

9. BIRTH DEFECTS

Birth defects among stillborn and liveborn infants

A birth defect is any structural defect detected during pregnancy or at birth, excluding birth injuries and minor anomalies such as skin tags, positional talipes, birthmarks, or clicky hips. Descriptions of some common birth defects are shown in Appendix 1. A list of common exclusions is shown in Appendix 2.

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

This chapter reports birth defects detected during pregnancy or in the first year of life for 1997–2002 and birth defects detected during pregnancy or at birth for 2003.

Trends in reported birth defects

Between 1997 and 2003, the reported number of infants with birth defects has remained stable at just over two per cent (Table 106). In 2003, 970 cases of birth defects detected during pregnancy or at birth were reported.

Birth defects by diagnostic category

The most common categories of birth defects for births of more than 20 weeks gestation or with a birthweight greater

TABLE 106

BIRTH DEFECT CASES, NSW 1997–2003[#]

Year	Birth defect cases	Births	Rate/1,000 births
1997	1991	87416	22.8
1998	1941	85627	22.7
1999	1828	86468	21.1
2000	1858	87279	21.3
2001	1775	85285	20.8
2002	1742	85398	20.4
2003	970	85853	11.3

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

[#] For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

than 400 grams are presented in Table 107. Birth defects are classified using the British Paediatric Association (BPA) Classification of Diseases, which is primarily organised by body system.¹ For infants with more than one defect, each defect is counted separately. The number of birth defects reported therefore exceeds the number of affected infants.

In 1997–2003, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genito-urinary system (Table 107). This is a similar pattern to previous years. In 2002, the overall rate of defects was lower than the previous five years (34.0 versus 39.6 per 1,000), due to a lower overall birth defect rate among infants.

TABLE 107

BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1997–2003

Diagnostic category	No. defects				Rate/1,000 births			
	1997–2001	2002	2003	1997–2003	1997–2001	2002	2003	1997–2003
Defects of nervous system								
Anencephaly	45	14	11	70	0.1	0.2	0.1	0.1
Spina Bifida	147	25	21	193	0.3	0.3	0.2	0.3
Encephalocele	30	6	5	41	0.1	0.1	0.1	0.1
Microcephaly	115	26	4	145	0.3	0.3	0.0	0.2
Congenital hydrocephalus	182	28	30	240	0.4	0.3	0.3	0.4
Other nervous system defects	425	43	32	500	1.0	0.5	0.4	0.8
TOTAL	944	142	103	1189	2.2	1.7	1.2	2.0
Defects of eye								
Anophthalmos–microphthalmos	64	3	4	71	0.1	0.0	0.0	0.1
Buphthalmos–congenital glaucoma	24	8	0	32	0.1	0.1	0.0	0.1
Congenital cataract	81	15	5	101	0.2	0.2	0.1	0.2
Other eye defects	176	34	10	220	0.4	0.4	0.1	0.4
TOTAL	345	60	19	424	0.8	0.7	0.2	0.7
Defects of ear, face and neck								
Absence–stricture auditory canal	49	16	8	73	0.1	0.2	0.1	0.1
Absent auricle	9	1	0	10	0.0	0.0	0.0	0.0
Defects of face and neck	43	10	2	55	0.1	0.1	0.0	0.1
Other ear defects	85	28	11	124	0.2	0.3	0.1	0.2
TOTAL	186	55	21	262	0.4	0.6	0.2	0.4
Defects of cardiovascular system								
Transposition of great vessels	204	45	33	282	0.5	0.5	0.4	0.5
Tetralogy of Fallot	131	38	21	190	0.3	0.4	0.2	0.3
Ventricular septal defect	935	177	75	1187	2.2	2.1	0.9	2.0
Atrial septal defect	884	155	61	1100	2.0	1.8	0.7	1.8

TABLE 101 (continued)
BIRTH DEFECTS AMONG STILLBIRTHS AND LIVE BIRTHS BY DIAGNOSTIC CATEGORY, NSW 1997–2003[#]

