1	0.1
Other chromosomal anomalies	314	58	28	400	0.7	0.6	0.3	0.6
TOTAL	962	195	99	1256	2.2	2.1	1.0	2.0
Situs inversus								
Situs inversus	30	1	4	35	0.1	0.0	0.0	0.1
Congenital malformation syndromes								
Congenital malformation syndromes	186	36	26	248	0.4	0.4	0.3	0.4
Congenital cytomegalovirus infection								
Congenital cytomegalovirus infection	1	0	0	1	0.0	0.0	0.0	0.0
Non-immune hydrops foetalis								
Non-immune hydrops foetalis	108	18	14	140	0.3	0.2	0.1	0.2
Other and unspecified anomalies								
Other and unspecified anomalies	466	94	7	567	1.1	1.0	0.1	0.9
TOTAL	14940	3142	1542	19624	34.6	34.2	16.2	31.7

Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

[#]For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

Infant characteristics

In the period 2001–2007, a single condition was reported in 64.5% of infants, two conditions in 18.1%, three conditions in 7.9%, and four or more conditions in 9.5% of infants. The sex was male in 57.9% of infants, female in 41.7%, indeterminate in 0.3% of infants, and was not stated for 0.2%.

Congenital conditions were more common in preterm and post-term infants than in infants born at term (Table 104). Congenital conditions were also more common in infants born of a multiple pregnancy than a singleton pregnancy;

in 2001–2007, 1.8% of singleton babies, 2.5% of twins, and 3.4% of triplets were born with a congenital condition.

About 11% of infants born with congenital conditions died in the perinatal period, over half of which were stillbirths (Table 105). These figures comprise all cases of congenital conditions, including those where the cause of death may not be directly related to the congenital condition(s). By comparison, the perinatal mortality rate among all births reported to the NSW Midwives Data Collection was less than 1% in 2007 (see Chapter 4).

Table 104. Cases of congenital conditions by gestational age, NSW, 2001–2007[#]

Gestational age (weeks)	2001–2005		2006		Year 2007		2001–2007		No. of cases/1000 births
	No.	%	No.	%	No.	%	No.	%	
	20–27	579	6.7	124	7.0	70	8.6	773	
28–31	252	2.9	65	3.7	21	2.6	338	3.0	74.5
32–36	1073	12.4	225	12.8	131	16.1	1429	12.7	40.0
37–41	6317	73.1	1253	71.1	590	72.3	8160	72.8	14.5
42+	171	2.0	31	1.8	4	0.5	206	1.8	17.1
Not stated	244	2.8	64	3.6	0	0.0	308	2.7	–
TOTAL	8636	100.0	1762	100.0	816	100.0	11 214	100.0	18.1

Source: NSW Register of Congenital conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
[#]For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

Table 105. Cases of congenital conditions by pregnancy outcome, NSW, 2001–2007[#]

Pregnancy outcome	2001–2005		Year 2006		Year 2007		2001–2007	
	No.	%	No.	%	No.	%	No.	%
	Stillbirth	563	6.5	124	7.0	65	8.0	752
Live born/neonatal death	344	4.0	71	4.0	56	6.9	471	4.2
Live born/postneonatal death	58	0.7	9	0.5	4	0.5	71	0.6
Live born surviving	7671	88.8	1558	88.4	691	84.7	9920	88.5
TOTAL	8636	100.0	1762	100.0	816	100.0	11 214	100.0

Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.
[#]For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

Maternal characteristics

After 35 years of age, the incidence of congenital conditions increased with increasing maternal age (Table 106). Whereas the rate of congenital conditions is higher in older women, the majority of births occur in younger women. In 2001–2007, 74.2% of babies with congenital conditions were born to women aged less than 35 years.

In 2001–2007, 348 babies of Aboriginal or Torres Strait Islander mothers were reported to have congenital conditions. The rate of congenital conditions among these babies was 20.7 per 1000 compared with 17.2 per 1000 for babies born to non-Aboriginal mothers.

Table 106. Cases of congenital conditions by maternal age, NSW, 2001–2007#

Maternal age (years)	Year								
	2001–2005		2006		2007		2001–2007		No. of cases/1000 births
	No.	%	No.	%	No.	%	No.	%	
<20	358	4.1	66	3.7	34	4.2	458	4.1	18.7
20–24	1259	14.6	237	13.5	115	14.1	1611	14.4	18.1
25–29	2245	26.0	405	23.0	227	27.8	2877	25.7	16.7
30–34	2572	29.8	561	31.8	237	29.0	3370	30.1	16.3
35–39	1377	15.9	293	16.6	163	20.0	1833	16.3	17.5
40–44	344	4.0	74	4.2	38	4.7	456	4.1	22.3
45+	27	0.3	8	0.5	2	0.2	37	0.3	36.5
Not stated	454	5.3	118	6.7	0	0.0	572	5.1	–
TOTAL	8636	100.0	1762	100.0	816	100.0	11 214	100.0	18.1

Source: NSW Register of Congenital conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

Congenital conditions among terminations of pregnancy, spontaneous abortions and unknown outcomes of pregnancy

The number of terminations of pregnancy reported to the Register increased from 257 in 2001 to 354 in 2006 (Table 107). In all, 178 terminations of pregnancy have been reported to the Register for 2007. This number is expected to increase as pregnancy outcomes for babies with conditions detected during pregnancy in 2007 continue to be reported.

Of the 1996 terminations of pregnancy reported in 2001–2007, 1555 (77.9%) were associated with a chromosomal

anomaly, the most common of which was Trisomy 21 (Down syndrome), and 173 (8.7%) were associated with a neural tube defect (Table 108).

For spontaneous abortions, cytogenetic analysis is carried out only in cases of habitual abortion; the numbers presented, therefore, underestimate the number of spontaneous abortions that occur as a result of congenital conditions. Descriptions of some diagnostic terms used here are included in Appendix 1.

Table 107. Pregnancies with fetuses affected by congenital conditions resulting in termination, spontaneous abortion or unknown outcome, NSW, 2001–2007

Pregnancy outcome	Year							
	2001	2002	2003	2004	2005	2006	2007	2001–2007
	No.	No.	No.	No.	No.	No.	No.	No.
Spontaneous abortion	171	202	233	298	321	364	317	1906
Termination of pregnancy of <20 weeks gestation	257	285	313	305	304	354	178	1996
Unknown outcome	19	7	17	38	29	27	0	137
TOTAL	447	494	563	641	654	745	495	4039

Source: NSW Register of Congenital conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Table 108. Congenital conditions among terminations, spontaneous abortions and unknown outcomes of pregnancy by diagnostic category, NSW, 2001–2007

Diagnostic category	Year										
	2001–2005			2006			2007			2001–2007	
	Spontaneous abortion No.	Termination of pregnancy of <20 weeks gestation No.	Unknown No.	Spontaneous abortion No.	Termination of pregnancy of <20 weeks gestation No.	Unknown No.	Spontaneous abortion No.	Termination of pregnancy of <20 weeks gestation No.	Spontaneous abortion No.	Termination of pregnancy of <20 weeks gestation No.	Unknown No.
Nervous system											
Neural tube defects	7	129	2	1	25	0	1	19	9	173	2
Other nervous system anomalies	5	110	2	1	31	0	2	13	8	154	2
TOTAL	12	239	4	2	56	0	3	32	17	327	4
Eye	0	4	0	0	0	0	0	0	0	4	0
Ear, face and neck	1	9	1	0	3	0	0	0	1	12	1
Cardiovascular system	12	196	7	7	65	1	3	33	22	294	8
Respiratory system	4	22	1	3	2	0	0	10	7	34	1
Gastrointestinal system	9	117	2	3	24	0	1	33	13	174	2
Musculoskeletal system	25	257	9	3	70	0	7	69	35	396	9
Genitourinary system	9	109	2	1	54	0	1	36	11	199	2
Integumentary system	15	114	7	6	23	0	5	13	26	150	7
Cystic hygroma	1	1	0	0	0	0	0	0	1	1	0
Chromosomal anomalies											
Trisomy 21	99	609	43	25	154	17	19	57	143	820	60
Trisomy 13	45	86	10	15	17	1	15	5	75	108	11
Trisomy 18	59	183	12	13	50	3	19	24	91	257	15
Turner syndrome	133	97	6	43	22	1	30	8	206	127	7
Other chromosomal anomalies	873	192	28	261	31	5	229	20	1363	243	33
TOTAL	1209	1167	99	357	274	27	312	114	1878	1555	126
Situs inversus	0	4	0	0	0	0	0	1	0	5	0
Congenital malformation syndromes	2	11	0	0	5	0	0	3	2	19	0
Non-immune hydrops foetalis	10	42	1	2	14	0	6	5	18	61	1
Other and unspecified anomalies	3	31	2	1	5	0	0	8	4	44	2
TOTAL	1312	2323	135	385	595	28	338	357	2035	3275	163

Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

Trends in selected congenital conditions

Trends in a selection of common congenital conditions are shown in Table 109 and Figures 5–8. For 2001–2006, malformations reported up to 1 year of age are included. For 2007, malformations reported during pregnancy or at birth are included.

Over the period 2001–2006, the rate of neural tube defects has remained fairly stable at about 0.7 per 1000 births. The reported number of live born and stillborn infants with neural tube defects was 39 in 2001 and 42 in 2006, and 35 cases have been reported for 2007. The number of reported terminations of pregnancy was 32 in 2001, 24 in 2006, and 18 in 2007 (Figure 5).

Over the period 2001–2007, the number of cases of isolated cleft palate ranged from 52 to 90 per year, and for total cleft lip (including cases of cleft lip and cleft palate) from 58 to 88 per year. Termination of pregnancy was usually associated with other conditions such as neural

tube conditions, chromosomal anomalies, or multiple anomalies in addition to the cleft lip and/or cleft palate.

The reported number of live born and stillborn infants with chromosomal anomalies was 167 in 2001 and 195 in 2006. The number of reported terminations of pregnancy associated with chromosomal conditions rose from 202 in 2001 to 274 in 2006. The number of infants born with Down syndrome was 88 in 2001 and 90 in 2006, whereas the number of reported terminations of pregnancy associated with Down syndrome rose from 92 in 2001 to 154 in 2006 (Figure 7).

In 2001, 23 live born infants were reported to have a diaphragmatic hernia, three babies were stillborn and there were two terminations of pregnancy associated with this condition. In 2006, there were 21 live born infants reported with a diaphragmatic hernia, three stillborn babies and one termination of pregnancy (Figure 8).

Table 109. Selected congenital conditions by year, NSW, 2001–2007#

Condition	2001		2002		2003		2004		2005		2006		2007	
	No.	No. of cases/1000	No.	No. of cases/1000	No.	No. of cases/1000	No.	No. of cases/1000	No.	No. of cases/1000	No.	No. of cases/1000	No.	No. of cases/1000
Neural tube defects	71	0.8	61	0.7	67	0.8	58	0.7	66	0.7	66	0.7	53	0.6
Anencephalus	25	0.3	20	0.2	18	0.2	16	0.2	19	0.2	15	0.2	24	0.3
Spina bifida	39	0.5	32	0.4	46	0.5	35	0.4	40	0.4	45	0.5	24	0.3
Encephalocele	8	0.1	10	0.1	7	0.1	8	0.1	8	0.1	8	0.1	7	0.1
Cleft palate	67	0.8	60	0.7	88	1.0	74	0.9	90	1.0	64	0.7	52	0.5
Total cleft lip	88	1.0	76	0.9	83	1.0	79	0.9	66	0.7	85	0.9	58	0.6
Hypospadias	173	2.0	133	1.6	171	2.0	150	1.8	146	1.6	149	1.6	93	1.0
Limb reduction defects	42	0.5	21	0.2	31	0.4	36	0.4	38	0.4	43	0.5	38	0.4
Chromosomal anomalies	369	4.3	440	5.2	454	5.3	446	5.2	414	4.6	469	5.1	212	2.2
Down syndrome	180	2.1	221	2.6	228	2.7	232	2.7	212	2.4	244	2.7	105	1.1
Renal agenesis and dysgenesis	75	0.9	63	0.7	67	0.8	82	1.0	73	0.8	86	0.9	47	0.5
Exomphalos	22	0.3	22	0.3	19	0.2	28	0.3	15	0.2	22	0.2	20	0.2
Gastroschisis	23	0.3	18	0.2	18	0.2	16	0.2	19	0.2	21	0.2	27	0.3
Diaphragmatic hernia	28	0.3	23	0.3	21	0.2	30	0.4	28	0.3	25	0.3	20	0.2

Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

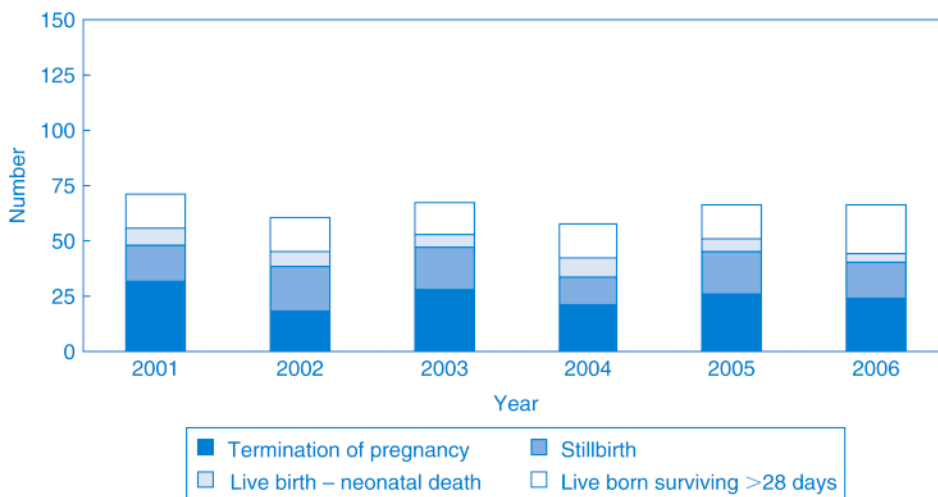


Figure 5. Neural tube defects: cases by year and pregnancy outcome, NSW, 2001–2007#.

Source: NSW Register of Congenital Conditions, Centre for Epidemiology and Research, NSW Department of Health.

#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are reported.

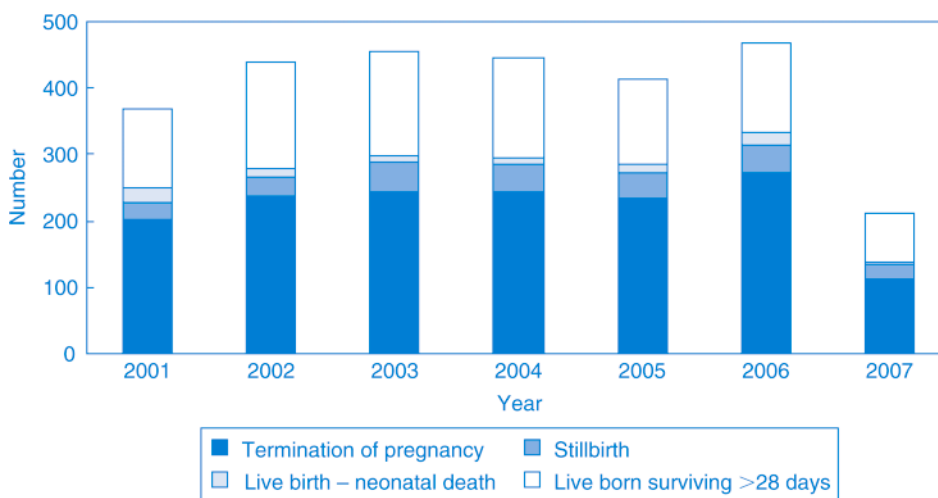


Figure 6. Chromosomal anomalies: cases by year and pregnancy outcome, NSW, 2001–2007#.

