

4. Trends in New South Wales

Confinements and births by plurality

The number of births in NSW rose from 90,610 in 2005 to 96,439 in 2009, a rise of 6.4% (Table 1). Most of this rise occurred in 2006 and 2007. In 2009, 96,439 births to 95,043

mothers were reported. The number of multiple (twin and triplet) pregnancies has remained fairly stable over recent years.

Table 1. Plurality, NSW 2005–2009

Plurality	2005		2006		2007		2008		2009	
	No.	%								
Confinements										
Singleton	87699	98.4	89890	98.4	93194	98.5	93411	98.5	93677	98.6
Twins	1413	1.6	1386	1.5	1388	1.5	1428	1.5	1339	1.4
Triplets	27	0.0	37	0.0	20	0.0	24	0.0	24	0.0
Quadruplets	1	0.0	2	0.0	0	0.0	1	0.0	3	0.0
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0
Births										
Singleton	87699	96.8	89890	96.9	93194	97.0	93411	97.0	93677	97.1
Twins	2826	3.1	2772	3.0	2776	2.9	2856	3.0	2678	2.8
Triplets	81	0.1	111	0.1	60	0.1	72	0.1	72	0.1
Quadruplets	4	0.0	8	0.0	0	0.0	4	0.0	12	0.0
TOTAL	90610	100.0	92781	100.0	96030	100.0	96343	100.0	96439	100.0

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

Local Health District of residence

The increase in births occurred mainly in the metropolitan areas, with the Sydney, South Eastern Sydney and Western Sydney Local Health Districts reporting over 1,000 more mothers giving birth in 2009 compared to 2005 (Table 2).

In 2009, similar to previous years, 28% of mothers giving birth were resident in South Western Sydney and Western Sydney Local Health Districts.

Table 2. Maternal Local Health District of residence, NSW 2005–2009

Local Health District	2005		2006		2007		2008		2009	
	No.	%								
Sydney	7385	8.3	7859	8.6	8194	8.7	8472	8.9	8473	8.9
South Western Sydney	12462	14.0	12712	13.9	13156	13.9	12989	13.7	12743	13.4
South Eastern Sydney	10142	11.4	10422	11.4	10889	11.5	10972	11.6	11278	11.9
Illawarra Shoalhaven	4246	4.8	4373	4.8	4452	4.7	4439	4.7	4420	4.7
Western Sydney	12037	13.5	12311	13.5	13059	13.8	13312	14.0	13573	14.3
Nepean Blue Mountains	4822	5.4	4756	5.2	4867	5.1	4767	5.0	4819	5.1
Northern Sydney	9908	11.1	10254	11.2	10567	11.2	10397	11.0	10372	10.9
Central Coast	3761	4.2	3829	4.2	3905	4.1	3955	4.2	3949	4.2
Hunter New England	10309	11.6	10513	11.5	10830	11.4	10680	11.3	10559	11.1
Northern NSW	2769	3.1	2798	3.1	2992	3.2	2990	3.2	2940	3.1
Mid North Coast	2118	2.4	2178	2.4	2208	2.3	2333	2.5	2252	2.4
Southern NSW	1393	1.6	1435	1.6	1405	1.5	1453	1.5	1421	1.5
Murrumbidgee	2608	2.9	2622	2.9	2685	2.8	2593	2.7	2616	2.8
Western NSW	3647	4.1	3807	4.2	3755	4.0	3788	4.0	3708	3.9
Far West	277	0.3	239	0.3	270	0.3	272	0.3	243	0.3
Other-not stated	1256	1.4	1207	1.3	1368	1.4	1452	1.5	1677	1.8
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

