

## 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 17).

### Trends in confinements

Between 2005 and 2009, the percentage of mothers who were born in non-English speaking countries rose from 20.8% to 24.3% (Table 89). The increase was mainly among mothers born in Asian countries and the Middle East and Africa. There was a decline in the percentage of mothers born in Southern European countries and Melanesia, Micronesia and Polynesia.

**Table 89. Births and confinements by country of birth group, NSW 2005–2009**

Country of birth group	Year									
	2005		2006		2007		2008		2009	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>										
English speaking	70354	78.9	71515	78.3	73109	77.3	72361	76.3	71643	75.4
Central & South America	726	0.8	765	0.8	793	0.8	830	0.9	867	0.9
Melanesia, Micronesia & Polynesia	1485	1.7	1538	1.7	1518	1.6	1424	1.5	1351	1.4
Southern Europe	927	1.0	901	1.0	843	0.9	847	0.9	865	0.9
Western & Northern Europe	688	0.8	725	0.8	782	0.8	844	0.9	834	0.9
Eastern Europe, Russia, Central Asian & Baltic States	578	0.6	564	0.6	688	0.7	676	0.7	749	0.8
Middle East & Africa	4080	4.6	4216	4.6	4343	4.6	4635	4.9	4503	4.7
South East Asia	4571	5.1	4698	5.1	5166	5.5	5255	5.5	5286	5.6
North East Asia	3117	3.5	3143	3.4	3966	4.2	4023	4.2	4333	4.6
Southern Asia	2396	2.7	2759	3.0	3191	3.4	3759	4.0	4310	4.5
Other-not stated	218	0.2	491	0.5	203	0.2	210	0.2	302	0.3
TOTAL	89140	100.0	91315	100.0	94602	100.0	94864	100.0	95043	100.0
<b>Births</b>										
English speaking	71558	79.0	72699	78.4	74266	77.3	73562	76.4	72741	75.4
Central & South America	743	0.8	779	0.8	809	0.8	842	0.9	881	0.9
Melanesia, Micronesia & Polynesia	1508	1.7	1564	1.7	1546	1.6	1441	1.5	1364	1.4
Southern Europe	945	1.0	920	1.0	858	0.9	866	0.9	879	0.9
Western & Northern Europe	700	0.8	737	0.8	795	0.8	861	0.9	845	0.9
Eastern Europe, Russia, Central Asian & Baltic States	593	0.7	573	0.6	701	0.7	689	0.7	758	0.8
Middle East & Africa	4142	4.6	4287	4.6	4410	4.6	4707	4.9	4595	4.8
South East Asia	4626	5.1	4746	5.1	5206	5.4	5304	5.5	5334	5.5
North East Asia	3144	3.5	3172	3.4	4006	4.2	4058	4.2	4382	4.5
Southern Asia	2428	2.7	2801	3.0	3225	3.4	3798	3.9	4354	4.5
Other-not stated	223	0.2	503	0.5	208	0.2	215	0.2	306	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.

## Maternal age

In 2009 births to teenage mothers were more common among mothers born in English-speaking countries than non-English speaking countries (Table 90, Figure 4), while the