Diagnostic category	No. defects			1997–2003	Rate/1,000 births			
	1997–2001	2002	2003		1997–2001	2002	2003	1997–2003
Defects of cardiovascular system (cont.)								
Heart valve defects	699	93	60	852	1.6	1.1	0.7	1.4
Patent ductus arteriosus > 37 weeks	494	91	40	625	1.1	1.1	0.5	1.0
Coarctation of aorta	202	38	19	259	0.5	0.4	0.2	0.4
Other defects of aorta	111	19	10	140	0.3	0.2	0.1	0.2
Defects of pulmonary artery	150	22	15	187	0.3	0.3	0.2	0.3
Other cardiovascular defects	802	120	102	1024	1.9	1.4	1.2	1.7
TOTAL	4612	798	436	5846	10.7	9.3	5.1	9.7
Defects of respiratory system								
Defects of nose	76	15	5	96	0.2	0.2	0.1	0.2
Defects of larynx, trachea and bronchus	49	9	3	61	0.1	0.1	0.0	0.1
Defects of lung	93	17	3	113	0.2	0.2	0.0	0.2
TOTAL	218	41	11	270	0.5	0.5	0.1	0.4
Defects of gastrointestinal system								
Cleft palate only	371	68	90	529	0.9	0.8	1.0	0.9
Cleft lip only	145	33	31	209	0.3	0.4	0.4	0.3
Cleft palate and cleft lip	250	38	40	328	0.6	0.4	0.5	0.5
Oesophageal atresia only	8	1	3	12	0.0	0.0	0.0	0.0
Oesophageal atresia with TOF	93	15	8	116	0.2	0.2	0.1	0.2
Tracheo-oesophageal fistula (TOF) only	27	5	0	32	0.1	0.1	.	0.1
Atresia–stenosis of small intestine	140	33	15	188	0.3	0.4	0.2	0.3
Atresia–stenosis of anus	137	22	16	175	0.3	0.3	0.2	0.3
Other gastrointestinal defects	494	90	35	619	1.1	1.1	0.4	1.0
TOTAL	1665	305	238	2208	3.9	3.6	2.8	3.7
Defects of genitourinary system								
Defects of female genitals	52	2	8	62	0.1	0.0	0.1	0.1
Undescended testis	372	57	12	441	0.9	0.7	0.1	0.7
Hypospadias	916	133	137	1186	2.1	1.6	1.6	2.0
Epispadias	21	2	2	25	0.0	0.0	0.0	0.0
Chordee	134	29	15	178	0.3	0.3	0.2	0.3
Indeterminate sex–ambiguous genitalia	57	9	5	71	0.1	0.1	0.1	0.1
Renal agenesis–dysgenesis	218	34	20	272	0.5	0.4	0.2	0.5
Obstructive defects of renal pelvis and ureter	783	116	36	935	1.8	1.4	0.4	1.5
Other genitourinary system defects	678	108	54	840	1.6	1.3	0.6	1.4
TOTAL	3231	490	289	4010	7.5	5.7	3.4	6.6
Defects of musculoskeletal system								
Congenital dislocation of the hips	706	135	61	902	1.6	1.6	0.7	1.5
Talipes equinovarus	283	75	36	394	0.7	0.9	0.4	0.7
Polydactyly	477	102	89	668	1.1	1.2	1.0	1.1
Syndactyly	119	21	12	152	0.3	0.2	0.1	0.3
Reduction deformities of limbs	301	26	30	357	0.7	0.3	0.3	0.6
Craniosynostosis	371	59	9	439	0.9	0.7	0.1	0.7
Diaphragmatic hernia	132	22	17	171	0.3	0.3	0.2	0.3
Exomphalos	70	14	14	98	0.2	0.2	0.2	0.2
Gastroschisis	96	18	15	129	0.2	0.2	0.2	0.2
Other musculoskeletal defects	1057	123	87	1267	2.4	1.4	1.0	2.1
TOTAL	3612	595	370	4577	8.4	7.0	4.3	7.6
Defects of integumentary system								
Cystic hygroma	369	57	36	462	0.9	0.7	0.4	0.8
TOTAL	58	9	7	74	0.1	0.1	0.1	0.1
Chromosomal defects								
Trisomy 21	522	103	77	702	1.2	1.2	0.9	1.2
Trisomy 13	36	5	7	48	0.1	0.1	0.1	0.1
Trisomy 18	88	20	15	123	0.2	0.2	0.2	0.2
Turner syndrome	60	17	7	84	0.1	0.2	0.1	0.1
Other chromosomal defects	253	62	32	347	0.6	0.7	0.4	0.6
TOTAL	959	207	138	1304	2.2	2.4	1.6	2.2
Situs inversus	18	4	8	30	0.0	0.0	0.1	0.0
Congenital malformation syndromes	197	42	17	256	0.5	0.5	0.2	0.4
Congenital cytomegalovirus infection	6	0	0	6	0.0	0.0	0.0	0.0
Congenital toxoplasmosis	1	0	0	1	0.0	0.0	0.0	0.0
Non-immune hydrops foetalis	133	19	13	165	0.3	0.2	0.2	0.3
Other and unspecified birth defects	562	78	15	655	1.3	0.9	0.2	1.1
TOTAL	17116	2902	1721	21739	39.6	34.0	20.0	36.0