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

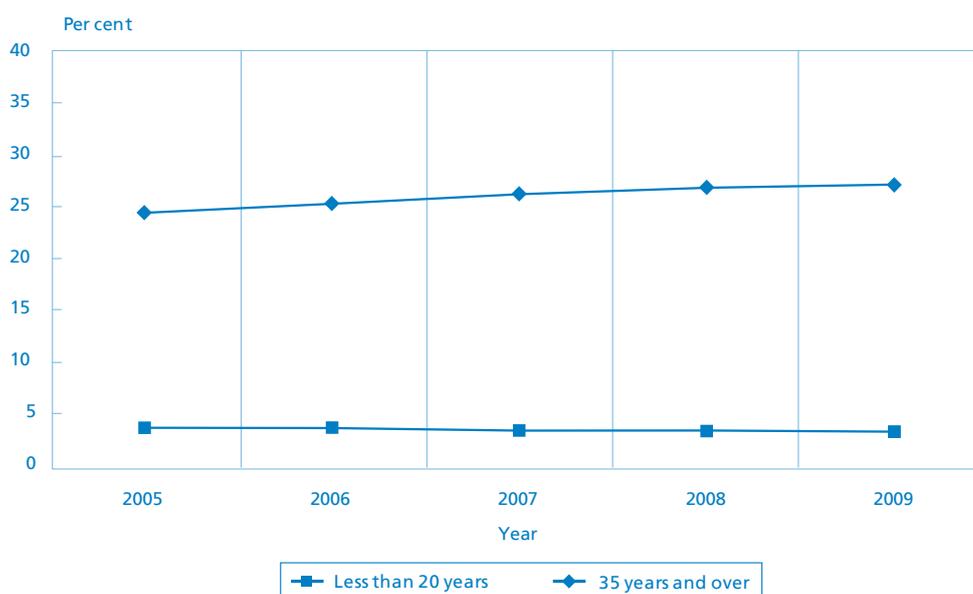
Maternal age

The percentage of mothers who were teenagers fell from 3.9% in 2005 to 3.5% in 2009. Over the same period the percentage of mothers aged 35 years increased from 20.7% to 23.8% of all mothers giving birth (Figure 1, Table 3).

The mean maternal age rose from 30.4 to 30.7 years over the 5 years 2005 to 2009. 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 13.6% to 15.4% over the 5 year period, and the proportion of multiparous mothers who were aged 35 years or more increased from 25.7% to 30.1%. The mean maternal age rose from 28.8 to 29.1 years for primiparous mothers and from 31.5 to 32.0 years for multiparous mothers.

Figure 1. Mothers aged less than 20 years and 35 years and over, NSW 2005–2009



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

Table 3. Maternal age, NSW 2005–2009

Maternal age (years)	2005		2006		2007		2008		2009	
	No.	%								
Less than 15	30	0.0	18	0.0	20	0.0	29	0.0	23	0.0
15–19	3410	3.8	3453	3.8	3342	3.5	3331	3.5	3271	3.4
20–24	12739	14.3	12686	13.9	13150	13.9	13118	13.8	12649	13.3
25–29	24006	26.9	24553	26.9	25361	26.8	25405	26.8	25836	27.2
30–34	30502	34.2	30785	33.7	31124	32.9	30649	32.3	30590	32.2
35–39	15275	17.1	16526	18.1	18047	19.1	18582	19.6	18726	19.7
40–44	3017	3.4	3073	3.4	3375	3.6	3581	3.8	3743	3.9
45+	149	0.2	163	0.2	166	0.2	158	0.2	190	0.2
Not stated	12	0.0	58	0.1	17	0.0	11	0.0	15	0.0
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

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

Maternal country of birth

In the period 2005–2009, 68.3% of mothers were born in Australia. In 2009, mothers born in the United Kingdom, China, New Zealand, India and Vietnam together accounted

for 12.2% of all mothers (Table 4). Further information on maternal country of birth is shown in Chapter 8.