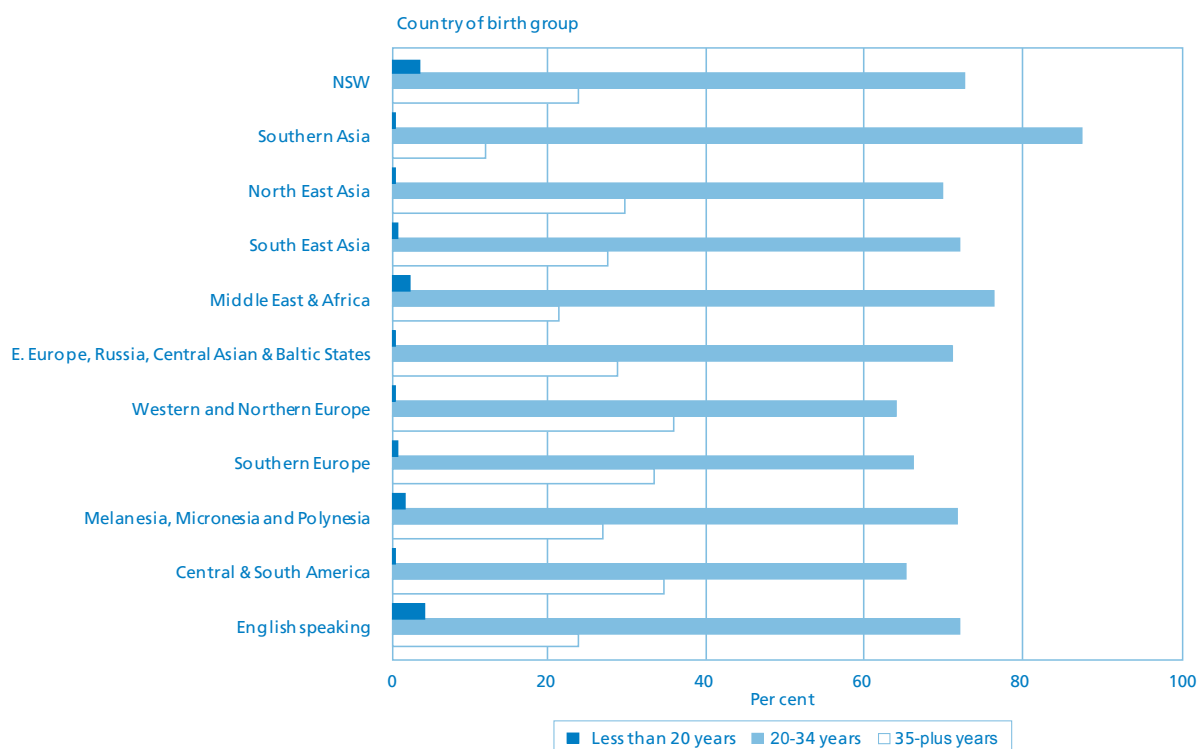
largest proportions of mothers aged 35 years and over were among mothers born in Western and Northern Europe (35.7%) and Central and South America (34.4%).

**Table 90. Maternal age by country of birth group, NSW 2009**

Country of birth group	Maternal age (years)									
	12–19		20–34		35+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	3064	4.3	51651	72.1	16914	23.6	14	0.0	71643	100.0
Central & South America	3	0.3	566	65.3	298	34.4	0	0.0	867	100.0
Melanesia, Micronesia & Polynesia	21	1.6	969	71.7	361	26.7	0	0.0	1351	100.0
Southern Europe	7	0.8	571	66.0	287	33.2	0	0.0	865	100.0
Western & Northern Europe	4	0.5	532	63.8	298	35.7	0	0.0	834	100.0
Eastern Europe, Russia, Central Asian & Baltic States	2	0.3	533	71.2	214	28.6	0	0.0	749	100.0
Middle East & Africa	107	2.4	3436	76.3	960	21.3	0	0.0	4503	100.0
South East Asia	35	0.7	3801	71.9	1450	27.4	0	0.0	5286	100.0
North East Asia	22	0.5	3028	69.9	1283	29.6	0	0.0	4333	100.0
Southern Asia	24	0.6	3774	87.6	512	11.9	0	0.0	4310	100.0
Other-not stated	5	1.7	214	70.9	82	27.2	1	0.3	302	100.0
<b>TOTAL</b>	<b>3294</b>	<b>3.5</b>	<b>69075</b>	<b>72.7</b>	<b>22659</b>	<b>23.8</b>	<b>15</b>	<b>0.0</b>	<b>95043</b>	<b>100.0</b>

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

**Figure 4. Maternal age by country of birth group, NSW 2009**



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

## Local health district of residence

In 2009, the proportion of mothers born in non-English speaking countries was highest in the Western Sydney Local Health District (45.3%), followed by the South Western Sydney Local Health District (40.0%). Six percent of mothers were born in South East Asian countries, 52.5% 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 9.1% of mothers were born in North East Asian or Southern Asian countries, with the majority living in Sydney metropolitan areas (Table 91).

