

Contributory factors

Local review of cases showed a number of deaths had potentially avoidable aspects. Contributory factors were thought to be present in around one quarter of perinatal related deaths (excluding termination of pregnancy) (Table 3.35).

Table 3.35: Contributory factors and potentially avoidable perinatal related deaths 2018

	Fetal deaths				Neonatal deaths		Perinatal related deaths (total)	
	Termination of pregnancy		Stillbirths		n	%	n	%
	n	%	n	%				
Contributory factors								
Present	16	11.9	91	28.9	46	29.9	153	25.3
Absent	117	86.7	218	69.2	108	70.1	443	73.3
Missing data	<3	x	6	1.9	-	-	8	1.3
Potentially avoidable								
Yes	7	5.2	44	14.0	28	18.2	79	13.1
Contributory factors present but not potentially avoidable	9	6.7	42	13.3	17	11.0	68	11.3
Contributory factors present but avoidability unknown	-	-	3	1.0	<3	x	4	0.7

'x' indicates percentage suppressed due to small numbers.

Source: PMMRC's perinatal data extract 2018, local review data.

Contributory factors included organisational and/or management factors, personnel factors, and barriers to access. Of these, 'barriers to access and/or engagement with care' was the most common contributory factor cited (Table 3.36).

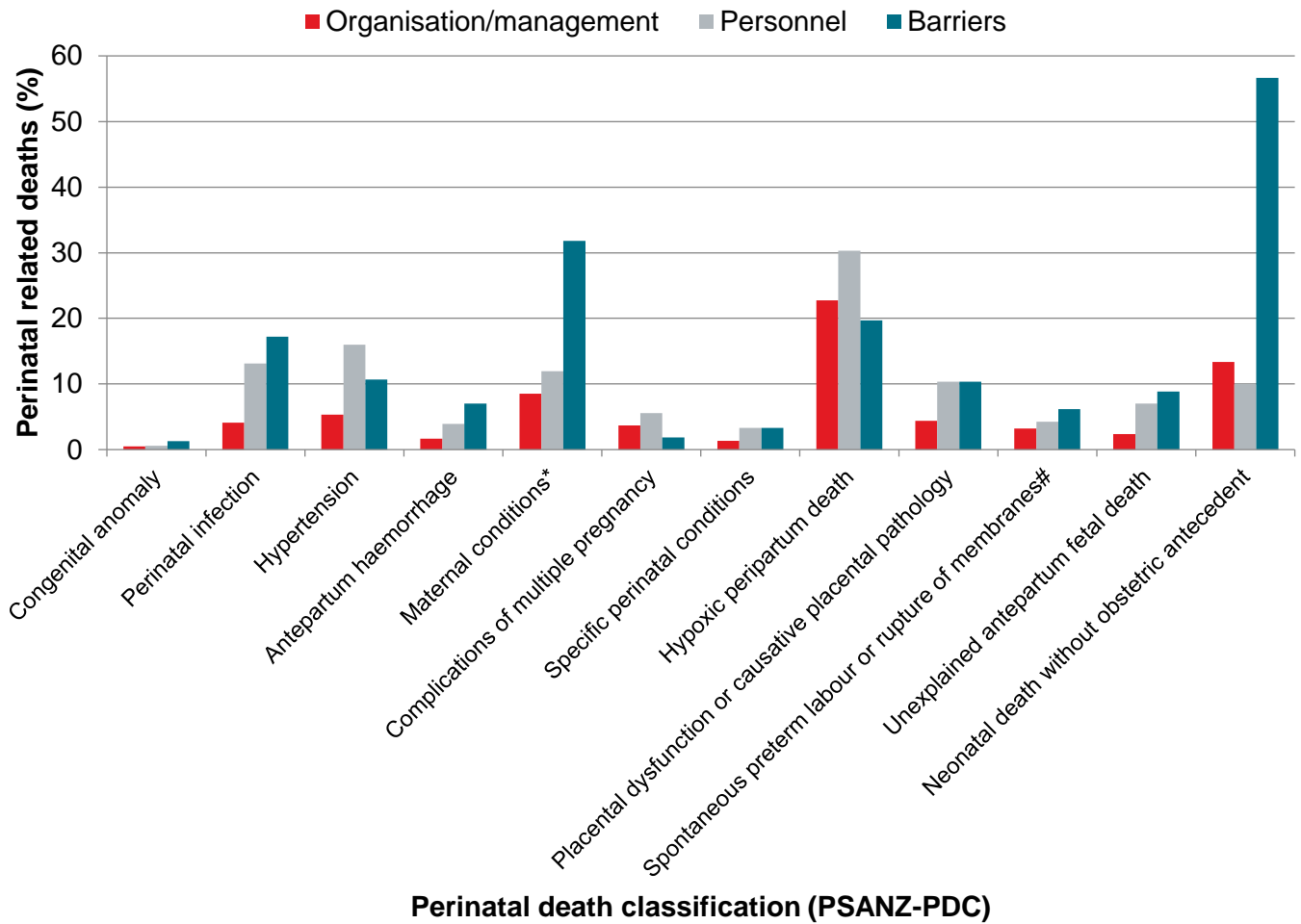
Table 3.36: Details of contributory factors among perinatal related deaths 2009–2018

