

## 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 (p. 18).

### Trends in confinements

Between 2003 and 2007, the percentage of mothers who were born in non-English speaking countries rose slightly, from 20.6 to 22.5% (Table 88). The increase was mainly among mothers born in North-East Asian and Southern Asian countries. There was a decline in the percentage of mothers born in Southern European countries.

**Table 88. Births and confinements by country-of-birth group, NSW, 2003–2007**

Country-of-birth group	2003		2004		Year 2005		2006		2007	
	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Confinements</b>										
English speaking	67 322	79.2	66 621	79.0	70 354	78.9	71 515	78.3	73 109	77.3
Central and South America	692	0.8	675	0.8	726	0.8	765	0.8	793	0.8
Melanesia, Micronesia and Polynesia	1545	1.8	1584	1.9	1485	1.7	1538	1.7	1518	1.6
Southern Europe	1040	1.2	926	1.1	927	1.0	901	1.0	843	0.9
Western and Northern Europe	660	0.8	649	0.8	688	0.8	725	0.8	782	0.8
Eastern Europe, Russia, Central Asian and Baltic States	486	0.6	518	0.6	578	0.6	564	0.6	688	0.7
Middle East and Africa	3879	4.6	3876	4.6	4080	4.6	4216	4.6	4343	4.6
South-East Asia	4673	5.5	4445	5.3	4571	5.1	4698	5.1	5166	5.5
North-East Asia	2819	3.3	2884	3.4	3117	3.5	3143	3.4	3966	4.2
Southern Asia	1746	2.1	1930	2.3	2396	2.7	2759	3.0	3191	3.4
Other/Not stated	170	0.2	180	0.2	218	0.2	491	0.5	203	0.2
<b>TOTAL</b>	<b>85 032</b>	<b>100.0</b>	<b>84 288</b>	<b>100.0</b>	<b>89 140</b>	<b>100.0</b>	<b>91 315</b>	<b>100.0</b>	<b>94 602</b>	<b>100.0</b>
<b>Births</b>										
English speaking	68 459	79.2	67 735	79.1	71 558	79.0	72 699	78.4	74 266	77.3
Central and South America	699	0.8	683	0.8	743	0.8	779	0.8	809	0.8
Melanesia, Micronesia and Polynesia	1564	1.8	1600	1.9	1508	1.7	1564	1.7	1546	1.6
Southern Europe	1064	1.2	939	1.1	945	1.0	920	1.0	858	0.9
Western and Northern Europe	668	0.8	663	0.8	700	0.8	737	0.8	795	0.8
Eastern Europe, Russia, Central Asian and Baltic States	494	0.6	525	0.6	593	0.7	573	0.6	701	0.7
Middle East and Africa	3947	4.6	3941	4.6	4142	4.6	4287	4.6	4410	4.6
South-East Asia	4733	5.5	4488	5.2	4626	5.1	4746	5.1	5206	5.4
North-East Asia	2846	3.3	2910	3.4	3144	3.5	3172	3.4	4006	4.2
Southern Asia	1766	2.0	1953	2.3	2428	2.7	2801	3.0	3225	3.4
Other/Not stated	174	0.2	189	0.2	223	0.2	503	0.5	208	0.2
<b>TOTAL</b>	<b>86 414</b>	<b>100.0</b>	<b>85 626</b>	<b>100.0</b>	<b>90 610</b>	<b>100.0</b>	<b>92 781</b>	<b>100.0</b>	<b>96 030</b>	<b>100.0</b>

