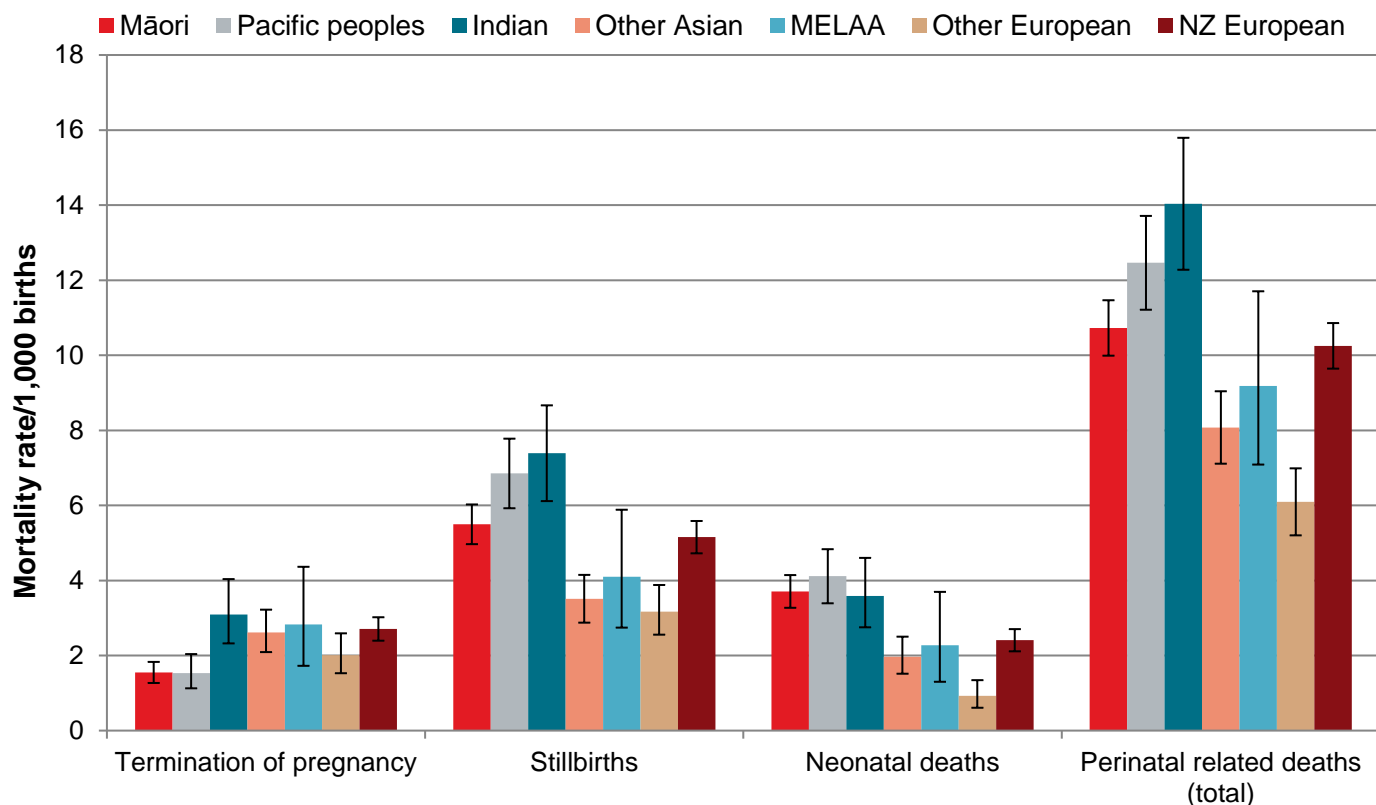


## Perinatal related mortality by prioritised ethnic group

There were significant differences in perinatal related mortality by prioritised ethnic group of both mother (Figure 3.7 and Table 3.13) and baby (Figure 3.8 and Table 3.14). These patterns were the same, regardless of whether our analysis used the mother's or baby's prioritised ethnic group.

Figure 3.7: Perinatal related mortality rates (per 1,000 births, with 95% CIs) by maternal prioritised ethnic group 2014–2018



MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract 2014–2018; Denominator: MAT births 2014–2018.