Source: NSW Register of Congenital Conditions, Centre for Epidemiology and Research, NSW Department of Health.

#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are reported.

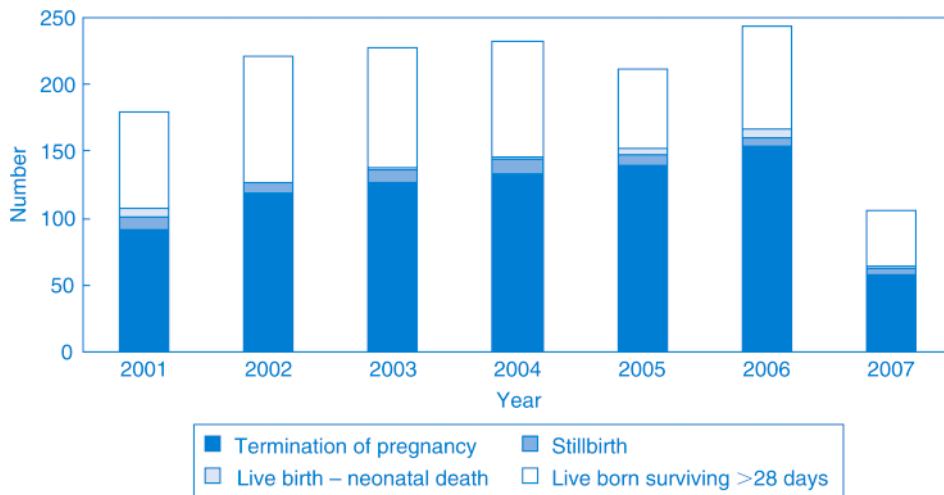


Figure 7. Down syndrome: cases by year and pregnancy outcome, NSW, 2001-2007#.
 Source: NSW Register of Congenital Conditions, Centre for Epidemiology and Research, NSW Department of Health.
 #For 2001-2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are reported.

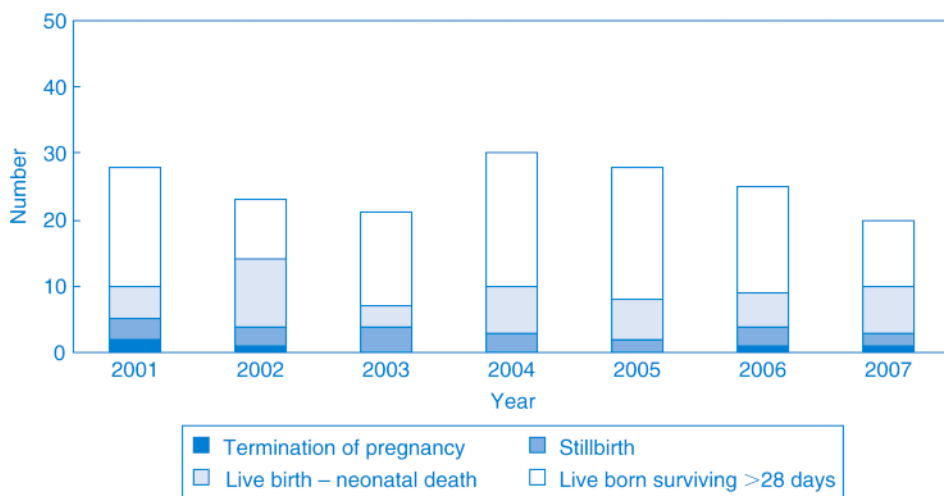


Figure 8. Diaphragmatic hernia: cases by year and pregnancy outcome, NSW, 2001-2007#.
 Source: NSW Register of Congenital Conditions, Centre for Epidemiology and Research, NSW Department of Health.
 #For 2001-2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are reported.

Congenital conditions by NSW health areas

Crude rates of reported congenital conditions for NSW health areas and rates standardised for maternal age are shown in Table 110. The denominator population includes live births and stillbirths among NSW residents as reported to the MDC. The rate of congenital conditions increases with increasing maternal age (Table 106). To allow direct comparison of geographical areas, the rates have been standardised to the maternal-age distribution of births in NSW in 1991.

In interpreting congenital condition rates among NSW areas, it should also be noted that infants with congenital conditions who are born to mothers resident in areas close to interstate borders may be transferred interstate for care and therefore may not be reported to the Register.

Over the period 2001–2007, standardised rates of reported congenital conditions were lowest in the Greater Southern Area and highest in the Hunter and New England Area. Review of cases showed slightly increased reported rates of a wide range of congenital conditions in the Hunter and New England Area compared with NSW overall, including unstable hips (but not dislocated hips), talipes equinovarus, first-degree hypospadias, undescended testis, obstructive conditions of the renal pelvis and ureter, spina bifida, ventricular septal defect, atrial septal defect, patent ductus arteriosus, coarctation of the aorta and chromosomal anomalies. There was no clustering by small geographical area. The range and pattern of these conditions suggest that reporting of congenital abnormalities is better in the Hunter and New England Health Area than in NSW as a whole.

Table 110. Cases of congenital conditions by health area, NSW, 2001–2007#

Health area	2001–2005			2006			Year			2001–2007			99% confidence interval
	No. of cases	Crude rate/1000 births	Standardised rate/1000 births	No. of cases	Crude rate/1000 births	Standardised rate/1000 births	No. of cases	Crude rate/1000 births	Standardised rate/1000 births	No. of cases	Crude rate/1000 births	Standardised rate/1000 births	
Sydney South West	2175	22.4	21.0	433	20.8	18.5	204	9.5	9.1	2812	20.1	18.8	17.8–19.9
South-Eastern Sydney and Illawarra	1677	23.5	21.0	402	26.3	22.8	155	9.8	9.1	2234	21.8	19.4	18.2–20.7
Sydney West	1753	21.4	20.1	342	19.6	18.3	205	11.2	10.5	2300	19.6	18.4	17.3–19.4
Northern Sydney and Central Coast	1528	22.9	19.2	336	23.5	20.5	153	10.4	8.4	2017	21.1	17.8	16.4–19.2
Hunter and New England	1446	28.7	27.1	274	25.6	23.0	129	11.7	10.9	1849	25.7	24.0	22.5–25.6
North Coast	446	18.6	17.6	81	16.0	14.3	55	10.4	9.3	582	17.0	15.9	14.2–17.8
Greater Southern	356	17.7	15.9	67	16.4	15.0	28	6.8	6.7	451	16.0	14.5	12.6–16.4
Greater Western	416	20.9	20.1	95	23.0	21.0	48	11.6	11.5	559	19.8	19.0	16.9–21.2
TOTAL NSW	9797	22.7	20.9	2030	22.1	19.7	977	10.3	9.5	12 804	20.7	19.0	18.5–19.5

Source: NSW Register of Congenital conditions (HOIST). Centre for Epidemiology and Research, NSW Department of Health.

#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.

10. Perinatal deaths

Review of perinatal deaths 2007

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_007 describes hospital procedures for review and reporting of perinatal deaths.¹ In 2006 and 2007, the Maternal and Perinatal Committee carried out reviews of perinatal deaths occurring among fetuses or infants of at least 20 weeks gestation or at least 400 g birth weight, bringing the Committee's review process in line with the criteria used by the NSW Midwives Data Collection (MDC) since 2006 for reporting of births.

