

Te mate pēpi | Perinatal mortality

Neonatal death

For babies aged 20–28 weeks' gestation, extreme prematurity was the leading cause of neonatal death. The mortality rate from extreme prematurity in babies under 28 weeks' gestation was the same for Māori as for babies of New Zealand European mothers. There was some evidence of increase in deaths due to neurological conditions over the study period in these extremely preterm babies.

For babies aged 28 weeks and over, congenital abnormalities were the leading cause of death, followed by neurological conditions. Unlike babies aged less than 28 weeks, for those aged 28 weeks and over there was strong evidence of a decrease in deaths over the study period. In this age group (28 weeks and over) there was a significant increase in the rate of death from cardio-respiratory disorders but a statistically significant decrease in deaths due to neurological conditions (Table 3.7).

Table 3.7: Neonatal death classification (PSANZ-NDC) specific neonatal death rates (per 1,000 live births) 2007–2017

Neonatal death classification (PSANZ-NDC)	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		Chi-squared test for trend (p)
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	
Gestation <28 weeks	N=275		N=277		N=286		N=292		N=242		N=256		N=257		N=274		N=255		N=249		N=281		
Congenital abnormality	<3	s	-	-	<3	s	-	-	<3	s	<3	s	<3	s	<3	s	3	11.76	<3	s	4	14.23	0.093
Extreme prematurity	57	207.27	52	187.73	57	199.30	84	287.67	54	223.14	67	261.72	63	245.14	69	251.82	51	200.00	53	212.85	69	245.55	0.34
Cardio-respiratory disorders	9	32.73	9	32.49	11	38.46	16	54.79	7	28.93	10	39.06	5	19.46	12	43.80	10	39.22	6	24.10	9	32.03	0.57
Infection	6	21.82	9	32.49	5	17.48	7	23.97	7	28.93	10	39.06	5	19.46	7	25.55	<3	s	4	16.06	8	28.47	0.54
Neurological	6	21.82	3	10.83	10	34.97	<3	s	8	33.06	6	23.44	8	31.13	12	43.80	11	43.14	8	32.13	8	28.47	0.040
Gastrointestinal	<3	s	-	-	5	17.48	4	13.70	<3	s	<3	s	<3	s	<3	s	<3	s	3	12.05	4	14.23	0.68
Other	<3	s	3	10.83	3	10.49	-	-	-	-	<3	s	<3	s	<3	s	4	15.69	<3	s	<3	s	0.98
Gestation ≥28 weeks	N=63,687		N=63,718		N=63,784		N=64,108		N=61,996		N=61,609		N=59,102		N=58,938		N=58,727		N=59,443		N=59,107		
Congenital abnormality	36	0.57	43	0.67	41	0.64	46	0.72	48	0.77	36	0.58	31	0.52	43	0.73	42	0.72	33	0.56	28	0.47	0.39
Extreme prematurity	-	-	-	-	<3	s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36
Cardio-respiratory disorders	<3	s	<3	s	-	-	<3	s	4	0.06	4	0.06	<3	s	4	0.07	6	0.10	5	0.08	7	0.12	0.0019
Infection	8	0.13	12	0.19	7	0.11	12	0.19	8	0.13	7	0.11	7	0.12	8	0.14	5	0.09	10	0.17	7	0.12	0.53
Neurological	25	0.39	30	0.47	30	0.47	26	0.41	15	0.24	19	0.31	17	0.29	12	0.20	20	0.34	16	0.27	14	0.24	0.0023
Gastrointestinal	-	-	-	-	3	0.05	<3	s	-	-	<3	s	-	-	<3	s	<3	s	<3	s	-	-	0.76
Other	12	0.19	14	0.22	8	0.13	10	0.16	9	0.15	13	0.21	13	0.22	9	0.15	10	0.17	8	0.13	12	0.20	0.91