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

## Maternal age

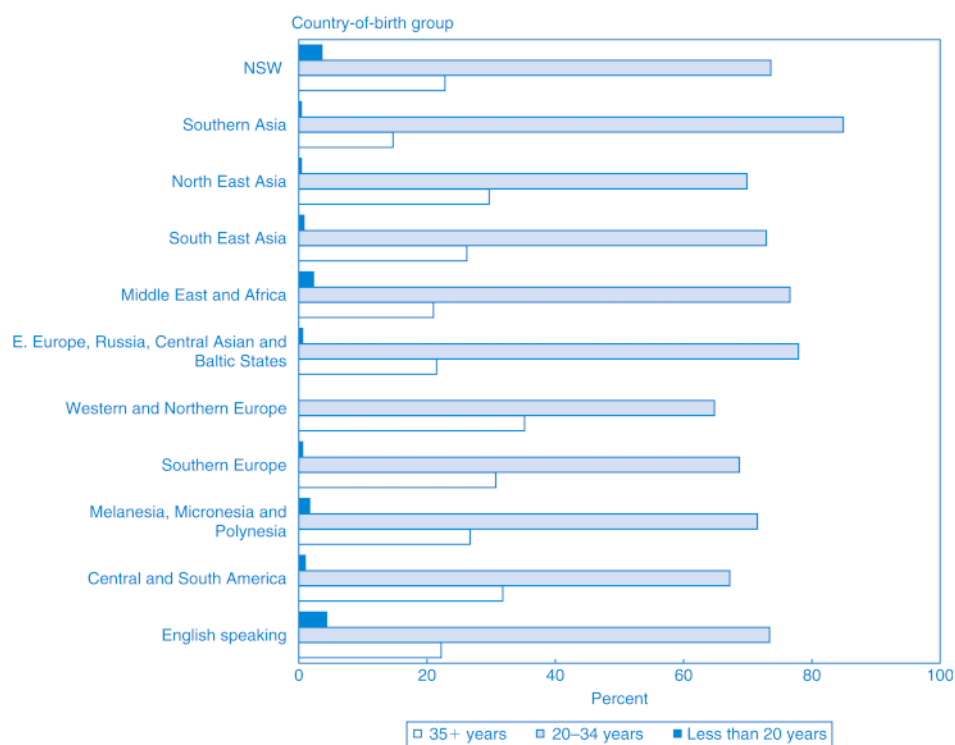
In 2007, births to teenage mothers were more common among mothers born in English-speaking countries than in non-English speaking countries (Table 89, Figure 4), whereas the largest proportions of mothers aged 35 years

and over were among mothers born in Western and Northern Europe (35.2%) and Central and South America (31.8%).

**Table 89. Age of mother by country-of-birth group and maternal age, NSW, 2007**

Country-of-birth group	Maternal age (years)									
	12-19		20-34		35+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	3138	4.3	53 696	73.4	16 259	22.2	16	0.0	73 109	100.0
Central and South America	8	1.0	533	67.2	252	31.8	0	0.0	793	100.0
Melanesia, Micronesia and Polynesia	26	1.7	1086	71.5	406	26.7	0	0.0	1518	100.0
Southern Europe	5	0.6	579	68.7	259	30.7	0	0.0	843	100.0
Western and Northern Europe	0	0.0	507	64.8	275	35.2	0	0.0	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	4	0.6	536	77.9	148	21.5	0	0.0	688	100.0
Middle East and Africa	102	2.3	3327	76.6	914	21.0	0	0.0	4343	100.0
South-East Asia	43	0.8	3767	72.9	1356	26.2	0	0.0	5166	100.0
North-East Asia	16	0.4	2773	69.9	1177	29.7	0	0.0	3966	100.0
Southern Asia	14	0.4	2709	84.9	468	14.7	0	0.0	3191	100.0
Other/Not stated	6	3.0	122	60.1	74	36.5	1	0.5	203	100.0
TOTAL	3362	3.6	69 635	73.6	21 588	22.8	17	0.0	94 602	100.0

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



**Figure 4. Maternal age by country-of-birth group, NSW, 2006.**

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

## Health area of residence

In 2007, the proportion of mothers born in non-English speaking countries was highest in the Sydney South West Area (38.8%), followed by the Sydney West Area (32.7%). Six percent of mothers were born in South-East Asian countries, 49.1% of whom were resident in the Sydney South West Area. Almost 5% of mothers were

born in Middle Eastern or African countries and 80.2% of these mothers were resident in the Sydney South West or Sydney West Areas. A further 4.2% of mothers were born in North-East Asian countries and 3.4% in Southern Asian countries, with the majority living in metropolitan areas (Table 90).