Table 4. Maternal country of birth, NSW 2005–2009#

Country of birth	Year									
	2005		2006		2007		2008		2009	
	No.	%								
Australia	64246	72.1	65226	71.4	66526	70.3	65700	69.3	64884	68.3
United Kingdom	2172	2.4	2288	2.5	2494	2.6	2532	2.7	2587	2.7
China	1767	2.0	1787	2.0	2354	2.5	2321	2.4	2586	2.7
New Zealand	2233	2.5	2343	2.6	2450	2.6	2388	2.5	2378	2.5
India	1094	1.2	1294	1.4	1580	1.7	1940	2.0	2342	2.5
Vietnam	1652	1.9	1720	1.9	1752	1.9	1699	1.8	1661	1.7
Philippines	1160	1.3	1220	1.3	1359	1.4	1373	1.4	1417	1.5
Lebanon	1608	1.8	1547	1.7	1505	1.6	1557	1.6	1391	1.5
Iraq	681	0.8	743	0.8	821	0.9	925	1.0	869	0.9
Indonesia	541	0.6	578	0.6	653	0.7	743	0.8	731	0.8
South Africa	579	0.6	598	0.7	599	0.6	687	0.7	718	0.8
Fiji	670	0.8	697	0.8	749	0.8	681	0.7	657	0.7
South Korea	419	0.5	485	0.5	564	0.6	609	0.6	623	0.7
Pakistan	345	0.4	396	0.4	440	0.5	468	0.5	528	0.6
Bangladesh	293	0.3	327	0.4	376	0.4	511	0.5	510	0.5
Thailand	290	0.3	309	0.3	382	0.4	421	0.4	472	0.5
United States of America	359	0.4	428	0.5	407	0.4	417	0.4	454	0.5
Hong Kong	332	0.4	338	0.4	392	0.4	414	0.4	432	0.5
Malaysia	339	0.4	315	0.3	386	0.4	371	0.4	392	0.4
Sri Lanka	320	0.4	324	0.4	339	0.4	362	0.4	384	0.4
Japan	339	0.4	288	0.3	352	0.4	378	0.4	376	0.4
Ireland	325	0.4	299	0.3	367	0.4	361	0.4	340	0.4
Afghanistan	263	0.3	335	0.4	334	0.4	336	0.4	322	0.3
Sudan	226	0.3	283	0.3	299	0.3	318	0.3	303	0.3
Germany	211	0.2	240	0.3	236	0.2	262	0.3	284	0.3
Canada	227	0.3	262	0.3	250	0.3	267	0.3	274	0.3
Western Samoa	306	0.3	298	0.3	299	0.3	277	0.3	254	0.3
Cambodia	268	0.3	276	0.3	300	0.3	295	0.3	251	0.3
Nepal	75	0.1	78	0.1	119	0.1	137	0.1	217	0.2
Turkey	251	0.3	269	0.3	231	0.2	213	0.2	215	0.2
Iran	176	0.2	181	0.2	164	0.2	199	0.2	202	0.2
Poland	127	0.1	163	0.2	152	0.2	175	0.2	200	0.2
Tonga	222	0.2	212	0.2	187	0.2	191	0.2	184	0.2
Chile	194	0.2	189	0.2	218	0.2	174	0.2	178	0.2
Egypt	177	0.2	162	0.2	162	0.2	164	0.2	176	0.2
France	122	0.1	138	0.2	149	0.2	161	0.2	167	0.2
Singapore	146	0.2	121	0.1	144	0.2	164	0.2	163	0.2
Syria	147	0.2	132	0.1	163	0.2	132	0.1	162	0.2
Russian Federation (not USSR)	151	0.2	121	0.1	144	0.2	153	0.2	157	0.2
Brazil	86	0.1	81	0.1	117	0.1	128	0.1	152	0.2
Serbia and Montenegro	168	0.2	163	0.2	137	0.1	144	0.2	151	0.2
North Korea	140	0.2	124	0.1	169	0.2	152	0.2	149	0.2
Taiwan	107	0.1	102	0.1	122	0.1	129	0.1	143	0.2
Inadequately Described	58	0.1	10	0.0	36	0.0	37	0.0	136	0.1
Saudi Arabia	24	0.0	40	0.0	56	0.1	86	0.1	135	0.1
Netherlands	87	0.1	99	0.1	132	0.1	116	0.1	115	0.1
Former Yugoslavia	135	0.2	132	0.1	115	0.1	103	0.1	113	0.1
Macedonia	106	0.1	105	0.1	108	0.1	106	0.1	112	0.1
Laos	108	0.1	92	0.1	127	0.1	92	0.1	111	0.1
Zimbabwe	68	0.1	88	0.1	101	0.1	125	0.1	110	0.1
Italy	119	0.1	95	0.1	95	0.1	92	0.1	109	0.1
Bosnia–Herzegovina	98	0.1	96	0.1	114	0.1	97	0.1	109	0.1
Colombia	49	0.1	74	0.1	63	0.1	83	0.1	104	0.1
Papua New Guinea	106	0.1	126	0.1	136	0.1	122	0.1	101	0.1
Peru	73	0.1	97	0.1	80	0.1	86	0.1	101	0.1
Other/Not stated	2555	2.9	2781	3.0	2496	2.6	2690	2.8	2651	2.8
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Research, NSW Ministry of Health.
Countries of birth for which 100 or more women gave birth in 2009.

