

# NSW Mothers and Babies 2010



Health

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## Data collection

NSW Perinatal Data Collection	Elvis Maio NSW hospitals' midwives and independent midwives NSW hospitals' medical record departments
NSW Register of Congenital Conditions	Susan Travis, Christine Erratt NSW Register of Congenital Conditions Advisory Committee NSW hospitals' midwives, doctors, and cytogenetic laboratories Medical record departments, particularly at The Children's Hospital at Westmead, The Sydney Children's Hospital and The John Hunter Hospital
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## NSW Maternal and Perinatal Committee, 2010

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## NSW Register of Congenital Conditions 2010

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## 2. Executive summary

This is the fourteenth annual report on mothers and babies in NSW. The report draws information from a variety of sources, including the NSW Perinatal Data Collection, the NSW Register of Congenital Conditions, and the NSW Admitted Patient Data Collection; as well as birth registration data from the NSW Registry of Births, Deaths and Marriages. Information on causes of perinatal deaths was obtained through confidential reviews carried out by the NSW Maternal and Perinatal Committee.

### Trends in NSW

The number of births in NSW rose from 92,781 in 2006 to 96,489 in 2010, an overall rise of 4.0%. The increase in births occurred mainly in the metropolitan areas. The largest increase occurred in the Western Sydney Local Health District, where the number of births increased from 12,311 to 13,795 between 2006 and 2010.

The percentage of mothers who were teenagers fell from 3.8% in 2006 to 3.4% in 2010. Over the same period the percentage of mothers aged 35 years and over increased from 21.6% to 24.2% of all mothers giving birth. The mean maternal age rose from 30.5 to 30.8 years; rising marginally from 29.0 to 29.1 years among mothers giving birth for the first time, and from 31.6 to 32.0 years for mothers who had given birth previously.

Between 2006 and 2010, the proportion of mothers starting antenatal care at 20-plus weeks gestation declined from 11.2% to 6.9% and the proportion of mothers starting antenatal care at less than 14 weeks gestation increased from 68.7% to 79.3%.

Between 2006 and 2010, 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 from 172 in 2006 to 264 in 2010, while the reported number of planned homebirths that occurred at home rose from 125 in 2006 to 246 in 2010.

The rate of normal vaginal birth decreased from 60.4% in 2006 to 57.7% in 2010. The caesarean section rate increased from 28.8% to 30.5% and the rate of instrumental birth increased from 10.1% to 11.5%. Operative births were more common among privately than publicly insured mothers: among privately insured mothers the rate of normal vaginal birth fell from 48.4% in 2005 to 46.6% in 2009 and the caesarean section rate increased from 36.7% to 38.8%;

among publicly insured mothers the rate of normal vaginal birth fell from 64.9% to 64.5% and the caesarean section rate rose from 25.4% to 25.6%.

Since 2006, the pattern of birth weight has remained stable, with the rate of low birth weight (less than 2,500 grams) at just over 6% each year. The rate of low birth weight was 6.1% in 2010. The percentage of babies born prematurely (less than 37 weeks gestation) has remained stable at about 7% and was 7.4% in 2010. The perinatal mortality rate varied from 8.2 to 9.0 per 1,000 births over the 5 year period, and was 8.2 per 1,000 in 2010.

### Aboriginal and Torres Strait Islander mothers and babies

Between 2006 and 2010, the number of reported births to Aboriginal or Torres Strait Islander mothers rose from 2,649 to 3,138, representing 2.9% and 3.3% respectively of all babies born in NSW.

Births to teenage mothers followed the same declining trend as for non-Aboriginal mothers. The percentage of Aboriginal or Torres Strait Islander mothers who were teenagers fell from 20.5% in 2006 to 18.6% in 2010. The percentage of mothers giving birth at 35 years of age or more has been stable at about 9%.

Between 2006 and 2010, the proportion of Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 14 weeks gestation rose from 58.6% to 71.3%, and the proportion that commenced antenatal care at less than 20 weeks gestation rose from 74.8% to 84.1%. In 2010, 47.9% of Aboriginal or Torres Strait Islander mothers reported smoking at some time during pregnancy, compared to 53.6% in 2006. This compares with 10.0% of non-Aboriginal or Torres Strait Islander mothers who reported smoking at some time during pregnancy in 2010.

Since 2006, the rate of low birth weight (less than 2,500 grams) in Aboriginal or Torres Strait Islander babies has been over 10% and was 11.2% in 2010. This is about twice the rate for babies born to non-Aboriginal or Torres Strait Islander mothers, which was 5.9% in 2010. Over the same period, over 10% of Aboriginal or Torres Strait Islander babies have been premature (less than 37 weeks gestation). The rate of prematurity was 11.7% in 2010—compared with a rate of 7.2% for babies born to non-Aboriginal or Torres Strait Islander mothers.

Since 2006, the perinatal mortality rate among Aboriginal or Torres Strait Islander babies has varied from 12.1 to 22.6 per 1,000 births. The rate of 13.4 per 1,000 in 2010 is substantially higher than the rate of 8.0 per 1,000 experienced by babies born to non-Aboriginal or Torres Strait Islander mothers.

Aboriginal mothers and babies are under-reported to the NSW Perinatal Data Collection. For NSW overall, the estimated percentage of births to Aboriginal or Torres Strait Islander mothers reported to the PDC ranged from 74.2% to 84.4% between 2007 and 2009. In 2009, reporting varied markedly between Local Health Districts, ranging from 66.3% in the South Western Sydney Local Health District to 96.8% in the Mid North Coast Local Health District, with reporting generally better in rural compared to urban areas.

### Country of birth

Between 2006 and 2010, the percentage of mothers who were born in non-English speaking countries rose from 21.1% to 25.3%. 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 Melanesia, Micronesia and Polynesia.

In 2010, 91.7% of all mothers commenced antenatal care before 20 weeks gestation and 79.3% commenced antenatal care before 14 weeks gestation. There was some variation between country of birth groups, with 81.5% of mothers born in English speaking countries commencing antenatal care before 14 weeks gestation, compared with 64.2% of mothers born in Melanesia, Micronesia, and Polynesia, and 82.1% of mothers born in Southern Asia.

In 2010, 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 seven mothers born in English speaking countries smoked at some time during pregnancy, compared to fewer than one in ten mothers born in other country of birth groups.

The highest rates of low birth weight were in babies of mothers born in Southern Asia (9.0%) and Melanesia, Micronesia and Polynesia (7.5%). Babies of mothers born in Western and Northern Europe were least likely to be low birth weight. The highest rate of prematurity was among babies of mothers born in South East Asia (7.7%). Babies of mothers born in Western and Northern Europe were least likely to be premature. The perinatal mortality rate was highest among babies of mothers born in Melanesia, Micronesia and Polynesia (16.5 per 1,000) and lowest among babies of mothers born in North East Asia (4.6 per 1,000).

### Congenital conditions

About 2% of infants are born with congenital conditions each year in NSW. In 2004–2010, 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 to full term infants, and among male infants compared to female infants. The rate of congenital conditions increases with increasing maternal age, especially after age 35. However, as most babies are born to mothers aged less than 35 years, the majority of babies with congenital conditions were born to younger mothers.

### Perinatal deaths

Confidential reports on 755 perinatal deaths in 2010 were reviewed. Overall, 134 (17.7%) of these deaths were unexplained stillbirths. The most common obstetric antecedent of perinatal death was congenital anomaly (24.2%). The other major obstetric antecedents of perinatal death were spontaneous preterm labour (15.6%) and perinatal infection (11.8%). The most common cause of neonatal death was extreme prematurity (41.3%), followed by congenital abnormalities (21.5%). Post-mortem examinations were carried out in 31.4% of all perinatal deaths.

# 3. Methods

## Data sources

### *The New South Wales Perinatal Data Collection*

The New South Wales Perinatal Data Collection (PDC) 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 grams birth weight.

The PDC relies on the attending midwife or doctor to complete a notification form when a birth occurs. The form, a copy of which is shown at Appendix 4, includes demographic items and items on maternal health, the pregnancy, labour, birth, and perinatal outcomes. Completed forms are sent to the Data Collection and Quality Unit in the Health System Information and Performance Reporting Branch of the NSW Ministry of Health, where they are compiled into the PDC database.

In 2010, 83% of PDC notifications were received electronically from hospital obstetric information systems. These notifications were received by secure upload to the state database or encrypted via email. There are several source systems that generate the PDC data. The largest source is the ObstetriX database, which supplies 51.1% of all PDC records and covers Northern Sydney Local Health District, Central Coast Local Health District, South Eastern Sydney Local Health District, Illawarra Shoalhaven Local Health District, Hunter New England Local Health District, Nepean Blue Mountains Local Health District, Western Sydney Local Health District, some hospitals in Mid North Coast Local Health District, Northern NSW Local Health District, Murrumbidgee Local Health District, Southern NSW Local Health District, Western NSW Local Health District and Far West Local Health District. The following systems also supply records to the PDC: Cerner (Sydney Local Health District and South Western Sydney Local Health District)—19.4%; Meditech, which supplies data for six Ramsay Private Hospitals (North Shore Private Hospital, Westmead Private Hospital, St George Private Hospital, Kareena Private Hospital, Figtree Private Hospital and Tamara Private Hospital), 8.7%; Sydney Adventist Hospital database, 2.2%; and Newcastle Private Hospital database, 2.0%.

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

### *The New South Wales Register of Congenital Conditions*

The NSW Register of Congenital Conditions is a population based surveillance system established to monitor congenital conditions detected during pregnancy or at birth, or diagnosed in infants up to one year of age. The Register was established in 1990 and, under the NSW Public Health Act 2010, doctors, hospitals, and laboratories are required to notify certain congenital conditions detected during pregnancy, at birth, or up to one year of life. The Register is administered by the Centre for Epidemiology and Evidence in the NSW Ministry 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 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.

The activities of the Register include: annual publication of information on congenital conditions in NSW; provision of information to health services to assist in service planning and monitoring of child health, and investigation of specific issues; provision of information in response to specific requests from the public, health professionals, and other government departments; and provision of data to the AIHW National Perinatal Epidemiology and Statistics Unit (NPESU) for monitoring of congenital conditions at a national level.

Sources of notifications to the Register include: the PDC, 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 2 formats: aggregate information similar to that contained in this report, and data concerning individuals with identifying information removed. All requests for data should be submitted in writing to the Director, Centre for Epidemiology and Evidence. 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 PD2012-051 *Disclosure of unit record data for research or management of health services* which is available on the NSW Ministry of Health's website at [www.health.nsw.gov.au](http://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 was linked to PDC data to produce information on type of birth according to 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](http://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 Health System Information and Performance Reporting Branch of the NSW Ministry 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 liveborn babies, and stillbirths of at least 20 weeks gestation or at least 400 grams 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. Complete information on reviews of maternal deaths was not available at the time of publication.

### **Method for estimating level of reporting of Aboriginal mothers and babies**

The Aboriginality of the mother, rather than the baby, is reported to the PDC. Consequently, maternal Aboriginality was used for this analysis. The number of births reported to Torres Strait Islander mothers is quite small in NSW. Aboriginal and Torres Strait Islander mothers were therefore combined for this analysis.

Records of births reported to the PDC were linked to birth registration records of the NSW Registry of Births, Deaths and Marriages (RBDM) for births occurring in the 3-year period 2007–2009. Record linkage was carried out at the Centre for Health Record Linkage ([www.cherel.org.au](http://www.cherel.org.au)). The overall linkage rate was 91.3% of PDC records and 97.7% of birth registration records. Some births occurring in 2010 are registered by the RBDM in subsequent years. Births registered up to 2010 are included in this analysis, resulting in the relatively lower rate of linkage of PDC records compared to birth registration records.

Reporting of Aboriginal and Torres Strait Islander peoples on population health and health-related datasets may be improved using record linkage, a process referred to as "enhanced" reporting. Methods for enhanced reporting have been described in detail elsewhere.<sup>1</sup> In relation to reporting of births, we accepted a mother as Aboriginal or Torres Strait Islander where either the PDC or RBDM birth registration record indicated that the mother was Aboriginal or Torres Strait Islander. Analysis was carried out using SAS version 9.2. Analyses concerning geographic location were based on Local Health District of residence as reported to the PDC.

### **References**

1. Population and Public Health Division. *Improved reporting of Aboriginal and Torres Strait Islander peoples on population datasets in New South Wales using record linkage—a feasibility study*. Sydney: NSW Ministry of Health, 2012.

## Definitions

### *Aboriginal and Torres Strait Islander*

Women who identify themselves as Australian Aboriginal or Torres Strait Islander.

### *Apgar score*

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

### *Augmentation*

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

### *Birth weight*

The newborn infant's first bare weight in grams.

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

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

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

### *Caesarean section*

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.

### *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 who, after being born, breathes or shows any evidence of life such as a heartbeat.

### *Neonatal death*

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

### *Neonatal mortality rate*

The number of neonatal deaths per 1,000 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 1,000 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 in utero at 20 weeks gestation that are subsequently born separately. 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 less than 20 weeks gestation and less than 400 grams birth weight.

### *Stillbirth*

The complete expulsion or extraction from its mother of a product of conception of at least 20 weeks gestation or 400 grams birth weight who did not, at any time after 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 PDC 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 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 three categories: full breastfeeding, which includes babies who were reported to be breastfed or to be receiving expressed breastmilk; any breastfeeding, which includes babies who were reported to be receiving breastmilk 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 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 PDC. The PDC 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 to 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 Local Health Districts.

### *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.

### *Maternity service level*

In NSW, role delineation forms part of service planning to assist in describing the complexity of services required for the needs of the population. Local Health Districts are responsible for determining the appropriate role delineation of services for health care facilities within the network of services in that Local Health District. The process of role delineation is part of the process which responds to the needs of the population and takes into account the clinical networks within the Local Health Districts. Role delineation levels are determined for a range of services provided at a health facility including; emergency, medical, surgical, maternity, integrated community and hospital, community based services, as well as support services; such as pharmacy, diagnostic imaging and pathology. The process determines the support services, staff profile, safety standards and requirements to ensure that clinical services are provided safely and with appropriate support. Accordingly, the criteria for each role level listed below are used in conjunction with requirements for a range of support services.

**Level 1:** Postnatal only. Normal post-partum mothers and babies delivered elsewhere returned for post-natal care provided there are no complications. Mothercraft nurses and Registered Nurses (RN) with post-graduate qualifications and/or experience specific to the needs of the service. Access to midwives with current clinical experience preferable. Nursing and midwifery education programs available, specific to the needs of the service. Has Level 1 Neonatal Service. Quality improvement activities. Interpreters as per Circular 94/10.

**Level 2:** Normal risk delivery only. As Level 1. Plus able to cope with sudden unexpected complications until transfer. Has 24 hour access to Medical Officers on site or available within 10 minutes. Nurse Unit Manger (NUM) is desirable for general ward. Midwives available. Continual education programs for all clinical staff in neonatal and adult resuscitation methods and the management of obstetric emergencies (as per Circular 99/86). Has Level 2 Neonatal Service. Links with units at higher levels of service, for referrals and transfers, consistent protocols and continuing education. Strategies in place to ensure ongoing competency of all providers of maternity care. Has more than 80 deliveries per year, or has Medical Practitioners complying with the RACGP/RACOG "Recommended Guidelines relating to Hospital Access and Delineation of Clinical Privileges in Obstetrics for GPs". (If minimum caseload cannot be achieved, considerations may be made for the degree of geographic isolation). Has Level 2 General Surgery. Formal quality improvement program. Formal protocols and referral links to allied health and psychiatry services. Has established referral links to higher levels of care and expertise, including specialist medical, nursing and midwifery services.

**Level 3:** As Level 2 plus may deliver selected moderate risk pregnancies (>36 week gestation) in consultation. Access to obstetrician/s for consultation. Has Accredited Medical Practitioners to provide simultaneous care of mother and neonate in theatre. Specialist anaesthetist (may be GP anaesthetist credentialed for obstetric anaesthesia) and an additional Accredited Medical Practitioner in newborn paediatrics. Sufficient Accredited Medical Practitioners (may be GP anaesthetist credentialed for obstetric anaesthesia) and General Surgeon (may be accredited Medical Practitioner in obstetrics) credentialed for lower segment caesarean section (LSCS). Has NUM. Midwives on all shifts. Some RNs with experience in neonatal care and/or having or undertaking relevant postbasic studies.

**Level 4:** As Level 3 plus care for mothers and babies (>34 weeks gestation) at moderate risk and elective LSCS. Obstetricians, Paediatricians and Specialist Anaesthetists on call 24 hours. Accredited Medical Practitioners on site 24 hours. Has NUM and experienced RNs. Experienced midwives on all shifts. Established links with CNC and/or CNE in midwifery and neonatal nursing. Has a minimum of Level 3 Neonatal Service. Allied health professionals and liaison psychiatry available.

**Level 5:** As Level 4 plus may deliver selected high risk pregnancies. Has Level 4 Neonatal Service. CNCs and/or CNE in midwifery on site.

**Level 6:** Care of normal, moderate and high risk deliveries. Obstetric Registrar on site 24 hours. Anaesthetic Registrar on site 24 hours and available exclusively for obstetrics for hospitals with more than 3000 births per year. Obstetricians

may have specific subspecialties/skills/training. Access to fetomaternal specialist. May participate on High Risk Pregnancy and Feto-Maternal Advisory Line (PAL) roster. Experienced midwives on all shifts. Capacity to provide high ratio of nurse/patient care for women with acute complications with pregnancy or birth. 24 hour access to ultrasound services and reporting. CTG monitoring available with capacity to carry out fetal scalp pH in labour ward. Operating suite staff on site. Capacity to carry out caesarean section within 30 minutes. Usually a specialist supra regional unit or statewide role. The lead hospital within a defined network, in which the combined total is at least 3000 births per year. Has Level 5 Neonatal Service. 24 hour access to liaison psychiatry and allied health services. Full-time CNC and/or CNE in midwifery.

Note: Minimum levels of support services as well as definitions of risk and staff details are outlined in the *Guide to the Role Delineation of Health Services Third Edition (2002)*.

### **Type of birth**

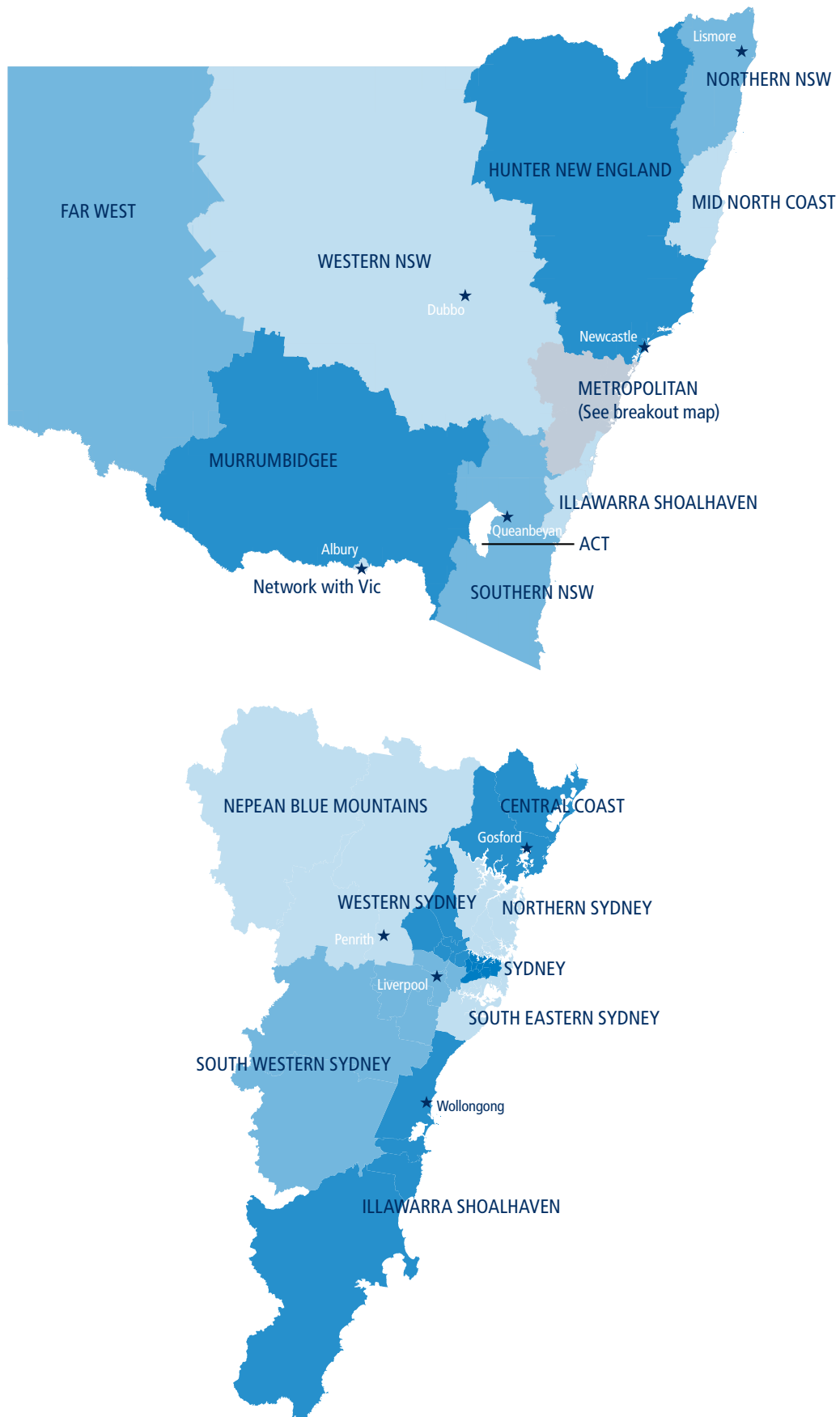
The 'vaginal breech' category covers all forms of vaginal breech birth, including forceps to the after coming head.

### **Perinatal mortality rate**

Perinatal deaths include deaths reported to the PDC only. As the PDC form is completed at discharge or transfer of the baby, deaths occurring after this time may not be reported to the PDC. Birth and perinatal death registration data held by the Australian Bureau of Statistics (ABS) give the most complete ascertainment of perinatal deaths for calculation of rates.



## Map of NSW Local Health Districts



## 4. Trends In New South Wales

### Confinements and births by plurality

The number of births in NSW rose from 92,781 in 2006 to 96,439 in 2009, a rise of 3.9%, and stabilised at 96,489 in 2010. In 2010, 96,489 births to 94,996 mothers were

reported. The percentage of multiple (twin and triplet) pregnancies has remained fairly stable over recent years at about 1.5%.

**Table 1. Plurality, NSW 2006–2010**

Plurality	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>										
Singleton	89890	98.4	93194	98.5	93411	98.5	93677	98.6	93527	98.5
Twins	1386	1.5	1388	1.5	1428	1.5	1339	1.4	1446	1.5
Triplets	37	0.0	20	0.0	24	0.0	24	0.0	22	0.0
Quadruplets	2	0.0	0	0.0	1	0.0	3	0.0	1	0.0
<b>Total</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>
<b>Births</b>										
Singleton	89890	96.9	93194	97.0	93411	97.0	93677	97.1	93527	96.9
Twins	2772	3.0	2776	2.9	2856	3.0	2678	2.8	2892	3.0
Triplets	111	0.1	60	0.1	72	0.1	72	0.1	66	0.1
Quadruplets	8	0.0	0	0.0	4	0.0	12	0.0	4	0.0
<b>TOTAL</b>	<b>92781</b>	<b>100.0</b>	<b>96030</b>	<b>100.0</b>	<b>96343</b>	<b>100.0</b>	<b>96439</b>	<b>100.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

### Local Health District of residence

The numbers of births in Local Health Districts in 2010 were similar to 2009. In 2010 27.7% of mothers giving birth were

resident in South Western Sydney and Western Sydney Local Health Districts, similar to previous years.

**Table 2. Maternal Local Health District of residence, NSW 2006–2010**

Local health district	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	7859	8.6	8194	8.7	8472	8.9	8473	8.9	8531	9.0
South Western Sydney	12712	13.9	13156	13.9	12989	13.7	12743	13.4	12554	13.2
South Eastern Sydney	10422	11.4	10889	11.5	10972	11.6	11278	11.9	11351	11.9
Illawarra Shoalhaven	4373	4.8	4452	4.7	4439	4.7	4420	4.7	4403	4.6
Western Sydney	12311	13.5	13059	13.8	13312	14.0	13573	14.3	13795	14.5
Nepean Blue Mountains	4756	5.2	4867	5.1	4767	5.0	4819	5.1	4743	5.0
Northern Sydney	10254	11.2	10567	11.2	10397	11.0	10372	10.9	10634	11.2
Central Coast	3829	4.2	3905	4.1	3955	4.2	3949	4.2	3777	4.0
Hunter New England	10513	11.5	10830	11.4	10680	11.3	10559	11.1	10821	11.4
Northern NSW	2798	3.1	2992	3.2	2990	3.2	2940	3.1	2848	3.0
Mid North Coast	2178	2.4	2208	2.3	2333	2.5	2252	2.4	2289	2.4
Southern NSW	1435	1.6	1405	1.5	1453	1.5	1421	1.5	1367	1.4
Murrumbidgee	2622	2.9	2685	2.8	2593	2.7	2616	2.8	2514	2.6
Western NSW	3807	4.2	3755	4.0	3788	4.0	3708	3.9	3719	3.9
Far West	239	0.3	270	0.3	272	0.3	243	0.3	254	0.3
Other-not stated	1207	1.3	1368	1.4	1452	1.5	1677	1.8	1396	1.5
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

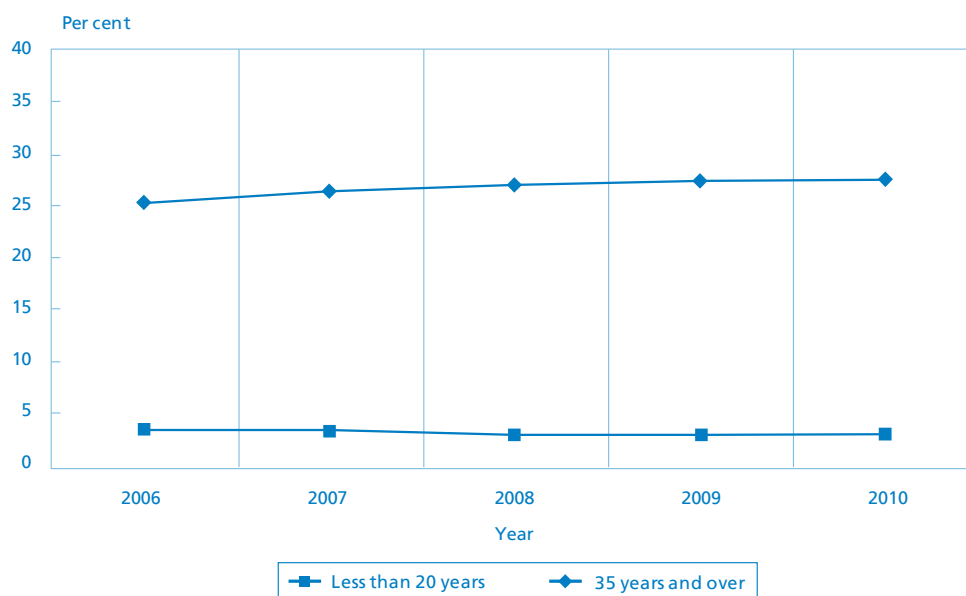
## Maternal age

The percentage of mothers who were teenagers fell slightly from 3.8% in 2006 to 3.4% in 2010. Over the same period the percentage of mothers aged 35 years increased from 21.6% to 24.2% of all mothers giving birth (Figure 1, Table 3).

The mean maternal age rose from 30.5 to 30.8 years over the 5 years 2006 to 2010. The trend towards later childbirth is

evident among both primiparous and multiparous mothers: the proportion of mothers giving birth for the first time who were aged 35 years or more increased from 14.7% to 15.8% over the 5-year period, and the proportion of multiparous mothers who were aged 35 years or more increased from 26.6% to 30.5%. The mean maternal age rose slightly from 29.0 to 29.1 years for primiparous mothers and from 31.6 to 32.0 years for multiparous mothers.

**Figure 1. Mothers aged less than 20 years and 35 years and over, NSW 2006–2010**



Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence. NSW Ministry of Health.

**Table 3. Maternal age, NSW 2006–2010**

Maternal age (years)	2006		2007		2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 15	18	0.0	20	0.0	29	0.0	23	0.0	17	0.0
15–19	3453	3.8	3342	3.5	3331	3.5	3271	3.4	3182	3.3
20–24	12686	13.9	13150	13.9	13118	13.8	12649	13.3	12776	13.4
25–29	24553	26.9	25361	26.8	25405	26.8	25836	27.2	25811	27.2
30–34	30785	33.7	31124	32.9	30649	32.3	30590	32.2	30205	31.8
35–39	16526	18.1	18047	19.1	18582	19.6	18726	19.7	18924	19.9
40–44	3073	3.4	3375	3.6	3581	3.8	3743	3.9	3890	4.1
45+	163	0.2	166	0.2	158	0.2	190	0.2	177	0.2
Not stated	58	0.1	17	0.0	11	0.0	15	0.0	14	0.0
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Maternal country of birth

In 2010, 67.3% of mothers were born in Australia. In 2010, mothers born in the China, India, United Kingdom, New Zealand, and Vietnam together accounted for 12.5% of all

mothers (Table 4). Further information on maternal country of birth is shown in Chapter 8.

**Table 4. Maternal country of birth, NSW 2006–2010#**

Country of birth	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Australia	65226	71.4	66526	70.3	65700	69.3	64884	68.3	63945	67.3
China	1787	2.0	2354	2.5	2321	2.4	2586	2.7	2899	3.1
India	1294	1.4	1580	1.7	1940	2.0	2342	2.5	2753	2.9
United Kingdom	2288	2.5	2494	2.6	2532	2.7	2587	2.7	2491	2.6
New Zealand	2343	2.6	2450	2.6	2388	2.5	2378	2.5	2281	2.4
Vietnam	1720	1.9	1752	1.9	1699	1.8	1661	1.7	1413	1.5
Lebanon	1547	1.7	1505	1.6	1557	1.6	1391	1.5	1409	1.5
Philippines	1220	1.3	1359	1.4	1373	1.4	1417	1.5	1401	1.5
Iraq	743	0.8	821	0.9	925	1.0	869	0.9	936	1.0
Indonesia	578	0.6	653	0.7	743	0.8	731	0.8	783	0.8
South Korea	485	0.5	564	0.6	609	0.6	623	0.7	705	0.7
South Africa	598	0.7	599	0.6	687	0.7	718	0.8	661	0.7
Fiji	697	0.8	749	0.8	681	0.7	657	0.7	655	0.7
Bangladesh	327	0.4	376	0.4	511	0.5	510	0.5	589	0.6
Pakistan	396	0.4	440	0.5	468	0.5	528	0.6	525	0.6
Thailand	309	0.3	382	0.4	421	0.4	472	0.5	482	0.5
United States of America	428	0.5	407	0.4	417	0.4	454	0.5	447	0.5
Ireland	299	0.3	367	0.4	361	0.4	340	0.4	429	0.5
Sri Lanka	324	0.4	339	0.4	362	0.4	384	0.4	428	0.5
Hong Kong	338	0.4	392	0.4	414	0.4	432	0.5	414	0.4
Malaysia	315	0.3	386	0.4	371	0.4	392	0.4	409	0.4
Japan	288	0.3	352	0.4	378	0.4	376	0.4	386	0.4
Afghanistan	335	0.4	334	0.4	336	0.4	322	0.3	320	0.3
Sudan	283	0.3	299	0.3	318	0.3	303	0.3	318	0.3
Nepal	78	0.1	119	0.1	137	0.1	217	0.2	285	0.3
Germany	240	0.3	236	0.2	262	0.3	284	0.3	280	0.3
Canada	262	0.3	250	0.3	267	0.3	274	0.3	268	0.3
Cambodia	276	0.3	300	0.3	295	0.3	251	0.3	251	0.3
Iran	181	0.2	164	0.2	199	0.2	202	0.2	240	0.3
Western Samoa	298	0.3	299	0.3	277	0.3	254	0.3	230	0.2
Poland	163	0.2	152	0.2	175	0.2	200	0.2	207	0.2
Turkey	269	0.3	231	0.2	213	0.2	215	0.2	204	0.2
Egypt	162	0.2	162	0.2	164	0.2	176	0.2	197	0.2
France	138	0.2	149	0.2	161	0.2	167	0.2	185	0.2
Brazil	81	0.1	117	0.1	128	0.1	152	0.2	185	0.2
Tonga	212	0.2	187	0.2	191	0.2	184	0.2	176	0.2
Russian Federation (not USSR)	121	0.1	144	0.2	153	0.2	157	0.2	164	0.2
North Korea	124	0.1	169	0.2	152	0.2	149	0.2	162	0.2
Chile	189	0.2	218	0.2	174	0.2	178	0.2	160	0.2
Singapore	121	0.1	144	0.2	164	0.2	163	0.2	157	0.2
Saudi Arabia	40	0.0	56	0.1	86	0.1	135	0.1	152	0.2
Taiwan	102	0.1	122	0.1	129	0.1	143	0.2	145	0.2
Syria	132	0.1	163	0.2	132	0.1	162	0.2	137	0.1
Bosnia-Herzegovina	96	0.1	114	0.1	97	0.1	109	0.1	124	0.1
Netherlands	99	0.1	132	0.1	116	0.1	115	0.1	119	0.1
Former Yugoslavia	132	0.1	115	0.1	103	0.1	113	0.1	118	0.1
Macedonia	105	0.1	108	0.1	106	0.1	112	0.1	118	0.1
Zimbabwe	88	0.1	101	0.1	125	0.1	110	0.1	112	0.1
Serbia and Montenegro	163	0.2	137	0.1	144	0.2	151	0.2	107	0.1
Argentina	98	0.1	97	0.1	113	0.1	95	0.1	107	0.1
Papua New Guinea	126	0.1	136	0.1	122	0.1	101	0.1	106	0.1
Colombia	74	0.1	63	0.1	83	0.1	104	0.1	106	0.1
Jordan	93	0.1	89	0.1	83	0.1	86	0.1	104	0.1
Sweden	60	0.1	68	0.1	92	0.1	84	0.1	101	0.1
Inadequately described	10	0.0	36	0.0	37	0.0	136	0.1	213	0.2
Other—not stated	2814	3.1	2544	2.7	2672	2.8	2707	2.8	2697	2.8
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Countries of birth for which 100 or more women gave birth in 2010.

## Aboriginal and Torres Strait Islander mothers

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 2,611 in 2006 to 3,090 in 2010, an increase from 2.9% to 3.3% of all mothers

(Table 5). Further information on Aboriginal and Torres Strait Islander mothers and babies is shown in Chapter 7.

**Table 5. Aboriginal and Torres Strait Islander mothers, NSW 2006–2010**

Aboriginal or Torres Strait Islander	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Aboriginal or Torres Strait Islander	2611	2.9	2888	3.1	2976	3.1	2904	3.1	3090	3.3
Non-Aboriginal or Torres Strait Islander	88176	96.6	91519	96.7	91675	96.6	91963	96.8	91662	96.5
Not stated	528	0.6	195	0.2	213	0.2	176	0.2	244	0.3
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Previous pregnancies

In recent years there were no substantial changes in the reported number of previous pregnancies greater than 20 weeks gestation (Table 6). The proportion of mothers giving

birth for the first time has been stable at 41% to 43%, while the proportion of mothers giving birth to a second or subsequent baby has been stable at 57% to 58%.

**Table 6. Previous pregnancies, NSW 2006–2010**

No. previous pregnancies (>20 weeks gestation)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	37855	41.5	39188	41.4	39451	41.6	40349	42.5	40796	42.9
1–4	51443	56.3	53496	56.5	53637	56.5	52975	55.7	52491	55.3
5+	1579	1.7	1483	1.6	1713	1.8	1701	1.8	1671	1.8
Not stated	438	0.5	435	0.5	63	0.1	18	0.0	38	0.0
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Duration of pregnancy at first antenatal visit

Between 2006 and 2010, the proportion of mothers starting antenatal care at 20-plus weeks gestation declined from 11.2% to 6.9% (Table 7). This has been accompanied

by an increase in the proportion of mothers starting antenatal care at less than 14 weeks gestation from 68.7% to 79.3% over the 5-year period.

**Table 7. Duration of pregnancy at first antenatal visit, NSW 2006–2010**

Duration of pregnancy (weeks)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–13	62757	68.7	72269	76.4	77647	81.9	74947	78.9	75317	79.3
14–19	17117	18.7	13512	14.3	10853	11.4	12437	13.1	11840	12.5
20-plus	10218	11.2	6827	7.2	5374	5.7	6744	7.1	6594	6.9
Not stated	1223	1.3	1994	2.1	990	1.0	915	1.0	1245	1.3
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Smoking in pregnancy

The proportion of mothers reporting any smoking during pregnancy declined from 13.5% in 2006 to 11.2% in 2010 (Table 8). Of mothers who smoked during pregnancy in 2010, 17.3% stopped smoking in the first 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 9).

**Table 8. Smoking in pregnancy, NSW 2006–2010**

Smoking in pregnancy	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Did not smoke	77415	84.8	82126	86.8	82734	87.2	83605	88.0	84300	88.7
Smoked	12307	13.5	12068	12.8	12094	12.7	11434	12.0	10685	11.2
Not stated	1593	1.7	408	0.4	36	0.0	4	0.0	11	0.0
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Table 9. Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy, NSW 2006–2010**

Cigarettes smoked in the second half of pregnancy	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	514	4.2	672	5.6	1227	10.1	1842	16.1	1851	17.3
1–10 per day	6243	50.7	6334	52.5	5929	49.0	4995	43.7	4739	44.4
> 10 per day	5016	40.8	4430	36.7	4110	34.0	3580	31.3	2941	27.5
Smoked, amount not stated	455	3.7	631	5.2	825	6.8	1015	8.9	1154	10.8
Not stated	79	0.6	1	0.0	3	0.0	2	0.0	0	0.0
<b>TOTAL</b>	<b>12307</b>	<b>100.0</b>	<b>12068</b>	<b>100.0</b>	<b>12094</b>	<b>100.0</b>	<b>11434</b>	<b>100.0</b>	<b>10685</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Place of birth

In 2010, the majority of mothers planned to give birth in a hospital labour ward, and 3.7% of mothers planned to give birth in a birth centre (Table 10). Seventy-seven per cent of mothers who planned to give birth in a birth centre actually

did so. The total number of reported planned homebirths rose from 172 in 2006 to 264 in 2010, while the reported number of planned homebirths that occurred at home rose from 125 in 2006 to 246 in 2010.

**Table 10. Maternal place of birth, NSW 2006–2010**

Place of birth	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hospital	87567	95.9	90015	95.2	90143	95.0	90525	95.2	90730	95.5
Birth centre	1878	2.1	2714	2.9	2911	3.1	2736	2.9	2703	2.8
Planned birth centre–hospital admission	1240	1.4	1205	1.3	1063	1.1	1004	1.1	830	0.9
Planned homebirth	125	0.1	144	0.2	200	0.2	231	0.2	246	0.3
Planned homebirth–hospital admission	47	0.1	31	0.0	43	0.0	35	0.0	18	0.0
Born before arrival	388	0.4	490	0.5	497	0.5	512	0.5	468	0.5
Not stated	70	0.1	3	0.0	7	0.0	0	0.0	1	0.0
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Hypertension and diabetes

The reported rate of gestational diabetes rose slightly to 5.6% in 2010, while rates of diabetes mellitus have remained stable at 0.6% over the 5-year period (Table 11). 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 7.5% of mothers in 2010, compared to 4.9% in 2006.

**Table 11. Maternal hypertension or diabetes, NSW 2006–2010#**

Condition	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Diabetes mellitus	541	0.6	546	0.6	601	0.6	525	0.6	609	0.6
Gestational diabetes	4375	4.8	4091	4.3	4509	4.8	5157	5.4	5330	5.6
Essential hypertension	804	0.9	721	0.8	833	0.9	756	0.8	796	0.8
Pre-eclampsia	3198	3.5	–	–	–	–	–	–	–	–
Pregnancy induced hypertension#										
–proteinuric	612	0.7	1625	1.7	1766	1.9	1902	2.0	1879	2.0
–non-proteinuric	626	0.7	3904	4.1	4216	4.4	4251	4.5	4478	4.7
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 3,198 of 55,078 mothers; and pregnancy induced hypertension was reported in 1,238 of 36,237 mothers.

## Labour

The rate of spontaneous onset of labour fell from 58.2% in 2006 to 56.2% in 2010 and the rate of induction of labour rose from 24.7% in 2006 to 26.1% in 2010 (Table 12). The most common reported reason for induction of labour in 2010 was prolonged pregnancy (41 or more weeks) (24.0%),

followed by prelabour rupture of membranes (14.4%), hypertensive disease (10.2%), diabetes (6.9%), suspected intrauterine growth retardation (4.5%), fetal distress (1.8%) and fetal death (0.9%).

**Table 12. Onset and augmentation of labour, NSW 2006–2010**

Onset of labour	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	38706	42.4	38291	40.5	39076	41.2	38697	40.7	38280	40.3
Spontaneous augmented with ARM	6318	6.9	7339	7.8	7069	7.5	6840	7.2	6611	7.0
Spontaneous augmented with oxytocics/ prostaglandins#	8146	8.9	8553	9.0	8591	9.1	8382	8.8	8481	8.9
No labour	15516	17.0	15878	16.8	16120	17.0	16649	17.5	16849	17.7
Induced–oxytocics/ prostaglandins	7306	8.0	8607	9.1	8576	9.0	8680	9.1	8763	9.2
Induced–ARM only	1447	1.6	1648	1.7	1680	1.8	1710	1.8	1782	1.9
Induced–ARM+oxytocics/ prostaglandins	13389	14.7	14003	14.8	13577	14.3	13904	14.6	14057	14.8
Induced–other#	417	0.5	263	0.3	164	0.2	181	0.2	166	0.2
Not stated	70	0.1	20	0.0	11	0.0	0	0.0	7	0.0
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 60.4% in 2006 to 57.7% in 2010 (Table 13). The caesarean section rate increased from 28.8% to 30.5%; while the rate of instrumental birth (forceps and vacuum extraction) increased from 10.1% to 11.5%. Operative and instrumental births are more common among privately than publicly insured mothers (Table 14). Among privately

insured mothers the rate of normal vaginal birth fell from 48.4% in 2005 to 46.6% in 2009 and the caesarean section rate increased from 36.7% to 38.8%. Among publicly insured mothers the rate of normal vaginal birth fell from 64.9% to 64.5% and the caesarean section rate rose from 25.4% to 25.6%.

**Table 13. Type of birth, NSW 2006–2010**

Type of birth	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	55187	60.4	56648	59.9	56173	59.2	55359	58.2	54774	57.7
Forceps	2885	3.2	3273	3.5	3486	3.7	3383	3.6	3843	4.0
Vacuum extraction	6332	6.9	6779	7.2	6830	7.2	7232	7.6	7074	7.4
Vaginal breech	366	0.4	381	0.4	387	0.4	355	0.4	332	0.3
Elective caesarean section	15507	17.0	15878	16.8	16120	17.0	16649	17.5	16849	17.7
Emergency caesarean section#	10827	11.9	11572	12.2	11854	12.5	12065	12.7	12099	12.7
Not stated	211	0.2	71	0.1	14	0.0	0	0.0	25	0.0
<b>TOTAL</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

**Table 14. Maternal health insurance by type of birth, NSW 2005–2009#**

Insurance status–type of birth	2005		2006		Year 2007		2008		2009	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Public</b>										
Normal vaginal	32199	64.9	34649	64.7	38288	65.2	39148	65.3	38889	64.5
Forceps	1313	2.6	1494	2.8	1773	3.0	1872	3.1	1882	3.1
Vacuum extraction	3301	6.7	3390	6.3	3648	6.2	3578	6.0	3847	6.4
Vaginal breech	172	0.3	223	0.4	236	0.4	265	0.4	264	0.4
Elective caesarean section	6457	13.0	7278	13.6	7741	13.2	7913	13.2	8115	13.5
Emergency caesarean section##	6153	12.4	6421	12.0	7037	12.0	7191	12.0	7337	12.2
Not stated	0	0.0	57	0.1	32	0.1	10	0.0	0	0.0
<b>TOTAL</b>	<b>49595</b>	<b>100.0</b>	<b>53512</b>	<b>100.0</b>	<b>58755</b>	<b>100.0</b>	<b>59977</b>	<b>100.0</b>	<b>60334</b>	<b>100.0</b>
<b>Private</b>										
Normal vaginal	13614	48.4	13709	47.2	14464	46.9	15057	46.7	15494	46.6
Forceps	1378	4.9	1313	4.5	1450	4.7	1555	4.8	1452	4.4
Vacuum extraction	2764	9.8	2732	9.4	2989	9.7	3137	9.7	3303	9.9
Vaginal breech	60	0.2	65	0.2	89	0.3	99	0.3	84	0.3
Elective caesarean section	6592	23.4	7176	24.7	7562	24.5	7935	24.6	8332	25.1
Emergency caesarean section##	3738	13.3	3901	13.4	4233	13.7	4454	13.8	4566	13.7
Not stated	0	0.0	138	0.5	32	0.1	4	0.0	0	0.0
<b>TOTAL</b>	<b>28146</b>	<b>100.0</b>	<b>29034</b>	<b>100.0</b>	<b>30819</b>	<b>100.0</b>	<b>32241</b>	<b>100.0</b>	<b>33231</b>	<b>100.0</b>
<b>TOTAL###</b>										
Normal vaginal	54568	61.2	55187	60.4	56648	59.9	56173	59.2	55359	58.2
Forceps	2801	3.1	2885	3.2	3273	3.5	3486	3.7	3383	3.6
Vacuum extraction	6372	7.1	6332	6.9	6779	7.2	6830	7.2	7232	7.6
Vaginal breech	322	0.4	366	0.4	381	0.4	387	0.4	355	0.4
Elective caesarean section	14467	16.2	15507	17.0	15878	16.8	16120	17.0	16649	17.5
Emergency caesarean section##	10610	11.9	10827	11.9	11572	12.2	11854	12.5	12065	12.7
Not stated	0	0.0	211	0.2	71	0.1	14	0.0	0	0.0
<b>TOTAL</b>	<b>89140</b>	<b>100.0</b>	<b>91315</b>	<b>100.0</b>	<b>94602</b>	<b>100.0</b>	<b>94864</b>	<b>100.0</b>	<b>95043</b>	<b>100.0</b>

Source: Linked data of the NSW Perinatal Data Collection and NSW Admitted Patient Data Collection. Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Figures for 2005 to 2008 differ to 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 2006, with slightly more male babies born than females in each year. In 2010, 49,361 (51.2%) babies were male, 47,094 (48.8%) were female, and 7 were of indeterminate sex. This compares with babies born in 2006, when 47,985 (51.7%) babies were male, 44,702 (48.2%) were female, and 11 were of indeterminate sex.

## Gestational age

In 2010, 7.4% of babies were born prematurely (less than 37 weeks gestation), the same percentage as in 2006 (Table 15). Over the 5 year period, 91% to 92% of babies were born at term (37–41 weeks gestation). The percentage of postmature babies (42-plus weeks gestation) fell from 1.6% in 2006 to 0.8% in 2010.

**Table 15. Gestational age, NSW 2006–2010**

Gestational age (weeks)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
< 28	674	0.7	707	0.7	732	0.8	705	0.7	665	0.7
28–31	675	0.7	660	0.7	683	0.7	660	0.7	676	0.7
32–36	5490	5.9	5703	5.9	5794	6.0	5697	5.9	5762	6.0
37–41	84424	91.0	88011	91.6	88353	91.7	88596	91.9	88649	91.9
42 +	1499	1.6	907	0.9	764	0.8	773	0.8	732	0.8
Not stated	19	0.0	42	0.0	17	0.0	8	0.0	5	0.0
<b>TOTAL</b>	<b>92781</b>	<b>100.0</b>	<b>96030</b>	<b>100.0</b>	<b>96343</b>	<b>100.0</b>	<b>96439</b>	<b>100.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Birth weight

Since 2006, the pattern of birth weights has remained stable, with the rate of low birth weight (less than 2,500 grams) at

6.1% to 6.4% (Table 16). The rate of low birth weight was 6.1% in 2010.

**Table 16. Birth weight, NSW 2006–2010**

Birth weight (grams)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 500	239	0.3	255	0.3	266	0.3	259	0.3	210	0.2
500–999	411	0.4	422	0.4	422	0.4	402	0.4	408	0.4
1000–1499	562	0.6	512	0.5	525	0.5	501	0.5	541	0.6
1500–1999	1167	1.3	1119	1.2	1230	1.3	1081	1.1	1120	1.2
2000–2499	3554	3.8	3541	3.7	3551	3.7	3541	3.7	3621	3.8
2500–2999	13906	15.0	14265	14.9	14157	14.7	14316	14.8	14648	15.2
3000–3499	33074	35.6	34790	36.2	34612	35.9	34902	36.2	35008	36.3
3500–3999	28705	30.9	29648	30.9	29891	31.0	29884	31.0	29575	30.7
4000–4499	9389	10.1	9717	10.1	9889	10.3	9787	10.1	9654	10.0
4500+	1649	1.8	1653	1.7	1716	1.8	1692	1.8	1645	1.7
Not stated	125	0.1	108	0.1	84	0.1	74	0.1	59	0.1
<b>TOTAL</b>	<b>92781</b>	<b>100.0</b>	<b>96030</b>	<b>100.0</b>	<b>96343</b>	<b>100.0</b>	<b>96439</b>	<b>100.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Apgar score

In 2010, 2.1% of babies were born with an Apgar score of less than 7 at 5 minutes and 1.1% were born with an Apgar score

of less than 4 (Table 17). These rates are similar to those of previous years.

**Table 17. Apgar score at 5 minutes, NSW 2006–2010#**

Apgar score	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
0–4	1007	1.1	1093	1.1	1093	1.1	1088	1.1	1051	1.1
5–6	890	1.0	910	0.9	900	0.9	901	0.9	959	1.0
7+	90645	97.7	93685	97.6	94077	97.6	94175	97.7	94201	97.6
Not stated	239	0.3	342	0.4	273	0.3	275	0.3	278	0.3
<b>TOTAL</b>	<b>92781</b>	<b>100.0</b>	<b>96030</b>	<b>100.0</b>	<b>96343</b>	<b>100.0</b>	<b>96439</b>	<b>100.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Includes stillbirths and live births.

## Infant feeding

The percentage of babies fully breastfed at the time of discharge from hospital rose from 76.9% to 80.0% between 2006 and 2010, the percentage of babies that received any

breastfeeding rose from 3.4% to 7.5%, and the percentage of babies receiving infant formula only fell from 12.3% to 11.6% (Table 18).

**Table 18. Live births by type of infant feeding, NSW 2006–2010#**

Apgar score	2006#		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Full breastfeeding	28068	76.9	75092	78.9	76398	79.8	77155	80.5	76757	80.0
Any breastfeeding	1229	3.4	6113	6.4	6068	6.3	6423	6.7	7184	7.5
Infant formula only	4495	12.3	12300	12.9	11833	12.4	11559	12.1	11159	11.6
Not stated	2695	7.4	1715	1.8	1404	1.5	700	0.7	821	0.9
<b>TOTAL</b>	<b>36487</b>	<b>100.0</b>	<b>95220</b>	<b>100.0</b>	<b>95703</b>	<b>100.0</b>	<b>95837</b>	<b>100.0</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Reporting of infant feeding commenced in 2006 and was reported for 36,487 live births.

## Perinatal outcome

In the period 2006–2010 the perinatal mortality rate varied from 8.2 to 9.0 per 1,000 (Table 19). In 2010, 69.9% of all reported perinatal deaths were stillbirths and 30.1% were neonatal deaths. In 2010, of the 794 perinatal deaths in NSW,

767 (96.6%) were reported among planned hospital births, 16 (2.0%) among planned birth centre births, 10 were among babies born before arrival at hospital and 1 death was reported in a planned home birth.

**Table 19. Perinatal outcomes, NSW 2006–2010#**

Year	Liveborn surviving		Stillbirth		Neonatal death		Death—age not stated		Not stated		Total births		Perinatal death rate/1,000 births##
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2006	91840	99.0	592	0.6	229	0.2	6	0.0	114	0.1	92781	100.0	8.8
2007	94973	98.9	629	0.7	239	0.2	8	0.0	181	0.2	96030	100.0	9.0
2008	95440	99.1	585	0.6	256	0.3	7	0.0	55	0.1	96343	100.0	8.7
2009	95595	99.1	598	0.6	240	0.2	2	0.0	4	0.0	96439	100.0	8.7
2010	95675	99.2	555	0.6	239	0.2	7	0.0	13	0.0	96489	100.0	8.2

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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.

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

## 5. Local Health Districts

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 2010 were resident in the Western Sydney Local Health District ( $n = 13,795$ , 14.5%), followed by the South Western Sydney Local Health District ( $n = 12,554$ , 13.2%) and the South Eastern Sydney Local Health District ( $n = 11,351$ , 11.9%) (Table 20).

### Maternal age

The proportion of women giving birth at less than 20 years of age varied from 0.5% in the Northern Sydney Local Health District to 13.4% in the Far West Local Health District, while the proportion of mothers giving birth at 35 years of age or more ranged from 13.8% in the Greater Far West Local Health District to 39.4% in the Northern Sydney Local Health District (Table 20).

### Maternal country of birth

Seventy-five per cent of women who gave birth in NSW in 2010 were born in English speaking countries, 15.6% were born in Asian countries, and 5.0% were born in the Middle East or Africa (Table 21). The highest proportions of mothers born in non-English speaking countries were resident in the Western Sydney, South Western Sydney and Sydney Local Health Districts.

### Aboriginal and Torres Strait Islander mothers

In 2010, 3.3% of mothers were reported to be Aboriginal or Torres Strait Islander (Table 22). The proportion of Aboriginal or Torres Strait Islander mothers varied from 0.3% in the Northern Sydney Local Health District to 21.3% in the Far West Local Health District.

**Table 20. Maternal age by Local Health District of residence, NSW 2010**

Local Health District	Maternal age (years)														Not stated	TOTAL		
	12–19		20–24		25–29		30–34		35–39		40–44		45 +					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%				
Sydney	83	1.0	598	7.0	1865	21.9	3100	36.3	2346	27.5	511	6.0	26	0.3	2	0.0	8531	100.0
South Western Sydney	416	3.3	2111	16.8	4019	32.0	3655	29.1	1951	15.5	381	3.0	19	0.2	2	0.0	12554	100.0
South Eastern Sydney	116	1.0	685	6.0	2463	21.7	4290	37.8	3043	26.8	713	6.3	41	0.4	0	0.0	11351	100.0
Illawarra Shoalhaven	195	4.4	726	16.5	1270	28.8	1317	29.9	751	17.1	137	3.1	7	0.2	0	0.0	4403	100.0
Western Sydney	372	2.7	1833	13.3	4349	31.5	4488	32.5	2321	16.8	410	3.0	22	0.2	0	0.0	13795	100.0
Nepean Blue Mountains	197	4.2	776	16.4	1537	32.4	1342	28.3	742	15.6	148	3.1	1	0.0	0	0.0	4743	100.0
Northern Sydney	58	0.5	329	3.1	1811	17.0	4247	39.9	3402	32.0	754	7.1	29	0.3	4	0.0	10634	100.0
Central Coast	181	4.8	623	16.5	1091	28.9	1058	28.0	682	18.1	135	3.6	7	0.2	0	0.0	3777	100.0
Hunter New England	668	6.2	2091	19.3	3204	29.6	2941	27.2	1617	14.9	291	2.7	9	0.1	0	0.0	10821	100.0
Northern NSW	160	5.6	569	20.0	805	28.3	736	25.8	482	16.9	91	3.2	3	0.1	2	0.1	2848	100.0
Mid North Coast	145	6.3	503	22.0	647	28.3	581	25.4	337	14.7	72	3.1	4	0.2	0	0.0	2289	100.0
Southern NSW	94	6.9	273	20.0	377	27.6	376	27.5	207	15.1	40	2.9	0	0.0	0	0.0	1367	100.0
Murrumbidgee	153	6.1	494	19.6	778	30.9	670	26.7	347	13.8	64	2.5	6	0.2	2	0.1	2514	100.0
Western NSW	284	7.6	842	22.6	1094	29.4	937	25.2	462	12.4	96	2.6	4	0.1	0	0.0	3719	100.0
Far West	34	13.4	69	27.2	59	23.2	57	22.4	28	11.0	7	2.8	0	0.0	0	0.0	254	100.0
Other—not stated	43	3.1	254	18.2	442	31.7	410	29.4	206	14.8	40	2.9	0	0.0	1	0.1	1396	100.0
<b>TOTAL</b>	<b>3199</b>	<b>3.4</b>	<b>12776</b>	<b>13.4</b>	<b>25811</b>	<b>27.2</b>	<b>30205</b>	<b>31.8</b>	<b>18924</b>	<b>19.9</b>	<b>3890</b>	<b>4.1</b>	<b>178</b>	<b>0.2</b>	<b>13</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Table 21. Maternal country of birth by Local Health District of residence, NSW 2010#**

Local Health District	Country of birth group																				TOTAL	
	English speaking		Central & South America		Melanesia, Micronesia & Polynesia		Southern Europe		Western & Northern Europe		Eastern Europe, Russia, Central Asian & Baltic States		Middle East & Africa		South East Asia		North East Asia		Southern Asia			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		No.
Sydney	5133	60.5	124	1.5	110	1.3	94	1.1	98	1.2	116	1.4	526	6.2	693	8.2	932	11.0	657	7.7	8483	100.0
South Western Sydney	7557	60.4	158	1.3	418	3.3	248	2.0	46	0.4	81	0.6	1661	13.3	1537	12.3	288	2.3	508	4.1	12502	100.0
South Eastern Sydney	7728	69.2	191	1.7	115	1.0	146	1.3	221	2.0	229	2.1	437	3.9	720	6.5	936	8.4	439	3.9	11162	100.0
Illawarra Shoalhaven	4000	91.0	21	0.5	15	0.3	64	1.5	29	0.7	14	0.3	104	2.4	76	1.7	40	0.9	33	0.8	4396	100.0
Western Sydney	7229	52.4	96	0.7	406	2.9	100	0.7	52	0.4	86	0.6	1373	10.0	951	6.9	1103	8.0	2388	17.3	13784	100.0
Nepean Blue Mountains	4236	89.5	13	0.3	47	1.0	21	0.4	30	0.6	29	0.6	107	2.3	106	2.2	45	1.0	101	2.1	4735	100.0
Northern Sydney	7537	71.1	165	1.6	76	0.7	76	0.7	229	2.2	174	1.6	219	2.1	563	5.3	1139	10.7	427	4.0	10605	100.0
Central Coast	3549	94.2	20	0.5	17	0.5	6	0.2	17	0.5	17	0.5	23	0.6	59	1.6	31	0.8	29	0.8	3768	100.0
Hunter New England	10314	95.4	21	0.2	27	0.2	20	0.2	52	0.5	11	0.1	104	1.0	126	1.2	69	0.6	72	0.7	10816	100.0
Northern NSW	2680	94.3	13	0.5	7	0.2	4	0.1	38	1.3	6	0.2	14	0.5	38	1.3	20	0.7	21	0.7	2841	100.0
Mid North Coast	2155	94.4	5	0.2	7	0.3	4	0.2	15	0.7	5	0.2	18	0.8	34	1.5	16	0.7	23	1.0	2282	100.0
Southern NSW	1297	94.9	1	0.1	6	0.4	12	0.9	6	0.4	2	0.1	4	0.3	20	1.5	10	0.7	8	0.6	1366	100.0
Murrumbidgee	2343	93.4	4	0.2	26	1.0	6	0.2	10	0.4	3	0.1	35	1.4	28	1.1	13	0.5	41	1.6	2509	100.0
Western NSW	3600	97.0	6	0.2	8	0.2	1	0.0	7	0.2	4	0.1	23	0.6	28	0.8	13	0.4	20	0.5	3710	100.0
Far West	249	98.4	0	0.0	1	0.4	0	0.0	0	0.0	1	0.4	0	0.0	2	0.8	0	0.0	0	0.0	253	100.0
Other-not stated	921	66.1	28	2.0	27	1.9	11	0.8	30	2.2	11	0.8	38	2.7	94	6.7	88	6.3	145	10.4	1393	100.0
<b>TOTAL</b>	<b>70528</b>	<b>74.5</b>	<b>866</b>	<b>0.9</b>	<b>1313</b>	<b>1.4</b>	<b>813</b>	<b>0.9</b>	<b>880</b>	<b>0.9</b>	<b>789</b>	<b>0.8</b>	<b>4686</b>	<b>5.0</b>	<b>5075</b>	<b>5.4</b>	<b>4743</b>	<b>5.0</b>	<b>4912</b>	<b>5.2</b>	<b>94605</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Excludes 391 mothers for which country of birth was not stated. Maternal countries of birth and country of birth groups are shown in Appendix 3.