Perinatal deaths 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 868 perinatal deaths of at least 20 weeks gestation or at least 400 g birth weight reported to the MDC in

2007. Confidential reports on 827 deaths were reviewed. Of the 629 stillbirths reported to the MDC, reviews were carried out on 582 (92.5%). The MDC was notified of 239 neonatal deaths. Reviews were carried out on 245 neonatal deaths, which include neonatal deaths that occurred after discharge or transfer from the hospital of birth.

Trends in causes of perinatal death

Causes of perinatal death in 2006 and 2007 are shown in Table 111. The overall pattern of deaths was similar for both years. The percentage of deaths due to congenital abnormalities fell slightly from 22.5% in 2006 to 20.7% in 2007; whereas there was an increase in the percentage of deaths attributed to unexplained antepartum, from 19.4% to 24.7%. Almost one in five deaths was due to spontaneous preterm birth for both years.

Causes of perinatal death 2007

Perinatal deaths were classified according to the PSANZ-PDC, which identifies the single most important factor that led to the chain of events that resulted in the death.

1. Congenital abnormality

In 2007, congenital abnormalities as a group were the second most common cause of perinatal death, responsible for 171 deaths (Table 112). The most common abnormalities were chromosomal ($n = 38$; 22.2%). Of these, 13 were trisomy 18, 13 were trisomy 21, two were trisomy 13, and two were Turner syndrome.

Table 111. Perinatal deaths by PSANZ perinatal death classification, NSW, 2006–2007[#]

PSANZ perinatal death classification	2006		2007	
	No.	%	No.	%
1. Congenital abnormality	194	22.5	171	20.7
2. Perinatal infection	51	5.9	54	6.5
3. Hypertension	26	3.0	27	3.3
4. Antepartum haemorrhage	71	8.2	70	8.5
5. Maternal disease	23	2.7	27	3.3
6. Specific perinatal conditions	74	8.6	48	5.8
7. Hypoxic peripartum death	27	3.1	35	4.2
8. Fetal growth restriction	53	6.1	31	3.7
9. Spontaneous preterm	171	19.8	152	18.4
10. Unexplained antepartum death	167	19.4	204	24.7
11. No obstetric antecedent	5	0.6	8	1.0
TOTAL	862	100.0	827	100.0

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

[#]Figures may differ from previous reports because of additional information having been received after publication. PSANZ: Perinatal Society of Australia and New Zealand.

Table 112. Perinatal deaths by PSANZ perinatal death classification and perinatal outcome, NSW, 2007

PSANZ perinatal death classification	Perinatal outcome					
	Stillbirth		Neonatal death		TOTAL	
	No.	%	No.	%	No.	%
1. Congenital abnormality						
Central nervous system	31	5.3	24	9.8	55	6.7
Cardiovascular system	11	1.9	10	4.1	21	2.5
Urinary system	4	0.7	6	2.4	10	1.2
Gastrointestinal system	3	0.5	0	0.0	3	0.4
Chromosomal	34	5.8	4	1.6	38	4.6
Metabolic	1	0.2	1	0.4	2	0.2
Multiple	11	1.9	5	2.0	16	1.9
Musculoskeletal	10	1.7	5	2.0	15	1.8
Respiratory	1	0.2	1	0.4	2	0.2
Diaphragmatic hernia	1	0.2	4	1.6	5	0.6
Tumours	1	0.2	1	0.4	2	0.2
Other specified	0	0.0	1	0.4	1	0.1
Unspecified	0	0.0	1	0.4	1	0.1
Total	108	18.6	63	25.7	171	20.7
2. Perinatal infection						
Group B <i>Streptococcus</i>	5	0.9	2	0.8	7	0.8
<i>Escherichia coli</i>	4	0.7	4	1.6	8	1.0
Spirochaetal	0	0.0	1	0.4	1	0.1
Other bacterial	1	0.2	2	0.8	3	0.4
Unspecified bacterial	9	1.5	6	2.4	15	1.8
Cytomegalovirus	2	0.3	2	0.8	4	0.5
Parvovirus	1	0.2	0	0.0	1	0.1
Herpes simplex virus	2	0.3	0	0.0	2	0.2
Other unspecified organism	9	1.5	4	1.6	13	1.6
Total	33	5.7	21	8.6	54	6.5
3. Hypertension						
Chronic: essential	0	0.0	1	0.4	1	0.1
Chronic: secondary, e.g. renal	1	0.2	0	0.0	1	0.1
Gestational	4	0.7	0	0.0	4	0.5
Pre-eclampsia	18	3.1	1	0.4	19	2.3
Pre-eclampsia superimposed on chronic hypertension	1	0.2	1	0.4	2	0.2
Total	24	4.1	3	1.2	27	3.3
4. Antepartum haemorrhage						
Placental abruption	31	5.3	16	6.5	47	5.7
Placenta praevia	2	0.3	0	0.0	2	0.2
Vasa praevia	1	0.2	0	0.0	1	0.1
Other	3	0.5	0	0.0	3	0.4
Undetermined origin	7	1.2	10	4.1	17	2.1
Total	44	7.6	26	10.6	70	8.5
5. Maternal disease						
Termination of pregnancy for maternal psychosocial indications	3	0.5	2	0.8	5	0.6
Diabetes/gestational diabetes	7	1.2	2	0.8	9	1.1
Maternal injury: accidental	3	0.5	0	0.0	3	0.4
Lupus obstetric syndrome	2	0.3	1	0.4	3	0.4
Obstetric cholestasis	2	0.3	0	0.0	2	0.2
Other specified	4	0.7	1	0.4	5	0.6
Total	21	3.6	6	2.4	27	3.3
6. Specific perinatal conditions						
Twin-to-twin transfusion	13	2.2	1	0.4	14	1.7
Fetomaternal haemorrhage	5	0.9	0	0.0	5	0.6
Antepartum cord complications	7	1.2	0	0.0	7	0.8
Uterine abnormality	3	0.5	2	0.8	5	0.6
Birth trauma	1	0.2	0	0.0	1	0.1
Alloimmune disease – ABO	1	0.2	0	0.0	1	0.1
Alloimmune disease – unspecified	1	0.2	0	0.0	1	0.1
Idiopathic hydrops	7	1.2	4	1.6	11	1.3
Other	3	0.5	0	0.0	3	0.4
Total	41	7.0	7	2.9	48	5.8
7. Hypoxic peripartum death						
Intrapartum complication – uterine rupture	1	0.2	2	0.8	3	0.4
Intrapartum complication – cord prolapse	0	0.0	5	2.0	5	0.6
Intrapartum complication – shoulder dystocia	2	0.3	2	0.8	4	0.5

(Continued)

Table 112. (Continued)