Aboriginal and Torres Strait Islander mothers

The reported number of Aboriginal or Torres Strait Islander mothers giving birth increased from 2,474 in 2005 to 2,904 in 2009, an increase from 2.8% to 3.1% 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 2005–2009

Aboriginal or Torres Strait Islander	Year									
	2005		2006		2007		2008		2009	
	No.	%								
Aboriginal or Torres Strait Islander	2474	2.8	2611	2.9	2888	3.1	2976	3.1	2904	3.1
Non-Aboriginal or Torres Strait Islander	86570	97.1	88176	96.6	91519	96.7	91675	96.6	91963	96.8
Not stated	96	0.1	528	0.6	195	0.2	213	0.2	176	0.2
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Research, 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 42%, while the proportion of mothers giving birth to a second to fifth

baby has been stable at about 56%. The number of women giving birth for the fifth or subsequent time rose by 18.0% from 1,441 in 2005 to 1,701 in 2009—however, these mothers comprised only 1.8% of all mothers in 2009.

Table 6. Previous pregnancies, NSW 2005–2009

No. previous pregnancies (>20 weeks gestation)	Year									
	2005		2006		2007		2008		2009	
	No.	%								
0	37073	41.6	37855	41.5	39188	41.4	39451	41.6	40349	42.5
1–4	50566	56.7	51443	56.3	53496	56.5	53637	56.5	52975	55.7
5+	1441	1.6	1579	1.7	1483	1.6	1713	1.8	1701	1.8
Not stated	60	0.1	438	0.5	435	0.5	63	0.1	18	0.0
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

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

Duration of pregnancy at first antenatal visit

Between 2005 and 2009, the proportion of mothers starting antenatal care at 20-plus weeks gestation declined from 11.4% to 7.1% (Table 7). This has been accompanied by an

increase in the proportion of mothers starting antenatal care at less than 14 weeks gestation from 68.1% to 78.9% over the 5-year period.

Table 7. Duration of pregnancy at first antenatal visit, NSW 2005–2009

Duration of pregnancy (weeks)	Year									
	2005		2006		2007		2008		2009	
	No.	%								
0–13	60681	68.1	62757	68.7	72269	76.4	77647	81.9	74947	78.9
14–19	17775	19.9	17117	18.7	13512	14.3	10853	11.4	12437	13.1
20+	10169	11.4	10218	11.2	6827	7.2	5374	5.7	6744	7.1
Not stated	515	0.6	1223	1.3	1994	2.1	990	1.0	915	1.0
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

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

Smoking in pregnancy

The proportion of mothers reporting any smoking during pregnancy declined between 2005 and 2009: 12,738 (14.3%) mothers reported smoking in pregnancy in 2005, 12,307 (13.5%) in 2006, 12,068 (12.8%) in 2007, 12,094 (12.7%) in 2008, and 11,434 (12.0%) in 2009.

Of mothers who smoked during pregnancy in 2009, 16.1% stopped smoking before the second half of pregnancy. Over the 5-year period, among those who smoked in the second half of pregnancy, there was a trend towards smoking fewer cigarettes per day (Table 8).