**Table 22. Aboriginal and Torres Strait Islander mothers by Local Health District of residence, NSW 2010**

Local Health District	Aboriginal and Torres Strait Islander						TOTAL	
	Aboriginal or Torres Strait Islander		Non-Aboriginal or Torres Strait Islander		Not stated		No.	%
	No.	%	No.	%	No.	%		
Sydney	87	1.0	8422	98.7	22	0.3	8531	100.0
South Western Sydney	176	1.4	12333	98.2	45	0.4	12554	100.0
South Eastern Sydney	69	0.6	11237	99.0	45	0.4	11351	100.0
Illawarra Shoalhaven	188	4.3	4213	95.7	2	0.0	4403	100.0
Western Sydney	209	1.5	13578	98.4	8	0.1	13795	100.0
Nepean Blue Mountains	126	2.7	4610	97.2	7	0.1	4743	100.0
Northern Sydney	36	0.3	10561	99.3	37	0.3	10634	100.0
Central Coast	125	3.3	3629	96.1	23	0.6	3777	100.0
Hunter New England	803	7.4	9998	92.4	20	0.2	10821	100.0
Northern NSW	216	7.6	2626	92.2	6	0.2	2848	100.0
Mid North Coast	223	9.7	2062	90.1	4	0.2	2289	100.0
Southern NSW	86	6.3	1280	93.6	1	0.1	1367	100.0
Murrumbidgee	155	6.2	2344	93.2	15	0.6	2514	100.0
Western NSW	514	13.8	3198	86.0	7	0.2	3719	100.0
Far West	54	21.3	200	78.7	0	0.0	254	100.0
Other-not stated	23	1.6	1371	98.2	2	0.1	1396	100.0
<b>TOTAL</b>	<b>3090</b>	<b>3.3</b>	<b>91662</b>	<b>96.5</b>	<b>244</b>	<b>0.3</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Duration of pregnancy at first antenatal visit

In 2010, 91.7% of mothers commenced antenatal care prior to 20 weeks gestation and 79.3% commenced antenatal care prior to 14 weeks gestation. The percentage of mothers commencing antenatal care prior to 20 weeks gestation varied

from 79.1% in the South Western Sydney Local Health District to 96.9% in the Nepean Blue Mountains Local Health District (Table 23).

**Table 23. Duration of pregnancy at first antenatal visit by Local Health District of residence, NSW 2010**

Local Health District	Duration of pregnancy at first antenatal visit (weeks)									
	0–13		14–19		20–plus		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	5908	69.3	1789	21.0	691	8.1	143	1.7	8531	100.0
South Western Sydney	6770	53.9	3160	25.2	2271	18.1	353	2.8	12554	100.0
South Eastern Sydney	8316	73.3	2141	18.9	807	7.1	87	0.8	11351	100.0
Illawarra Shoalhaven	3638	82.6	532	12.1	218	5.0	15	0.3	4403	100.0
Western Sydney	12718	92.2	611	4.4	392	2.8	74	0.5	13795	100.0
Nepean Blue Mountains	4252	89.6	346	7.3	127	2.7	18	0.4	4743	100.0
Northern Sydney	9206	86.6	830	7.8	267	2.5	331	3.1	10634	100.0
Central Coast	3348	88.6	239	6.3	181	4.8	9	0.2	3777	100.0
Hunter New England	9055	83.7	915	8.5	774	7.2	77	0.7	10821	100.0
Northern NSW	2462	86.4	240	8.4	125	4.4	21	0.7	2848	100.0
Mid North Coast	1937	84.6	223	9.7	110	4.8	19	0.8	2289	100.0
Southern NSW	1122	82.1	138	10.1	91	6.7	16	1.2	1367	100.0
Murrumbidgee	2193	87.2	188	7.5	115	4.6	18	0.7	2514	100.0
Western NSW	3130	84.2	311	8.4	246	6.6	32	0.9	3719	100.0
Far West	205	80.7	25	9.8	21	8.3	3	1.2	254	100.0
Other–not stated	1057	75.7	152	10.9	158	11.3	29	2.1	1396	100.0
<b>TOTAL</b>	<b>75317</b>	<b>79.3</b>	<b>11840</b>	<b>12.5</b>	<b>6594</b>	<b>6.9</b>	<b>1245</b>	<b>1.3</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Smoking in pregnancy

In 2010, 9.3% of mothers reported smoking in the second half of pregnancy (Table 24). The lowest rate was reported among mothers resident in the Northern Sydney Local

Health District (1.2%) and the highest rate was reported among residents of the Far West Local Health District (26.0%).

**Table 24. Cigarettes smoked in the second half of pregnancy by Local Health District of residence, NSW 2010**

Local Health District	Cigarettes smoked in the second half of pregnancy											
	None		1–10 per day		More than ten per day		Smoked–amount not stated		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	8297	97.3	104	1.2	54	0.6	74	0.9	2	0.0	8531	100.0
South Western Sydney	11413	90.9	354	2.8	271	2.2	516	4.1	0	0.0	12554	100.0
South Eastern Sydney	11067	97.5	176	1.6	80	0.7	24	0.2	4	0.0	11351	100.0
Illawarra Shoalhaven	3875	88.0	290	6.6	191	4.3	47	1.1	0	0.0	4403	100.0
Western Sydney	12871	93.3	567	4.1	282	2.0	75	0.5	0	0.0	13795	100.0
Nepean Blue Mountains	4109	86.6	387	8.2	182	3.8	65	1.4	0	0.0	4743	100.0
Northern Sydney	10506	98.8	79	0.7	31	0.3	18	0.2	0	0.0	10634	100.0
Central Coast	3209	85.0	328	8.7	185	4.9	55	1.5	0	0.0	3777	100.0
Hunter New England	9026	83.4	1001	9.3	670	6.2	124	1.1	0	0.0	10821	100.0
Northern NSW	2372	83.3	300	10.5	155	5.4	19	0.7	2	0.1	2848	100.0
Mid North Coast	1858	81.2	236	10.3	154	6.7	41	1.8	0	0.0	2289	100.0
Southern NSW	1096	80.2	152	11.1	115	8.4	3	0.2	1	0.1	1367	100.0
Murrumbidgee	2074	82.5	223	8.9	196	7.8	20	0.8	1	0.0	2514	100.0
Western NSW	2924	78.6	426	11.5	315	8.5	53	1.4	1	0.0	3719	100.0
Far West	188	74.0	39	15.4	19	7.5	8	3.1	0	0.0	254	100.0
Other–not stated	1266	90.7	77	5.5	41	2.9	12	0.9	0	0.0	1396	100.0
<b>TOTAL</b>	<b>86151</b>	<b>90.7</b>	<b>4739</b>	<b>5.0</b>	<b>2941</b>	<b>3.1</b>	<b>1154</b>	<b>1.2</b>	<b>11</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Place of birth

Ninety-six per cent of mothers chose to give birth in a hospital birthing suite in 2010, compared to 3.7% who planned a birth centre birth and 0.3% who planned a home birth (Table 25). Planned birth centre births were most commonly reported in the Hunter New England and Northern NSW Local Health Districts.

## Labour

In 2010, the onset of labour was spontaneous in 56.2% of confinements (Table 26). Labour was induced in 26.1% of confinements and no labour (elective caesarean section) was reported in 17.7%. The rate of spontaneous onset of labour was highest among residents of the Southern NSW Local Health District (68.4%). The highest rate of induction of labour was among residents of the Illawarra Shoalhaven Local Health District (33.2%).

**Table 25. Place of birth by Local Health District of residence, NSW 2010**

Local Health District	Place of birth															
	Hospital		Birth centre		Planned birth centre–hospital admission		Planned homebirth		Planned homebirth–hospital admission		Born before arrival		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	7994	93.7	457	5.4	16	0.2	19	0.2	1	0.0	44	0.5	0	0.0	8531	100.0
South Western Sydney	12346	98.3	110	0.9	12	0.1	16	0.1	0	0.0	70	0.6	0	0.0	12554	100.0
South Eastern Sydney	10758	94.8	421	3.7	107	0.9	18	0.2	4	0.0	42	0.4	1	0.0	11351	100.0
Illawarra Shoalhaven	4319	98.1	48	1.1	5	0.1	22	0.5	1	0.0	8	0.2	0	0.0	4403	100.0
Western Sydney	13216	95.8	254	1.8	249	1.8	6	0.0	0	0.0	70	0.5	0	0.0	13795	100.0
Nepean Blue Mountains	4611	97.2	74	1.6	24	0.5	13	0.3	0	0.0	21	0.4	0	0.0	4743	100.0
Northern Sydney	10425	98.0	163	1.5	10	0.1	19	0.2	1	0.0	16	0.2	0	0.0	10634	100.0
Central Coast	3650	96.6	74	2.0	10	0.3	10	0.3	1	0.0	32	0.8	0	0.0	3777	100.0
Hunter New England	9428	87.1	952	8.8	309	2.9	57	0.5	4	0.0	71	0.7	0	0.0	10821	100.0
Northern NSW	2746	96.4	33	1.2	16	0.6	35	1.2	2	0.1	16	0.6	0	0.0	2848	100.0
Mid North Coast	2240	97.9	3	0.1	18	0.8	13	0.6	3	0.1	12	0.5	0	0.0	2289	100.0
Southern NSW	1336	97.7	2	0.1	10	0.7	7	0.5	0	0.0	12	0.9	0	0.0	1367	100.0
Murrumbidgee	2463	98.0	11	0.4	16	0.6	5	0.2	0	0.0	19	0.8	0	0.0	2514	100.0
Western NSW	3591	96.6	78	2.1	16	0.4	4	0.1	1	0.0	29	0.8	0	0.0	3719	100.0
Far West	249	98.0	3	1.2	2	0.8	0	0.0	0	0.0	0	0.0	0	0.0	254	100.0
Other–not stated	1358	97.3	20	1.4	10	0.7	2	0.1	0	0.0	6	0.4	0	0.0	1396	100.0
<b>TOTAL</b>	<b>90730</b>	<b>95.5</b>	<b>2703</b>	<b>2.8</b>	<b>830</b>	<b>0.9</b>	<b>246</b>	<b>0.3</b>	<b>18</b>	<b>0.0</b>	<b>468</b>	<b>0.5</b>	<b>1</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Table 26. Onset and augmentation of labour by Local Health District of residence, NSW 2010**

Local Health District	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	3258	38.2	410	4.8	1313	15.4	1576	18.5	711	8.3	163	1.9	1088	12.8	11	0.1	1	0.0	8531	100.0
South Western Sydney	5233	41.7	1134	9.0	1231	9.8	1986	15.8	1167	9.3	139	1.1	1636	13.0	28	0.2	0	0.0	12554	100.0
South Eastern Sydney	4028	35.5	918	8.1	1120	9.9	2380	21.0	1036	9.1	204	1.8	1652	14.6	11	0.1	2	0.0	11351	100.0
Illawarra Shoalhaven	1510	34.3	348	7.9	304	6.9	778	17.7	428	9.7	133	3.0	897	20.4	4	0.1	1	0.0	4403	100.0
Western Sydney	5247	38.0	962	7.0	1233	8.9	2241	16.2	1278	9.3	178	1.3	2645	19.2	11	0.1	0	0.0	13795	100.0
Nepean Blue Mountains	1915	40.4	347	7.3	267	5.6	889	18.7	457	9.6	95	2.0	768	16.2	5	0.1	0	0.0	4743	100.0
Northern Sydney	3926	36.9	721	6.8	916	8.6	2442	23.0	866	8.1	279	2.6	1477	13.9	7	0.1	0	0.0	10634	100.0
Central Coast	1411	37.4	242	6.4	342	9.1	760	20.1	363	9.6	57	1.5	593	15.7	8	0.2	1	0.0	3777	100.0
Hunter New England	4837	44.7	540	5.0	752	6.9	1643	15.2	1053	9.7	205	1.9	1738	16.1	52	0.5	1	0.0	10821	100.0
Northern NSW	1551	54.5	151	5.3	196	6.9	371	13.0	252	8.8	58	2.0	259	9.1	10	0.4	0	0.0	2848	100.0
Mid North Coast	1111	48.5	185	8.1	162	7.1	331	14.5	168	7.3	53	2.3	276	12.1	3	0.1	0	0.0	2289	100.0
Southern NSW	678	49.6	134	9.8	123	9.0	195	14.3	133	9.7	19	1.4	81	5.9	4	0.3	0	0.0	1367	100.0
Murrumbidgee	1151	45.8	177	7.0	122	4.9	457	18.2	324	12.9	81	3.2	194	7.7	7	0.3	1	0.0	2514	100.0
Western NSW	1671	44.9	226	6.1	208	5.6	599	16.1	356	9.6	94	2.5	563	15.1	2	0.1	0	0.0	3719	100.0
Far West	128	50.4	13	5.1	14	5.5	39	15.4	31	12.2	6	2.4	23	9.1	0	0.0	0	0.0	254	100.0
Other–not stated	625	44.8	103	7.4	178	12.8	162	11.6	140	10.0	18	1.3	167	12.0	3	0.2	0	0.0	1396	100.0
<b>TOTAL</b>	<b>38280</b>	<b>40.3</b>	<b>6611</b>	<b>7.0</b>	<b>8481</b>	<b>8.9</b>	<b>16849</b>	<b>17.7</b>	<b>8763</b>	<b>9.2</b>	<b>1782</b>	<b>1.9</b>	<b>14057</b>	<b>14.8</b>	<b>166</b>	<b>0.2</b>	<b>7</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

\*ARM: artificial rupture of membranes.

# May include artificial rupture of membranes.

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

## Birth

Fifty-eight per cent of births were normal vaginal births in 2010, 11.5% were instrumental and 30.5% were by caesarean section (Table 27). The highest rate of normal vaginal birth was 68.4% among residents of the Northern NSW Local Health District, while the highest rate of instrumental birth was 14.6% among residents of the South Eastern Sydney Local Health District. The caesarean section rate varied from 24.5% among mothers resident in the Southern NSW Local Health District to 37.7% in the Northern Sydney Local Health District.

## Birth weight

In 2010, 6.1% of births were low birth weight (less than 2,500 grams). These comprised 0.6% of birth weight less than 1,000 grams, 0.6% in the 1,000 to 1,499 gram range and 4.9% in the 1,500 to 2,499 gram range (Table 28).

Rates of low birth weight ranged from 4.1% in the Southern NSW Local Health District to 8.5% in the Mid North Coast Local Health District.

**Table 27. Type of birth by Local Health District of residence, NSW 2010**

Local Health District	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.	%	No.	%
Sydney	4455	52.2	520	6.1	720	8.4	30	0.4	1576	18.5	1227	14.4	3	0.0	8531	100.0
South Western Sydney	8210	65.4	271	2.2	889	7.1	56	0.4	1986	15.8	1141	9.1	1	0.0	12554	100.0
South Eastern Sydney	5755	50.7	607	5.3	1055	9.3	28	0.2	2380	21.0	1523	13.4	3	0.0	11351	100.0
Illawarra Shoalhaven	2642	60.0	104	2.4	334	7.6	9	0.2	778	17.7	533	12.1	3	0.1	4403	100.0
Western Sydney	7903	57.3	778	5.6	1030	7.5	45	0.3	2241	16.2	1797	13.0	1	0.0	13795	100.0
Nepean Blue Mountains	2731	57.6	122	2.6	341	7.2	14	0.3	889	18.7	646	13.6	0	0.0	4743	100.0
Northern Sydney	5207	49.0	511	4.8	888	8.4	20	0.2	2442	23.0	1564	14.7	2	0.0	10634	100.0
Central Coast	1977	52.3	157	4.2	291	7.7	12	0.3	760	20.1	578	15.3	2	0.1	3777	100.0
Hunter New England	6664	61.6	333	3.1	755	7.0	60	0.6	1643	15.2	1366	12.6	0	0.0	10821	100.0
Northern NSW	1949	68.4	92	3.2	98	3.4	16	0.6	371	13.0	317	11.1	5	0.2	2848	100.0
Mid North Coast	1518	66.3	67	2.9	95	4.2	11	0.5	331	14.5	267	11.7	0	0.0	2289	100.0
Southern NSW	888	65.0	65	4.8	76	5.6	2	0.1	195	14.3	140	10.2	1	0.1	1367	100.0
Murrumbidgee	1479	58.8	67	2.7	179	7.1	7	0.3	457	18.2	322	12.8	3	0.1	2514	100.0
Western NSW	2405	64.7	84	2.3	186	5.0	11	0.3	599	16.1	434	11.7	0	0.0	3719	100.0
Far West	144	56.7	8	3.1	12	4.7	3	1.2	39	15.4	48	18.9	0	0.0	254	100.0
Other—not stated	847	60.7	57	4.1	125	9.0	8	0.6	162	11.6	196	14.0	1	0.1	1396	100.0
<b>TOTAL</b>	<b>54774</b>	<b>57.7</b>	<b>3843</b>	<b>4.0</b>	<b>7074</b>	<b>7.4</b>	<b>332</b>	<b>0.3</b>	<b>16849</b>	<b>17.7</b>	<b>12099</b>	<b>12.7</b>	<b>25</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Emergency caesarean section includes caesarean section where the onset of labour was not stated.

**Table 28. Birth weight by Local Health District of residence, NSW 2010**

Local Health District	Birth weight (grams)																				TOTAL			
	Less than 500		500–999		1000–1499		1500–1999		2000–2499		2500–2999		3000–3499		3500–3999		4000–4499		4500+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	25	0.3	41	0.5	32	0.4	88	1.0	305	3.5	1407	16.3	3276	37.9	2593	30.0	757	8.8	116	1.3	4	0.0	8644	100.0
South Western Sydney	29	0.2	72	0.6	71	0.6	148	1.2	533	4.2	2120	16.6	4766	37.4	3609	28.3	1199	9.4	183	1.4	10	0.1	12740	100.0
South Eastern Sydney	20	0.2	34	0.3	66	0.6	115	1.0	380	3.3	1732	15.0	4475	38.8	3500	30.3	1061	9.2	150	1.3	7	0.1	11540	100.0
Illawarra Shoalhaven	7	0.2	26	0.6	22	0.5	37	0.8	162	3.6	612	13.7	1585	35.4	1470	32.8	483	10.8	72	1.6	2	0.0	4478	100.0
Western Sydney	30	0.2	63	0.4	107	0.8	164	1.2	564	4.0	2392	17.1	5271	37.6	4026	28.7	1161	8.3	226	1.6	7	0.0	14011	100.0
Nepean Blue Mountains	5	0.1	16	0.3	19	0.4	58	1.2	173	3.6	694	14.4	1744	36.1	1492	30.9	526	10.9	106	2.2	2	0.0	4835	100.0
Northern Sydney	16	0.1	28	0.3	57	0.5	119	1.1	335	3.1	1546	14.3	3973	36.7	3519	32.5	1036	9.6	178	1.6	6	0.1	10813	100.0
Central Coast	11	0.3	11	0.3	27	0.7	58	1.5	157	4.1	479	12.5	1287	33.6	1248	32.6	459	12.0	91	2.4	0	0.0	3828	100.0
Hunter New England	31	0.3	59	0.5	74	0.7	154	1.4	448	4.1	1566	14.2	3614	32.8	3566	32.4	1284	11.7	214	1.9	8	0.1	11018	100.0
Northern NSW	10	0.3	10	0.3	10	0.3	28	1.0	89	3.1	396	13.7	936	32.5	940	32.6	384	13.3	79	2.7	2	0.1	2884	100.0
Mid North Coast	11	0.5	15	0.6	18	0.8	36	1.5	118	5.1	296	12.7	784	33.7	748	32.1	257	11.0	45	1.9	1	0.0	2329	100.0
Southern NSW	1	0.1	1	0.1	2	0.1	10	0.7	42	3.0	194	14.1	496	36.0	428	31.0	170	12.3	34	2.5	1	0.1	1379	100.0
Murrumbidgee	4	0.2	2	0.1	7	0.3	23	0.9	95	3.7	389	15.3	871	34.2	798	31.3	302	11.9	53	2.1	3	0.1	2547	100.0
Western NSW	8	0.2	17	0.5	17	0.5	61	1.6	147	3.9	574	15.2	1326	35.1	1156	30.6	395	10.5	69	1.8	3	0.1	3773	100.0
Far West	1	0.4	3	1.2	0	0.0	3	1.2	12	4.7	38	14.9	95	37.3	71	27.8	28	11.0	4	1.6	0	0.0	255	100.0
Other—not stated	1	0.1	10	0.7	12	0.8	18	1.3	61	4.3	213	15.1	509	36.0	411	29.0	152	10.7	25	1.8	3	0.2	1415	100.0
<b>TOTAL</b>	<b>210</b>	<b>0.2</b>	<b>408</b>	<b>0.4</b>	<b>541</b>	<b>0.6</b>	<b>1120</b>	<b>1.2</b>	<b>3621</b>	<b>3.8</b>	<b>14648</b>	<b>15.2</b>	<b>35008</b>	<b>36.3</b>	<b>29575</b>	<b>30.7</b>	<b>9654</b>	<b>10.0</b>	<b>1645</b>	<b>1.7</b>	<b>59</b>	<b>0.1</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Gestational age

The majority of births (91.9%) were at term, and 0.8% were post-term (42-plus weeks). The 7.4% of preterm births comprised 0.7% born at less than 28 weeks, 0.7% at 28–31 weeks, and 6.0% at 32–36 weeks. The highest rate of preterm

birth was 9.6% in the Mid North Coast Local Health District, while the lowest was 3.6% in the Southern NSW Local Health District (Table 29).

**Table 29. Gestational age by Local Health District of residence, NSW 2010**

Local Health District	Gestational age (weeks)										TOTAL			
	< 28		28–31		32–36		37–41		42 +		Not stated		No.	%
Sydney	65	0.8	46	0.5	494	5.7	7974	92.2	65	0.8	0	0.0	8644	100.0
South Western Sydney	107	0.8	92	0.7	751	5.9	11749	92.2	41	0.3	0	0.0	12740	100.0
South Eastern Sydney	60	0.5	69	0.6	680	5.9	10639	92.2	92	0.8	0	0.0	11540	100.0
Illawarra Shoalhaven	33	0.7	26	0.6	279	6.2	4119	92.0	21	0.5	0	0.0	4478	100.0
Western Sydney	96	0.7	118	0.8	779	5.6	12984	92.7	34	0.2	0	0.0	14011	100.0
Nepean Blue Mountains	21	0.4	28	0.6	317	6.6	4448	92.0	20	0.4	1	0.0	4835	100.0
Northern Sydney	50	0.5	65	0.6	593	5.5	10038	92.8	66	0.6	1	0.0	10813	100.0
Central Coast	21	0.5	32	0.8	276	7.2	3478	90.9	20	0.5	1	0.0	3828	100.0
Hunter New England	103	0.9	99	0.9	748	6.8	9944	90.3	124	1.1	0	0.0	11018	100.0
Northern NSW	21	0.7	10	0.3	155	5.4	2629	91.2	69	2.4	0	0.0	2884	100.0
Mid North Coast	27	1.2	27	1.2	169	7.3	2067	88.8	37	1.6	2	0.1	2329	100.0
Southern NSW	2	0.1	3	0.2	45	3.3	1297	94.1	32	2.3	0	0.0	1379	100.0
Murrumbidgee	10	0.4	14	0.5	145	5.7	2347	92.1	31	1.2	0	0.0	2547	100.0
Western NSW	28	0.7	33	0.9	235	6.2	3419	90.6	58	1.5	0	0.0	3773	100.0
Far West	4	1.6	0	0.0	16	6.3	229	89.8	6	2.4	0	0.0	255	100.0
Other-not stated	17	1.2	14	1.0	80	5.7	1288	91.0	16	1.1	0	0.0	1415	100.0
<b>TOTAL</b>	<b>665</b>	<b>0.7</b>	<b>676</b>	<b>0.7</b>	<b>5762</b>	<b>6.0</b>	<b>88649</b>	<b>91.9</b>	<b>732</b>	<b>0.8</b>	<b>5</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Infant feeding

In 2010, infant feeding on discharge from hospital was reported for 95,921 liveborn babies (Table 30). The majority of babies (80.0%) were reported to be fully breastfed, 11.6% were receiving infant formula only, and a further 7.5% were

being partially breastfed. Rates of full breastfeeding varied from 71.3% in the South Western Sydney Local Health District to 89.6% in the Northern NSW Local Health District.

**Table 30. Live births by infant feeding on discharge and Local Health District of residence, NSW 2010**

Local Health District	Infant feeding								TOTAL	
	Full breastfeeding		Any breastfeeding		Infant formula only		Not stated		No.	%
Sydney	7134	83.1	908	10.6	488	5.7	57	0.7	8587	100.0
South Western Sydney	9025	71.3	1398	11.0	2154	17.0	88	0.7	12665	100.0
South Eastern Sydney	9539	83.0	1084	9.4	769	6.7	95	0.8	11487	100.0
Illawarra Shoalhaven	3484	78.2	183	4.1	736	16.5	52	1.2	4455	100.0
Western Sydney	10707	76.9	1470	10.6	1583	11.4	170	1.2	13930	100.0
Nepean Blue Mountains	3612	75.1	303	6.3	866	18.0	30	0.6	4811	100.0
Northern Sydney	9295	86.3	817	7.6	585	5.4	72	0.7	10769	100.0
Central Coast	3104	81.6	168	4.4	493	13.0	38	1.0	3803	100.0
Hunter New England	8921	81.5	350	3.2	1581	14.4	90	0.8	10942	100.0
Northern NSW	2566	89.6	83	2.9	192	6.7	23	0.8	2864	100.0
Mid North Coast	1956	84.8	75	3.3	249	10.8	27	1.2	2307	100.0
Southern NSW	1168	85.1	42	3.1	160	11.7	3	0.2	1373	100.0
Murrumbidgee	1896	74.9	111	4.4	490	19.4	33	1.3	2530	100.0
Western NSW	2932	78.4	101	2.7	681	18.2	26	0.7	3740	100.0
Far West	190	75.4	8	3.2	49	19.4	5	2.0	252	100.0
Other-not stated	1228	87.3	83	5.9	83	5.9	12	0.9	1406	100.0
<b>TOTAL</b>	<b>76757</b>	<b>80.0</b>	<b>7184</b>	<b>7.5</b>	<b>11159</b>	<b>11.6</b>	<b>821</b>	<b>0.9</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.



## Perinatal outcomes

The perinatal mortality rate in 2010 was 8.2 per 1,000 births. This rate includes all live births, and stillbirths of at least 400 grams birth weight or at least 20 weeks gestation (Table 31).

The perinatal mortality rate varied from 5.1 per 1,000 in the Southern NSW Local Health District to 19.6 per 1,000 in the Far West Local Health District.

**Table 31. Perinatal outcomes by Local Health District of residence, NSW 2010#**

Local Health District	Perinatal Outcome										Total births		Perinatal mortality rate/1,000 births
	Liveborn surviving		Stillbirth		Neonatal death		Not stated		Death-age not stated		No.	%	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Sydney	8572	99.2	57	0.7	15	0.2	0	0.0	0	0.0	8644	100.0	8.3
South Western Sydney	12616	99.0	75	0.6	49	0.4	0	0.0	0	0.0	12740	100.0	9.7
South Eastern Sydney	11465	99.4	49	0.4	19	0.2	4	0.0	3	0.0	11540	100.0	5.9
Illawarra Shoalhaven	4445	99.3	22	0.5	10	0.2	1	0.0	0	0.0	4478	100.0	7.1
Western Sydney	13889	99.1	80	0.6	41	0.3	1	0.0	0	0.0	14011	100.0	8.6
Nepean Blue Mountains	4806	99.4	24	0.5	5	0.1	0	0.0	0	0.0	4835	100.0	6.0
Northern Sydney	10749	99.4	43	0.4	20	0.2	1	0.0	0	0.0	10813	100.0	5.8
Central Coast	3794	99.1	25	0.7	9	0.2	0	0.0	0	0.0	3828	100.0	8.9
Hunter New England	10903	99.0	75	0.7	38	0.3	1	0.0	1	0.0	11018	100.0	10.3
Northern NSW	2856	99.0	17	0.6	7	0.2	3	0.1	1	0.0	2884	100.0	8.3
Mid North Coast	2296	98.6	22	0.9	11	0.5	0	0.0	0	0.0	2329	100.0	14.2
Southern NSW	1372	99.5	6	0.4	1	0.1	0	0.0	0	0.0	1379	100.0	5.1
Murrumbidgee	2524	99.1	16	0.6	4	0.2	1	0.0	2	0.1	2547	100.0	7.9
Western NSW	3733	98.9	33	0.9	7	0.2	0	0.0	0	0.0	3773	100.0	10.6
Far West	250	98.0	3	1.2	2	0.8	0	0.0	0	0.0	255	100.0	19.6
Other—not stated	1405	99.3	8	0.6	1	0.1	1	0.1	0	0.0	1415	100.0	6.4
<b>TOTAL</b>	<b>95675</b>	<b>99.2</b>	<b>555</b>	<b>0.6</b>	<b>239</b>	<b>0.2</b>	<b>13</b>	<b>0.0</b>	<b>7</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>	<b>8.2</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

## Live births by statistical local areas

Table 32. Live births by Local Health District and statistical local area of residence, NSW 2010 (Revised 26 March 2013)

Local Health District – statistical local area	No.	%	Local Health District – statistical local area	No.	%
<b>Sydney</b>			Holroyd	1979	14.2
Ashfield	549	6.4	Parramatta–Inner	972	7.0
Burwood	359	4.2	Parramatta–North-East	581	4.2
Canada Bay–Concord	573	6.7	Parramatta–North-West	603	4.3
Canada Bay–Drummoyne	597	7.0	Parramatta–South	818	5.9
Canterbury	2367	27.6	TOTAL	13930	100.0
Leichhardt	1039	12.1	<b>Nepean Blue Mountains</b>		
Marrickville	1316	15.3	Blue Mountains	853	17.7
Strathfield	468	5.5	Hawkesbury	883	18.4
Sydney–South	811	9.4	Lithgow	237	4.9
Sydney–West	508	5.9	Penrith–East	1557	32.4
TOTAL	8587	100.0	Penrith–West	1281	26.6
<b>South Western Sydney</b>			TOTAL	4811	100.0
Bankstown–North-East	1196	9.4	<b>Northern Sydney</b>		
Bankstown–North-West	1000	7.9	Hornsby–North	734	6.8
Bankstown–South	710	5.6	Hornsby–South	1126	10.5
Camden	872	6.9	Hunters Hill	146	1.4
Campbelltown–North	1232	9.7	Ku-ring-gai	955	8.9
Campbelltown–South	1126	8.9	Lane Cove	402	3.7
Fairfield–East	1691	13.4	Manly	672	6.2
Fairfield–West	752	5.9	Mosman	364	3.4
Liverpool–East	1879	14.8	North Sydney	1021	9.5
Liverpool–West	1120	8.8	Pittwater	744	6.9
Wingecarribee	504	4.0	Ryde	1392	12.9
Wollondilly	583	4.6	Warringah	2121	19.7
TOTAL	12665	100.0	Willoughby	1092	10.1
<b>South Eastern Sydney</b>			TOTAL	10769	100.0
Botany	644	5.6	<b>Central Coast</b>		
Hurstville	1118	9.7	Gosford–East	669	17.6
Kogarah	785	6.8	Gosford–West	1229	32.3
Randwick	1912	16.6	Wyong–North-East	1008	26.5
Rockdale	1592	13.9	Wyong–South and West	897	23.6
Sutherland Shire–East	1330	11.6	TOTAL	3803	100.0
Sutherland Shire–West	1559	13.6	<b>Hunter New England</b>		
Sydney–Inner	194	1.7	Armidale Dumaresq–City	252	2.3
Sydney (SESAHS)	476	4.1	Armidale Dumaresq–Balance	33	0.3
Waverley	1113	9.7	Cessnock	731	6.7
Woollahra	761	6.6	Dungog	86	0.8
Other-not stated	3	0.0	Glen Innes Severn	99	0.9
TOTAL	11487	100.0	Gloucester	44	0.4
<b>Illawarra Shoalhaven</b>			Greater Taree	513	4.7
Kiama	169	3.8	Great Lakes	314	2.9
Shellharbour	853	19.1	Gunnedah	199	1.8
Shoalhaven–Pt A	476	10.7	Guyra	72	0.7
Shoalhaven–Pt B	554	12.4	Gwydir	52	0.5
Wollongong–Inner	1229	27.6	Inverell–Pt A	63	0.6
Wollongong–Balance	1174	26.4	Inverell–Pt B	149	1.4
TOTAL	4455	100.0	Lake Macquarie–East	635	5.8
<b>Western Sydney</b>			Lake Macquarie–North	1065	9.7
Auburn	1502	10.8	Lake Macquarie–West	517	4.7
Baulkham Hills–Central	961	6.9	Liverpool Plains	65	0.6
Baulkham Hills–North	680	4.9	Maitland	1054	9.6
Baulkham Hills–South	426	3.1	Moree Plains	227	2.1
Blacktown–North	1826	13.1	Muswellbrook	243	2.2
Blacktown–South-East	1765	12.7	Narrabri	222	2.0
Blacktown–South-West	1817	13.0	Newcastle–Inner City	664	6.1

Table 32. (Continued)

Local Health District – statistical local area	No.	%	Local Health District – statistical local area	No.	%
Newcastle–Outer West	603	5.5	Deniliquin	79	3.1
Newcastle–Throsby	729	6.7	Greater Hume Shire	21	0.8
Port Stephens	775	7.1	Griffith	396	15.7
Singleton	344	3.1	Gundagai	38	1.5
Tamworth Regional–Pt A	746	6.8	Harden	45	1.8
Tamworth Regional–Pt B	122	1.1	Hay	37	1.5
Tenterfield	23	0.2	Jerilderie	7	0.3
Upper Hunter Shire	201	1.8	Junea	71	2.8
Uralla	72	0.7	Lachlan	32	1.3
Walcha	28	0.3	Leeton	150	5.9
TOTAL	10942	100.0	Lockhart	33	1.3
<b>Northern NSW</b>			Murrumbidgee	26	1.0
Ballina	370	12.9	Narrandera	103	4.1
Byron	286	10.0	Temora	78	3.1
Clarence Valley–Coast	174	6.1	Tumbarumba	30	1.2
Clarence Valley–Grafton	298	10.4	Tumut	111	4.4
Clarence Valley–Balance	65	2.3	Wagga Wagga–Pt A	809	32.0
Kyogle	113	3.9	Wagga Wagga–Pt B	46	1.8
Lismore–Pt A	381	13.3	Young	160	6.3
Lismore–Pt B	136	4.7	Other-not stated	9	0.4
Richmond Valley–Casino	148	5.2	TOTAL	2530	100.0
Richmond Valley Bal	131	4.6	<b>Western NSW</b>		
Tenterfield	1	0.0	Bathurst Regional–Pt A	488	13.0
Tweed–Tweed-Heads	438	15.3	Bathurst Regional–Pt B	54	1.4
Tweed–Tweed Coast	133	4.6	Blayney	101	2.7
Tweed–Pt B	190	6.6	Bogan	56	1.5
TOTAL	2864	100.0	Bourke	58	1.6
<b>Mid North Coast</b>			Brewarrina	22	0.6
Bellingen	123	5.3	Cabonne	167	4.5
Coffs Harbour–Pt A	633	27.4	Cobar	67	1.8
Coffs Harbour–Pt B	200	8.7	Coonamble	51	1.4
Kempsey	401	17.4	Cowra	133	3.6
Nambucca	187	8.1	Dubbo–Pt A	617	16.5
Other-not stated	763	33.1	Dubbo–Pt B	31	0.8
TOTAL	2307	100.0	Forbes	148	4.0
<b>Southern NSW</b>			Gilgandra	61	1.6
Bega Valley	262	19.1	Lachlan	50	1.3
Bombala	21	1.5	Mid-Western Regional–Pt A	248	6.6
Cooma-Monaro	83	6.0	Mid-Western Regional–Pt B	38	1.0
Eurobodalla	336	24.5	Narromine	89	2.4
Greater Argyle–Goulburn	229	16.7	Oberon	54	1.4
Greater Argyle–Balance	41	3.0	Orange	585	15.6
Palerang–Pt A	33	2.4	Parkes	204	5.5
Queanbeyan	232	16.9	Walgett	100	2.7
Snowy River	74	5.4	Warren	48	1.3
Upper Lachlan	42	3.1	Warrumbungle Shire	118	3.2
Yass Valley	7	0.5	Weddin	44	1.2
Other-not stated	13	0.9	Wellington	108	2.9
TOTAL	1373	100.0	TOTAL	3740	100.0
<b>Murrumbidgee</b>			<b>Far West</b>		
Berrigan	19	0.8	Broken Hill	229	90.9
Bland	70	2.8	Central Darling	21	8.3
Boorowa	19	0.8	Other-not stated	2	0.8
Carrathool	21	0.8	TOTAL	252	100.0
Conargo	11	0.4	<b>Other-not stated</b>	1406	100.0
Coolamon	49	1.9	<b>TOTAL NSW</b>	95921	100.0
Cootamundra	60	2.4			

Source: NSW Perinatal Data Collection (HOIST), Centre for Epidemiology and Evidence, NSW Ministry of Health.  
 # Statistical Local Area assigned according to the Australian Bureau of Statistics 1216.0.15.001 ASGC 2007 Electronic Structures [www.abs.gov.au].

# 6. NSW hospitals

## Onset and augmentation of labour

Table 33 shows onset or augmentation of labour for Local Health Districts, and Table 34 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 33. Onset and augmentation of labour by Local Health District of hospital, NSW 2010**

Local Health District	Onset and augmentation of labour																		TOTAL	
	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented oxytocics/prostagl.#		No labour		Induced-oxytocics/prostagl.		Induced-ARM only		Induced-ARM + oxytocics/prostagl.		Induced-other##		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Sydney	2849	41.3	161	2.3	1214	17.6	1113	16.1	583	8.4	102	1.5	873	12.7	5	0.1	0	0.0	6900	100.0
South Western Sydney	4620	45.1	980	9.6	1012	9.9	1394	13.6	949	9.3	106	1.0	1170	11.4	23	0.2	0	0.0	10254	100.0
South Eastern Sydney	3357	43.0	564	7.2	708	9.1	1189	15.2	797	10.2	121	1.5	1064	13.6	7	0.1	0	0.0	7807	100.0
Illawarra Shoalhaven	1302	40.6	250	7.8	216	6.7	449	14.0	336	10.5	97	3.0	554	17.3	3	0.1	1	0.0	3208	100.0
Western Sydney	3820	41.1	586	6.3	803	8.6	1350	14.5	988	10.6	113	1.2	1629	17.5	7	0.1	0	0.0	9296	100.0
Nepean Blue Mountains	2129	45.0	318	6.7	235	5.0	804	17.0	429	9.1	108	2.3	707	14.9	3	0.1	0	0.0	4733	100.0
Northern Sydney	2147	42.7	353	7.0	456	9.1	767	15.2	528	10.5	78	1.6	701	13.9	1	0.0	0	0.0	5031	100.0
Central Coast	1107	41.4	174	6.5	253	9.5	450	16.8	268	10.0	25	0.9	390	14.6	4	0.1	0	0.0	2671	100.0
Hunter New England	4279	47.5	412	4.6	604	6.7	1172	13.0	990	11.0	183	2.0	1318	14.6	48	0.5	1	0.0	9007	100.0
Northern NSW	1893	52.6	232	6.4	277	7.7	455	12.6	317	8.8	69	1.9	346	9.6	11	0.3	0	0.0	3600	100.0
Mid North Coast	1093	48.6	190	8.5	163	7.3	311	13.8	165	7.3	52	2.3	271	12.1	3	0.1	0	0.0	2248	100.0
Southern NSW	693	50.6	134	9.8	125	9.1	188	13.7	137	10.0	19	1.4	69	5.0	4	0.3	0	0.0	1369	100.0
Murrumbidgee	958	49.4	136	7.0	77	4.0	303	15.6	221	11.4	69	3.6	168	8.7	6	0.3	0	0.0	1938	100.0
Western NSW	1553	45.9	212	6.3	192	5.7	485	14.3	325	9.6	90	2.7	526	15.5	0	0.0	0	0.0	3383	100.0
Far West	130	51.0	13	5.1	14	5.5	41	16.1	31	12.2	5	2.0	21	8.2	0	0.0	0	0.0	255	100.0
Private Hospitals	6188	26.8	1896	8.2	2131	9.2	6378	27.6	1699	7.3	545	2.4	4250	18.4	40	0.2	5	0.0	23132	100.0
<b>TOTAL*</b>	<b>38280</b>	<b>40.3</b>	<b>6611</b>	<b>7.0</b>	<b>8481</b>	<b>8.9</b>	<b>16849</b>	<b>17.7</b>	<b>8763</b>	<b>9.2</b>	<b>1782</b>	<b>1.9</b>	<b>14057</b>	<b>14.8</b>	<b>166</b>	<b>0.2</b>	<b>7</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST), Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# May include artificial rupture of membranes.  
## This category includes other forms of induction such as Foley's catheter.  
\* Total includes births at home assisted by independent midwives.

**Table 34. Onset and augmentation of labour by hospital and maternity service level, NSW 2010#**

Maternity service level-hospital	Onset and augmentation of labour																		TOTAL	
	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented-oxytocics/prostagl.##		No labour		Induced-oxytocics/prostagl.		Induced-ARM only		Induced-ARM + oxytocics/prostagl.		Induced-other###		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
<b>Level 6</b>																				
Royal Prince Alfred	2142	41.1	0	0.0	950	18.2	881	16.9	453	8.7	90	1.7	696	13.3	4	0.1	0	0.0	5216	100.0
Royal North Shore	904	38.4	171	7.3	218	9.3	420	17.9	257	10.9	40	1.7	342	14.5	0	0.0	0	0.0	2352	100.0
Royal Hospital for Women	1616	40.6	301	7.6	282	7.1	719	18.1	433	10.9	79	2.0	541	13.6	7	0.2	0	0.0	3978	100.0
Liverpool	1348	44.9	277	9.2	338	11.3	427	14.2	285	9.5	18	0.6	301	10.0	7	0.2	0	0.0	3001	100.0
Nepean	1608	45.4	241	6.8	171	4.8	580	16.4	312	8.8	73	2.1	557	15.7	3	0.1	0	0.0	3545	100.0
Westmead	1836	37.5	327	6.7	450	9.2	775	15.8	565	11.5	64	1.3	876	17.9	1	0.0	0	0.0	4894	100.0
John Hunter	1702	45.8	143	3.8	339	9.1	458	12.3	352	9.5	74	2.0	629	16.9	23	0.6	0	0.0	3720	100.0
<b>TOTAL</b>	<b>11156</b>	<b>41.8</b>	<b>1460</b>	<b>5.5</b>	<b>2748</b>	<b>10.3</b>	<b>4260</b>	<b>16.0</b>	<b>2657</b>	<b>9.9</b>	<b>438</b>	<b>1.6</b>	<b>3942</b>	<b>14.8</b>	<b>45</b>	<b>0.2</b>	<b>0</b>	<b>0.0</b>	<b>26706</b>	<b>100.0</b>
<b>Level 5</b>																				
Gosford	950	38.1	156	6.3	253	10.1	450	18.0	268	10.7	25	1.0	390	15.6	4	0.2	0	0.0	2496	100.0
St. George	1112	43.3	183	7.1	297	11.6	320	12.5	268	10.4	30	1.2	357	13.9	0	0.0	0	0.0	2567	100.0
Blacktown	1327	43.2	173	5.6	205	6.7	432	14.1	279	9.1	43	1.4	609	19.8	6	0.2	0	0.0	3074	100.0
Coffs Harbour	495	46.3	80	7.5	78	7.3	178	16.6	59	5.5	36	3.4	144	13.5	0	0.0	0	0.0	1070	100.0
Lismore Base	709	55.0	51	4.0	71	5.5	190	14.8	114	8.9	28	2.2	120	9.3	5	0.4	0	0.0	1288	100.0
Tweed Heads	691	46.7	131	8.9	153	10.3	141	9.5	130	8.8	35	2.4	194	13.1	4	0.3	0	0.0	1479	100.0
Port Macquarie Base	362	44.1	82	10.0	70	8.5	111	13.5	77	9.4	11	1.3	105	12.8	2	0.2	0	0.0	820	100.0
Wollongong	860	39.0	181	8.2	176	8.0	266	12.1	233	10.6	64	2.9	423	19.2	3	0.1	0	0.0	2206	100.0
Maitland	741	44.5	70	4.2	101	6.1	241	14.5	226	13.6	22	1.3	256	15.4	8	0.5	0	0.0	1665	100.0
Wagga Wagga Base	365	51.2	29	4.1	29	4.1	113	15.8	76	10.7	18	2.5	79	11.1	4	0.6	0	0.0	713	100.0
<b>TOTAL</b>	<b>7612</b>	<b>43.8</b>	<b>1136</b>	<b>6.5</b>	<b>1433</b>	<b>8.2</b>	<b>2442</b>	<b>14.1</b>	<b>1730</b>	<b>10.0</b>	<b>312</b>	<b>1.8</b>	<b>2677</b>	<b>15.4</b>	<b>36</b>	<b>0.2</b>	<b>0</b>	<b>0.0</b>	<b>17378</b>	<b>100.0</b>
<b>Level 4</b>																				
Canterbury	707	42.0	161	9.6	264	15.7	232	13.8	130	7.7	12	0.7	177	10.5	1	0.1	0	0.0	1684	100.0
Hornsby	573	44.9	97	7.6	104	8.2	182	14.3	137	10.7	17	1.3	164	12.9	1	0.1	0	0.0	1275	100.0
Manly	571	44.3	68	5.3	134	10.4	165	12.8	134	10.4	21	1.6	195	15.1	0	0.0	0	0.0	1288	100.0

Table 34. (Continued)

Maternity service level-hospital	Spontaneous		Spontaneous augmented with ARM		Spontaneous augmented-oxytocics/prostagl.##		Onset and augmentation of labour												TOTAL	
							No labour		Induced-oxytocics/prostagl.		Induced-ARM only		Induced-ARM + oxytocics/prostagl.		Induced-other###		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sutherland	629	49.8	80	6.3	129	10.2	150	11.9	96	7.6	12	1.0	166	13.2	0	0.0	0	0.0	1262	100.0
Auburn	657	49.5	86	6.5	148	11.1	143	10.8	144	10.8	6	0.5	144	10.8	0	0.0	0	0.0	1328	100.0
Fairfield	886	48.0	198	10.7	211	11.4	205	11.1	135	7.3	4	0.2	203	11.0	4	0.2	0	0.0	1846	100.0
Campbelltown	1166	42.5	273	9.9	188	6.9	420	15.3	283	10.3	54	2.0	353	12.9	7	0.3	0	0.0	2744	100.0
Bankstown-Lidcombe	965	46.2	165	7.9	212	10.1	281	13.4	202	9.7	19	0.9	241	11.5	5	0.2	0	0.0	2090	100.0
Hawkesbury	354	44.7	48	6.1	29	3.7	153	19.3	70	8.8	32	4.0	106	13.4	0	0.0	0	0.0	792	100.0
Grafton Base	200	43.0	24	5.2	53	11.4	75	16.1	73	15.7	6	1.3	32	6.9	2	0.4	0	0.0	465	100.0
Tamworth Base	424	46.6	49	5.4	48	5.3	119	13.1	108	11.9	18	2.0	128	14.1	15	1.6	1	0.1	910	100.0
Manning Base	338	46.9	48	6.7	31	4.3	107	14.9	77	10.7	17	2.4	102	14.2	0	0.0	0	0.0	720	100.0
Dubbo Base	483	40.0	98	8.1	78	6.5	169	14.0	105	8.7	33	2.7	241	20.0	0	0.0	0	0.0	1207	100.0
Orange Base	354	41.2	56	6.5	43	5.0	146	17.0	88	10.2	26	3.0	146	17.0	0	0.0	0	0.0	859	100.0
Goulburn Base	116	40.4	28	9.8	65	22.6	52	18.1	22	7.7	0	0.0	3	1.0	1	0.3	0	0.0	287	100.0
Griffith Base	232	50.5	25	5.4	17	3.7	65	14.2	47	10.2	34	7.4	38	8.3	1	0.2	0	0.0	459	100.0
<b>TOTAL</b>	<b>8655</b>	<b>45.0</b>	<b>1504</b>	<b>7.8</b>	<b>1754</b>	<b>9.1</b>	<b>2664</b>	<b>13.9</b>	<b>1851</b>	<b>9.6</b>	<b>311</b>	<b>1.6</b>	<b>2439</b>	<b>12.7</b>	<b>37</b>	<b>0.2</b>	<b>1</b>	<b>0.0</b>	<b>19216</b>	<b>100.0</b>
<b>Level 3</b>																				
Blue Mountains	113	53.3	7	3.3	14	6.6	35	16.5	15	7.1	2	0.9	26	12.3	0	0.0	0	0.0	212	100.0
Kempsey	186	61.4	24	7.9	14	4.6	22	7.3	29	9.6	5	1.7	22	7.3	1	0.3	0	0.0	303	100.0
Armidale	203	47.7	22	5.2	28	6.6	57	13.4	60	14.1	10	2.3	45	10.6	1	0.2	0	0.0	426	100.0
Gunnedah	81	37.5	21	9.7	5	2.3	33	15.3	33	15.3	14	6.5	29	13.4	0	0.0	0	0.0	216	100.0
Inverell	54	20.6	7	2.7	20	7.6	71	27.1	44	16.8	7	2.7	59	22.5	0	0.0	0	0.0	262	100.0
Moree	111	49.8	13	5.8	16	7.2	27	12.1	21	9.4	2	0.9	33	14.8	0	0.0	0	0.0	223	100.0
Mudgee	120	50.8	7	3.0	5	2.1	36	15.3	26	11.0	12	5.1	30	12.7	0	0.0	0	0.0	236	100.0
Bathurst Base	359	60.3	22	3.7	22	3.7	84	14.1	61	10.3	12	2.0	35	5.9	0	0.0	0	0.0	595	100.0
Bega	121	51.1	28	11.8	18	7.6	30	12.7	21	8.9	2	0.8	17	7.2	0	0.0	0	0.0	237	100.0
Moruya	166	48.7	36	10.6	13	3.8	54	15.8	45	13.2	6	1.8	19	5.6	2	0.6	0	0.0	341	100.0
Queanbeyan	185	57.1	34	10.5	17	5.2	28	8.6	36	11.1	8	2.5	15	4.6	1	0.3	0	0.0	324	100.0
Young	101	48.1	22	10.5	16	7.6	21	10.0	23	11.0	4	1.9	23	11.0	0	0.0	0	0.0	210	100.0
Bowral	255	44.5	67	11.7	63	11.0	61	10.6	44	7.7	11	1.9	72	12.6	0	0.0	0	0.0	573	100.0
Shoalhaven	387	43.8	59	6.7	28	3.2	174	19.7	89	10.1	31	3.5	116	13.1	0	0.0	0	0.0	884	100.0
Broken Hill Base	130	51.0	13	5.1	14	5.5	41	16.1	31	12.2	5	2.0	21	8.2	0	0.0	0	0.0	255	100.0
Other hospitals	907	51.6	134	7.6	92	5.2	278	15.8	178	10.1	27	1.5	141	8.0	2	0.1	0	0.0	1759	100.0
<b>TOTAL</b>	<b>3479</b>	<b>49.3</b>	<b>516</b>	<b>7.3</b>	<b>385</b>	<b>5.5</b>	<b>1052</b>	<b>14.9</b>	<b>756</b>	<b>10.7</b>	<b>158</b>	<b>2.2</b>	<b>703</b>	<b>10.0</b>	<b>7</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>7056</b>	<b>100.0</b>
<b>Level 2</b>																				
<b>TOTAL</b>	<b>953</b>	<b>76.4</b>	<b>95</b>	<b>7.6</b>	<b>26</b>	<b>2.1</b>	<b>47</b>	<b>3.8</b>	<b>66</b>	<b>5.3</b>	<b>17</b>	<b>1.4</b>	<b>43</b>	<b>3.4</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.1</b>	<b>1248</b>	<b>100.0</b>
<b>Private</b>																				
Mater, North Sydney	712	28.9	223	9.1	224	9.1	757	30.7	166	6.7	107	4.3	274	11.1	0	0.0	0	0.0	2463	100.0
North Shore Private	663	24.8	249	9.3	341	12.8	865	32.4	130	4.9	105	3.9	310	11.6	8	0.3	0	0.0	2671	100.0
Sydney Adventist	984	47.2	0	0	1	0.0	504	24.2	122	5.9	32	1.5	442	21.2	0	0.0	0	0.0	2085	100.0
North Gosford Private	180	23.5	54	7.0	74	9.7	229	29.9	76	9.9	21	2.7	127	16.6	4	0.5	1	0.1	766	100.0
Hurstville Community	236	24.9	85	9.0	133	14.0	237	25.0	83	8.8	13	1.4	159	16.8	1	0.1	0	0.0	947	100.0
Kareena Private	110	17.6	48	7.7	49	7.8	216	34.5	46	7.3	22	3.5	134	21.4	1	0.2	0	0.0	626	100.0
St. George Private	334	19.8	123	7.3	211	12.5	497	29.5	141	8.4	43	2.6	334	19.8	1	0.1	0	0.0	1684	100.0
Prince of Wales Private	626	25.2	308	12.4	190	7.7	799	32.2	185	7.5	71	2.9	295	11.9	6	0.2	3	0.1	2483	100.0
Norwest Private	378	22.1	133	7.8	192	11.2	322	18.8	99	5.8	19	1.1	567	33.1	3	0.2	0	0.0	1713	100.0
Sydney Southwest Private	254	25.9	60	6.1	101	10.3	244	24.9	89	9.1	20	2.0	210	21.4	3	0.3	0	0.0	981	100.0
Nepean Private	268	30.7	90	10.3	43	4.9	218	25.0	86	9.9	10	1.1	153	17.5	5	0.6	0	0.0	873	100.0
Westmead Private	418	19.7	243	11.5	303	14.3	518	24.5	190	9.0	11	0.5	433	20.5	1	0.0	0	0.0	2117	100.0
Figtree Private	150	14.6	92	9.0	74	7.2	282	27.5	79	7.7	26	2.5	322	31.4	1	0.1	0	0.0	1026	100.0
Newcastle Private	622	32.9	116	6.1	138	7.3	474	25.1	82	4.3	28	1.5	425	22.5	5	0.3	0	0.0	1890	100.0
Calvary, Wagga Wagga	209	35.0	44	7.4	47	7.9	150	25.1	107	17.9	12	2.0	26	4.4	1	0.2	1	0.2	597	100.0
Other hospitals	45	21.3	28	13.3	10	4.7	66	31.3	18	8.5	5	2.4	39	18.5	0	0.0	0	0.0	211	100.0
<b>TOTAL</b>	<b>6188</b>	<b>26.8</b>	<b>1896</b>	<b>8.2</b>	<b>2131</b>	<b>9.2</b>	<b>6378</b>	<b>27.6</b>	<b>1699</b>	<b>7.3</b>	<b>545</b>	<b>2.4</b>	<b>4250</b>	<b>18.4</b>	<b>40</b>	<b>0.2</b>	<b>5</b>	<b>0.0</b>	<b>23132</b>	<b>100.0</b>
<b>TOTAL NSW**</b>	<b>38280</b>	<b>40.3</b>	<b>6611</b>	<b>7.0</b>	<b>8481</b>	<b>8.9</b>	<b>16849</b>	<b>17.7</b>	<b>8763</b>	<b>9.2</b>	<b>1782</b>	<b>1.9</b>	<b>14057</b>	<b>14.8</b>	<b>166</b>	<b>0.2</b>	<b>7</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence NSW Ministry of Health.

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

## May include artificial rupture of membranes.

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

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

\*\* Total NSW includes births at home assisted by independent midwives and births at level 1 hospitals.