Contributory factors	2009–2018	
	n	%
Any contributory factor	1,693	26.4
Organisational and/or management factors	335	5.2
Personnel factors	524	8.2
Barriers to access and/or engagement with care	1,211	18.9

Source: PMMRC's perinatal data extract 2009–2018, local review data.

Barriers to care were most notable for perinatal infection, maternal conditions and situations with no obstetric antecedent. Personnel factors were more common in hypertension and hypoxic peripartum death (Figure 3.26 and Table 3.37).

Figure 3.26: Main contributory factor(s)* in potentially avoidable perinatal related deaths (as a percentage of all deaths in each PSANZ-PDC category) by perinatal death classification (PSANZ-PDC) 2014–2018



* Excludes one death where the contributory factor was not identified.

Spontaneous preterm labour or rupture of membranes (<37 weeks' gestation).

Source: PMMRC's perinatal data extract 2014–2018, local review data.

Table 3.37: Main contributory factor(s)* in potentially avoidable perinatal related death by perinatal death classification (PSANZ-PDC) 2014–2018

Perinatal death classification (PSANZ-PDC)	Perinatal related deaths	Potentially avoidable					
		Organisation/management		Personnel		Barriers to care	
		n	%	n	%	n	%
Congenital anomaly	856	4	0.5	5	0.6	11	1.3
Perinatal infection	122	5	4.1	16	13.1	21	17.2
Hypertension	75	4	5.3	12	16.0	8	10.7
Antepartum haemorrhage	357	6	1.7	14	3.9	25	7.0
Maternal conditions	176	15	8.5	21	11.9	56	31.8
Complications of multiple pregnancy	108	4	3.7	6	5.6	<3	x
Specific perinatal conditions	151	<3	x	5	3.3	5	3.3
Hypoxic peripartum death	66	15	22.7	20	30.3	13	19.7
Placental dysfunction or causative placental pathology	251	11	4.4	26	10.4	26	10.4
Spontaneous preterm labour or rupture of membranes (<37 weeks' gestation)	470	15	3.2	20	4.3	29	6.2
Unexplained antepartum fetal death	384	9	2.3	27	7.0	34	8.9
Neonatal death without obstetric antecedent	30	4	13.3	3	10.0	17	56.7

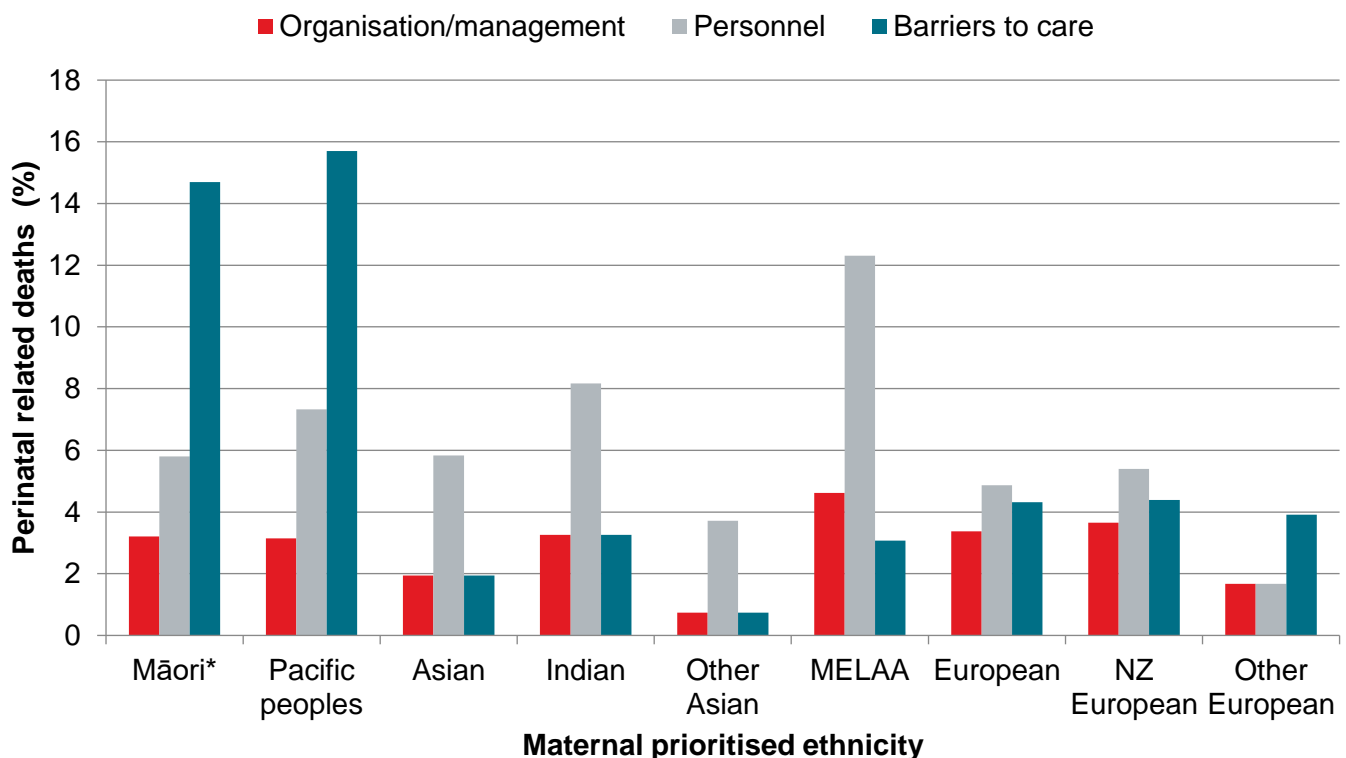
* Excludes one death where the contributory factor was not identified.