Table 8. Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy, NSW 2005–2009

Cigarettes smoked in the second half of the pregnancy	Year									
	2005		2006		2007		2008		2009	
	No.	%								
None	552	4.3	514	4.2	672	5.6	1227	10.1	1842	16.1
1–10 per day	6483	50.9	6243	50.7	6334	52.5	5929	49.0	4995	43.7
More than 10 per day	5129	40.3	5016	40.8	4430	36.7	4110	34.0	3580	31.3
Smoked, amount not stated	572	4.5	455	3.7	631	5.2	825	6.8	1015	8.9
Not stated	2	0.0	79	0.6	1	0.0	3	0.0	2	0.0
TOTAL	12738	100.0	12307	100.0	12068	100.0	12094	100.0	11434	100.0

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

Place of birth

In 2009, the majority of mothers planned to give birth in a hospital labour ward, and 3.9% of mothers planned to give birth in a birth centre (Table 9). Seventy-three 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 152 in 2005 to 266 in 2009, while the reported number of planned homebirths that occurred at home rose from 112 in 2005 to 231 in 2009.

Table 9. Maternal place of birth, NSW 2005–2009

Place of birth	Year									
	2005		2006		2007		2008		2009	
	No.	%								
Hospital	85660	96.1	87567	95.9	90015	95.2	90143	95.0	90525	95.2
Birth centre	1830	2.1	1878	2.1	2714	2.9	2911	3.1	2736	2.9
Planned birth centre/hospital admission	1128	1.3	1240	1.4	1205	1.3	1063	1.1	1004	1.1
Planned homebirth	112	0.1	125	0.1	144	0.2	200	0.2	231	0.2
Planned homebirth/hospital admission	40	0.0	47	0.1	31	0.0	43	0.0	35	0.0
Born before arrival	369	0.4	388	0.4	490	0.5	497	0.5	512	0.5
Not stated	1	0.0	70	0.1	3	0.0	7	0.0	0	0.0
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

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

Hypertension and diabetes

The reported rate of gestational diabetes rose slightly to 5.4% in 2009, while rates of diabetes mellitus have remained stable at 0.6% over the 5-year period (Table 10). During 2006, there was a change in the format for reporting hypertension in pregnancy where reporting of pre-eclampsia was replaced

with reporting of proteinuric and non-proteinuric pregnancy induced hypertension. Overall, hypertension in pregnancy was reported among 7.3% of mothers in 2009, compared to 6.1% in 2005.

Table 10. Maternal hypertension or diabetes, NSW 2005–2009#

Condition	2005		2006		Year 2007		2008		2009	
	No.	%								
Diabetes mellitus	503	0.6	541	0.6	546	0.6	601	0.6	525	0.6
Gestational diabetes	4165	4.7	4375	4.8	4091	4.3	4509	4.8	5157	5.4
Essential hypertension	842	0.9	804	0.9	721	0.8	833	0.9	756	0.8
Pre-eclampsia#	4553	5.1	3198	3.5	–	–	–	–	–	–
Pregnancy induced hypertension#										
– proteinuric	–	–	612	0.7	1625	1.7	1766	1.9	1902	2.0
– non-proteinuric	–	–	626	0.7	3904	4.1	4216	4.4	4251	4.5
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Research, 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 58.3% in 2005 to 56.7% in 2009 (Table 11). The rate of induction of labour was 25.8% in 2009, similar to previous years. The most common reported reason for induction of labour in 2009 was prolonged pregnancy (41 or more weeks) (26.1%), followed

by prelabour rupture of membranes (12.6%), hypertensive disease (10.0%), diabetes (6.9%), suspected intrauterine growth retardation (4.2%), fetal distress (1.6%) and fetal death (1.0%).

Table 11. Onset and augmentation of labour, NSW 2005–2009

Onset of labour	2005		2006		Year 2007		2008		2009	
	No.	%								
Spontaneous	38027	42.7	38706	42.4	38291	40.5	39076	41.2	38697	40.7
Spontaneous augmented with ARM	6152	6.9	6318	6.9	7339	7.8	7069	7.5	6840	7.2
Spontaneous augmented with oxytocics/ prostaglandins#	7812	8.8	8146	8.9	8553	9.0	8591	9.1	8382	8.8
No labour	14467	16.2	15516	17.0	15878	16.8	16120	17.0	16649	17.5
Induced – oxytocics/ prostaglandins	7417	8.3	7306	8.0	8607	9.1	8576	9.0	8680	9.1
Induced – ARM only	1595	1.8	1447	1.6	1648	1.7	1680	1.8	1710	1.8
Induced – ARM+oxytocics/ prostaglandins	13273	14.9	13389	14.7	14003	14.8	13577	14.3	13904	14.6
Induced – other#	384	0.4	417	0.5	263	0.3	164	0.2	181	0.2
Not stated	13	0.0	70	0.1	20	0.0	11	0.0	0	0.0
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Research, 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 61.2% in 2005 to 58.2% in 2009 (Table 12). The caesarean section rate increased from 28.1% to 30.2%. The rate of instrumental birth remained steady at 10% to 11%.