Table 90. Health area of residence by maternal country-of-birth group, NSW, 2007<sup>#</sup>

Health area	Country-of-birth group																						TOTAL	
	English speaking		Central and South America		Melanesia, Micronesia and Polynesia		Southern Europe		Western and Northern Europe		Eastern Europe, Russia, Central Asian and Baltic States		Middle East and Africa		South-East Asia		North-East Asia		Southern Asia		Other/Not stated			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Sydney South West	12 919	60.9	317	1.5	623	2.9	366	1.7	132	0.6	148	0.7	2103	9.9	2534	11.9	1117	5.3	887	4.2	60	0.3	21 206	100.0
South-Eastern Sydney and Illawarra	12 309	78.9	158	1.0	126	0.8	218	1.4	199	1.3	206	1.3	481	3.1	701	4.5	841	5.4	317	2.0	41	0.3	15 597	100.0
Sydney West	12 115	67.1	143	0.8	565	3.1	136	0.8	84	0.5	122	0.7	1382	7.6	1076	6.0	885	4.9	1531	8.5	29	0.2	18 068	100.0
Northern Sydney and Central Coast	11 664	80.7	129	0.9	100	0.7	80	0.6	242	1.7	158	1.1	234	1.6	551	3.8	934	6.5	312	2.2	43	0.3	14 447	100.0
Hunter and New England	10 448	96.1	14	0.1	38	0.3	17	0.2	44	0.4	16	0.1	48	0.4	133	1.2	61	0.6	44	0.4	5	0.0	10 868	100.0
North Coast	4 951	95.2	11	0.2	25	0.5	10	0.2	35	0.7	8	0.2	29	0.6	73	1.4	18	0.3	22	0.4	17	0.3	5 199	100.0
Greater Southern	3 874	95.6	5	0.1	24	0.6	9	0.2	15	0.4	8	0.2	26	0.6	26	0.6	21	0.5	42	1.0	2	0.0	4 052	100.0
Greater Western	3 969	97.7	6	0.1	–	–	–	–	5	0.1	–	–	17	0.4	23	0.6	15	0.4	12	0.3	5	0.1	4 062	100.0
Other/Not stated	860	78.0	10	0.9	–	–	–	–	26	2.4	–	–	23	2.1	49	4.4	74	6.7	24	2.2	1	0.1	1 103	100.0
TOTAL	73 109	77.3	793	0.8	1 518	1.6	843	0.9	782	0.8	688	0.7	4 343	4.6	5 166	5.5	3 966	4.2	3 191	3.4	203	0.2	94 602	100.0

Source: NSW Midwives Data Collection (HOIST), Centre for Epidemiology and Research, NSW Department of Health.  
<sup>#</sup>Data not shown for country-of-birth groups with less than five in a group.

### Duration of pregnancy at first antenatal visit

In 2007, 90.7% of all mothers commenced antenatal care before 20 weeks gestation. There was some variation among country-of-birth groups, with 91.7% of mothers born in English speaking countries commencing antenatal

care before 20 weeks gestation, compared with 78.0% of mothers born in Melanesia, Micronesia, and Polynesia, and 84.9% of mothers born in the Middle East and Africa (Table 91).

**Table 91. Duration of pregnancy at first antenatal visit by country-of-birth group, NSW, 2007**

Country-of-birth group	Duration of pregnancy at first antenatal visit (weeks)							
	0-19		20+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	67 056	91.7	4595	6.3	1458	2.0	73 109	100.0
Central and South America	720	90.8	50	6.3	23	2.9	793	100.0
Melanesia, Micronesia and Polynesia	1184	78.0	263	17.3	71	4.7	1518	100.0
Southern Europe	761	90.3	57	6.8	25	3.0	843	100.0
Western and Northern Europe	740	94.6	33	4.2	9	1.2	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	626	91.0	54	7.8	8	1.2	688	100.0
Middle East and Africa	3687	84.9	514	11.8	142	3.3	4343	100.0
South-East Asia	4468	86.5	534	10.3	164	3.2	5166	100.0
North-East Asia	3440	86.7	480	12.1	46	1.2	3966	100.0
Southern Asia	2921	91.5	233	7.3	37	1.2	3191	100.0
Other/Not stated	178	87.7	14	6.9	11	5.4	203	100.0
TOTAL	85 781	90.7	6827	7.2	1994	2.1	94 602	100.0

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

### Smoking in pregnancy

In 2007, smoking at any time during pregnancy was more common among mothers born in English speaking countries than among mothers born in non-English speaking countries (Table 92). About one in six mothers born in English speaking countries smoked at some time during pregnancy, compared with <1 in 10 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. Six percent of mothers who smoked during pregnancy quit before the second half of pregnancy. 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 with mothers born in other country-of-birth groups (Table 93).