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

[#] For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

Infant characteristics

In the period 1997–2003, a single defect was reported in 64.0 per cent of infants, two defects in 18.1 per cent, three defects in 8.0 per cent, and four or more defects in 9.9 per cent of cases.

The sex was male in 58.4 per cent of infants, female in 41.1 per cent, indeterminate in 0.3 per cent of infants, and was not stated for 0.2 per cent.

Birth defects were more common in preterm and post-term infants than infants born at term (Table 108). Birth defects were also more common in infants born of a multiple

pregnancy than a singleton pregnancy: in 1997–2003, 2.0 per cent of singleton babies, 2.6 per cent of twins, and 4.0 per cent of triplets were born with a birth defect.

About 11 per cent of infants born with birth defects died in the perinatal period, over half of which were stillbirths (Table 109). These figures comprise all birth defect cases, including those where the cause of death may not be directly related to the birth defect/s. By comparison, the perinatal mortality rate among all births reported to the NSW Midwives Data Collection was less than 1 per cent in 2003 (see Chapter 4).

TABLE 108

BIRTH DEFECT CASES BY GESTATIONAL AGE, NSW 1997–2003[#]

Gestational age (weeks)	1997–2001		2002		Year 2003		1997–2003		
	No.	%	No.	%	No.	%	No.	%	Rate/1,000 births
20–27	547	5.8	107	6.1	105	10.8	759	6.3	184.4
28–31	279	3.0	54	3.1	28	2.9	361	3.0	82.3
32–36	1089	11.6	195	11.2	94	9.7	1378	11.4	40.5
37–41	6976	74.3	1279	73.4	726	74.8	8981	74.2	16.4
42+	214	2.3	43	2.5	17	1.8	274	2.3	19.4
Not stated	288	3.1	64	3.7	0	0.0	352	2.9	–
TOTAL	9393	100.0	1742	100.0	970	100.0	12105	100.0	20.1

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

[#] For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

TABLE 109

BIRTH DEFECT CASES BY PREGNANCY OUTCOME, NSW 1997–2003[#]

Pregnancy outcome	1997–2001		2002		Year 2003		1997–2003	
	No.	%	No.	%	No.	%	No.	%
Stillbirth	546	5.8	105	6.0	100	10.3	751	6.2
Liveborn–neonatal death	433	4.6	62	3.6	59	6.1	554	4.6
Liveborn–postneonatal death	75	0.8	21	1.2	7	0.7	103	0.9
Liveborn surviving	8339	88.8	1554	89.2	804	82.9	10697	88.4
TOTAL	9393	100.0	1742	100.0	970	100.0	12105	100.0

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

[#] For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported. Postneonatal deaths are likely to be under-reported.

Maternal characteristics

After 30 years of age, the incidence of birth defects increased with increasing maternal age (Table 110). While the rate of birth defects is higher in older women, the majority of births occur in younger women: in 1997–2003, 76.6 per cent of babies with birth defects were born to women aged less than 35 years.

In 1997–2003, 243 babies of Aboriginal or Torres Strait Islander mothers were reported to have birth defects. The rate of birth defects among these babies was 16.8 per 1,000 compared with 20.2 per 1,000 for non-Aboriginal mothers.