## Type of birth

Table 35 shows type of birth for Local Health Districts, and Table 36 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 35. Type of birth by Local Health District of hospital, NSW 2010**

Local Health District	Normal vaginal		Forceps		Vacuum extraction		Type of birth		Elective caesarean section		Emergency caesarean section#		Not stated		TOTAL	
	No.	%	No.	%	No.	%	Vaginal breech		No.	%	No.	%	No.	%	No.	%
							No.	%								
Sydney	3826	55.4	433	6.3	511	7.4	27	0.4	1113	16.1	990	14.3	0	0.0	6900	100.0
South Western Sydney	7093	69.2	185	1.8	657	6.4	48	0.5	1394	13.6	877	8.6	0	0.0	10254	100.0
South Eastern Sydney	4524	57.9	470	6.0	628	8.0	32	0.4	1189	15.2	964	12.3	0	0.0	7807	100.0
Illawarra Shoalhaven	2096	65.3	78	2.4	172	5.4	7	0.2	449	14.0	406	12.7	0	0.0	3208	100.0
Western Sydney	5522	59.4	547	5.9	659	7.1	38	0.4	1350	14.5	1180	12.7	0	0.0	9296	100.0
Nepean Blue Mountains	2774	58.6	94	2.0	360	7.6	16	0.3	804	17.0	685	14.5	0	0.0	4733	100.0
Northern Sydney	2854	56.7	345	6.9	256	5.1	11	0.2	767	15.2	798	15.9	0	0.0	5031	100.0
Central Coast	1504	56.3	122	4.6	197	7.4	7	0.3	450	16.8	391	14.6	0	0.0	2671	100.0
Hunter New England	5793	64.3	283	3.1	540	6.0	60	0.7	1172	13.0	1159	12.9	0	0.0	9007	100.0
Northern NSW	2443	67.9	109	3.0	163	4.5	18	0.5	455	12.6	407	11.3	5	0.1	3600	100.0
Mid North Coast	1500	66.7	68	3.0	95	4.2	8	0.4	311	13.8	266	11.8	0	0.0	2248	100.0
Southern NSW	894	65.3	67	4.9	77	5.6	2	0.1	188	13.7	139	10.2	2	0.1	1369	100.0
Murrumbidgee	1216	62.7	40	2.1	110	5.7	5	0.3	303	15.6	264	13.6	0	0.0	1938	100.0
Western NSW	2251	66.5	78	2.3	171	5.1	10	0.3	485	14.3	388	11.5	0	0.0	3383	100.0
Far West	142	55.7	8	3.1	12	4.7	3	1.2	41	16.1	49	19.2	0	0.0	255	100.0
Private Hospitals	10187	44.0	916	4.0	2466	10.7	36	0.2	6378	27.6	3136	13.6	13	0.1	23132	100.0
<b>TOTAL*</b>	<b>54774</b>	<b>57.7</b>	<b>3843</b>	<b>4.0</b>	<b>7074</b>	<b>7.4</b>	<b>332</b>	<b>0.3</b>	<b>16849</b>	<b>17.7</b>	<b>12099</b>	<b>12.7</b>	<b>25</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

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

**Table 36. Type of birth by hospital and maternity service level, NSW 2010# (Revised 13 February 2013)**

Maternity service level-hospital	Normal vaginal		Vaginal breech		Forceps		Type of birth		Elective caesarean section		Emergency caesarean section##		Not stated		TOTAL	
	No.	%	No.	%	No.	%	Vacuum extraction		No.	%	No.	%	No.	%	No.	%
							No.	%								
<b>Level 6</b>																
Royal Prince Alfred	2775	53.2	21	0.4	397	7.6	371	7.1	881	16.9	771	14.8	0	0.0	5216	100.0
Royal North Shore	1174	49.9	8	0.3	219	9.3	107	4.5	420	17.9	424	18.0	0	0.0	2352	100.0
Royal Hospital for Women	2068	52.0	26	0.7	335	8.4	307	7.7	719	18.1	523	13.1	0	0.0	3978	100.0
Liverpool	2046	68.2	25	0.8	61	2.0	173	5.8	427	14.2	269	9.0	0	0.0	3001	100.0
Nepean	2080	58.7	16	0.5	63	1.8	296	8.3	580	16.4	510	14.4	0	0.0	3545	100.0
Westmead	2760	56.4	28	0.6	315	6.4	347	7.1	775	15.8	669	13.7	0	0.0	4894	100.0
John Hunter	2286	61.5	33	0.9	190	5.1	214	5.8	458	12.3	539	14.5	0	0.0	3720	100.0
<b>TOTAL</b>	<b>15189</b>	<b>56.9</b>	<b>157</b>	<b>0.6</b>	<b>1580</b>	<b>5.9</b>	<b>1815</b>	<b>6.8</b>	<b>4260</b>	<b>16.0</b>	<b>3705</b>	<b>13.9</b>	<b>0</b>	<b>0.0</b>	<b>26706</b>	<b>100.0</b>
<b>Level 5</b>																
Gosford	1329	53.2	7	0.3	122	4.9	197	7.9	450	18.0	391	15.7	0	0.0	2496	100.0
St. George	1587	61.8	3	0.1	110	4.3	233	9.1	320	12.5	314	12.2	0	0.0	2567	100.0
Blacktown	1834	59.7	7	0.2	180	5.9	242	7.9	432	14.1	379	12.3	0	0.0	3074	100.0
Coffs Harbour	689	64.4	3	0.3	25	2.3	41	3.8	178	16.6	134	12.5	0	0.0	1070	100.0
Lismore Base	828	64.3	8	0.6	70	5.4	24	1.9	190	14.8	168	13.0	0	0.0	1288	100.0
Tweed Heads	1007	68.1	5	0.3	29	2.0	115	7.8	141	9.5	182	12.3	0	0.0	1479	100.0
Port Macquarie Base	536	65.4	2	0.2	42	5.1	35	4.3	111	13.5	94	11.5	0	0.0	820	100.0
Wollongong	1478	67.0	4	0.2	40	1.8	129	5.8	266	12.1	289	13.1	0	0.0	2206	100.0
Maitland	1030	61.9	7	0.4	41	2.5	100	6.0	241	14.5	246	14.8	0	0.0	1665	100.0
Wagga Wagga Base	418	58.6	4	0.6	15	2.1	28	3.9	113	15.8	135	18.9	0	0.0	713	100.0
<b>TOTAL</b>	<b>10736</b>	<b>61.8</b>	<b>50</b>	<b>0.3</b>	<b>674</b>	<b>3.9</b>	<b>1144</b>	<b>6.6</b>	<b>2442</b>	<b>14.1</b>	<b>2332</b>	<b>13.4</b>	<b>0</b>	<b>0.0</b>	<b>17378</b>	<b>100.0</b>
<b>Level 4</b>																
Canterbury	1051	62.4	6	0.4	36	2.1	140	8.3	232	13.8	219	13.0	0	0.0	1684	100.0
Hornsby	802	62.9	1	0.1	63	4.9	48	3.8	182	14.3	179	14.0	0	0.0	1275	100.0
Manly	762	59.2	2	0.2	63	4.9	101	7.8	165	12.8	195	15.1	0	0.0	1288	100.0
Sutherland	869	68.9	3	0.2	25	2.0	88	7.0	150	11.9	127	10.1	0	0.0	1262	100.0

Table 36. (Continued)

Maternity service level–hospital	Type of birth															
	Normal vaginal		Vaginal breech		Forceps		Vacuum extraction		Elective caesarean section		Emergency caesarean section##		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Auburn	928	69.9	3	0.2	52	3.9	70	5.3	143	10.8	132	9.9	0	0.0	1328	100.0
Fairfield	1399	75.8	8	0.4	8	0.4	89	4.8	205	11.1	137	7.4	0	0.0	1846	100.0
Campbelltown	1844	67.2	8	0.3	19	0.7	199	7.3	420	15.3	254	9.3	0	0.0	2744	100.0
Bankstown-Lidcombe	1414	67.7	5	0.2	63	3.0	154	7.4	281	13.4	173	8.3	0	0.0	2090	100.0
Hawkesbury	444	56.1	0	0.0	31	3.9	41	5.2	153	19.3	123	15.5	0	0.0	792	100.0
Grafton Base	305	65.6	4	0.9	9	1.9	15	3.2	75	16.1	57	12.3	0	0.0	465	100.0
Tamworth Base	594	65.3	4	0.4	20	2.2	63	6.9	119	13.1	110	12.1	0	0.0	910	100.0
Manning Base	459	63.8	7	1.0	4	0.6	52	7.2	107	14.9	91	12.6	0	0.0	720	100.0
Dubbo Base	828	68.6	4	0.3	38	3.1	51	4.2	169	14.0	117	9.7	0	0.0	1207	100.0
Orange Base	533	62.0	1	0.1	14	1.6	63	7.3	146	17.0	102	11.9	0	0.0	859	100.0
Goulburn Base	173	60.3	1	0.3	29	10.1	6	2.1	52	18.1	26	9.1	0	0.0	287	100.0
Griffith Base	284	61.9	0	0.0	15	3.3	34	7.4	65	14.2	61	13.3	0	0.0	459	100.0
<b>TOTAL</b>	<b>12689</b>	<b>66.0</b>	<b>57</b>	<b>0.3</b>	<b>489</b>	<b>2.5</b>	<b>1214</b>	<b>6.3</b>	<b>2664</b>	<b>13.9</b>	<b>2103</b>	<b>10.9</b>	<b>0</b>	<b>0.0</b>	<b>19216</b>	<b>100.0</b>
<b>Level 3</b>																
Blue Mountains	137	64.6	0	0.0	0	0.0	15	7.1	35	16.5	25	11.8	0	0.0	212	100.0
Kempsey	224	73.9	2	0.7	1	0.3	16	5.3	22	7.3	38	12.5	0	0.0	303	100.0
Armidale	281	66.0	1	0.2	10	2.3	23	5.4	57	13.4	54	12.7	0	0.0	426	100.0
Gunnedah	126	58.3	1	0.5	0	0.0	34	15.7	33	15.3	22	10.2	0	0.0	216	100.0
Inverell	147	56.1	0	0.0	13	5.0	10	3.8	71	27.1	21	8.0	0	0.0	262	100.0
Moree	167	74.9	0	0.0	3	1.3	6	2.7	27	12.1	20	9.0	0	0.0	223	100.0
Mudgee	155	65.7	0	0.0	0	0.0	16	6.8	36	15.3	29	12.3	0	0.0	236	100.0
Bathurst Base	388	65.2	2	0.3	25	4.2	14	2.4	84	14.1	82	13.8	0	0.0	595	100.0
Bega	153	64.6	0	0.0	18	7.6	7	3.0	30	12.7	29	12.2	0	0.0	237	100.0
Moruya	219	64.2	1	0.3	9	2.6	26	7.6	54	15.8	32	9.4	0	0.0	341	100.0
Queanbeyan	215	66.4	0	0.0	7	2.2	33	10.2	28	8.6	39	12.0	2	0.6	324	100.0
Young	154	73.3	0	0.0	3	1.4	10	4.8	21	10.0	22	10.5	0	0.0	210	100.0
Bowral	390	68.1	2	0.3	34	5.9	42	7.3	61	10.6	44	7.7	0	0.0	573	100.0
Shoalhaven	531	60.1	3	0.3	36	4.1	30	3.4	174	19.7	110	12.4	0	0.0	884	100.0
Broken Hill Base	142	55.7	3	1.2	8	3.1	12	4.7	41	16.1	49	19.2	0	0.0	255	100.0
Other hospitals	1208	68.7	4	0.2	15	0.9	87	4.9	278	15.8	165	9.4	2	0.1	1759	100.0
<b>TOTAL</b>	<b>4637</b>	<b>65.7</b>	<b>19</b>	<b>0.3</b>	<b>182</b>	<b>2.6</b>	<b>381</b>	<b>5.4</b>	<b>1052</b>	<b>14.9</b>	<b>781</b>	<b>11.1</b>	<b>4</b>	<b>0.1</b>	<b>7056</b>	<b>100.0</b>
<b>Level 2</b>																
<b>TOTAL</b>	<b>1099</b>	<b>88.1</b>	<b>5</b>	<b>0.4</b>	<b>2</b>	<b>0.2</b>	<b>54</b>	<b>4.3</b>	<b>47</b>	<b>3.8</b>	<b>38</b>	<b>3.0</b>	<b>3</b>	<b>0.2</b>	<b>1248</b>	<b>100.0</b>
<b>Private</b>																
Mater, North Sydney	925	37.6	2	0.1	80	3.2	327	13.3	757	30.7	372	15.1	0	0.0	2463	100.0
North Shore Private	1049	39.3	5	0.2	79	3.0	274	10.3	865	32.4	399	14.9	0	0.0	2671	100.0
Sydney Adventist	1086	52.1	3	0.1	71	3.4	169	8.1	504	24.2	252	12.1	0	0.0	2085	100.0
North Gosford Private	297	38.8	1	0.1	27	3.5	76	9.9	229	29.9	134	17.5	2	0.3	766	100.0
Hurstville Community	400	42.2	0	0.0	20	2.1	145	15.3	237	25.0	145	15.3	0	0.0	947	100.0
Kareena Private	248	39.6	3	0.5	34	5.4	55	8.8	216	34.5	70	11.2	0	0.0	626	100.0
St. George Private	653	38.8	1	0.1	89	5.3	183	10.9	497	29.5	261	15.5	0	0.0	1684	100.0
Prince of Wales Private	951	38.3	1	0.0	97	3.9	264	10.6	799	32.2	363	14.6	8	0.3	2483	100.0
Norwest Private	867	50.6	2	0.1	113	6.6	193	11.3	322	18.8	216	12.6	0	0.0	1713	100.0
Sydney Southwest Private	513	52.3	3	0.3	20	2.0	110	11.2	244	24.9	91	9.3	0	0.0	981	100.0
Nepean Private	468	53.6	3	0.3	27	3.1	45	5.2	218	25.0	112	12.8	0	0.0	873	100.0
Westmead Private	975	46.1	6	0.3	163	7.7	170	8.0	518	24.5	285	13.5	0	0.0	2117	100.0
Figtree Private	468	45.6	0	0.0	18	1.8	149	14.5	282	27.5	109	10.6	0	0.0	1026	100.0
Newcastle Private	912	48.3	5	0.3	32	1.7	228	12.1	474	25.1	239	12.6	0	0.0	1890	100.0
Calvary, Wagga Wagga	279	46.7	1	0.2	28	4.7	72	12.1	150	25.1	64	10.7	3	0.5	597	100.0
Other hospitals	97	46.0	0	0.0	18	8.5	6	2.8	66	31.3	24	11.4	0	0.0	211	100.0
<b>TOTAL</b>	<b>10188</b>	<b>44.0</b>	<b>36</b>	<b>0.2</b>	<b>916</b>	<b>4.0</b>	<b>2466</b>	<b>10.7</b>	<b>6378</b>	<b>27.6</b>	<b>3136</b>	<b>13.6</b>	<b>13</b>	<b>0.1</b>	<b>23133</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>54774</b>	<b>57.7</b>	<b>332</b>	<b>0.3</b>	<b>3843</b>	<b>4.0</b>	<b>7074</b>	<b>7.4</b>	<b>16849</b>	<b>17.7</b>	<b>12099</b>	<b>12.7</b>	<b>25</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually. Maternity 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 births at home assisted by independent midwives and births at level 1 hospitals.

## Pain relief

Table 37 shows type of pain relief provided to women during labour or delivery for Local Health Districts, and Table 38 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

In addition to the types of pain relief shown in the tables, in 2010 a further 24,694 (26.0%) women were reported to have received local anaesthetic to the perineum, and 782 (0.8%) received a pudendal block.

**Table 37. Pain relief by Local Health District of hospital, NSW 2010**

Local Health District	Pain relief											
	Epidural-spinal##		General anaesthetic		IM narcotics		Nitrous oxide		Nil		Total#	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	3421	49.6	368	5.3	720	10.4	2911	42.2	838	12.1	6900	100.0
South Western Sydney	2852	27.8	459	4.5	2767	27.0	5010	48.9	1538	15.0	10254	100.0
South Eastern Sydney	3883	49.7	182	2.3	1052	13.5	3418	43.8	729	9.3	7807	100.0
Illawarra Shoalhaven	1270	39.6	118	3.7	431	13.4	1706	53.2	386	12.0	3208	100.0
Western Sydney	3970	42.7	399	4.3	1419	15.3	4420	47.5	559	6.0	9296	100.0
Nepean Blue Mountains	2039	43.1	305	6.4	947	20.0	2416	51.0	407	8.6	4733	100.0
Northern Sydney	2473	49.2	171	3.4	709	14.1	2246	44.6	391	7.8	5031	100.0
Central Coast	1224	45.8	135	5.1	567	21.2	1227	45.9	305	11.4	2671	100.0
Hunter New England	2950	32.8	490	5.4	1889	21.0	4277	47.5	1122	12.5	9007	100.0
Northern NSW	1290	35.8	96	2.7	540	15.0	1661	46.1	700	19.4	3600	100.0
Mid North Coast	744	33.1	89	4.0	442	19.7	1068	47.5	369	16.4	2248	100.0
Southern NSW	390	28.5	49	3.6	230	16.8	725	53.0	296	21.6	1369	100.0
Murrumbidgee	638	32.9	55	2.8	603	31.1	988	51.0	293	15.1	1938	100.0
Western NSW	1091	32.2	172	5.1	798	23.6	1710	50.5	437	12.9	3383	100.0
Far West	99	38.8	14	5.5	55	21.6	102	40.0	37	14.5	255	100.0
Private Hospitals	15811	68.4	870	3.8	1951	8.4	7297	31.5	960	4.2	23132	100.0
<b>TOTAL NSW*</b>	<b>44145</b>	<b>46.5</b>	<b>3972</b>	<b>4.2</b>	<b>15121</b>	<b>15.9</b>	<b>41185</b>	<b>43.4</b>	<b>9505</b>	<b>10.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

## The category 'Epidural-spinal' includes epidural, spinal, combined epidural and spinal, and caudal pain relief.

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

**Table 38. Pain relief by hospital and maternity service level, NSW 2010#**

Maternity service level-hospital	Pain relief											
	Epidural-spinal*		General anaesthetic		IM narcotics		Nitrous oxide		Nil		Total##	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Level 6</b>												
Royal Prince Alfred	2780	53.3	290	5.6	531	10.2	2092	40.1	626	12.0	5216	100.0
Royal North Shore	1315	55.9	84	3.6	287	12.2	1118	47.5	103	4.4	2352	100.0
Royal Hospital for Women	2269	57.0	60	1.5	571	14.4	1456	36.6	356	8.9	3978	100.0
Liverpool	1088	36.3	134	4.5	1107	36.9	1155	38.5	299	10.0	3001	100.0
Nepean	1579	44.5	241	6.8	704	19.9	1890	53.3	257	7.2	3545	100.0
Westmead	2460	50.3	207	4.2	757	15.5	2145	43.8	164	3.4	4894	100.0
John Hunter	1345	36.2	276	7.4	988	26.6	1751	47.1	337	9.1	3720	100.0
<b>TOTAL</b>	<b>12836</b>	<b>48.1</b>	<b>1292</b>	<b>4.8</b>	<b>4945</b>	<b>18.5</b>	<b>11607</b>	<b>43.5</b>	<b>2142</b>	<b>8.0</b>	<b>26706</b>	<b>100.0</b>
<b>Level 5</b>												
Gosford	1224	49.0	134	5.4	561	22.5	1165	46.7	246	9.9	2496	100.0
St. George	1138	44.3	82	3.2	345	13.4	1305	50.8	237	9.2	2567	100.0
Blacktown	1154	37.5	146	4.7	446	14.5	1508	49.1	226	7.4	3074	100.0
Coffs Harbour	380	35.5	57	5.3	147	13.7	481	45.0	154	14.4	1070	100.0
Lismore Base	573	44.5	39	3.0	191	14.8	565	43.9	166	12.9	1288	100.0
Tweed Heads	514	34.8	35	2.4	246	16.6	781	52.8	259	17.5	1479	100.0
Port Macquarie Base	290	35.4	26	3.2	204	24.9	394	48.0	131	16.0	820	100.0
Wollongong	898	40.7	79	3.6	198	9.0	1260	57.1	221	10.0	2206	100.0
Maitland	598	35.9	74	4.4	204	12.3	844	50.7	218	13.1	1665	100.0
Wagga Wagga Base	290	40.7	19	2.7	195	27.3	333	46.7	108	15.1	713	100.0
<b>TOTAL</b>	<b>7059</b>	<b>40.6</b>	<b>691</b>	<b>4.0</b>	<b>2737</b>	<b>15.7</b>	<b>8636</b>	<b>49.7</b>	<b>1966</b>	<b>11.3</b>	<b>17378</b>	<b>100.0</b>
<b>Level 4</b>												
Canterbury	641	38.1	78	4.6	189	11.2	819	48.6	212	12.6	1684	100.0
Hornsby	584	45.8	52	4.1	188	14.7	584	45.8	105	8.2	1275	100.0
Manly	574	44.6	35	2.7	230	17.9	502	39.0	136	10.6	1288	100.0
Sutherland	476	37.7	40	3.2	136	10.8	657	52.1	136	10.8	1262	100.0
Auburn	356	26.8	46	3.5	216	16.3	767	57.8	169	12.7	1328	100.0
Fairfield	277	15.0	103	5.6	412	22.3	867	47.0	390	21.1	1846	100.0
Campbelltown	770	28.1	116	4.2	626	22.8	1485	54.1	504	18.4	2744	100.0



Maternity service level–hospital	Pain relief											
	Epidural–spinal*		General anaesthetic		IM narcotics		Nitrous oxide		Nil		Total##	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bankstown-Lidcombe	557	26.7	82	3.9	399	19.1	1192	57.0	263	12.6	2090	100.0
Hawkesbury	294	37.1	54	6.8	171	21.6	359	45.3	84	10.6	792	100.0
Grafton Base	154	33.1	21	4.5	89	19.1	236	50.8	77	16.6	465	100.0
Tamworth Base	394	43.3	28	3.1	83	9.1	456	50.1	100	11.0	910	100.0
Manning Base	200	27.8	44	6.1	240	33.3	373	51.8	102	14.2	720	100.0
Dubbo Base	395	32.7	76	6.3	356	29.5	594	49.2	123	10.2	1207	100.0
Orange Base	331	38.5	36	4.2	209	24.3	466	54.2	86	10.0	859	100.0
Goulburn Base	90	31.4	11	3.8	70	24.4	186	64.8	18	6.3	287	100.0
Griffith Base	156	34.0	15	3.3	221	48.1	247	53.8	46	10.0	459	100.0
<b>TOTAL</b>	<b>6249</b>	<b>32.5</b>	<b>837</b>	<b>4.4</b>	<b>3835</b>	<b>20.0</b>	<b>9790</b>	<b>50.9</b>	<b>2551</b>	<b>13.3</b>	<b>19216</b>	<b>100.0</b>
<b>Level 3</b>												
Blue Mountains	86	40.6	9	4.2	34	16.0	90	42.5	29	13.7	212	100.0
Kempsey	74	24.4	6	2.0	82	27.1	167	55.1	57	18.8	303	100.0
Armidale	124	29.1	15	3.5	85	20.0	211	49.5	42	9.9	426	100.0
Gunnedah	59	27.3	0	0.0	62	28.7	95	44.0	27	12.5	216	100.0
Inverell	89	34.0	4	1.5	51	19.5	94	35.9	49	18.7	262	100.0
Moree	48	21.5	12	5.4	33	14.8	101	45.3	50	22.4	223	100.0
Mudgee	68	28.8	10	4.2	51	21.6	134	56.8	29	12.3	236	100.0
Bathurst Base	186	31.3	29	4.9	73	12.3	260	43.7	111	18.7	595	100.0
Bega	67	28.3	9	3.8	49	20.7	129	54.4	50	21.1	237	100.0
Moruya	104	30.5	15	4.4	75	22.0	166	48.7	73	21.4	341	100.0
Queanbeyan	84	25.9	10	3.1	28	8.6	160	49.4	95	29.3	324	100.0
Young	47	22.4	2	1.0	76	36.2	128	61.0	34	16.2	210	100.0
Bowral	160	27.9	24	4.2	223	38.9	311	54.3	82	14.3	573	100.0
Shoalhaven	351	39.7	38	4.3	198	22.4	398	45.0	138	15.6	884	100.0
Broken Hill Base	99	38.8	14	5.5	55	21.6	102	40.0	37	14.5	255	100.0
Other hospitals	429	24.4	82	4.7	313	17.8	812	46.2	405	23.0	1759	100.0
<b>TOTAL</b>	<b>2075</b>	<b>29.4</b>	<b>279</b>	<b>4.0</b>	<b>1488</b>	<b>21.1</b>	<b>3358</b>	<b>47.6</b>	<b>1308</b>	<b>18.5</b>	<b>7056</b>	<b>100.0</b>
<b>Level 2</b>												
<b>TOTAL</b>	<b>104</b>	<b>8.3</b>	<b>3</b>	<b>0.2</b>	<b>158</b>	<b>12.7</b>	<b>447</b>	<b>35.8</b>	<b>411</b>	<b>32.9</b>	<b>1248</b>	<b>100.0</b>
<b>Private</b>												
Mater, North Sydney	1713	69.5	29	1.2	288	11.7	769	31.2	103	4.2	2463	100.0
North Shore Private	1954	73.2	43	1.6	86	3.2	737	27.6	99	3.7	2671	100.0
Sydney Adventist	1437	68.9	36	1.7	172	8.2	715	34.3	49	2.4	2085	100.0
North Gosford Private	430	56.1	73	9.5	72	9.4	211	27.5	70	9.1	766	100.0
Hurstville Community	694	73.3	17	1.8	73	7.7	262	27.7	50	5.3	947	100.0
Kareena Private	518	82.7	9	1.4	24	3.8	94	15.0	23	3.7	626	100.0
St. George Private	1359	80.7	34	2.0	70	4.2	444	26.4	60	3.6	1684	100.0
Prince of Wales Private	1765	71.1	353	14.2	44	1.8	621	25.0	91	3.7	2483	100.0
Norwest Private	1139	66.5	112	6.5	108	6.3	432	25.2	83	4.8	1713	100.0
Sydney Southwest Private	515	52.5	19	1.9	269	27.4	459	46.8	43	4.4	981	100.0
Nepean Private	465	53.3	19	2.2	183	21.0	422	48.3	43	4.9	873	100.0
Westmead Private	1410	66.6	54	2.6	179	8.5	769	36.3	62	2.9	2117	100.0
Figtree Private	744	72.5	17	1.7	16	1.6	298	29.0	40	3.9	1026	100.0
Newcastle Private	1220	64.6	36	1.9	252	13.3	757	40.1	61	3.2	1890	100.0
Calvary, Wagga Wagga	333	55.8	11	1.8	105	17.6	222	37.2	69	11.6	597	100.0
Other hospitals	115	54.5	8	3.8	10	4.7	85	40.3	15	7.1	211	100.0
<b>TOTAL</b>	<b>15811</b>	<b>68.3</b>	<b>870</b>	<b>3.8</b>	<b>1951</b>	<b>8.4</b>	<b>7297</b>	<b>31.5</b>	<b>960</b>	<b>4.2</b>	<b>23132</b>	<b>100.0</b>
<b>TOTAL NSW**</b>	<b>44145</b>	<b>46.5</b>	<b>3972</b>	<b>4.2</b>	<b>15121</b>	<b>15.9</b>	<b>41184</b>	<b>43.4</b>	<b>9498</b>	<b>10.0</b>	<b>94985</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 per cent as one woman may have more than one type of analgesia.  
\* The category 'Epidural-spinal' includes epidural, spinal, combined epidural and spinal, and caudal pain relief.  
\*\* Total NSW includes births at home assisted by independent midwives and births at level 1 hospitals.

## Perineal status

Table 39 shows the perineal status in vaginal births for Local Health Districts, and Table 40 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

In 2010, there were 1,633 cases of third degree tear and 110 cases of fourth degree tear reported among women who gave birth vaginally in 2010, including tears associated with an episiotomy.

**Table 39. Perineal status among vaginal births by Local Health District of hospital, NSW 2010**

Local Health District	Perineal status																	
	Intact		1st degree tear/graze		2nd degree tear		3rd or 4th degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	825	17.2	1128	23.5	1785	37.2	174	3.6	538	11.2	179	3.7	168	3.5	0	0.0	4797	100.0
South Western Sydney	2187	27.4	1916	24.0	2172	27.2	115	1.4	1169	14.6	140	1.8	284	3.6	0	0.0	7983	100.0
South Eastern Sydney	1051	18.6	1602	28.3	1721	30.4	148	2.6	811	14.3	261	4.6	60	1.1	0	0.0	5654	100.0
Illawarra Shoalhaven	709	30.1	876	37.2	485	20.6	25	1.1	163	6.9	70	3.0	25	1.1	0	0.0	2353	100.0
Western Sydney	1309	19.3	2059	30.4	1681	24.8	97	1.4	1227	18.1	315	4.7	78	1.2	0	0.0	6766	100.0
Nepean Blue Mountains	804	24.8	1179	36.3	697	21.5	44	1.4	384	11.8	87	2.7	49	1.5	0	0.0	3244	100.0
Northern Sydney	598	17.3	1090	31.4	1059	30.6	94	2.7	392	11.3	210	6.1	23	0.7	0	0.0	3466	100.0
Central Coast	350	19.1	802	43.8	396	21.6	47	2.6	116	6.3	94	5.1	25	1.4	0	0.0	1830	100.0
Hunter New England	1688	25.3	2693	40.3	1320	19.8	136	2.0	525	7.9	244	3.7	70	1.0	0	0.0	6676	100.0
Northern NSW	867	31.7	822	30.1	725	26.5	45	1.6	147	5.4	71	2.6	56	2.0	0	0.0	2733	100.0
Mid North Coast	551	33.0	470	28.1	454	27.2	24	1.4	101	6.0	51	3.1	20	1.2	0	0.0	1671	100.0
Southern NSW	371	35.7	243	23.4	234	22.5	16	1.5	122	11.7	21	2.0	32	3.1	1	0.1	1040	100.0
Murrumbidgee	560	40.8	395	28.8	259	18.9	8	0.6	118	8.6	19	1.4	12	0.9	0	0.0	1371	100.0
Western NSW	740	29.5	935	37.3	502	20.0	43	1.7	183	7.3	91	3.6	15	0.6	1	0.0	2510	100.0
Far West	67	40.6	53	32.1	24	14.5	1	0.6	18	10.9	2	1.2	0	0.0	0	0.0	165	100.0
Private Hospitals	2595	19.1	2596	19.1	4335	31.9	110	0.8	3472	25.5	209	1.5	286	2.1	2	0.0	13605	100.0
<b>TOTAL*</b>	<b>15343</b>	<b>23.2</b>	<b>18909</b>	<b>28.6</b>	<b>17874</b>	<b>27.1</b>	<b>1129</b>	<b>1.7</b>	<b>9488</b>	<b>14.4</b>	<b>2065</b>	<b>3.1</b>	<b>1205</b>	<b>1.8</b>	<b>10</b>	<b>0.0</b>	<b>66023</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

**Table 40. Perineal status among vaginal births by hospital and maternity service level, NSW 2010#**

Maternity service level–hospital	Perineal status																		
	Intact		1st degree tear/graze		2nd degree tear		3rd or 4th degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated		TOTAL		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<b>Level 6</b>																			
Royal Prince Alfred	539	15.1	884	24.8	1380	38.7	120	3.4	405	11.4	133	3.7	103	2.9	0	0.0	3564	100.0	
Royal North Shore	232	15.4	413	27.4	415	27.5	43	2.9	256	17.0	141	9.4	8	0.5	0	0.0	1508	100.0	
Royal Hospital for Women	427	15.6	767	28.0	821	30.0	70	2.6	500	18.3	119	4.3	32	1.2	0	0.0	2736	100.0	
Liverpool	604	26.2	498	21.6	620	26.9	46	2.0	374	16.2	48	2.1	115	5.0	0	0.0	2305	100.0	
Nepean	574	23.4	921	37.5	508	20.7	33	1.3	317	12.9	65	2.6	37	1.5	0	0.0	2455	100.0	
Westmead	662	19.2	905	26.2	921	26.7	49	1.4	685	19.9	173	5.0	55	1.6	0	0.0	3450	100.0	
John Hunter	588	21.6	1087	39.9	579	21.3	82	3.0	220	8.1	146	5.4	21	0.8	0	0.0	2723	100.0	
<b>TOTAL</b>	<b>3626</b>	<b>19.3</b>	<b>5475</b>	<b>29.2</b>	<b>5244</b>	<b>28.0</b>	<b>443</b>	<b>2.4</b>	<b>2757</b>	<b>14.7</b>	<b>825</b>	<b>4.4</b>	<b>371</b>	<b>2.0</b>	<b>0</b>	<b>0.0</b>	<b>18741</b>	<b>100.0</b>	
<b>Level 5</b>																			
Gosford	311	18.8	703	42.5	361	21.8	47	2.8	115	6.9	93	5.6	25	1.5	0	0.0	1655	100.0	
St. George	378	19.6	506	26.2	616	31.9	61	3.2	238	12.3	116	6.0	18	0.9	0	0.0	1933	100.0	
Blacktown	354	15.6	792	35.0	566	25.0	30	1.3	407	18.0	96	4.2	18	0.8	0	0.0	2263	100.0	
Coffs Harbour	194	25.6	289	38.1	201	26.5	10	1.3	39	5.1	19	2.5	6	0.8	0	0.0	758	100.0	
Lismore Base	275	29.6	300	32.3	233	25.1	21	2.3	58	6.2	37	4.0	6	0.6	0	0.0	930	100.0	
Tweed Heads	316	27.3	332	28.7	353	30.5	21	1.8	68	5.9	29	2.5	37	3.2	0	0.0	1156	100.0	
Port Macquarie Base	215	35.0	114	18.5	189	30.7	10	1.6	51	8.3	27	4.4	9	1.5	0	0.0	615	100.0	
Wollongong	472	28.6	600	36.3	375	22.7	20	1.2	104	6.3	61	3.7	19	1.2	0	0.0	1651	100.0	
Maitland	258	21.9	495	42.0	262	22.2	27	2.3	88	7.5	31	2.6	17	1.4	0	0.0	1178	100.0	
Wagga Wagga Base	169	36.3	152	32.7	96	20.6	3	0.6	35	7.5	6	1.3	4	0.9	0	0.0	465	100.0	
<b>TOTAL</b>	<b>2942</b>	<b>23.3</b>	<b>4283</b>	<b>34.0</b>	<b>3252</b>	<b>25.8</b>	<b>250</b>	<b>2.0</b>	<b>1203</b>	<b>9.5</b>	<b>515</b>	<b>4.1</b>	<b>159</b>	<b>1.3</b>	<b>0</b>	<b>0.0</b>	<b>12604</b>	<b>100.0</b>	
<b>Level 4</b>																			
Canterbury	286	23.2	244	19.8	405	32.8	54	4.4	133	10.8	46	3.7	65	5.3	0	0.0	1233	100.0	
Hornsby	175	19.1	286	31.3	315	34.5	25	2.7	75	8.2	31	3.4	7	0.8	0	0.0	914	100.0	
Manly	167	18.0	338	36.4	291	31.4	25	2.7	61	6.6	38	4.1	8	0.9	0	0.0	928	100.0	
Sutherland	246	25.0	329	33.4	284	28.8	17	1.7	73	7.4	26	2.6	10	1.0	0	0.0	985	100.0	
Auburn	293	27.8	362	34.4	194	18.4	18	1.7	135	12.8	46	4.4	5	0.5	0	0.0	1053	100.0	
Fairfield	478	31.8	353	23.5	410	27.3	11	0.7	206	13.7	22	1.5	24	1.6	0	0.0	1504	100.0	
Campbelltown	604	29.2	510	24.6	595	28.7	40	1.9	252	12.2	13	0.6	56	2.7	0	0.0	2070	100.0	

Maternity service level– hospital	Perineal status																	
	Intact		1st degree tear/graze		2nd degree tear		3rd or 4th degree tear		Episiotomy		Combined tear and episiotomy		Other		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bankstown-Lidcombe	352	21.5	430	26.3	434	26.5	14	0.9	290	17.7	52	3.2	64	3.9	0	0.0	1636	100.0
Hawkesbury	130	25.2	172	33.3	132	25.6	7	1.4	54	10.5	16	3.1	5	1.0	0	0.0	516	100.0
Grafton Base	144	43.2	88	26.4	75	22.5	2	0.6	16	4.8	3	0.9	5	1.5	0	0.0	333	100.0
Tamworth Base	171	25.1	278	40.8	121	17.8	15	2.2	60	8.8	25	3.7	11	1.6	0	0.0	681	100.0
Manning Base	155	29.7	216	41.4	101	19.3	6	1.1	34	6.5	5	1.0	5	1.0	0	0.0	522	100.0
Dubbo Base	299	32.5	320	34.7	170	18.5	8	0.9	94	10.2	24	2.6	6	0.7	0	0.0	921	100.0
Orange Base	144	23.6	258	42.2	128	20.9	14	2.3	34	5.6	30	4.9	3	0.5	0	0.0	611	100.0
Goulburn Base	57	27.3	11	5.3	42	20.1	3	1.4	75	35.9	8	3.8	13	6.2	0	0.0	209	100.0
Griffith Base	121	36.3	118	35.4	50	15.0	2	0.6	35	10.5	5	1.5	2	0.6	0	0.0	333	100.0
<b>TOTAL</b>	<b>3822</b>	<b>26.5</b>	<b>4313</b>	<b>29.8</b>	<b>3747</b>	<b>25.9</b>	<b>261</b>	<b>1.8</b>	<b>1627</b>	<b>11.3</b>	<b>390</b>	<b>2.7</b>	<b>289</b>	<b>2.0</b>	<b>0</b>	<b>0.0</b>	<b>14449</b>	<b>100.0</b>
<b>Level 3</b>																		
Blue Mountains	47	30.9	52	34.2	38	25.0	4	2.6	5	3.3	3	2.0	3	2.0	0	0.0	152	100.0
Kempsey	111	45.7	59	24.3	52	21.4	4	1.6	8	3.3	5	2.1	4	1.6	0	0.0	243	100.0
Armidale	98	31.1	115	36.5	49	15.6	0	0.0	39	12.4	12	3.8	2	0.6	0	0.0	315	100.0
Gunnedah	57	35.4	44	27.3	28	17.4	0	0.0	19	11.8	9	5.6	4	2.5	0	0.0	161	100.0
Inverell	65	38.2	58	34.1	12	7.1	0	0.0	32	18.8	3	1.8	0	0.0	0	0.0	170	100.0
Moree	60	34.1	72	40.9	34	19.3	1	0.6	5	2.8	3	1.7	1	0.6	0	0.0	176	100.0
Mudgee	45	26.3	66	38.6	44	25.7	0	0.0	10	5.8	6	3.5	0	0.0	0	0.0	171	100.0
Bathurst Base	109	25.4	184	42.9	85	19.8	6	1.4	28	6.5	12	2.8	5	1.2	0	0.0	429	100.0
Bega	59	33.1	51	28.7	40	22.5	4	2.2	20	11.2	3	1.7	1	0.6	0	0.0	178	100.0
Moruya	114	44.7	63	24.7	44	17.3	4	1.6	16	6.3	5	2.0	8	3.1	1	0.4	255	100.0
Queanbeyan	69	27.1	86	33.7	76	29.8	5	2.0	6	2.4	4	1.6	9	3.5	0	0.0	255	100.0
Young	77	46.1	29	17.4	42	25.1	1	0.6	12	7.2	3	1.8	3	1.8	0	0.0	167	100.0
Bowral	149	31.8	125	26.7	113	24.1	4	0.9	47	10.0	5	1.1	25	5.3	0	0.0	468	100.0
Shoalhaven	194	32.3	243	40.5	93	15.5	3	0.5	53	8.8	8	1.3	6	1.0	0	0.0	600	100.0
Broken Hill Base	67	40.6	53	32.1	24	14.5	1	0.6	18	10.9	2	1.2	0	0.0	0	0.0	165	100.0
Other hospitals	538	40.9	397	30.2	232	17.7	19	1.4	75	5.7	35	2.7	18	1.4	0	0.0	1314	100.0
<b>TOTAL</b>	<b>1859</b>	<b>35.6</b>	<b>1697</b>	<b>32.5</b>	<b>1006</b>	<b>19.3</b>	<b>56</b>	<b>1.1</b>	<b>393</b>	<b>7.5</b>	<b>118</b>	<b>2.3</b>	<b>89</b>	<b>1.7</b>	<b>1</b>	<b>0.0</b>	<b>5219</b>	<b>100.0</b>
<b>Level 2</b>																		
<b>TOTAL</b>	<b>398</b>	<b>34.3</b>	<b>465</b>	<b>40.1</b>	<b>244</b>	<b>21.0</b>	<b>6</b>	<b>0.5</b>	<b>31</b>	<b>2.7</b>	<b>7</b>	<b>0.6</b>	<b>9</b>	<b>0.8</b>	<b>0</b>	<b>0.0</b>	<b>1160</b>	<b>100.0</b>
<b>Private</b>																		
Mater, North Sydney	204	15.3	225	16.9	384	28.8	4	0.3	413	31.0	48	3.6	56	4.2	0	0.0	1334	100.0
North Shore Private	220	15.6	286	20.3	475	33.8	6	0.4	391	27.8	12	0.9	17	1.2	0	0.0	1407	100.0
Sydney Adventist	242	18.2	372	28.0	382	28.7	6	0.5	306	23.0	11	0.8	10	0.8	0	0.0	1329	100.0
North Gosford Private	117	29.2	72	18.0	103	25.7	3	0.7	84	20.9	9	2.2	13	3.2	0	0.0	401	100.0
Hurstville Community	87	15.4	129	22.8	144	25.5	5	0.9	170	30.1	21	3.7	9	1.6	0	0.0	565	100.0
Kareena Private	91	26.8	63	18.5	128	37.6	3	0.9	55	16.2	0	0.0	0	0.0	0	0.0	340	100.0
St. George Private	179	19.3	196	21.2	315	34.0	14	1.5	214	23.1	2	0.2	6	0.6	0	0.0	926	100.0
Prince of Wales Private	267	20.3	240	18.3	424	32.3	6	0.5	305	23.2	34	2.6	35	2.7	2	0.2	1313	100.0
Norwest Private	246	20.9	185	15.7	445	37.9	10	0.9	221	18.8	16	1.4	52	4.4	0	0.0	1175	100.0
Sydney Southwest Private	129	20.0	127	19.7	136	21.1	5	0.8	213	33.0	12	1.9	24	3.7	0	0.0	646	100.0
Nepean Private	109	20.1	57	10.5	184	33.9	5	0.9	161	29.7	6	1.1	21	3.9	0	0.0	543	100.0
Westmead Private	235	17.9	263	20.0	340	25.9	6	0.5	446	33.9	8	0.6	16	1.2	0	0.0	1314	100.0
Figtree Private	102	16.1	74	11.7	243	38.3	6	0.9	202	31.8	3	0.5	5	0.8	0	0.0	635	100.0
Newcastle Private	269	22.9	240	20.4	448	38.1	20	1.7	187	15.9	0	0.0	13	1.1	0	0.0	1177	100.0
Calvary, Wagga Wagga	77	20.3	44	11.6	149	39.2	10	2.6	71	18.7	24	6.3	5	1.3	0	0.0	380	100.0
Other hospitals	22	18.2	23	19.0	35	28.9	1	0.8	33	27.3	3	2.5	4	3.3	0	0.0	121	100.0
<b>TOTAL</b>	<b>2595</b>	<b>19.1</b>	<b>2596</b>	<b>19.1</b>	<b>4335</b>	<b>31.9</b>	<b>110</b>	<b>0.8</b>	<b>3472</b>	<b>25.5</b>	<b>209</b>	<b>1.5</b>	<b>286</b>	<b>2.1</b>	<b>2</b>	<b>0.0</b>	<b>13605</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>15343</b>	<b>23.2</b>	<b>18909</b>	<b>28.6</b>	<b>17874</b>	<b>27.1</b>	<b>1129</b>	<b>1.7</b>	<b>9488</b>	<b>14.4</b>	<b>2065</b>	<b>3.1</b>	<b>1205</b>	<b>1.8</b>	<b>10</b>	<b>0.0</b>	<b>66023</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 births at home assisted by independent midwives and births at level 1 hospitals.

## Birth weight

Table 41 shows the birth weight of babies for Local Health Districts, and Table 42 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 41. Births by birth weight and Local Health District of hospital, NSW 2010**

Local Health District	Less than 1,000		1,000–1,499		1,500–2,499		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Sydney	75	1.1	48	0.7	365	5.2	6517	93.0	5	0.1	7010
South Western Sydney	96	0.9	68	0.7	580	5.6	9646	92.8	7	0.1	10397	100.0
South Eastern Sydney	63	0.8	59	0.7	397	5.0	7436	93.4	6	0.1	7961	100.0
Illawarra Shoalhaven	19	0.6	10	0.3	161	4.9	3065	94.1	1	0.0	3256	100.0
Western Sydney	78	0.8	90	1.0	561	5.9	8715	92.2	6	0.1	9450	100.0
Nepean Blue Mountains	35	0.7	49	1.0	299	6.2	4448	92.0	4	0.1	4835	100.0
Northern Sydney	44	0.9	77	1.5	255	5.0	4738	92.6	3	0.1	5117	100.0
Central Coast	12	0.4	7	0.3	137	5.1	2541	94.2	1	0.0	2698	100.0
Hunter New England	97	1.1	85	0.9	575	6.3	8424	91.7	5	0.1	9186	100.0
Northern NSW	22	0.6	10	0.3	144	4.0	3462	95.1	3	0.1	3641	100.0
Mid North Coast	18	0.8	11	0.5	124	5.4	2127	93.2	1	0.0	2281	100.0
Southern NSW	1	0.1	2	0.1	45	3.3	1330	96.4	2	0.1	1380	100.0
Murrumbidgee	4	0.2	5	0.3	96	4.9	1851	94.5	2	0.1	1958	100.0
Western NSW	14	0.4	5	0.1	160	4.7	3241	94.7	2	0.1	3422	100.0
Far West	4	1.6	0	0.0	14	5.5	238	93.0	0	0.0	256	100.0
Private Hospitals	36	0.2	15	0.1	828	3.5	22586	96.2	11	0.0	23476	100.0
<b>TOTAL*</b>	<b>618</b>	<b>0.6</b>	<b>541</b>	<b>0.6</b>	<b>4741</b>	<b>4.9</b>	<b>90530</b>	<b>93.8</b>	<b>59</b>	<b>0.1</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

**Table 42. Births by birth weight, hospital and maternity service level, NSW 2010#**

Maternity service level–hospital	Less than 1,000		1,000–1,499		1,500–2,499		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	<b>Level 6</b>											
Royal Prince Alfred	65	1.2	48	0.9	308	5.8	4891	92.0	4	0.1	5316	100.0
Royal North Shore	39	1.6	74	3.1	190	7.8	2119	87.4	3	0.1	2425	100.0
Royal Hospital for Women	50	1.2	55	1.3	269	6.6	3720	90.7	6	0.1	4100	100.0
Liverpool	73	2.4	62	2.0	288	9.3	2656	86.2	3	0.1	3082	100.0
Nepean	33	0.9	49	1.3	265	7.3	3287	90.4	4	0.1	3638	100.0
Westmead	64	1.3	81	1.6	381	7.6	4486	89.4	5	0.1	5017	100.0
John Hunter	73	1.9	71	1.9	328	8.6	3344	87.5	5	0.1	3821	100.0
<b>TOTAL</b>	<b>397</b>	<b>1.4</b>	<b>440</b>	<b>1.6</b>	<b>2029</b>	<b>7.4</b>	<b>24503</b>	<b>89.4</b>	<b>30</b>	<b>0.1</b>	<b>27399</b>	<b>100.0</b>
<b>Level 5</b>												
Gosford	12	0.5	7	0.3	136	5.4	2367	93.8	1	0.0	2523	100.0
St. George	9	0.3	3	0.1	110	4.2	2477	95.3	0	0.0	2599	100.0
Blacktown	13	0.4	6	0.2	144	4.6	2936	94.7	1	0.0	3100	100.0
Coffs Harbour	7	0.6	6	0.6	54	5.0	1022	93.8	0	0.0	1089	100.0
Lismore Base	7	0.5	2	0.2	44	3.4	1253	95.9	1	0.1	1307	100.0
Tweed Heads	7	0.5	5	0.3	63	4.2	1420	94.9	1	0.1	1496	100.0
Port Macquarie Base	7	0.8	4	0.5	58	7.0	763	91.6	1	0.1	833	100.0
Wollongong	16	0.7	6	0.3	122	5.4	2095	93.5	1	0.0	2240	100.0
Maitland	8	0.5	3	0.2	65	3.8	1615	95.5	0	0.0	1691	100.0
Wagga Wagga Base	4	0.6	3	0.4	62	8.5	656	90.2	2	0.3	727	100.0
<b>TOTAL</b>	<b>90</b>	<b>0.5</b>	<b>45</b>	<b>0.3</b>	<b>858</b>	<b>4.9</b>	<b>16604</b>	<b>94.3</b>	<b>8</b>	<b>0.0</b>	<b>17605</b>	<b>100.0</b>
<b>Level 4</b>												
Canterbury	10	0.6	0	0.0	57	3.4	1626	96.0	1	0.1	1694	100.0
Hornsby	2	0.2	1	0.1	30	2.3	1246	97.4	0	0.0	1279	100.0
Manly	3	0.2	2	0.2	34	2.6	1258	97.0	0	0.0	1297	100.0
Sutherland	4	0.3	1	0.1	18	1.4	1239	98.2	0	0.0	1262	100.0
Auburn	1	0.1	3	0.2	36	2.7	1293	97.0	0	0.0	1333	100.0
Fairfield	7	0.4	0	0.0	56	3.0	1793	96.6	0	0.0	1856	100.0
Campbelltown	12	0.4	4	0.1	130	4.7	2626	94.7	0	0.0	2772	100.0

Table 42. (Continued)

Maternity service level– hospital	Less than 1,000		1,000–1,499		Birth weight 1,500–2,499		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Bankstown-Lidcombe	4	0.2	1	0.0	90	4.3	2009	95.3	4	0.2	2108
Hawkesbury	2	0.3	0	0.0	26	3.3	772	96.5	0	0.0	800	100.0
Grafton Base	8	1.7	3	0.6	28	6.0	431	91.7	0	0.0	470	100.0
Tamworth Base	4	0.4	0	0.0	76	8.1	858	91.5	0	0.0	938	100.0
Manning Base	7	1.0	4	0.5	38	5.2	685	93.3	0	0.0	734	100.0
Dubbo Base	6	0.5	2	0.2	64	5.2	1150	94.0	1	0.1	1223	100.0
Orange Base	5	0.6	2	0.2	58	6.6	807	92.4	1	0.1	873	100.0
Goulburn Base	0	0.0	1	0.3	14	4.8	277	94.9	0	0.0	292	100.0
Griffith Base	0	0.0	2	0.4	20	4.3	443	95.3	0	0.0	465	100.0
<b>TOTAL</b>	<b>75</b>	<b>0.4</b>	<b>26</b>	<b>0.1</b>	<b>775</b>	<b>4.0</b>	<b>18513</b>	<b>95.4</b>	<b>7</b>	<b>0.0</b>	<b>19396</b>	<b>100.0</b>
<b>Level 3</b>												
Blue Mountains	0	0.0	0	0.0	1	0.5	211	99.5	0	0.0	212	100.0
Kempsey	4	1.3	1	0.3	10	3.3	289	95.1	0	0.0	304	100.0
Armidale	0	0.0	2	0.5	28	6.5	400	93.0	0	0.0	430	100.0
Gunnedah	1	0.5	0	0.0	5	2.3	210	97.2	0	0.0	216	100.0
Inverell	0	0.0	2	0.8	8	3.0	255	96.2	0	0.0	265	100.0
Moree	0	0.0	2	0.9	8	3.6	215	95.6	0	0.0	225	100.0
Mudgee	1	0.4	1	0.4	5	2.1	229	97.0	0	0.0	236	100.0
Bathurst Base	1	0.2	0	0.0	23	3.8	579	96.0	0	0.0	603	100.0
Bega	0	0.0	0	0.0	7	3.0	230	97.0	0	0.0	237	100.0
Moruya	1	0.3	1	0.3	10	2.9	333	96.2	1	0.3	346	100.0
Queanbeyan	0	0.0	0	0.0	6	1.8	318	97.8	1	0.3	325	100.0
Young	0	0.0	0	0.0	5	2.4	205	97.6	0	0.0	210	100.0
Bowral	0	0.0	1	0.2	16	2.8	562	97.1	0	0.0	579	100.0
Shoalhaven	3	0.3	4	0.4	38	4.2	853	95.0	0	0.0	898	100.0
Broken Hill Base	4	1.6	0	0.0	14	5.5	238	93.0	0	0.0	256	100.0
Other hospitals	2	0.1	0	0.0	43	2.4	1716	97.4	0	0.0	1761	100.0
<b>TOTAL</b>	<b>17</b>	<b>0.2</b>	<b>14</b>	<b>0.2</b>	<b>227</b>	<b>3.2</b>	<b>6843</b>	<b>96.3</b>	<b>2</b>	<b>0.0</b>	<b>7103</b>	<b>100.0</b>
<b>Level 2</b>												
<b>TOTAL</b>	<b>2</b>	<b>0.2</b>	<b>0</b>	<b>0.0</b>	<b>21</b>	<b>1.7</b>	<b>1225</b>	<b>98.1</b>	<b>1</b>	<b>0.1</b>	<b>1249</b>	<b>100.0</b>
<b>Private</b>												
Mater, North Sydney	1	0.0	1	0.0	82	3.3	2414	96.6	0	0.0	2498	100.0
North Shore Private	11	0.4	5	0.2	119	4.4	2589	95.0	2	0.1	2726	100.0
Sydney Adventist	4	0.2	3	0.1	87	4.1	2022	95.5	1	0.0	2117	100.0
North Gosford Private	2	0.3	0	0.0	23	3.0	747	96.8	0	0.0	772	100.0
Hurstville Community	2	0.2	0	0.0	29	3.0	931	96.8	0	0.0	962	100.0
Kareena Private	0	0.0	1	0.2	31	4.9	606	95.0	0	0.0	638	100.0
St. George Private	0	0.0	1	0.1	62	3.6	1640	96.2	1	0.1	1704	100.0
Prince of Wales Private	0	0.0	0	0.0	76	3.0	2433	96.9	3	0.1	2512	100.0
Norwest Private	5	0.3	2	0.1	72	4.1	1656	95.4	0	0.0	1735	100.0
Sydney Southwest Private	0	0.0	0	0.0	30	3.0	964	96.8	2	0.2	996	100.0
Nepean Private	1	0.1	0	0.0	22	2.5	861	97.4	0	0.0	884	100.0
Westmead Private	4	0.2	0	0.0	88	4.1	2053	95.7	1	0.0	2146	100.0
Figtree Private	0	0.0	0	0.0	24	2.3	1019	97.7	0	0.0	1043	100.0
Newcastle Private	6	0.3	1	0.1	68	3.5	1848	96.0	1	0.1	1924	100.0
Calvary, Wagga Wagga	0	0.0	1	0.2	14	2.3	594	97.5	0	0.0	609	100.0
Other hospitals	0	0.0	0	0.0	1	0.5	210	99.5	0	0.0	211	100.0
<b>TOTAL</b>	<b>36</b>	<b>0.2</b>	<b>15</b>	<b>0.1</b>	<b>828</b>	<b>3.5</b>	<b>22586</b>	<b>96.2</b>	<b>11</b>	<b>0.0</b>	<b>23476</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>618</b>	<b>0.6</b>	<b>541</b>	<b>0.6</b>	<b>4741</b>	<b>4.9</b>	<b>90530</b>	<b>93.8</b>	<b>59</b>	<b>0.1</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 births at home assisted by independent midwives and births at level 1 hospitals.