Table 3.13: Perinatal related mortality rates (per 1,000 births) by maternal prioritised ethnic group 2014–2018

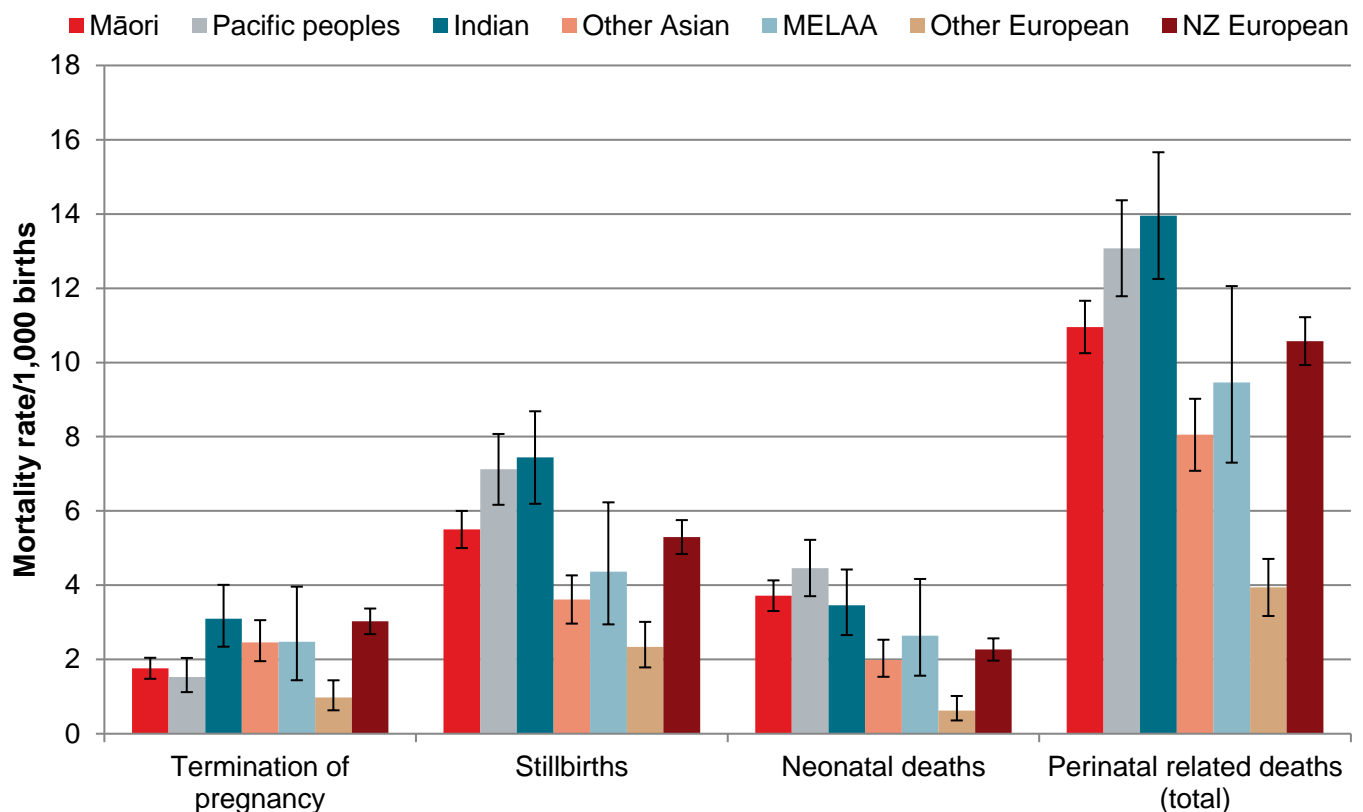
Prioritised ethnic group (mother)	Total births		Fetal deaths						Neonatal deaths			Perinatal related deaths (total)		
			Termination of pregnancy			Stillbirths								
	N=300,205*		n=673			n=1,545			n=828			n=3,046		
	N	%	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate
Māori	75,506	25.2	117	17.4	1.55	415	26.9	5.50	278	33.6	3.71	810	26.6	10.73
Pacific peoples	30,651	10.2	47	7.0	1.53	210	13.6	6.85	125	15.1	4.11	382	12.5	12.46
Asian	50,763	16.9	141	21.0	2.78	246	15.9	4.85	127	15.3	2.52	514	16.9	10.13
Indian	17,455	5.8	54	8.0	3.09	129	8.3	7.39	62	7.5	3.59	245	8.0	14.04
Other Asian	33,308	11.1	87	12.9	2.61	117	7.6	3.51	65	7.9	1.96	269	8.8	8.08
MELAA	7,078	2.4	20	3.0	2.83	29	1.9	4.10	16	1.9	2.28	65	2.1	9.18
European	136,089	45.3	348	51.7	2.56	643	41.6	4.72	282	34.1	2.09	1,273	41.8	9.35
NZ European	106,721	35.5	289	42.9	2.71	550	35.6	5.15	255	30.8	2.41	1,094	35.9	10.25
Other European	29,368	9.8	59	8.8	2.01	93	6.0	3.17	27	3.3	0.92	179	5.9	6.10