**Table 92. Smoking in pregnancy by country-of-birth group, NSW, 2007**

Country-of-birth group	Smoking in pregnancy							
	No		Yes		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	61 360	83.9	11 435	15.6	314	0.4	73 109	100.0
Central and South America	756	95.3	31	3.9	6	0.8	793	100.0
Melanesia, Micronesia and Polynesia	1376	90.6	124	8.2	18	1.2	1518	100.0
Southern Europe	789	93.6	51	6.0	3	0.4	843	100.0
Western and Northern Europe	746	95.4	35	4.5	1	0.1	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	661	96.1	25	3.6	2	0.3	688	100.0
Middle East and Africa	4131	95.1	193	4.4	19	0.4	4343	100.0
South-East Asia	5023	97.2	118	2.3	25	0.5	5166	100.0
North-East Asia	3924	98.9	36	0.9	6	0.2	3966	100.0
Southern Asia	3172	99.4	8	0.3	11	0.3	3191	100.0
Other/Not stated	188	92.6	12	5.9	3	1.5	203	100.0
TOTAL	82 126	86.8	12 068	12.8	408	0.4	94 602	100.0

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

**Table 93. Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy and country-of-birth group, NSW, 2007**

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	609	5.3	5954	52.1	4277	37.4	594	5.2	1	0.0	11 435	100.0
Central and South America	6	19.4	19	61.3	5	16.1	1	3.2	0	0.0	31	100.0
Melanesia, Micronesia and Polynesia	9	7.3	84	67.7	22	17.7	9	7.3	0	0.0	124	100.0
Southern Europe	2	3.9	31	60.8	17	33.3	1	2.0	0	0.0	51	100.0
Western and Northern Europe	3	8.6	19	54.3	12	34.3	1	2.9	0	0.0	35	100.0
Eastern Europe, Russia, Central Asian and Baltic States	0	0.0	22	88.0	3	12.0	0	0.0	0	0.0	25	100.0
Middle East and Africa	11	5.7	112	58.0	57	29.5	13	6.7	0	0.0	193	100.0
South-East Asia	22	18.6	60	50.8	26	22.0	10	8.5	0	0.0	118	100.0
North-East Asia	9	25.0	21	58.3	4	11.1	2	5.6	0	0.0	36	100.0
Southern Asia	1	12.5	6	75.0	1	12.5	0	0.0	0	0.0	8	100.0
Other/Not stated	0	0.0	6	50.0	6	50.0	0	0.0	0	0.0	12	100.0
TOTAL	672	5.6	6334	52.5	4430	36.7	631	5.2	1	0.0	12 068	100.0

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

### Medical conditions and obstetric complications

In 2007, 1.6% 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 94). The rates of gestational diabetes in mothers born in North-East Asia, Southern Asia and Melanesia, Micronesia and

Polynesia were more than twice the rate for all mothers in NSW.

Overall, 0.8% of mothers were reported to have essential hypertension, and 5.8% were reported to have pregnancy-induced hypertension.

**Table 94. Maternal medical conditions and obstetric complications by country-of-birth group, NSW, 2007**

Country-of-birth group	Medical conditions and obstetric complications									
	Diabetes mellitus		Gestational diabetes		Condition Essential hypertension		Pregnancy-induced hypertension		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	399	0.5	2361	3.2	591	0.8	4873	6.7	73 109	100.0
Central and South America	1	0.1	36	4.5	9	1.1	26	3.3	793	100.0
Melanesia, Micronesia and Polynesia	24	1.6	132	8.7	20	1.3	67	4.4	1518	100.0
Southern Europe	5	0.6	46	5.5	9	1.1	24	2.8	843	100.0
Western and Northern Europe	5	0.6	25	3.2	3	0.4	38	4.9	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	2	0.3	31	4.5	1	0.1	26	3.8	688	100.0
Middle East and Africa	33	0.8	266	6.1	21	0.5	94	2.2	4343	100.0
South-East Asia	27	0.5	407	7.9	34	0.7	172	3.3	5166	100.0
North-East Asia	14	0.4	398	10.0	12	0.3	68	1.7	3966	100.0
Southern Asia	36	1.1	380	11.9	19	0.6	129	4.0	3191	100.0
Other/Not stated	0	0	9	4.4	2	1.0	5	2.5	203	100.0
TOTAL <sup>#</sup>	546	0.6	4091	4.3	721	0.8	5522	5.8	94 602	100.0

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

<sup>#</sup>Total refers to total mothers giving birth in NSW.