**Table 91. Local Health District of residence by country of birth group, NSW 2009#**

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.	%	No.
Sydney	5160	60.9	98	1.2	108	1.3	115	1.4	94	1.1	87	1.0	556	6.6	669	7.9	887	10.5	664	7.8	35	0.4	8473	100.0
South Western Sydney	7596	59.6	172	1.3	479	3.8	256	2.0	46	0.4	58	0.5	1593	12.5	1731	13.6	292	2.3	466	3.7	54	0.4	12743	100.0
South Eastern Sydney	7966	70.6	186	1.6	101	0.9	172	1.5	213	1.9	207	1.8	419	3.7	709	6.3	839	7.4	373	3.3	93	0.8	11278	100.0
Illawarra Shoalhaven	4032	91.2	25	0.6	14	0.3	55	1.2	24	0.5	19	0.4	82	1.9	81	1.8	47	1.1	34	0.8	7	0.2	4420	100.0
Western Sydney	7393	54.5	121	0.9	408	3.0	102	0.8	34	0.3	102	0.8	1322	9.7	1046	7.7	1014	7.5	2004	14.8	27	0.2	13573	100.0
Nepean Blue Mountains	4351	90.3	19	0.4	45	0.9	35	0.7	15	0.3	15	0.3	91	1.9	116	2.4	41	0.9	74	1.5	17	0.4	4819	100.0
Northern Sydney	7546	72.8	161	1.6	82	0.8	72	0.7	242	2.3	173	1.7	210	2.0	516	5.0	958	9.2	373	3.6	39	0.4	10372	100.0
Central Coast	3727	94.4	20	0.5	15	0.4	8	0.2	25	0.6	22	0.6	19	0.5	47	1.2	32	0.8	24	0.6	10	0.3	3949	100.0
Hunter New England	10087	95.5	17	0.2	31	0.3	27	0.3	51	0.5	24	0.2	75	0.7	101	1.0	70	0.7	72	0.7	4	0.0	10559	100.0
Northern NSW	2785	94.7	11	0.4	10	0.3	5	0.2	28	1.0	4	0.1	20	0.7	43	1.5	17	0.6	17	0.6	0	0.0	2940	100.0
Mid North Coast	2126	94.4	5	0.2	6	0.3	2	0.1	9	0.4	10	0.4	13	0.6	37	1.6	11	0.5	30	1.3	3	0.1	2252	100.0
Southern NSW	1356	95.4	0	0.0	7	0.5	2	0.1	7	0.5	3	0.2	9	0.6	21	1.5	8	0.6	6	0.4	2	0.1	1421	100.0
Murrumbidgee	2473	94.5	0	0.0	17	0.6	1	0.0	9	0.3	2	0.1	27	1.0	21	0.8	17	0.6	48	1.8	1	0.0	2616	100.0
Western NSW	3587	96.7	7	0.2	8	0.2	2	0.1	7	0.2	7	0.2	20	0.5	36	1.0	16	0.4	15	0.4	3	0.1	3708	100.0
Far West	235	96.7	2	0.8	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	3	1.2	0	0.0	2	0.8	0	0.0	243	100.0
Other-not stated	1223	72.9	23	1.4	19	1.1	11	0.7	30	1.8	16	1.0	47	2.8	109	6.5	84	5.0	108	6.4	7	0.4	1677	100.0
<b>TOTAL</b>	<b>71643</b>	<b>75.4</b>	<b>867</b>	<b>0.9</b>	<b>1351</b>	<b>1.4</b>	<b>865</b>	<b>0.9</b>	<b>834</b>	<b>0.9</b>	<b>749</b>	<b>0.8</b>	<b>4503</b>	<b>4.7</b>	<b>5286</b>	<b>5.6</b>	<b>4333</b>	<b>4.6</b>	<b>4310</b>	<b>4.5</b>	<b>302</b>	<b>0.3</b>	<b>95043</b>	<b>100.0</b>

Source: NSW Perinatal Data Collection (HOIST). Centre for Epidemiology and Research, 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 2009, 91.9% of all mothers commenced antenatal care before 20 weeks gestation and 78.9% commenced antenatal care before 14 weeks gestation. There was some variation between country of birth groups, with 93.2% of mothers

born in English speaking countries commencing antenatal care before 20 weeks gestation, compared with 79.6% of mothers born in Melanesia, Micronesia, and Polynesia, and 87.9% of mothers born in North East Asia (Table 92).