TABLE 110

BIRTH DEFECT CASES BY MATERNAL AGE, NSW 1997–2003#

Maternal age (years)	1997–2001		Year				1997–2003		
	No.	%	No.	2002 %	No.	2003 %	No.	%	Rate/1,000 births
Under 20	458	4.9	65	3.7	42	4.3	565	4.7	20.8
20–24	1453	15.5	238	13.7	154	15.9	1845	15.2	19.5
25–29	2756	29.3	456	26.2	266	27.4	3478	28.7	18.7
30–34	2549	27.1	528	30.3	305	31.4	3382	27.9	17.9
35–39	1358	14.5	260	14.9	156	16.1	1774	14.7	19.9
40–44	319	3.4	71	4.1	46	4.7	436	3.6	26.4
45+	20	0.2	5	0.3	1	0.1	26	0.2	36.7
Not stated	480	5.1	119	6.8	0	0.0	599	4.9	–
TOTAL	9393	100.0	1742	100.0	970	100.0	12105	100.0	20.1

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

For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

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

In the period 1998–2002, 250 to 300 terminations of pregnancy per year were reported to the NSW Birth Defects Register (Table 111). Notifications increased dramatically following the introduction of a requirement to notify birth defects under the *NSW Public Health Act 1991* from 1 January 1998. To date, 153 terminations of pregnancy have been reported to the Register for 2003. This number is expected to increase as outcomes for mothers with defects detected during pregnancy in 2003 continue to be reported.

Of the total 1,646 terminations of pregnancy reported in 1997–2003, 1,160 (70.5 per cent) were associated with a chromosomal abnormality, the most common of which was Trisomy 21 (Down syndrome), and 233 (14.2 per cent) were associated with a neural tube defect (Tables 111 and 112).

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

TABLE 111

PREGNANCIES WITH FETUSES AFFECTED BY BIRTH DEFECTS AND RESULTING IN SPONTANEOUS ABORTION, TERMINATION OF PREGNANCY OR UNKNOWN OUTCOME, NSW 1997–2003

Pregnancy outcome	Year							
	1997 No.	1998 No.	1999 No.	2000 No.	2001 No.	2002 No.	2003 No.	1997–2003 No.
Spontaneous abortion	72	84	119	124	171	202	225	997
Termination of pregnancy less than 20 weeks gestation	125	254	310	262	257	285	153	1646
Unknown outcome	157	13	16	22	19	7	0	234
TOTAL	354	351	445	408	447	494	378	2877

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

TABLE 112

BIRTH DEFECTS AMONG SPONTANEOUS ABORTIONS, TERMINATIONS OF PREGNANCY AND UNKNOWN OUTCOME OF PREGNANCY BY DIAGNOSTIC CATEGORY, NSW 1997–2003

Diagnostic category	1997–2001			Year 2002			2003			1997–2003		
	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome	Spont. abortion	Termination of pregnancy less than 20 weeks gestation	Unknown outcome
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Defects of nervous system												
Neural tube defects	7	188	3	1	19	0	0	26	8	233	3	
Other nervous system defects	5	128	8	0	23	0	1	10	6	161	8	
TOTAL	12	316	11	1	42	0	1	36	14	394	11	
Defects of eye	0	2	0	0	0	0	0	1	0	3	0	
Defects of ear, face and neck	0	12	1	0	1	0	1	1	1	14	1	
Defects of cardiovascular system	10	175	9	0	31	1	4	29	14	235	10	
Defects of respiratory system	0	28	3	0	4	0	2	1	2	33	3	
Defects of gastrointestinal system	3	107	4	0	13	0	5	23	8	143	4	
Defects of musculoskeletal system	28	347	13	2	35	2	4	40	34	422	15	
Defects of genitourinary system	10	175	7	0	16	0	3	24	13	215	7	
Defects of the integumentary system	1	1	0	0	1	0	0	0	1	2	0	
Cystic hygroma	8	75	5	1	20	0	1	12	10	107	5	
Chromosomal defects												
Trisomy 21	44	395	86	17	118	1	18	50	79	563	87	
Trisomy 13	27	56	17	6	18	0	8	5	41	79	17	
Trisomy 18	31	153	35	11	38	1	9	18	51	209	36	
Turner syndrome	51	69	12	22	13	0	24	6	97	88	12	
Other chromosomal defects	397	159	59	145	49	3	164	13	706	221	62	
TOTAL	550	832	209	201	236	5	223	92	974	1160	214	
Situs inversus	0	4	0	0	2	0	0	0	0	6	0	
Congenital malformation syndromes	2	18	1	0	1	0	0	2	2	21	1	
Non-immune hydrops foetalis	7	44	5	1	10	0	1	3	9	57	5	
Other and unspecified birth defects	3	34	5	0	8	1	2	2	5	44	6	
TOTAL	634	2170	273	206	420	9	247	266	1087	2856	282	

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

Trends in selected birth defects

Trends in a selection of common birth defects are shown in Table 113 and Figures 14 to 17. For 1997–2002, malformations reported up to one year of age are included; for 2003, malformations reported during pregnancy or at birth are included.