PSANZ perinatal death classification	Perinatal outcome					
	Stillbirth		Neonatal death		TOTAL	
	No.	%	No.	%	No.	%
Intrapartum complication – other	1	0.2	2	0.8	3	0.4
Evidence of non-reassuring fetal status in a normally grown infant	3	0.5	4	1.6	7	0.8
No intrapartum complications and no evidence of non-reassuring fetal status	2	0.3	0	0.0	2	0.2
Unspecified	9	1.5	2	0.8	11	1.3
Total	18	3.1	17	6.9	35	4.2
8. Fetal growth restriction						
With evidence of reduced vascular perfusion on Doppler studies and/or placental histopathology	17	2.9	3	1.2	20	2.4
With chronic villitis	1	0.2	0	0.0	1	0.1
No placental pathology	5	0.9	0	0.0	5	0.6
No examination of placenta	0	0.0	1	0.4	1	0.1
Other specified placental pathology	3	0.5	0	0.0	3	0.4
Unspecified or not known whether placental examined	1	0.2	0	0.0	1	0.1
Total	27	4.6	4	1.6	31	3.7
9. Spontaneous preterm						
Intact membranes or membrane rupture less than 24 h, with chorioamnionitis on placental histopathology	7	1.2	34	13.9	41	5.0
Intact membranes or membrane rupture less than 24 h, without chorioamnionitis on placental histopathology	12	2.1	14	5.7	26	3.1
Intact membranes or membrane rupture less than 24 h, with clinical evidence of chorioamnionitis, no examination of placenta	2	0.3	0	0.0	2	0.2
Intact membranes or membrane rupture less than 24 h, with no clinical signs of chorioamnionitis, no examination of placenta	2	0.3	2	0.8	4	0.5
Intact membranes or membrane rupture less than 24 h, with unspecified/unknown placental examination	0	0.0	5	2.0	5	0.6
Membrane rupture 24 h or more, with chorioamnionitis on placental histopathology	22	3.8	20	8.2	42	5.1
Membrane rupture 24 h or more, without chorioamnionitis on placental histopathology	2	0.3	5	2.0	7	0.8
Membrane rupture 24 h or more, with clinical evidence of chorioamnionitis, no examination of placenta	1	0.2	1	0.4	2	0.2
Membrane rupture 24 h or more, with no clinical signs of chorioamnionitis, no examination of placenta	8	1.4	3	1.2	11	1.3
Membrane rupture 24 h or more, with unspecified/unknown placental examination	2	0.3	0	0.0	2	0.2
Membrane rupture unknown duration, with chorioamnionitis on placental histopathology	0	0.0	3	1.2	3	0.4
Membrane rupture unknown duration, without chorioamnionitis on placental histopathology	0	0.0	1	0.4	1	0.1
Membrane rupture unknown duration, with no clinical signs of chorioamnionitis, no examination of placenta	4	0.7	1	0.4	5	0.6
Membrane rupture unknown duration, with unspecified/unknown placental examination	0	0.0	1	0.4	1	0.1
Total	62	10.7	90	36.7	152	18.4
10. Unexplained antepartum death						
With evidence of reduced vascular perfusion on Doppler studies and/or placental histopathology	24	4.1	0	0.0	24	2.9
With chronic villitis	3	0.5	0	0.0	3	0.4
No placental pathology	111	19.1	0	0.0	111	13.4
No examination of placenta	14	2.4	0	0.0	14	1.7
Other specified placental pathology	50	8.6	0	0.0	50	6.0
Unspecified or not known whether placenta examined	2	0.3	0	0.0	2	0.2
Total	204	35.1	0	0.0	204	24.7
11. No obstetric antecedent						
Postnatally acquired infection	0	0.0	2	0.8	2	0.2
Other specified	0	0.0	1	0.4	1	0.1
Unknown/unexplained	0	0.0	5	2.0	5	0.6
Total	0	0.0	8	3.3	8	1.0
TOTAL	582	100.0	245	100.0	827	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.
PSANZ: Perinatal Society of Australia and New Zealand.

Fifty-five deaths were associated with abnormalities of the central nervous system (32.2%) and included 24 deaths due to neural tube defects and 13 deaths associated with congenital hydrocephalus. Twenty-one deaths were associated with abnormalities of the cardiovascular system, which included 10 cases of hypoplastic left-heart syndrome, two cases of transposition of the great vessels, one case of hypoplastic left ventricle, one case of hypoplastic right heart and one case of coarctation of the aorta.

Five deaths were associated with congenital diaphragmatic hernia, and 16 deaths were due to multiple abnormalities not associated with a chromosomal abnormality.

2. Perinatal infection

Fifty-four deaths (6.5%) were found to be due to infection, of which 33 were stillbirths and 21 were neonatal deaths. For 33 deaths, there was an associated chorioamnionitis. The most common infective organisms were *Escherichia coli* ($n = 8$) and group B *Streptococcus* infection ($n = 7$). Four perinatal deaths followed congenital cytomegalo-virus infection, one followed a parvovirus infection, and one followed a herpes simplex infection.

3. Hypertension

Twenty-seven deaths (3.3%) were considered to be due to maternal hypertension. There were 24 stillbirths and three neonatal deaths. The majority ($n = 19$) occurred in mothers with pre-eclampsia. There were two deaths attributed to chronic hypertension, four to gestational hypertension, and two to pre-eclampsia superimposed on pre-existing hypertension.

4. Antepartum haemorrhage

Seventy deaths were due to antepartum haemorrhage, of which 47 were due to placental abruption, two were due to placenta praevia, and one was due to vasa praevia. Of the 47 deaths due to placental abruption, seven were associated with maternal hypertension.

5. Maternal disease

Twenty-seven deaths were attributed to other maternal conditions, including diabetes ($n = 9$), maternal injury ($n = 3$), lupus obstetric syndrome ($n = 3$) and termination of pregnancy ($n = 5$).

6. Specific perinatal conditions

Twin-to-twin transfusion accounted for the majority of deaths in this group ($n = 14$), followed by idiopathic hydrops ($n = 11$), antepartum cord complications ($n = 7$), uterine abnormality ($n = 5$) and fetomaternal haemorrhage ($n = 5$).

7. Hypoxic peripartum death

There were 35 deaths associated with peripartum hypoxia. Five deaths followed cord prolapse, four deaths were associated with shoulder dystocia and three deaths followed uterine rupture. Eight deaths occurred before the onset of labour, nine during labour and one at an unspecified time prior to birth. The remaining 17 deaths occurred in the neonatal period.

8. Fetal growth restriction

In 31 cases, the main cause of death was considered to be fetal growth restriction (FGR). Of these, 27 were stillbirths and four were neonatal deaths. FGR is defined as less than the tenth percentile of birth weight 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 152 (18.4%) perinatal deaths associated with spontaneous preterm birth, which comprises normally formed and appropriately grown babies born before 37 weeks gestation. Of these, 62 (40.8%) were stillbirths and 90 (59.2%) were neonatal deaths.

Of all deaths in this category, 84 (55.3%) were at less than 23 weeks gestation, 54 (35.5%) were at 23–25 weeks gestation, and 14 (9.2%) occurred between 26 and 36 weeks gestation. Fifty-six deaths (36.8%) were associated with membrane rupture of 24 h or more.

10. Unexplained antepartum death

Of the 204 unexplained stillbirths, 123 (60.3%) were low birth weight babies and 130 (63.7%) were premature. A variety of associated maternal conditions were reported in this group, including multiple pregnancy ($n = 14$ deaths), maternal hypertension ($n = 15$), diabetes ($n = 8$), and thyrotoxicosis ($n = 2$). Post-mortem examination was carried out in 80 cases (39.2%). Placental histopathology results were provided for 181 unexplained antepartum deaths (88.7%).

11. No obstetric antecedent

No obstetric cause of death was identified for eight neonatal deaths. There were two deaths due to postnatally acquired infection, one death due to primary persistent pulmonary hypertension and five deaths were unexplained.

Obstetric cause of perinatal death by hospital service level

Obstetric service levels are described in the Explanatory Notes of the Methods section (p. 11). The majority of perinatal deaths occurred in Level 6 hospitals (45.6%, Table 113). The proportion of unexplained intrauterine deaths was substantially lower in Level 6 hospitals than in other hospitals, possibly because of 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 2007

Of the 827 perinatal deaths reviewed for 2007, 377 (45.6%) occurred before the onset of labour, 72 (8.7%) occurred during labour, 131 (15.8%) occurred at an unknown time before birth, and 247 (29.8%) were neonatal deaths.

Of the 72 deaths that occurred during labour, 40 (55.6%) occurred at less than 23 weeks gestation, 16 (22.2%) occurred at 23–25 weeks gestation, and 16 (22.2%) occurred at 26 weeks or more.

Neonatal causes of death

In 2007, extreme prematurity (26 weeks gestation or less) was the most common cause of neonatal death, accounting for 45.3% of all neonatal deaths in 2007 (Table 114). Congenital abnormalities were the next most common cause of neonatal death, accounting for about one in four deaths.