'x' indicates percentage suppressed due to small numbers.

Source: PMMRC's perinatal data extract 2014–2018, local review data.

Barriers to accessing care were frequent among Māori and Pacific mothers, while personnel was the most significant factor identified for those in Indian and MELAA ethnic groups (Figure 3.27 and Table 3.38).

Figure 3.27: Main contributory factor(s) in potentially avoidable perinatal related deaths (as a percentage of all deaths) by maternal prioritised ethnic group 2014–2018



* Excludes one death where the contributory factor was not identified.

MELAA = Middle Eastern, Latin American, or African.

Source: PMMRC's perinatal data extract 2014–2018, local review data.

Table 3.38: Main contributory factor(s) in potentially avoidable perinatal related deaths by maternal prioritised ethnic group* 2014–2018

Maternal prioritised ethnic group	Perinatal related deaths	Potentially avoidable					
		Organisation/management		Personnel		Barriers to care	
		n	%	n	%	n	%
Māori#	810	26	3.2	47	5.8	119	14.7
Pacific peoples	382	12	3.1	28	7.3	60	15.7
Asian	514	10	1.9	30	5.8	10	1.9
Indian	245	8	3.3	20	8.2	8	3.3
Other Asian	269	<3	x	10	3.7	<3	x
MELAA	65	3	4.6	8	12.3	<3	x
European	1,273	43	3.4	62	4.9	55	4.3
NZ European	1,094	40	3.7	59	5.4	48	4.4
Other European	179	3	1.7	3	1.7	7	3.9

* Excludes two perinatal related deaths (total) with unknown maternal ethnicity.