The reported number of liveborn and stillborn infants with neural tube defects was 51 in 1997 and 44 in 2002, and 35 have been reported for 2003 to date. The number of reported terminations of pregnancy was 21 in 1997, 18 in 2002, and 25 in 2003 (Figure 14).

Over the period 1997–2003, the number of cases of isolated cleft palate ranged from 71 to 75 per year, and for total cleft lip (including cases of cleft lip and cleft palate) from 74 to 89 per year. Termination of pregnancy was usually associated with other defects such as neural tube defects, chromosomal abnormalities, or multiple abnormalities in addition to the cleft lip and/or cleft palate.

The number of reported terminations of pregnancy for chromosomal abnormalities, including Down syndrome, increased following the introduction of a requirement to notify birth defects under the *NSW Public Health Act 1991* from 1 January 1998 (Figures 15 and 16). The reported number of liveborn and stillborn infants with chromosomal defects was 145 in 1997 and 100 in 2003, and the number of reported terminations of pregnancy associated with chromosomal defects rose from 56 in 1997 to 236 in 2002. The number of liveborn infants with Down syndrome was 98 in 1997 and 93 in 2002, while the number of reported terminations of pregnancy associated with Down syndrome rose from 27 in 1997 to 118 in 2002.

In 1997, 22 liveborn infants and 5 stillborn infants had a diaphragmatic hernia, and there was one termination of pregnancy for this condition. In 2002, there were 19 liveborn infants and 3 stillborn infants who had a diaphragmatic hernia, and there was 1 termination of pregnancy (Figure 17).

TABLE 113

SELECTED BIRTH DEFECT CASES BY YEAR, NSW 1997–2003[#]

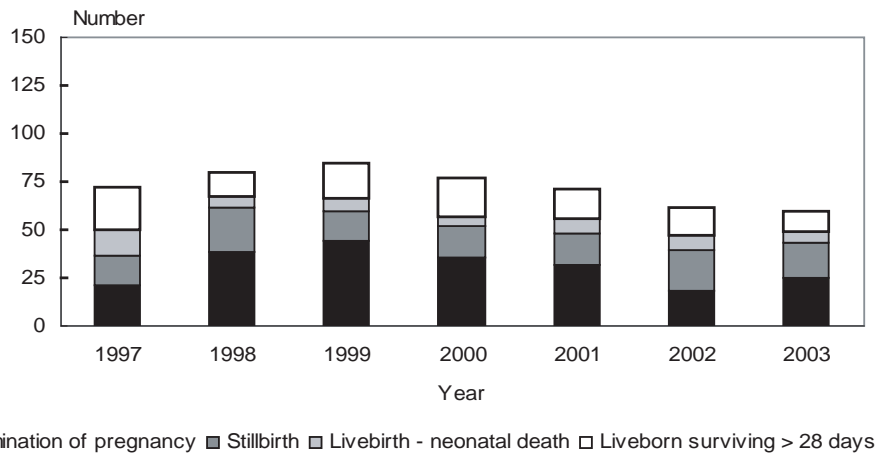
Birth defect	Year													
	1997		1998		1999		2000		2001		2002		2003	
	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000	No.	Rate/ 1,000
Neural tube defects	72	0.8	80	0.9	85	1.0	77	0.9	71	0.8	62	0.7	60	0.7
Anencephalus	22	0.3	34	0.4	24	0.3	29	0.3	25	0.3	20	0.2	18	0.2
Spina bifida	42	0.5	42	0.5	57	0.7	42	0.5	39	0.5	33	0.4	39	0.5
Encephalocele	11	0.1	10	0.1	8	0.1	13	0.1	8	0.1	10	0.1	6	0.1
Cleft palate	65	0.7	68	0.8	67	0.8	79	0.9	67	0.8	60	0.7	75	0.9
Total cleft lip	86	1.0	89	1.0	84	1.0	71	0.8	88	1.0	76	0.9	74	0.9
Hypospadias	163	1.9	191	2.2	199	2.3	191	2.2	173	2.0	133	1.6	138	1.6
Limb reduction defects	61	0.7	54	0.6	56	0.6	61	0.7	42	0.5	21	0.2	28	0.3
Chromosomal abnormalities	235	2.7	357	4.2	412	4.8	412	4.7	370	4.3	443	5.2	228	2.7
Down syndrome	139	1.6	185	2.2	199	2.3	214	2.5	180	2.1	221	2.6	125	1.5
Renal agenesis and dysgenesis	85	1.0	100	1.2	80	0.9	82	0.9	75	0.9	63	0.7	48	0.6
Exomphalos	19	0.2	25	0.3	17	0.2	28	0.3	22	0.3	22	0.3	15	0.2
Gastroschisis	22	0.3	18	0.2	18	0.2	20	0.2	23	0.3	18	0.2	18	0.2
Diaphragmatic hernia	28	0.3	24	0.3	41	0.5	22	0.3	28	0.3	23	0.3	17	0.2