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

privately insured mothers the rate of normal vaginal birth fell from 49.8% in 2004 to 46.7% in 2008 and the caesarean section rate increased from 35.2% to 38.4%. Among publicly insured mothers the rate of normal vaginal birth fell from 66.0% to 65.6% and the caesarean section rate rose from 24.4% to 25.0%.

Table 12. Type of birth, 2005–2009

Type of delivery	2005		2006		Year 2007		2008		2009	
	No.	%								
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
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0

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

Table 13. Maternal health insurance status by type of birth, NSW 2004–2008#

Insurance status – type of birth	2004		2005		Year 2006		2007		2008	
	No.	%								
Public										
Normal vaginal	31757	66.0	34132	65.6	37344	65.6	40245	65.7	39996	65.6
Forceps	1342	2.8	1324	2.5	1520	2.7	1791	2.9	1881	3.1
Vacuum extraction	3071	6.4	3345	6.4	3448	6.1	3694	6.0	3591	5.9
Vaginal breech	220	0.5	197	0.4	245	0.4	250	0.4	278	0.5
Elective caesarean section	5852	12.2	6761	13.0	7714	13.6	8045	13.1	8008	13.1
Emergency caesarean section##	5887	12.2	6288	12.1	6586	11.6	7177	11.7	7227	11.8
Not stated	0	0.0	0	0.0	64	0.1	36	0.1	10	0.0
TOTAL	48129	100.0	52047	100.0	56921	100.0	61238	100.0	60991	100.0
Private										
Normal vaginal	13304	49.8	13777	48.5	13961	47.5	14601	47.1	15082	46.7
Forceps	1321	4.9	1380	4.9	1323	4.5	1453	4.7	1556	4.8
Vacuum extraction	2599	9.7	2772	9.8	2746	9.3	2995	9.7	3134	9.7
Vaginal breech	60	0.2	62	0.2	67	0.2	88	0.3	99	0.3
Elective caesarean section	5935	22.2	6642	23.4	7253	24.7	7614	24.5	7941	24.6
Emergency caesarean section##	3468	13.0	3753	13.2	3919	13.3	4242	13.7	4452	13.8
Not stated	7	0.0	0	0.0	138	0.5	32	0.1	4	0.0
TOTAL	26694	100.0	28386	100.0	29407	100.0	31025	100.0	32268	100.0
TOTAL###										
Normal vaginal	52366	62.1	54568	61.2	55187	60.4	56648	59.9	56173	59.2
Forceps	2762	3.3	2801	3.1	2885	3.2	3273	3.5	3486	3.7
Vacuum extraction	5902	7.0	6372	7.1	6332	6.9	6779	7.2	6830	7.2
Vaginal breech	347	0.4	322	0.4	366	0.4	381	0.4	387	0.4
Elective caesarean section	12930	15.3	14467	16.2	15507	17.0	15878	16.8	16120	17.0
Emergency caesarean section##	9974	11.8	10610	11.9	10827	11.9	11572	12.2	11854	12.5
Not stated	7	0.0	0	0.0	211	0.2	71	0.1	14	0.0
TOTAL	84288	100.0	89140	100.0	91315	100.0	94602	100.0	94864	100.0

Source: Linked data of the NSW Perinatal Data Collection and NSW Admitted Patient Data Collection. Centre for Epidemiology and Research, NSW Ministry of Health.
Figures for 2004 to 2007 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 2005, with slightly more male babies born than females in each year. In 2009, 49,362 (51.2%) babies were male, 47,063 (48.8%) were female, and 14 were of indeterminate sex. This compares with babies born in 2005, when 46,580 (51.4%) babies were male, 43,932 (48.5%) were female, 18 were of indeterminate sex, and sex was not reported for 80 babies.