## Gestational age

Table 43 shows the gestational age of babies for Local Health Districts, and Table 44 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 43. Births by gestational age and Local Health District of hospital, NSW 2010**

Local Health District	Gestational age										TOTAL	
	<32		32–33		34–36		37+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
Sydney	147	2.1	75	1.1	351	5.0	6437	91.8	0	0.0	7010	100.0
South Western Sydney	191	1.8	101	1.0	525	5.0	9580	92.1	0	0.0	10397	100.0
South Eastern Sydney	126	1.6	112	1.4	417	5.2	7306	91.8	0	0.0	7961	100.0
Illawarra Shoalhaven	30	0.9	25	0.8	194	6.0	3007	92.4	0	0.0	3256	100.0
Western Sydney	178	1.9	102	1.1	445	4.7	8725	92.3	0	0.0	9450	100.0
Nepean Blue Mountains	103	2.1	97	2.0	286	5.9	4348	89.9	1	0.0	4835	100.0
Northern Sydney	143	2.8	64	1.3	233	4.6	4677	91.4	0	0.0	5117	100.0
Central Coast	22	0.8	20	0.7	155	5.7	2500	92.7	1	0.0	2698	100.0
Hunter New England	217	2.4	132	1.4	561	6.1	8276	90.1	0	0.0	9186	100.0
Northern NSW	36	1.0	25	0.7	160	4.4	3420	93.9	0	0.0	3641	100.0
Mid North Coast	35	1.5	14	0.6	127	5.6	2103	92.2	2	0.1	2281	100.0
Southern NSW	2	0.1	5	0.4	35	2.5	1338	97.0	0	0.0	1380	100.0
Murrumbidgee	18	0.9	11	0.6	94	4.8	1835	93.7	0	0.0	1958	100.0
Western NSW	28	0.8	15	0.4	168	4.9	3211	93.8	0	0.0	3422	100.0
Far West	4	1.6	2	0.8	13	5.1	237	92.6	0	0.0	256	100.0
Private Hospitals	61	0.3	89	0.4	1109	4.7	22216	94.6	1	0.0	23476	100.0
<b>TOTAL*</b>	1341	1.4	889	0.9	4873	5.1	89381	92.6	5	0.0	96489	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

**Table 44. Births by gestational age, hospital and maternity service level, NSW 2010#**

Maternity service level– hospital	Gestational age										TOTAL	
	<32		32–33		34–36		37+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%		
<b>Level 6</b>												
Royal Prince Alfred	134	2.5	72	1.4	290	5.5	4820	90.7	0	0.0	5316	100.0
Royal North Shore	134	5.5	62	2.6	145	6.0	2084	85.9	0	0.0	2425	100.0
Royal Hospital for Women	109	2.7	92	2.2	265	6.5	3634	88.6	0	0.0	4100	100.0
Liverpool	159	5.2	83	2.7	197	6.4	2643	85.8	0	0.0	3082	100.0
Nepean	100	2.7	95	2.6	233	6.4	3209	88.2	1	0.0	3638	100.0
Westmead	155	3.1	90	1.8	272	5.4	4500	89.7	0	0.0	5017	100.0
John Hunter	174	4.6	106	2.8	279	7.3	3262	85.4	0	0.0	3821	100.0
<b>TOTAL</b>	965	3.5	600	2.2	1681	6.1	24152	88.1	1	0.0	27399	100.0
<b>Level 5</b>												
Gosford	22	0.9	20	0.8	155	6.1	2325	92.2	1	0.0	2523	100.0
St. George	12	0.5	16	0.6	121	4.7	2450	94.3	0	0.0	2599	100.0
Blacktown	19	0.6	12	0.4	138	4.5	2931	94.5	0	0.0	3100	100.0
Coffs Harbour	15	1.4	6	0.6	64	5.9	1003	92.1	1	0.1	1089	100.0
Lismore Base	11	0.8	8	0.6	59	4.5	1229	94.0	0	0.0	1307	100.0
Tweed Heads	13	0.9	11	0.7	72	4.8	1400	93.6	0	0.0	1496	100.0
Port Macquarie Base	14	1.7	5	0.6	52	6.2	762	91.5	0	0.0	833	100.0
Wollongong	25	1.1	22	1.0	138	6.2	2055	91.7	0	0.0	2240	100.0
Maitland	10	0.6	5	0.3	107	6.3	1569	92.8	0	0.0	1691	100.0
Wagga Wagga Base	15	2.1	7	1.0	48	6.6	657	90.4	0	0.0	727	100.0
<b>TOTAL</b>	156	0.9	112	0.6	954	5.4	16381	93.0	2	0.0	17605	100.0
<b>Level 4</b>												
Canterbury	13	0.8	3	0.2	61	3.6	1617	95.5	0	0.0	1694	100.0
Hornsby	3	0.2	1	0.1	44	3.4	1231	96.2	0	0.0	1279	100.0
Manly	6	0.5	1	0.1	44	3.4	1246	96.1	0	0.0	1297	100.0
Sutherland	5	0.4	4	0.3	31	2.5	1222	96.8	0	0.0	1262	100.0
Auburn	4	0.3	0	0.0	35	2.6	1294	97.1	0	0.0	1333	100.0
Fairfield	7	0.4	1	0.1	64	3.4	1784	96.1	0	0.0	1856	100.0
Campbelltown	14	0.5	16	0.6	159	5.7	2583	93.2	0	0.0	2772	100.0

Table 44. (Continued)

Maternity service level– hospital	Gestational age										TOTAL	
	<32		32–33		34–36		37+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bankstown-Lidcombe	10	0.5	1	0.0	85	4.0	2012	95.4	0	0.0	2108	100.0
Hawkesbury	3	0.4	0	0.0	42	5.3	755	94.4	0	0.0	800	100.0
Grafton Base	12	2.6	6	1.3	26	5.5	426	90.6	0	0.0	470	100.0
Tamworth Base	7	0.7	8	0.9	63	6.7	860	91.7	0	0.0	938	100.0
Manning Base	11	1.5	6	0.8	46	6.3	671	91.4	0	0.0	734	100.0
Dubbo Base	13	1.1	7	0.6	74	6.1	1129	92.3	0	0.0	1223	100.0
Orange Base	10	1.1	5	0.6	61	7.0	797	91.3	0	0.0	873	100.0
Goulburn Base	1	0.3	3	1.0	8	2.7	280	95.9	0	0.0	292	100.0
Griffith Base	3	0.6	3	0.6	34	7.3	425	91.4	0	0.0	465	100.0
<b>TOTAL</b>	<b>122</b>	<b>0.6</b>	<b>65</b>	<b>0.3</b>	<b>877</b>	<b>4.5</b>	<b>18332</b>	<b>94.5</b>	<b>0</b>	<b>0.0</b>	<b>19396</b>	<b>100.0</b>
<b>Level 3</b>												
Blue Mountains	0	0.0	1	0.5	1	0.5	210	99.1	0	0.0	212	100.0
Kempsey	6	2.0	3	1.0	11	3.6	283	93.1	1	0.3	304	100.0
Armidale	3	0.7	2	0.5	25	5.8	400	93.0	0	0.0	430	100.0
Gunnedah	1	0.5	0	0.0	4	1.9	211	97.7	0	0.0	216	100.0
Inverell	2	0.8	3	1.1	12	4.5	248	93.6	0	0.0	265	100.0
Moree	3	1.3	1	0.4	8	3.6	213	94.7	0	0.0	225	100.0
Mudgee	2	0.8	0	0.0	4	1.7	230	97.5	0	0.0	236	100.0
Bathurst Base	2	0.3	1	0.2	16	2.7	584	96.8	0	0.0	603	100.0
Bega	0	0.0	1	0.4	4	1.7	232	97.9	0	0.0	237	100.0
Moruya	1	0.3	1	0.3	7	2.0	337	97.4	0	0.0	346	100.0
Queanbeyan	0	0.0	0	0.0	7	2.2	318	97.8	0	0.0	325	100.0
Young	0	0.0	0	0.0	7	3.3	203	96.7	0	0.0	210	100.0
Bowral	1	0.2	0	0.0	20	3.5	558	96.4	0	0.0	579	100.0
Shoalhaven	5	0.6	3	0.3	56	6.2	834	92.9	0	0.0	898	100.0
Broken Hill Base	4	1.6	2	0.8	13	5.1	237	92.6	0	0.0	256	100.0
Other hospitals	3	0.2	3	0.2	48	2.7	1707	96.9	0	0.0	1761	100.0
<b>TOTAL</b>	<b>33</b>	<b>0.5</b>	<b>21</b>	<b>0.3</b>	<b>243</b>	<b>3.4</b>	<b>6805</b>	<b>95.8</b>	<b>1</b>	<b>0.0</b>	<b>7103</b>	<b>100.0</b>
<b>Level 2</b>												
<b>TOTAL</b>	<b>2</b>	<b>0.2</b>	<b>1</b>	<b>0.1</b>	<b>7</b>	<b>0.6</b>	<b>1239</b>	<b>99.2</b>	<b>0</b>	<b>0.0</b>	<b>1249</b>	<b>100.0</b>
<b>Private</b>												
Mater, North Sydney	2	0.1	12	0.5	93	3.7	2391	95.7	0	0.0	2498	100.0
North Shore Private	16	0.6	27	1.0	156	5.7	2527	92.7	0	0.0	2726	100.0
Sydney Adventist	6	0.3	19	0.9	85	4.0	2007	94.8	0	0.0	2117	100.0
North Gosford Private	2	0.3	3	0.4	36	4.7	731	94.7	0	0.0	772	100.0
Hurstville Community	2	0.2	2	0.2	42	4.4	916	95.2	0	0.0	962	100.0
Kareena Private	1	0.2	4	0.6	54	8.5	579	90.8	0	0.0	638	100.0
St. George Private	2	0.1	2	0.1	78	4.6	1622	95.2	0	0.0	1704	100.0
Prince of Wales Private	2	0.1	3	0.1	124	4.9	2382	94.8	1	0.0	2512	100.0
Norwest Private	7	0.4	6	0.3	100	5.8	1622	93.5	0	0.0	1735	100.0
Sydney Southwest Private	3	0.3	1	0.1	39	3.9	953	95.7	0	0.0	996	100.0
Nepean Private	1	0.1	0	0.0	40	4.5	843	95.4	0	0.0	884	100.0
Westmead Private	7	0.3	2	0.1	94	4.4	2043	95.2	0	0.0	2146	100.0
Figtree Private	0	0.0	0	0.0	42	4.0	1001	96.0	0	0.0	1043	100.0
Newcastle Private	9	0.5	5	0.3	94	4.9	1816	94.4	0	0.0	1924	100.0
Calvary, Wagga Wagga	1	0.2	2	0.3	31	5.1	575	94.4	0	0.0	609	100.0
Other hospitals	0	0.0	1	0.5	1	0.5	209	99.1	0	0.0	211	100.0
<b>TOTAL</b>	<b>61</b>	<b>0.3</b>	<b>89</b>	<b>0.4</b>	<b>1109</b>	<b>4.7</b>	<b>22216</b>	<b>94.6</b>	<b>1</b>	<b>0.0</b>	<b>23476</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>1341</b>	<b>1.4</b>	<b>889</b>	<b>0.9</b>	<b>4873</b>	<b>5.1</b>	<b>89381</b>	<b>92.6</b>	<b>5</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 births at home assisted by independent midwives and births at level 1 hospitals.

## Neonatal resuscitation

Table 45 shows the type of neonatal resuscitation for Local Health Districts, and Table 46 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 45. Births by type of resuscitation and Local Health District of hospital, NSW 2010**

Local Health District	None		Suction		Oxygen therapy		Resuscitation IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Sydney	5574	79.5	307	4.4	434	6.2	572	8.2	76	1.1	47	0.7	0	0.0	7010
South Western Sydney	8890	85.5	323	3.1	615	5.9	442	4.3	58	0.6	68	0.7	1	0.0	10397	100.0
South Eastern Sydney	6178	77.6	515	6.5	638	8.0	535	6.7	71	0.9	24	0.3	0	0.0	7961	100.0
Illawarra Shoalhaven	2551	78.3	220	6.8	294	9.0	170	5.2	8	0.2	13	0.4	0	0.0	3256	100.0
Western Sydney	7116	75.3	893	9.4	712	7.5	563	6.0	134	1.4	32	0.3	0	0.0	9450	100.0
Nepean Blue Mountains	3576	74.0	416	8.6	488	10.1	239	4.9	90	1.9	26	0.5	0	0.0	4835	100.0
Northern Sydney	3903	76.3	278	5.4	471	9.2	405	7.9	42	0.8	18	0.4	0	0.0	5117	100.0
Central Coast	2002	74.2	105	3.9	291	10.8	272	10.1	3	0.1	25	0.9	0	0.0	2698	100.0
Hunter New England	6911	75.2	306	3.3	865	9.4	984	10.7	76	0.8	44	0.5	0	0.0	9186	100.0
Northern NSW	2815	77.3	178	4.9	374	10.3	234	6.4	19	0.5	21	0.6	0	0.0	3641	100.0
Mid North Coast	1880	82.4	56	2.5	161	7.1	164	7.2	7	0.3	13	0.6	0	0.0	2281	100.0
Southern NSW	1178	85.4	43	3.1	86	6.2	61	4.4	5	0.4	6	0.4	1	0.1	1380	100.0
Murrumbidgee	1549	79.1	105	5.4	173	8.8	123	6.3	3	0.2	5	0.3	0	0.0	1958	100.0
Western NSW	2780	81.2	91	2.7	316	9.2	218	6.4	5	0.1	11	0.3	1	0.0	3422	100.0
Far West	199	77.7	15	5.9	17	6.6	25	9.8	0	0.0	0	0.0	0	0.0	256	100.0
Private Hospitals	16277	69.3	3486	14.8	2676	11.4	980	4.2	28	0.1	23	0.1	6	0.0	23476	100.0
Other-not stated	148	89.6	7	4.3	4	2.4	5	3.0	0	0.0	0	0.0	1	0.6	165	100.0
<b>TOTAL*</b>	<b>73527</b>	<b>76.2</b>	<b>7344</b>	<b>7.6</b>	<b>8615</b>	<b>8.9</b>	<b>5992</b>	<b>6.2</b>	<b>625</b>	<b>0.6</b>	<b>376</b>	<b>0.4</b>	<b>10</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 2010#**

Maternity service level-hospital	None		Suction		Oxygen therapy		Resuscitation IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	<b>Level 6</b>															
Royal Prince Alfred	4204	79.1	210	4.0	280	5.3	515	9.7	73	1.4	34	0.6	0	0.0	5316	100.0
Royal North Shore	1713	70.6	219	9.0	196	8.1	246	10.1	40	1.6	11	0.5	0	0.0	2425	100.0
Royal Hospital for Women	3090	75.4	356	8.7	292	7.1	282	6.9	61	1.5	19	0.5	0	0.0	4100	100.0
Liverpool	2495	81.0	167	5.4	144	4.7	209	6.8	49	1.6	17	0.6	0	0.0	3082	100.0
Nepean	2712	74.5	307	8.4	306	8.4	204	5.6	90	2.5	19	0.5	0	0.0	3638	100.0
Westmead	3715	74.0	427	8.5	422	8.4	315	6.3	128	2.6	10	0.2	0	0.0	5017	100.0
John Hunter	2758	72.2	140	3.7	243	6.4	604	15.8	63	1.6	13	0.3	0	0.0	3821	100.0
<b>TOTAL</b>	<b>20687</b>	<b>75.5</b>	<b>1826</b>	<b>6.7</b>	<b>1883</b>	<b>6.9</b>	<b>2375</b>	<b>8.7</b>	<b>504</b>	<b>1.8</b>	<b>123</b>	<b>0.4</b>	<b>1</b>	<b>0.0</b>	<b>27399</b>	<b>100.0</b>
<b>Level 5</b>																
Gosford	1845	73.1	104	4.1	280	11.1	267	10.6	3	0.1	24	1.0	0	0.0	2523	100.0
St. George	2036	78.3	95	3.7	264	10.2	195	7.5	5	0.2	4	0.2	0	0.0	2599	100.0
Blacktown	2251	72.6	415	13.4	225	7.3	186	6.0	2	0.1	21	0.7	0	0.0	3100	100.0
Coffs Harbour	910	83.6	43	3.9	68	6.2	57	5.2	4	0.4	7	0.6	0	0.0	1089	100.0
Lismore Base	1008	77.1	58	4.4	162	12.4	69	5.3	5	0.4	5	0.4	0	0.0	1307	100.0
Tweed Heads	1188	79.4	36	2.4	138	9.2	109	7.3	14	0.9	11	0.7	0	0.0	1496	100.0
Port Macquarie Base	673	80.8	10	1.2	69	8.3	75	9.0	3	0.4	3	0.4	0	0.0	833	100.0
Wollongong	1740	77.7	154	6.9	204	9.1	128	5.7	6	0.3	8	0.4	0	0.0	2240	100.0
Maitland	1399	82.7	20	1.2	130	7.7	122	7.2	4	0.2	16	0.9	0	0.0	1691	100.0
Wagga Wagga Base	599	82.4	26	3.6	33	4.5	64	8.8	3	0.4	2	0.3	0	0.0	727	100.0
<b>TOTAL</b>	<b>13649</b>	<b>77.5</b>	<b>961</b>	<b>5.5</b>	<b>1573</b>	<b>8.9</b>	<b>1272</b>	<b>7.2</b>	<b>49</b>	<b>0.3</b>	<b>101</b>	<b>0.6</b>	<b>0</b>	<b>0.0</b>	<b>17605</b>	<b>100.0</b>
<b>Level 4</b>																
Canterbury	1370	80.9	97	5.7	154	9.1	57	3.4	3	0.2	13	0.8	0	0.0	1694	100.0
Hornsby	1081	84.5	30	2.3	96	7.5	66	5.2	1	0.1	5	0.4	0	0.0	1279	100.0
Manly	1004	77.4	27	2.1	172	13.3	92	7.1	0	0.0	2	0.2	0	0.0	1297	100.0



Table 46. (Continued)

Maternity service level– hospital	Resuscitation															
	None		Suction		Oxygen therapy		IPPR by bag and mask		Intubation and IPPR		External cardiac massage and ventilation		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sutherland	1052	83.4	64	5.1	82	6.5	58	4.6	5	0.4	1	0.1	0	0.0	1262	100.0
Auburn	1150	86.3	51	3.8	65	4.9	62	4.7	4	0.3	1	0.1	0	0.0	1333	100.0
Fairfield	1712	92.2	30	1.6	68	3.7	44	2.4	0	0.0	2	0.1	0	0.0	1856	100.0
Campbelltown	2306	83.2	59	2.1	257	9.3	116	4.2	7	0.3	27	1.0	0	0.0	2772	100.0
Bankstown-Lidcombe	1889	89.6	59	2.8	94	4.5	47	2.2	2	0.1	17	0.8	0	0.0	2108	100.0
Hawkesbury	594	74.3	59	7.4	130	16.3	12	1.5	0	0.0	5	0.6	0	0.0	800	100.0
Grafton Base	334	71.1	68	14.5	27	5.7	39	8.3	0	0.0	2	0.4	0	0.0	470	100.0
Tamworth Base	743	79.2	20	2.1	85	9.1	81	8.6	3	0.3	6	0.6	0	0.0	938	100.0
Manning Base	598	81.5	10	1.4	54	7.4	62	8.4	4	0.5	6	0.8	0	0.0	734	100.0
Dubbo Base	970	79.3	48	3.9	105	8.6	93	7.6	2	0.2	5	0.4	0	0.0	1223	100.0
Orange Base	703	80.5	7	0.8	112	12.8	45	5.2	0	0.0	6	0.7	0	0.0	873	100.0
Goulburn Base	230	78.8	9	3.1	32	11.0	17	5.8	3	1.0	1	0.3	0	0.0	292	100.0
Griffith Base	372	80.0	10	2.2	56	12.0	26	5.6	0	0.0	1	0.2	0	0.0	465	100.0
<b>TOTAL</b>	<b>16108</b>	<b>83.0</b>	<b>648</b>	<b>3.3</b>	<b>1589</b>	<b>8.2</b>	<b>917</b>	<b>4.7</b>	<b>34</b>	<b>0.2</b>	<b>100</b>	<b>0.5</b>	<b>0</b>	<b>0.0</b>	<b>19396</b>	<b>100.0</b>
<b>Level 3</b>																
Blue Mountains	169	79.7	16	7.5	14	6.6	11	5.2	0	0.0	2	0.9	0	0.0	212	100.0
Kempsey	253	83.2	2	0.7	18	5.9	28	9.2	0	0.0	3	1.0	0	0.0	304	100.0
Armidale	303	70.5	13	3.0	92	21.4	21	4.9	0	0.0	1	0.2	0	0.0	430	100.0
Gunnedah	103	47.7	62	28.7	44	20.4	7	3.2	0	0.0	0	0.0	0	0.0	216	100.0
Inverell	117	44.2	9	3.4	117	44.2	21	7.9	1	0.4	0	0.0	0	0.0	265	100.0
Moree	163	72.4	8	3.6	30	13.3	24	10.7	0	0.0	0	0.0	0	0.0	225	100.0
Mudgee	180	76.3	5	2.1	31	13.1	19	8.1	1	0.4	0	0.0	0	0.0	236	100.0
Bathurst Base	502	83.3	25	4.1	33	5.5	42	7.0	1	0.2	0	0.0	0	0.0	603	100.0
Bega	197	83.1	8	3.4	15	6.3	15	6.3	1	0.4	1	0.4	0	0.0	237	100.0
Moruya	293	84.7	11	3.2	27	7.8	14	4.0	1	0.3	0	0.0	0	0.0	346	100.0
Queanbeyan	295	90.8	9	2.8	9	2.8	7	2.2	0	0.0	4	1.2	1	0.3	325	100.0
Young	151	71.9	34	16.2	12	5.7	12	5.7	0	0.0	1	0.5	0	0.0	210	100.0
Bowral	488	84.3	8	1.4	52	9.0	26	4.5	0	0.0	5	0.9	0	0.0	579	100.0
Shoalhaven	712	79.3	63	7.0	81	9.0	38	4.2	2	0.2	2	0.2	0	0.0	898	100.0
Broken Hill Base	199	77.7	15	5.9	17	6.6	25	9.8	0	0.0	0	0.0	0	0.0	256	100.0
Other hospitals	1380	78.4	102	5.8	197	11.2	78	4.4	2	0.1	2	0.1	0	0.0	1761	100.0
<b>TOTAL</b>	<b>5505</b>	<b>77.5</b>	<b>390</b>	<b>5.5</b>	<b>789</b>	<b>11.1</b>	<b>388</b>	<b>5.5</b>	<b>9</b>	<b>0.1</b>	<b>21</b>	<b>0.3</b>	<b>1</b>	<b>0.0</b>	<b>7103</b>	<b>100.0</b>
<b>Level 2</b>																
<b>TOTAL</b>	<b>1073</b>	<b>85.9</b>	<b>26</b>	<b>2.1</b>	<b>93</b>	<b>7.4</b>	<b>50</b>	<b>4.0</b>	<b>1</b>	<b>0.1</b>	<b>6</b>	<b>0.5</b>	<b>0</b>	<b>0.0</b>	<b>1249</b>	<b>100.0</b>
<b>Private</b>																
Mater, North Sydney	1858	74.4	131	5.2	351	14.1	155	6.2	1	0.0	2	0.1	0	0.0	2498	100.0
North Shore Private	2083	76.4	284	10.4	268	9.8	86	3.2	4	0.1	1	0.0	0	0.0	2726	100.0
Sydney Adventist	1827	86.3	40	1.9	145	6.8	98	4.6	3	0.1	4	0.2	0	0.0	2117	100.0
North Gosford Private	562	72.8	56	7.3	117	15.2	35	4.5	0	0.0	2	0.3	0	0.0	772	100.0
Hurstville Community	384	39.9	394	41.0	139	14.4	44	4.6	1	0.1	0	0.0	0	0.0	962	100.0
Kareena Private	440	69.0	139	21.8	37	5.8	22	3.4	0	0.0	0	0.0	0	0.0	638	100.0
St. George Private	648	38.0	659	38.7	318	18.7	75	4.4	2	0.1	2	0.1	0	0.0	1704	100.0
Prince of Wales Private	1644	65.4	340	13.5	431	17.2	88	3.5	1	0.0	2	0.1	6	0.2	2512	100.0
Norwest Private	1540	88.8	43	2.5	119	6.9	32	1.8	0	0.0	1	0.1	0	0.0	1735	100.0
Sydney Southwest Private	715	71.8	182	18.3	64	6.4	31	3.1	1	0.1	3	0.3	0	0.0	996	100.0
Nepean Private	603	68.2	72	8.1	167	18.9	41	4.6	1	0.1	0	0.0	0	0.0	884	100.0
Westmead Private	1721	80.2	206	9.6	131	6.1	84	3.9	2	0.1	2	0.1	0	0.0	2146	100.0
Figtree Private	188	18.0	761	73.0	65	6.2	26	2.5	2	0.2	1	0.1	0	0.0	1043	100.0
Newcastle Private	1514	78.7	75	3.9	204	10.6	121	6.3	8	0.4	2	0.1	0	0.0	1924	100.0
Calvary, Wagga Wagga	406	66.7	81	13.3	82	13.5	38	6.2	2	0.3	0	0.0	0	0.0	609	100.0
Other hospitals	144	68.2	23	10.9	38	18.0	5	2.4	0	0.0	1	0.5	0	0.0	211	100.0
<b>TOTAL</b>	<b>16277</b>	<b>69.3</b>	<b>3486</b>	<b>14.8</b>	<b>2676</b>	<b>11.4</b>	<b>980</b>	<b>4.2</b>	<b>28</b>	<b>0.1</b>	<b>23</b>	<b>0.1</b>	<b>6</b>	<b>0.0</b>	<b>23476</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>73527</b>	<b>76.2</b>	<b>7344</b>	<b>7.6</b>	<b>8615</b>	<b>8.9</b>	<b>5992</b>	<b>6.2</b>	<b>625</b>	<b>0.6</b>	<b>376</b>	<b>0.4</b>	<b>10</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 births at home assisted by independent midwives and births 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 Local Health Districts, and Table 48 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 47. Live births by admission to special care or neonatal intensive care by Local Health District of hospital, NSW 2010**

Local Health District	No		Admission to special care or NICU				TOTAL	
	No.	%	No.	%	No.	%	No.	%
Sydney	6104	87.8	846	12.2	0	0.0	6950	100.0
South Western Sydney	9219	89.2	1112	10.8	0	0.0	10331	100.0
South Eastern Sydney	6509	82.3	1398	17.7	0	0.0	7907	100.0
Illawarra Shoalhaven	2639	81.5	601	18.5	0	0.0	3240	100.0
Western Sydney	7160	76.3	2218	23.7	0	0.0	9378	100.0
Nepean Blue Mountains	3521	73.2	1286	26.8	0	0.0	4807	100.0
Northern Sydney	4243	83.3	850	16.7	0	0.0	5093	100.0
Central Coast	2150	80.3	529	19.7	0	0.0	2679	100.0
Hunter New England	7539	82.7	1571	17.2	5	0.1	9115	100.0
Northern NSW	3027	83.6	594	16.4	1	0.0	3622	100.0
Mid North Coast	1929	85.2	336	14.8	0	0.0	2265	100.0
Southern NSW	1311	95.4	59	4.3	4	0.3	1374	100.0
Murrumbidgee	1594	81.9	351	18.0	1	0.1	1946	100.0
Western NSW	2863	84.4	527	15.5	1	0.0	3391	100.0
Far West	215	85.0	38	15.0	0	0.0	253	100.0
Private Hospitals	21268	90.9	2107	9.0	35	0.1	23410	100.0
<b>TOTAL*</b>	<b>81437</b>	<b>84.9</b>	<b>14427</b>	<b>15.0</b>	<b>57</b>	<b>0.1</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 or neonatal intensive care, hospital and maternity service level, NSW 2010#**

Maternity service level–hospital	No		Admission to special care or NICU				TOTAL	
	No.	%	No.	%	No.	%	No.	%
<b>Level 6</b>								
Royal Prince Alfred	4613	87.5	658	12.5	0	0.0	5271	100.0
Royal North Shore	2055	85.3	353	14.7	0	0.0	2408	100.0
Royal Hospital for Women	3370	82.8	699	17.2	0	0.0	4069	100.0
Liverpool	2536	83.3	510	16.7	0	0.0	3046	100.0
Nepean	2531	70.0	1083	30.0	0	0.0	3614	100.0
Westmead	3760	75.7	1210	24.3	0	0.0	4970	100.0
John Hunter	2978	78.7	806	21.3	0	0.0	3784	100.0
<b>TOTAL</b>	<b>21843</b>	<b>80.4</b>	<b>5319</b>	<b>19.6</b>	<b>0</b>	<b>0.0</b>	<b>27162</b>	<b>100.0</b>
<b>Level 5</b>								
Gosford	1979	79.0	525	21.0	0	0.0	2504	100.0
St. George	2067	80.1	515	19.9	0	0.0	2582	100.0
Blacktown	2341	76.0	738	24.0	0	0.0	3079	100.0
Coffs Harbour	877	80.8	209	19.2	0	0.0	1086	100.0
Lismore Base	1051	80.7	252	19.3	0	0.0	1303	100.0
Tweed Heads	1227	82.3	264	17.7	0	0.0	1491	100.0
Port Macquarie Base	720	87.5	103	12.5	0	0.0	823	100.0
Wollongong	1736	78.0	491	22.0	0	0.0	2227	100.0
Maitland	1415	84.6	258	15.4	0	0.0	1673	100.0
Wagga Wagga Base	558	77.8	159	22.2	0	0.0	717	100.0
<b>TOTAL</b>	<b>13971</b>	<b>79.9</b>	<b>3514</b>	<b>20.1</b>	<b>0</b>	<b>0.0</b>	<b>17485</b>	<b>100.0</b>
<b>Level 4</b>								
Canterbury	1491	88.8	188	11.2	0	0.0	1679	100.0
Hornsby	1010	79.2	266	20.8	0	0.0	1276	100.0
Manly	1063	82.2	230	17.8	0	0.0	1293	100.0
Sutherland	1072	85.4	184	14.6	0	0.0	1256	100.0
Auburn	1059	79.7	270	20.3	0	0.0	1329	100.0
Fairfield	1668	90.3	180	9.7	0	0.0	1848	100.0
Campbelltown	2612	94.6	150	5.4	0	0.0	2762	100.0

Table 48. (Continued)

Maternity service level– hospital	No		Admission to special care or NICU				TOTAL	
	No.	%	Yes		Not stated		No.	%
			No.	%	No.	%		
Bankstown-Lidcombe	1845	87.9	254	12.1	0	0.0	2099	100.0
Hawkesbury	631	79.2	166	20.8	0	0.0	797	100.0
Grafton Base	396	85.9	65	14.1	0	0.0	461	100.0
Tamworth Base	675	72.2	260	27.8	0	0.0	935	100.0
Manning Base	595	82.1	130	17.9	0	0.0	725	100.0
Dubbo Base	959	79.3	251	20.7	0	0.0	1210	100.0
Orange Base	694	80.4	169	19.6	0	0.0	863	100.0
Goulburn Base	265	91.4	25	8.6	0	0.0	290	100.0
Griffith Base	292	63.1	170	36.7	1	0.2	463	100.0
<b>TOTAL</b>	<b>16327</b>	<b>84.7</b>	<b>2958</b>	<b>15.3</b>	<b>1</b>	<b>0.0</b>	<b>19286</b>	<b>100.0</b>
<b>Level 3</b>								
Blue Mountains	180	84.9	32	15.1	0	0.0	212	100.0
Kempsey	278	92.4	23	7.6	0	0.0	301	100.0
Armidale	386	89.8	44	10.2	0	0.0	430	100.0
Gunnedah	213	99.1	2	0.9	0	0.0	215	100.0
Inverell	246	93.2	18	6.8	0	0.0	264	100.0
Moree	208	92.4	17	7.6	0	0.0	225	100.0
Mudgee	223	94.9	12	5.1	0	0.0	235	100.0
Bathurst Base	524	87.3	76	12.7	0	0.0	600	100.0
Bega	224	94.5	13	5.5	0	0.0	237	100.0
Moruya	331	96.2	13	3.8	0	0.0	344	100.0
Queanbeyan	315	97.5	4	1.2	4	1.2	323	100.0
Young	205	97.6	5	2.4	0	0.0	210	100.0
Bowral	558	96.9	18	3.1	0	0.0	576	100.0
Shoalhaven	787	87.9	108	12.1	0	0.0	895	100.0
Broken Hill Base	215	85.0	38	15.0	0	0.0	253	100.0
Other hospitals	1680	95.7	70	4.0	6	0.3	1756	100.0
<b>TOTAL</b>	<b>6573</b>	<b>92.9</b>	<b>493</b>	<b>7.0</b>	<b>10</b>	<b>0.1</b>	<b>7076</b>	<b>100.0</b>
<b>Level 2</b>								
<b>TOTAL</b>	<b>1216</b>	<b>97.5</b>	<b>31</b>	<b>2.5</b>	<b>0</b>	<b>0.0</b>	<b>1247</b>	<b>100.0</b>
<b>Private</b>								
Mater, North Sydney	2275	91.2	219	8.8	0	0.0	2494	100.0
North Shore Private	2702	99.7	9	0.3	0	0.0	2711	100.0
Sydney Adventist	1770	83.9	339	16.1	0	0.0	2109	100.0
North Gosford Private	625	81.3	143	18.6	1	0.1	769	100.0
Hurstville Community	840	87.5	120	12.5	0	0.0	960	100.0
Kareena Private	632	99.4	4	0.6	0	0.0	636	100.0
St. George Private	1700	99.8	3	0.2	0	0.0	1703	100.0
Prince of Wales Private	2182	87.1	292	11.7	31	1.2	2505	100.0
Norwest Private	1490	86.2	238	13.8	0	0.0	1728	100.0
Sydney Southwest Private	792	79.8	200	20.2	0	0.0	992	100.0
Nepean Private	674	76.3	209	23.7	0	0.0	883	100.0
Westmead Private	2139	99.9	3	0.1	0	0.0	2142	100.0
Figtree Private	1041	99.9	1	0.1	0	0.0	1042	100.0
Newcastle Private	1670	87.0	249	13.0	0	0.0	1919	100.0
Calvary, Wagga Wagga	533	87.8	72	11.9	2	0.3	607	100.0
Other hospitals	204	96.7	6	2.8	1	0.5	211	100.0
<b>TOTAL</b>	<b>21268</b>	<b>90.9</b>	<b>2107</b>	<b>9.0</b>	<b>35</b>	<b>0.1</b>	<b>23410</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>81437</b>	<b>84.9</b>	<b>14427</b>	<b>15.0</b>	<b>57</b>	<b>0.1</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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.

NICU: neonatal intensive care unit.

## Infant feeding

Table 49 shows infant feeding at discharge from the hospital of birth for Local Health Districts, and Table 50 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 49. Live births by type of infant feeding and Local Health District of hospital, NSW 2010**

Local Health District	Infant feeding									
	Full breastfeeding		Any breastfeeding		Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	5776	83.1	761	10.9	380	5.5	33	0.5	6950	100.0
South Western Sydney	7339	71.0	1141	11.0	1783	17.3	68	0.7	10331	100.0
South Eastern Sydney	6621	83.7	737	9.3	498	6.3	51	0.6	7907	100.0
Illawarra Shoalhaven	2523	77.9	126	3.9	549	16.9	42	1.3	3240	100.0
Western Sydney	7195	76.7	1026	10.9	938	10.0	219	2.3	9378	100.0
Nepean Blue Mountains	3504	72.9	245	5.1	1025	21.3	33	0.7	4807	100.0
Northern Sydney	4472	87.8	363	7.1	203	4.0	55	1.1	5093	100.0
Central Coast	2141	79.9	108	4.0	409	15.3	21	0.8	2679	100.0
Hunter New England	7241	79.4	365	4.0	1428	15.7	81	0.9	9115	100.0
Northern NSW	3262	90.1	93	2.6	243	6.7	24	0.7	3622	100.0
Mid North Coast	1929	85.2	58	2.6	251	11.1	27	1.2	2265	100.0
Southern NSW	1175	85.5	42	3.1	155	11.3	2	0.1	1374	100.0
Murrumbidgee	1417	72.8	64	3.3	441	22.7	24	1.2	1946	100.0
Western NSW	2667	78.6	83	2.4	624	18.4	17	0.5	3391	100.0
Far West	192	75.9	8	3.2	48	19.0	5	2.0	253	100.0
Private Hospitals	19170	81.9	1962	8.4	2183	9.3	95	0.4	23410	100.0
<b>TOTAL*</b>	<b>76757</b>	<b>80.0</b>	<b>7184</b>	<b>7.5</b>	<b>11159</b>	<b>11.6</b>	<b>821</b>	<b>0.9</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
\*Total NSW includes live births at home assisted by independent midwives.

**Table 50. Live births by type of infant feeding, hospital and maternity service level, NSW 2010#**

Maternity service level–hospital	Infant feeding									
	Full breastfeeding		Any breastfeeding		Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Level 6</b>										
Royal Prince Alfred	4476	84.9	507	9.6	266	5.0	22	0.4	5271	100.0
Royal North Shore	2054	85.3	228	9.5	98	4.1	28	1.2	2408	100.0
Royal Hospital for Women	3440	84.5	390	9.6	208	5.1	31	0.8	4069	100.0
Liverpool	1988	65.3	467	15.3	544	17.9	47	1.5	3046	100.0
Nepean	2580	71.4	204	5.6	815	22.6	15	0.4	3614	100.0
Westmead	3774	75.9	605	12.2	432	8.7	159	3.2	4970	100.0
John Hunter	2957	78.1	143	3.8	645	17.0	39	1.0	3784	100.0
<b>TOTAL</b>	<b>21269</b>	<b>78.3</b>	<b>2544</b>	<b>9.4</b>	<b>3008</b>	<b>11.1</b>	<b>341</b>	<b>1.3</b>	<b>27162</b>	<b>100.0</b>
<b>Level 5</b>										
Gosford	1980	79.1	108	4.3	395	15.8	21	0.8	2504	100.0
St. George	2082	80.6	287	11.1	203	7.9	10	0.4	2582	100.0
Blacktown	2283	74.1	322	10.5	420	13.6	54	1.8	3079	100.0
Coffs Harbour	936	86.2	35	3.2	97	8.9	18	1.7	1086	100.0
Lismore Base	1178	90.4	43	3.3	75	5.8	7	0.5	1303	100.0
Tweed Heads	1362	91.3	29	1.9	92	6.2	8	0.5	1491	100.0
Port Macquarie Base	689	83.7	21	2.6	107	13.0	6	0.7	823	100.0
Wollongong	1692	76.0	87	3.9	416	18.7	32	1.4	2227	100.0
Maitland	1287	76.9	87	5.2	293	17.5	6	0.4	1673	100.0
Wagga Wagga Base	510	71.1	22	3.1	169	23.6	16	2.2	717	100.0
<b>TOTAL</b>	<b>13999</b>	<b>80.1</b>	<b>1041</b>	<b>6.0</b>	<b>2267</b>	<b>13.0</b>	<b>178</b>	<b>1.0</b>	<b>17485</b>	<b>100.0</b>
<b>Level 4</b>										
Canterbury	1300	77.4	254	15.1	114	6.8	11	0.7	1679	100.0
Hornsby	1139	89.3	93	7.3	34	2.7	10	0.8	1276	100.0
Manly	1166	90.2	42	3.2	68	5.3	17	1.3	1293	100.0
Sutherland	1099	87.5	60	4.8	87	6.9	10	0.8	1256	100.0
Auburn	1138	85.6	99	7.4	86	6.5	6	0.5	1329	100.0
Fairfield	1195	64.7	353	19.1	294	15.9	6	0.3	1848	100.0
Campbelltown	2008	72.7	155	5.6	592	21.4	7	0.3	2762	100.0

Table 50. (Continued)

Maternity service level– hospital	Infant feeding									
	Full breastfeeding		Any breastfeeding		Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Bankstown-Lidcombe	1652	78.7	157	7.5	283	13.5	7	0.3	2099	100.0
Hawkesbury	616	77.3	28	3.5	146	18.3	7	0.9	797	100.0
Grafton Base	373	80.9	16	3.5	65	14.1	7	1.5	461	100.0
Tamworth Base	730	78.1	40	4.3	157	16.8	8	0.9	935	100.0
Manning Base	594	81.9	34	4.7	94	13.0	3	0.4	725	100.0
Dubbo Base	886	73.2	37	3.1	284	23.5	3	0.2	1210	100.0
Orange Base	692	80.2	28	3.2	138	16.0	5	0.6	863	100.0
Goulburn Base	240	82.8	5	1.7	44	15.2	1	0.3	290	100.0
Griffith Base	322	69.5	21	4.5	113	24.4	7	1.5	463	100.0
<b>TOTAL</b>	<b>15150</b>	<b>78.6</b>	<b>1422</b>	<b>7.4</b>	<b>2599</b>	<b>13.5</b>	<b>115</b>	<b>0.6</b>	<b>19286</b>	<b>100.0</b>
<b>Level 3</b>										
Blue Mountains	180	84.9	6	2.8	18	8.5	8	3.8	212	100.0
Kempsey	255	84.7	2	0.7	41	13.6	3	1.0	301	100.0
Armidale	375	87.2	14	3.3	38	8.8	3	0.7	430	100.0
Gunnedah	180	83.7	6	2.8	29	13.5	0	0.0	215	100.0
Inverell	219	83.0	9	3.4	33	12.5	3	1.1	264	100.0
Moree	167	74.2	15	6.7	36	16.0	7	3.1	225	100.0
Mudgee	188	80.0	2	0.9	43	18.3	2	0.9	235	100.0
Bathurst Base	522	87.0	5	0.8	68	11.3	5	0.8	600	100.0
Bega	199	84.0	14	5.9	24	10.1	0	0.0	237	100.0
Moruya	289	84.0	8	2.3	46	13.4	1	0.3	344	100.0
Queanbeyan	287	88.9	10	3.1	26	8.0	0	0.0	323	100.0
Young	147	70.0	10	4.8	53	25.2	0	0.0	210	100.0
Bowral	496	86.1	9	1.6	70	12.2	1	0.2	576	100.0
Shoalhaven	722	80.7	37	4.1	127	14.2	9	1.0	895	100.0
Broken Hill Base	192	75.9	8	3.2	48	19.0	5	2.0	253	100.0
Other hospitals	1406	80.1	46	2.6	293	16.7	11	0.6	1756	100.0
<b>TOTAL</b>	<b>5824</b>	<b>82.3</b>	<b>201</b>	<b>2.8</b>	<b>993</b>	<b>14.0</b>	<b>58</b>	<b>0.8</b>	<b>7076</b>	<b>100.0</b>
<b>Level 2</b>										
<b>TOTAL</b>	<b>1131</b>	<b>90.7</b>	<b>11</b>	<b>0.9</b>	<b>99</b>	<b>7.9</b>	<b>6</b>	<b>0.5</b>	<b>1247</b>	<b>100.0</b>
<b>Private</b>										
Mater, North Sydney	2122	85.1	272	10.9	100	4.0	0	0.0	2494	100.0
North Shore Private	2281	84.1	271	10.0	151	5.6	8	0.3	2711	100.0
Sydney Adventist	1855	88.0	0	0.0	246	11.7	8	0.4	2109	100.0
North Gosford Private	674	87.6	35	4.6	56	7.3	4	0.5	769	100.0
Hurstville Community	712	74.2	154	16.0	93	9.7	1	0.1	960	100.0
Kareena Private	525	82.5	35	5.5	76	11.9	0	0.0	636	100.0
St. George Private	1343	78.9	185	10.9	170	10.0	5	0.3	1703	100.0
Prince of Wales Private	2139	85.4	210	8.4	114	4.6	42	1.7	2505	100.0
Norwest Private	1394	80.7	110	6.4	223	12.9	1	0.1	1728	100.0
Sydney Southwest Private	709	71.5	98	9.9	183	18.4	2	0.2	992	100.0
Nepean Private	649	73.5	111	12.6	123	13.9	0	0.0	883	100.0
Westmead Private	1510	70.5	389	18.2	234	10.9	9	0.4	2142	100.0
Figtree Private	835	80.1	39	3.7	167	16.0	1	0.1	1042	100.0
Newcastle Private	1741	90.7	0	0.0	174	9.1	4	0.2	1919	100.0
Calvary, Wagga Wagga	494	81.4	47	7.7	57	9.4	9	1.5	607	100.0
Other hospitals	188	89.1	6	2.8	16	7.6	1	0.5	211	100.0
<b>TOTAL</b>	<b>19170</b>	<b>81.9</b>	<b>1962</b>	<b>8.4</b>	<b>2183</b>	<b>9.3</b>	<b>95</b>	<b>0.4</b>	<b>23410</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>76757</b>	<b>80.0</b>	<b>7184</b>	<b>7.5</b>	<b>11159</b>	<b>11.6</b>	<b>821</b>	<b>0.9</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 Local Health Districts, and Table 52 for individual hospitals by maternity service level where at least 200 mothers gave birth in 2010.

**Table 51. Baby discharge status by Local Health District of Hospital, NSW 2010**

Local Health District	Baby discharge status												TOTAL	
	Discharged		Transferred		Stillborn		Died		Transferred and died		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	6813	97.2	121	1.7	60	0.9	15	0.2	1	0.0	0	0.0	7010	100.0
South Western Sydney	10006	96.2	273	2.6	66	0.6	52	0.5	0	0.0	0	0.0	10397	100.0
South Eastern Sydney	7747	97.3	133	1.7	54	0.7	26	0.3	1	0.0	0	0.0	7961	100.0
Illawarra Shoalhaven	3182	97.7	53	1.6	16	0.5	5	0.2	0	0.0	0	0.0	3256	100.0
Western Sydney	9022	95.5	321	3.4	72	0.8	35	0.4	0	0.0	0	0.0	9450	100.0
Nepean Blue Mountains	4597	95.1	201	4.2	28	0.6	9	0.2	0	0.0	0	0.0	4835	100.0
Northern Sydney	4883	95.4	191	3.7	24	0.5	19	0.4	0	0.0	0	0.0	5117	100.0
Central Coast	2632	97.6	45	1.7	19	0.7	2	0.1	0	0.0	0	0.0	2698	100.0
Hunter New England	8399	91.4	674	7.3	71	0.8	42	0.5	0	0.0	0	0.0	9186	100.0
Northern NSW	3403	93.5	209	5.7	18	0.5	9	0.2	1	0.0	1	0.0	3641	100.0
Mid North Coast	2141	93.9	116	5.1	16	0.7	8	0.4	0	0.0	0	0.0	2281	100.0
Southern NSW	1345	97.5	29	2.1	6	0.4	0	0.0	0	0.0	0	0.0	1380	100.0
Murrumbidgee	1788	91.3	155	7.9	12	0.6	3	0.2	0	0.0	0	0.0	1958	100.0
Western NSW	2998	87.6	387	11.3	31	0.9	6	0.2	0	0.0	0	0.0	3422	100.0
Far West	246	96.1	5	2.0	3	1.2	2	0.8	0	0.0	0	0.0	256	100.0
Private Hospitals	23217	98.9	174	0.7	59	0.3	15	0.1	4	0.0	7	0.0	23476	100.0
<b>TOTAL*</b>	<b>92576</b>	<b>95.9</b>	<b>3090</b>	<b>3.2</b>	<b>555</b>	<b>0.6</b>	<b>248</b>	<b>0.3</b>	<b>7</b>	<b>0.0</b>	<b>13</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST), Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

**Table 52. Baby discharge status by hospital and maternity service level, NSW 2010#**

Maternity service level-hospital	Baby discharge status												TOTAL	
	Discharged		Transferred		Stillborn		Died		Transferred and died		Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Level 6</b>														
Royal Prince Alfred	5157	97.0	98	1.8	45	0.8	15	0.3	1	0.0	0	0.0	5316	100.0
Royal North Shore	2236	92.2	157	6.5	17	0.7	15	0.6	0	0.0	0	0.0	2425	100.0
Royal Hospital for Women	3962	96.6	83	2.0	31	0.8	24	0.6	0	0.0	0	0.0	4100	100.0
Liverpool	2810	91.2	196	6.4	36	1.2	40	1.3	0	0.0	0	0.0	3082	100.0
Nepean	3430	94.3	175	4.8	24	0.7	9	0.2	0	0.0	0	0.0	3638	100.0
Westmead	4688	93.4	253	5.0	47	0.9	29	0.6	0	0.0	0	0.0	5017	100.0
John Hunter	3568	93.4	183	4.8	37	1.0	33	0.9	0	0.0	0	0.0	3821	100.0
<b>TOTAL</b>	<b>25851</b>	<b>94.4</b>	<b>1145</b>	<b>4.2</b>	<b>237</b>	<b>0.9</b>	<b>165</b>	<b>0.6</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>27399</b>	<b>100.0</b>
<b>Level 5</b>														
Gosford	2467	97.8	35	1.4	19	0.8	2	0.1	0	0.0	0	0.0	2523	100.0
St. George	2544	97.9	35	1.3	17	0.7	2	0.1	1	0.0	0	0.0	2599	100.0
Blacktown	3016	97.3	57	1.8	21	0.7	6	0.2	0	0.0	0	0.0	3100	100.0
Coffs Harbour	1012	92.9	69	6.3	3	0.3	5	0.5	0	0.0	0	0.0	1089	100.0
Lismore Base	1274	97.5	26	2.0	4	0.3	3	0.2	0	0.0	0	0.0	1307	100.0
Tweed Heads	1327	88.7	160	10.7	5	0.3	4	0.3	0	0.0	0	0.0	1496	100.0
Port Macquarie Base	788	94.6	34	4.1	10	1.2	1	0.1	0	0.0	0	0.0	833	100.0
Wollongong	2184	97.5	38	1.7	13	0.6	5	0.2	0	0.0	0	0.0	2240	100.0
Maitland	1426	84.3	247	14.6	18	1.1	0	0.0	0	0.0	0	0.0	1691	100.0
Wagga Wagga Base	623	85.7	92	12.7	10	1.4	2	0.3	0	0.0	0	0.0	727	100.0
<b>TOTAL</b>	<b>16661</b>	<b>94.6</b>	<b>793</b>	<b>4.5</b>	<b>120</b>	<b>0.7</b>	<b>30</b>	<b>0.2</b>	<b>1</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>17605</b>	<b>100.0</b>
<b>Level 4</b>														
Canterbury	1656	97.8	23	1.4	15	0.9	0	0.0	0	0.0	0	0.0	1694	100.0
Hornsby	1262	98.7	13	1.0	3	0.2	1	0.1	0	0.0	0	0.0	1279	100.0
Manly	1272	98.1	18	1.4	4	0.3	3	0.2	0	0.0	0	0.0	1297	100.0
Sutherland	1241	98.3	15	1.2	6	0.5	0	0.0	0	0.0	0	0.0	1262	100.0
Auburn	1318	98.9	11	0.8	4	0.3	0	0.0	0	0.0	0	0.0	1333	100.0
Fairfield	1837	99.0	9	0.5	8	0.4	2	0.1	0	0.0	0	0.0	1856	100.0
Campbelltown	2714	97.9	42	1.5	10	0.4	6	0.2	0	0.0	0	0.0	2772	100.0

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.	%
Bankstown-Lidcombe	2077	98.5	19	0.9	9	0.4	3	0.1	0	0.0	0	0.0	2108	100.0
Hawkesbury	787	98.4	10	1.3	3	0.4	0	0.0	0	0.0	0	0.0	800	100.0
Grafton Base	449	95.5	11	2.3	9	1.9	1	0.2	0	0.0	0	0.0	470	100.0
Tamworth Base	780	83.2	152	16.2	3	0.3	3	0.3	0	0.0	0	0.0	938	100.0
Manning Base	711	96.9	12	1.6	9	1.2	2	0.3	0	0.0	0	0.0	734	100.0
Dubbo Base	955	78.1	252	20.6	13	1.1	3	0.2	0	0.0	0	0.0	1223	100.0
Orange Base	789	90.4	71	8.1	10	1.1	3	0.3	0	0.0	0	0.0	873	100.0
Goulburn Base	282	96.6	8	2.7	2	0.7	0	0.0	0	0.0	0	0.0	292	100.0
Griffith Base	431	92.7	32	6.9	2	0.4	0	0.0	0	0.0	0	0.0	465	100.0
<b>TOTAL</b>	<b>18561</b>	<b>95.7</b>	<b>698</b>	<b>3.6</b>	<b>110</b>	<b>0.6</b>	<b>27</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>0.0</b>	<b>19396</b>	<b>100.0</b>
<b>Level 3</b>														
Blue Mountains	202	95.3	10	4.7	0	0.0	0	0.0	0	0.0	0	0.0	212	100.0
Kempsey	288	94.7	11	3.6	3	1.0	2	0.7	0	0.0	0	0.0	304	100.0
Armidale	416	96.7	14	3.3	0	0.0	0	0.0	0	0.0	0	0.0	430	100.0
Gunnedah	212	98.1	3	1.4	1	0.5	0	0.0	0	0.0	0	0.0	216	100.0
Inverell	257	97.0	7	2.6	1	0.4	0	0.0	0	0.0	0	0.0	265	100.0
Moree	215	95.6	10	4.4	0	0.0	0	0.0	0	0.0	0	0.0	225	100.0
Mudgee	231	97.9	4	1.7	1	0.4	0	0.0	0	0.0	0	0.0	236	100.0
Bathurst Base	568	94.2	32	5.3	3	0.5	0	0.0	0	0.0	0	0.0	603	100.0
Bega	232	97.9	5	2.1	0	0.0	0	0.0	0	0.0	0	0.0	237	100.0
Moruya	338	97.7	6	1.7	2	0.6	0	0.0	0	0.0	0	0.0	346	100.0
Queanbeyan	316	97.2	7	2.2	2	0.6	0	0.0	0	0.0	0	0.0	325	100.0
Young	206	98.1	4	1.9	0	0.0	0	0.0	0	0.0	0	0.0	210	100.0
Bowral	568	98.1	7	1.2	3	0.5	1	0.2	0	0.0	0	0.0	579	100.0
Shoalhaven	884	98.4	11	1.2	3	0.3	0	0.0	0	0.0	0	0.0	898	100.0
Broken Hill Base	246	96.1	5	2.0	3	1.2	2	0.8	0	0.0	0	0.0	256	100.0
Other hospitals	1668	94.7	87	4.9	4	0.2	1	0.1	0	0.0	1	0.1	1761	100.0
<b>TOTAL</b>	<b>6847</b>	<b>96.4</b>	<b>223</b>	<b>3.1</b>	<b>26</b>	<b>0.4</b>	<b>6</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>	<b>7103</b>	<b>100.0</b>
<b>Level 2</b>														
<b>TOTAL</b>	<b>1201</b>	<b>96.2</b>	<b>43</b>	<b>3.4</b>	<b>2</b>	<b>0.2</b>	<b>2</b>	<b>0.2</b>	<b>1</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>1249</b>	<b>100.0</b>
<b>Private</b>														
Mater, North Sydney	2480	99.3	14	0.6	4	0.2	0	0.0	0	0.0	0	0.0	2498	100.0
North Shore Private	2695	98.9	11	0.4	15	0.6	5	0.2	0	0.0	0	0.0	2726	100.0
Sydney Adventist	2098	99.1	11	0.5	8	0.4	0	0.0	0	0.0	0	0.0	2117	100.0
North Gosford Private	764	99.0	4	0.5	3	0.4	1	0.1	0	0.0	0	0.0	772	100.0
Hurstville Community	949	98.6	11	1.1	2	0.2	0	0.0	0	0.0	0	0.0	962	100.0
Kareena Private	630	98.7	6	0.9	2	0.3	0	0.0	0	0.0	0	0.0	638	100.0
St. George Private	1685	98.9	17	1.0	1	0.1	1	0.1	0	0.0	0	0.0	1704	100.0
Prince of Wales Private	2494	99.3	11	0.4	1	0.0	0	0.0	0	0.0	6	0.2	2512	100.0
Norwest Private	1711	98.6	16	0.9	7	0.4	1	0.1	0	0.0	0	0.0	1735	100.0
Sydney Southwest Private	986	99.0	6	0.6	4	0.4	0	0.0	0	0.0	0	0.0	996	100.0
Nepean Private	873	98.8	10	1.1	1	0.1	0	0.0	0	0.0	0	0.0	884	100.0
Westmead Private	2127	99.1	11	0.5	4	0.2	3	0.1	1	0.0	0	0.0	2146	100.0
Figtree Private	1027	98.5	15	1.4	1	0.1	0	0.0	0	0.0	0	0.0	1043	100.0
Newcastle Private	1898	98.6	17	0.9	5	0.3	3	0.2	1	0.1	0	0.0	1924	100.0
Calvary, Wagga Wagga	597	98.0	7	1.1	1	0.2	1	0.2	2	0.3	1	0.2	609	100.0
Other hospitals	204	96.7	7	3.3	0	0.0	0	0.0	0	0.0	0	0.0	211	100.0
<b>TOTAL</b>	<b>23217</b>	<b>98.9</b>	<b>174</b>	<b>0.7</b>	<b>59</b>	<b>0.3</b>	<b>15</b>	<b>0.1</b>	<b>4</b>	<b>0.0</b>	<b>7</b>	<b>0.0</b>	<b>23476</b>	<b>100.0</b>
<b>TOTAL NSW*</b>	<b>92576</b>	<b>95.9</b>	<b>3090</b>	<b>3.2</b>	<b>555</b>	<b>0.6</b>	<b>248</b>	<b>0.3</b>	<b>7</b>	<b>0.0</b>	<b>13</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 births at home assisted by independent midwives and births 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 2010.

**Table 53. Average maternal postnatal length of stay in hospital of birth, NSW 2007–2010# (Revised 13 February 2013)**

Local Health District–hospital	Average postnatal length of stay (days)				Local Health District–hospital	Average postnatal length of stay (days)			
	2007 %	2008 %	2009 %	2010 %		2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	3.0	2.9	2.8	2.9	Grafton Base	3.6	3.5	3.5	3.3
Royal Prince Alfred	3.5	3.5	3.3	3.3	Lismore Base	3.3	3.1	3.2	3.0
TOTAL	3.4	3.4	3.2	3.2	Tweed Heads	2.6	2.7	2.6	2.5
<b>South Western Sydney</b>					Other hospitals	3.0	3.0	2.7	2.7
Fairfield	2.6	2.5	2.5	2.2	TOTAL	3.1	3.0	2.9	2.8
Liverpool	3.0	2.9	2.9	2.8	<b>Mid North Coast</b>				
Campbelltown	2.7	2.7	2.5	2.5	Coffs Harbour	3.6	3.7	3.6	3.2
Bankstown-Lidcombe	2.9	2.6	2.5	2.5	Kempsey	3.1	2.9	2.7	2.9
Bowral	2.6	2.7	2.8	2.6	Port Macquarie Base	3.4	3.2	3.3	3.2
Other hospitals	–	7.0	–	–	Other hospitals	4.4	2.3	2.4	2.4
TOTAL	2.8	2.7	2.6	2.5	TOTAL	3.5	3.4	3.4	3.2
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	3.5	3.1	2.6	2.9	Bega	2.4	2.3	2.1	2.4
Sutherland	2.9	2.8	2.7	2.8	Goulburn Base	3.3	3.3	3.3	3.3
Royal Hospital for Women	3.4	3.8	3.6	3.3	Moruya	2.6	2.6	2.7	2.4
TOTAL	3.4	3.4	3.2	3.1	Queanbeyan	3.3	3.3	3.7	3.2
<b>Illawarra Shoalhaven</b>					Other hospitals	3.4	3.6	3.3	3.7
Shoalhaven	2.8	2.6	2.5	2.5	TOTAL	3.1	3.0	3.0	2.9
Wollongong	2.8	2.8	2.6	2.6	<b>Murrumbidgee</b>				
Other hospitals	2.6	2.7	3.0	2.3	Young	3.7	4.1	3.8	3.2
TOTAL	2.8	2.8	2.6	2.6	Griffith Base	3.3	3.1	2.9	3.0
<b>Western Sydney</b>					Wagga Wagga Base	2.7	2.7	2.4	2.5
Auburn	2.6	2.0	2.0	1.9	Other hospitals	3.7	3.3	3.3	3.1
Blacktown	2.9	2.8	2.7	2.7	TOTAL	3.2	3.1	2.9	2.9
Westmead	2.7	2.6	2.4	2.2	<b>Western NSW</b>				
TOTAL	2.8	2.6	2.4	2.4	Dubbo Base	2.9	2.7	2.5	2.5
<b>Nepean Blue Mountains</b>					Mudgee	2.9	3.1	2.5	2.5
Blue Mountains	3.3	3.4	3.4	3.2	Bathurst Base	3.2	2.9	2.7	2.7
Nepean	2.8	2.6	2.4	2.4	Orange Base	3.2	3.3	2.8	2.8
Hawkesbury	3.2	3.2	3.1	3.2	Other hospitals	3.6	2.9	2.9	2.9
Other hospitals	3.0	2.9	3.2	3.0	TOTAL	3.1	2.9	2.7	2.6
TOTAL	2.9	2.7	2.6	2.6	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	3.5	3.3	3.4	3.3
Hornsby	2.4	2.5	2.4	2.3	TOTAL	3.5	3.3	3.4	3.3
Manly	2.9	3.0	2.7	2.5	<b>Private Hospitals</b>				
Royal North Shore	3.0	3.0	2.8	2.8	Mater, North Sydney	4.6	4.5	4.4	4.4
Other hospitals	2.4	2.4	1.9	0.3	North Shore Private	4.3	4.5	4.4	4.4
TOTAL	2.7	2.7	2.6	2.5	Sydney Adventist	4.7	4.7	4.6	4.6
<b>Central Coast</b>					North Gosford Private	4.6	4.7	4.6	4.5
Gosford	2.2	2.2	2.2	2.2	Hurstville Community	4.7	4.5	4.5	4.4
Other hospitals	1.8	1.3	1.1	0.5	Kareena Private	4.5	4.6	4.5	4.4
TOTAL	2.2	2.2	2.1	2.1	St. George Private	4.4	4.2	4.2	4.3
<b>Hunter New England</b>					Prince of Wales Private	4.8	4.4	4.5	4.6
Armidale	3.4	3.3	3.0	3.1	Norwest Private	4.6	4.3	4.3	4.5
Gunnedah	3.7	3.3	3.6	3.5	Sydney Southwest Private	4.5	4.4	4.3	4.5
Inverell	3.4	3.0	3.1	3.0	Nepean Private	5.2	4.7	4.8	4.9
Moree	3.3	3.3	3.0	2.9	Westmead Private	4.0	3.9	3.9	4.2
Tamworth Base	3.2	3.1	3.0	2.7	Figtree Private	5.3	5.3	5.2	5.2
Manning Base	3.3	3.0	3.0	2.9	Newcastle Private	4.0	4.0	3.8	4.0
Maitland	2.5	2.4	2.5	2.3	Calvary, Wagga Wagga	5.0	5.0	4.5	4.4
John Hunter	3.0	2.9	2.8	2.7	Other hospitals	4.9	4.8	4.7	4.6
Other hospitals	2.4	2.3	2.1	2.1	TOTAL	4.5	4.4	4.4	4.4
TOTAL	3.0	2.8	2.8	2.6	<b>TOTAL NSW*</b>	3.4	3.3	3.2	3.2

Source: NSW Perinatal Data Collection (HOIST), Centre for Epidemiology and Evidence, NSW Ministry 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 7 of the Australian Council on Healthcare Standards Clinical Indicator User's Manual 2012.<sup>1</sup>

### Reference

1. Australian Council on Healthcare Standards. *Obstetrics Indicator Users' Manual 2012. Obstetrics version 6*. Sydney: ACHS, 2012.