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

[#] Includes terminations of pregnancy, stillbirths and livebirths. From 1 January 1998 birth defects became notifiable under the *NSW Public Health Act 1991*. This resulted in increased reporting of birth defects, particularly those associated with termination of pregnancy. For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

FIGURE 14

NEURAL TUBE DEFECTS: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1997-2003#

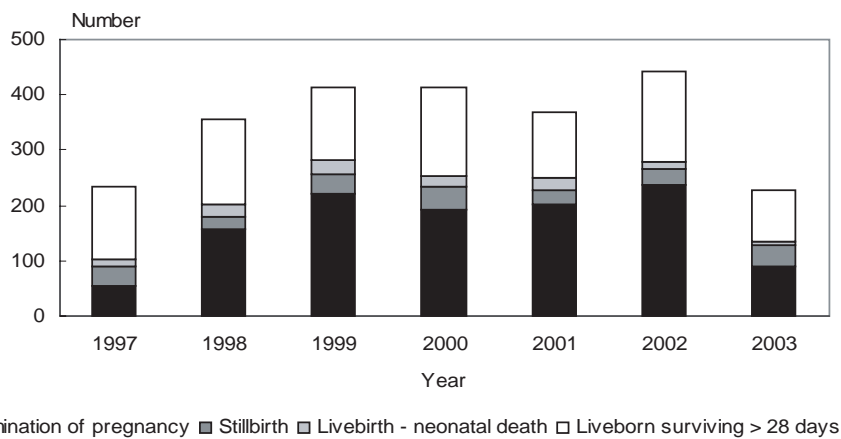


Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.

For 1997-2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

FIGURE 15

CHROMOSOMAL ABNORMALITIES: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1997-2003#

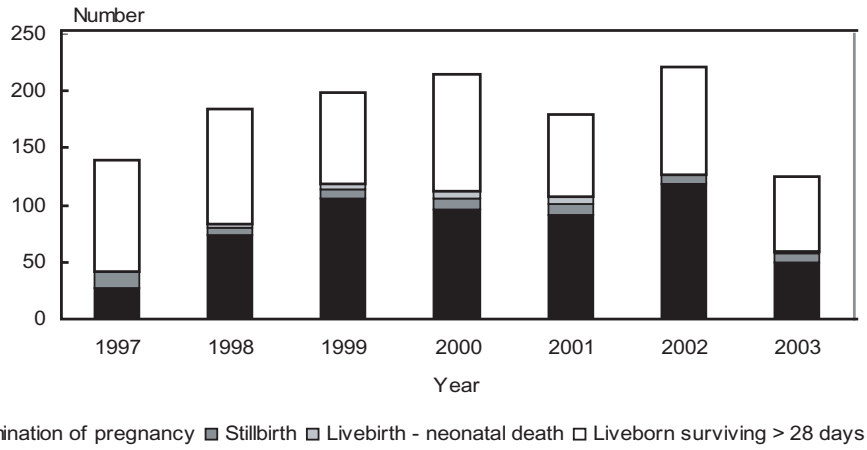


Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.