Of the 245 neonatal deaths, 195 (79.6%) were preterm (Table 115). Among the 50 neonatal deaths among babies born at term, 22 deaths were due to congenital malformations and a further 16 were due to neurological conditions.

Table 113. Perinatal deaths by PSANZ perinatal death classification and hospital service level, NSW, 2007[#]

PSANZ perinatal death classification	Hospital service level												TOTAL ^{**}	
	2		3		4		5		6		Private		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Congenital abnormality	0	0.0	8	12.5	8	6.4	22	13.8	116	30.8	15	16.7	171	20.7
2. Perinatal infection	0	0.0	3	4.7	7	5.6	7	4.4	32	8.5	4	4.4	54	6.5
3. Hypertension	0	0.0	4	6.3	6	4.8	4	2.5	10	2.7	3	3.3	27	3.3
4. Antepartum haemorrhage	1	20.0	7	10.9	14	11.2	10	6.3	31	8.2	7	7.8	70	8.5
5. Maternal disease	0	0.0	0	0.0	8	6.4	5	3.1	11	2.9	3	3.3	27	3.3
6. Specific perinatal conditions	0	0.0	4	6.3	4	3.2	7	4.4	25	6.6	8	8.9	48	5.8
7. Hypoxic peripartum death	0	0.0	4	6.3	6	4.8	5	3.1	14	3.7	4	4.4	35	4.2
8. Fetal growth restriction	0	0.0	2	3.1	10	8.0	7	4.4	10	2.7	2	2.2	31	3.7
9. Spontaneous preterm	2	40.0	14	21.9	17	13.6	36	22.5	72	19.1	11	12.2	152	18.4
10. Unexplained antepartum death	2	40.0	17	26.6	43	34.4	56	35.0	53	14.1	33	36.7	204	24.7
11. No obstetric antecedent	0	0.0	1	1.6	2	1.6	1	0.6	3	0.8	0	0.0	8	1.0
TOTAL	5	100.0	64	100.0	125	100.0	160	100.0	377	100.0	90	100.0	827	100.0

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

[#]The maternity service level is the level of the hospital of death.

^{**}Total includes four babies born in NSW who died interstate and two babies who died in NSW non-maternity hospitals.

PSANZ: Perinatal Society of Australia and New Zealand.

Table 114. Neonatal deaths by PSANZ neonatal death classification, NSW, 2006–2007

PSANZ neonatal death classification	Year			
	2006		2007	
	No.	%	No.	%
Congenital abnormality				
Central nervous system	5	1.9	19	7.8
Cardiovascular system	7	2.6	10	4.1
Urinary tract	7	2.6	6	2.4
Gastrointestinal tract	5	1.9	0	0.0
Chromosomal	16	6.0	4	1.6
Metabolic	2	0.7	2	0.8
Multiple	12	4.5	5	2.0
Musculoskeletal	4	1.5	4	1.6
Respiratory	1	0.4	1	0.4
Diaphragmatic hernia	3	1.1	4	1.6
Haematological	0	0.0	1	0.4
Tumours	1	0.4	1	0.4
Other specified congenital abnormality	1	0.4	1	0.4
Unspecified	1	0.4	1	0.4
Total	65	24.3	59	24.1
Extreme prematurity				
Not resuscitated	72	26.9	83	33.9
Unsuccessful resuscitation	10	3.7	11	4.5
Resuscitation unspecified or unknown	26	9.7	17	6.9
Total	108	40.3	111	45.3
Cardio-respiratory disorders				
Hyaline membrane disease/respiratory distress syndrome	18	6.7	5	2.0
Meconium aspiration syndrome	4	1.5	2	0.8
Primary persistent pulmonary hypertension	1	0.4	1	0.4
Pulmonary hypoplasia	4	1.5	3	1.2
Other	3	1.1	5	2.0
Total	30	11.2	16	6.5
Infection				
Congenital bacterial	5	1.9	6	2.4
Acquired bacterial	6	2.2	2	0.8
Congenital viral	2	0.7	1	0.4
Acquired viral	0	0.0	1	0.4
Other	0	0.0	1	0.4
Unspecified organism	5	1.9	1	0.4
Total	18	6.7	12	4.9
Neurological				
Hypoxic ischaemic encephalopathy/perinatal asphyxia	27	10.1	26	10.6
Intracranial haemorrhage	8	3.0	10	4.1
Other	0	0.0	1	0.4
Total	35	13.1	37	15.1
Gastrointestinal				
Necrotising enterocolitis	3	1.1	2	0.8
Total	3	1.1	2	0.8
Other				
SIDS	1	0.4	0	0.0
Trauma	1	0.4	0	0.0
Other specified	3	1.1	0	0.0
Unclassified sudden infant death	0	0.0	1	0.4
Unknown/undetermined	4	1.5	7	2.9
Total	9	3.4	8	3.3
TOTAL	268	100.0	245	100.0

Source: NSW Maternal and Perinatal Committee, NSW Department of Health.
PSANZ: Perinatal Society of Australia and New Zealand.
SIDS: sudden infant death syndrome.

Table 115. Neonatal deaths by PSANZ neonatal death classification and gestational age, NSW, 2007

PSANZ neonatal death classification	Gestational age (weeks)				TOTAL	
	<37		37+		No.	%
	No.	%	No.	%		
Congenital abnormality						
Central nervous system	14	7.2	5	10.0	19	7.8
Cardiovascular system	4	2.1	6	12.0	10	4.1
Urinary tract	6	3.1	0	0.0	6	2.4
Chromosomal	1	0.5	3	6.0	4	1.6
Metabolic	2	1.0	0	0.0	2	0.8
Multiple	3	1.5	2	4.0	5	2.0
Musculoskeletal	1	0.5	3	6.0	4	1.6
Respiratory	1	0.5	0	0.0	1	0.4
Diaphragmatic hernia	3	1.5	1	2.0	4	1.6
Haematological	1	0.5	0	0.0	1	0.4
Tumours	1	0.5	0	0.0	1	0.4
Other specified congenital abnormality	0	0.0	1	2.0	1	0.4
Unspecified	0	0.0	1	2.0	1	0.4
Total	37	19.0	22	44.0	59	24.1
Extreme prematurity						
Not resuscitated	83	42.6	0	0.0	83	33.9
Unsuccessful resuscitation	11	5.6	0	0.0	11	4.5
Resuscitation unspecified or unknown	17	8.7	0	0.0	17	6.9
Total	111	56.9	0	0.0	111	45.3
Cardio-respiratory disorders						
Hyaline membrane disease/respiratory distress syndrome	5	2.6	0	0.0	5	2.0
Meconium aspiration syndrome	0	0.0	2	4.0	2	0.8
Primary persistent pulmonary hypertension	1	0.5	0	0.0	1	0.4
Pulmonary hypoplasia	3	1.5	0	0.0	3	1.2
Other	3	1.5	2	4.0	5	2.0
Total	12	6.2	4	8.0	16	6.5
Infection						
Congenital bacterial	5	2.6	1	2.0	6	2.4
Acquired bacterial	2	1.0	0	0.0	2	0.8
Congenital viral	1	0.5	0	0.0	1	0.4
Acquired viral	0	0.0	1	2.0	1	0.4
Other	0	0.0	1	2.0	1	0.4
Unspecified organism	1	0.5	0	0.0	1	0.4
Total	9	4.6	3	6.0	12	4.9
Neurological						
Hypoxic ischaemic encephalopathy/perinatal asphyxia	10	5.1	16	32.0	26	10.6
Intracranial haemorrhage	10	5.1	0	0.0	10	4.1
Other	1	0.5	0	0.0	1	0.4
Total	21	10.8	16	32.0	37	15.1
Gastrointestinal						
Necrotising enterocolitis	2	1.0	0	0.0	2	0.8
Total	2	1.0	0	0.0	2	0.8
Other						
Unclassified sudden infant death	0	0.0	1	2.0	1	0.4
Unknown/undetermined	3	1.5	4	8.0	7	2.9
Total	3	1.5	5	10.0	8	3.3
TOTAL	195	100.0	50	100.0	245	100.0

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

Perinatal deaths associated with maternal drug dependency and abuse 2007

No perinatal deaths were directly attributed to maternal drug dependency or drug abuse in 2007. Nine 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 2007

Post-mortem 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. Post-mortem examinations were carried out for 283 (34.2%) deaths,

including 227 stillborn infants (39.0% of all reported stillbirths) and 56 neonatal deaths (22.9% of all reported neonatal deaths). Placental histopathology was carried out for 665 perinatal deaths (80.4%).