## 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 54 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 54. 1.1 Selected primipara who have a spontaneous vaginal birth by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	58.0	57.2	55.2	51.3	Grafton Base	57.5	55.9	57.6	57.6
Royal Prince Alfred	53.8	54.0	51.8	50.8	Lismore Base	60.3	60.0	59.2	64.0
TOTAL	54.7	54.6	52.6	50.9	Tweed Heads	65.2	66.8	67.8	62.0
<b>South Western Sydney</b>					Other hospitals	70.6	75.2	90.6	97.1
Fairfield	73.5	75.8	71.2	76.0	TOTAL	63.5	64.6	65.8	64.7
Liverpool	62.6	65.0	67.6	65.0	<b>Mid North Coast</b>				
Campbelltown	67.6	66.9	64.8	63.3	Coffs Harbour	60.2	56.1	51.1	60.0
Bankstown-Lidcombe	62.1	63.6	62.2	60.1	Kempsey	73.5	73.8	71.2	57.7
Bowral	48.9	55.6	52.9	53.4	Port Macquarie Base	62.4	57.7	58.4	52.0
Other hospitals	0.0	0.0	100.0	0.0	Other hospitals	100.0	100.0	75.0	100.0
TOTAL	65.0	66.7	65.7	64.9	TOTAL	63.3	59.2	56.0	57.1
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	57.6	50.9	55.2	56.5	Bega	61.5	56.3	68.4	60.0
Sutherland	66.2	70.3	57.4	65.8	Goulburn Base	52.0	55.6	38.0	55.3
Royal Hospital for Women	49.5	49.4	51.4	50.6	Moruya	58.2	53.5	54.5	52.3
TOTAL	54.6	53.1	53.7	55.2	Queanbeyan	68.0	63.6	60.0	62.9
<b>Illawarra Shoalhaven</b>					Other hospitals	67.1	69.3	75.6	73.0
Shoalhaven	57.2	55.8	57.1	57.1	TOTAL	61.4	60.1	57.6	59.5
Wollongong	55.9	59.8	59.0	59.5	<b>Murrumbidgee</b>				
Other hospitals	58.1	60.0	41.7	51.9	Young	52.3	47.6	51.1	57.1
TOTAL	56.2	58.9	58.0	58.6	Griffith Base	64.2	58.6	59.4	50.4
<b>Western Sydney</b>					Wagga Wagga Base	54.3	49.1	51.1	50.9
Auburn	69.2	70.8	63.7	59.4	Other hospitals	48.8	54.5	51.7	57.1
Blacktown	54.8	54.4	50.7	47.4	TOTAL	54.8	52.7	53.2	53.0
Westmead	57.2	50.9	50.6	47.7	<b>Western NSW</b>				
TOTAL	58.4	54.8	52.4	49.2	Dubbo Base	54.8	57.1	62.2	64.7
<b>Nepean Blue Mountains</b>					Mudgee	56.7	57.9	64.3	49.2
Blue Mountains	55.7	47.2	51.1	52.0	Bathurst Base	64.9	66.7	59.4	61.5
Nepean	49.0	47.5	49.0	50.5	Orange Base	50.6	56.4	46.0	54.6
Hawkesbury	50.0	45.9	44.8	45.6	Other hospitals	56.5	64.8	60.0	67.3
Other hospitals	63.0	59.6	64.5	50.0	TOTAL	55.7	59.8	57.6	60.7
TOTAL	50.2	47.8	48.6	49.7	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	53.8	47.9	52.9	50.9
Hornsby	52.3	49.0	53.6	54.9	TOTAL	53.8	47.9	52.9	50.9
Manly	63.4	55.0	49.6	52.6	<b>Private Hospitals</b>				
Royal North Shore	54.5	54.8	46.7	46.6	Mater, North Sydney	29.8	28.2	30.1	31.7
Other hospitals	50.0	56.1	62.3	100.0	North Shore Private	33.9	31.3	36.1	36.3
TOTAL	55.0	53.6	50.2	51.2	Sydney Adventist	44.0	42.8	47.2	46.9
<b>Central Coast</b>					North Gosford Private	34.1	30.7	29.8	29.0
Gosford	43.7	46.4	43.6	42.1	Hurstville Community	35.5	36.7	39.9	37.4
Other hospitals	83.8	95.8	100.0	100.0	Kareena Private	21.9	20.9	35.3	33.3
TOTAL	47.6	48.2	46.9	44.3	St. George Private	35.1	31.3	25.6	28.5
<b>Hunter New England</b>					Prince of Wales Private	39.7	40.8	35.5	36.6
Armidale	71.6	59.5	73.5	58.0	Norwest Private	41.9	47.5	40.1	40.5
Gunnedah	51.4	37.2	40.9	35.3	Sydney Southwest Private	55.2	51.8	48.9	43.9
Inverell	43.1	39.2	42.3	51.7	Nepean Private	44.1	42.1	48.0	51.3
Moree	67.3	62.5	65.7	75.5	Westmead Private	43.5	40.6	39.4	33.3
Tamworth Base	46.4	45.3	53.7	53.1	Figtree Private	41.7	45.8	38.3	36.9
Manning Base	59.7	63.0	57.3	55.4	Newcastle Private	41.8	41.7	45.8	39.2
Maitland	58.0	56.0	50.2	48.9	Calvary, Wagga Wagga	36.8	37.1	39.2	36.5
John Hunter	60.4	59.9	59.5	52.6	Other hospitals	31.9	43.5	34.7	44.2
Other hospitals	73.1	75.3	75.6	74.4	TOTAL	38.9	38.0	38.1	37.1
TOTAL	59.8	58.9	58.6	54.5	<b>TOTAL NSW*</b>	52.7	52.1	51.4	50.6

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 55 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 55. 1.2 Selected primipara who undergo induction of labour by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	28.5	27.8	28.2	25.8	Grafton Base	32.5	40.5	31.4	35.4
Royal Prince Alfred	25.7	25.1	27.6	28.6	Lismore Base	33.9	24.0	25.6	27.6
TOTAL	26.3	25.6	27.8	28.0	Tweed Heads	27.8	26.6	30.6	26.6
<b>South Western Sydney</b>					Other hospitals				
Fairfield	23.7	19.0	23.1	26.1	TOTAL	28.0	25.4	26.8	25.9
Liverpool	27.3	31.2	28.9	27.6	<b>Mid North Coast</b>				
Campbelltown	30.6	27.3	32.2	33.8	Coffs Harbour	20.8	23.5	23.8	29.1
Bankstown-Lidcombe	33.5	28.3	33.8	30.0	Kempsey	8.2	31.1	23.7	29.6
Bowral	35.1	36.8	21.4	25.3	Port Macquarie Base	32.5	24.5	28.1	24.0
Other hospitals	0.0	0.0	0.0	0.0	Other hospitals	0.0	0.0	0.0	0.0
TOTAL	29.1	27.5	29.4	29.4	TOTAL	23.9	24.4	25.1	27.1
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	35.1	39.7	35.9	34.9	Bega	33.3	27.1	29.8	27.1
Sutherland	30.5	29.9	37.7	32.1	Goulburn Base	8.0	9.7	15.5	9.2
Royal Hospital for Women	35.2	33.8	32.8	34.7	Moruya	27.8	29.6	24.7	25.6
TOTAL	34.5	35.1	34.7	34.3	Queanbeyan	26.7	29.9	15.6	15.5
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	28.9	32.0	30.7	36.6	TOTAL	22.6	22.7	19.7	19.7
Wollongong	39.7	43.2	43.7	39.3	<b>Murrumbidgee</b>				
Other hospitals	54.8	30.0	37.5	33.3	Young	27.3	23.8	34.0	23.8
TOTAL	38.1	40.5	40.5	38.4	Griffith Base	19.5	15.2	24.8	36.2
<b>Western Sydney</b>					Wagga Wagga Base				
Auburn	32.3	29.5	30.3	29.7	Other hospitals	33.8	28.5	29.3	29.4
Blacktown	43.2	40.4	43.9	43.9	TOTAL	28.9	24.0	31.1	33.5
Westmead	43.0	44.5	42.7	45.9	<b>Western NSW</b>				
TOTAL	41.3	41.1	41.4	43.0	Dubbo Base	31.2	34.5	29.7	39.2
<b>Nepean Blue Mountains</b>					Mudgee				
Blue Mountains	35.4	26.4	51.1	22.0	Bathurst Base	23.9	16.7	16.9	27.7
Nepean	37.9	41.3	40.7	38.8	Orange Base	35.9	33.6	38.6	41.3
Hawkesbury	43.0	39.7	42.3	34.4	Other hospitals	35.5	27.0	26.0	31.8
Other hospitals	41.3	22.8	35.5	39.5	TOTAL	31.8	29.7	29.3	36.7
TOTAL	38.9	39.5	41.3	37.3	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base				
Hornsby	28.8	37.6	34.5	38.9	TOTAL	24.6	15.5	19.1	29.1
Manly	32.8	30.7	31.9	35.2	<b>Private Hospitals</b>				
Royal North Shore	33.0	35.7	37.1	37.2	Mater, North Sydney	29.7	30.7	28.2	24.5
Other hospitals	41.7	35.0	31.1	0.0	North Shore Private	27.2	30.3	30.6	22.8
TOTAL	33.2	35.1	34.8	36.3	Sydney Adventist	35.8	32.0	33.9	32.2
<b>Central Coast</b>					North Gosford Private				
Gosford	36.4	38.2	39.8	40.5	Hurstville Community	31.8	29.9	30.3	37.9
Other hospitals	0.0	0.0	0.0	0.0	Kareena Private	36.2	36.3	30.5	32.9
TOTAL	32.9	36.8	37.5	39.0	St. George Private	36.3	45.0	40.6	33.9
<b>Hunter New England</b>					Prince of Wales Private				
Armidale	33.3	35.5	33.7	41.0	Norwest Private	28.1	25.2	28.9	26.8
Gunnedah	37.8	41.9	50.0	47.1	Sydney Southwest Private	46.1	47.2	45.5	50.8
Inverell	31.4	33.3	51.9	37.9	Nepean Private	33.4	36.3	35.9	44.9
Moree	26.5	35.4	54.3	42.9	Westmead Private	34.0	40.7	40.6	38.2
Tamworth Base	37.5	44.8	48.3	39.6	Figtree Private	37.2	34.3	34.4	37.3
Manning Base	23.7	33.6	37.6	34.4	Newcastle Private	51.0	49.8	52.3	53.1
Maitland	39.1	40.3	38.5	41.9	Calvary, Wagga Wagga	30.1	33.3	30.3	32.6
John Hunter	28.5	34.0	34.2	34.4	Other hospitals	27.1	26.9	26.7	35.1
Other hospitals	20.8	22.0	20.4	16.9	TOTAL	33.3	37.1	36.1	36.5
TOTAL	30.8	35.0	36.2	35.6	TOTAL	33.9	33.9	34.0	34.6
					<b>TOTAL NSW*</b>				
					32.8 33.0 33.8 34.2				

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 56 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 56. 1.3 Selected primipara who undergo an instrumental vaginal birth by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	22.1	26.1	24.0	22.5	Grafton Base	17.5	17.1	17.8	15.2
Royal Prince Alfred	22.7	20.5	22.7	24.7	Lismore Base	12.4	13.2	15.8	15.7
TOTAL	22.6	21.7	23.0	24.2	Tweed Heads	15.8	15.6	13.4	19.9
<b>South Western Sydney</b>					Other hospitals	13.1	12.4	7.1	2.9
Fairfield	11.9	11.2	16.6	10.8	TOTAL	14.4	14.5	14.2	16.9
Liverpool	19.8	15.6	16.7	19.0	<b>Mid North Coast</b>				
Campbelltown	9.7	12.8	14.2	17.0	Coffs Harbour	16.3	18.6	23.4	13.7
Bankstown-Lidcombe	21.4	20.9	21.3	23.6	Kempsey	6.1	3.3	10.2	18.3
Bowral	30.5	29.2	27.9	30.1	Port Macquarie Base	17.3	22.1	20.0	23.5
Other hospitals	0.0	0.0	0.0	0.0	Other hospitals	0.0	0.0	25.0	0.0
TOTAL	17.0	16.0	17.5	18.5	TOTAL	15.3	18.0	20.8	17.7
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	23.6	25.6	24.4	25.2	Bega	10.3	25.0	8.8	21.4
Sutherland	16.4	16.4	25.8	15.9	Goulburn Base	18.7	26.4	32.4	22.4
Royal Hospital for Women	26.0	26.1	27.1	26.8	Moruya	21.5	25.4	20.8	25.6
TOTAL	23.8	24.5	26.0	24.4	Queanbeyan	18.7	23.4	26.7	15.5
<b>Illawarra Shoalhaven</b>					Other hospitals	13.4	12.0	11.1	5.4
Shoalhaven	15.7	17.1	20.0	16.1	TOTAL	17.1	22.2	21.5	19.2
Wollongong	20.3	20.2	18.1	17.6	<b>Murrumbidgee</b>				
Other hospitals	22.6	35.0	37.5	29.6	Young	13.6	19.0	17.0	19.0
TOTAL	19.5	19.9	19.1	17.6	Griffith Base	23.6	19.2	17.8	28.3
<b>Western Sydney</b>					Wagga Wagga Base	20.0	22.5	20.7	17.4
Auburn	13.7	14.9	17.9	21.7	Other hospitals	26.3	21.1	19.8	18.3
Blacktown	20.0	22.5	25.7	28.3	TOTAL	22.3	21.0	19.4	20.8
Westmead	22.0	27.1	24.8	28.5	<b>Western NSW</b>				
TOTAL	20.0	23.9	24.1	27.5	Dubbo Base	17.6	17.5	17.8	16.3
<b>Nepean Blue Mountains</b>					Mudgee	26.7	23.7	16.1	16.9
Blue Mountains	22.8	18.9	17.8	14.0	Bathurst Base	7.5	14.6	13.8	15.4
Nepean	22.1	22.8	21.9	24.1	Orange Base	21.2	20.0	23.8	19.3
Hawkesbury	15.2	16.3	22.6	17.7	Other hospitals	16.9	11.5	6.0	13.6
Other hospitals	10.9	10.5	9.7	10.5	TOTAL	17.5	17.3	16.8	16.6
TOTAL	20.4	20.9	21.5	22.1	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	12.3	14.1	10.3	9.1
Hornsby	24.0	20.4	23.3	20.5	TOTAL	12.3	14.1	10.3	9.1
Manly	18.8	23.0	26.2	22.1	<b>Private Hospitals</b>				
Royal North Shore	19.5	18.3	23.3	25.7	Mater, North Sydney	35.9	35.9	30.9	30.2
Other hospitals	31.4	22.8	20.5	0.0	North Shore Private	28.1	29.2	25.9	26.5
TOTAL	22.1	20.4	23.7	23.0	Sydney Adventist	22.1	27.8	25.2	21.3
<b>Central Coast</b>					North Gosford Private	22.4	21.2	24.1	31.3
Gosford	21.0	22.1	22.6	27.3	Hurstville Community	29.1	34.2	24.0	29.4
Other hospitals	10.3	4.2	0.0	0.0	Kareena Private	33.6	40.3	27.1	26.0
TOTAL	20.0	21.4	21.3	26.3	St. George Private	29.6	34.8	32.4	31.7
<b>Hunter New England</b>					Prince of Wales Private	24.6	23.0	26.2	26.1
Armidale	11.8	15.7	8.4	17.0	Norwest Private	35.6	30.2	29.4	34.7
Gunnedah	43.2	23.3	22.7	41.2	Sydney Southwest Private	22.1	23.7	27.1	27.4
Inverell	19.6	19.6	25.0	15.5	Nepean Private	26.5	27.5	22.1	17.2
Moree	16.3	10.4	22.9	14.3	Westmead Private	28.7	27.0	28.6	30.5
Tamworth Base	31.3	27.9	32.0	21.3	Figtree Private	31.1	31.6	27.7	33.4
Manning Base	21.6	16.4	20.4	22.9	Newcastle Private	24.5	28.8	25.9	28.8
Maitland	19.4	16.8	18.1	19.2	Calvary, Wagga Wagga	33.3	29.3	33.5	37.8
John Hunter	22.2	23.1	20.0	22.6	Other hospitals	34.8	29.0	40.3	26.9
Other hospitals	13.7	13.9	9.0	11.8	TOTAL	28.2	29.3	27.6	28.5
TOTAL	21.4	20.0	19.5	20.6	<b>TOTAL NSW*</b>	22.3	22.7	22.8	23.6

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 57 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 57. 1.4 Selected primipara undergoing caesarean section by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	19.9	16.7	20.8	26.2	Grafton Base	25.0	27.0	24.6	27.3
Royal Prince Alfred	23.3	25.5	25.4	24.5	Lismore Base	27.0	26.8	25.0	20.3
TOTAL	22.6	23.6	24.4	24.9	Tweed Heads	19.0	17.3	18.7	18.0
<b>South Western Sydney</b>					Other hospitals	16.3	12.4	2.4	0.0
Fairfield	14.7	13.0	12.2	13.3	TOTAL	22.0	20.9	20.0	18.4
Liverpool	17.6	19.4	15.7	16.1	<b>Mid North Coast</b>				
Campbelltown	22.8	20.3	21.0	19.7	Coffs Harbour	23.5	25.3	25.5	26.3
Bankstown-Lidcombe	16.5	15.3	16.5	16.4	Kempsey	20.4	21.3	18.6	23.9
Bowral	20.1	15.2	19.3	16.4	Port Macquarie Base	20.3	20.2	21.6	24.5
Other hospitals	0.0	0.0	0.0	0.0	Other hospitals	0.0	0.0	0.0	0.0
TOTAL	18.0	17.2	16.8	16.6	TOTAL	21.4	22.6	23.2	25.2
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	18.8	23.5	20.3	18.3	Bega	28.2	18.8	22.8	18.6
Sutherland	17.4	13.3	16.7	18.2	Goulburn Base	29.3	18.1	29.6	22.4
Royal Hospital for Women	24.5	24.5	21.5	22.7	Moruya	20.3	21.1	24.7	22.1
TOTAL	21.6	22.5	20.2	20.4	Queanbeyan	13.3	13.0	13.3	20.7
<b>Illawarra Shoalhaven</b>					Other hospitals	19.5	17.3	13.3	21.6
Shoalhaven	27.1	27.1	22.9	26.8	TOTAL	21.4	17.5	20.9	21.0
Wollongong	23.8	20.0	23.0	22.9	<b>Murrumbidgee</b>				
Other hospitals	19.4	5.0	20.8	18.5	Young	34.1	33.3	31.9	23.8
TOTAL	24.3	21.2	22.9	23.8	Griffith Base	12.2	22.2	22.8	21.3
<b>Western Sydney</b>					Wagga Wagga Base	25.7	28.4	28.2	31.7
Auburn	17.1	14.3	18.4	19.0	Other hospitals	25.0	24.4	28.4	24.6
Blacktown	25.2	23.1	23.7	24.3	TOTAL	22.9	26.3	27.4	26.2
Westmead	20.8	22.1	24.6	23.9	<b>Western NSW</b>				
TOTAL	21.6	21.3	23.4	23.3	Dubbo Base	25.1	25.0	19.9	19.0
<b>Nepean Blue Mountains</b>					Mudgee	16.7	18.4	19.6	33.8
Blue Mountains	21.5	34.0	31.1	34.0	Bathurst Base	27.6	18.8	26.9	23.1
Nepean	28.9	29.7	29.2	25.4	Orange Base	27.7	23.6	29.6	26.1
Hawkesbury	34.8	37.8	32.6	36.7	Other hospitals	26.6	23.8	34.0	19.1
Other hospitals	26.1	29.8	25.8	39.5	TOTAL	25.8	22.7	25.4	22.7
TOTAL	29.4	31.3	29.9	28.2	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	33.8	36.6	36.8	40.0
Hornsby	23.8	30.7	23.1	24.5	TOTAL	33.8	36.6	36.8	40.0
Manly	17.8	22.0	24.3	25.4	<b>Private Hospitals</b>				
Royal North Shore	26.0	27.0	30.1	27.7	Mater, North Sydney	34.2	35.9	39.0	38.1
Other hospitals	18.6	21.1	17.2	0.0	North Shore Private	37.8	39.5	37.9	37.3
TOTAL	23.0	26.0	26.0	25.8	Sydney Adventist	33.9	29.4	27.7	31.7
<b>Central Coast</b>					North Gosford Private	43.1	48.1	46.1	39.7
Gosford	35.3	31.5	33.8	30.5	Hurstville Community	35.1	29.1	36.1	33.2
Other hospitals	5.9	0.0	0.0	0.0	Kareena Private	44.5	38.7	37.2	39.5
TOTAL	32.4	30.4	31.8	29.4	St. George Private	34.8	33.9	42.0	39.8
<b>Hunter New England</b>					Prince of Wales Private	35.5	36.0	38.3	36.5
Armidale	16.7	24.8	18.1	25.0	Norwest Private	22.5	22.0	30.5	24.9
Gunnedah	5.4	39.5	36.4	23.5	Sydney Southwest Private	22.4	23.7	24.0	28.7
Inverell	37.3	41.2	32.7	32.8	Nepean Private	29.4	30.4	29.9	31.5
Moree	16.3	27.1	11.4	10.2	Westmead Private	27.6	32.3	32.1	36.1
Tamworth Base	22.3	26.7	14.3	25.6	Figtree Private	26.8	22.5	34.0	29.7
Manning Base	18.0	20.5	22.3	21.7	Newcastle Private	33.8	29.5	28.3	32.0
Maitland	22.5	27.3	31.6	31.9	Calvary, Wagga Wagga	29.9	33.5	27.3	25.7
John Hunter	17.4	17.0	20.5	24.8	Other hospitals	31.9	27.4	25.0	28.8
Other hospitals	13.2	10.8	15.4	13.8	TOTAL	32.7	32.6	34.2	34.2
TOTAL	18.7	21.1	21.9	24.9	<b>TOTAL NSW*</b>	24.9	25.1	25.7	25.7

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 58. 2.1 Vaginal delivery after previous primary caesarean section by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	16.9	12.0	15.6	17.6	Grafton Base	12.2	7.7	17.6	17.7
Royal Prince Alfred	13.5	11.0	14.3	13.1	Lismore Base	20.1	18.4	23.0	22.1
TOTAL	14.3	11.3	14.7	14.4	Tweed Heads	19.1	17.2	16.6	19.8
<b>South Western Sydney</b>					Other hospitals	25.8	12.8	10.0	4.2
Fairfield	5.4	0.0	2.8	2.2	TOTAL	19.7	16.2	18.9	19.4
Liverpool	20.5	27.7	17.1	26.2	<b>Mid North Coast</b>				
Campbelltown	15.6	22.6	12.5	10.8	Coffs Harbour	10.0	14.6	14.7	11.1
Bankstown-Lidcombe	11.0	22.0	12.2	14.7	Kempsey	30.4	16.7	8.7	11.8
Bowral	20.7	11.9	14.3	17.0	Port Macquarie Base	21.3	14.8	9.7	16.0
TOTAL	15.3	20.2	12.9	15.9	TOTAL	17.0	15.0	12.6	13.1
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	23.0	16.6	19.3	18.3	Bega	9.1	18.2	38.1	17.6
Sutherland	6.7	6.1	1.3	3.9	Goulburn Base	26.5	30.3	22.6	8.7
Royal Hospital for Women	8.3	9.8	10.7	13.0	Moruya	12.5	22.5	7.4	16.0
TOTAL	13.1	11.5	12.6	13.9	Queanbeyan	5.3	16.7	14.3	12.0
<b>Illawarra Shoalhaven</b>					Other hospitals	16.7	25.0	31.8	20.0
Shoalhaven	6.3	3.4	11.0	7.0	TOTAL	16.1	23.7	22.1	14.5
Wollongong	25.3	23.4	20.9	22.0	<b>Murrumbidgee</b>				
Other hospitals	9.1	8.3	50.0	10.0	Young	0.0	10.5	7.1	12.5
TOTAL	18.3	16.7	18.0	16.9	Griffith Base	12.8	17.6	20.0	13.9
<b>Western Sydney</b>					Wagga Wagga Base	8.7	13.3	11.0	10.7
Auburn	4.0	1.6	3.1	4.9	Other hospitals	6.3	10.8	9.4	6.8
Blacktown	18.4	22.5	18.0	13.5	TOTAL	8.3	12.9	12.4	10.3
Westmead	20.8	16.9	17.4	17.5	<b>Western NSW</b>				
TOTAL	18.7	17.6	16.6	15.0	Dubbo Base	25.3	21.9	12.9	18.4
<b>Nepean Blue Mountains</b>					Mudgee	0.0	0.0	15.8	0.0
Blue Mountains	0.0	0.0	0.0	0.0	Bathurst Base	24.4	13.4	14.3	4.8
Nepean	14.8	16.5	17.8	16.6	Orange Base	8.9	12.4	12.3	22.9
Hawkesbury	14.1	14.7	14.6	10.9	Other hospitals	16.7	6.4	17.2	27.9
Other hospitals	15.6	16.7	13.3	4.5	TOTAL	17.4	13.8	13.8	17.2
TOTAL	14.3	15.7	16.0	14.4	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	6.5	13.8	13.0	12.1
Hornsby	9.4	11.1	9.6	17.1	TOTAL	6.5	13.8	13.0	12.1
Manly	17.3	9.0	11.3	12.6	<b>Private Hospitals</b>				
Royal North Shore	11.2	9.8	9.4	11.6	Mater, North Sydney	3.6	3.9	4.3	4.3
Other hospitals	4.2	13.0	16.0	0.0	North Shore Private	3.8	4.2	6.2	4.7
TOTAL	10.4	10.6	10.3	13.4	Sydney Adventist	6.4	9.2	8.5	8.7
<b>Central Coast</b>					North Gosford Private	6.8	6.5	3.9	5.6
Gosford	5.7	8.6	7.0	10.1	Hurstville Community	2.9	2.8	6.1	5.6
Other hospitals	100.0	0.0	0.0	0.0	Kareena Private	1.9	0.0	3.0	4.2
TOTAL	6.3	8.6	7.0	10.1	St. George Private	6.4	6.5	4.0	4.7
<b>Hunter New England</b>					Prince of Wales Private	4.8	4.3	3.4	3.5
Armidale	16.3	27.8	15.4	7.9	Norwest Private	11.7	10.8	11.4	9.1
Gunnedah	33.3	8.3	0.0	19.2	Sydney Southwest Private	5.1	5.9	3.3	3.6
Inverell	13.5	14.3	9.1	11.8	Nepean Private	10.4	11.5	5.8	11.4
Moree	14.3	26.7	45.5	6.7	Westmead Private	8.3	5.1	8.3	7.6
Tamworth Base	13.1	8.2	23.8	20.0	Figtree Private	6.4	7.1	5.9	6.7
Manning Base	29.5	27.7	10.8	27.0	Newcastle Private	9.3	11.4	12.4	8.1
Maitland	16.4	17.1	19.4	14.9	Calvary, Wagga Wagga	14.3	7.2	12.5	3.3
John Hunter	21.7	27.3	23.7	23.0	Other hospitals	2.0	7.8	8.5	2.9
Other hospitals	20.0	13.7	12.2	20.0	TOTAL	6.2	6.3	6.5	5.9
TOTAL	19.6	21.5	19.8	19.5	<b>TOTAL NSW*</b>	12.3	12.5	12.0	12.1

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 or unsutured perineal 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 59 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 59. 3.1 Selected primipara delivering vaginally with an intact perineum by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	12.3	7.4	10.0	8.8	Grafton Base	40.0	40.7	31.5	41.7
Royal Prince Alfred	14.5	15.3	10.6	12.8	Lismore Base	25.0	26.5	22.4	26.8
TOTAL	14.0	13.5	10.4	12.0	Tweed Heads	31.4	24.9	23.8	25.1
<b>South Western Sydney</b>					Other hospitals				
Fairfield	21.4	28.2	18.1	21.4	TOTAL	29.7	34.3	41.0	46.4
Liverpool	15.3	16.4	15.6	13.8	<b>Mid North Coast</b>				
Campbelltown	25.5	28.4	28.6	19.6	Coffs Harbour	25.4	23.5	16.2	18.1
Bankstown-Lidcombe	13.8	11.0	11.7	13.3	Kempsey	41.0	44.7	35.4	38.9
Bowral	26.1	22.8	30.1	30.3	Port Macquarie Base	24.8	28.3	30.3	16.2
Other hospitals	0.0	0.0	100.0	0.0	Other hospitals	70.0	42.9	0.0	25.0
TOTAL	19.1	21.0	19.4	17.5	TOTAL	28.0	27.9	23.3	20.1
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	20.0	19.0	18.2	12.7	Bega	39.3	35.9	36.4	21.1
Sutherland	25.8	19.5	19.8	25.6	Goulburn Base	13.2	6.8	10.0	5.1
Royal Hospital for Women	19.9	15.7	15.4	12.0	Moruya	36.5	33.9	34.5	38.8
TOTAL	20.8	17.4	17.1	14.7	Queanbeyan	50.8	46.3	43.6	50.5
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	27.3	29.5	29.7	34.1	TOTAL	42.4	41.0	59.0	65.5
Wollongong	14.2	21.5	18.8	15.1	<b>Murrumbidgee</b>				
Other hospitals	36.0	15.8	21.1	63.6	Young	27.6	14.3	34.4	28.1
TOTAL	17.6	22.9	21.4	21.3	Griffith Base	29.6	36.4	32.1	35.0
<b>Western Sydney</b>					Wagga Wagga Base				
Auburn	23.6	19.0	21.9	19.5	Other hospitals	32.3	33.1	32.0	28.9
Blacktown	16.6	18.1	13.9	10.1	TOTAL	38.3	33.3	31.3	42.1
Westmead	11.4	12.2	9.5	11.5	<b>Western NSW</b>				
TOTAL	15.0	15.1	12.7	12.3	Dubbo Base	26.2	27.7	36.2	30.6
<b>Nepean Blue Mountains</b>					Mudgee				
Blue Mountains	14.5	20.0	25.8	27.3	Bathurst Base	16.0	21.0	35.6	27.9
Nepean	20.4	18.3	17.9	14.7	Orange Base	41.2	35.9	35.9	31.0
Hawkesbury	34.7	29.2	28.0	22.1	Other hospitals	31.3	32.1	21.1	24.2
Other hospitals	32.4	35.0	13.0	17.4	TOTAL	25.3	18.3	21.2	33.7
TOTAL	22.9	20.9	20.0	16.4	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base				
Hornsby	16.7	14.1	14.5	18.0	TOTAL	44.2	40.0	46.5	36.4
Manly	20.9	19.1	20.5	19.8	<b>Private Hospitals</b>				
Royal North Shore	17.9	13.9	13.1	13.9	Mater, North Sydney	10.4	10.8	9.3	9.7
Other hospitals	28.9	26.7	34.7	54.3	North Shore Private	11.7	8.4	14.0	8.6
TOTAL	19.9	17.1	17.0	17.6	Sydney Adventist	8.3	7.1	6.7	8.0
<b>Central Coast</b>					North Gosford Private				
Gosford	20.1	21.7	15.8	13.7	Hurstville Community	19.3	24.2	27.6	19.3
Other hospitals	23.4	12.5	27.9	15.4	Kareena Private	5.3	7.1	11.6	7.6
TOTAL	20.6	21.2	16.8	13.8	St. George Private	4.9	18.8	16.9	8.4
<b>Hunter New England</b>					Prince of Wales Private				
Armidale	22.4	28.6	23.5	22.7	Norwest Private	14.2	19.3	17.6	20.1
Gunnedah	8.6	30.8	7.1	11.5	Sydney Southwest Private	10.8	15.0	14.9	11.0
Inverell	34.4	33.3	34.3	48.7	Nepean Private	15.4	15.8	8.0	11.6
Moree	31.7	28.6	29.0	27.3	Westmead Private	8.9	13.2	11.7	10.9
Tamworth Base	20.1	15.9	19.5	21.4	Figtree Private	9.3	10.8	12.6	10.7
Manning Base	28.1	30.2	23.8	25.2	Newcastle Private	7.2	11.7	11.1	7.8
Maitland	28.4	25.1	19.7	14.4	Calvary, Wagga Wagga	19.0	26.7	27.5	17.5
John Hunter	22.4	21.5	21.8	17.9	Other hospitals	12.9	18.0	8.6	2.7
Other hospitals	40.2	35.7	27.6	31.0	TOTAL	21.7	8.9	16.7	13.5
TOTAL	25.8	24.9	22.3	20.5	<b>TOTAL NSW*</b>				
						19.1	18.9	17.7	16.5

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 60 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 60. 3.2 Selected primipara undergoing episiotomy and no perineal tear by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	17.3	19.8	29.8	21.7	Grafton Base	18.9	21.0	22.5	13.9
Royal Prince Alfred	16.6	17.4	16.6	15.7	Lismore Base	17.5	12.2	18.1	11.8
TOTAL	16.8	17.9	19.7	17.0	Tweed Heads	18.5	14.0	14.9	12.4
<b>South Western Sydney</b>					<b>Other hospitals</b>				
Fairfield	32.6	21.2	30.5	27.7	TOTAL	16.8	14.1	16.6	11.6
Liverpool	33.5	31.3	28.7	27.8	<b>Mid North Coast</b>				
Campbelltown	16.9	19.2	20.3	26.0	Coffs Harbour	11.2	15.0	24.3	13.8
Bankstown-Lidcombe	29.2	30.2	32.3	33.9	Kempsey	7.7	8.5	4.2	11.1
Bowral	13.0	15.9	18.6	21.3	Port Macquarie Base	17.2	19.9	16.6	19.5
Other hospitals	0.0	0.0	0.0	0.0	Other hospitals	0.0	14.3	0.0	0.0
TOTAL	27.7	25.1	27.2	28.4	TOTAL	13.1	16.2	18.9	15.4
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	14.1	14.5	19.4	22.0	Bega	10.7	7.7	13.6	22.8
Sutherland	9.3	8.0	16.8	14.5	Goulburn Base	50.9	66.1	74.0	66.1
Royal Hospital for Women	26.3	27.5	27.0	26.6	Moruya	15.9	19.6	20.7	17.9
TOTAL	19.6	20.0	22.6	22.8	Queanbeyan	10.8	7.5	10.3	5.5
<b>Illawarra Shoalhaven</b>					<b>Other hospitals</b>				
Shoalhaven	18.2	18.2	18.4	17.7	TOTAL	18.9	23.0	23.8	23.4
Wollongong	18.5	12.7	14.1	14.2	<b>Murrumbidgee</b>				
Other hospitals	8.0	10.5	10.5	22.7	Young	6.9	7.1	25.0	18.8
TOTAL	18.1	13.8	15.0	15.4	Griffith Base	23.1	20.8	20.5	27.0
<b>Western Sydney</b>					<b>Wagga Wagga Base</b>				
Auburn	19.2	19.3	24.8	29.7	Other hospitals	25.8	25.8	27.7	16.8
Blacktown	32.8	26.1	26.6	36.1	TOTAL	21.2	20.4	22.6	21.7
Westmead	34.3	36.6	34.7	36.5	<b>Western NSW</b>				
TOTAL	31.2	30.6	30.7	35.4	Dubbo Base	32.2	34.0	23.1	23.8
<b>Nepean Blue Mountains</b>					<b>Mudgee</b>				
Blue Mountains	8.1	11.4	9.7	9.1	Bathurst Base	8.2	17.1	20.5	15.0
Nepean	25.0	24.9	21.3	26.5	Orange Base	14.5	14.3	15.0	14.3
Hawkesbury	14.7	16.2	22.4	24.3	Other hospitals	17.6	12.9	7.6	9.0
Other hospitals	32.4	25.0	30.4	8.7	TOTAL	21.1	21.5	18.0	17.2
TOTAL	22.3	22.9	21.3	25.0	<b>Far West</b>				
<b>Northern Sydney</b>					<b>Broken Hill Base</b>				
Hornsby	22.3	18.6	21.5	16.3	TOTAL	16.3	17.8	16.3	18.2
Manly	11.2	17.8	14.4	11.0	<b>Private Hospitals</b>				
Royal North Shore	13.4	20.9	24.0	24.9	Mater, North Sydney	40.5	45.2	43.6	42.6
Other hospitals	9.1	8.0	5.9	0.0	North Shore Private	42.9	46.8	38.7	40.2
TOTAL	14.4	17.7	19.6	18.5	Sydney Adventist	37.3	36.9	34.6	33.7
<b>Central Coast</b>					<b>North Gosford Private</b>				
Gosford	11.4	9.8	13.2	13.3	Hurstville Community	43.9	44.2	36.1	45.3
Other hospitals	7.8	4.2	4.7	3.8	Kareena Private	45.7	38.5	32.3	28.0
TOTAL	10.9	9.5	12.5	12.8	St. George Private	24.7	36.0	32.0	38.2
<b>Hunter New England</b>					<b>Prince of Wales Private</b>				
Armidale	20.0	17.6	19.1	25.3	Norwest Private	39.2	33.3	27.5	32.6
Gunnedah	62.9	23.1	42.9	26.9	Sydney Southwest Private	43.1	45.6	46.8	48.6
Inverell	53.1	46.7	48.6	35.9	Nepean Private	52.4	48.9	47.7	49.7
Moree	9.8	8.6	9.7	2.3	Westmead Private	51.2	50.9	49.8	57.9
Tamworth Base	31.0	31.7	17.8	21.4	Figtree Private	48.9	51.5	53.5	54.4
Manning Base	10.5	12.9	12.3	17.9	Newcastle Private	32.2	26.0	22.4	27.0
Maitland	14.4	10.3	12.2	18.2	Calvary, Wagga Wagga	27.7	20.7	29.7	33.6
John Hunter	11.1	13.4	14.9	15.9	Other hospitals	30.4	48.9	44.4	48.6
Other hospitals	9.2	11.1	9.4	9.5	TOTAL	39.7	40.0	37.8	40.3
TOTAL	15.8	14.8	15.0	17.0	<b>TOTAL NSW*</b>	24.9	25.0	25.4	26.3

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 61 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 61. 3.3 Selected primipara sustaining a perineal tear and no episiotomy by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	65.7	63.7	54.9	60.2	Grafton Base	53.3	49.4	51.7	58.3
Royal Prince Alfred	70.6	69.0	72.4	69.5	Lismore Base	64.6	66.8	68.4	63.2
TOTAL	69.5	67.8	68.3	67.5	Tweed Heads	54.5	62.8	66.1	66.8
<b>South Western Sydney</b>					Other hospitals				
Fairfield	52.3	60.2	52.7	57.2	TOTAL	58.7	61.9	64.5	64.4
Liverpool	51.1	49.0	51.5	56.4	<b>Mid North Coast</b>				
Campbelltown	68.2	60.0	56.4	58.2	Coffs Harbour	53.8	57.7	51.9	71.4
Bankstown-Lidcombe	57.2	57.8	49.1	49.6	Kempsey	66.7	70.2	70.8	64.8
Bowral	67.4	62.1	63.7	54.9	Port Macquarie Base	54.8	54.8	57.2	53.2
Other hospitals	0.0	0.0	0.0	0.0	Other hospitals	70.0	57.1	100.0	75.0
TOTAL	57.2	56.7	53.0	55.4	TOTAL	56.0	58.0	56.5	64.0
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	64.4	64.6	59.8	59.1	Bega	67.9	64.1	47.7	63.2
Sutherland	70.5	73.7	66.2	68.2	Goulburn Base	28.3	22.0	14.0	18.6
Royal Hospital for Women	57.4	58.2	58.4	60.6	Moruya	58.7	51.8	50.0	53.7
TOTAL	61.8	62.9	60.3	61.4	Queanbeyan	69.2	68.7	59.0	65.9
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	66.1	59.1	62.0	68.3	TOTAL	56.4	52.1	46.8	51.5
Wollongong	70.6	68.4	64.9	67.0	<b>Murrumbidgee</b>				
Other hospitals	44.0	57.9	63.2	40.9	Young	69.0	64.3	28.1	56.3
TOTAL	68.7	66.2	64.2	66.5	Griffith Base	58.3	50.6	62.8	51.0
<b>Western Sydney</b>					Wagga Wagga Base				
Auburn	55.5	63.3	53.7	54.4	Other hospitals	41.7	46.2	49.4	50.5
Blacktown	49.2	57.7	56.5	51.3	TOTAL	51.9	51.4	53.8	54.8
Westmead	47.8	45.4	46.4	46.8	<b>Western NSW</b>				
TOTAL	49.5	52.0	50.7	49.3	Dubbo Base	45.0	43.1	45.0	51.6
<b>Nepean Blue Mountains</b>					Mudgee				
Blue Mountains	82.3	65.7	71.0	66.7	Bathurst Base	62.9	64.1	56.4	68.0
Nepean	54.9	58.7	59.6	57.2	Orange Base	50.6	58.9	51.9	64.0
Hawkesbury	63.3	64.6	57.8	62.5	Other hospitals	53.8	63.4	68.2	66.3
Other hospitals	41.2	45.0	56.5	65.2	TOTAL	51.7	55.3	51.9	59.6
TOTAL	57.8	59.3	59.6	58.6	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base				
Hornsby	59.3	62.1	64.6	67.1	TOTAL	58.1	57.8	53.5	60.6
Manly	72.9	67.2	63.7	72.6	<b>Private Hospitals</b>				
Royal North Shore	65.0	58.8	53.3	52.6	Mater, North Sydney	37.4	34.4	36.6	36.6
Other hospitals	71.6	73.3	79.2	97.1	North Shore Private	41.8	44.9	46.4	50.8
TOTAL	66.2	63.6	60.8	62.6	Sydney Adventist	47.7	52.4	56.8	57.1
<b>Central Coast</b>					North Gosford Private				
Gosford	65.8	73.4	68.0	66.2	Hurstville Community	39.8	36.0	43.5	40.9
Other hospitals	79.7	87.5	79.1	84.6	Kareena Private	45.7	43.6	54.6	63.6
TOTAL	67.7	74.1	68.9	67.1	St. George Private	56.7	53.9	56.2	54.5
<b>Hunter New England</b>					Prince of Wales Private				
Armidale	45.9	52.7	60.3	52.0	Norwest Private	41.2	45.2	50.2	45.6
Gunnedah	20.0	38.5	35.7	42.3	Sydney Southwest Private	38.2	35.1	36.8	33.3
Inverell	25.0	30.0	28.6	38.5	Nepean Private	36.3	32.6	29.9	34.4
Moree	48.8	68.6	83.9	79.5	Westmead Private	39.9	39.5	39.3	31.6
Tamworth Base	47.1	54.0	67.2	58.4	Figtree Private	41.6	34.7	35.4	38.2
Manning Base	59.6	69.8	67.2	63.4	Newcastle Private	55.4	54.2	57.5	60.7
Maitland	72.6	73.5	73.1	67.0	Calvary, Wagga Wagga	47.5	48.6	50.8	44.5
John Hunter	69.4	69.9	69.1	64.3	Other hospitals	52.2	44.4	27.8	43.2
Other hospitals	69.0	67.3	74.7	73.8	TOTAL	44.3	44.0	45.2	44.9
TOTAL	63.4	66.8	68.8	64.0	<b>TOTAL NSW*</b>	56.6	57.0	56.2	56.6

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 62 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 62. 3.4 Selected primipara undergoing episiotomy and sustaining a perineal tear by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	7.77	7.41	5.51	8.31	Grafton Base	4.44	1.23	0.00	2.78
Royal Prince Alfred	5.42	4.87	3.47	6.30	Lismore Base	5.00	5.88	3.38	9.21
TOTAL	5.95	5.45	3.94	6.72	Tweed Heads	1.98	3.65	2.44	3.80
<b>South Western Sydney</b>					Other hospitals	2.34	2.24	2.41	1.45
Fairfield	3.73	1.87	3.05	3.26	TOTAL	3.29	3.85	2.44	5.10
Liverpool	4.07	5.58	5.49	4.06	<b>Mid North Coast</b>				
Campbelltown	2.32	2.62	2.08	1.75	Coffs Harbour	5.92	2.82	7.14	5.71
Bankstown-Lidcombe	4.82	5.13	6.57	7.72	Kempsey	0.00	4.26	6.25	1.85
Bowral	0.00	2.07	1.77	3.28	Port Macquarie Base	2.55	3.61	6.21	11.04
Other hospitals	0.00	0.00	0.00	0.00	Other hospitals	0.00	0.00	0.00	0.00
TOTAL	3.53	3.78	4.16	4.10	TOTAL	3.73	3.23	6.63	7.11
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	8.24	9.95	11.42	11.14	Bega	0.00	2.56	6.82	5.26
Sutherland	2.80	3.24	4.83	3.90	Goulburn Base	1.89	0.00	4.00	5.08
Royal Hospital for Women	6.12	6.18	6.94	6.88	Moruya	3.17	5.36	0.00	2.99
TOTAL	6.33	6.88	7.94	7.84	Queanbeyan	3.08	4.48	6.41	1.10
<b>Illawarra Shoalhaven</b>					Other hospitals	3.03	0.00	0.00	3.45
Shoalhaven	3.31	5.30	6.96	3.05	TOTAL	2.55	2.48	3.72	3.30
Wollongong	2.92	5.37	5.71	8.66	<b>Murrumbidgee</b>				
Other hospitals	12.00	15.79	10.53	0.00	Young	3.45	7.14	6.25	6.25
TOTAL	3.35	5.66	6.15	7.00	Griffith Base	0.93	2.60	3.85	4.00
<b>Western Sydney</b>					Wagga Wagga Base	4.62	4.96	8.00	3.51
Auburn	10.62	9.32	8.25	9.31	Other hospitals	4.17	4.30	3.61	3.16
Blacktown	10.82	10.17	10.73	9.50	TOTAL	3.36	4.39	5.66	3.81
Westmead	11.10	10.44	11.63	10.20	<b>Western NSW</b>				
TOTAL	10.94	10.18	10.85	9.86	Dubbo Base	6.93	4.26	6.11	6.85
<b>Nepean Blue Mountains</b>					Mudgee	2.00	4.84	11.11	11.63
Blue Mountains	3.23	5.71	6.45	9.09	Bathurst Base	4.12	2.56	1.71	5.00
Nepean	10.19	6.90	9.69	6.89	Orange Base	7.23	8.33	17.29	11.80
Hawkesbury	8.00	6.92	13.04	5.15	Other hospitals	6.59	6.45	6.06	8.99
Other hospitals	2.94	5.00	4.35	8.70	TOTAL	6.11	5.41	8.14	8.42
TOTAL	9.04	6.76	10.07	6.74	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	2.33	0.00	0.00	3.03
Hornsby	7.54	11.90	6.06	6.36	TOTAL	2.33	0.00	0.00	3.03
Manly	5.81	6.64	12.59	6.60	<b>Private Hospitals</b>				
Royal North Shore	11.32	11.32	16.44	16.03	Mater, North Sydney	11.01	7.62	7.95	5.30
Other hospitals	5.08	4.81	1.98	0.00	North Shore Private	1.88	0.63	0.90	1.13
TOTAL	8.47	9.44	11.69	10.83	Sydney Adventist	7.84	2.73	2.59	1.45
<b>Central Coast</b>					North Gosford Private	9.66	5.83	4.88	5.19
Gosford	11.66	8.41	11.94	14.16	Hurstville Community	9.94	8.63	7.41	5.78
Other hospitals	4.69	0.00	4.65	3.85	Kareena Private	1.23	1.71	0.77	0.00
TOTAL	10.71	7.96	11.33	13.63	St. George Private	3.87	1.04	0.86	0.62
<b>Hunter New England</b>					Prince of Wales Private	2.20	3.62	6.41	4.91
Armidale	5.88	10.99	5.88	9.33	Norwest Private	4.05	3.74	4.31	3.26
Gunnedah	8.57	15.38	7.14	19.23	Sydney Southwest Private	2.62	3.86	5.20	2.78
Inverell	6.25	3.33	8.57	0.00	Nepean Private	1.79	2.11	1.52	2.19
Moree	19.51	2.86	0.00	6.82	Westmead Private	0.73	0.38	0.52	0.80
Tamworth Base	6.32	9.52	7.47	8.44	Figtree Private	0.90	1.53	0.51	0.00
Manning Base	3.51	4.31	4.92	3.25	Newcastle Private	0.00	0.50	0.25	0.00
Maitland	3.34	5.15	7.89	7.90	Calvary, Wagga Wagga	7.92	9.91	13.28	14.55
John Hunter	11.08	10.54	9.14	11.76	Other hospitals	8.70	0.00	9.26	5.41
Other hospitals	2.17	5.03	4.12	5.36	TOTAL	4.13	2.92	3.40	2.72
TOTAL	7.51	8.22	7.57	9.14	<b>TOTAL NSW*</b>	6.02	5.70	6.36	6.48

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 63 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 63. 3.5 Selected primipara undergoing surgical repair of the perineum for third degree tear by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	9.02	6.91	2.51	10.83	Grafton Base	3.33	1.23	4.49	2.78
Royal Prince Alfred	7.84	5.24	6.04	6.16	Lismore Base	2.92	3.36	3.38	4.82
TOTAL	8.11	5.62	5.22	7.15	Tweed Heads	4.29	5.65	7.05	3.80
<b>South Western Sydney</b>					Other hospitals				
Fairfield	5.60	4.15	4.77	2.65	TOTAL	3.15	3.98	5.01	3.80
Liverpool	3.74	5.74	6.19	5.65	<b>Mid North Coast</b>				
Campbelltown	3.94	3.84	2.97	4.47	Coffs Harbour	4.73	3.76	7.14	4.29
Bankstown-Lidcombe	2.19	2.85	4.20	2.33	Kempsey	2.56	0.00	0.00	3.70
Bowral	2.90	2.76	4.42	3.28	Port Macquarie Base	5.10	4.82	4.83	5.19
Other hospitals	0.00	0.00	0.00	0.00	Other hospitals	10.00	0.00	0.00	0.00
TOTAL	3.82	4.12	4.55	3.90	TOTAL	4.80	3.70	5.41	4.50
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	6.56	8.21	7.98	9.59	Bega	0.00	0.00	2.27	5.26
Sutherland	3.11	3.54	4.58	4.18	Goulburn Base	7.55	6.78	8.00	3.39
Royal Hospital for Women	3.71	6.76	7.33	7.19	Moruya	4.76	3.57	1.72	1.49
TOTAL	4.58	6.68	7.01	7.50	Queanbeyan	1.54	2.99	3.85	3.30
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	3.31	2.27	1.27	1.83	TOTAL	3.64	3.19	4.09	2.97
Wollongong	3.13	1.99	3.27	4.12	<b>Murrumbidgee</b>				
Other hospitals	16.00	0.00	15.79	0.00	Young	3.45	0.00	3.13	3.13
TOTAL	3.67	1.99	3.15	3.43	Griffith Base	3.70	1.30	6.41	1.00
<b>Western Sydney</b>					Wagga Wagga Base				
Auburn	4.13	5.79	1.90	6.31	Other hospitals	6.67	5.38	0.00	1.05
Blacktown	5.76	7.28	8.87	5.85	TOTAL	5.43	3.13	3.46	1.47
Westmead	4.59	5.86	3.73	5.88	<b>Western NSW</b>				
TOTAL	4.85	6.30	5.12	5.93	Dubbo Base	8.42	4.79	4.80	2.42
<b>Nepean Blue Mountains</b>					Mudgee				
Blue Mountains	6.45	5.71	3.23	18.18	Bathurst Base	2.00	4.84	4.44	2.33
Nepean	4.78	3.69	5.33	4.49	Orange Base	0.00	6.84	5.98	3.00
Hawkesbury	4.00	1.54	2.48	3.68	Other hospitals	7.23	7.74	8.27	9.32
Other hospitals	2.94	2.50	0.00	0.00	TOTAL	6.59	9.68	6.06	12.36
TOTAL	4.69	3.38	4.56	4.77	5.94	6.69	5.93	5.93	5.62
<b>Northern Sydney</b>					<b>Far West</b>				
Hornsby	6.56	8.92	5.39	5.65	Broken Hill Base	2.33	2.22	2.33	6.06
Manly	1.94	2.90	2.88	5.35	TOTAL	2.33	2.22	2.33	6.06
Royal North Shore	8.19	10.04	10.50	9.58	<b>Private Hospitals</b>				
Other hospitals	4.06	3.74	4.95	2.86	Mater, North Sydney	3.30	3.93	4.09	1.99
TOTAL	6.00	7.30	6.94	7.36	North Shore Private	1.46	0.84	2.25	1.35
<b>Central Coast</b>					Sydney Adventist				
Gosford	7.94	6.31	7.04	9.51	North Gosford Private	1.90	1.59	2.16	1.45
Other hospitals	1.56	0.00	0.00	0.00	Hurstville Community	2.76	0.00	2.44	2.96
TOTAL	7.07	5.97	6.45	9.02	Kareena Private	1.17	3.05	4.17	2.67
<b>Hunter New England</b>					St. George Private				
Armidale	0.00	3.30	0.00	0.00	Prince of Wales Private	1.23	0.85	3.08	2.80
Gunnedah	5.71	7.69	0.00	0.00	Other hospitals	2.84	3.11	4.61	3.69
Inverell	0.00	0.00	0.00	0.00	TOTAL	1.47	1.93	1.19	1.56
Moree	2.44	2.86	3.23	4.55	Norwest Private	4.05	3.74	3.53	3.51
Tamworth Base	5.17	6.35	4.60	5.19	Sydney Southwest Private	3.75	1.93	1.60	3.70
Manning Base	5.26	1.72	2.46	2.44	Nepean Private	1.79	2.63	1.52	3.28
Maitland	4.35	10.31	10.04	7.56	Westmead Private	0.91	0.57	0.17	0.40
John Hunter	7.85	10.14	7.80	10.07	Figtree Private	0.45	1.02	0.51	0.98
Other hospitals	2.72	4.52	2.35	2.38	Newcastle Private	2.20	2.72	1.97	3.34
TOTAL	5.49	7.86	6.23	6.88	Calvary, Wagga Wagga	5.94	4.50	7.81	9.09
					Other hospitals	0.00	0.00	3.70	2.70
					TOTAL	2.17	2.09	2.43	2.37
					<b>TOTAL NSW*</b>	4.48	4.73	4.75	5.03

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* Total NSW includes births at home 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 37<sup>0</sup> to 41<sup>0</sup> weeks gestation.