**Table 92. Duration of pregnancy at first antenatal visit by country of birth group, NSW 2009**

Country of birth group	Duration of pregnancy at first antenatal visit (weeks)								TOTAL	
	0–13		14–19		20–plus		Not stated		No.	%
	No.	%	No.	%	No.	%	No.	%		
English speaking	58083	81.1	8657	12.1	4317	6.0	586	0.8	71643	100.0
Central & South America	654	75.4	139	16.0	66	7.6	8	0.9	867	100.0
Melanesia, Micronesia & Polynesia	847	62.7	228	16.9	246	18.2	30	2.2	1351	100.0
Southern Europe	639	73.9	153	17.7	63	7.3	10	1.2	865	100.0
Western & Northern Europe	682	81.8	110	13.2	37	4.4	5	0.6	834	100.0
Eastern Europe, Russia, Central Asian & Baltic States	591	78.9	103	13.8	48	6.4	7	0.9	749	100.0
Middle East & Africa	3051	67.8	799	17.7	560	12.4	93	2.1	4503	100.0
South East Asia	3590	67.9	1020	19.3	598	11.3	78	1.5	5286	100.0
North East Asia	3166	73.1	644	14.9	475	11.0	48	1.1	4333	100.0
Southern Asia	3425	79.5	530	12.3	314	7.3	41	1.0	4310	100.0
Other-not stated	219	72.5	54	17.9	20	6.6	9	3.0	302	100.0
<b>TOTAL</b>	<b>74947</b>	<b>78.9</b>	<b>12437</b>	<b>13.1</b>	<b>6744</b>	<b>7.1</b>	<b>915</b>	<b>1.0</b>	<b>95043</b>	<b>100.0</b>

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

## Smoking in pregnancy

In 2009, 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 93). About one in seven mothers born in English speaking countries smoked at some time during pregnancy, compared to fewer than one in nine 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. Sixteen 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. Of mothers who did smoke in the second half of pregnancy, mothers born in English speaking countries were more likely to smoke more than 10 cigarettes per day compared to mothers born in other country of birth groups (Table 94).

**Table 93. Smoking in pregnancy by country of birth group, NSW 2009**

Country of birth group	Smoking in pregnancy						TOTAL	
	No		Yes		Not stated		No.	%
	No.	%	No.	%	No.	%		
English speaking	61121	85.3	10519	14.7	3	0.0	71643	100.0
Central & South America	844	97.3	23	2.7	0	0.0	867	100.0
Melanesia, Micronesia & Polynesia	1204	89.1	147	10.9	0	0.0	1351	100.0
Southern Europe	797	92.1	68	7.9	0	0.0	865	100.0
Western & Northern Europe	806	96.6	28	3.4	0	0.0	834	100.0
Eastern Europe, Russia, Central Asian & Baltic States	726	96.9	23	3.1	0	0.0	749	100.0
Middle East & Africa	4208	93.4	295	6.6	0	0.0	4503	100.0
South East Asia	5082	96.1	204	3.9	0	0.0	5286	100.0
North East Asia	4294	99.1	39	0.9	0	0.0	4333	100.0
Southern Asia	4242	98.4	68	1.6	0	0.0	4310	100.0
Other-not stated	281	93.0	20	6.6	1	0.3	302	100.0
<b>TOTAL</b>	<b>83605</b>	<b>88.0</b>	<b>11434</b>	<b>12.0</b>	<b>4</b>	<b>0.0</b>	<b>95043</b>	<b>100.0</b>