Gestational age

In 2009, 7.3% of babies were born prematurely (less than 37 weeks gestation), compared to 7.2% in 2005 (Table 14). 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 1.9% in 2005 to 0.8% in 2009.

Table 14. Gestational age, NSW 2005–2009

Gestational age (weeks)	Year									
	2005		2006		2007		2008		2009	
	No.	%								
< 28	622	0.7	674	0.7	707	0.7	732	0.8	705	0.7
28–31	654	0.7	675	0.7	660	0.7	683	0.7	660	0.7
32–36	5248	5.8	5490	5.9	5703	5.9	5794	6.0	5697	5.9
37–41	82367	90.9	84424	91.0	88011	91.6	88353	91.7	88596	91.9
42+	1709	1.9	1499	1.6	907	0.9	764	0.8	773	0.8
Not stated	10	0.0	19	0.0	42	0.0	17	0.0	8	0.0
TOTAL	90610	100.0	92781	100.0	96030	100.0	96343	100.0	96439	100.0

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

Birth weight

Since 2005, the pattern of birth weights has remained stable, with the rate of low birth weight (less than 2,500 grams) at

6.0% to 6.4% (Table 15). The rate of low birth weight was 6.0% in 2009.

Table 15. Birth weight, NSW 2005–2009

Birth weight (grams)	Year									
	2005		2006		2007		2008		2009	
	No.	%								
Less than 500	227	0.3	239	0.3	255	0.3	266	0.3	259	0.3
500–999	392	0.4	411	0.4	422	0.4	422	0.4	402	0.4
1000–1499	513	0.6	562	0.6	512	0.5	525	0.5	501	0.5
1500–1999	1100	1.2	1167	1.3	1119	1.2	1230	1.3	1081	1.1
2000–2499	3452	3.8	3554	3.8	3541	3.7	3551	3.7	3541	3.7
2500–2999	13675	15.1	13906	15.0	14265	14.9	14157	14.7	14316	14.8
3000–3499	32451	35.8	33074	35.6	34790	36.2	34612	35.9	34902	36.2
3500–3999	27822	30.7	28705	30.9	29648	30.9	29891	31.0	29884	31.0
4000–4499	9298	10.3	9389	10.1	9717	10.1	9889	10.3	9787	10.1
4500+	1613	1.8	1649	1.8	1653	1.7	1716	1.8	1692	1.8
Not stated	67	0.1	125	0.1	108	0.1	84	0.1	74	0.1
TOTAL	90610	100.0	92781	100.0	96030	100.0	96343	100.0	96439	100.0

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

Apgar score

In 2009, 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 16). These rates are similar to those of previous years.

Table 16. Apgar score at 5 minutes, NSW 2005–2009#

Apgar score	Year									
	2005		2006		2007		2008		2009	
	No.	%								
0–4	963	1.1	1007	1.1	1093	1.1	1093	1.1	1088	1.1
5–6	833	0.9	890	1.0	910	0.9	900	0.9	901	0.9
7+	88621	97.8	90645	97.7	93685	97.6	94077	97.6	94175	97.7
Not stated	193	0.2	239	0.3	342	0.4	273	0.3	275	0.3
TOTAL	90610	100.0	92781	100.0	96030	100.0	96343	100.0	96439	100.0

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

Perinatal outcome

In the period 2005–2009 the perinatal mortality rate varied from 8.7 to 9.0 per 1,000 (Table 17). In 2009, 71.4% of all reported perinatal deaths were stillbirths and 28.6% were neonatal deaths.

In 2009, of the 838 perinatal deaths in NSW, 799 (95.3%) were reported among planned hospital births, 24 (2.9%) among planned birth centre births, and 15 were among babies born before arrival at hospital. No perinatal deaths were reported among planned home births.