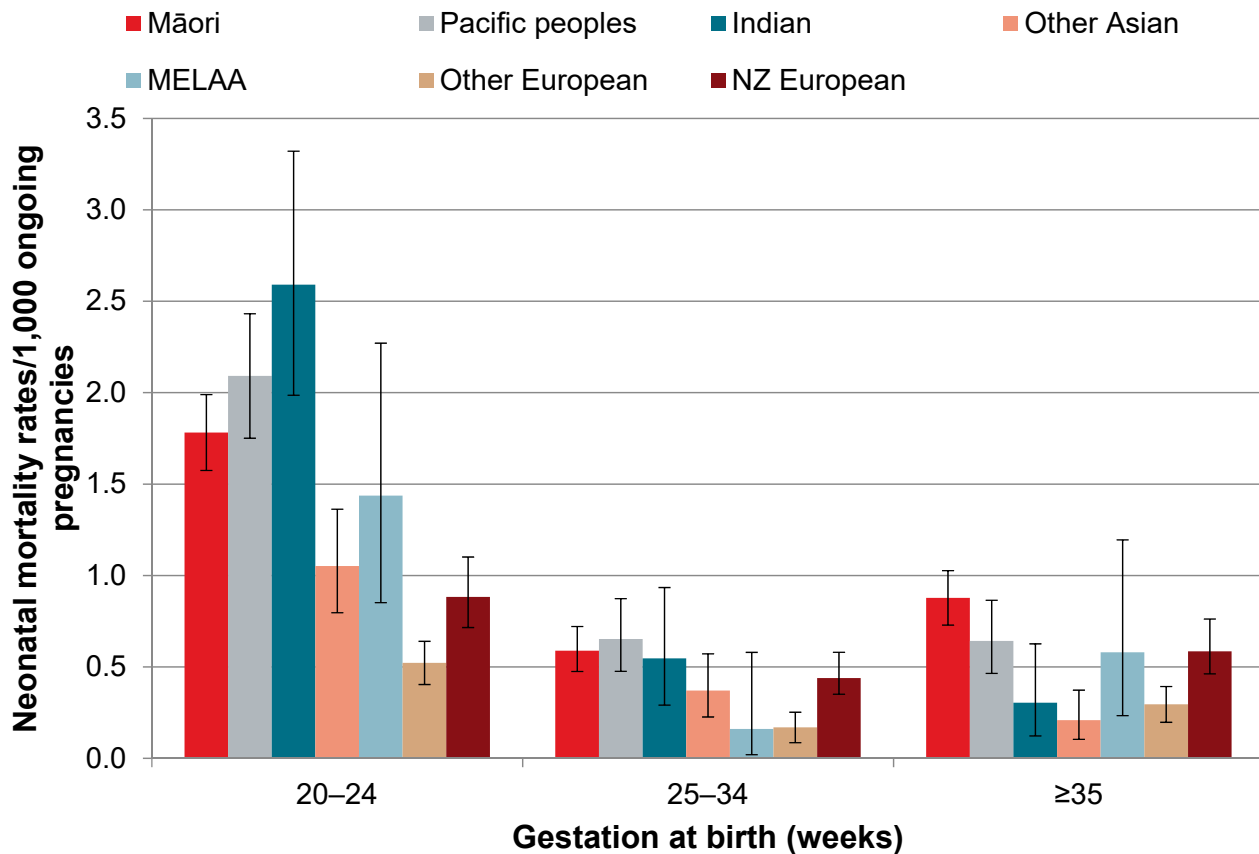
's' indicates rate suppressed due to small numbers.

Sources: Numerator: PMMRC's perinatal data extract, neonatal deaths only, 2007–2017; Denominator: MAT births excluding fetal deaths 2007–2017

Extracted from the full report at: www.hqsc.govt.nz/our-programmes/mrc/pmmrc/publications-and-resources/publication/3832

Figure 3.3 shows the neonatal mortality rate by prioritised ethnic group (congenital abnormalities excluded). This shows that the burden of mortality for all ethnic groups is in babies born at 20–24 weeks' gestation. By prioritised ethnic group, neonatal mortality rates are statistically significantly higher in babies born to mothers of Indian, Pacific and Māori ethnicities, compared with mothers of New Zealand European ethnicity. Directing more resource into understanding and preventing preterm delivery is needed to reduce these high mortality rates.

Figure 3.3: Neonatal death rates (per 1,000 ongoing pregnancies) by gestation at birth and maternal ethnicity excluding death with congenital abnormalities 2008–2017*



* Unknown/Other ethnicity not represented.

MELAA = Middle Eastern, Latin American, or African.

Sources: Numerator: PMMRC's perinatal data extract excluding congenital abnormalities 2008–2017; Denominator: MAT births 2008–2017.