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

**Table 94. Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy and country of birth group, NSW 2009**

Country of birth group	Cigarettes per day in the second half of pregnancy											
	None		1–10 per day		> 10 per day		Smoked, amount not stated		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	1362	12.9	4766	45.3	3481	33.1	908	8.6	2	0.0	10519	100.0
Central & South America	14	60.9	5	21.7	2	8.7	2	8.7	0	0.0	23	100.0
Melanesia, Micronesia & Polynesia	51	34.7	53	36.1	25	17.0	18	12.2	0	0.0	147	100.0
Southern Europe	19	27.9	27	39.7	8	11.8	14	20.6	0	0.0	68	100.0
Western & Northern Europe	15	53.6	8	28.6	3	10.7	2	7.1	0	0.0	28	100.0
Eastern Europe, Russia, Central Asian & Baltic States	9	39.1	8	34.8	3	13.0	3	13.0	0	0.0	23	100.0
Middle East & Africa	147	49.8	76	25.8	34	11.5	38	12.9	0	0.0	295	100.0
South East Asia	136	66.7	35	17.2	12	5.9	21	10.3	0	0.0	204	100.0
North East Asia	27	69.2	8	20.5	2	5.1	2	5.1	0	0.0	39	100.0
Southern Asia	52	76.5	4	5.9	6	8.8	6	8.8	0	0.0	68	100.0
Other-not stated	10	50.0	5	25.0	4	20.0	1	5.0	0	0.0	20	100.0
<b>TOTAL</b>	<b>1842</b>	<b>16.1</b>	<b>4995</b>	<b>43.7</b>	<b>3580</b>	<b>31.3</b>	<b>1015</b>	<b>8.9</b>	<b>2</b>	<b>0.0</b>	<b>11434</b>	<b>100.0</b>

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

## Medical conditions and obstetric complications

In 2009, 1.5% of mothers born in Melanesia, Micronesia, and Polynesia were reported to have diabetes mellitus—two and a half times the rate for all mothers in NSW, though the number of mothers is small (Table 95). The rates of gestational diabetes in mothers born in Asian countries and Melanesia, Micronesia, and Polynesia were over twice the rate for all mothers in NSW.

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 Southern European countries, than other country of birth groups.

**Table 95. Medical conditions and obstetric complications by country of birth group, NSW 2009**

Country of birth group	Condition									
	Diabetes mellitus		Gestational diabetes		Essential hypertension		Pregnancy-induced hypertension		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	372	0.5	2783	3.9	584	0.8	5370	7.5	71643	100.0
Central & South America	6	0.7	52	6.0	7	0.8	36	4.2	867	100.0
Melanesia, Micronesia & Polynesia	20	1.5	158	11.7	12	0.9	66	4.9	1351	100.0
Southern Europe	3	0.3	64	7.4	10	1.2	32	3.7	865	100.0
Western & Northern Europe	4	0.5	34	4.1	6	0.7	36	4.3	834	100.0
Eastern Europe, Russia, Central Asian & Baltic States	3	0.4	45	6.0	7	0.9	38	5.1	749	100.0
Middle East & Africa	30	0.7	328	7.3	27	0.6	124	2.8	4503	100.0
South East Asia	33	0.6	612	11.6	46	0.9	163	3.1	5286	100.0
North East Asia	20	0.5	484	11.2	17	0.4	90	2.1	4333	100.0
Southern Asia	31	0.7	578	13.4	36	0.8	181	4.2	4310	100.0
Other-not stated	3	1.0	19	6.3	4	1.3	17	5.6	302	100.0
<b>TOTAL</b>	<b>525</b>	<b>0.6</b>	<b>5157</b>	<b>5.4</b>	<b>756</b>	<b>0.8</b>	<b>6153</b>	<b>6.5</b>	<b>95043</b>	<b>100.0</b>

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

## Labour and birth

Mothers born in non-English speaking countries, except mothers born in Southern Asia, were more likely to have a spontaneous onset of labour than mothers born in English speaking countries (Table 96). Rates of induction of labour varied from 18.7% among mothers born in South East Asia to 28.9% among mothers born in Southern Asia.

Mothers born in the Middle East and Africa and Melanesia, Micronesia and Polynesia were more likely to have a normal vaginal birth than mothers in other country of birth groups (Table 97). The highest caesarean section rate was among mothers born in Central and South America (37.7%).