## Labour and birth

Mothers born in non-English speaking countries were more likely to have a spontaneous onset of labour than mothers born in English speaking countries (Table 95). Rates of induction of labour varied from 18.3% among mothers born in South-East Asia to 28.6% 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 96). The highest caesarean section rates were among mothers born in Central and South America (37.2%) and Southern Asia (32.4%).

**Table 95. Labour onset by country-of-birth group, NSW, 2007**

Country-of-birth group	Onset of labour									
	Spontaneous		No labour <sup>#</sup>		Induced		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	40 826	55.8	12 621	17.3	19 645	26.9	17	0.0	73 109	100.0
Central and South America	453	57.1	156	19.7	184	23.2	0	0.0	793	100.0
Melanesia, Micronesia and Polynesia	893	58.8	241	15.9	384	25.3	0	0.0	1518	100.0
Southern Europe	480	56.9	134	15.9	229	27.2	0	0.0	843	100.0
Western and Northern Europe	481	61.5	130	16.6	171	21.9	0	0.0	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	425	61.8	87	12.6	176	25.6	0	0.0	688	100.0
Middle East and Africa	2763	63.6	603	13.9	976	22.5	1	0.0	4343	100.0
South-East Asia	3473	67.2	748	14.5	945	18.3	0	0.0	5166	100.0
North-East Asia	2480	62.5	632	15.9	853	21.5	1	0.0	3966	100.0
Southern Asia	1788	56.0	489	15.3	914	28.6	0	0.0	3191	100.0
Other/Not stated	121	59.6	37	18.2	44	21.7	1	0.5	203	100.0
TOTAL	54 183	57.3	15 878	16.8	24 521	25.9	20	0.0	94 602	100.0

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

<sup>#</sup>No labour indicates elective caesarean section.

**Table 96. Type of birth by country-of-birth group, NSW, 2007**

Country-of-birth group	Type of delivery															
	Normal vaginal		Forceps		Vacuum extraction		Vaginal breech		Elective caesarean section		Emergency caesarean section <sup>#</sup>		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	43 859	60.0	2415	3.3	5002	6.8	294	0.4	12 621	17.3	8853	12.1	65	0.1	73 109	100.0
Central and South America	394	49.7	32	4.0	69	8.7	2	0.3	156	19.7	139	17.5	1	0.1	793	100.0
Melanesia, Micronesia and Polynesia	978	64.4	40	2.6	65	4.3	7	0.5	241	15.9	186	12.3	1	0.1	1518	100.0
Southern Europe	513	60.9	35	4.2	61	7.2	5	0.6	134	15.9	95	11.3	0	0.0	843	100.0
Western and Northern Europe	468	59.8	29	3.7	71	9.1	2	0.3	130	16.6	82	10.5	0	0.0	782	100.0
Eastern Europe, Russia, Central Asian and Baltic States	428	62.2	39	5.7	69	10.0	1	0.1	87	12.6	64	9.3	0	0.0	688	100.0
Middle East and Africa	3002	69.1	88	2.0	227	5.2	16	0.4	603	13.9	406	9.3	1	0.0	4343	100.0
South-East Asia	3078	59.6	227	4.4	432	8.4	27	0.5	748	14.5	653	12.6	1	0.0	5166	100.0
North-East Asia	2182	55.0	173	4.4	458	11.5	11	0.3	632	15.9	510	12.9	0	0.0	3966	100.0
Southern Asia	1644	51.5	185	5.8	313	9.8	14	0.4	489	15.3	546	17.1	0	0.0	3191	100.0
Other/Not stated	102	50.2	10	4.9	12	5.9	2	1.0	37	18.2	38	18.7	2	1.0	203	100.0
TOTAL	56 648	59.9	3273	3.5	6779	7.2	381	0.4	15 878	16.8	11 572	12.2	71	0.1	94 602	100.0

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

<sup>#</sup>Emergency caesarean section includes caesarean sections where the onset of labour was not stated.

## Birth weight

The rate of low birth weight (<2500 g) in 2007 was 6.1% in NSW. The highest rates of low birth weight were in babies of mothers born in Southern Asia (9.1%) and Melanesia,

Micronesia and Polynesia (7.4%) (Table 97). Babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States were least likely to be of low birth weight.