For 1997-2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

FIGURE 16

DOWN SYNDROME: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1997–2003#

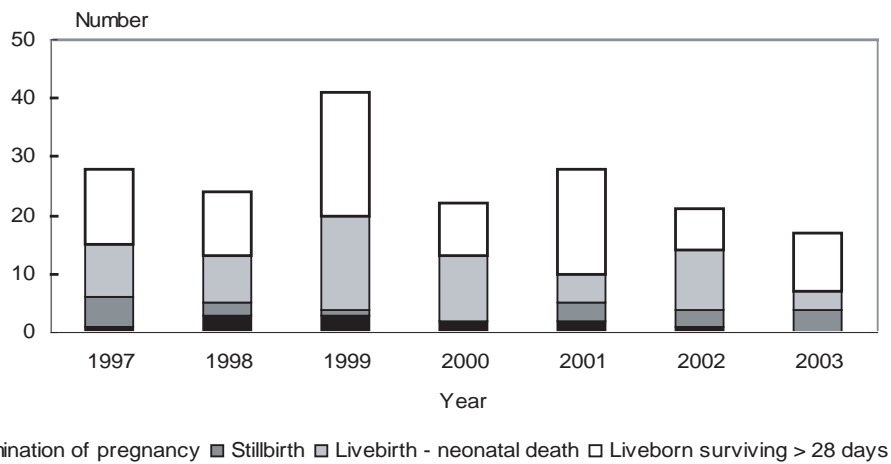


Source: NSW Birth Defects Register. Centre for Epidemiology and Research, NSW Department of Health.

For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

FIGURE 17

DIAPHRAGMATIC HERNIA: CASES BY YEAR AND PREGNANCY OUTCOME, NSW 1997–2003#



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

For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.

Birth defects by NSW health areas

Crude rates of reported birth defects for NSW health areas and rates standardised for maternal age are shown in Table 114. The denominator population includes livebirths and stillbirths among NSW residents as reported to the MDC. The rate of birth defects increases with increasing maternal age (Table 110). In order to allow direct comparison of geographic areas, rates have been standardised to the maternal age distribution of births in NSW in 1991.

Information shown in these tables reflects the reporting practices of the various areas. From 1 January 1998 doctors, hospitals and laboratories are required to notify birth defects detected during pregnancy, at birth or up to one year of life under the *NSW Public Health Act 1991*. Thus, higher rates of reported birth defects may be expected from 1998 onwards compared to previous years. In interpreting birth defect rates among NSW areas, it

should also be noted that infants with birth defects who are born to mothers resident in areas close to interstate borders may be transferred interstate for care and therefore may not be reported to the BDR.

Over the period 1997–2003, standardised rates of reported birth defects were lowest in the Greater Southern Area and highest in the Hunter & New England Area. Review of cases showed slightly increased reported rates of a range of birth defects in the Hunter & New England Area compared to NSW overall including: unstable hips (but not dislocated hips), isolated atrial septal defect and ventricular septal defect, and first degree hypospadias. The range and pattern of these defects suggests that enumeration of less severe conditions is better in the Hunter & New England Health Area compared with NSW as a whole. Neural tube defects were also more commonly reported in the Hunter & New England Health Area due to better reporting of terminations of pregnancy.

TABLE 114

BIRTH DEFECTS IN NSW HEALTH AREAS, 1997–2003#

Health Area	1997–2001			2002			2003			1997–2003			99% confidence intervals	
	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births	No.	Crude rate per 1,000 births	Standardised rate per 1,000 births		
Sydney South West	2185	22.7	21.7	423	21.8	19.7	242	12.2	12.2	2850	21.1	20.0	19.0	21.1
Northern Sydney & Central Coast	1546	23.6	22.2	317	24.3	18.8	148	11.1	8.5	2011	21.9	19.9	18.5	21.4
Sydney West	1922	24.0	23.0	350	21.7	20.4	210	13.0	12.2	2482	22.1	21.1	20.0	22.3
Hunter & New England	1395	27.1	26.5	261	25.7	23.8	159	16.1	15.4	1815	25.4	24.6	23.1	26.2
South Eastern Sydney & Illawarra	1665	23.9	21.6	357	25.6	22.1	186	13.2	13.0	2208	22.6	20.4	19.1	21.7
North Coast	555	22.3	22.3	86	18.2	17.8	66	14.2	13.6	707	20.7	20.4	18.5	22.6
Greater Southern	442	19.1	18.0	54	13.4	11.9	36	9.3	9.1	532	17.2	16.1	14.3	18.0
Greater Western	457	21.5	20.8	70	17.9	17.0	45	11.4	11.9	572	19.6	19.0	17.0	21.2
TOTAL NSW	10167	23.5	22.4	1918	22.5	20.1	1092	12.7	12.3	13177	21.8	20.7	20.2	21.2

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

Cases exclude terminations of pregnancy, stillbirths and livebirths where the place of residence is unknown. For 1997–2002, cases reported during pregnancy and up to one year of age are included. For 2003, cases reported during pregnancy or at birth are reported.