Table 64 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 64. 3.6 Selected primipara undergoing surgical repair of the perineum for fourth degree tear by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	0.75	1.23	0.00	1.26	Grafton Base	2.22	0.00	0.00	0.00
Royal Prince Alfred	0.22	0.07	0.23	0.14	Lismore Base	0.00	0.42	0.42	0.44
TOTAL	0.34	0.34	0.17	0.37	Tweed Heads	0.33	0.00	0.00	0.76
<b>South Western Sydney</b>					Other hospitals				
Fairfield	0.21	0.00	0.19	0.41	TOTAL	0.39	0.13	0.13	0.52
Liverpool	0.33	0.48	0.84	0.58	<b>Mid North Coast</b>				
Campbelltown	0.70	0.35	0.00	0.16	Coffs Harbour	0.00	0.00	0.48	0.00
Bankstown-Lidcombe	0.22	0.19	0.36	0.18	Kempsey	0.00	0.00	0.00	0.00
Bowral	0.00	0.69	0.00	0.00	Port Macquarie Base	0.00	0.00	0.69	0.00
Other hospitals	0.00	0.00	0.00	0.00	Other hospitals	0.00	0.00	0.00	0.00
TOTAL	0.33	0.30	0.35	0.32	TOTAL	0.00	0.00	0.49	0.00
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	0.84	0.47	0.78	0.56	Bega	0.00	0.00	0.00	1.75
Sutherland	0.31	0.29	0.00	0.00	Goulburn Base	0.00	0.00	0.00	0.00
Royal Hospital for Women	0.28	0.39	0.20	0.42	Moruya	0.00	0.00	0.00	1.49
TOTAL	0.47	0.40	0.34	0.39	Queanbeyan	0.00	1.49	0.00	1.10
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	0.83	0.00	0.63	0.00	TOTAL	0.00	0.35	0.00	0.99
Wollongong	0.42	0.20	0.41	0.00	<b>Murrumbidgee</b>				
Other hospitals	4.00	5.26	0.00	0.00	Young	0.00	0.00	0.00	0.00
TOTAL	0.64	0.31	0.45	0.00	Griffith Base	0.93	0.00	0.00	0.00
<b>Western Sydney</b>					Wagga Wagga Base				
Auburn	0.29	0.00	1.27	0.30	Other hospitals	0.83	0.00	1.20	0.00
Blacktown	0.35	0.15	0.14	0.29	TOTAL	0.52	0.31	0.31	0.00
Westmead	0.29	0.18	0.69	0.24	<b>Western NSW</b>				
TOTAL	0.31	0.15	0.60	0.27	Dubbo Base	0.00	0.00	0.00	0.40
<b>Nepean Blue Mountains</b>					Mudgee				
Blue Mountains	0.00	0.00	0.00	0.00	Bathurst Base	1.03	0.00	0.00	0.00
Nepean	0.64	0.48	0.48	0.45	Orange Base	0.60	0.00	0.00	0.62
Hawkesbury	0.00	0.00	0.00	0.00	Other hospitals	0.00	0.00	0.00	1.12
Other hospitals	0.00	0.00	0.00	0.00	TOTAL	0.33	0.16	0.00	0.47
TOTAL	0.46	0.36	0.36	0.35	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base				
Hornsby	0.33	0.00	0.00	1.06	TOTAL	0.00	0.00	0.00	0.00
Manly	0.00	0.41	0.72	0.00	<b>Private Hospitals</b>				
Royal North Shore	0.87	0.64	0.20	0.70	Mater, North Sydney	0.66	0.00	0.23	0.22
Other hospitals	0.51	0.00	0.00	0.00	North Shore Private	0.21	0.00	0.45	0.00
TOTAL	0.52	0.34	0.25	0.58	Sydney Adventist	0.24	0.23	0.22	0.24
<b>Central Coast</b>					North Gosford Private				
Gosford	0.50	0.47	0.00	0.63	Hurstville Community	0.58	0.00	0.00	0.89
Other hospitals	1.56	0.00	0.00	0.00	Kareena Private	0.00	0.00	0.00	0.00
TOTAL	0.64	0.44	0.00	0.60	St. George Private	1.29	0.78	0.58	0.31
<b>Hunter New England</b>					Prince of Wales Private				
Armidale	0.00	0.00	0.00	0.00	Norwest Private	0.00	0.00	0.39	0.00
Gunnedah	0.00	0.00	0.00	0.00	Sydney Southwest Private	0.00	0.77	0.00	0.00
Inverell	0.00	0.00	0.00	0.00	Nepean Private	0.00	0.00	0.00	0.55
Moree	0.00	0.00	0.00	2.27	Westmead Private	0.37	0.00	0.17	0.40
Tamworth Base	0.00	0.00	1.15	1.30	Figtree Private	0.00	0.00	0.00	0.00
Manning Base	0.00	0.00	0.00	0.00	Newcastle Private	0.00	0.25	1.23	0.28
Maitland	0.67	0.00	0.36	0.00	Calvary, Wagga Wagga	0.00	0.90	3.13	4.55
John Hunter	0.70	0.14	0.67	0.52	Other hospitals	2.17	0.00	1.85	0.00
Other hospitals	0.00	0.00	0.00	0.00	TOTAL	0.33	0.17	0.39	0.33
TOTAL	0.42	0.06	0.49	0.42	<b>TOTAL NSW*</b>	0.38	0.24	0.35	0.36

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

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

## General anaesthesia for caesarean section. Indicator 4.1

**Definition:** Total number of women having a general anaesthetic for a caesarean section as a percentage of women having a caesarean section. Table 65 shows aggregate

information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 65. 4.1 General anaesthesia for caesarean section by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	13.28	14.09	14.06	11.75	Grafton Base	26.67	29.25	15.83	12.88
Royal Prince Alfred	12.25	12.19	11.89	15.19	Lismore Base	4.86	6.49	6.43	6.70
TOTAL	12.45	12.53	12.36	14.46	Tweed Heads	11.15	10.76	10.31	7.74
<b>South Western Sydney</b>					Other hospitals	5.98	8.33	3.70	2.04
Fairfield	50.26	43.49	36.19	26.90	TOTAL	10.12	11.51	9.19	7.77
Liverpool	21.65	20.22	18.22	16.52	<b>Mid North Coast</b>				
Campbelltown	11.73	12.82	16.10	14.24	Coffs Harbour	11.67	14.92	9.12	14.42
Bankstown-Lidcombe	22.67	20.09	15.30	17.18	Kempsey	8.77	10.45	16.33	6.67
Bowral	15.67	14.71	9.35	19.05	Port Macquarie Base	10.82	8.00	10.20	11.71
TOTAL	23.51	21.72	19.27	17.66	Other hospitals	0.00	0.00	0.00	0.00
<b>South Eastern Sydney</b>					TOTAL	10.98	11.75	10.14	12.65
St. George	11.32	8.29	8.59	9.46	<b>Southern NSW</b>				
Sutherland	6.37	8.33	10.11	10.11	Bega	22.86	8.33	15.09	13.56
Royal Hospital for Women	4.05	4.61	4.73	3.22	Goulburn Base	29.27	37.04	24.36	14.10
TOTAL	6.39	6.05	6.49	5.95	Moruya	23.17	18.68	17.20	16.28
<b>Illawarra Shoalhaven</b>					Queanbeyan	10.71	18.18	16.36	13.43
Shoalhaven	11.22	6.93	8.21	9.15	Other hospitals	5.80	9.23	4.88	10.81
Wollongong	12.57	9.75	10.59	10.63	TOTAL	18.83	19.76	16.88	14.07
Other hospitals	12.50	8.70	8.33	6.25	<b>Murrumbidgee</b>				
TOTAL	12.08	8.78	9.78	10.06	Young	11.54	7.55	4.35	4.65
<b>Western Sydney</b>					Griffith Base	18.63	18.42	12.15	8.73
Auburn	27.34	19.48	15.21	13.45	Wagga Wagga Base	12.74	13.40	5.68	6.45
Blacktown	17.57	18.88	13.03	15.04	Other hospitals	13.94	6.83	12.90	12.67
Westmead	19.04	18.31	14.69	11.50	TOTAL	14.12	11.92	8.94	8.47
TOTAL	19.47	18.62	14.19	12.85	<b>Western NSW</b>				
<b>Nepean Blue Mountains</b>					Dubbo Base	25.89	24.08	20.77	23.78
Blue Mountains	8.06	5.08	10.67	13.33	Mudgee	25.42	15.00	10.42	12.31
Nepean	23.18	20.32	19.98	18.26	Bathurst Base	10.92	12.27	14.97	13.25
Hawkesbury	10.64	11.59	14.39	15.58	Orange Base	12.87	12.75	16.96	13.71
Other hospitals	10.14	7.59	3.33	1.59	Other hospitals	28.13	23.44	24.63	14.81
TOTAL	20.05	17.69	17.81	16.86	TOTAL	19.45	18.09	18.55	16.95
<b>Northern Sydney</b>					<b>Far West</b>				
Hornsby	9.06	8.11	7.35	8.86	Broken Hill Base	18.67	11.49	13.10	13.33
Manly	8.65	7.78	6.13	7.22	TOTAL	18.67	11.49	13.10	13.33
Royal North Shore	7.82	8.43	8.90	8.53	<b>Private Hospitals</b>				
Other hospitals	6.39	6.64	6.90	0.00	Mater, North Sydney	4.33	3.36	2.85	2.57
TOTAL	8.00	8.00	7.84	8.31	North Shore Private	2.48	3.62	2.73	3.16
<b>Central Coast</b>					Sydney Adventist	5.98	6.77	3.77	4.37
Gosford	14.07	13.88	11.06	12.49	North Gosford Private	5.57	5.29	18.88	19.83
Other hospitals	55.56	100.00	100.00	0.00	Hurstville Community	4.49	3.51	3.90	4.19
TOTAL	14.50	13.98	11.16	12.49	Kareena Private	4.85	1.77	2.60	3.15
<b>Hunter New England</b>					St. George Private	4.33	5.11	4.87	4.49
Armidale	4.80	8.47	10.19	6.31	Prince of Wales Private	0.47	3.28	25.46	29.95
Gunnedah	16.13	15.09	12.24	0.00	Norwest Private	8.53	10.25	12.57	20.07
Inverell	4.40	1.96	1.25	4.35	Sydney Southwest Private	10.72	5.62	4.53	5.67
Moree	7.89	11.32	10.00	17.02	Nepean Private	7.57	6.07	6.11	5.45
Tamworth Base	13.91	17.67	16.04	10.04	Westmead Private	9.03	6.60	6.30	6.35
Manning Base	23.57	19.32	22.11	20.71	Figtree Private	7.94	2.56	5.29	4.35
Maitland	11.68	14.53	12.27	10.88	Newcastle Private	6.57	4.46	3.03	4.63
John Hunter	20.59	17.83	19.27	17.95	Calvary, Wagga Wagga	2.55	3.53	5.02	5.14
Other hospitals	25.21	29.66	34.81	30.43	Other hospitals	11.90	9.62	10.34	8.89
TOTAL	16.61	16.43	17.41	15.02	TOTAL	5.25	4.76	7.49	8.89
					<b>TOTAL NSW*</b>	11.91	11.19	11.40	11.47

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

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

## Postpartum haemorrhage and blood transfusion after vaginal birth. Indicator 7.1

**Definition:** Total number of women who give birth vaginally who receive a blood transfusion during the same admission as a percentage of women who give birth vaginally.

Table 66 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 66. 7.1 Postpartum haemorrhage and blood transfusion following vaginal birth by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	0.08	0.08	0.24	0.24	Grafton Base	2.40	2.45	3.68	1.80
Royal Prince Alfred	0.11	0.11	0.17	0.11	Lismore Base	3.94	2.42	3.28	3.12
TOTAL	0.10	0.10	0.19	0.15	Tweed Heads	4.70	2.65	3.43	2.68
<b>South Western Sydney</b>					Other hospitals				
Fairfield	0.12	0.49	0.39	0.13	TOTAL	3.86	2.41	3.23	2.67
Liverpool	0.30	0.43	0.26	0.39	<b>Mid North Coast</b>				
Campbelltown	0.20	0.19	0.25	0.05	Coffs Harbour	2.49	3.00	2.07	1.19
Bankstown-Lidcombe	0.17	0.91	0.58	0.24	Kempsey	3.45	1.66	3.11	2.47
Bowral	0.36	0.19	0.94	0.43	Port Macquarie Base	2.03	2.11	2.21	3.25
Other hospitals	0.00	0.00	0.00	0.00	Other hospitals	4.49	2.38	3.92	1.82
TOTAL	0.22	0.47	0.39	0.23	TOTAL	2.57	2.46	2.34	2.15
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	0.15	0.33	0.32	1.45	Bega	6.19	7.10	3.95	2.25
Sutherland	0.22	0.32	0.40	1.12	Goulburn Base	2.38	3.24	2.68	3.35
Royal Hospital for Women	1.03	0.74	0.79	2.16	Moruya	4.15	4.01	3.88	1.57
TOTAL	0.59	0.54	0.56	1.73	Queanbeyan	6.38	3.51	5.91	6.27
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	0.19	0.36	0.33	1.50	TOTAL	2.30	3.57	4.58	2.10
Wollongong	0.87	0.37	0.67	2.06	TOTAL	4.03	4.10	4.22	3.27
Other hospitals	0.97	0.00	0.00	3.92	<b>Murrumbidgee</b>				
TOTAL	0.73	0.35	0.57	2.00	Young	11.68	1.56	4.64	2.99
<b>Western Sydney</b>					Griffith Base				
Auburn	0.17	0.35	0.74	1.33	5.98	4.90	7.26	2.70	
Blacktown	0.48	0.45	0.38	1.50	Wagga Wagga Base	8.61	3.17	1.52	1.51
Westmead	0.13	0.48	0.34	1.36	Other hospitals	4.94	2.53	3.70	3.69
TOTAL	0.26	0.45	0.42	1.40	TOTAL	7.11	3.18	3.75	2.63
<b>Nepean Blue Mountains</b>					<b>Western NSW</b>				
Blue Mountains	1.79	0.00	1.76	0.66	Dubbo Base	3.42	2.93	2.19	0.87
Nepean	0.43	0.44	0.44	1.67	Mudgee	1.04	1.10	3.35	1.17
Hawkesbury	0.66	0.17	0.51	1.16	Bathurst Base	5.68	4.45	4.58	1.63
Other hospitals	2.47	1.96	3.88	1.65	Orange Base	2.19	3.92	1.84	0.82
TOTAL	0.65	0.45	0.65	1.54	Other hospitals	4.43	3.34	3.42	2.12
<b>Northern Sydney</b>					TOTAL				
Hornsby	0.56	0.11	1.30	1.20	3.45	3.38	2.77	1.20	
Manly	0.00	0.29	0.74	1.29	<b>Far West</b>				
Royal North Shore	0.26	0.39	0.61	0.99	Broken Hill Base	4.10	7.53	4.55	2.42
Other hospitals	0.48	0.51	0.00	0.00	TOTAL	4.10	7.53	4.55	2.42
TOTAL	0.32	0.32	0.75	1.10	<b>Private Hospitals</b>				
<b>Central Coast</b>					Mater, North Sydney				
Gosford	0.48	0.45	0.49	1.33	2.72	2.74	1.92	1.27	
Other hospitals	0.39	0.68	0.43	1.14	North Shore Private	0.74	0.14	0.21	0.21
TOTAL	0.47	0.47	0.48	1.31	Sydney Adventist	1.60	3.22	3.65	3.09
<b>Hunter New England</b>					North Gosford Private				
Armidale	2.13	1.77	0.30	1.27	3.73	1.85	2.70	1.75	
Gunnedah	2.50	1.59	1.77	0.00	Hurstville Community	1.43	1.49	1.63	2.30
Inverell	0.56	1.89	0.57	2.94	Kareena Private	0.00	1.74	0.53	0.29
Moree	2.12	1.97	0.67	2.27	St. George Private	0.36	0.27	0.70	0.22
Tamworth Base	3.49	1.50	0.80	2.06	Prince of Wales Private	2.68	2.52	2.12	1.75
Manning Base	2.66	0.92	0.72	0.38	Norwest Private	1.41	1.10	1.36	1.79
Maitland	0.34	0.34	0.09	1.27	Sydney Southwest Private	1.62	1.84	0.69	1.24
John Hunter	0.55	0.38	0.54	1.87	Nepean Private	3.64	3.28	1.40	0.92
Other hospitals	1.61	0.46	0.39	0.80	Westmead Private	0.36	0.43	0.46	0.46
TOTAL	1.24	0.68	0.50	1.51	Figtree Private	1.81	1.28	0.16	0.31
					Newcastle Private				
					0.53				
					0.25				
					0.33				
					0.17				
					1.91				
					2.17				
					1.55				
					2.11				
					2.40				
					2.00				
					0.00				
					2.50				
					1.51				
					1.50				
					1.29				
					1.19				
					<b>TOTAL NSW*</b>				
					1.23				
					1.05				
					1.04				
					1.30				

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

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

## Postpartum haemorrhage and blood transfusion after caesarean section.

### Indicator 7.2

**Definition:** Total number of women who undergo caesarean section who receive a blood transfusion during the same admission as a percentage of women who undergo caesarean section.

Table 67 shows aggregate information for hospitals where at least 200 mothers gave birth in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 67. 7.2 Postpartum haemorrhage and blood transfusion following caesarean section by Local Health District and hospital, NSW 2007–2010#**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	0.27	0.00	0.00	0.00	Grafton Base	6.67	2.72	0.72	2.27
Royal Prince Alfred	0.20	0.24	0.06	0.12	Lismore Base	2.05	2.64	0.80	1.12
TOTAL	0.21	0.20	0.05	0.10	Tweed Heads	1.69	0.69	1.39	4.95
<b>South Western Sydney</b>					Other hospitals	0.00	0.00	1.85	0.00
Fairfield	0.00	0.28	0.55	0.58	TOTAL	2.34	1.80	1.08	2.67
Liverpool	0.43	0.14	0.78	0.29	<b>Mid North Coast</b>				
Campbelltown	0.32	0.00	0.30	0.15	Coffs Harbour	2.33	3.05	1.95	2.56
Bankstown-Lidcombe	0.76	0.70	0.67	0.44	Kempsey	1.75	0.00	2.04	5.00
Bowral	0.00	0.74	0.00	0.95	Port Macquarie Base	1.55	1.78	1.53	1.95
TOTAL	0.36	0.27	0.54	0.35	Other hospitals	0.00	0.00	0.00	0.00
<b>South Eastern Sydney</b>					TOTAL	1.96	2.21	1.81	2.60
St. George	1.24	1.46	0.81	3.31	<b>Southern NSW</b>				
Sutherland	0.40	0.44	0.72	1.44	Bega	2.86	6.25	0.00	0.00
Royal Hospital for Women	1.10	0.98	0.99	2.09	Goulburn Base	0.00	1.23	2.56	0.00
TOTAL	1.06	1.06	0.91	2.37	Moruya	3.66	3.30	4.30	1.16
<b>Illawarra Shoalhaven</b>					Queanbeyan	1.79	6.82	10.91	2.99
Shoalhaven	0.33	1.82	0.75	3.17	Other hospitals	4.35	3.08	0.00	2.70
Wollongong	1.00	0.96	0.93	2.16	TOTAL	2.47	3.65	3.75	1.22
Other hospitals	0.00	8.70	8.33	0.00	<b>Murrumbidgee</b>				
TOTAL	0.72	1.46	0.98	2.46	Young	7.69	3.77	4.35	2.33
<b>Western Sydney</b>					Griffith Base	3.92	1.75	5.61	3.97
Auburn	0.78	0.43	1.90	1.45	Wagga Wagga Base	4.25	3.35	3.49	0.81
Blacktown	1.25	1.06	0.85	1.36	Other hospitals	3.64	4.35	9.03	0.67
Westmead	1.21	0.69	0.97	1.59	TOTAL	4.33	3.35	5.59	1.59
TOTAL	1.17	0.79	1.03	1.50	<b>Western NSW</b>				
<b>Nepean Blue Mountains</b>					Dubbo Base	1.42	1.34	0.35	1.40
Blue Mountains	0.00	1.69	1.33	1.67	Mudgee	1.69	0.00	8.33	1.54
Nepean	1.12	0.53	0.93	1.65	Bathurst Base	1.15	2.45	4.79	1.20
Hawkesbury	0.00	0.43	0.74	1.81	Orange Base	1.84	1.59	0.69	1.21
Other hospitals	2.90	0.00	3.33	3.17	Other hospitals	3.13	3.13	2.99	1.85
TOTAL	0.98	0.53	1.02	1.75	TOTAL	1.75	1.78	2.06	1.37
<b>Northern Sydney</b>					<b>Far West</b>				
Hornsby	0.30	0.74	1.92	2.77	Broken Hill Base	2.67	3.45	2.38	0.00
Manly	0.48	0.00	1.23	1.67	TOTAL	2.67	3.45	2.38	0.00
Royal North Shore	0.53	1.45	1.20	2.01	<b>Private Hospitals</b>				
Other hospitals	0.91	0.95	2.30	0.00	Mater, North Sydney	1.13	0.64	1.26	1.15
TOTAL	0.53	0.96	1.42	2.11	North Shore Private	0.83	0.08	0.34	0.24
<b>Central Coast</b>					Sydney Adventist	0.35	0.62	0.13	0.53
Gosford	0.23	0.24	1.41	2.14	North Gosford Private	1.01	0.69	0.00	1.10
Other hospitals	22.22	0.00	0.00	0.00	Hurstville Community	0.79	0.27	0.24	0.79
TOTAL	0.46	0.24	1.41	2.14	Kareena Private	1.12	0.71	0.32	0.70
<b>Hunter New England</b>					St. George Private	0.14	0.39	0.24	0.40
Armidale	2.40	1.69	1.85	1.80	Prince of Wales Private	3.62	2.95	1.01	1.03
Gunnedah	0.00	0.00	2.04	0.00	Norwest Private	0.80	1.11	0.29	0.74
Inverell	2.20	0.98	0.00	1.09	Sydney Southwest Private	0.87	0.84	0.60	0.30
Moree	2.63	3.77	0.00	2.13	Nepean Private	2.52	0.96	2.22	0.30
Tamworth Base	3.48	1.72	0.47	1.75	Westmead Private	0.00	0.25	0.71	0.25
Manning Base	1.91	1.14	1.51	2.53	Figtree Private	0.95	1.92	0.50	1.02
Maitland	1.27	0.00	1.14	1.23	Newcastle Private	0.14	0.15	0.00	0.42
John Hunter	0.82	0.48	0.75	3.01	Calvary, Wagga Wagga	1.53	0.78	2.51	2.80
Other hospitals	1.68	0.85	2.96	0.87	Other hospitals	0.79	0.96	0.86	3.33
TOTAL	1.52	0.77	1.06	2.15	TOTAL	1.00	0.78	0.64	0.71
					<b>TOTAL NSW*</b>	1.07	0.91	0.99	1.31

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Hospitals with more than 200 births are identified individually.

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

## Intrauterine growth restriction. Indicator 8.1

**Definition:** Total number of deliveries with birth weight less than 2750 grams at 40<sup>0</sup> weeks gestation or beyond as a percentage of the total number of deliveries at 40<sup>0</sup> weeks gestation or beyond.

Table 68 shows aggregate information for hospitals where at least 200 babies were born in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 68. 8.1 Intrauterine growth restriction at 40 weeks gestation or more by Local Health District and hospital, NSW 2007–2010# (Revised 26 March 2013)**

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	2.72	2.21	2.04	2.64	Grafton Base	1.08	1.97	1.19	1.75
Royal Prince Alfred	1.13	1.75	1.43	1.38	Lismore Base	1.73	1.41	1.39	0.78
TOTAL	1.52	1.86	1.58	1.69	Tweed Heads	0.77	1.38	1.51	1.75
<b>South Western Sydney</b>					Other hospitals	2.31	2.12	2.77	1.70
Fairfield	2.01	2.77	2.12	2.31	TOTAL	1.44	1.61	1.58	1.42
Liverpool	2.96	2.32	2.20	3.27	<b>Mid North Coast</b>				
Campbelltown	2.16	1.14	1.41	1.10	Coffs Harbour	1.88	1.56	0.89	1.54
Bankstown-Lidcombe	1.69	1.11	2.71	2.13	Kempsey	3.76	2.27	2.63	1.99
Bowral	2.26	1.36	1.67	1.99	Port Macquarie Base	2.36	2.84	2.11	1.88
Other hospitals	0.00	0.00	0.00	0.00	Other hospitals	4.26	0.00	3.13	5.13
TOTAL	2.25	1.77	2.04	2.20	TOTAL	2.47	2.04	1.63	1.86
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	2.10	2.07	2.01	2.17	Bega	0.00	2.56	0.64	3.08
Sutherland	1.80	1.12	0.83	0.71	Goulburn Base	4.19	5.88	1.79	3.28
Royal Hospital for Women	1.49	0.78	1.39	1.61	Moruya	1.63	3.24	2.96	1.55
TOTAL	1.74	1.24	1.48	1.64	Queanbeyan	2.58	2.61	2.66	2.46
<b>Illawarra Shoalhaven</b>					Other hospitals	2.44	2.82	2.73	4.21
Shoalhaven	2.28	1.83	1.01	1.86	TOTAL	2.44	3.58	2.15	2.73
Wollongong	1.63	1.81	1.12	1.26	<b>Murrumbidgee</b>				
Other hospitals	3.57	0.00	0.00	1.64	Young	1.77	4.27	0.77	1.59
TOTAL	1.87	1.76	1.04	1.45	Griffith Base	3.33	1.35	2.29	1.94
<b>Western Sydney</b>					Wagga Wagga Base	3.10	1.41	1.65	2.88
Auburn	1.98	1.90	2.04	1.30	Other hospitals	2.14	1.74	2.06	1.63
Blacktown	1.97	2.06	1.80	2.24	TOTAL	2.70	1.83	1.81	2.07
Westmead	2.16	3.63	2.75	1.92	<b>Western NSW</b>				
TOTAL	2.06	2.77	2.30	1.94	Dubbo Base	3.03	2.28	2.31	2.65
<b>Nepean Blue Mountains</b>					Mudgee	1.95	3.36	1.47	0.88
Blue Mountains	0.62	1.85	0.00	0.92	Bathurst Base	3.34	4.80	2.73	1.57
Nepean	1.53	1.55	1.34	1.32	Orange Base	2.40	1.09	2.10	3.13
Hawkesbury	1.39	0.85	1.10	2.06	Other hospitals	1.69	1.55	3.90	1.89
Other hospitals	3.30	2.35	5.80	2.99	TOTAL	2.59	2.47	2.56	2.28
TOTAL	1.51	1.48	1.37	1.48	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base	2.21	4.69	6.40	0.93
Hornsby	1.81	0.67	0.80	2.18	TOTAL	2.21	4.69	6.40	0.93
Manly	1.00	0.42	0.51	1.32	<b>Private Hospitals</b>				
Royal North Shore	1.70	2.38	1.62	1.42	Mater, North Sydney	1.59	1.29	0.85	1.63
Other hospitals	2.04	0.80	0.46	1.67	North Shore Private	1.52	1.93	2.41	1.64
TOTAL	1.64	1.25	1.01	1.58	Sydney Adventist	0.68	1.14	2.25	2.11
<b>Central Coast</b>					North Gosford Private	2.45	0.36	0.76	1.11
Gosford	1.51	0.85	0.99	0.93	Hurstville Community	1.52	0.95	1.38	1.27
Other hospitals	0.66	0.00	1.34	0.00	Kareena Private	0.70	1.28	1.72	0.00
TOTAL	1.41	0.79	1.04	0.86	St. George Private	2.34	1.69	1.79	1.17
<b>Hunter New England</b>					Prince of Wales Private	2.28	1.22	1.30	2.22
Armidale	5.22	0.97	2.35	3.89	Norwest Private	1.21	1.96	2.37	1.56
Gunnedah	3.61	2.33	1.35	1.89	Sydney Southwest Private	0.95	1.00	1.24	1.86
Inverell	5.68	1.45	5.08	3.23	Nepean Private	0.64	1.27	1.67	1.01
Moree	5.08	3.66	0.00	0.94	Westmead Private	2.46	2.26	1.60	2.70
Tamworth Base	2.26	2.23	2.71	2.59	Figtree Private	1.18	1.17	0.41	0.00
Manning Base	1.31	3.08	2.48	2.20	Newcastle Private	0.81	1.47	1.63	1.29
Maitland	0.68	2.37	1.62	1.67	Calvary, Wagga Wagga	0.76	1.61	1.63	1.14
John Hunter	2.65	2.19	1.77	1.27	Other hospitals	1.55	0.00	0.99	1.06
Other hospitals	2.39	0.74	1.68	2.03	TOTAL	1.50	1.45	1.62	1.62
TOTAL	2.42	2.06	1.90	1.80	<b>TOTAL NSW*</b>	1.88	1.80	1.72	1.75

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

\* TOTAL NSW includes births at home 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 minutes post delivery as a percentage of the total number of term babies born.

Table 69 shows aggregate information for hospitals where at least 200 babies were born in 2010, totals for hospitals within each Local Health District, and the NSW total.

**Table 69. 9.1 Apgar score of 7 or less in term babies by Local Health District and hospital, NSW 2007–2010#**  
(Revised 26 March 2013)

Local Health District–hospital	2007 %	2008 %	2009 %	2010 %	Local Health District–hospital	2007 %	2008 %	2009 %	2010 %
<b>Sydney</b>					<b>Northern NSW</b>				
Canterbury	0.78	0.84	0.86	1.61	Grafton Base	1.24	2.23	0.43	1.41
Royal Prince Alfred	1.15	1.58	1.67	1.37	Lismore Base	1.91	0.86	1.13	1.14
TOTAL	1.06	1.40	1.46	1.43	Tweed Heads	0.43	0.41	1.26	1.07
<b>South Western Sydney</b>					Other hospitals				
Fairfield	1.24	1.31	2.00	0.39	TOTAL	1.14	0.88	0.96	1.14
Liverpool	1.08	0.83	0.81	0.80	<b>Mid North Coast</b>				
Campbelltown	1.06	0.91	0.86	1.59	Coffs Harbour	0.92	0.80	0.58	1.20
Bankstown-Lidcombe	0.89	0.81	0.67	0.65	Kempsey	2.80	2.75	0.69	2.12
Bowral	0.75	1.90	0.90	0.72	Port Macquarie Base	2.43	2.23	2.29	1.97
Other hospitals	0.00	0.00	0.00	0.00	Other hospitals	1.19	0.00	2.04	0.00
TOTAL	1.04	1.01	1.02	0.90	TOTAL	1.77	1.56	1.23	1.57
<b>South Eastern Sydney</b>					<b>Southern NSW</b>				
St. George	1.29	1.30	0.63	1.31	Bega	0.00	0.52	0.37	1.72
Sutherland	0.54	0.82	0.82	1.15	Goulburn Base	1.07	0.70	0.69	1.07
Royal Hospital for Women	1.26	1.22	1.52	1.49	Moruya	1.78	1.42	1.29	1.49
TOTAL	1.16	1.19	1.11	1.37	Queanbeyan	1.06	0.75	0.33	0.63
<b>Illawarra Shoalhaven</b>					Other hospitals				
Shoalhaven	0.77	0.65	0.85	0.72	TOTAL	0.89	0.80	0.59	1.12
Wollongong	0.61	1.01	1.17	1.80	<b>Murrumbidgee</b>				
Other hospitals	4.69	2.22	3.41	1.69	Young	0.54	0.57	1.04	0.99
TOTAL	0.82	0.96	1.15	1.50	Griffith Base	1.37	1.76	1.01	1.65
<b>Western Sydney</b>					Wagga Wagga Base				
Auburn	0.51	0.53	1.32	0.46	Other hospitals	1.08	0.97	1.17	0.55
Blacktown	1.09	1.02	0.79	1.54	TOTAL	1.30	1.18	1.27	1.26
Westmead	0.96	1.00	0.89	0.60	<b>Western NSW</b>				
TOTAL	0.93	0.93	0.92	0.90	Dubbo Base	1.80	1.01	1.49	1.34
<b>Nepean Blue Mountains</b>					Mudgee				
Blue Mountains	0.35	1.06	3.00	2.38	Bathurst Base	1.15	0.70	1.29	1.20
Nepean	0.59	0.74	0.56	0.53	Orange Base	0.93	1.07	1.46	1.01
Hawkesbury	0.98	0.39	1.45	0.66	Other hospitals	1.37	0.72	0.94	1.49
Other hospitals	1.38	0.46	0.00	2.87	TOTAL	1.42	0.88	1.32	1.19
TOTAL	0.68	0.68	0.83	0.74	<b>Far West</b>				
<b>Northern Sydney</b>					Broken Hill Base				
Hornsby	0.51	0.57	1.89	1.14	TOTAL	1.19	3.17	0.45	0.42
Manly	1.24	1.00	0.99	0.96	<b>Private Hospitals</b>				
Royal North Shore	0.78	0.99	1.13	0.82	Mater, North Sydney	0.51	0.36	0.37	0.67
Other hospitals	2.44	1.03	0.95	0.86	North Shore Private	0.50	0.39	0.60	0.32
TOTAL	1.07	0.89	1.27	0.94	Sydney Adventist	0.82	0.67	0.28	0.40
<b>Central Coast</b>					North Gosford Private				
Gosford	1.27	1.06	2.58	1.98	Hurstville Community	0.72	0.58	0.77	0.98
Other hospitals	0.00	1.38	0.85	0.57	Kareena Private	0.19	1.53	0.63	0.69
TOTAL	1.15	1.08	2.43	1.88	St. George Private	0.68	0.68	0.57	0.43
<b>Hunter New England</b>					Prince of Wales Private				
Armidale	1.40	0.23	1.22	0.25	Norwest Private	0.32	0.33	0.17	0.00
Gunnedah	0.67	0.00	0.00	0.00	Sydney Southwest Private	0.86	0.83	0.30	0.95
Inverell	0.41	1.24	0.42	0.00	Nepean Private	0.50	0.46	0.33	0.24
Moree	1.86	1.01	0.00	0.00	Westmead Private	0.81	0.86	0.67	0.83
Tamworth Base	0.84	1.41	1.17	1.51	Figtree Private	0.11	0.54	0.30	0.70
Manning Base	1.32	1.33	1.00	2.40	Newcastle Private	0.46	0.73	0.33	0.50
Maitland	1.82	2.33	1.90	1.73	Calvary, Wagga Wagga	1.66	0.68	0.51	1.22
John Hunter	1.75	1.94	2.38	2.64	Other hospitals	0.69	0.40	0.76	1.92
Other hospitals	1.24	0.72	0.79	0.95	TOTAL	0.64	0.63	0.44	0.55
TOTAL	1.50	1.60	1.67	1.83	<b>TOTAL NSW*</b>	1.01	0.99	1.02	1.06

Source: NSW Perinatal Data Collection (HOIST), Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Hospitals with more than 200 births are identified individually.

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



# 7. Aboriginal and Torres Strait Islander mothers and babies

## Reporting of Aboriginality

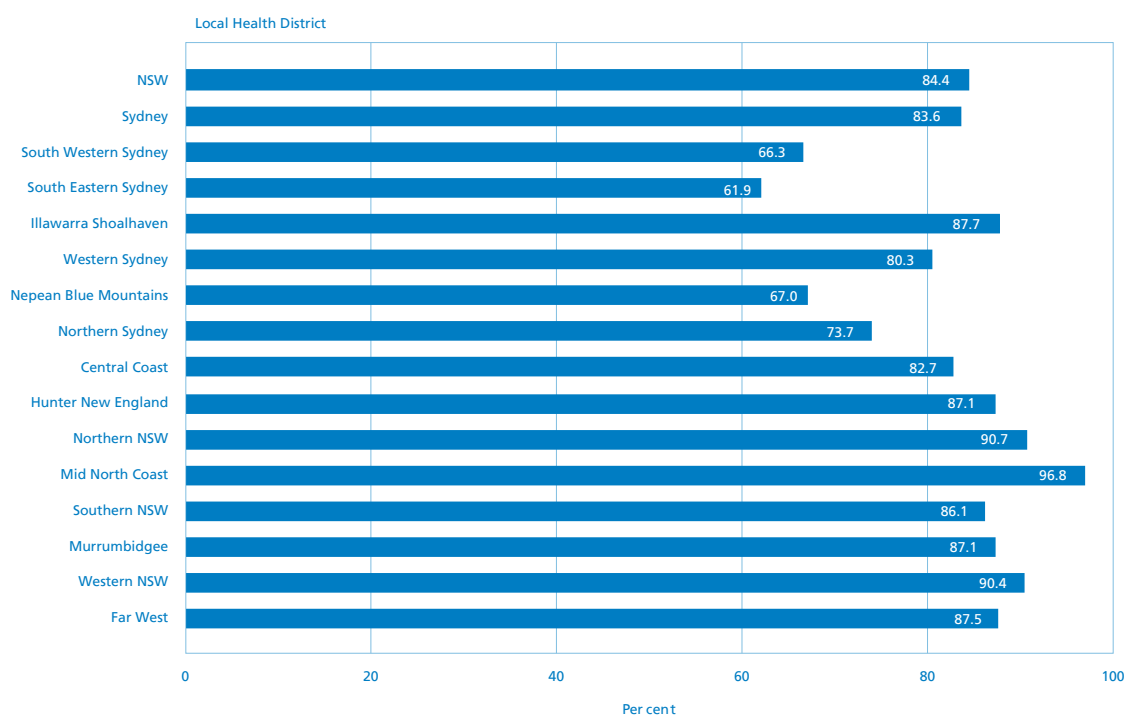
Maternal Aboriginality is under-reported on the Perinatal Data Collection. One method of assessing the extent of under-reporting and monitoring changes over time is to compare the reporting of maternal Aboriginality to the Perinatal Data Collection with reporting of maternal Aboriginality on birth registrations held by the NSW Registry of Births, Deaths and Marriages. Using record linkage, an estimate of the total number of babies born to Aboriginal or Torres Strait Islander mothers was obtained and compared with the number of babies born to Aboriginal or Torres Strait Islander mothers as reported to the Perinatal Data Collection (Table 70). An estimate of the total number of babies born to Aboriginal or Torres Strait Islander mothers or fathers was also obtained and compared with the number of babies born to Aboriginal or Torres Strait Islander mothers as reported to the Perinatal Data Collection (Table 71). The method used is described in Chapter 3 (page 11).

For NSW overall, the estimated percentage of births to Aboriginal or Torres Strait Islander mothers reported to the Perinatal Data Collection ranged from 74.2% to 84.4% between 2007 and 2009. In 2009, reporting varied markedly between Local Health Districts, ranging from 66.3% in the

South Western Sydney Local Health District to 96.8% in the Mid North Coast Local Health District, with reporting generally better in rural compared to urban areas (Table 70, Figure 2). The total number of babies born to Aboriginal or Torres Strait Islander mothers in 2009 is estimated to be 3,474, about 19% higher than the number reported to the Perinatal Data Collection. Under-reporting means that numbers of births presented in this chapter should be interpreted with caution.

Table 71 shows the number of babies born to Aboriginal or Torres Strait Islander mothers as reported to the Perinatal Data Collection and the number of babies born to Aboriginal or Torres Strait Islander mothers or fathers as reported to the NSW Registry of Births, Deaths and Marriages between 2007 and 2009. The estimated percentage of births to Aboriginal or Torres Strait Islander mothers or fathers ranged from 55.4% to 59.4% between 2007 and 2009. In 2009, reporting ranged from 43.5% in the Nepean Blue Mountains Local Health District to 73.0% in the Mid North Coast Local Health District. There are therefore a substantial number of babies with non-Aboriginal or Torres Strait Islander mothers and Aboriginal or Torres Strait Islander fathers who are not represented in the numbers reported in this chapter.

**Figure 2. Level of reporting of babies born to Aboriginal or Torres Strait Islander mothers to the NSW Perinatal Data Collection by year of birth and Local Health District of residence, NSW 2009**



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

**Table 70. Births to Aboriginal or Torres Strait Islander mothers by source of birth report, year of birth and Local Health District of residence, NSW 2007–2009#**

Year of birth–Local Health District	PDC births	RBDM births	Births reported to both PDC/RBDM	Total estimated Aboriginal births	Level of reporting
	No.	No.	No.	No.	%
<b>2007</b>					
Sydney	97	130	62	165	58.8
South Western Sydney	161	246	93	314	51.3
South Eastern Sydney	86	113	36	163	52.8
Illawarra Shoalhaven	163	129	101	191	85.3
Western Sydney	221	231	127	325	68.0
Nepean Blue Mountains	144	129	86	187	77.0
Northern Sydney	28	57	13	72	38.9
Central Coast	111	102	72	141	78.7
Hunter New England	661	537	406	792	83.5
Northern NSW	230	147	129	248	92.7
Mid North Coast	149	95	87	157	94.9
Southern NSW	67	40	34	73	91.8
Murrumbidgee	169	135	107	197	85.8
Western NSW	511	375	330	556	91.9
Far West	44	28	23	49	89.8
Other–not stated	82	73	56	99	82.8
NSW	2924	2567	1762	3729	78.4
<b>2008</b>					
Sydney	103	234	74	263	39.2
South Western Sydney	174	255	108	321	54.2
South Eastern Sydney	59	200	41	218	27.1
Illawarra Shoalhaven	196	161	136	221	88.7
Western Sydney	202	264	131	335	60.3
Nepean Blue Mountains	148	126	90	184	80.4
Northern Sydney	21	82	11	92	22.8
Central Coast	123	129	92	160	76.9
Hunter New England	750	651	519	882	85.0
Northern NSW	203	155	127	231	87.9
Mid North Coast	172	113	103	182	94.5
Southern NSW	59	48	32	75	78.7
Murrumbidgee	150	116	89	177	84.7
Western NSW	535	380	330	585	91.5
Far West	53	29	26	56	94.6
Other–not stated	66	61	45	82	80.5
NSW	3014	3004	1954	4064	74.2
<b>2009</b>					
Sydney	107	90	69	128	83.6
South Western Sydney	173	203	115	261	66.3
South Eastern Sydney	65	86	46	105	61.9
Illawarra Shoalhaven	171	151	127	195	87.7
Western Sydney	204	190	140	254	80.3
Nepean Blue Mountains	118	140	82	176	67.0
Northern Sydney	28	26	16	38	73.7
Central Coast	110	97	74	133	82.7
Hunter New England	664	558	460	762	87.1
Northern NSW	205	146	125	226	90.7
Mid North Coast	184	122	116	190	96.8
Southern NSW	68	48	37	79	86.1
Murrumbidgee	148	123	101	170	87.1
Western NSW	566	394	334	626	90.4
Far West	35	26	21	40	87.5
Other–not stated	85	63	57	91	93.4
NSW	2931	2463	1920	3474	84.4

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

# Information for 2007 and 2008 differs from previous reports as the methods for estimating births to Aboriginal mothers has changed and the linked datasets have been updated.

PDC: Perinatal Data Collection

RBDM: Registry of Births, Deaths and Marriages

**Table 71. Births to Aboriginal or Torres Strait Islander mothers and fathers by source of birth report, year of birth and Local Health District of residence, NSW 2007–2009#**

Year of birth—Local Health District	PDC births	RBDM births	Births reported to both PDC/RBDM	Total estimated Aboriginal births	Level of reporting
	No.	No.	No.	No.	%
<b>2007</b>					
Sydney	97	169	68	198	49.0
South Western Sydney	161	363	97	427	37.7
South Eastern Sydney	86	155	37	204	42.2
Illawarra Shoalhaven	163	237	106	294	55.4
Western Sydney	221	353	133	441	50.1
Nepean Blue Mountains	144	209	88	265	54.3
Northern Sydney	28	86	13	101	27.7
Central Coast	111	181	75	217	51.2
Hunter New England	661	848	417	1092	60.5
Northern NSW	230	248	142	336	68.5
Mid North Coast	149	157	90	216	69.0
Southern NSW	67	72	38	101	66.3
Murrumbidgee	169	195	116	248	68.1
Western NSW	511	542	343	710	72.0
Far West	44	37	25	56	78.6
Other—not stated	82	114	59	137	59.9
NSW	2924	3966	1847	5043	58.0
<b>2008</b>					
Sydney	103	277	76	304	33.9
South Western Sydney	174	387	111	450	38.7
South Eastern Sydney	59	254	41	272	21.7
Illawarra Shoalhaven	196	261	141	316	62.0
Western Sydney	202	364	131	435	46.4
Nepean Blue Mountains	148	214	92	270	54.8
Northern Sydney	21	113	12	122	17.2
Central Coast	123	209	96	236	52.1
Hunter New England	750	969	524	1195	62.8
Northern NSW	203	259	135	327	62.1
Mid North Coast	172	185	107	250	68.8
Southern NSW	59	82	35	106	55.7
Murrumbidgee	150	193	96	247	60.7
Western NSW	535	540	344	731	73.2
Far West	53	43	27	69	76.8
Other—not stated	66	95	46	115	57.4
NSW	3014	4445	2014	5445	55.4
<b>2009</b>					
Sydney	107	134	72	169	63.3
South Western Sydney	173	334	121	386	44.8
South Eastern Sydney	65	145	47	163	39.9
Illawarra Shoalhaven	171	266	133	304	56.3
Western Sydney	204	309	141	372	54.8
Nepean Blue Mountains	118	235	82	271	43.5
Northern Sydney	28	44	16	56	50.0
Central Coast	110	192	76	226	48.7
Hunter New England	664	887	469	1082	61.4
Northern NSW	205	229	126	308	66.6
Mid North Coast	184	190	122	252	73.0
Southern NSW	68	83	40	111	61.3
Murrumbidgee	148	197	103	242	61.2
Western NSW	566	586	349	803	70.5
Far West	35	41	22	54	64.8
Other—not stated	85	112	59	138	61.6
NSW	2931	3984	1978	4937	59.4

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

# Information for 2007 and 2008 differs from previous reports as the methods for estimating births to Aboriginal mothers and fathers has changed and the linked datasets have been updated.

PDC: Perinatal Data Collection

RBDM: Registry of Births, Deaths and Marriages

## Trends in births

Between 2006 and 2010, the number of reported births to Aboriginal or Torres Strait Islander mothers rose from 2,649 to 3,138, representing 2.9% and 3.3% respectively of all babies born in NSW. In 2010, 2,994 babies were born to Aboriginal

mothers, 53 babies were born to Torres Strait Islander mothers and 91 babies were born to mothers of both Aboriginal and Torres Strait Islander background (Table 72).

**Table 72. Aboriginal and Torres Strait Islander mothers and babies, NSW 2006–2010#**

Aboriginal and Torres Strait Islander	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>										
Aboriginal but not Torres Strait Islander	2429	93.0	2700	93.5	2801	94.1	2757	94.9	2947	95.4
Torres Strait Islander but not Aboriginal	50	1.9	53	1.8	61	2.0	45	1.5	53	1.7
Both Aboriginal and Torres Strait Islander	132	5.1	135	4.7	114	3.8	102	3.5	90	2.9
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>
<b>Births</b>										
Aboriginal but not Torres Strait Islander	2463	93.0	2736	93.5	2836	94.1	2784	95.0	2994	95.4
Torres Strait Islander but not Aboriginal	51	1.9	54	1.8	61	2.0	45	1.5	53	1.7
Both Aboriginal and Torres Strait Islander	135	5.1	136	4.6	118	3.9	102	3.5	91	2.9
<b>TOTAL</b>	<b>2649</b>	<b>100.0</b>	<b>2926</b>	<b>100.0</b>	<b>3015</b>	<b>100.0</b>	<b>2931</b>	<b>100.0</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70), and the true numbers of babies are about 68% higher than shown (Table 71).

## Plurality

Between 2006 and 2010, multiple pregnancies (twins, triplets etc.) were reported for about 1% of all pregnancies.

In 2010, 2.9% of babies born to Aboriginal or Torres Strait Islander mothers were twins (Table 73).

**Table 73. Aboriginal and Torres Strait Islander mothers and babies by plurality, NSW 2006–2010#**

Plurality	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>										
Singleton	2574	98.6	2851	98.7	2937	98.7	2877	99.1	3043	98.5
Twins	36	1.4	36	1.2	39	1.3	27	0.9	46	1.5
Triplets	1	0.0	1	0.0	0	0.0	0	0.0	1	0.0
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>
<b>Births</b>										
Singleton	2574	97.2	2851	97.4	2937	97.4	2877	98.2	3043	97.0
Twins	72	2.7	72	2.5	78	2.6	54	1.8	92	2.9
Triplets	3	0.1	3	0.1	0	0.0	0	0.0	3	0.1
<b>TOTAL</b>	<b>2649</b>	<b>100.0</b>	<b>2926</b>	<b>100.0</b>	<b>3015</b>	<b>100.0</b>	<b>2931</b>	<b>100.0</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).

## Previous pregnancies

In 2010, one-third of Aboriginal or Torres Strait Islander mothers gave birth for the first time (Table 74), 57.2% of mothers reported between one and four previous births and

8.4% of mothers had previously given birth to 5 or more babies. This pattern has not changed substantially since 2006.

**Table 74. Previous pregnancies among Aboriginal and Torres Strait Islander mothers, NSW 2006–2010#**

No. previous pregnancies (>20 weeks)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	844	32.3	952	33.0	986	33.1	1000	34.4	1062	34.4
1-4	1551	59.4	1683	58.3	1735	58.3	1677	57.7	1768	57.2
5+	199	7.6	237	8.2	253	8.5	227	7.8	260	8.4
Not stated	17	0.7	16	0.6	2	0.1	0	0.0	0	0.0
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).

## Maternal age

The reported number of Aboriginal or Torres Strait Islander mothers giving birth has increased at all ages over recent years. The percentage of Aboriginal or Torres Strait Islander mothers who were teenagers fell from 20.5% in 2006 to

18.6% in 2010. The percentage of mothers giving birth at 35 years of age or more has been stable at about 9% (Table 75).

**Table 75. Age of Aboriginal and Torres Strait Islander mothers, NSW 2006–2010#**

Maternal age (years)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
12-19	534	20.5	543	18.8	589	19.8	549	18.9	576	18.6
20-34	1851	70.9	2080	72.0	2109	70.9	2074	71.4	2223	71.9
35+	222	8.5	264	9.1	278	9.3	281	9.7	291	9.4
Not stated	4	0.2	1	0.0	0	0.0	0	0.0	0	0.0
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).

## Local Health District of residence

Between 2006 and 2010, the reported number of Aboriginal or Torres Strait Islander mothers rose in most Local Health Districts. The reported number of Aboriginal or Torres Strait Islander mothers who gave birth in 2010 ranged from 36 in the Northern Sydney Local Health District to 803 in the Hunter

New England Local Health District (Table 76). The proportion of mothers who were teenagers varied from 12.5% in the South Western Sydney Local Health District to 23.2% in the South Eastern Sydney Local Health District (Table 77).

**Table 76. Local Health District of residence of Aboriginal and Torres Strait Islander mothers, NSW 2006–2010#**

Local Health District	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	97	3.7	96	3.3	102	3.4	105	3.6	87	2.8
South Western Sydney	117	4.5	157	5.4	173	5.8	170	5.9	176	5.7
South Eastern Sydney	69	2.6	85	2.9	57	1.9	64	2.2	69	2.2
Illawarra Shoalhaven	151	5.8	162	5.6	190	6.4	170	5.9	188	6.1
Western Sydney	191	7.3	221	7.7	201	6.8	203	7.0	209	6.8
Nepean Blue Mountains	87	3.3	141	4.9	140	4.7	113	3.9	126	4.1
Northern Sydney	17	0.7	27	0.9	21	0.7	28	1.0	36	1.2
Central Coast	88	3.4	109	3.8	122	4.1	110	3.8	125	4.0
Hunter New England	589	22.6	647	22.4	730	24.5	654	22.5	803	26.0
Northern NSW	205	7.9	228	7.9	210	7.1	203	7.0	216	7.0
Mid North Coast	190	7.3	195	6.8	203	6.8	234	8.1	223	7.2
Southern NSW	71	2.7	66	2.3	58	1.9	68	2.3	86	2.8
Murrumbidgee	128	4.9	178	6.2	152	5.1	156	5.4	155	5.0
Western NSW	521	20.0	499	17.3	526	17.7	553	19.0	514	16.6
Far West	43	1.6	43	1.5	51	1.7	35	1.2	54	1.7
Other-not stated	47	1.8	34	1.2	40	1.3	38	1.3	23	0.7
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown. The level of under-reporting varies between Local Health Districts (Table 70).

**Table 77. Local Health District of residence of Aboriginal and Torres Strait Islander mothers by age, NSW 2010**

Local Health District	Under 20		Maternal age (years) 20-plus		TOTAL	
	No.	%	No.	%	No.	%
Sydney	18	20.7	69	79.3	87	100.0
South Western Sydney	22	12.5	154	87.5	176	100.0
South Eastern Sydney	16	23.2	53	76.8	69	100.0
Illawarra Shoalhaven	32	17.0	156	83.0	188	100.0
Western Sydney	32	15.3	177	84.7	209	100.0
Nepean Blue Mountains	20	15.9	106	84.1	126	100.0
Northern Sydney	–	–	–	–	–	100.0
Central Coast	20	16.0	105	84.0	125	100.0
Hunter New England	167	20.8	636	79.2	803	100.0
Northern NSW	47	21.8	169	78.2	216	100.0
Mid North Coast	39	17.5	184	82.5	223	100.0
Southern NSW	17	19.8	69	80.2	86	100.0
Murrumbidgee	30	19.4	125	80.6	155	100.0
Western NSW	102	19.8	412	80.2	514	100.0
Far West	11	20.4	43	79.6	54	100.0
Other-not stated	–	–	–	–	–	100.0
<b>TOTAL</b>	<b>576</b>	<b>18.6</b>	<b>2514</b>	<b>81.4</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown. The level of under-reporting varies between Local Health Districts (Table 70). Data not shown for cell counts less than five.

## Duration of pregnancy at first antenatal visit

Between 2006 and 2010, the proportion of Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 14 weeks gestation rose from 58.6% to 71.3%, and the proportion who commenced antenatal care at less than 20 weeks gestation rose from 74.8% to 84.1% (Table 78). This compares with 79.6% of non-Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 14 weeks gestation, and 92.0% who commenced antenatal care at less than 20 weeks gestation in 2010.

In 2010, the proportion of Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 14 weeks gestation varied from 48.3% in the Sydney Local Health District to 85.7% in the Nepean Blue Mountains Local Health District (Table 79).

**Table 78. Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers, NSW 2006–2010#**

Duration of pregnancy (weeks)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-13	1531	58.6	1840	63.7	2045	68.7	2011	69.2	2204	71.3
14-19	421	16.1	456	15.8	437	14.7	410	14.1	396	12.8
20-plus	550	21.1	461	16.0	404	13.6	428	14.7	426	13.8
Not stated	109	4.2	131	4.5	90	3.0	55	1.9	64	2.1
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).

**Table 79. Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers by Local Health District of residence, NSW 2010#**

Local Health District	Duration of pregnancy (weeks)									
	0-13		14-19		20-plus		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	42	48.3	21	24.1	22	25.3	2	2.3	87	100.0
South Western Sydney	95	54.0	29	16.5	46	26.1	6	3.4	176	100.0
South Eastern Sydney	48	69.6	10	14.5	9	13.0	2	2.9	69	100.0
Illawarra Shoalhaven	158	84.0	20	10.6	10	5.3	0	0.0	188	100.0
Western Sydney	166	79.4	14	6.7	23	11.0	6	2.9	209	100.0
Nepean Blue Mountains	108	85.7	9	7.1	5	4.0	4	3.2	126	100.0
Northern Sydney	28	77.8	–	–	–	–	–	–	36	100.0
Central Coast	100	80.0	11	8.8	12	9.6	2	1.6	125	100.0
Hunter New England	572	71.2	102	12.7	117	14.6	12	1.5	803	100.0
Northern NSW	162	75.0	26	12.0	27	12.5	1	0.5	216	100.0
Mid North Coast	147	65.9	42	18.8	29	13.0	5	2.2	223	100.0
Southern NSW	60	69.8	13	15.1	10	11.6	3	3.5	86	100.0
Murrumbidgee	116	74.8	18	11.6	17	11.0	4	2.6	155	100.0
Western NSW	341	66.3	70	13.6	88	17.1	15	2.9	514	100.0
Far West	39	72.2	6	11.1	8	14.8	1	1.9	54	100.0
Other-not stated	22	95.7	–	–	–	–	–	–	23	100.0
<b>TOTAL</b>	<b>2204</b>	<b>71.3</b>	<b>396</b>	<b>12.8</b>	<b>426</b>	<b>13.8</b>	<b>64</b>	<b>2.1</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Information not shown for health areas where the number of mothers is less than 5 in a group.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown.

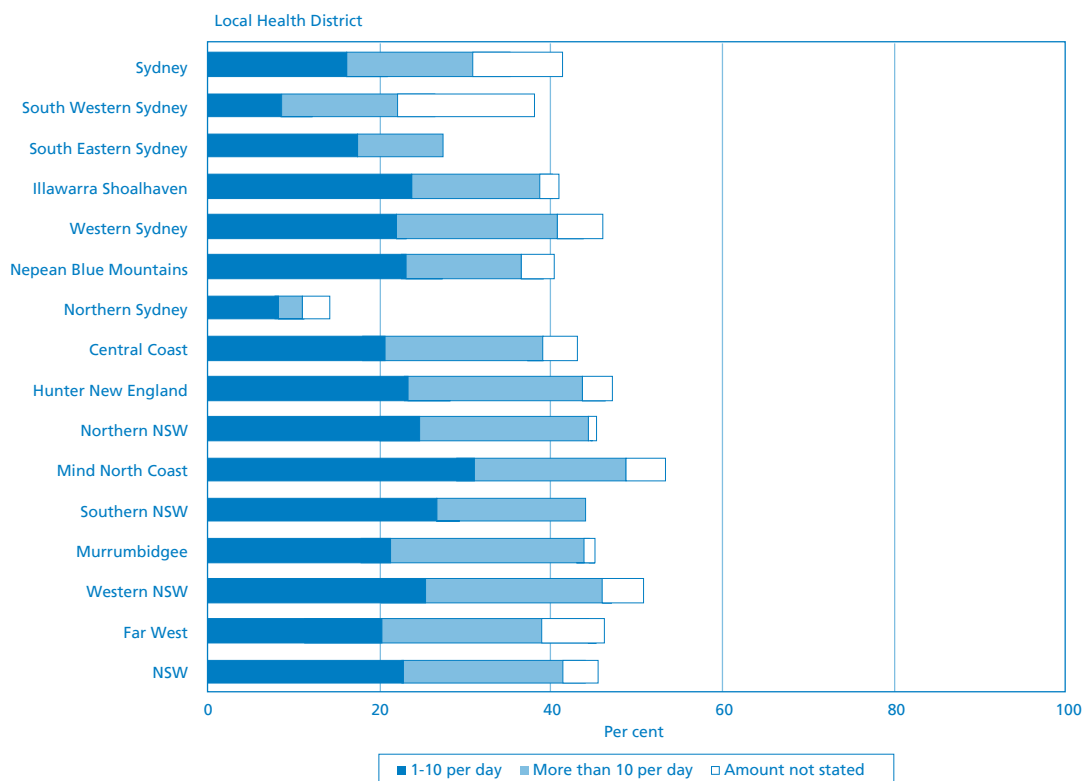
The level of under-reporting varies between Local Health Districts (Table 70). Data not shown for cell counts less than five.

## Smoking in pregnancy

In 2010, 47.9% of Aboriginal or Torres Strait Islander mothers reported smoking at some time during pregnancy, compared to 53.6% in 2006. This compares with 10.0% of non-Aboriginal or Torres Strait Islander mothers who reported smoking at some time during pregnancy in 2010.

Smoking in the second half of pregnancy poses the greatest risk to the health of both mother and baby. In 2010, 45.6% of Aboriginal or Torres Strait Islander mothers reported smoking in the second half of pregnancy. This percentage varied from 13.9% in the Northern Sydney Local Health District to 53.3% in the Mid North Coast Local Health District (Figure 3).

**Figure 3. Smoking in the second half of pregnancy among Aboriginal and Torres Strait Islander mothers by amount smoked and Local Health District of residence, NSW 2010#**



Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Due to under-reporting of Aboriginal mothers on the PDC, it is likely that the true numbers are about one and a half times higher than shown. The level of reporting varies between Local Health Districts (Table 69).

## Medical conditions and obstetric complications

In 2010, there were similar rates of diabetes mellitus, gestational diabetes, essential hypertension and pre-eclampsia reported among Aboriginal or Torres Strait Islander mothers compared with non-Aboriginal or Torres Strait Islander mothers (Table 80). The number of Aboriginal or Torres Strait

Islander mothers with medical conditions and obstetric complications reported to the Perinatal Data Collection is low, even after taking into account under-reporting of Aboriginal mothers. The low numbers may be due to under-detection and/or under-reporting.

**Table 80. Medical conditions and obstetric complications among Aboriginal and non-Aboriginal mothers, NSW 2010#**

Condition	Aboriginal or Torres Strait Islander						TOTAL	
	Aboriginal or Torres Strait Islander		Non-Aboriginal or Torres Strait Islander		Not stated		No.	%
	No.	%	No.	%	No.	%		
Diabetes mellitus	17	0.6	591	0.6	1	0.4	609	0.6
Gestational diabetes	154	5.0	5166	5.6	10	4.1	5330	5.6
Essential hypertension	24	0.8	770	0.8	2	0.8	796	0.8
Pre-eclampsia	194	6.3	6154	6.7	9	3.7	6357	6.7
<b>TOTAL</b>	3090	100.0	91662	100.0	244	100.0	94996	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).



## Labour and birth

The rate of spontaneous onset of labour among Aboriginal or Torres Strait Islander mothers fell from 66.2% in 2006 to 63.3% in 2010 (Table 81), while the rate of induction of labour increased from 21.1% to 23.9%. The rate of induction of labour among Aboriginal or Torres Strait Islander mothers was slightly lower than the rate of 26.2% reported among non-Aboriginal or Torres Strait Islander mothers in 2010.

Between 2006 and 2010, the rate of normal vaginal birth fell from 71.5% to 67.0%. The caesarean section rate rose from 22.5% to 25.5% (Table 82). The rate of instrumental delivery rose slightly from 5.0% to 6.9%, and about 1% of all births were vaginal breech births.

**Table 81. Labour onset for Aboriginal and Torres Strait Islander mothers, NSW 2006–2010#**

Labour onset	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spontaneous	1728	66.2	1884	65.2	1966	66.1	1852	63.8	1956	63.3
No labour#	329	12.6	315	10.9	339	11.4	357	12.3	394	12.8
Induced	552	21.1	688	23.8	669	22.5	695	23.9	740	23.9
Not stated	2	0.1	1	0.0	2	0.1	0	0.0	0	0.0
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).

## No labour indicates elective caesarean section.

**Table 82. Type of birth among Aboriginal and Torres Strait Islander mothers, NSW 2006–2010#**

Type of delivery	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Normal vaginal	1868	71.5	2015	69.8	2074	69.7	1984	68.3	2070	67.0
Forceps	46	1.8	42	1.5	75	2.5	64	2.2	68	2.2
Vacuum extraction	84	3.2	121	4.2	124	4.2	126	4.3	144	4.7
Vaginal breech	17	0.7	27	0.9	25	0.8	23	0.8	19	0.6
Elective caesarean section	329	12.6	315	10.9	339	11.4	357	12.3	394	12.8
Emergency caesarean section#	259	9.9	365	12.6	336	11.3	350	12.1	395	12.8
Not stated	8	0.3	3	0.1	3	0.1	0	0.0	0	0.0
<b>TOTAL</b>	<b>2611</b>	<b>100.0</b>	<b>2888</b>	<b>100.0</b>	<b>2976</b>	<b>100.0</b>	<b>2904</b>	<b>100.0</b>	<b>3090</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of mothers are about 19% higher than shown (Table 70).