**Table 97. Birth weight by maternal country-of-birth group, NSW, 2007**

Country-of-birth group	Birth weight (g)							
	<2500		2500+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	4482	6.0	69 697	93.8	87	0.1	74 266	100.0
Central and South America	38	4.7	771	95.3	0	0.0	809	100.0
Melanesia, Micronesia and Polynesia	114	7.4	1431	92.6	1	0.1	1546	100.0
Southern Europe	51	5.9	807	94.1	0	0.0	858	100.0
Western and Northern Europe	33	4.2	761	95.7	1	0.1	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	26	3.7	675	96.3	0	0.0	701	100.0
Middle East and Africa	253	5.7	4153	94.2	4	0.1	4410	100.0
South-East Asia	326	6.3	4871	93.6	9	0.2	5206	100.0
North-East Asia	191	4.8	3812	95.2	3	0.1	4006	100.0
Southern Asia	293	9.1	2930	90.9	2	0.1	3225	100.0
Other/Not stated	42	20.2	165	79.3	1	0.5	208	100.0
TOTAL	5849	6.1	90 073	93.8	108	0.1	96 030	100.0

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

## Gestational age

The rate of prematurity (<37 weeks gestation) in 2007 was 7.4% in NSW. The highest rate of prematurity was among babies of mothers born in Melanesia, Micronesia and

Polynesia (8.3%). Babies of mothers born in North-East Asia were least likely to be premature (Table 98).

**Table 98. Gestational age by maternal country-of-birth group, NSW, 2007**

Country-of-birth group	Gestational age (weeks)							
	<37		37+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%
English speaking	5577	7.5	68 654	92.4	35	0.0	74 266	100.0
Central and South America	57	7.0	752	93.0	0	0.0	809	100.0
Melanesia, Micronesia and Polynesia	128	8.3	1417	91.7	1	0.1	1546	100.0
Southern Europe	61	7.1	797	92.9	0	0.0	858	100.0
Western and Northern Europe	51	6.4	743	93.5	1	0.1	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	37	5.3	664	94.7	0	0.0	701	100.0
Middle East and Africa	300	6.8	4108	93.2	2	0.0	4410	100.0
South-East Asia	390	7.5	4814	92.5	2	0.0	5206	100.0
North-East Asia	190	4.7	3815	95.2	1	0.0	4006	100.0
Southern Asia	240	7.4	2985	92.6	0	0.0	3225	100.0
Other/Not stated	39	18.8	169	81.3	0	0.0	208	100.0
TOTAL	7070	7.4	88 918	92.6	42	0.0	96 030	100.0

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

## Apgar score

In 2007, 2.1% of all babies (including stillborn babies) had an Apgar score of <7 at 5 min and 1.1% had a score of <4 (Table 99). The rate of Apgar scores of <7 was highest among babies of mothers born in Western and Northern Europe (2.5%) and Melanesia, Micronesia and Polynesia (2.4%).

**Table 99. Apgar score at 5 min by maternal country-of-birth group, NSW, 2007#**

Country-of-birth group	0-4		5-6		Apgar score 7+		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	836	1.1	721	1.0	72 431	97.5	278	0.4	74 266	100.0
Central and South America	7	0.9	8	1.0	793	98.0	1	0.1	809	100.0
Melanesia, Micronesia and Polynesia	24	1.6	13	0.8	1501	97.1	8	0.5	1546	100.0
Southern Europe	9	1.0	6	0.7	840	97.9	3	0.3	858	100.0
Western and Northern Europe	12	1.5	8	1.0	774	97.4	1	0.1	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	4	0.6	5	0.7	689	98.3	3	0.4	701	100.0
Middle East and Africa	65	1.5	31	0.7	4297	97.4	17	0.4	4410	100.0
South-East Asia	65	1.2	53	1.0	5074	97.5	14	0.3	5206	100.0
North-East Asia	30	0.7	23	0.6	3946	98.5	7	0.2	4006	100.0
Southern Asia	35	1.1	39	1.2	3142	97.4	9	0.3	3225	100.0
Other/Not stated	6	2.9	3	1.4	198	95.2	1	0.5	208	100.0
TOTAL	1093	1.1	910	0.9	93 685	97.6	342	0.4	96 030	100.0

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

## Infant feeding

The highest rates of full breastfeeding in 2007 were among babies of mothers born in Eastern Europe, Russia, Central Asian and Baltic States (87.2%), followed by babies of mothers born in Western and Northern Europe (85.2%). The lowest rates of full breastfeeding were among babies of mothers born in North-East Asia (71.3%) and Melanesia, Micronesia and Polynesia (71.5%) (Table 100).