\* Includes 118 unknown maternal ethnicity among total births and 2 unknown maternal ethnicity perinatal related deaths (total).

MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract 2014–2018; Denominator: MAT births 2014–2018.

Figure 3.8: Perinatal related mortality rates (per 1,000 births, with 95% CIs) by baby's prioritised ethnic group 2014–2018



MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract 2014–2018; Denominator: MAT births 2014–2018.

Table 3.14: Perinatal related mortality rates (per 1,000 births) by baby's prioritised ethnic group 2014–2018

Prioritised ethnic group (baby)	Total births		Fetal deaths						Neonatal deaths			Perinatal related deaths (total)		
			Termination of pregnancy			Stillbirths								
	N=300,205*	%	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate
Māori	84,523	28.2	149	22.1	1.76	465	30.1	5.50	312	37.7	3.72	926	30.4	10.96
Pacific peoples	30,055	10.0	46	6.8	1.53	214	13.9	7.12	133	16.1	4.46	393	12.9	13.08
Asian	51,327	17.1	138	20.5	2.69	256	16.6	4.99	128	15.5	2.51	522	17.1	10.17
Indian	18,415	6.1	57	8.5	3.10	137	8.9	7.44	63	7.6	3.46	257	8.4	13.96
Other Asian	32,912	11.0	81	12.0	2.46	119	7.7	3.62	65	7.9	1.99	265	8.7	8.05
MELAA	6,871	2.3	17	2.5	2.47	30	1.9	4.37	18	2.2	2.64	65	2.1	9.46
European	123,408	41.1	321	47.7	2.60	578	37.4	4.68	236	28.5	1.93	1,135	37.3	9.20
NZ European	97,776	32.6	296	44.0	3.03	518	33.5	5.30	220	26.6	2.27	1,034	33.9	10.58
Other European	25,632	8.5	25	3.7	0.98	60	3.9	2.34	16	1.9	0.63	101	3.3	3.94

\* Includes 4,021 unknown baby's ethnicity total births and 5 unknown baby's ethnicity perinatal related deaths (total).

MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract 2014–2018; Denominator: MAT births 2014–2018.

There was significant variation in the classification of perinatal related mortality by prioritised ethnic group (Figure 3.9). For deaths due to spontaneous preterm delivery, mortality rates were statistically significantly higher in Indian, Pacific and Māori women, compared with 'All others' ('Other Asian', MELAA and all European groups). For antepartum haemorrhage, rates were statistically significantly higher in babies of Indian and Pacific mothers than those of 'All other' mothers. Deaths due to placental dysfunction were statistically significantly higher in babies of Indian women than babies of 'All other' mothers. Deaths due to maternal conditions and perinatal infection were statistically significantly higher in babies of Pacific and Māori mothers than babies of 'All other' mothers. For babies of Māori mothers, rates for specific perinatal