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

## Birth weight

Since 2006, the rate of low birth weight (less than 2,500 grams) in Aboriginal or Torres Strait Islander babies has been over 10% and was 11.2% in 2010 (Table 83). This is about twice the rate for babies born to non-Aboriginal or Torres

Strait Islander mothers, which was 5.9% in 2010. In 2010, the largest number of low birth weight babies was in the Hunter New England Local Health District (Table 84).

**Table 83. Weight of Aboriginal and Torres Strait Islander babies, NSW 2006–2010#**

Birth weight (grams)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1,000	26	1.0	57	1.9	39	1.3	36	1.2	39	1.2
1,000 - 1,499	29	1.1	23	0.8	36	1.2	22	0.8	25	0.8
1,500 - 2,499	273	10.3	276	9.4	272	9.0	259	8.8	287	9.1
2,500+	2318	87.5	2563	87.6	2665	88.4	2610	89.0	2787	88.8
Not stated	3	0.1	7	0.2	3	0.1	4	0.1	0	0.0
<b>TOTAL</b>	<b>2649</b>	<b>100.0</b>	<b>2926</b>	<b>100.0</b>	<b>3015</b>	<b>100.0</b>	<b>2931</b>	<b>100.0</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown (Table 71).

**Table 84. Weight of Aboriginal and Torres Strait Islander babies by Local Health District of residence, NSW 2010#**

Local Health District	Birth weight (grams)				TOTAL	
	< 2,500		2,500+		No.	%
	No.	%	No.	%	No.	%
Sydney	9	10.3	78	89.7	87	100.0
South Western Sydney	20	11.2	159	88.8	179	100.0
South Eastern Sydney	–	–	–	–	69	100.0
Illawarra Shoalhaven	19	9.9	173	90.1	192	100.0
Western Sydney	33	15.6	179	84.4	212	100.0
Nepean Blue Mountains	16	12.3	114	87.7	130	100.0
Northern Sydney	0	0.0	36	100.0	36	100.0
Central Coast	12	9.5	114	90.5	126	100.0
Hunter New England	97	11.9	718	88.1	815	100.0
Northern NSW	14	6.3	207	93.7	221	100.0
Mid North Coast	39	17.2	188	82.8	227	100.0
Southern NSW	–	–	–	–	86	100.0
Murrumbidgee	12	7.7	143	92.3	155	100.0
Western NSW	64	12.2	461	87.8	525	100.0
Far West	10	18.2	45	81.8	55	100.0
Other-not stated	1	4.3	22	95.7	23	100.0
<b>TOTAL</b>	<b>351</b>	<b>11.2</b>	<b>2787</b>	<b>88.8</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown. The level of under-reporting varies between Local Health Districts (Table 71).

## Gestational age

Since 2006, over 10% of Aboriginal or Torres Strait Islander babies have been premature (less than 37 weeks gestation) (Table 85). The rate of prematurity was 11.7% in 2010—compared with a rate of 7.2% for babies born to non-

Aboriginal or Torres Strait Islander mothers. In 2010, the largest number of premature babies was born in the Hunter New England Local Health District (Table 86).

**Table 85. Gestational age of Aboriginal and Torres Strait Islander babies, NSW 2006–2010#**

Gestational age (weeks)	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
< 28	25	0.9	56	1.9	44	1.5	39	1.3	39	1.2
28-31	26	1.0	28	1.0	40	1.3	26	0.9	40	1.3
32-36	235	8.9	289	9.9	284	9.4	244	8.3	287	9.1
37-41	2330	88.0	2518	86.1	2622	87.0	2589	88.3	2739	87.3
42 +	31	1.2	32	1.1	24	0.8	33	1.1	32	1.0
Not stated	2	0.1	3	0.1	1	0.0	0	0.0	1	0.0
<b>TOTAL</b>	<b>2649</b>	<b>100.0</b>	<b>2926</b>	<b>100.0</b>	<b>3015</b>	<b>100.0</b>	<b>2931</b>	<b>100.0</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown (Table 71).

**Table 86. Gestational age of Aboriginal and Torres Strait Islander babies by Local Health District of residence, NSW 2010#**

Local Health District	Gestational age (weeks)						TOTAL	
	Less than 37		37+		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%
Sydney	7	8.0	80	92.0	0	0.0	87	100.0
South Western Sydney	23	12.8	156	87.2	0	0.0	179	100.0
South Eastern Sydney	–	–	–	–	–	–	69	100.0
Illawarra Shoalhaven	20	10.4	172	89.6	0	0.0	192	100.0
Western Sydney	38	17.9	174	82.1	0	0.0	212	100.0
Nepean Blue Mountains	11	8.5	119	91.5	0	0.0	130	100.0
Northern Sydney	–	–	–	–	–	–	36	100.0
Central Coast	11	8.7	114	90.5	1	0.8	126	100.0
Hunter New England	101	12.4	714	87.6	0	0.0	815	100.0
Northern NSW	25	11.3	196	88.7	0	0.0	221	100.0
Mid North Coast	42	18.5	185	81.5	0	0.0	227	100.0
Southern NSW	–	–	–	–	–	–	86	100.0
Murrumbidgee	11	7.1	144	92.9	0	0.0	155	100.0
Western NSW	61	11.6	464	88.4	0	0.0	525	100.0
Far West	8	14.5	47	85.5	0	0.0	55	100.0
Other-not stated	1	4.3	22	95.7	0	0.0	23	100.0
<b>TOTAL</b>	<b>366</b>	<b>11.7</b>	<b>2771</b>	<b>88.3</b>	<b>1</b>	<b>0.0</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown. The level of under-reporting varies between Local Health Districts (Table 71). Data not shown for cell counts less than five.

## Apgar score

In 2010, 3.3% of Aboriginal or Torres Strait Islander babies had an Apgar score less than seven (Table 87), slightly higher

than the rate of 2.0% for babies born to non-Aboriginal or Torres Strait Islander mothers.

**Table 87. Apgar score of Aboriginal and Torres Strait Islander babies, NSW 2006–2010#**

Apgar score at 5 minutes	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	36	1.4	73	2.5	62	2.1	53	1.8	50	1.6
5-6	24	0.9	42	1.4	45	1.5	39	1.3	53	1.7
7+	2571	97.1	2794	95.5	2886	95.7	2819	96.2	3016	96.1
Not stated	18	0.7	17	0.6	22	0.7	20	0.7	19	0.6
<b>TOTAL</b>	<b>2649</b>	<b>100.0</b>	<b>2926</b>	<b>100.0</b>	<b>3015</b>	<b>100.0</b>	<b>2931</b>	<b>100.0</b>	<b>3138</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown (Table 71).

## Infant feeding

In 2010, 62.5% of babies born to Aboriginal or Torres Strait Islander mothers were fully breastfed at discharge from hospital, 4.8% were partially breastfed and 30.4% received infant formula only (Table 88). This compares with 80.1% of

babies born to non-Aboriginal or Torres Strait Islander mothers who were fully breastfed in 2010. Rates of full breastfeeding ranged from 46.7% in the Western Sydney Local Health District to 80.6% in the Northern Sydney Local Health District.

**Table 88. Infant feeding among Aboriginal and Torres Strait Islander liveborn babies by Local Health District of residence, NSW 2010#**

Local Health District	Infant feeding									
	Full breastfeeding		Any breastfeeding		Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Sydney	46	52.9	–	–	–	–	–	–	87	100.0
South Western Sydney	94	52.5	14	7.8	70	39.1	1	0.6	179	100.0
South Eastern Sydney	50	72.5	7	10.1	12	17.4	0	0.0	69	100.0
Illawarra Shoalhaven	126	65.6	5	2.6	58	30.2	3	1.6	192	100.0
Western Sydney	99	46.7	9	4.2	96	45.3	8	3.8	212	100.0
Nepean Blue Mountains	64	49.2	11	8.5	52	40.0	3	2.3	130	100.0
Northern Sydney	29	80.6	–	–	–	–	–	–	36	100.0
Central Coast	84	66.7	8	6.3	33	26.2	1	0.8	126	100.0
Hunter New England	555	68.1	37	4.5	205	25.2	18	2.2	815	100.0
Northern NSW	159	71.9	12	5.4	46	20.8	4	1.8	221	100.0
Mid North Coast	174	76.7	5	2.2	37	16.3	11	4.8	227	100.0
Southern NSW	66	76.7	–	–	–	–	–	–	86	100.0
Murrumbidgee	86	55.5	–	–	–	–	–	–	155	100.0
Western NSW	274	52.2	25	4.8	210	40.0	16	3.0	525	100.0
Far West	34	61.8	–	–	–	–	–	–	55	100.0
Other-not stated	20	87.0	1	4.3	2	8.7	0	0.0	23	100.0
<b>TOTAL</b>	1960	62.5	150	4.8	955	30.4	73	2.3	3138	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown. The level of under-reporting varies between Local Health Districts (Table 71). Data not shown for cell counts less than five.

## Perinatal mortality

Since 2006, the perinatal mortality rate among Aboriginal or Torres Strait Islander babies has varied from 12.1 to 22.6 per 1,000 births (Table 89). The rate of 13.4 per 1,000 in 2010 is

substantially higher than the rate of 8.0 per 1,000 experienced by babies born to non-Aboriginal or Torres Strait Islander mothers.

**Table 89. Perinatal deaths among Aboriginal and Torres Strait Islander babies, NSW 2006–2010#**

Perinatal deaths	Year									
	2006		2007		2008		2009		2010	
	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000	No.	Rate/1,000
Stillbirth	16	6.0	41	14.0	34	11.3	27	9.2	26	8.3
Neonatal death	16	6.0	25	8.5	12	4.0	10	3.4	16	5.1
<b>TOTAL PERINATAL DEATHS</b>	32	12.1	66	22.6	46	15.3	37	12.6	42	13.4

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

# Perinatal deaths include deaths reported to the PDC only. As the PDC form is completed at discharge or transfer of the baby, deaths occurring after this time may not be reported to the PDC. # Due to under-reporting of Aboriginal mothers and babies to the PDC, it is likely that the true numbers of babies are about 68% higher than shown (Table 71).

## 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 (page 18).

### Trends in confinements

Between 2006 and 2010, the percentage of mothers who were born in non-English speaking countries rose from 21.1% to 25.3% (Table 90). 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 Melanesia, Micronesia and Polynesia.

**Table 90. Births and confinements by country of birth group, NSW 2006–2010**

Country of birth group	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>										
English speaking	71515	78.3	73109	77.3	72361	76.3	71643	75.4	70528	74.2
Central & South America	765	0.8	793	0.8	830	0.9	867	0.9	866	0.9
Melanesia, Micronesia & Polynesia	1538	1.7	1518	1.6	1424	1.5	1351	1.4	1313	1.4
Southern Europe	901	1.0	843	0.9	847	0.9	865	0.9	813	0.9
Western & Northern Europe	725	0.8	782	0.8	844	0.9	834	0.9	880	0.9
Eastern Europe, Russia, Central Asian & Baltic States	564	0.6	688	0.7	676	0.7	749	0.8	789	0.8
Middle East & Africa	4216	4.6	4343	4.6	4635	4.9	4503	4.7	4686	4.9
South East Asia	4698	5.1	5166	5.5	5255	5.5	5286	5.6	5075	5.3
North East Asia	3143	3.4	3966	4.2	4023	4.2	4333	4.6	4743	5.0
Southern Asia	2759	3.0	3191	3.4	3759	4.0	4310	4.5	4912	5.2
Other—not stated	491	0.5	203	0.2	210	0.2	302	0.3	391	0.4
TOTAL	91315	100.0	94602	100.0	94864	100.0	95043	100.0	94996	100.0
<b>Births</b>										
English speaking	72699	78.4	74266	77.3	73562	76.4	72741	75.4	71708	74.3
Central & South America	779	0.8	809	0.8	842	0.9	881	0.9	876	0.9
Melanesia, Micronesia & Polynesia	1564	1.7	1546	1.6	1441	1.5	1364	1.4	1331	1.4
Southern Europe	920	1.0	858	0.9	866	0.9	879	0.9	828	0.9
Western & Northern Europe	737	0.8	795	0.8	861	0.9	845	0.9	891	0.9
Eastern Europe, Russia, Central Asian & Baltic States	573	0.6	701	0.7	689	0.7	758	0.8	799	0.8
Middle East & Africa	4287	4.6	4410	4.6	4707	4.9	4595	4.8	4754	4.9
South East Asia	4746	5.1	5206	5.4	5304	5.5	5334	5.5	5143	5.3
North East Asia	3172	3.4	4006	4.2	4058	4.2	4382	4.5	4783	5.0
Southern Asia	2801	3.0	3225	3.4	3798	3.9	4354	4.5	4971	5.2
Other—not stated	503	0.5	208	0.2	215	0.2	306	0.3	405	0.4
TOTAL	92781	100.0	96030	100.0	96343	100.0	96439	100.0	96489	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Maternal age

In 2010, births to teenage mothers were more common among mothers born in English-speaking countries than non-English speaking countries (Table 91, Figure 4), while the

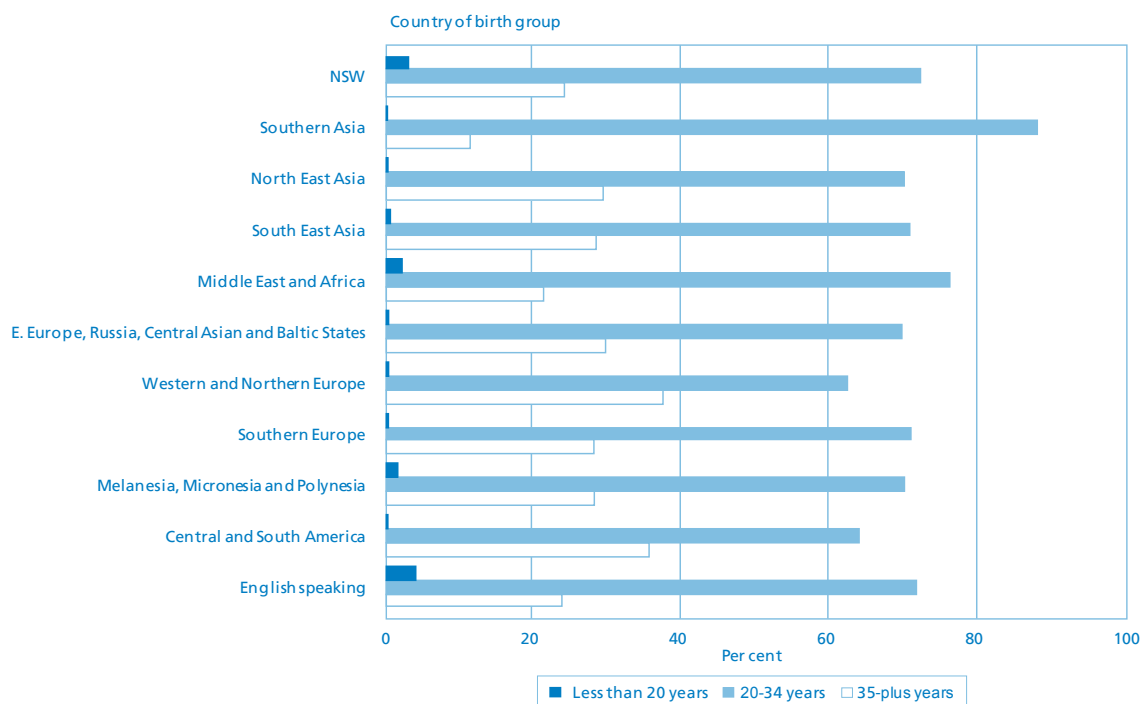
largest proportions of mothers aged 35 years and over were among mothers born in Western and Northern Europe (37.5%) and Central and South America (35.7%).

**Table 91. Maternal age by country of birth group, NSW 2010**

Country of birth group	Maternal age (years)											
	12–19		20–34				35+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%		
English speaking	2982	4.2	50561	71.7	16974	24.1	11	0.0	70528	100.0		
Central & South America	4	0.5	553	63.9	309	35.7	0	0.0	866	100.0		
Melanesia, Micronesia & Polynesia	22	1.7	921	70.1	370	28.2	0	0.0	1313	100.0		
Southern Europe	3	0.4	579	71.2	231	28.4	0	0.0	813	100.0		
Western & Northern Europe	1	0.1	549	62.4	330	37.5	0	0.0	880	100.0		
Eastern Europe, Russia, Central Asian & Baltic States	2	0.3	550	69.7	237	30.0	0	0.0	789	100.0		
Middle East & Africa	104	2.2	3573	76.2	1009	21.5	0	0.0	4686	100.0		
South East Asia	37	0.7	3582	70.6	1455	28.7	1	0.0	5075	100.0		
North East Asia	23	0.5	3321	70.0	1398	29.5	1	0.0	4743	100.0		
Southern Asia	19	0.4	4327	88.1	566	11.5	0	0.0	4912	100.0		
Other—not stated	2	0.5	276	70.6	113	28.9	0	0.0	391	100.0		
<b>TOTAL</b>	<b>3199</b>	<b>3.4</b>	<b>68792</b>	<b>72.4</b>	<b>22992</b>	<b>24.2</b>	<b>13</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>		

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

**Figure 4. Maternal age by country of birth group, NSW 2010**



Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence. NSW Ministry of Health.

## Local Health District of residence

In 2010, the proportion of mothers born in non-English speaking countries was highest in the Western Sydney Local Health District (47.5%), followed by the South Western Sydney (39.4%) and Sydney (39.3%) Local Health Districts. Five percent of mothers were born in South East Asian countries, 49.0% of whom were resident in the Western Sydney and South Western Sydney Local Health Districts.

Almost 5% of mothers were born in Middle Eastern and African countries and 64.7% of these mothers were resident in the Western Sydney and South Western Sydney Local Health Districts. A further 5.2% of mothers were born in North East Asian countries and 5.0% in Southern Asian countries, with the majority living in Sydney metropolitan areas (Table 92).

**Table 92. Local Health District of residence by country of birth group, NSW 2010#**

Local Health District	Country of birth group																						TOTAL	
	English speaking		Central & South America		Melanesia, Micronesia & Polynesia		Southern Europe		Western & Northern Europe		Eastern Europe, Russia, Central Asian & Baltic States		Middle East & Africa		South East Asia		North East Asia		Southern Asia		Other-not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Sydney	5133	60.2	124	1.5	110	1.3	94	1.1	98	1.1	116	1.4	526	6.2	693	8.1	932	10.9	657	7.7	48	0.6	8531	100.0
South Western Sydney	7557	60.2	158	1.3	418	3.3	248	2.0	46	0.4	81	0.6	1661	13.2	1537	12.2	288	2.3	508	4.0	52	0.4	12554	100.0
South Eastern Sydney	7728	68.1	191	1.7	115	1.0	146	1.3	221	1.9	229	2.0	437	3.8	720	6.3	936	8.2	439	3.9	189	1.7	11351	100.0
Illawarra Shoalhaven	4000	90.8	21	0.5	15	0.3	64	1.5	29	0.7	14	0.3	104	2.4	76	1.7	40	0.9	33	0.7	7	0.2	4403	100.0
Western Sydney	7229	52.4	96	0.7	406	2.9	100	0.7	52	0.4	86	0.6	1373	10.0	951	6.9	1103	8.0	2388	17.3	11	0.1	13795	100.0
Nepean Blue Mountains	4236	89.3	13	0.3	47	1.0	21	0.4	30	0.6	29	0.6	107	2.3	106	2.2	45	0.9	101	2.1	8	0.2	4743	100.0
Northern Sydney	7537	70.9	165	1.6	76	0.7	76	0.7	229	2.2	174	1.6	219	2.1	563	5.3	1139	10.7	427	4.0	29	0.3	10634	100.0
Central Coast	3549	94.0	20	0.5	17	0.5	6	0.2	17	0.5	17	0.5	23	0.6	59	1.6	31	0.8	29	0.8	9	0.2	3777	100.0
Hunter New England	10314	95.3	21	0.2	27	0.2	20	0.2	52	0.5	11	0.1	104	1.0	126	1.2	69	0.6	72	0.7	5	0.0	10821	100.0
Northern NSW	2680	94.1	13	0.5	7	0.2	4	0.1	38	1.3	6	0.2	14	0.5	38	1.3	20	0.7	21	0.7	7	0.2	2848	100.0
Mid North Coast	2155	94.1	5	0.2	7	0.3	4	0.2	15	0.7	5	0.2	18	0.8	34	1.5	16	0.7	23	1.0	7	0.3	2289	100.0
Southern NSW	1297	94.9	1	0.1	6	0.4	12	0.9	6	0.4	2	0.1	4	0.3	20	1.5	10	0.7	8	0.6	1	0.1	1367	100.0
Murrumbidgee	2343	93.2	4	0.2	26	1.0	6	0.2	10	0.4	3	0.1	35	1.4	28	1.1	13	0.5	41	1.6	5	0.2	2514	100.0
Western NSW	3600	96.8	6	0.2	8	0.2	1	0.0	7	0.2	4	0.1	23	0.6	28	0.8	13	0.3	20	0.5	9	0.2	3719	100.0
Far West	249	98.0	0	0.0	1	0.4	0	0.0	0	0.0	1	0.4	0	0.0	2	0.8	0	0.0	0	0.0	1	0.4	254	100.0
Other-not stated	921	66.0	28	2.0	27	1.9	11	0.8	30	2.1	11	0.8	38	2.7	94	6.7	88	6.3	145	10.4	3	0.2	1396	100.0
<b>TOTAL</b>	<b>70528</b>	<b>74.2</b>	<b>866</b>	<b>0.9</b>	<b>1313</b>	<b>1.4</b>	<b>813</b>	<b>0.9</b>	<b>880</b>	<b>0.9</b>	<b>789</b>	<b>0.8</b>	<b>4686</b>	<b>4.9</b>	<b>5075</b>	<b>5.3</b>	<b>4743</b>	<b>5.0</b>	<b>4912</b>	<b>5.2</b>	<b>391</b>	<b>0.4</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry 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 2010, 91.7% of all mothers commenced antenatal care before 20 weeks gestation and 79.3% commenced antenatal care before 14 weeks gestation. There was some variation between country of birth groups, with 81.5% of mothers

born in English speaking countries commencing antenatal care before 14 weeks gestation, compared with 64.2% of mothers born in Melanesia, Micronesia, and Polynesia, and 82.1% of mothers born in Southern Asia (Table 93).

**Table 93. Duration of pregnancy at first antenatal visit by country of birth group, NSW 2010**

Country of birth group	Duration of pregnancy at first antenatal visit (weeks)									
	0–13		14–19		20-plus		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	57466	81.5	8039	11.4	4135	5.9	888	1.3	70528	100.0
Central & South America	657	75.9	140	16.2	62	7.2	7	0.8	866	100.0
Melanesia, Micronesia & Polynesia	843	64.2	207	15.8	228	17.4	35	2.7	1313	100.0
Southern Europe	612	75.3	130	16.0	67	8.2	4	0.5	813	100.0
Western & Northern Europe	709	80.6	118	13.4	42	4.8	11	1.3	880	100.0
Eastern Europe, Russia, Central Asian & Baltic States	617	78.2	104	13.2	63	8.0	5	0.6	789	100.0
Middle East & Africa	3114	66.5	823	17.6	670	14.3	79	1.7	4686	100.0
South East Asia	3423	67.4	995	19.6	566	11.2	91	1.8	5075	100.0
North East Asia	3536	74.6	693	14.6	433	9.1	81	1.7	4743	100.0
Southern Asia	4033	82.1	543	11.1	305	6.2	31	0.6	4912	100.0
Other—not stated	307	78.5	48	12.3	23	5.9	13	3.3	391	100.0
<b>TOTAL</b>	<b>75317</b>	<b>79.3</b>	<b>11840</b>	<b>12.5</b>	<b>6594</b>	<b>6.9</b>	<b>1245</b>	<b>1.3</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Smoking in pregnancy

In 2010, smoking at any time during pregnancy was more common among mothers born in English speaking countries than mothers born in non-English speaking countries (Table 94). About one in seven mothers born in English speaking countries smoked at some time during pregnancy, compared to fewer than one in ten 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. Fourteen percent of mothers who smoked during pregnancy quit before the second half of pregnancy. Mothers born in non-English speaking countries were more likely to quit before the second half of pregnancy compared to mothers born in English speaking countries (Table 95).

**Table 94. Smoking in pregnancy by country of birth group, NSW 2010**

Country of birth group	Smoking in pregnancy							
	No		Yes		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	60758	86.1	9762	13.8	8	0.0	70528	100.0
Central & South America	835	96.4	31	3.6	0	0.0	866	100.0
Melanesia, Micronesia & Polynesia	1187	90.4	126	9.6	0	0.0	1313	100.0
Southern Europe	741	91.1	72	8.9	0	0.0	813	100.0
Western & Northern Europe	852	96.8	26	3.0	2	0.2	880	100.0
Eastern Europe, Russia, Central Asian & Baltic States	751	95.2	38	4.8	0	0.0	789	100.0
Middle East & Africa	4425	94.4	261	5.6	0	0.0	4686	100.0
South East Asia	4858	95.7	217	4.3	0	0.0	5075	100.0
North East Asia	4673	98.5	70	1.5	0	0.0	4743	100.0
Southern Asia	4849	98.7	63	1.3	0	0.0	4912	100.0
Other—not stated	371	94.9	19	4.9	1	0.3	391	100.0
<b>TOTAL</b>	<b>84300</b>	<b>88.7</b>	<b>10685</b>	<b>11.2</b>	<b>11</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.



**Table 95. Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy and country of birth group, NSW 2010**

Country of birth group	Cigarettes per day in the second half of pregnancy								TOTAL	
	None		1– 10 per day		>10 per day		Smoked, amount not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	1324	13.6	4547	46.6	2856	29.3	1035	10.6	9762	100.0
Central & South America	20	64.5	5	16.1	3	9.7	3	9.7	31	100.0
Melanesia, Micronesia & Polynesia	45	35.7	43	34.1	13	10.3	25	19.8	126	100.0
Southern Europe	29	40.3	23	31.9	11	15.3	9	12.5	72	100.0
Western & Northern Europe	12	46.2	9	34.6	4	15.4	1	3.8	26	100.0
Eastern Europe, Russia, Central Asian & Baltic States	18	47.4	11	28.9	2	5.3	7	18.4	38	100.0
Middle East & Africa	138	52.9	51	19.5	30	11.5	42	16.1	261	100.0
South East Asia	150	69.1	30	13.8	15	6.9	22	10.1	217	100.0
North East Asia	59	84.3	6	8.6	1	1.4	4	5.7	70	100.0
Southern Asia	48	76.2	9	14.3	1	1.6	5	7.9	63	100.0
Other—not stated	8	42.1	5	26.3	5	26.3	1	5.3	19	100.0
<b>TOTAL</b>	<b>1851</b>	<b>17.3</b>	<b>4739</b>	<b>44.4</b>	<b>2941</b>	<b>27.5</b>	<b>1154</b>	<b>10.8</b>	<b>10685</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Medical conditions and obstetric complications

In 2010, 2.3% of mothers born in Melanesia, Micronesia, and Polynesia were reported to have diabetes mellitus—almost four times the rate for all mothers in NSW, though the number of mothers is small (Table 96). Over 10% of mothers born in Asian countries and Melanesia, Micronesia, and Polynesia were reported to have gestational diabetes.

Mothers born in English speaking countries were more likely to have pregnancy-induced hypertension compared to mothers born in non-English speaking countries. Rates of essential hypertension were higher among mothers born in Melanesia, Micronesia, and Polynesia than other country of birth group.

**Table 96. Maternal medical conditions and obstetric complications by country of birth group, NSW 2010**

Country of birth group	Diabetes mellitus		Gestational diabetes		Condition		Pregnancy-induced hypertension		TOTAL	
	No.	%	No.	%	Essential hypertension		No.	%	No.	%
					No.	%				
English speaking	454	0.6	2855	4.0	622	0.9	5464	7.7	70528	100.0
Central & South America	1	0.1	49	5.7	9	1.0	36	4.2	866	100.0
Melanesia, Micronesia & Polynesia	30	2.3	154	11.7	24	1.8	68	5.2	1313	100.0
Southern Europe	5	0.6	41	5.0	5	0.6	33	4.1	813	100.0
Western & Northern Europe	2	0.2	35	4.0	5	0.6	48	5.5	880	100.0
Eastern Europe, Russia, Central Asian & Baltic States	2	0.3	48	6.1	5	0.6	35	4.4	789	100.0
Middle East & Africa	28	0.6	381	8.1	41	0.9	132	2.8	4686	100.0
South East Asia	33	0.7	545	10.7	31	0.6	194	3.8	5075	100.0
North East Asia	17	0.4	558	11.8	15	0.3	105	2.2	4743	100.0
Southern Asia	37	0.8	646	13.2	34	0.7	226	4.6	4912	100.0
Other—not stated	0	0.0	18	4.6	5	1.3	16	4.1	391	100.0
<b>TOTAL</b>	<b>609</b>	<b>0.6</b>	<b>5330</b>	<b>5.6</b>	<b>796</b>	<b>0.8</b>	<b>6357</b>	<b>6.7</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Total refers to total mothers giving birth in NSW.

## Labour and birth

Across maternal country of birth groups, the rate of spontaneous onset of labour varied from 53.5% among mothers born in Southern Asia to 64.6% among mothers born in South East Asia, while rates of induction of labour varied from 18.6% among mothers born in South East Asia to 28.9% among mothers born in Southern Asia (Table 97).

Mothers born in Melanesia, Micronesia and Polynesia, and the Middle East and Africa were more likely to have a normal vaginal birth than mothers in other country of birth groups (Table 98). The highest caesarean section rate was among mothers born in Central and South America (39.3%).

**Table 97. Labour onset by country of birth group, NSW 2010**

Country of birth group	Spontaneous		No labour#		Onset of labour				TOTAL	
	No.	%	No.	%	Induced		Not stated		No.	%
					No.	%	No.	%		
English speaking	38831	55.1	12659	17.9	19033	27.0	5	0.0	70528	100.0
Central & South America	447	51.6	202	23.3	217	25.1	0	0.0	866	100.0
Melanesia, Micronesia & Polynesia	786	59.9	206	15.7	321	24.4	0	0.0	1313	100.0
Southern Europe	461	56.7	132	16.2	220	27.1	0	0.0	813	100.0
Western & Northern Europe	535	60.8	140	15.9	205	23.3	0	0.0	880	100.0
Eastern Europe, Russia, Central Asian & Baltic States	474	60.1	138	17.5	177	22.4	0	0.0	789	100.0
Middle East & Africa	2872	61.3	727	15.5	1087	23.2	0	0.0	4686	100.0
South East Asia	3277	64.6	854	16.8	944	18.6	0	0.0	5075	100.0
North East Asia	2861	60.3	843	17.8	1039	21.9	0	0.0	4743	100.0
Southern Asia	2629	53.5	861	17.5	1422	28.9	0	0.0	4912	100.0
Other—not stated	199	50.9	87	22.3	103	26.3	2	0.5	391	100.0
<b>TOTAL</b>	<b>53372</b>	<b>56.2</b>	<b>16849</b>	<b>17.7</b>	<b>24768</b>	<b>26.1</b>	<b>7</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# No labour indicates elective caesarean section.

**Table 98. Type of birth by country of birth group, NSW 2010**

Country of birth group	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	41275	58.5	2591	3.7	5019	7.1	248	0.4	12659	17.9	8715	12.4	21	0.0	70528	100.0
Central & South America	417	48.2	42	4.8	67	7.7	0	0.0	202	23.3	138	15.9	0	0.0	866	100.0
Melanesia, Micronesia & Polynesia	853	65.0	38	2.9	64	4.9	8	0.6	206	15.7	144	11.0	0	0.0	1313	100.0
Southern Europe	470	57.8	35	4.3	53	6.5	4	0.5	132	16.2	119	14.6	0	0.0	813	100.0
Western & Northern Europe	512	58.2	52	5.9	71	8.1	3	0.3	140	15.9	102	11.6	0	0.0	880	100.0
Eastern Europe, Russia, Central Asian & Baltic States	446	56.5	43	5.4	62	7.9	4	0.5	138	17.5	96	12.2	0	0.0	789	100.0
Middle East & Africa	3022	64.5	150	3.2	280	6.0	29	0.6	727	15.5	477	10.2	1	0.0	4686	100.0
South East Asia	2834	55.8	228	4.5	420	8.3	16	0.3	854	16.8	723	14.2	0	0.0	5075	100.0
North East Asia	2483	52.4	265	5.6	509	10.7	7	0.1	843	17.8	635	13.4	1	0.0	4743	100.0
Southern Asia	2296	46.7	367	7.5	489	10.0	11	0.2	861	17.5	887	18.1	1	0.0	4912	100.0
Other—not stated	166	42.5	32	8.2	40	10.2	2	0.5	87	22.3	63	16.1	1	0.3	391	100.0
<b>TOTAL</b>	<b>54774</b>	<b>57.7</b>	<b>3843</b>	<b>4.0</b>	<b>7074</b>	<b>7.4</b>	<b>332</b>	<b>0.3</b>	<b>16849</b>	<b>17.7</b>	<b>12099</b>	<b>12.7</b>	<b>25</b>	<b>0.0</b>	<b>94996</b>	<b>100.0</b>

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

## Birth weight

The rate of low birth weight (less than 2,500 grams) in 2010 was 6.1% in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asia (9.0%) and

Melanesia, Micronesia and Polynesia (7.5%) (Table 99). Babies of mothers born in Western and Northern Europe were least likely to be low birth weight.

**Table 99. Birth weight by country of birth group, NSW 2010**

Country of birth group	Birth weight (grams)							
	< 2,500		2,500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	4300	6.0	67364	93.9	44	0.1	71708	100.0
Central & South America	45	5.1	831	94.9	0	0.0	876	100.0
Melanesia, Micronesia & Polynesia	100	7.5	1231	92.5	0	0.0	1331	100.0
Southern Europe	37	4.5	791	95.5	0	0.0	828	100.0
Western & Northern Europe	32	3.6	858	96.3	1	0.1	891	100.0
Eastern Europe, Russia, Central Asian & Baltic States	40	5.0	759	95.0	0	0.0	799	100.0
Middle East & Africa	284	6.0	4465	93.9	5	0.1	4754	100.0
South East Asia	346	6.7	4793	93.2	4	0.1	5143	100.0
North East Asia	224	4.7	4558	95.3	1	0.0	4783	100.0
Southern Asia	446	9.0	4521	90.9	4	0.1	4971	100.0
Other—not stated	46	11.4	359	88.6	0	0.0	405	100.0
<b>TOTAL</b>	<b>5900</b>	<b>6.1</b>	<b>90530</b>	<b>93.8</b>	<b>59</b>	<b>0.1</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Gestational age

The rate of prematurity (less than 37 weeks gestation) in 2010 was 7.4% in NSW. The highest rate of prematurity was among babies of mothers born in South East Asia (7.7%). Babies of

mothers born in Western and Northern Europe were least likely to be premature (Table 100).

**Table 100. Gestational age by country of birth group, NSW 2010**

Country of birth group	Gestational age (weeks)							
	Less than 37		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	5427	7.6	66277	92.4	4	0.0	71708	100.0
Central & South America	55	6.3	821	93.7	0	0.0	876	100.0
Melanesia, Micronesia & Polynesia	101	7.6	1230	92.4	0	0.0	1331	100.0
Southern Europe	46	5.6	782	94.4	0	0.0	828	100.0
Western & Northern Europe	42	4.7	849	95.3	0	0.0	891	100.0
Eastern Europe, Russia, Central Asian & Baltic States	52	6.5	747	93.5	0	0.0	799	100.0
Middle East & Africa	305	6.4	4449	93.6	0	0.0	4754	100.0
South East Asia	396	7.7	4746	92.3	1	0.0	5143	100.0
North East Asia	260	5.4	4523	94.6	0	0.0	4783	100.0
Southern Asia	365	7.3	4606	92.7	0	0.0	4971	100.0
Other—not stated	54	13.3	351	86.7	0	0.0	405	100.0
<b>TOTAL</b>	<b>7103</b>	<b>7.4</b>	<b>89381</b>	<b>92.6</b>	<b>5</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Apgar score

In 2010, 2.1% of all babies (including stillborn babies) had an Apgar score of less than 7 at 5 minutes and 1.1% had a score of less than 4 (Table 101). The rates of Apgar scores

of less than 7 were highest among babies of mothers born in Melanesia, Micronesia and Polynesia (3.4%).

**Table 101. Apgar score at five minutes by country of birth group, NSW 2010#**

Country of birth group	0–4		5–6		Apgar score 7+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	774	1.1	734	1.0	69988	97.6	212	0.3	71708	100.0
Central & South America	4	0.5	7	0.8	863	98.5	2	0.2	876	100.0
Melanesia, Micronesia & Polynesia	26	2.0	19	1.4	1278	96.0	8	0.6	1331	100.0
Southern Europe	5	0.6	4	0.5	818	98.8	1	0.1	828	100.0
Western & Northern Europe	7	0.8	6	0.7	878	98.5	0	0.0	891	100.0
Eastern Europe, Russia, Central Asian & Baltic States	6	0.8	5	0.6	787	98.5	1	0.1	799	100.0
Middle East & Africa	78	1.6	45	0.9	4617	97.1	14	0.3	4754	100.0
South East Asia	59	1.1	61	1.2	5000	97.2	23	0.4	5143	100.0
North East Asia	26	0.5	35	0.7	4709	98.5	13	0.3	4783	100.0
Southern Asia	60	1.2	41	0.8	4866	97.9	4	0.1	4971	100.0
Other–not stated	6	1.5	2	0.5	397	98.0	0	0.0	405	100.0
<b>TOTAL</b>	<b>1051</b>	<b>1.1</b>	<b>959</b>	<b>1.0</b>	<b>94201</b>	<b>97.6</b>	<b>278</b>	<b>0.3</b>	<b>96489</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# Births include stillbirths.

## Infant feeding

The highest rates of full breastfeeding in 2010 were among babies of mothers born in Western and Northern Europe (91.2%), followed by babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States (89.4%).

The lowest rates of full breastfeeding were among babies of mothers born in South East Asia (70.4%) and Melanesia, Micronesia and Polynesia (73.4%) (Table 102).

**Table 102. Infant feeding among liveborn babies by country of birth group, NSW 2010#**

Country of birth group	Full breastfeeding		Any breastfeeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	57421	80.6	3648	5.1	9599	13.5	613	0.9	71281	100.0
Central & South America	750	85.9	71	8.1	45	5.2	7	0.8	873	100.0
Melanesia, Micronesia & Polynesia	967	73.4	180	13.7	147	11.2	23	1.7	1317	100.0
Southern Europe	641	77.9	85	10.3	94	11.4	3	0.4	823	100.0
Western & Northern Europe	810	91.2	34	3.8	39	4.4	5	0.6	888	100.0
Eastern Europe, Russia, Central Asian & Baltic States	712	89.4	52	6.5	29	3.6	3	0.4	796	100.0
Middle East & Africa	3868	82.0	479	10.2	330	7.0	42	0.9	4719	100.0
South East Asia	3602	70.4	1021	19.9	447	8.7	48	0.9	5118	100.0
North East Asia	3558	74.6	925	19.4	262	5.5	23	0.5	4768	100.0
Southern Asia	4124	83.6	644	13.0	123	2.5	44	0.9	4935	100.0
Other–not stated	304	75.4	45	11.2	44	10.9	10	2.5	403	100.0
<b>TOTAL</b>	<b>76757</b>	<b>80.0</b>	<b>7184</b>	<b>7.5</b>	<b>11159</b>	<b>11.6</b>	<b>821</b>	<b>0.9</b>	<b>95921</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Perinatal outcomes

In 2010, 99% of babies born in NSW and reported to the PDC were born alive and survived until discharge from the hospital of birth (Table 103). The perinatal mortality rate was highest among babies of mothers born in Melanesia, Micronesia and Polynesia (16.5 per 1,000) and lowest among babies of

mothers born in North East Asia (4.6 per 1,000). However, as the majority of births are to mothers born in English speaking countries, the majority of perinatal deaths (n=581, 73.2%) occurred among these babies.

**Table 103. Perinatal outcomes by country of birth group, NSW 2010#**

Country of birth group	Liveborn surviving		Stillbirth		Neonatal death		Perinatal outcome				Total births	Perinatal mortality rate/ 1,000 births##	
	No.	%	No.	%	No.	%	Death-age not stated		Not stated				
							No.	%	No.	%			
English speaking	71111	99.2	416	0.6	165	0.2	5	0.0	11	0.0	71708	100.0	8.1
Central & South America	872	99.5	3	0.3	1	0.1	0	0.0	0	0.0	876	100.0	-
Melanesia, Micronesia & Polynesia	1309	98.3	14	1.1	8	0.6	0	0.0	0	0.0	1331	100.0	16.5
Southern Europe	822	99.3	5	0.6	1	0.1	0	0.0	0	0.0	828	100.0	7.2
Western & Northern Europe	887	99.6	2	0.2	1	0.1	0	0.0	1	0.1	891	100.0	-
Eastern Europe, Russia, Central Asian & Baltic States	795	99.5	3	0.4	1	0.1	0	0.0	0	0.0	799	100.0	-
Middle East & Africa	4697	98.8	35	0.7	22	0.5	0	0.0	0	0.0	4754	100.0	12.0
South East Asia	5097	99.1	24	0.5	19	0.4	2	0.0	1	0.0	5143	100.0	8.4
North East Asia	4761	99.5	15	0.3	7	0.1	0	0.0	0	0.0	4783	100.0	4.6
Southern Asia	4923	99.0	36	0.7	12	0.2	0	0.0	0	0.0	4971	100.0	9.7
Other-not stated	401	99.0	2	0.5	2	0.5	0	0.0	0	0.0	405	100.0	-
<b>TOTAL</b>	<b>95675</b>	<b>99.2</b>	<b>555</b>	<b>0.6</b>	<b>239</b>	<b>0.2</b>	<b>7</b>	<b>0.0</b>	<b>13</b>	<b>0.0</b>	<b>96489</b>	<b>100.0</b>	<b>8.2</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.

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

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

## 9. Congenital conditions

### Congenital conditions among stillborn and liveborn 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 one 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 thalassaemia 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 2004–2009 and congenital conditions detected during pregnancy or at birth for 2010.

### Trends in reported congenital conditions

Between 2004 and 2009, 1.8% to 2.1% of infants were reported to have congenital conditions (Table 104). In 2010, 775 cases of congenital conditions detected during pregnancy or at birth have been reported to date.

**Table 104. Cases of congenital conditions, NSW 2004–2010#**

Year	Cases of congenital conditions	Births	Rate/1,000 births
2004	1751	84607	20.7
2005	1617	89337	18.1
2006	1768	91554	19.3
2007	1831	94640	19.3
2008	1883	94874	19.8
2009	1815	94733	19.2
2010	775	95074	8.2

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

# For 2004–2009, cases reported during pregnancy and one year of age are included. For 2010, cases reported during pregnancy or at birth are included.

### Congenital conditions by diagnostic category

The most common categories of congenital conditions for stillborn and liveborn babies are presented in Table 105. 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 2004–2010, conditions of the cardiovascular system were most commonly reported, followed by conditions of the musculoskeletal system and conditions of the genitourinary system. This is a similar pattern to previous years.

**Table 105. Congenital conditions among stillbirths and liveborn infants by diagnostic category, NSW 2004–2010#**

Diagnostic category#	No. conditions				Rate/1,000 births			
	2004–2008	2009	2010	2004–2010	2004–2008	2009	2010	2004–2010
<b>Nervous system</b>								
Anencephaly	47	5	3	55	0.1	0.1	0.0	0.1
Spina Bifida	151	35	19	205	0.3	0.4	0.2	0.3
Encephalocele	32	7	2	41	0.1	0.1	0.0	0.1
Microcephaly	97	30	6	133	0.2	0.3	0.1	0.2
Congenital hydrocephalus	170	45	16	231	0.4	0.5	0.2	0.4
Other nervous system anomalies	309	74	39	422	0.7	0.8	0.4	0.7
TOTAL	806	196	85	1087	1.8	2.1	0.9	1.7
<b>Eye</b>								
Anophthalmos–microphthalmos	55	22	5	82	0.1	0.2	0.1	0.1
Buphthalmos–congenital glaucoma	32	9	2	43	0.1	0.1	0.0	0.1
Congenital cataract	83	23	4	110	0.2	0.2	0.0	0.2
Other eye anomalies	198	39	10	247	0.4	0.4	0.1	0.4
TOTAL	368	93	21	482	0.8	1.0	0.2	0.7
<b>Ear, face and neck</b>								
Absence–stricture auditory canal	49	9	7	65	0.1	0.1	0.1	0.1
Absent auricle	5	0	0	5	0.0	0	0	0.0
Anomalies of face and neck	34	3	3	40	0.1	0.0	0.0	0.1
Other ear anomalies	65	15	14	94	0.1	0.2	0.1	0.1
TOTAL	153	27	24	204	0.3	0.3	0.3	0.3
<b>Cardiovascular system</b>								
Transposition of great vessels	241	60	20	321	0.5	0.6	0.2	0.5
Tetralogy of Fallot	158	42	23	223	0.3	0.4	0.2	0.3
Ventricular septal defect	846	190	64	1100	1.9	2.0	0.7	1.7
Atrial septal defect	858	220	81	1159	1.9	2.3	0.9	1.8
Heart valve anomalies	515	126	61	702	1.1	1.3	0.6	1.1
Patent ductus arteriosus > 37 weeks	457	129	49	635	1.0	1.4	0.5	1.0
Coarctation of aorta	221	49	12	282	0.5	0.5	0.1	0.4
Other anomalies of aorta	127	23	21	171	0.3	0.2	0.2	0.3
Anomalies of pulmonary artery	155	34	17	206	0.3	0.4	0.2	0.3
Other cardiovascular anomalies	749	212	127	1088	1.6	2.2	1.3	1.7
TOTAL	4327	1085	475	5887	9.5	11.5	5.0	9.1
<b>Respiratory system</b>								
Nose	59	13	5	77	0.1	0.1	0.1	0.1
Larynx, trachea and bronchus	35	6	3	44	0.1	0.1	0.0	0.1
Lung	119	29	22	170	0.3	0.3	0.2	0.3
TOTAL	213	48	30	291	0.5	0.5	0.3	0.5
<b>Gastrointestinal system</b>								
Cleft palate only	414	69	53	536	0.9	0.7	0.6	0.8
Cleft lip only	148	28	31	207	0.3	0.3	0.3	0.3
Cleft palate and cleft lip	221	57	40	318	0.5	0.6	0.4	0.5
Oesophageal atresia only	16	4	2	22	0.0	0.0	0.0	0.0
Oesophageal atresia with TOF	96	20	9	125	0.2	0.2	0.1	0.2
Tracheo-oesophageal fistula (TOF) only	23	5	1	29	0.1	0.1	0.0	0.0
Atresia-stenosis of small intestine	127	22	17	166	0.3	0.2	0.2	0.3
Atresia-stenosis of anus	147	39	13	199	0.3	0.4	0.1	0.3
Other gastrointestinal anomalies	494	102	25	621	1.1	1.1	0.3	1.0
TOTAL	1686	346	191	2223	3.7	3.7	2.0	3.4
<b>Genitourinary system</b>								
Anomalies of female genitals	67	8	2	77	0.1	0.1	0.0	0.1
Undescended testis	354	97	16	467	0.8	1.0	0.2	0.7
Hypospadias	733	151	71	955	1.6	1.6	0.7	1.5
Epispadias	6	2	4	12	0.0	0.0	0.0	0.0
Chordee	160	43	17	220	0.4	0.5	0.2	0.3
Indeterminate sex-ambiguous genitalia	57	10	7	74	0.1	0.1	0.1	0.1
Renal agenesis-dysgenesis	174	33	33	240	0.4	0.3	0.3	0.4
Obstructive anomalies of renal pelvis and ureter	732	144	51	927	1.6	1.5	0.5	1.4
Other genitourinary system anomalies	702	137	57	896	1.5	1.4	0.6	1.4
TOTAL	2985	625	258	3868	6.6	6.6	2.7	6.0

Table 105. (Continued)

Diagnostic category#	No. conditions				Rate/1,000 births			
	2004–2008	2009	2010	2004–2010	2004–2008	2009	2010	2004–2010
<b>Musculoskeletal system</b>								
Congenital dislocation of the hips	617	108	38	763	1.4	1.1	0.4	1.2
Talipes equinovarus	373	58	17	448	0.8	0.6	0.2	0.7
Polydactyly	477	77	79	633	1.0	0.8	0.8	1.0
Syndactyly	130	19	16	165	0.3	0.2	0.2	0.3
Reduction deformities of limbs	281	87	52	420	0.6	0.9	0.5	0.7
Craniosynostosis	191	37	9	237	0.4	0.4	0.1	0.4
Diaphragmatic hernia	138	33	24	195	0.3	0.3	0.3	0.3
Exomphalos	68	28	7	103	0.1	0.3	0.1	0.2
Gastroschisis	103	32	16	151	0.2	0.3	0.2	0.2
Other musculoskeletal anomalies	765	190	103	1058	1.7	2.0	1.1	1.6
<b>TOTAL</b>	<b>3143</b>	<b>669</b>	<b>361</b>	<b>4173</b>	<b>6.9</b>	<b>7.1</b>	<b>3.8</b>	<b>6.5</b>
<b>Integumentary system</b>	238	32	9	279	0.5	0.3	0.1	0.4
<b>Cystic Hygroma</b>	54	12	5	71	0.1	0.1	0.1	0.1
<b>Chromosomal anomalies</b>								
Trisomy 21	436	96	49	581	1.0	1.0	0.5	0.9
Trisomy 13	33	10	5	48	0.1	0.1	0.1	0.1
Trisomy 18	89	17	13	119	0.2	0.2	0.1	0.2
Turner syndrome	74	9	7	90	0.2	0.1	0.1	0.1
Other chromosomal anomalies	325	78	38	441	0.7	0.8	0.4	0.7
<b>TOTAL</b>	<b>957</b>	<b>210</b>	<b>112</b>	<b>1279</b>	<b>2.1</b>	<b>2.2</b>	<b>1.2</b>	<b>2.0</b>
<b>Situs inversus</b>	22	4	7	33	0.0	0.0	0.1	0.1
<b>Congenital malformation syndromes</b>	188	44	19	251	0.4	0.5	0.2	0.4
<b>Congenital cytomegalovirus infection</b>	3	2	0	5	0.0	0.0	0.0	0.0
<b>Non-immune hydrops foetalis</b>	105	21	8	134	0.2	0.2	0.1	0.2
<b>Other and unspecified anomalies</b>	549	148	19	716	1.2	1.6	0.2	1.1
<b>TOTAL</b>	<b>15797</b>	<b>3562</b>	<b>1624</b>	<b>20983</b>	<b>34.7</b>	<b>37.6</b>	<b>17.1</b>	<b>32.5</b>

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

# For 2004–2009, cases reported during pregnancy and one year of age are included. For 2010, cases reported during pregnancy or at birth are included.

## Infant characteristics

In the period 2004–2010, a single condition was reported in 62.4% of infants, two conditions in 18.5%, three conditions in 8.6%, and four or more conditions in 10.5% of cases. The sex was male in 57.5% of infants, female in 42.1%, indeterminate in 0.2% of infants, and was not reported for 0.1%.

Congenital conditions were more common in preterm and post-term infants than infants born at term (Table 106). Congenital conditions were also more common in infants born of a multiple pregnancy than a singleton pregnancy: in 2004–2010, 1.8% of singleton babies, 2.7% of twins, and 2.8% of triplets were born with a congenital condition.

Eleven per cent of infants born with congenital conditions died in the perinatal period, over half of which were stillbirths (Table 107). 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 Perinatal Data Collection was less than 1% in 2010 (see Chapter 4).

Table 106. Cases of congenital conditions by gestational age, NSW 2004–2010#

Gestational age (weeks)	2004–2008		2009		Year 2010		2004–2010		Rate/1,000
	No.	%	No.	%	No.	%	No.	%	
	20–27	607	6.9	142	7.8	75	9.7	824	
28–31	270	3.1	58	3.2	14	1.8	342	3.0	74.4
32–36	1188	13.4	222	12.2	95	12.3	1505	13.2	39.5
37–41	6378	72.1	1275	70.2	589	76.0	8242	72.0	14.0
42 +	120	1.4	15	0.8	2	0.3	137	1.2	17.1
Not stated	287	3.2	103	5.7	0	0	390	3.4	–
<b>TOTAL</b>	<b>8850</b>	<b>100.0</b>	<b>1815</b>	<b>100.0</b>	<b>775</b>	<b>100.0</b>	<b>11440</b>	<b>100.0</b>	<b>17.7</b>

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

# For 2004–2009, cases reported during pregnancy and one year of age are included. For 2010, cases reported during pregnancy or at birth are included.



**Table 107. Cases of congenital conditions by pregnancy outcome, NSW 2004–2010#**

Pregnancy outcome	Year							
	2004–2008		2009		2010		2004–2010	
	No.	%	No.	%	No.	%	No.	%
Stillbirth	598	6.8	150	8.3	76	9.8	824	7.2
Liveborn/ neonatal death	332	3.8	60	3.3	38	4.9	430	3.8
Liveborn/ postneonatal death	47	0.5	22	1.2	9	1.2	78	0.7
Liveborn surviving	7873	89.0	1583	87.2	652	84.1	10108	88.4
<b>TOTAL</b>	<b>8850</b>	<b>100.0</b>	<b>1815</b>	<b>100.0</b>	<b>775</b>	<b>100.0</b>	<b>11440</b>	<b>100.0</b>

Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# For 2004–2009, cases reported during pregnancy and one year of age are included. For 2010, 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 108). While the rate of congenital conditions is higher in older women, the majority of births occur in younger women. In 2004–2010, 70.9% of babies with congenital conditions were born to women aged less than 35 years.

In 2004–2010, 383 babies of Aboriginal or Torres Strait Islander mothers were reported to have congenital conditions. The rate of congenital conditions among these babies was 19.9 per 1,000 compared with 16.0 per 1,000 for babies born to non-Aboriginal mothers.

**Table 108. Cases of congenital conditions by maternal age, NSW 2004–2010#**

Maternal age (years)	Year									
	2004–2008		2009		2010		2004–2010		Rate/1,000	
	No.	%	No.	%	No.	%	No.	%		
Under 20	350	4.0	76	4.2	30	3.9	456	4.0	19.5	
20–24	1196	13.5	240	13.2	141	18.2	1577	13.8	17.8	
25–29	2103	23.8	413	22.8	193	24.9	2709	23.7	15.6	
30–34	2662	30.1	484	26.7	227	29.3	3373	29.5	15.8	
35–39	1579	17.8	358	19.7	140	18.1	2077	18.2	17.2	
40–44	407	4.6	91	5.0	39	5.0	537	4.7	22.6	
45+	33	0.4	9	0.5	4	0.5	46	0.4	38.4	
Not stated	520	5.9	144	7.9	1	0.1	665	5.8	–	
<b>TOTAL</b>	<b>8850</b>	<b>100.0</b>	<b>1815</b>	<b>100.0</b>	<b>775</b>	<b>100.0</b>	<b>11440</b>	<b>100.0</b>	<b>17.7</b>	

Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
# For 2004–2009, cases reported during pregnancy and one year of age are included. For 2010, 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 306 in 2004 to 400 in 2009 and 383 in 2010 (Table 109).

Of the 2,422 terminations of pregnancy reported in 2004–2010, 1,939 (80.1%) were associated with a chromosomal anomaly, the most common of which was Trisomy 21 (Down syndrome), and 167 (6.9%) were associated with a neural tube defect (Table 110).

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

**Table 109. Pregnancies with fetuses affected by congenital conditions and resulting in spontaneous abortion, termination of pregnancy or unknown outcome, NSW 2004–2010**

Pregnancy outcome	Year							2004–2010
	2004	2005	2006	2007	2008	2009	2010	
	No.	No.	No.	No.	No.	No.	No.	No.
Spontaneous abortion	298	322	363	334	330	244	300	2191
Termination of pregnancy less than 20 weeks gestation	306	303	361	329	340	400	383	2422
Unknown outcome	38	29	23	21	34	36	0	181
<b>TOTAL</b>	642	654	747	684	704	680	683	4794

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

Table 110. Congenital conditions among, spontaneous abortions, termination of pregnancy and unknown outcomes of pregnancy by diagnostic category, NSW 2004–2010#

Diagnostic category	Year											
	2004–2008			2009			2010			2004–2010		
	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown
No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
<b>Nervous system</b>												
Neural tube defects	5	112	1	0	30	0	1	25	6	167	1	
Other nervous system anomalies	6	105	1	0	25	1	0	29	6	159	2	
TOTAL	11	217	2	0	55	1	1	54	12	326	3	
<b>Eye</b>	0	2	0	0	2	0	0	1	0	5	0	
<b>Ear, face and neck</b>	0	12	0	0	3	0	0	2	0	17	0	
<b>Cardiovascular system</b>	20	256	4	7	54	1	6	42	33	352	5	
<b>Respiratory system</b>	6	31	1	1	8	0	0	10	7	49	1	
<b>Gastrointestinal system</b>	14	138	1	4	20	1	0	29	18	187	2	
<b>Musculoskeletal system</b>	35	327	5	4	98	4	6	89	45	514	9	
<b>Genitourinary system</b>	11	168	1	0	15	0	2	51	13	234	1	
<b>Integumentary system</b>	1	0	0	0	0	0	0	0	1	0	0	
<b>Cystic hygroma</b>	30	128	13	6	26	4	5	22	41	176	17	
<b>Chromosomal anomalies</b>												
Trisomy 21	137	735	71	29	202	14	31	176	197	1113	85	
Trisomy 13	73	92	7	10	22	3	7	26	90	140	10	
Trisomy 18	76	205	18	10	46	6	15	47	101	298	24	
Turner syndrome	178	103	13	21	15	2	26	22	225	140	15	
Other chromosomal anomalies	1155	173	25	167	38	9	218	37	1540	248	34	
TOTAL	1619	1308	134	237	323	34	297	308	2153	1939	168	
<b>Situs inversus</b>	0	2	0	0	0	0	0	0	0	2	0	
<b>Congenital malformation syndromes</b>	2	16	0	1	4	0	0	6	3	26	0	
<b>Non-immune hydrops foetalis</b>	18	47	1	3	11	0	5	8	26	66	1	
<b>Other and unspecified anomalies</b>	2	37	1	0	9	0	0	5	2	51	1	
<b>TOTAL</b>	1769	2689	163	263	628	45	322	627	2354	3944	208	

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

## Trends in selected congenital conditions

Trends in a selection of common congenital conditions are shown in Table 111 and Figures 5 to 8. For 2004–2009, conditions reported up to one year of age are included. For 2010, conditions reported during pregnancy or at birth are included.

