

## 9. Congenital conditions

### Congenital conditions among stillborn and live born infants

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

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

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

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

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

### Trends in reported congenital conditions

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

conditions detected during pregnancy or at birth were reported.

### Congenital conditions by diagnostic category

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

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

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

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

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

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

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

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

(Continued)

Table 103. (Continued)

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

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

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

### Infant characteristics

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

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

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

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

**Table 104. Cases of congenital conditions by gestational age, NSW, 2001–2007<sup>#</sup>**

Gestational age (weeks)	2001–2005		2006		Year 2007		2001–2007		No. of cases/1000 births
	No.	%	No.	%	No.	%	No.	%	
20–27	579	6.7	124	7.0	70	8.6	773	6.9	178.0
28–31	252	2.9	65	3.7	21	2.6	338	3.0	74.5
32–36	1073	12.4	225	12.8	131	16.1	1429	12.7	40.0
37–41	6317	73.1	1253	71.1	590	72.3	8160	72.8	14.5
42+	171	2.0	31	1.8	4	0.5	206	1.8	17.1
Not stated	244	2.8	64	3.6	0	0.0	308	2.7	–
TOTAL	8636	100.0	1762	100.0	816	100.0	11 214	100.0	18.1

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

**Table 105. Cases of congenital conditions by pregnancy outcome, NSW, 2001–2007<sup>#</sup>**

Pregnancy outcome	2001–2005		Year 2006		Year 2007		2001–2007	
	No.	%	No.	%	No.	%	No.	%
Stillbirth	563	6.5	124	7.0	65	8.0	752	6.7
Live born/neonatal death	344	4.0	71	4.0	56	6.9	471	4.2
Live born/postneonatal death	58	0.7	9	0.5	4	0.5	71	0.6
Live born surviving	7671	88.8	1558	88.4	691	84.7	9920	88.5
TOTAL	8636	100.0	1762	100.0	816	100.0	11 214	100.0

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

## Maternal characteristics

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

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

**Table 106. Cases of congenital conditions by maternal age, NSW, 2001–2007<sup>#</sup>**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### Trends in selected congenital conditions

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

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

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

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

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

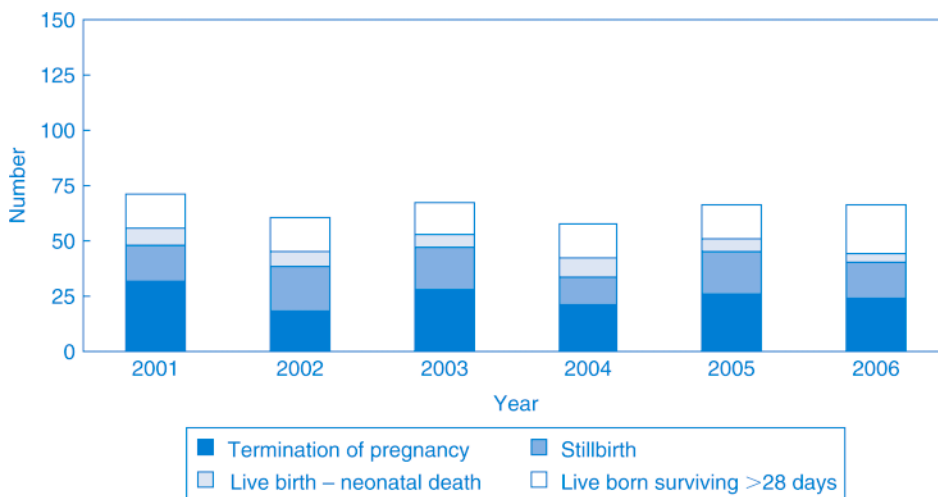
In 2001, 23 live born infants were reported to have a diaphragmatic hernia, three babies were stillborn and there were two terminations of pregnancy associated with this condition. In 2006, there were 21 live born infants reported with a diaphragmatic hernia, three stillborn babies and one termination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