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.

11. Appendixes

Appendix 1. Description of selected congenital conditions

The following include descriptions of some of the congenital conditions included in this report:

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

Appendix 2. Congenital conditions exclusion list

The following is a general list of minor conditions and non-structural disorders that are excluded from the NSW Register of Congenital Conditions:

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

Appendix 3. Maternal countries of birth and country of birth groups

English speaking	Eastern Europe, Russia, Central Asian and Baltic States	West Bank	Indonesia
Australia	Bulgaria	Yemen	Laos
Christmas Island	Czechoslovakia	Algeria	Malaysia
Cocos (Keeling) Islands	Hungary	Egypt	Burma (Myanmar)
Norfolk Island	Poland	Libya	Philippines
New Zealand	Romania	Mauritania	Singapore
United Kingdom	Armenia	Morocco	Thailand
Channel Islands	Azerbaijan	Sudan	Vietnam
Isle of Man	Belarus (formerly Byelorussia)	Tunisia	
Ireland	Estonia	Cameroon	Southern Asia
Bermuda	Georgia	Central African Republic	Afghanistan
Canada	Kazakhstan	Congo	Bangladesh
United States of America	Latvia	Cote d'Ivoire	Bhutan
South Africa	Lithuania	Gambia	India
	Moldova (formerly Moldavia)	Ghana	Maldives
Central and South America	Russian Federation	Guinea-Bissau	Nepal
Bahrain	Ukraine	Liberia	Pakistan
Argentina	Uzbekistan	Mali	Sri Lanka
Bolivia	Kazakhstan	Nigeria	
Brazil	Kyrgystan	Senegal	Southern Europe
Chile		Sierra Leone	Albania
Colombia	Melanesia, Micronesia and Polynesia	Zaire	Andorra
Ecuador	New Caledonia	Angola	Cyprus
Falkland Islands	Papua New Guinea	Botswana	Gibraltar
French Guiana	Solomon Islands	Djibouti	Greece
Guyana	Vanuatu	Ethiopia	Italy
Paraguay	Guam	Kenya	Malta
Peru	Kiribati	Malawi	Portugal
Surinam	Nauru	Mauritius	Spain
Uruguay	Cook Islands	Mozambique	Bosnia-Herzegovina
Venezuela	Fiji	Namibia	Croatia
Belize	French Polynesia (including Tahiti)	Reunion	Macedonia
Costa Rica	Niue	Rwanda	Slovenia
El Salvador	American Samoa	Seychelles	Serbia and Montenegro
Guatamala	Western Samoa	Somalia	Former Yugoslavia (not otherwise defined)
Honduras	Tokelau	Swaziland	
Mexico	Tonga	Tanzania	Western and Northern Europe
Nicaragua	Tuvalu	Uganda	Austria
Panama	Wallis and Fortuna	Zambia	Belgium
Antigua and Barbuda		Zimbabwe	France
Bahamas	Middle East and Africa	Eritrea	Germany (United)
Barbados	Bahrain	Ethiopia	Luxembourg
Cayman Islands	Gaza Strip		Netherlands
Cuba	Iran	North-East Asia	Switzerland
Grenada	Iraq	China (excluding Taiwan)	Denmark
Guadeloupe	Israel	Hong Kong	Faeroe Islands
Jamaica	Jordan	Japan	Finland
Netherlands Antilles	Kuwait	North Korea	Iceland
Puerto Rico	Lebanon	South Korea	Norway
St Kitts-Nevis	Qatar	Macau	Sweden
St Lucia	Saudi Arabia	Mongolia	
St Vincent and the Grenadines	Syria	Taiwan	
Trinidad and Tobago	Turkey	South-East Asia	
Turks and Caicos Islands	United Arab Emirates	Brunei	
		Cambodia	