**Table 96. Labour onset by country of birth group, NSW 2009**

Country of birth group	Onset of labour							
	Spontaneous		No labour#		Induced		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	39706	55.4	12810	17.9	19127	26.7	71643	100.0
Central & South America	497	57.3	186	21.5	184	21.2	867	100.0
Melanesia, Micronesia & Polynesia	839	62.1	212	15.7	300	22.2	1351	100.0
Southern Europe	487	56.3	155	17.9	223	25.8	865	100.0
Western & Northern Europe	526	63.1	134	16.1	174	20.9	834	100.0
Eastern Europe, Russia, Central Asian & Baltic States	440	58.7	135	18.0	174	23.2	749	100.0
Middle East & Africa	2799	62.2	679	15.1	1025	22.8	4503	100.0
South East Asia	3427	64.8	868	16.4	991	18.7	5286	100.0
North East Asia	2685	62.0	704	16.2	944	21.8	4333	100.0
Southern Asia	2355	54.6	708	16.4	1247	28.9	4310	100.0
Other-not stated	158	52.3	58	19.2	86	28.5	302	100.0
<b>TOTAL</b>	<b>53919</b>	<b>56.7</b>	<b>16649</b>	<b>17.5</b>	<b>24475</b>	<b>25.8</b>	<b>95043</b>	<b>100.0</b>

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

**Table 97. Type of birth by country of birth group, NSW 2009**

Local Health District	Type of birth												TOTAL	
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section#		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	42207	58.9	2402	3.4	5092	7.1	258	0.4	12810	17.9	8874	12.4	71643	100.0
Central & South America	419	48.3	41	4.7	78	9.0	2	0.2	186	21.5	141	16.3	867	100.0
Melanesia, Micronesia & Polynesia	881	65.2	26	1.9	77	5.7	6	0.4	212	15.7	149	11.0	1351	100.0
Southern Europe	508	58.7	36	4.2	62	7.2	5	0.6	155	17.9	99	11.4	865	100.0
Western & Northern Europe	480	57.6	27	3.2	85	10.2	3	0.4	134	16.1	105	12.6	834	100.0
Eastern Europe, Russia, Central Asian & Baltic States	437	58.3	39	5.2	52	6.9	5	0.7	135	18.0	81	10.8	749	100.0
Middle East & Africa	2942	65.3	117	2.6	264	5.9	25	0.6	679	15.1	476	10.6	4503	100.0
South East Asia	2939	55.6	196	3.7	557	10.5	15	0.3	868	16.4	711	13.5	5286	100.0
North East Asia	2326	53.7	219	5.1	487	11.2	13	0.3	704	16.2	584	13.5	4333	100.0
Southern Asia	2073	48.1	263	6.1	444	10.3	21	0.5	708	16.4	801	18.6	4310	100.0
Other-not stated	147	48.7	17	5.6	34	11.3	2	0.7	58	19.2	44	14.6	302	100.0
<b>TOTAL</b>	<b>55359</b>	<b>58.2</b>	<b>3383</b>	<b>3.6</b>	<b>7232</b>	<b>7.6</b>	<b>355</b>	<b>0.4</b>	<b>16649</b>	<b>17.5</b>	<b>12065</b>	<b>12.7</b>	<b>95043</b>	<b>100.0</b>

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.

## Birth weight

The rate of low birth weight (less than 2,500 grams) in 2009 was 6.0% in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asia (9.6%) and South

East Asia (6.2%) (Table 98). Babies of mothers born in Western and Northern Europe were least likely to be low birth weight.

**Table 98. Birth weight by maternal country of birth group, NSW 2009**

Country of birth group	Birth weight (grams)							
	Less than 2500		2500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	4277	5.9	68412	94.0	52	0.1	72741	100.0
Central & South America	46	5.2	835	94.8	0	0.0	881	100.0
Melanesia, Micronesia & Polynesia	82	6.0	1282	94.0	0	0.0	1364	100.0
Southern Europe	46	5.2	831	94.5	2	0.2	879	100.0
Western & Northern Europe	25	3.0	820	97.0	0	0.0	845	100.0
Eastern Europe, Russia, Central Asian & Baltic States	46	6.1	710	93.7	2	0.3	758	100.0
Middle East & Africa	282	6.1	4311	93.8	2	0.0	4595	100.0
South East Asia	329	6.2	4996	93.7	9	0.2	5334	100.0
North East Asia	214	4.9	4166	95.1	2	0.0	4382	100.0
Southern Asia	418	9.6	3932	90.3	4	0.1	4354	100.0
Other-not stated	19	6.2	286	93.5	1	0.3	306	100.0
<b>TOTAL</b>	<b>5784</b>	<b>6.0</b>	<b>90581</b>	<b>93.9</b>	<b>74</b>	<b>0.1</b>	<b>96439</b>	<b>100.0</b>