Table 17. Perinatal outcomes, NSW 2005–2009#

Year	Liveborn surviving		Stillborn		Neonatal death		Death – age not stated		Not stated		Total births		Perinatal death rate/ 1,000 births##
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2005	89786	99.1	535	0.6	257	0.3	0	0.0	32	0.0	90610	100.0	8.7
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

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

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

Maternal deaths

In the period 1990–2008, 183 deaths were reported among pregnant women or women who gave birth less than 6 weeks previously. Of these, 56 (30.6%) died of incidental causes not related to the pregnancy or its management, 77 (42.1%) deaths were found to be directly due to pregnancy or its management, and 47 (25.7%) deaths were found to result

from pre-existing disease or disease which developed during pregnancy (not due to direct obstetric causes), but which may have been aggravated by the physiologic effects of pregnancy (Table 18). Table 19 shows maternal deaths by cause in NSW for 2008.

Table 18. Maternal deaths by year, NSW 1990–2008#

Year	Classification										
	Direct		Indirect		Total: direct and indirect			Incidental		Total	
	No.	Ratio/ 100,000	No.	Ratio/ 100,000	No.	Ratio/ 100,000	No.	Ratio/ 100,000	No.	Ratio/ 100,000	
1990	4	4.6	6	6.9	10	11.6	2	2.3	12	13.9	
1991	4	4.7	1	1.2	5	5.8	1	1.2	6	7.0	
1992	5	5.7	1	1.1	6	6.8	5	5.7	11	12.5	
1993	6	6.9	1	1.2	7	8.1	6	6.9	13	15.0	
1994	8	9.2	1	1.2	9	10.4	3	3.5	12	13.8	
1995	7	8.1	2	2.3	9	10.4	6	7.0	15	17.4	
1996	6	7.0	1	1.2	7	8.2	5	5.9	12	14.1	
1997	7	8.1	2	2.3	9	10.5	5	5.8	14	16.1	
1998	4	4.7	4	4.7	8	9.4	3	3.5	11	12.9	
1999##	4	4.7	1	1.2	5	5.8	6	7.0	12	14.0	
2000	4	4.7	5	5.9	9	10.7	1	1.2	10	11.9	
2001	4	4.7	4	4.7	8	9.5	1	1.2	9	10.7	
2002	2	2.4	2	2.4	4	4.7	1	1.2	5	5.9	
2003	1	1.2	3	3.5	4	4.7	3	3.5	7	8.2	
2004###	2	2.3	2	2.3	4	4.7	2	2.3	7	8.2	
2005##	4	4.5	4	4.5	8	9.0	2	2.2	11	12.3	
2006	4	4.4	3	3.3	7	7.7	3	3.3	10	11.0	
2007	1	1.1	0	0.0	1	1.1	0	0.0	1	1.1	
2008	0	0.0	4	4.2	4	4.2	1	1.1	5	5.3	

Source: NSW Maternal and Perinatal Committee.

Includes all deaths of women who were pregnant at the time of death, or who died within 42 days of childbirth. Direct deaths include those resulting from obstetric complications of the pregnant state, including its management. Indirect deaths include those resulting from pre-existing disease or disease which developed during pregnancy and was not due to direct obstetric causes but which may have been aggravated by the physiological effects of pregnancy. Incidental deaths are those where the pregnancy is unlikely to have contributed significantly to the death.¹

Totals for 1999 and 2005 each include one death that was unable to be classified.

Total for 2004 includes one open coronial case.

Table 19. Maternal deaths by cause, NSW 2008#

Classification	Cause	No.
Indirect	Coronary artery atherosclerosis	1
Indirect	Rupture of splenic artery	1
Indirect	Acute on chronic intrapulmonary haemorrhage	1
Indirect	Positional asphyxia	1
Incidental	Ruptured aortic aneurysm	1

Source: NSW Maternal and Perinatal Committee.

Includes all deaths of women who were pregnant at the time of death, or who died within 42 days of childbirth. Indirect deaths include those resulting from pre-existing disease or disease which developed during pregnancy and was not due to direct obstetric causes but which may have been aggravated by the physiological effects of pregnancy. Incidental deaths are those where the pregnancy is unlikely to have contributed significantly to the death.¹

Reference

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