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

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

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

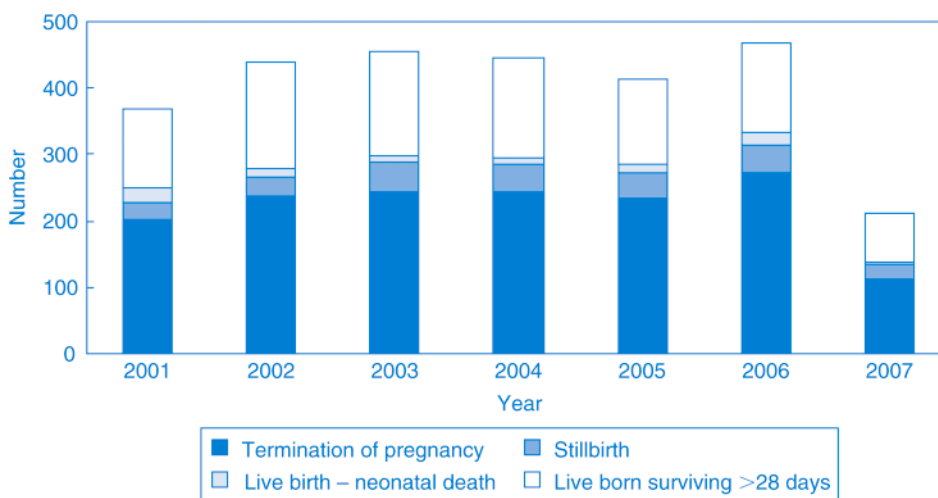
#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are included.



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

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

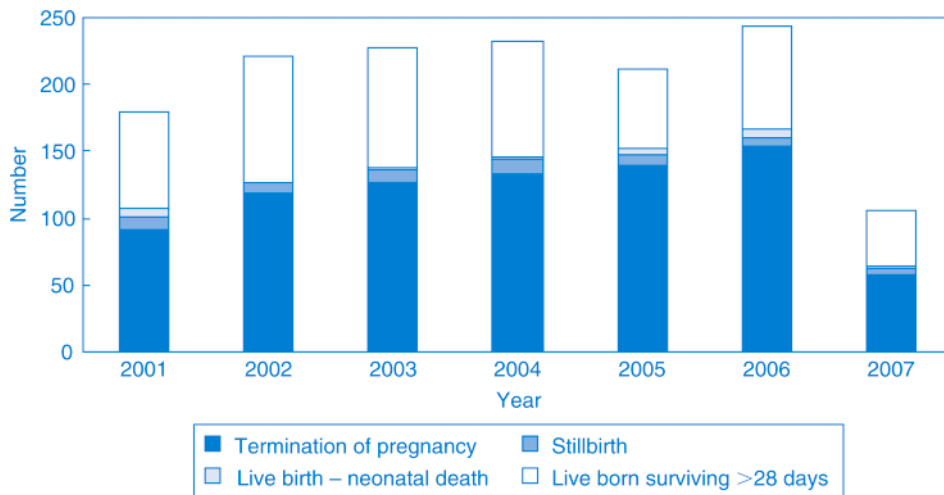
#For 2001–2006, cases reported during pregnancy and up to 1 year of age are included. For 2007, cases reported during pregnancy or at birth are reported.



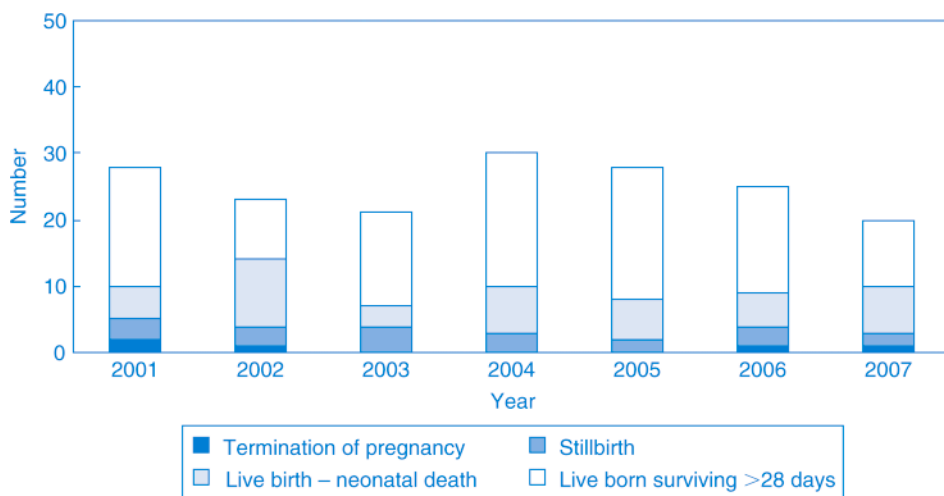
**Figure 6. Chromosomal anomalies: cases by year and pregnancy outcome, NSW, 2001–2007#.**

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

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



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



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



### Congenital conditions by NSW health areas

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

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

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

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

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

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

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