Appendix 4. Midwives data collection form

NSW MIDWIVES DATA COLLECTION			
Mother Unit Record No. <input type="text"/>		Hospital <input type="text"/> Code <input type="text"/>	
First Name <input type="text"/>		Family Name <input type="text"/>	
Address <input type="text"/>		Postcode <input type="text"/>	
Mother's birth date <input type="text"/>		LABOUR AND DELIVERY (cont.)	
Country of birth Australia <input type="checkbox"/> 1101 Other <input type="checkbox"/>		Analgesia for labour (tick one or more)	
If other, specify <input type="text"/>		None <input type="checkbox"/> Epidural/caudal <input type="checkbox"/>	
Indigenous status Aboriginal <input type="checkbox"/> 1 Torres Strait Islander <input type="checkbox"/> 2 Aboriginal and Torres Strait Islander <input type="checkbox"/> 3 None of the above <input type="checkbox"/> 4		Nitrous oxide <input type="checkbox"/> Combined <input type="checkbox"/>	
PREVIOUS PREGNANCIES		Systemic opioids <input type="checkbox"/> spinal-epidural <input type="checkbox"/>	
Previous pregnancy greater than 20 weeks? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0		Spinal <input type="checkbox"/> Other <input type="checkbox"/>	
If yes, No. previous pregnancies > 20 weeks <input type="text"/>		Type of birth	
Was the last birth by caesarean section? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0		Normal vaginal <input type="checkbox"/> 1 Vacuum extr. <input type="checkbox"/> 3	
Total number of previous caesarean sections? <input type="text"/>		Forceps <input type="checkbox"/> 2 Vaginal breech <input type="checkbox"/> 4	
THIS PREGNANCY		Caesarean section <input type="checkbox"/> 5	
Date of EDC <input type="text"/>		<i>If caesarean section, main induction:</i>	
Was antenatal care received? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0		Failure to progress	
If yes, duration of pregnancy at first contact for care (weeks) <input type="text"/>		- Cx 3cm dilated or less <input type="checkbox"/> 2	
Medical conditions Diabetes mellitus <input type="checkbox"/>		- Cx dilated more than 3cm <input type="checkbox"/> 3	
Gestational diabetes <input type="checkbox"/>		Fetal distress <input type="checkbox"/> 4	
Chronic hypertension <input type="checkbox"/>		Elective repeat caesarean section <input type="checkbox"/> 5	
Pregnancy-induced hypertension:		Other clinical indication <input type="checkbox"/> 6	
- proteinuric <input type="checkbox"/>		Non-clinical indication <input type="checkbox"/> 7	
- non-proteinuric <input type="checkbox"/>		Analgesia for delivery (tick one or more)	
Did the mother smoke at all during pregnancy? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0		None <input type="checkbox"/> Epidural/caudal <input type="checkbox"/>	
If yes, how many cigarettes each day on average in the second half of pregnancy?		Local to perineum <input type="checkbox"/> Combined <input type="checkbox"/>	
None <input type="checkbox"/> 1 >10 per day <input type="checkbox"/> 2		Pudendal <input type="checkbox"/> spinal+epidural <input type="checkbox"/>	
≤10 per day <input type="checkbox"/> 3 Unknown <input type="checkbox"/> 4		Spinal <input type="checkbox"/> General anaesthetic <input type="checkbox"/>	
LABOUR AND DELIVERY		Other <input type="checkbox"/>	
Onset of labour Spontaneous <input type="checkbox"/> 1 Induced <input type="checkbox"/> 2		Perineal status	
No labour <input type="checkbox"/> 3		Intact <input type="checkbox"/> 1 3rd deg. tear <input type="checkbox"/> 4	
If labour augmented/induced (tick 1 or more):		1st deg. tear/graze <input type="checkbox"/> 2 4th deg. tear <input type="checkbox"/> 5	
Oxytocins <input type="checkbox"/> ARM <input type="checkbox"/>		2nd deg. tear <input type="checkbox"/> 3 Other <input type="checkbox"/> 6	
Prostaglandins <input type="checkbox"/> Other <input type="checkbox"/>		Episiotomy Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0	
If labour induced, main indication:		Surgical repair of the vagina or perineum? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0	
Diabetes <input type="checkbox"/> 1		Management of the 3rd stage	
Hypertensive disease <input type="checkbox"/> 2		Active <input type="checkbox"/> 1 Physiological <input type="checkbox"/> 2	
Fetal distress <input type="checkbox"/> 3		BABY	
Fetal death <input type="checkbox"/> 4		Unit Record No. <input type="text"/>	
Chorioamnionitis <input type="checkbox"/> 5		Birth date <input type="text"/>	
Blood group isoimmunisation <input type="checkbox"/> 6		Sex M <input type="checkbox"/> 1 F <input type="checkbox"/> 2 Indet. <input type="checkbox"/> 3	
Prelabour rupture of membranes <input type="checkbox"/> 7		Plurality Single <input type="checkbox"/> 1 Multiple <input type="checkbox"/> 2	
Prolonged pregnancy (41+ weeks) <input type="checkbox"/> 8		If multiple, total number <input type="text"/>	
Suspected intrauterine growth restriction <input type="checkbox"/> 9		If multiple birth, specify baby number <input type="text"/>	
Other <input type="checkbox"/> 10		Birthweight (grams) <input type="text"/>	
Presentation at birth		Estimated gestational age <input type="text"/>	
Vertex <input type="checkbox"/> 1 Brow <input type="checkbox"/> 4		Apgar <input type="text"/>	
Breech <input type="checkbox"/> 2 Shoulder/transverse <input type="checkbox"/> 5		1 min <input type="text"/> 5 min <input type="text"/>	
Face <input type="checkbox"/> 3 Other <input type="checkbox"/> 6		Resuscitation of baby (tick 1 or more)	
LABOUR AND DELIVERY (cont.)		None/minimal <input type="checkbox"/> 1 IPPR: bag + mask <input type="checkbox"/> 4	
Analgesia for labour (tick one or more)		Suction <input type="checkbox"/> 2 Intubation + IPPR <input type="checkbox"/> 5	
None <input type="checkbox"/> Epidural/caudal <input type="checkbox"/>		O ₂ therapy <input type="checkbox"/> 3 External cardiac massage + ventilation <input type="checkbox"/> 6	
Nitrous oxide <input type="checkbox"/> Combined <input type="checkbox"/>		DISCHARGE	
Systemic opioids <input type="checkbox"/> spinal-epidural <input type="checkbox"/>		Mother	
Spinal <input type="checkbox"/> Other <input type="checkbox"/>		Discharged <input type="checkbox"/> 1 Discharged <input type="checkbox"/> 1	
Type of birth		Transferred <input type="checkbox"/> 2 Transferred <input type="checkbox"/> 2	
Normal vaginal <input type="checkbox"/> 1 Vacuum extr. <input type="checkbox"/> 3		Died <input type="checkbox"/> 3 Stillbirth <input type="checkbox"/> 3	
Forceps <input type="checkbox"/> 2 Vaginal breech <input type="checkbox"/> 4		Died <input type="checkbox"/> 4	
Caesarean section <input type="checkbox"/> 5		Transferred and died <input type="checkbox"/> 5	
<i>If caesarean section, main induction:</i>		Mother's date of discharge <input type="text"/>	
Failure to progress		Hospital mother transferred to <input type="text"/>	
- Cx 3cm dilated or less <input type="checkbox"/> 2		Infant feeding on hospital discharge Breast-feeding <input type="checkbox"/>	
- Cx dilated more than 3cm <input type="checkbox"/> 3		Expressed breast milk <input type="checkbox"/>	
Fetal distress <input type="checkbox"/> 4		Infant formula <input type="checkbox"/>	
Elective repeat caesarean section <input type="checkbox"/> 5		Baby's date of discharge <input type="text"/>	
Other clinical indication <input type="checkbox"/> 6		Hospital baby transferred to <input type="text"/>	
Non-clinical indication <input type="checkbox"/> 7		Baby transferred by NETS Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0	
Analgesia for delivery (tick one or more)		Signature of midwife at discharge <input type="text"/>	
None <input type="checkbox"/> Epidural/caudal <input type="checkbox"/>			
Local to perineum <input type="checkbox"/> Combined <input type="checkbox"/>			
Pudendal <input type="checkbox"/> spinal+epidural <input type="checkbox"/>			
Spinal <input type="checkbox"/> General anaesthetic <input type="checkbox"/>			
Other <input type="checkbox"/>			
Perineal status			
Intact <input type="checkbox"/> 1 3rd deg. tear <input type="checkbox"/> 4			
1st deg. tear/graze <input type="checkbox"/> 2 4th deg. tear <input type="checkbox"/> 5			
2nd deg. tear <input type="checkbox"/> 3 Other <input type="checkbox"/> 6			
Episiotomy Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0			
Surgical repair of the vagina or perineum? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0			
Management of the 3rd stage			
Active <input type="checkbox"/> 1 Physiological <input type="checkbox"/> 2			
BABY			
Unit Record No. <input type="text"/>			
Birth date <input type="text"/>			
Sex M <input type="checkbox"/> 1 F <input type="checkbox"/> 2 Indet. <input type="checkbox"/> 3			
Plurality Single <input type="checkbox"/> 1 Multiple <input type="checkbox"/> 2			
If multiple, total number <input type="text"/>			
If multiple birth, specify baby number <input type="text"/>			
Birthweight (grams) <input type="text"/>			
Estimated gestational age <input type="text"/>			
Apgar <input type="text"/>			
1 min <input type="text"/> 5 min <input type="text"/>			
Resuscitation of baby (tick 1 or more)			
None/minimal <input type="checkbox"/> 1 IPPR: bag + mask <input type="checkbox"/> 4			
Suction <input type="checkbox"/> 2 Intubation + IPPR <input type="checkbox"/> 5			
O ₂ therapy <input type="checkbox"/> 3 External cardiac massage + ventilation <input type="checkbox"/> 6			
DISCHARGE			
Mother			
Discharged <input type="checkbox"/> 1 Discharged <input type="checkbox"/> 1			
Transferred <input type="checkbox"/> 2 Transferred <input type="checkbox"/> 2			
Died <input type="checkbox"/> 3 Stillbirth <input type="checkbox"/> 3			
Died <input type="checkbox"/> 4			
Transferred and died <input type="checkbox"/> 5			
Mother's date of discharge <input type="text"/>			
Hospital mother transferred to <input type="text"/>			
Infant feeding on hospital discharge Breast-feeding <input type="checkbox"/>			
Expressed breast milk <input type="checkbox"/>			
Infant formula <input type="checkbox"/>			
Baby's date of discharge <input type="text"/>			
Hospital baby transferred to <input type="text"/>			
Baby transferred by NETS Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0			
Signature of midwife at discharge <input type="text"/>			

Public Health Act, 1991

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Health Department Copy

Please complete and forward to: NSW Midwives Data Collection
Performance Analysis and Reporting Branch, Level 5, NSW Department of Health
Locked Bag 961, North Sydney, NSW 2059