Over the period 2004 to 2009, the rate of neural tube defects has remained stable at about 0.7 to 0.8 per 1,000 births; followed by a decrease to 0.5 per 1,000 births in 2010. The reported number of liveborn and stillborn infants with neural tube defects was 37 in 2004 and 24 in 2010. The number of reported terminations of pregnancy was 21 in 2004 and 25 in 2010 (Figure 5).

Over the period 2004–2009, the number of cases of isolated cleft palate ranged from 64 to 82 per year, and for total cleft lip (including cases of cleft lip and cleft palate) from 66 to 91 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 liveborn and stillborn infants reported with chromosomal anomalies was 201 in 2004 and 209 in 2009. The number of reported terminations of pregnancy associated with chromosomal conditions rose from 246 in 2004 to 323 in 2009. The number of infants born with Down syndrome was 99 in 2004 and 96 in 2009, while the number of reported terminations of pregnancy associated with Down syndrome rose from 134 in 2004 to 202 in 2009.

In 2004, 27 liveborn infants were reported to have a diaphragmatic hernia, 3 babies were stillborn and there were no terminations of pregnancy associated with this condition. In 2009, there were 29 liveborn infants reported with a diaphragmatic hernia, 4 stillborn babies and 5 terminations of pregnancy (Figure 8).

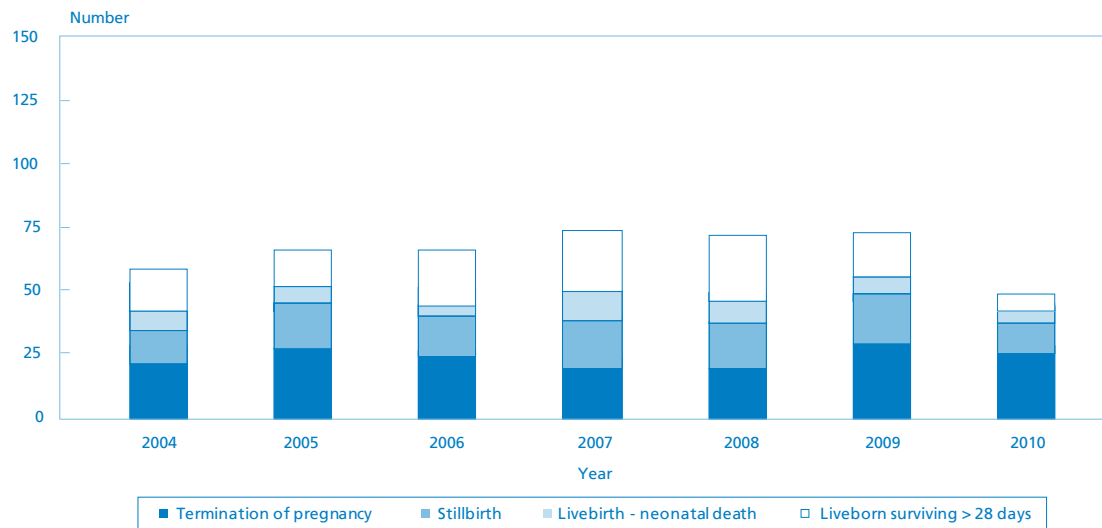
**Table 111. Selected congenital conditions by year, NSW 2004–2010**

Condition	2004		2005		2006		2007		2008		2009		2010	
	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000
Neural tube defects	58	0.7	66	0.7	66	0.7	74	0.8	72	0.8	73	0.8	49	0.5
Anencephalus	16	0.2	19	0.2	15	0.2	26	0.3	18	0.2	13	0.1	12	0.1
Spina bifida	35	0.4	40	0.4	45	0.5	42	0.4	45	0.5	53	0.6	32	0.3
Encephalocele	8	0.1	8	0.1	8	0.1	8	0.1	9	0.1	11	0.1	5	0.1
Cleft palate	74	0.9	90	1.0	64	0.7	74	0.8	82	0.9	64	0.7	53	0.6
Total cleft lip	79	0.9	66	0.7	85	0.9	73	0.8	91	1.0	87	0.9	79	0.8
Hypospadias	150	1.8	146	1.6	149	1.6	162	1.7	127	1.3	152	1.6	72	0.8
Limb reduction defects	36	0.4	38	0.4	43	0.5	49	0.5	53	0.6	55	0.6	43	0.5
Chromosomal abnormalities	447	5.3	409	4.6	480	5.2	456	4.8	469	4.9	532	5.6	419	4.4
Down syndrome	233	2.8	209	2.3	252	2.8	220	2.3	257	2.7	298	3.1	225	2.4
Renal agenesis and dysgenesis	82	1.0	73	0.8	86	0.9	63	0.7	70	0.7	67	0.7	67	0.7
Exomphalos	28	0.3	15	0.2	22	0.2	25	0.3	22	0.2	33	0.3	16	0.2
Gastroschisis	16	0.2	19	0.2	21	0.2	31	0.3	20	0.2	33	0.3	16	0.2
Diaphragmatic hernia	30	0.4	28	0.3	25	0.3	28	0.3	32	0.3	38	0.4	27	0.3

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

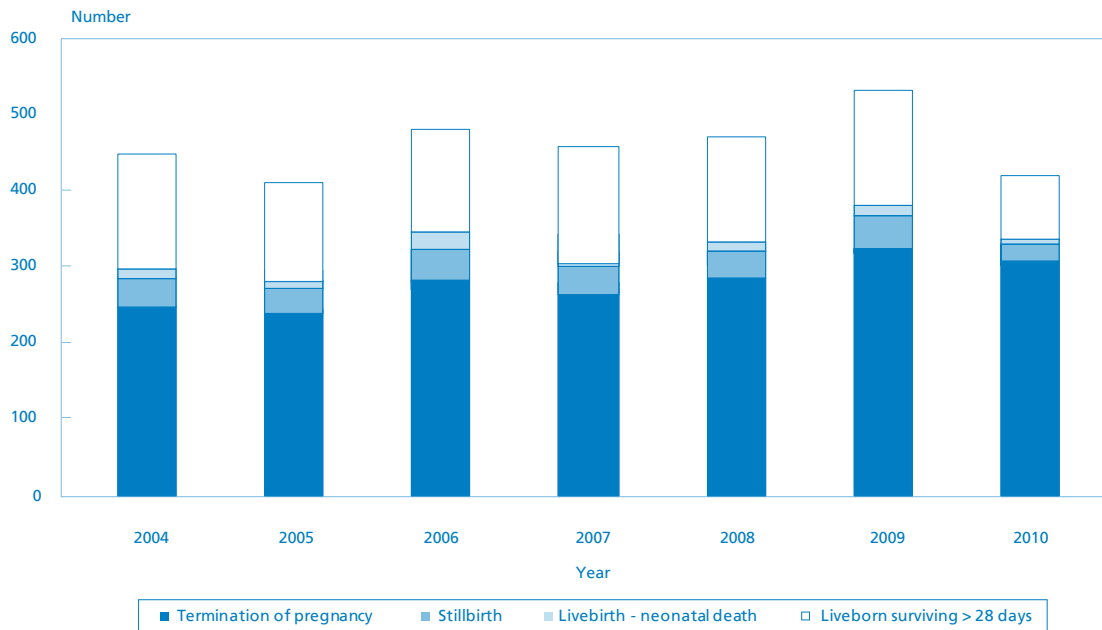
# For 2004–2009, cases reported during pregnancy and one year of age are included. For 2010, cases reported during pregnancy or at birth are included.

**Figure 5. Neural tube anomalies: cases by year and pregnancy outcome, NSW 2004–2010#**



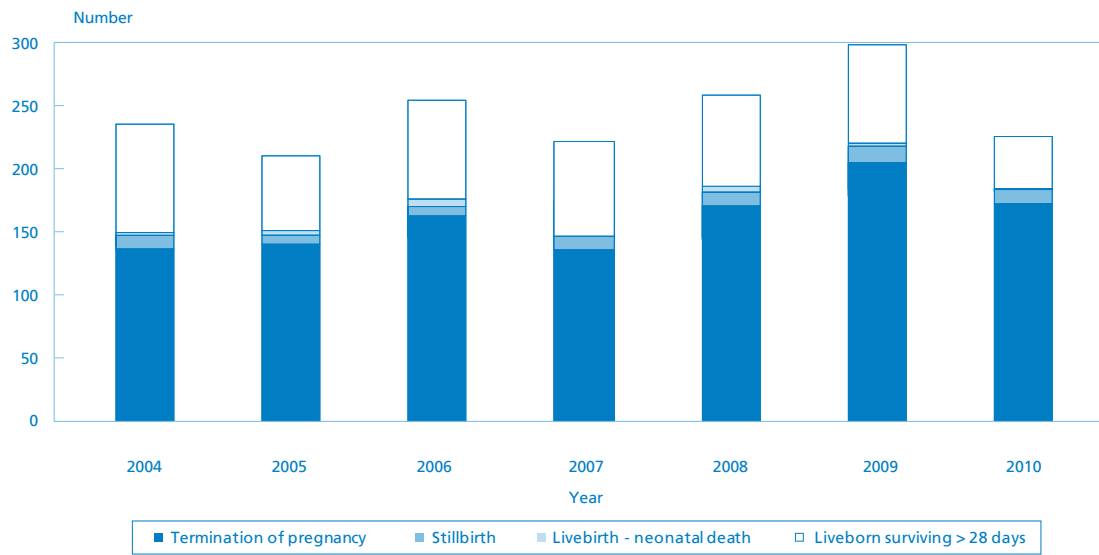
Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
 # For 2004-2009, cases reported during pregnancy and up to one year of age are included. For 2010, cases reported during pregnancy or at birth are reported.

**Figure 6. Chromosomal anomalies: cases by year and pregnancy outcome, NSW 2004–2010#**



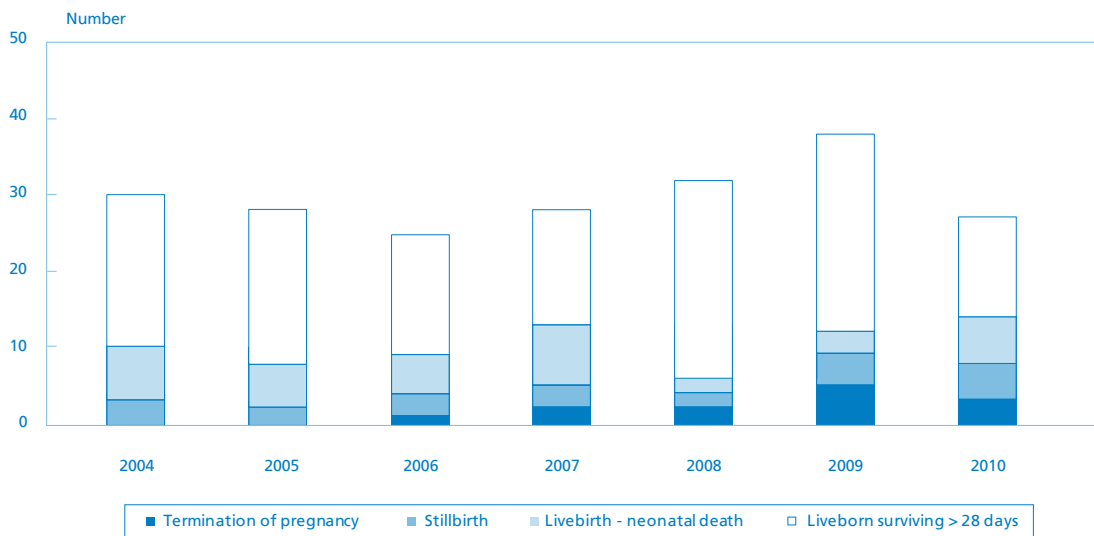
Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
 # For 2004-2009, cases reported during pregnancy and up to one year of age are included. For 2010, cases reported during pregnancy or at birth are reported.

**Figure 7. Down syndrome: cases by year and pregnancy outcome, NSW 2004–2010#**



Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
 # For 2004–2009, cases reported during pregnancy and up to one year of age are included. For 2010, cases reported during pregnancy or at birth are reported.

**Figure 8. Diaphragmatic hernia: cases by year and pregnancy outcome, NSW 2004–2010#**



Source: NSW Register of Congenital Conditions (HOIST). Centre for Epidemiology and Evidence, NSW Ministry of Health.  
 # For 2003–2008, cases reported during pregnancy and up to one year of age are included. For 2009, cases reported during pregnancy or at birth are reported.

# 10. Perinatal deaths

## Review of perinatal deaths 2010

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 Ministry of Health Policy Directive No. 2011\_076 describes hospital procedures for review and reporting of perinatal deaths.<sup>1</sup> Since 2006, the Maternal and Perinatal Committee has carried out reviews of perinatal deaths occurring among fetuses or infants of at least 20 weeks gestation or at least 400 grams birth weight, bringing the Committee's review process in line with the criteria used by the NSW Perinatal Data Collection (PDC) 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).<sup>2</sup>

There were 794 perinatal deaths reported to the PDC in 2010. Confidential reports on 755 deaths were reviewed. Of the 555 stillbirths reported to the PDC, reviews were carried out on 508 (91.5%). The PDC was notified of 239 neonatal deaths. Reviews were carried out on 247 neonatal deaths, which include neonatal deaths that occurred after discharge or transfer from the hospital of birth.

## Trends in causes of perinatal death

Recent trends in causes of perinatal death are shown in Table 112. Over the period 2006 to 2010 the most common cause of perinatal death was congenital anomaly followed by unexplained antepartum death and spontaneous preterm birth. The percentage of deaths attributed to perinatal infection increased from 5.9% to 11.8% over the four-year period, while the percentage of deaths attributed to spontaneous preterm birth fell from 19.8% to 15.6%.

**Table 112. Perinatal deaths by PSANZ Perinatal Death Classification, NSW 2006–2010#**

PSANZ Perinatal Death Classification	2006		2007		Year 2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
1. Congenital abnormality	194	22.5	189	21.2	192	23.2	198	23.9	183	24.2
2. Perinatal infection	51	5.9	62	7.0	93	11.2	90	10.9	89	11.8
3. Hypertension	26	3.0	34	3.8	42	5.1	29	3.5	26	3.4
4. Antepartum haemorrhage	71	8.2	73	8.2	74	8.9	67	8.1	68	9.0
5. Maternal disease	23	2.7	28	3.1	15	1.8	19	2.3	23	3.0
6. Specific perinatal conditions	74	8.6	53	5.9	48	5.8	55	6.6	64	8.5
7. Hypoxic peripartum death	27	3.1	40	4.5	30	3.6	26	3.1	25	3.3
8. Fetal growth restriction	53	6.1	35	3.9	22	2.7	19	2.3	19	2.5
9. Spontaneous preterm	171	19.8	156	17.5	121	14.6	134	16.2	118	15.6
10. Unexplained antepartum death	167	19.4	214	24.0	187	22.6	185	22.3	134	17.7
11. No obstetric antecedent	5	0.6	8	0.9	3	0.4	6	0.7	6	0.8
<b>TOTAL</b>	<b>862</b>	<b>100.0</b>	<b>892</b>	<b>100.0</b>	<b>827</b>	<b>100.0</b>	<b>828</b>	<b>100.0</b>	<b>755</b>	<b>100.0</b>

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

#Numbers may differ from previous reports due to additional information being received after publication.

## Causes of perinatal death 2010

Perinatal deaths were classified according to the PSANZ-PDC, which identifies the single most important factor which led to the chain of events which resulted in the death (Table 113).

### 1. Congenital anomaly

In 2010, congenital anomalies as a group were the most common cause of perinatal death, responsible for 183 deaths. The most common anomalies were chromosomal ( $n=44$ , 31.2%). Of these, 15 were trisomy 18, 11 were trisomy 21, 5 were trisomy 13, and 2 were Turner syndrome. Forty-four deaths were associated with anomalies of the central nervous system (24.2%) and included 16 deaths due to neural tube defects, 8 deaths associated with congenital hydrocephalus and 8 cases of absence or agenesis of corpus callosum. Eighteen deaths were associated with anomalies of the cardiovascular system, which included 5 cases of hypoplastic left heart syndrome, 2 cases of double outlet right ventricle, 1 case of truncus arteriosus and one case of Tetralogy of Fallot. Twenty-five deaths were due to multiple anomalies not associated with a chromosomal anomaly and 7 deaths were associated with diaphragmatic hernia.

### 2. Perinatal infection

Eighty-nine deaths (11.8%) were due to infection, of which 58 were stillbirths and 31 were neonatal deaths. For 47 deaths there was an associated chorioamnionitis. The most common specified infective organism was *Escherichia coli* ( $n=14$ ), followed by group B streptococcus infection ( $n=10$ ). There was one perinatal death associated with congenital cytomegalovirus infection.

### 3. Hypertension

Twenty-six deaths (3.4%) were considered to be due to maternal hypertension. There were 18 stillbirths and 8 neonatal deaths. The majority ( $n=14$ ) occurred in mothers with pre-eclampsia. There were 6 deaths attributed to chronic hypertension, and 6 to gestational hypertension.

### 4. Antepartum haemorrhage

Sixty-eight deaths (9.0%) were due to antepartum haemorrhage, of which 48 were due to placental abruption and 5 were due to placenta praevia. Of the 46 deaths due to placental abruption, 5 were associated with maternal hypertension.

### 5. Maternal disease

Twenty-three deaths were attributed to other maternal conditions including diabetes ( $n=11$ ), sepsis ( $n=2$ ), and maternal injury ( $n=1$ ).

### 6. Specific perinatal conditions

Twin-to-twin transfusion accounted for 21 of the 64 perinatal deaths in this group, followed by uterine abnormality ( $n=11$ ), antepartum cord complications ( $n=17$ ), idiopathic hydrops ( $n=6$ ), and fetomaternal haemorrhage ( $n=3$ ).

### 7. Hypoxic peripartum death

There were 25 deaths associated with peripartum hypoxia. Seven deaths followed evidence of non-reassuring fetal status in a normally grown infant, 3 followed cord prolapse and 2 followed uterine rupture. Three deaths occurred before the onset of labour, 5 during labour, 4 at an unspecified time before birth and the remaining 13 deaths occurred in the neonatal period.

### 8. Fetal growth restriction

In 19 cases the main cause of death was considered to be fetal growth restriction (FGR). Of these, 16 were stillbirths and 3 were neonatal deaths. FGR is defined as less than the tenth percentile of birth weight for gestational age with no major congenital anomalies. 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 or ultrasound prior to fetal demise.

### 9. Spontaneous preterm

There were 118 (15.6%) perinatal deaths associated with spontaneous preterm birth, which comprises normally formed and appropriately grown babies born before 37 weeks gestation. Of these, 30 (25.4%) were stillbirths and 88 (74.6%) were neonatal deaths.

Of all deaths in this category, 53 (44.9%) were at less than 23 weeks gestation, 48 (40.7%) were at 23–25 weeks gestation, and 17 (14.4%) occurred between 26 and 36 weeks gestation. Thirty-five deaths (29.7%) were associated with membrane rupture of 24 hours or more.

### 10. Unexplained antepartum death

Of the 134 unexplained stillbirths, 81 (60.5%) were low birth weight babies and 90 (67.2%) were premature. A variety of associated maternal conditions were reported in this group including: diabetes ( $n=7$ ), hypothyroidism ( $n=3$ ), multiple pregnancy ( $n=2$ ), and maternal hypertension ( $n=2$ ). Post-mortem examination was carried out in 42 cases (31.3%). Placental histopathology results were provided for 111 (82.8%) unexplained antepartum deaths.

### 11. No obstetric antecedent

No obstetric cause of death was identified for 6 neonatal deaths, which included one case of Sudden Infant Death Syndrome.



**Table 113. Perinatal deaths by PSANZ Perinatal Death Classification and perinatal outcome, NSW 2010**

PSANZ Perinatal Death Classification	Perinatal outcome					
	Stillbirth		Neonatal death		TOTAL	
	No.	%	No.	%	No.	%
<b>1. Congenital abnormality</b>						
Central nervous system	31	6.1	13	5.3	44	5.8
Cardiovascular system	12	2.4	6	2.4	18	2.4
Urinary system	9	1.8	6	2.4	15	2.0
Gastrointestinal system	1	0.2	0	0.0	1	0.1
Chromosomal	34	6.7	10	4.0	44	5.8
Metabolic	1	0.2	1	0.4	2	0.3
Multiple	15	3.0	10	4.0	25	3.3
Musculoskeletal	15	3.0	3	1.2	18	2.4
Respiratory	1	0.2	3	1.2	4	0.5
Diaphragmatic hernia	3	0.6	4	1.6	7	0.9
Tumours	1	0.2	0	0.0	1	0.1
Other specified	1	0.2	1	0.4	2	0.3
Unspecified	2	0.4	0	0.0	2	0.3
<b>Total</b>	<b>126</b>	<b>24.8</b>	<b>57</b>	<b>23.1</b>	<b>183</b>	<b>24.2</b>
<b>2. Perinatal infection</b>						
Group B Streptococcus	8	1.6	2	0.8	10	1.3
E Coli	9	1.8	5	2.0	14	1.9
Other bacterial	14	2.8	9	3.6	23	3.0
Unspecified bacterial	15	3.0	12	4.9	27	3.6
Cytomegalovirus	1	0.2	0	0.0	1	0.1
Other unspecified organism	11	2.2	3	1.2	14	1.9
<b>Total</b>	<b>58</b>	<b>11.4</b>	<b>31</b>	<b>12.6</b>	<b>89</b>	<b>11.8</b>
<b>3. Hypertension</b>						
Chronic: Essential	5	1.0	1	0.4	6	0.8
Gestational	6	1.2	0	0.0	6	0.8
Pre-eclampsia	5	1.0	7	2.8	12	1.6
Pre-eclampsia superimposed on chronic hypertension	2	0.4	0	0.0	2	0.3
<b>Total</b>	<b>18</b>	<b>3.5</b>	<b>8</b>	<b>3.2</b>	<b>26</b>	<b>3.4</b>
<b>4. Antepartum haemorrhage</b>						
Placental abruption	30	5.9	18	7.3	48	6.4
Placenta praevia	2	0.4	3	1.2	5	0.7
Other	5	1.0	1	0.4	6	0.8
Undetermined origin	5	1.0	4	1.6	9	1.2
<b>Total</b>	<b>42</b>	<b>8.3</b>	<b>26</b>	<b>10.5</b>	<b>68</b>	<b>9.0</b>
<b>5. Maternal disease</b>						
Diabetes—gestational diabetes	11	2.2	0	0.0	11	1.5
Maternal injury: Accidental	0	0.0	1	0.4	1	0.1
Sepsis	2	0.4	0	0.0	2	0.3
Other specified	7	1.4	2	0.8	9	1.2
<b>Total</b>	<b>20</b>	<b>3.9</b>	<b>3</b>	<b>1.2</b>	<b>23</b>	<b>3.0</b>
<b>6. Specific perinatal conditions</b>						
Twin-to-twin transfusion	17	3.3	4	1.6	21	2.8
Fetomaternal haemorrhage	3	0.6	0	0.0	3	0.4
Antepartum cord complications	16	3.1	1	0.4	17	2.3
Uterine abnormality	5	1.0	6	2.4	11	1.5
Alloimmune disease - Rhesus	3	0.6	0	0.0	3	0.4
Alloimmune disease - Other	1	0.2	0	0.0	1	0.1
Idiopathic hydrops	5	1.0	1	0.4	6	0.8
Other	2	0.4	0	0.0	2	0.3
<b>Total</b>	<b>52</b>	<b>10.2</b>	<b>12</b>	<b>4.9</b>	<b>64</b>	<b>8.5</b>
<b>7. Hypoxic peripartum death</b>						
Intrapartum complication - Uterine rupture	1	0.2	1	0.4	2	0.3
Intrapartum complication - Cord prolapse	2	0.4	1	0.4	3	0.4
Intrapartum complication - Other	3	0.6	2	0.8	5	0.7
Evidence of non-re-assuring fetal status in a normally grown infant	3	0.6	4	1.6	7	0.9
Unspecified	3	0.6	5	2.0	8	1.1
<b>Total</b>	<b>12</b>	<b>2.4</b>	<b>13</b>	<b>5.3</b>	<b>25</b>	<b>3.3</b>

Table 113. (Continued)

PSANZ Perinatal Death Classification	Perinatal outcome					
	Stillbirth		Neonatal death		TOTAL	
	No.	%	No.	%	No.	%
<b>8. Fetal growth restriction</b>						
With evidence of reduced vascular perfusion on Doppler studies and/or placental histopathology	11	2.2	1	0.4	12	1.6
With chronic villitis	1	0.2	1	0.4	2	0.3
No placental pathology	1	0.2	1	0.4	2	0.3
Other specified placental pathology	2	0.4	0	0.0	2	0.3
Unspecified or not known whether placental examined	1	0.2	0	0.0	1	0.1
Total	16	3.1	3	1.2	19	2.5
<b>9. Spontaneous preterm</b>						
Intact membranes or membrane rupture less than 24 hours: with chorioamnionitis on placental histopathology	8	1.6	30	12.1	38	5.0
Intact membranes or membrane rupture less than 24 hours: without chorioamnionitis on placental histopathology	4	0.8	18	7.3	22	2.9
Intact membranes or membrane rupture less than 24 hours: no clinical signs of chorioamnionitis, no examination of placenta	2	0.4	4	1.6	6	0.8
Membrane rupture 24 hours or more: with chorioamnionitis on placental histopathology	9	1.8	18	7.3	27	3.6
Membrane rupture 24 hours or more: without chorioamnionitis on placental histopathology	1	0.2	5	2.0	6	0.8
Membrane rupture 24 hours or more: no clinical signs of chorioamnionitis, no examination of placenta	1	0.2	1	0.4	2	0.3
Membrane rupture unknown duration: with chorioamnionitis on placental histopathology	1	0.2	5	2.0	6	0.8
Membrane rupture unknown duration: without chorioamnionitis on placental histopathology	2	0.4	2	0.8	4	0.5
Membrane rupture unknown duration: with clinical evidence of chorioamnionitis, no examination of placenta	0	0.0	2	0.8	2	0.3
Membrane rupture unknown duration: no clinical signs of chorioamnionitis, no examination of placenta	2	0.4	2	0.8	4	0.5
Membrane rupture unknown duration: unspecified/unknown placental examination	0	0.0	1	0.4	1	0.1
Total	30	5.9	88	35.6	118	15.6
<b>10. Unexplained antepartum death</b>						
With evidence of reduced vascular perfusion on Doppler studies and / or placental histopathology	19	3.7	0	0.0	19	2.5
With chronic villitis	6	1.2	0	0.0	6	0.8
No placental pathology	53	10.4	0	0.0	53	7.0
No examination of placenta	11	2.2	0	0.0	11	1.5
Other specified placental pathology	41	8.1	0	0.0	41	5.4
Unspecified or not known whether placenta examined	4	0.8	0	0.0	4	0.5
Total	134	26.4	0	0.0	134	17.7
<b>11. No obstetric antecedent</b>	0	0.0	6	2.4	6	0.8
<b>TOTAL</b>	508	100.0	247	100.0	755	100.0

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

Table 114. Perinatal deaths by PSANZ Perinatal Death Classification and hospital maternity service level, NSW 2010#

PSANZ Perinatal Death Classification	Maternity service level													
	2		3		4		5		6		P		TOTAL##	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1. Congenital abnormality	4	30.8	7	18.9	18	16.8	22	16.4	119	30.4	13	19.4	183	24.2
2. Perinatal infection	0	0.0	6	16.2	12	11.2	16	11.9	45	11.5	9	13.4	89	11.8
3. Hypertension	0	0.0	0	0.0	2	1.9	5	3.7	18	4.6	1	1.5	26	3.4
4. Antepartum haemorrhage	1	7.7	5	13.5	9	8.4	19	14.2	29	7.4	3	4.5	68	9.0
5. Maternal disease	0	0.0	0	0.0	9	8.4	5	3.7	7	1.8	1	1.5	23	3.0
6. Specific perinatal conditions	1	7.7	2	5.4	7	6.5	8	6.0	37	9.5	9	13.4	64	8.5
7. Hypoxic peripartum death	2	15.4	2	5.4	2	1.9	1	0.7	12	3.1	5	7.5	25	3.3
8. Fetal growth restriction	0	0.0	1	2.7	2	1.9	2	1.5	8	2.0	6	9.0	19	2.5
9. Spontaneous preterm	3	23.1	5	13.5	12	11.2	21	15.7	68	17.4	8	11.9	118	15.6
10. Unexplained antepartum death	2	15.4	9	24.3	32	29.9	33	24.6	46	11.8	12	17.9	134	17.7
11. No obstetric antecedent	0	0.0	0	0.0	2	1.9	2	1.5	2	0.5	0	0.0	6	0.8
<b>TOTAL</b>	13	100.0	37	100.0	107	100.0	134	100.0	391	100.0	67	100.0	755	100.0

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

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

## Total includes 6 babies who died at home or in NSW non-maternity hospitals.

## Obstetric cause of perinatal death by hospital service level

Maternity service levels are described in the Explanatory Notes of the Methods section (page 13). The majority of perinatal deaths occurred in level 6 hospitals (51.8%, Table 114). The proportion of unexplained intrauterine deaths was substantially lower in level 6 hospitals than other hospitals, possibly due to better access to perinatal post-mortem services. The proportion of deaths associated with congenital anomalies was highest in level 6 hospitals, reflecting patterns of referral for diagnosis and treatment.

## Time of death

Of the 755 perinatal deaths reviewed for 2010, 331 (43.8%) occurred before the onset of labour, 71 (9.4%) occurred during labour, 106 (14.0%) occurred at an unspecified time before birth, and 247 (32.7%) were neonatal deaths.

Of the 71 deaths reported to have occurred during labour, 44 (62.0%) occurred at less than 23 weeks gestation, 15 (21.1%) occurred at 23 to 25 weeks gestation, and 12 (16.9%) occurred at 26 weeks gestation or more.

## Causes of neonatal death

In 2010 extreme prematurity (26 weeks gestation or less) accounted for 41.3% of all neonatal deaths (Table 115). Congenital anomalies were the next most common cause of neonatal death, accounting for just over one in five deaths.

Of the 247 neonatal deaths, 210 (85.0%) were preterm (Table 116). Thirty-seven neonatal deaths were among babies born at term, of which 13 deaths were due to congenital anomalies and a further 11 deaths were due to neurological conditions.

## Perinatal deaths associated with maternal drug dependency–abuse

No perinatal deaths were directly attributed to maternal drug dependency or drug abuse in 2010. 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.

## Postmortem examination

Postmortem examination is valuable in ascertaining or confirming the cause of death, identifying additional factors that may have contributed to the death, and counselling parents about the cause of death. Postmortem examinations were carried out for 237 (31.4%) perinatal deaths in 2010: 189 stillborn infants (37.2% of all reported stillbirths) and 48 neonatal deaths (19.4% of all reported neonatal deaths). Placental histopathology was carried out for 622 (82.4%) perinatal deaths.

## References

1. NSW Department of Health. Review and Reporting of Perinatal Deaths. Available at [www.health.nsw.gov.au/policies/pd/2011/PD2011\\_076.html](http://www.health.nsw.gov.au/policies/pd/2011/PD2011_076.html).
2. Flenady V, King J, Charles A, Gardener G, Ellwood D, Day K, McCowan L, Kent A, Tudehope D, Richardson R, Conway L, Chan A, Haslam R, Khong Y for the Perinatal Society of Australia and New Zealand (PSANZ) Perinatal Mortality Group. *PSANZ Clinical Practice Guideline for Perinatal Mortality Version 2.2*, April 2009. Available at [www.psanzpnmsig.org](http://www.psanzpnmsig.org).

**Table 115. Neonatal deaths by PSANZ Neonatal Death Classification, NSW 2006–2010**

PSANZ Neonatal Death Classification	Gestational age									
	2006		2007		2008		2009		2010	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Congenital abnormality</b>										
Central nervous system	5	1.9	20	7.7	18	6.7	11	4.5	11	4.5
Cardiovascular system	8	3.0	10	3.9	4	1.5	5	2.0	6	2.4
Urinary system	7	2.6	6	2.3	3	1.1	4	1.6	6	2.4
Gastrointestinal system	5	1.9	0	0.0	2	0.7	1	0.4	0	0.0
Chromosomal	16	5.9	4	1.5	9	3.4	9	3.6	9	3.6
Metabolic	2	0.7	2	0.8	1	0.4	0	0.0	1	0.4
Multiple	12	4.5	6	2.3	12	4.5	8	3.2	9	3.6
Musculoskeletal	4	1.5	4	1.5	5	1.9	3	1.2	3	1.2
Respiratory	1	0.4	1	0.4	1	0.4	2	0.8	3	1.2
Diaphragmatic hernia	3	1.1	5	1.9	1	0.4	2	0.8	4	1.6
Haematological	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0
Tumours	1	0.4	2	0.8	0	0.0	0	0.0	0	0.0
Other specified congenital abnormality	1	0.4	1	0.4	3	1.1	1	0.4	1	0.4
Unspecified	1	0.4	1	0.4	0	0.0	0	0.0	0	0.0
<b>Total</b>	<b>66</b>	<b>24.5</b>	<b>63</b>	<b>24.3</b>	<b>59</b>	<b>22.0</b>	<b>46</b>	<b>18.6</b>	<b>53</b>	<b>21.5</b>
<b>Extreme prematurity</b>										
Not resuscitated	72	26.8	92	35.5	96	35.8	112	45.3	75	30.4
Unsuccessful resuscitation	10	3.7	11	4.2	12	4.5	5	2.0	13	5.3
Resuscitation unspecified or unknown	26	9.7	17	6.6	20	7.5	10	4.0	14	5.7
<b>Total</b>	<b>108</b>	<b>40.1</b>	<b>120</b>	<b>46.3</b>	<b>128</b>	<b>47.8</b>	<b>127</b>	<b>51.4</b>	<b>102</b>	<b>41.3</b>
<b>Cardio-respiratory disorders</b>										
Hyaline membrane disease–Respiratory distress syndrome	18	6.7	5	1.9	11	4.1	6	2.4	17	6.9
Meconium aspiration syndrome	4	1.5	2	0.8	2	0.7	1	0.4	1	0.4
Primary persistent pulmonary hypertension	1	0.4	1	0.4	1	0.4	2	0.8	1	0.4
Pulmonary hypoplasia	4	1.5	3	1.2	4	1.5	5	2.0	2	0.8
Chronic neonatal lung disease	0	0.0	0	0.0	1	0.4	0	0.0	1	0.4
Other	3	1.1	5	1.9	2	0.7	2	0.8	4	1.6
<b>Total</b>	<b>30</b>	<b>11.2</b>	<b>16</b>	<b>6.2</b>	<b>21</b>	<b>7.8</b>	<b>16</b>	<b>6.5</b>	<b>26</b>	<b>10.5</b>
<b>Infection</b>										
Congenital bacterial	5	1.9	6	2.3	14	5.2	5	2.0	15	6.1
Acquired bacterial	6	2.2	2	0.8	3	1.1	2	0.8	3	1.2
Congenital viral	2	0.7	1	0.4	0	0.0	0	0.0	0	0.0
Acquired viral	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0
Protozoal eg Toxoplasma	0	0.0	0	0.0	0	0.0	3	1.2	0	0.0
Fungal	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4
Other	0	0.0	1	0.4	1	0.4	0	0.0	0	0.0
Unspecified organism	5	1.9	1	0.4	2	0.7	1	0.4	2	0.8
<b>Total</b>	<b>18</b>	<b>6.7</b>	<b>12</b>	<b>4.6</b>	<b>20</b>	<b>7.5</b>	<b>11</b>	<b>4.5</b>	<b>21</b>	<b>8.5</b>
<b>Neurological</b>										
Hypoxic ischaemic encephalopathy–perinatal asphyxia	27	10.0	27	10.4	13	4.9	26	10.5	20	8.1
Intracranial haemorrhage	8	3.0	10	3.9	15	5.6	13	5.3	14	5.7
Other	0	0.0	1	0.4	0	0.0	1	0.4	0	0.0
<b>Total</b>	<b>35</b>	<b>13.0</b>	<b>38</b>	<b>14.7</b>	<b>28</b>	<b>10.4</b>	<b>40</b>	<b>16.2</b>	<b>34</b>	<b>13.8</b>
<b>Gastrointestinal</b>										
Necrotising enterocolitis	3	1.1	2	0.8	5	1.9	1	0.4	2	0.8
<b>Total</b>	<b>3</b>	<b>1.1</b>	<b>2</b>	<b>0.8</b>	<b>5</b>	<b>1.9</b>	<b>1</b>	<b>0.4</b>	<b>2</b>	<b>0.8</b>
<b>Other</b>										
SIDS	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0
Unclassified Sudden Infant Death	0	0.0	1	0.4	1	0.4	0	0.0	1	0.4
Possible SIDS	0	0.0	0	0.0	1	0.4	0	0.0	0	0.0
Multisystem failure	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0
Trauma	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0
Other specified	3	1.1	0	0.0	3	1.1	2	0.8	3	1.2
Unknown/Undetermined	4	1.5	7	2.7	2	0.7	3	1.2	5	2.0
<b>Total</b>	<b>9</b>	<b>3.3</b>	<b>8</b>	<b>3.1</b>	<b>7</b>	<b>2.6</b>	<b>6</b>	<b>2.4</b>	<b>9</b>	<b>3.6</b>
<b>TOTAL</b>	<b>269</b>	<b>100.0</b>	<b>259</b>	<b>100.0</b>	<b>268</b>	<b>100.0</b>	<b>247</b>	<b>100.0</b>	<b>247</b>	<b>100.0</b>

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

**Table 116. Neonatal deaths by PSANZ Neonatal Death Classification and gestational age, NSW 2010**

PSANZ Neonatal Death Classification	Gestational age				TOTAL	
	Less than 37 weeks		37 weeks +			
	No.	%	No.	%	No.	%
<b>Congenital abnormality</b>						
Central nervous system	9	4.3	2	5.4	11	4.5
Cardiovascular system	6	2.9	0	0.0	6	2.4
Urinary system	4	1.9	2	5.4	6	2.4
Chromosomal	7	3.3	2	5.4	9	3.6
Metabolic	1	0.5	0	0.0	1	0.4
Multiple	6	2.9	3	8.1	9	3.6
Musculoskeletal	2	1.0	1	2.7	3	1.2
Respiratory	2	1.0	1	2.7	3	1.2
Diaphragmatic hernia	2	1.0	2	5.4	4	1.6
Other specified congenital abnormality	1	0.5	0	0.0	1	0.4
<b>Total</b>	<b>40</b>	<b>19.0</b>	<b>13</b>	<b>35.1</b>	<b>53</b>	<b>21.5</b>
<b>Extreme prematurity</b>						
Not resuscitated	75	35.7	0	0.0	75	30.4
Unsuccessful resuscitation	13	6.2	0	0.0	13	5.3
Resuscitation unspecified or unknown	14	6.7	0	0.0	14	5.7
<b>Total</b>	<b>102</b>	<b>48.6</b>	<b>0</b>	<b>0.0</b>	<b>102</b>	<b>41.3</b>
<b>Cardio-respiratory disorders</b>						
Hyaline membrane disease—Respiratory distress syndrome	17	8.1	0	0.0	17	6.9
Meconium aspiration syndrome	0	0.0	1	2.7	1	0.4
Primary persistent pulmonary hypertension	0	0.0	1	2.7	1	0.4
Pulmonary hypoplasia	1	0.5	1	2.7	2	0.8
Chronic neonatal lung disease	1	0.5	0	0.0	1	0.4
Other	2	1.0	2	5.4	4	1.6
<b>Total</b>	<b>21</b>	<b>10.0</b>	<b>5</b>	<b>13.5</b>	<b>26</b>	<b>10.5</b>
<b>Infection</b>						
Congenital bacterial	13	6.2	2	5.4	15	6.1
Acquired bacterial	2	1.0	1	2.7	3	1.2
Fungal	1	0.5	0	0.0	1	0.4
Unspecified organism	1	0.5	1	2.7	2	0.8
<b>Total</b>	<b>17</b>	<b>8.1</b>	<b>4</b>	<b>10.8</b>	<b>21</b>	<b>8.5</b>
<b>Neurological</b>						
Hypoxic ischaemic encephalopathy / perinatal asphyxia	9	4.3	11	29.7	20	8.1
Intracranial haemorrhage	14	6.7	0	0.0	14	5.7
<b>Total</b>	<b>23</b>	<b>11.0</b>	<b>11</b>	<b>29.7</b>	<b>34</b>	<b>13.8</b>
<b>Gastrointestinal</b>						
Necrotising enterocolitis	2	1.0	0	0.0	2	0.8
<b>Total</b>	<b>2</b>	<b>1.0</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>0.8</b>
<b>Other</b>						
Unclassified Sudden Infant Death	0	0.0	1	2.7	1	0.4
Other specified	2	1.0	1	2.7	3	1.2
Unknown/Undetermined	3	1.4	2	5.4	5	2.0
<b>Total</b>	<b>5</b>	<b>2.4</b>	<b>4</b>	<b>10.8</b>	<b>9</b>	<b>3.6</b>
<b>TOTAL</b>	<b>210</b>	<b>100.0</b>	<b>37</b>	<b>100.0</b>	<b>247</b>	<b>100.0</b>

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

# 11. Appendices

## Appendix 1. Description of selected congenital conditions

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

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

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

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

#### English speaking

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

#### Central and South America

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

#### Eastern Europe, Russia,

Central Asian and Baltic States  
Bulgaria  
Czechoslovakia  
Hungary  
Poland  
Romania  
Armenia  
Azerbaijan  
Belarus (formerly Byelorussia)  
Estonia  
Georgia  
Kazakhstan  
Latvia  
Lithuania  
Moldova (formerly Moldavia)  
Russian Federation

Ukraine  
Uzbekistan  
Kazakhstan  
Kyrgyzstan

#### Melanesia, Micronesia and Polynesia

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

#### Middle East and Africa

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

Seychelles  
Somalia  
Swaziland  
Tanzania  
Uganda  
Zambia  
Zimbabwe  
Eritrea  
Ethiopia

#### North East Asia

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

#### South East Asia

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

#### Southern Asia

Afghanistan  
Bangladesh  
Bhutan  
India  
Maldives  
Nepal  
Pakistan Sri Lanka

#### Southern Europe

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

#### Western and Northern Europe

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

Appendix 4. NSW Perinatal Data Collection form

PLEASE PRESS FIRMLY WHEN COMPLETING THIS FORM

NSW MIDWIVES DATA COLLECTION																													
<b>Mother Unit Record No.</b> <input style="width: 100px; height: 15px;" type="text"/>	<b>Hospital</b> _____ <b>Code</b> <input style="width: 40px; height: 15px;" type="text"/>																												
<b>First Name</b> _____	<b>Family Name</b> _____																												
<b>Address</b> _____																													
<b>Postcode</b> <input style="width: 40px; height: 15px;" type="text"/>																													
<b>Mother's birth date</b> <input style="width: 40px; height: 15px;" type="text"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: left; padding: 2px;">LABOUR AND DELIVERY (cont.)</th> <th colspan="2" style="text-align: left; padding: 2px;">MATERNITY CARE</th> </tr> <tr> <td style="padding: 2px;"> <b>Analgesia for labour</b> (<i>tick one or more</i>)                              None <input type="checkbox"/> Epidural/caudal <input type="checkbox"/>  Nitrous oxide <input type="checkbox"/> Combined <input type="checkbox"/>  Systemic opioids <input type="checkbox"/> spinal-epidural <input type="checkbox"/>  Spinal <input type="checkbox"/> Other <input type="checkbox"/> </td> <td style="padding: 2px;"> <b>Model of care</b>  <i>(for shared care tick more than one box)</i>  Private obstetrician <input type="checkbox"/>  Hospital-based medical <input type="checkbox"/>  General practitioner <input type="checkbox"/>  Hospital-based midwife/midwives <input type="checkbox"/>  Independent midwife <input type="checkbox"/>  Not applicable <input type="checkbox"/> </td> <td style="padding: 2px;"> <b>Antenatal care</b>  Birth                              <input type="checkbox"/> </td> <td style="padding: 2px;"> <b>Birth</b>  <input type="checkbox"/> </td> </tr> <tr> <td style="padding: 2px;"> <b>Type of birth</b>  Normal vaginal <input type="checkbox"/> 1 Vacuum extr. <input type="checkbox"/> 3                              Forceps <input type="checkbox"/> 2 Vaginal breech <input type="checkbox"/> 4                              Caesarean section <input type="checkbox"/> 5                              <i>If caesarean section, main induction:</i>  Failure to progress                              - Cx 3cm dilated or less <input type="checkbox"/> 2                              - Cx dilated more than 3cm <input type="checkbox"/> 3                              Fetal distress <input type="checkbox"/> 4                              Elective repeat caesarean section <input type="checkbox"/> 5                              Other clinical indication <input type="checkbox"/> 6                              Non-clinical indication <input type="checkbox"/> 7 </td> <td style="padding: 2px;"> <b>Mother referred from another hospital?</b>  Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              If yes, specify hospital _____                              Referral prior to onset of labour <input type="checkbox"/> 1                              Referral after onset of labour <input type="checkbox"/> 2 </td> <td style="padding: 2px;"> <b>Baby place of birth</b>  Hospital theatre/delivery suite <input type="checkbox"/> 1                              Birth centre <input type="checkbox"/> 2                              Planned birth centre/delivery suite birth <input type="checkbox"/> 3                              Planned homebirth <input type="checkbox"/> 4                              Planned homebirth/hospital admission <input type="checkbox"/> 5                              Born before arrival <input type="checkbox"/> 6 </td> <td style="padding: 2px;"> <b>POSTNATAL</b>  <b>Mother</b>  Postpartum haemorrhage Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              requiring blood transfusion                              <b>Baby</b>  Birth defect? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              If yes, specify _____                              Admitted to SCN/NICU Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              If admitted to NICU                              Was a birth defect the main reason for admission? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              Vitamin K Oral <input type="checkbox"/> 1 IM <input type="checkbox"/> 2 None <input type="checkbox"/> 3                              Hepatitis B birth dose Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 </td> </tr> <tr> <th colspan="2" style="text-align: left; padding: 2px;">PREVIOUS PREGNANCIES</th> <th colspan="2" style="text-align: left; padding: 2px;">DISCHARGE</th> </tr> <tr> <td style="padding: 2px;"> <b>Previous pregnancy greater than 20 weeks?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              If yes                              No. previous pregnancies &gt; 20 weeks <input style="width: 40px; height: 15px;" type="text"/>  Was the last birth by caesarean section? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              Total number of previous caesarean sections? <input style="width: 40px; height: 15px;" type="text"/> </td> <td style="padding: 2px;"> <b>LABOUR AND DELIVERY</b>  <b>Onset of labour</b>  Spontaneous <input type="checkbox"/> 1 Induced <input type="checkbox"/> 2                              No labour <input type="checkbox"/> 3                              <i>If labour augmented/induced (tick 1 or more):</i>  Oxytocins <input type="checkbox"/> ARM <input type="checkbox"/>  Prostaglandins <input type="checkbox"/> Other <input type="checkbox"/>  <i>If labour induced, main indication:</i>  Diabetes <input type="checkbox"/> 1                              Hypertensive disease <input type="checkbox"/> 2                              Fetal distress <input type="checkbox"/> 3                              Fetal death <input type="checkbox"/> 4                              Chorioamnionitis <input type="checkbox"/> 5                              Blood group isoimmunisation <input type="checkbox"/> 6                              Prelabour rupture of membranes <input type="checkbox"/> 7                              Prolonged pregnancy (41+ weeks) <input type="checkbox"/> 8                              Suspected intrauterine growth restriction <input type="checkbox"/> 9                              Other <input type="checkbox"/> 10                              <b>Presentation at birth</b>  Vertex <input type="checkbox"/> 1                              Breech <input type="checkbox"/> 2 Shoulder/transverse <input type="checkbox"/> 5                              Face <input type="checkbox"/> 3 Other <input type="checkbox"/> 6 </td> <td style="padding: 2px;"> <b>Unit Record No.</b> <input style="width: 100px; height: 15px;" type="text"/>  <b>Birth date</b> <input style="width: 40px; height: 15px;" type="text"/>  <b>Sex</b> M <input type="checkbox"/> 1 F <input type="checkbox"/> 2 Indet. <input type="checkbox"/> 3                              <b>Plurality</b> Single <input type="checkbox"/> 1 Multiple <input type="checkbox"/> 2                              If multiple, total number <input style="width: 40px; height: 15px;" type="text"/>  If multiple birth, specify baby number <input style="width: 40px; height: 15px;" type="text"/>  <b>Birthweight</b> (grams) <input style="width: 40px; height: 15px;" type="text"/>  <b>Estimated gestational age</b> <input style="width: 40px; height: 15px;" type="text"/>  <b>Apgar</b>  <input style="width: 20px; height: 15px;" type="text"/> 1 min <input style="width: 20px; height: 15px;" type="text"/> 5 min                              <b>Resuscitation of baby</b> (<i>tick 1 or more</i>)                              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<sub>2</sub> therapy <input type="checkbox"/> 3 External cardiac massage + ventilation <input type="checkbox"/> 6 </td> <td style="padding: 2px;"> <b>Mother</b>  Discharged <input type="checkbox"/> 1                              Transferred <input type="checkbox"/> 2                              Died <input type="checkbox"/> 3                              Transferred and died <input type="checkbox"/> 5                              Mother's date of discharge <input style="width: 40px; height: 15px;" type="text"/>  Hospital mother transferred to _____                              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 style="width: 40px; height: 15px;" type="text"/>  Hospital baby transferred to _____                              Baby transferred by NETS Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              Signature of midwife at discharge _____ </td> </tr> <tr> <th colspan="2" style="text-align: left; padding: 2px;">THIS PREGNANCY</th> <th colspan="2" style="text-align: left; padding: 2px;">BABY</th> </tr> <tr> <td style="padding: 2px;"> <b>Date of EDC</b> <input style="width: 40px; height: 15px;" type="text"/>  <b>Was antenatal care received?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              If yes, duration of pregnancy at first contact for care (weeks) <input style="width: 40px; height: 15px;" type="text"/>  <b>Medical conditions</b>  Diabetes mellitus <input type="checkbox"/>  Gestational diabetes <input type="checkbox"/>  Chronic hypertension <input type="checkbox"/>  Pregnancy-induced hypertension:                              - proteinuric <input type="checkbox"/>  - non-proteinuric <input type="checkbox"/>  <b>Did the mother smoke at all during pregnancy?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              If yes, how many cigarettes each day on average in the second half of pregnancy?                              None <input type="checkbox"/> 1 &gt;10 per day <input type="checkbox"/> 2                              ≤ 10 per day <input type="checkbox"/> 3 Unknown <input type="checkbox"/> 4 </td> <td style="padding: 2px;"> <b>LABOUR AND DELIVERY</b>  <b>Analgesia for delivery</b> (<i>tick one or more</i>)                              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"/>  <b>Perineal status</b>  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  <b>Episiotomy</b>  Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0  <b>Surgical repair of the vagina or perineum?</b>  Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0  <b>Management of the 3rd stage</b>  Active <input type="checkbox"/> 1 Physiological <input type="checkbox"/> 2 </td> <td style="padding: 2px;"> <b>Perinatal status</b>  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 </td> <td style="padding: 2px;"> <b>DISCHARGE</b>  <b>Mother</b>  Discharged <input type="checkbox"/> 1                              Transferred <input type="checkbox"/> 2                              Died <input type="checkbox"/> 3                              Transferred and died <input type="checkbox"/> 5                              Mother's date of discharge <input style="width: 40px; height: 15px;" type="text"/>  Hospital mother transferred to _____                              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 style="width: 40px; height: 15px;" type="text"/>  Hospital baby transferred to _____                              Baby transferred by NETS Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0                              Signature of midwife at discharge _____ </td> </tr> </table>	LABOUR AND DELIVERY (cont.)		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Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes, specify _____ Admitted to SCN/NICU Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If admitted to NICU Was a birth defect the main reason for admission? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 Vitamin K Oral <input type="checkbox"/> 1 IM <input type="checkbox"/> 2 None <input type="checkbox"/> 3 Hepatitis B birth dose Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0	PREVIOUS PREGNANCIES		DISCHARGE		<b>Previous pregnancy greater than 20 weeks?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes No. previous pregnancies > 20 weeks <input style="width: 40px; height: 15px;" type="text"/> Was the last birth by caesarean section? 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<b>Type of birth</b> Normal vaginal <input type="checkbox"/> 1 Vacuum extr. <input type="checkbox"/> 3 Forceps <input type="checkbox"/> 2 Vaginal breech <input type="checkbox"/> 4 Caesarean section <input type="checkbox"/> 5 <i>If caesarean section, main induction:</i> Failure to progress - Cx 3cm dilated or less <input type="checkbox"/> 2 - Cx dilated more than 3cm <input type="checkbox"/> 3 Fetal distress <input type="checkbox"/> 4 Elective repeat caesarean section <input type="checkbox"/> 5 Other clinical indication <input type="checkbox"/> 6 Non-clinical indication <input type="checkbox"/> 7	<b>Mother referred from another hospital?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes, specify hospital _____ Referral prior to onset of labour <input type="checkbox"/> 1 Referral after onset of labour <input type="checkbox"/> 2	<b>Baby place of birth</b> Hospital theatre/delivery suite <input type="checkbox"/> 1 Birth centre <input type="checkbox"/> 2 Planned birth centre/delivery suite birth <input type="checkbox"/> 3 Planned homebirth <input type="checkbox"/> 4 Planned homebirth/hospital admission <input type="checkbox"/> 5 Born before arrival <input type="checkbox"/> 6	<b>POSTNATAL</b> <b>Mother</b> Postpartum haemorrhage Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 requiring blood transfusion <b>Baby</b> Birth defect? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes, specify _____ Admitted to SCN/NICU Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If admitted to NICU Was a birth defect the main reason for admission? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 Vitamin K Oral <input type="checkbox"/> 1 IM <input type="checkbox"/> 2 None <input type="checkbox"/> 3 Hepatitis B birth dose Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0																										
PREVIOUS PREGNANCIES		DISCHARGE																											
<b>Previous pregnancy greater than 20 weeks?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes No. previous pregnancies > 20 weeks <input style="width: 40px; height: 15px;" type="text"/> Was the last birth by caesarean section? Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 Total number of previous caesarean sections? <input style="width: 40px; height: 15px;" type="text"/>	<b>LABOUR AND DELIVERY</b> <b>Onset of labour</b> Spontaneous <input type="checkbox"/> 1 Induced <input type="checkbox"/> 2 No labour <input type="checkbox"/> 3 <i>If labour augmented/induced (tick 1 or more):</i> Oxytocins <input type="checkbox"/> ARM <input type="checkbox"/> Prostaglandins <input type="checkbox"/> Other <input type="checkbox"/> <i>If labour induced, main indication:</i> Diabetes <input type="checkbox"/> 1 Hypertensive disease <input type="checkbox"/> 2 Fetal distress <input type="checkbox"/> 3 Fetal death <input type="checkbox"/> 4 Chorioamnionitis <input type="checkbox"/> 5 Blood group isoimmunisation <input type="checkbox"/> 6 Prelabour rupture of membranes <input type="checkbox"/> 7 Prolonged pregnancy (41+ weeks) <input type="checkbox"/> 8 Suspected intrauterine growth restriction <input type="checkbox"/> 9 Other <input type="checkbox"/> 10 <b>Presentation at birth</b> Vertex <input type="checkbox"/> 1 Breech <input type="checkbox"/> 2 Shoulder/transverse <input type="checkbox"/> 5 Face <input type="checkbox"/> 3 Other <input type="checkbox"/> 6	<b>Unit Record No.</b> <input style="width: 100px; height: 15px;" type="text"/> <b>Birth date</b> <input style="width: 40px; height: 15px;" type="text"/> <b>Sex</b> M <input type="checkbox"/> 1 F <input type="checkbox"/> 2 Indet. <input type="checkbox"/> 3 <b>Plurality</b> Single <input type="checkbox"/> 1 Multiple <input type="checkbox"/> 2 If multiple, total number <input style="width: 40px; height: 15px;" type="text"/> If multiple birth, specify baby number <input style="width: 40px; height: 15px;" type="text"/> <b>Birthweight</b> (grams) <input style="width: 40px; height: 15px;" type="text"/> <b>Estimated gestational age</b> <input style="width: 40px; height: 15px;" type="text"/> <b>Apgar</b> <input style="width: 20px; height: 15px;" type="text"/> 1 min <input style="width: 20px; height: 15px;" type="text"/> 5 min <b>Resuscitation of baby</b> ( <i>tick 1 or more</i> ) 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 <sub>2</sub> therapy <input type="checkbox"/> 3 External cardiac massage + ventilation <input type="checkbox"/> 6	<b>Mother</b> Discharged <input type="checkbox"/> 1 Transferred <input type="checkbox"/> 2 Died <input type="checkbox"/> 3 Transferred and died <input type="checkbox"/> 5 Mother's date of discharge <input style="width: 40px; height: 15px;" type="text"/> Hospital mother transferred to _____ 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 style="width: 40px; height: 15px;" type="text"/> Hospital baby transferred to _____ Baby transferred by NETS Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 Signature of midwife at discharge _____																										
THIS PREGNANCY		BABY																											
<b>Date of EDC</b> <input style="width: 40px; height: 15px;" type="text"/> <b>Was antenatal care received?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes, duration of pregnancy at first contact for care (weeks) <input style="width: 40px; height: 15px;" type="text"/> <b>Medical conditions</b> Diabetes mellitus <input type="checkbox"/> Gestational diabetes <input type="checkbox"/> Chronic hypertension <input type="checkbox"/> Pregnancy-induced hypertension: - proteinuric <input type="checkbox"/> - non-proteinuric <input type="checkbox"/> <b>Did the mother smoke at all during pregnancy?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 If yes, how many cigarettes each day on average in the second half of pregnancy? None <input type="checkbox"/> 1 >10 per day <input type="checkbox"/> 2 ≤ 10 per day <input type="checkbox"/> 3 Unknown <input type="checkbox"/> 4	<b>LABOUR AND DELIVERY</b> <b>Analgesia for delivery</b> ( <i>tick one or more</i> ) 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"/> <b>Perineal status</b> 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 <b>Episiotomy</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 <b>Surgical repair of the vagina or perineum?</b> Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 <b>Management of the 3rd stage</b> Active <input type="checkbox"/> 1 Physiological <input type="checkbox"/> 2	<b>Perinatal status</b> 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	<b>DISCHARGE</b> <b>Mother</b> Discharged <input type="checkbox"/> 1 Transferred <input type="checkbox"/> 2 Died <input type="checkbox"/> 3 Transferred and died <input type="checkbox"/> 5 Mother's date of discharge <input style="width: 40px; height: 15px;" type="text"/> Hospital mother transferred to _____ 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 style="width: 40px; height: 15px;" type="text"/> Hospital baby transferred to _____ Baby transferred by NETS Yes <input type="checkbox"/> 1 No <input type="checkbox"/> 0 Signature of midwife at discharge _____																										

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