**Table 100. Infant feeding among live born babies by country-of-birth group, NSW, 2007**

Country-of-birth group	Full breast-feeding		Any breast-feeding		Infant feeding Infant formula only		Not stated		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
English speaking	58 604	78.9	3213	4.3	10 455	14.1	1994	2.7	74 266	100.0
Central and South America	669	82.7	79	9.8	50	6.2	11	1.4	809	100.0
Melanesia, Micronesia and Polynesia	1106	71.5	179	11.6	217	14.0	44	2.8	1546	100.0
Southern Europe	653	76.1	78	9.1	110	12.8	17	2.0	858	100.0
Western and Northern Europe	677	85.2	43	5.4	49	6.2	26	3.3	795	100.0
Eastern Europe, Russia, Central Asian and Baltic States	611	87.2	46	6.6	35	5.0	9	1.3	701	100.0
Middle East and Africa	3489	79.1	430	9.8	363	8.2	128	2.9	4410	100.0
South-East Asia	3578	68.7	917	17.6	577	11.1	134	2.6	5206	100.0
North-East Asia	2856	71.3	768	19.2	323	8.1	59	1.5	4006	100.0
Southern Asia	2696	83.6	347	10.8	101	3.1	81	2.5	3225	100.0
Other/Not stated	154	74.0	13	6.3	21	10.1	20	9.6	208	100.0
TOTAL	75 093	78.2	6113	6.4	12 301	12.8	2523	2.6	96 030	100.0

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



## Perinatal outcomes

In 2007, 99% of babies born in NSW and reported to the MDC were born alive and survived until discharge from the hospital of birth (Table 101). The perinatal mortality rate was highest among babies of mothers born in Middle Eastern and African countries (11.3 per 1000) and lowest among babies of mothers born in North East Asia (5.7 per 1000). However, because the majority of births were to

mothers born in English speaking countries, the majority of perinatal deaths occurred among these babies ( $n = 666$ , 76.7%). There were further 55 deaths among babies of mothers born in South-East Asia and 50 deaths among babies of mothers born in Middle East and African countries – comprising 6.3 and 5.8%, respectively, of all perinatal deaths reported to the MDC.

**Table 101. Perinatal outcomes by country-of-birth group, NSW, 2007#**

Country-of-birth group	Live born surviving		Stillbirth		Perinatal outcome						Total		Perinatal mortality/1000 births##
	No.	%	No.	%	Neonatal death		Death – age not stated		Not stated		No.	%	
					No.	%	No.	%	No.	%			
English speaking	73 443	98.9	475	0.6	191	0.3	8	0.0	149	0.2	74 266	100.0	9.0
Central and South America	804	99.4	3	0.4	2	0.2	0	0.0	0	0.0	809	100.0	6.2
Melanesia, Micronesia and Polynesia	1525	98.6	10	0.6	6	0.4	0	0.0	5	0.3	1546	100.0	10.3
Southern Europe	851	99.2	5	0.6	2	0.2	0	0.0	0	0.0	858	100.0	8.2
Western and Northern Europe	787	99.0	5	0.6	3	0.4	0	0.0	0	0.0	795	100.0	10.1
Eastern Europe, Russia, Central Asian and Baltic States	697	99.4	4	0.6	0	0.0	0	0.0	0	0.0	701	100.0	–
Middle East and Africa	4351	98.7	37	0.8	13	0.3	0	0.0	9	0.2	4410	100.0	11.3
South-East Asia	5141	98.8	43	0.8	12	0.2	0	0.0	10	0.2	5206	100.0	10.6
North-East Asia	3978	99.3	19	0.5	4	0.1	0	0.0	5	0.1	4006	100.0	5.7
Southern Asia	3195	99.1	22	0.7	6	0.2	0	0.0	2	0.1	3225	100.0	8.7
Other/Not stated	201	96.6	6	2.9	0	0.0	0	0.0	1	0.5	208	100.0	–
TOTAL	94 973	98.9	629	0.7	239	0.2	8	0.0	181	0.2	96 030	100.0	9.0

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

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

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