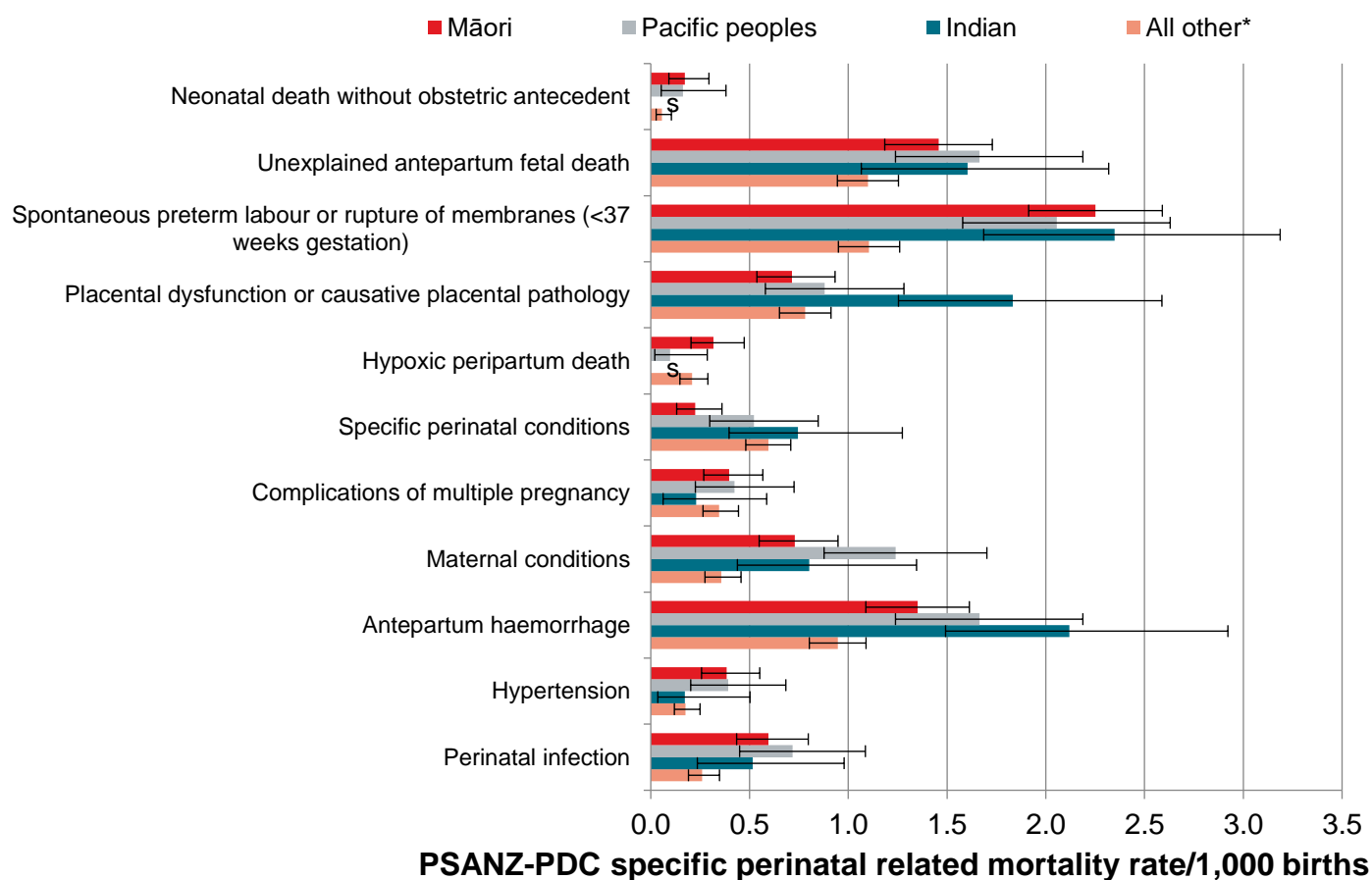
conditions were statistically significantly lower than for ‘All other’ mothers, and statistically significantly higher for hypertension.

No significant differences in mortality rates by prioritised ethnic category were evident for deaths due to hypoxic peripartum death, complications of multiple pregnancy, unexplained antepartum death, and deaths where no obstetric antecedent was identified (Figure 3.9).

While the rate of perinatal related mortality varies from year to year, few changes have occurred for most ethnic groups over the study period 2007–2018. There was some evidence that mortality rates have decreased in babies of New Zealand European mothers. However, the rates did not change for other ethnic groups. Table 3.15 presents the rates of perinatal related mortality by maternal ethnicity over time for the period 2009–2018.

Mortality rates alone do not provide a complete picture of the burden of mortality in specific communities. For communities with high fertility rates, such as Pacific and Māori communities,<sup>25</sup> the burden of perinatal deaths is greater than in communities with lower fertility rates. Therefore, these deaths have a greater impact in the community.