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

## Gestational age

The rate of prematurity (less than 37 weeks gestation) in 2009 was 7.3% in NSW. The highest rate of prematurity was among babies of mothers born in English-speaking countries (7.5%).

Babies of mothers born in Western and Northern Europe were least likely to be premature (Table 99).

**Table 99. Gestational age by maternal country of birth group, NSW 2009**

Country of birth group	Gestational age (weeks)							
	Less than 37		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	5462	7.5	67273	92.5	6	0.0	72741	100.0
Central & South America	65	7.4	816	92.6	0	0.0	881	100.0
Melanesia, Micronesia & Polynesia	89	6.5	1275	93.5	0	0.0	1364	100.0
Southern Europe	64	7.3	815	92.7	0	0.0	879	100.0
Western & Northern Europe	40	4.7	805	95.3	0	0.0	845	100.0
Eastern Europe, Russia, Central Asian & Baltic States	53	7.0	705	93.0	0	0.0	758	100.0
Middle East & Africa	291	6.3	4304	93.7	0	0.0	4595	100.0
South East Asia	396	7.4	4938	92.6	0	0.0	5334	100.0
North East Asia	255	5.8	4126	94.2	1	0.0	4382	100.0
Southern Asia	319	7.3	4035	92.7	0	0.0	4354	100.0
Other-not stated	28	9.2	277	90.5	1	0.3	306	100.0
<b>TOTAL</b>	<b>7062</b>	<b>7.3</b>	<b>89369</b>	<b>92.7</b>	<b>8</b>	<b>0.0</b>	<b>96439</b>	<b>100.0</b>

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

## Apgar score

In 2009, 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 100). The rates of Apgar scores of less

than 7 were highest among babies of mothers born in Southern Asia (2.8%).

**Table 100. Apgar score at five minutes by country of birth group, NSW 2009#**

Country of birth group	Apgar Score									
	0-4		5-6		7+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	792	1.1	687	0.9	71043	97.7	219	0.3	72741	100.0
Central & South America	5	0.6	11	1.2	864	98.1	1	0.1	881	100.0
Melanesia, Micronesia & Polynesia	21	1.5	12	0.9	1323	97.0	8	0.6	1364	100.0
Southern Europe	8	0.9	8	0.9	861	98.0	2	0.2	879	100.0
Western & Northern Europe	3	0.4	9	1.1	832	98.5	1	0.1	845	100.0
Eastern Europe, Russia, Central Asian & Baltic States	10	1.3	4	0.5	743	98.0	1	0.1	758	100.0
Middle East & Africa	57	1.2	54	1.2	4469	97.3	15	0.3	4595	100.0
South East Asia	68	1.3	47	0.9	5206	97.6	13	0.2	5334	100.0
North East Asia	43	1.0	19	0.4	4310	98.4	10	0.2	4382	100.0
Southern Asia	76	1.7	46	1.1	4228	97.1	4	0.1	4354	100.0
Other-not stated	5	1.6	4	1.3	296	96.7	1	0.3	306	100.0
<b>TOTAL</b>	<b>1088</b>	<b>1.1</b>	<b>901</b>	<b>0.9</b>	<b>94175</b>	<b>97.7</b>	<b>275</b>	<b>0.3</b>	<b>96439</b>	<b>100.0</b>

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

## Infant feeding

The highest rates of full breastfeeding in 2009 were among babies of mothers born in Western and Northern Europe (91.5%), followed by babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States (88.9%).

The lowest rates of full breastfeeding were among babies of mothers born in South East Asia (72.0%) and North East Asia (72.3%) (Table 101).