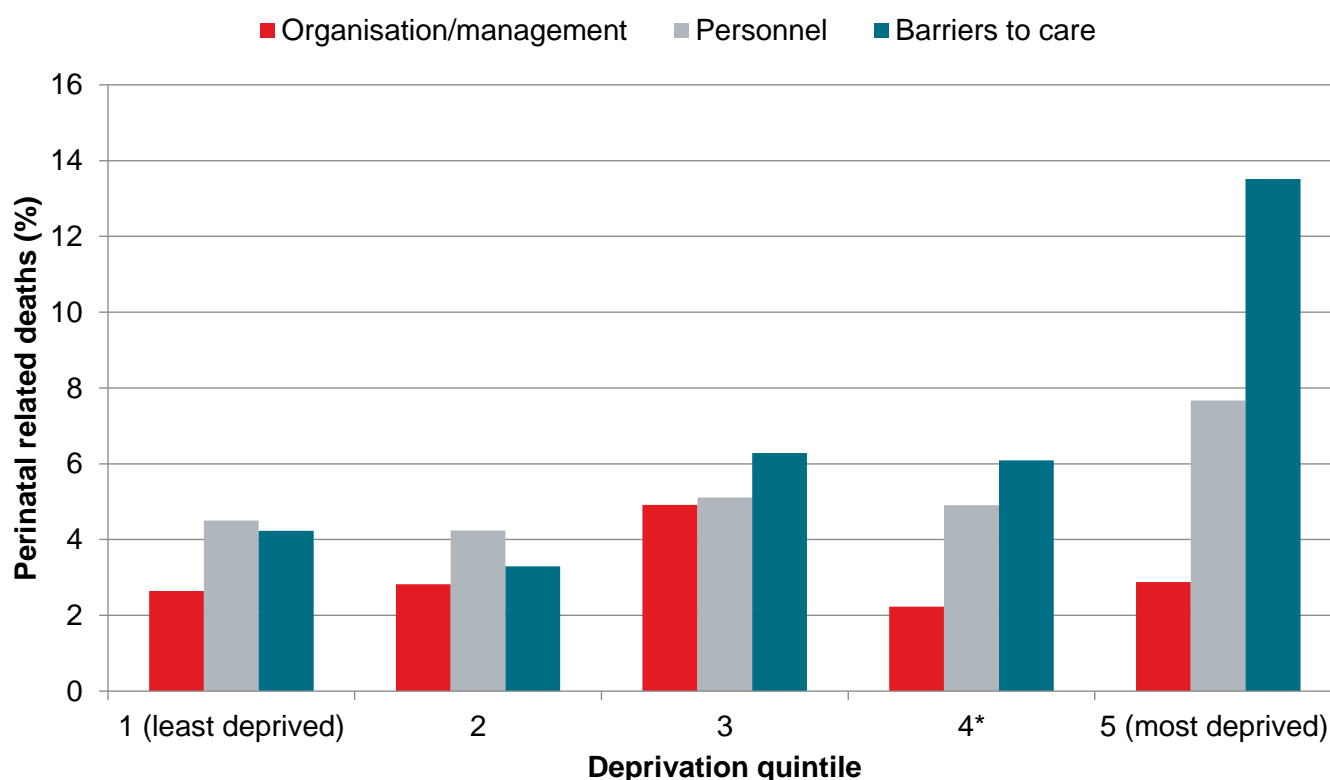
Excludes one death where the contributory factor was not identified.

'x' indicates percentage suppressed due to small numbers.

Source: PMMRC's perinatal data extract 2014–2018, local review data.

As the level of deprivation increased, barriers to accessing care became more significant, particularly among mothers living in NZDep2013 quintile 5 (Figure 3.28 and Table 3.39).

Figure 3.28: Main contributory factor(s) in potentially avoidable perinatal related deaths (as a percentage of all deaths) by NZDep2013 quintile 2014–2018



* Excludes one death where the contributory factor was not identified.

Source: PMMRC's perinatal data extract 2014–2018, local review data.

Table 3.39: Main contributory factor(s) in potentially avoidable perinatal related deaths by NZDep2013 quintile 2014–2018

Deprivation quintile	Perinatal related deaths n	Potentially avoidable					
		Organisation/ management		Personnel		Barriers to care	
		n	%	n	%	n	%
1 (least deprived)	378	10	2.6	17	4.5	16	4.2
2	425	12	2.8	18	4.2	14	3.3
3	509	25	4.9	26	5.1	32	6.3
4*	673	15	2.2	33	4.9	41	6.1
5 (most deprived)	1,043	30	2.9	80	7.7	141	13.5
Unknown	18	<3	x	<3	x	3	16.7

* Excludes one death where the contributory factor was not identified.

'x' indicates percentage suppressed due to small numbers.

Source: PMMRC's perinatal data extract 2014–2018, local review data.

Resuscitation

Resuscitation of babies born at 23–26 weeks' gestation requires careful discussion with parents about the implications of resuscitating and of not doing so. We are unable to identify the babies for whom resuscitation was discussed, offered and declined, and the babies for whom resuscitation was not discussed or offered. Table 3.40 shows the number of babies for whom resuscitation was attempted, by maternal prioritised ethnic group.

Table 3.40: Resuscitation and survival (to 28 days) by maternal prioritised ethnic group for live born babies at 23–26 weeks' gestation without congenital anomalies 2009–2018

Maternal prioritised ethnic group	Total live births*	Neonatal deaths				Total
		Resuscitation attempted		Resuscitation not attempted		
		n	%	n	%	
Māori	556	114	20.5	40	7.2	154
Pacific	230	42	18.3	27	11.7	69
Asian	209	36	17.2	15	7.2	51
Indian	89	14	15.7	12	13.5	26
Other Asian	120	22	18.3	3	2.5	25
MELAA	31	5	16.1	3	9.7	8
European	593	103	17.4	27	4.6	130
NZ European	482	87	18.0	23	4.8	110
Other European	111	16	14.4	4	3.6	20
Unknown/Other	-	-	-	-	-	-
Total	1,619	300		112		412

* Includes babies with congenital anomalies.

MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract where matched to MAT data, 23–26 weeks' gestation, 2009–2018; Denominator: Live births: MAT data 2009–2018.