Figure 3.9: Perinatal death classification (PSANZ-PDC) specific perinatal related mortality rates (per 1,000 births, with 95% CIs) (excluding congenital anomalies) by maternal prioritised ethnic category 2014–2018



\* ‘All other’ includes Other Asian, Middle Eastern, Latin American, or African (MELAA), Other European, New Zealand European, Unknown/Other.

‘s’ indicates rate suppressed due to small numbers.

Sources: Numerator: PMMRC’s perinatal data extract (excluding congenital anomalies) 2014–2018; Denominator: MAT births 2014–2018.

<sup>25</sup> Statistics New Zealand. 2016. National ethnic population projections. URL: [http://archive.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/projections-overview/nat-ethnic-pop-proj.aspx](http://archive.stats.govt.nz/browse_for_stats/population/estimates_and_projections/projections-overview/nat-ethnic-pop-proj.aspx). (accessed 26 November 2020).

Table 3.15: Perinatal related mortality rates (per 1,000 births) by maternal prioritised ethnic group\* and year 2009–2018

Maternal prioritised ethnic group	2009		2010		2011		2012		2013		2014		2015		2016		2017		2018	
	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N
Māori	209	17,224	193	17,102	176	16,518	163	16,391	156	15,241	166	14,881	143	15,116	182	15,367	153	15,244	166	14,898
Pacific peoples	106	7,563	107	7,651	79	7,276	94	7,087	84	6,539	83	6,304	71	6,186	73	5,973	82	6,098	73	6,090
Asian	75	6,416	90	7,030	86	7,244	100	8,586	83	8,229	95	9,344	96	9,324	107	10,667	121	10,702	95	10,726
Indian	33	1,931	36	2,081	35	2,153	38	2,368	37	2,445	45	2,760	43	3,116	53	3,500	58	3,862	46	4,217
Other Asian	42	4,485	54	4,949	51	5,091	62	6,218	46	5,784	50	6,584	53	6,208	54	7,167	63	6,840	49	6,509
MELAA	12	1,216	5	1,322	13	1,313	16	1,274	10	1,319	15	1,311	15	1,361	8	1,401	17	1,567	10	1,438
European	328	32,739	312	32,301	313	30,838	297	29,906	267	28,771	299	28,199	253	27,772	241	27,175	220	26,850	260	26,093
NZ European	292	26,541	271	26,105	263	24,820	250	24,040	230	22,895	262	22,304	224	21,900	207	21,379	183	20,929	218	20,209
Other European	36	6,198	41	6,196	50	6,018	47	5,866	37	5,876	37	5,895	29	5,872	34	5,796	37	5,921	42	5,884
	2009		2010		2011		2012		2013		2014		2015		2016		2017		2018	
	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
Māori	12.13	11.29	10.66	9.94	10.24	11.16	9.46	11.84	10.04	11.14										
Pacific peoples	14.02	13.99	10.86	13.26	12.85	13.17	11.48	12.22	13.45	11.99										
Asian	11.69	12.80	11.87	11.65	10.09	10.17	10.30	10.03	11.31	8.86										
Indian	17.09	17.30	16.26	16.05	15.13	16.30	13.80	15.14	15.02	10.91										
Other Asian	9.36	10.91	10.02	9.97	7.95	7.59	8.54	7.53	9.21	7.53										
MELAA	9.87	3.78	9.90	12.56	7.58	11.44	11.02	5.71	10.85	6.95										
European	10.02	9.66	10.15	9.93	9.28	10.60	9.11	8.87	8.19	9.96										
NZ European	11.00	10.38	10.60	10.40	10.05	11.75	10.23	9.68	8.74	10.79										
Other European	5.81	6.62	8.31	8.01	6.30	6.28	4.94	5.87	6.25	7.14										

\* Excludes 430 unknown maternal ethnicity total births and 2 unknown maternal ethnicity perinatal related deaths (total).

MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract 2009–2018; Denominator: MAT births 2009–2018.