**Table 101. Infant feeding among liveborn babies by country of birth group, NSW 2009#**

Country of birth group	Infant feeding									
	Full breast-feeding		Any breast-feeding		Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	58597	80.6	3318	4.6	9869	13.6	957	1.3	72741	100.0
Central & South America	761	86.4	63	7.2	51	5.8	6	0.7	881	100.0
Melanesia, Micronesia & Polynesia	1015	74.4	154	11.3	171	12.5	24	1.8	1364	100.0
Southern Europe	704	80.1	84	9.6	81	9.2	10	1.1	879	100.0
Western & Northern Europe	773	91.5	28	3.3	37	4.4	7	0.8	845	100.0
Eastern Europe, Russia, Central Asian & Baltic States	674	88.9	38	5.0	36	4.7	10	1.3	758	100.0
Middle East & Africa	3724	81.0	440	9.6	355	7.7	76	1.7	4595	100.0
South East Asia	3839	72.0	899	16.9	532	10.0	64	1.2	5334	100.0
North East Asia	3168	72.3	881	20.1	284	6.5	49	1.1	4382	100.0
Southern Asia	3659	84.0	488	11.2	119	2.7	88	2.0	4354	100.0
Other-not stated	243	79.4	30	9.8	24	7.8	9	2.9	306	100.0
<b>TOTAL</b>	<b>77157</b>	<b>80.0</b>	<b>6423</b>	<b>6.7</b>	<b>11559</b>	<b>12.0</b>	<b>1300</b>	<b>1.3</b>	<b>96439</b>	<b>100.0</b>

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



## Perinatal outcomes

In 2009, 99% of babies born in NSW and reported to the PDC were born alive and survived until discharge from the hospital of birth (Table 102). The perinatal mortality rate was highest among babies of mothers born in Southern Asia (14.5 per 1,000) and lowest among babies of mothers born in Central and South America (5.7 per 1,000). However, as the majority of births are to mothers born in English speaking countries,

the majority of perinatal deaths occurred among these babies ( $n=602$ , 71.8%). There were further 63 deaths among babies of mothers born in Southern Asian countries, and 53 deaths among babies of mothers born in Middle Eastern and African Countries—comprising 7.5% and 6.0% respectively of all perinatal deaths reported to the PDC.

**Table 102. Perinatal mortality by country of birth group, NSW 2009#**

Country of birth group	Perinatal outcome												Perinatal mortality rate/1000 births##
	Liveborn surviving		Stillborn		Neonatal death		Death-age not stated		Not stated		Total births		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
English speaking	72134	99.2	420	0.6	182	0.3	2	0.0	3	0.0	72741	100.0	8.3
Central & South America	876	99.4	5	0.6	0	0.0	0	0.0	0	0.0	881	100.0	5.7
Melanesia, Micronesia & Polynesia	1348	98.8	14	1.0	2	0.1	0	0.0	0	0.0	1364	100.0	11.7
Southern Europe	870	99.0	7	0.8	2	0.2	0	0.0	0	0.0	879	100.0	10.2
Western & Northern Europe	842	99.6	2	0.2	0	0.0	0	0.0	1	0.1	845	100.0	-
Eastern Europe, Russia, Central Asian & Baltic States	750	98.9	6	0.8	2	0.3	0	0.0	0	0.0	758	100.0	10.6
Middle East & Africa	4542	98.8	33	0.7	20	0.4	0	0.0	0	0.0	4595	100.0	11.5
South East Asia	5289	99.2	32	0.6	13	0.2	0	0.0	0	0.0	5334	100.0	8.4
North East Asia	4352	99.3	21	0.5	9	0.2	0	0.0	0	0.0	4382	100.0	6.8
Southern Asia	4291	98.6	53	1.2	10	0.2	0	0.0	0	0.0	4354	100.0	14.5
Other-not stated	301	98.4	5	1.6	0	0.0	0	0.0	0	0.0	306	100.0	-
<b>TOTAL</b>	<b>95595</b>	<b>99.1</b>	<b>598</b>	<b>0.6</b>	<b>240</b>	<b>0.2</b>	<b>2</b>	<b>0.0</b>	<b>4</b>	<b>0.0</b>	<b>96439</b>	<b>100.0</b>	<b>8.7</b>

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.

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