Spontaneous preterm labour or rupture of membranes was the leading classification of death for babies of Māori, Pacific, Indian and New Zealand European mothers. However, other leading causes varied by ethnic group. Unexplained antepartum death was a leading classification of death for babies of mothers in the Other Asian and Other European prioritised ethnic groups. For babies of Indian and Other Asian mothers, antepartum haemorrhage was a frequent cause of death. For babies of mothers in the MELAA prioritised ethnic group, antepartum haemorrhage was a leading cause of death (Table 3.16).

Table 3.16: Perinatal death classification (PSANZ-PDC) specific perinatal related mortality rates (excluding congenital anomalies) by maternal prioritised ethnic group\* 2014–2018

Perinatal death classification (PSANZ-PDC)	Māori			Pacific peoples			Asian								
	N=75,506			N=30,651			Indian			Other Asian			Total Asian		
	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate
Perinatal infection	45	6.9	0.60	22	7.3	0.72	9	4.9	0.52	8	4.9	0.24	17	4.9	0.33
Hypertension	29	4.5	0.38	12	4.0	0.39	3	1.6	0.17	5	3.0	0.15	8	2.3	0.16
Antepartum haemorrhage	102	15.7	1.35	51	16.9	1.66	37	20.0	2.12	35	21.3	1.05	72	20.6	1.42
Maternal conditions	55	8.5	0.73	38	12.6	1.24	14	7.6	0.80	9	5.5	0.27	23	6.6	0.45
Complications of multiple pregnancy	30	4.6	0.40	13	4.3	0.42	4	2.2	0.23	10	6.1	0.30	14	4.0	0.28
Specific perinatal conditions	17	2.6	0.23	16	5.3	0.52	13	7.0	0.74	10	6.1	0.30	23	6.6	0.45
Hypoxic peripartum death	24	3.7	0.32	3	1.0	0.10	<3	x	s	<3	x	s	4	1.1	0.08
Placental dysfunction or causative placental pathology	54	8.3	0.72	27	9.0	0.88	32	17.3	1.83	20	12.2	0.60	52	14.9	1.02
Spontaneous preterm labour or rupture of membranes (<37 weeks' gestation)	170	26.2	2.25	63	20.9	2.06	41	22.2	2.35	25	15.2	0.75	66	18.9	1.30
Unexplained antepartum fetal death	110	16.9	1.46	51	16.9	1.66	28	15.1	1.60	37	22.6	1.11	65	18.6	1.28
Neonatal death without obstetric antecedent	13	2.0	0.17	5	1.7	0.16	<3	x	s	3	1.8	0.09	5	1.4	0.10

Perinatal death classification (PSANZ-PDC)	MELAA			European								
	N=7,078			NZ European			Other European			Total European		
	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate
Perinatal infection	<3	x	s	30	4.1	0.28	6	5.8	0.20	36	4.3	0.26
Hypertension	<3	x	s	21	2.8	0.20	3	2.9	0.10	24	2.8	0.18
Antepartum haemorrhage	7	17.5	0.99	111	15.0	1.04	14	13.5	0.48	125	14.8	0.92
Maternal conditions	3	7.5	0.42	45	6.1	0.42	6	5.8	0.20	51	6.0	0.37
Complications of multiple pregnancy	<3	x	s	44	6.0	0.41	6	5.8	0.20	50	5.9	0.37
Specific perinatal conditions	<3	x	s	74	10.0	0.69	10	9.6	0.34	84	10.0	0.62
Hypoxic peripartum death	<3	x	s	32	4.3	0.30	<3	x	s	33	3.9	0.24
Placental dysfunction or causative placental pathology	<3	x	s	105	14.2	0.98	12	11.5	0.41	117	13.9	0.86
Spontaneous preterm labour or rupture of membranes (<37 weeks' gestation)	6	15.0	0.85	145	19.6	1.36	19	18.3	0.65	164	19.5	1.21
Unexplained antepartum fetal death	5	12.5	0.71	125	16.9	1.17	27	26.0	0.92	152	18.0	1.12
Neonatal death without obstetric antecedent	-	-	-	7	0.9	0.07	-	-	-	7	0.8	0.05

\* Excludes 134 unknown maternal ethnicity among total births (denominator) and 2 unknown maternal ethnicity perinatal related deaths (total) (numerator).

'x' indicates percentage suppressed due to small numbers.

's' indicates rate suppressed due to small numbers.

MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract (excluding congenital anomalies) 2014–2018; Denominator: MAT births 2014–2018.

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