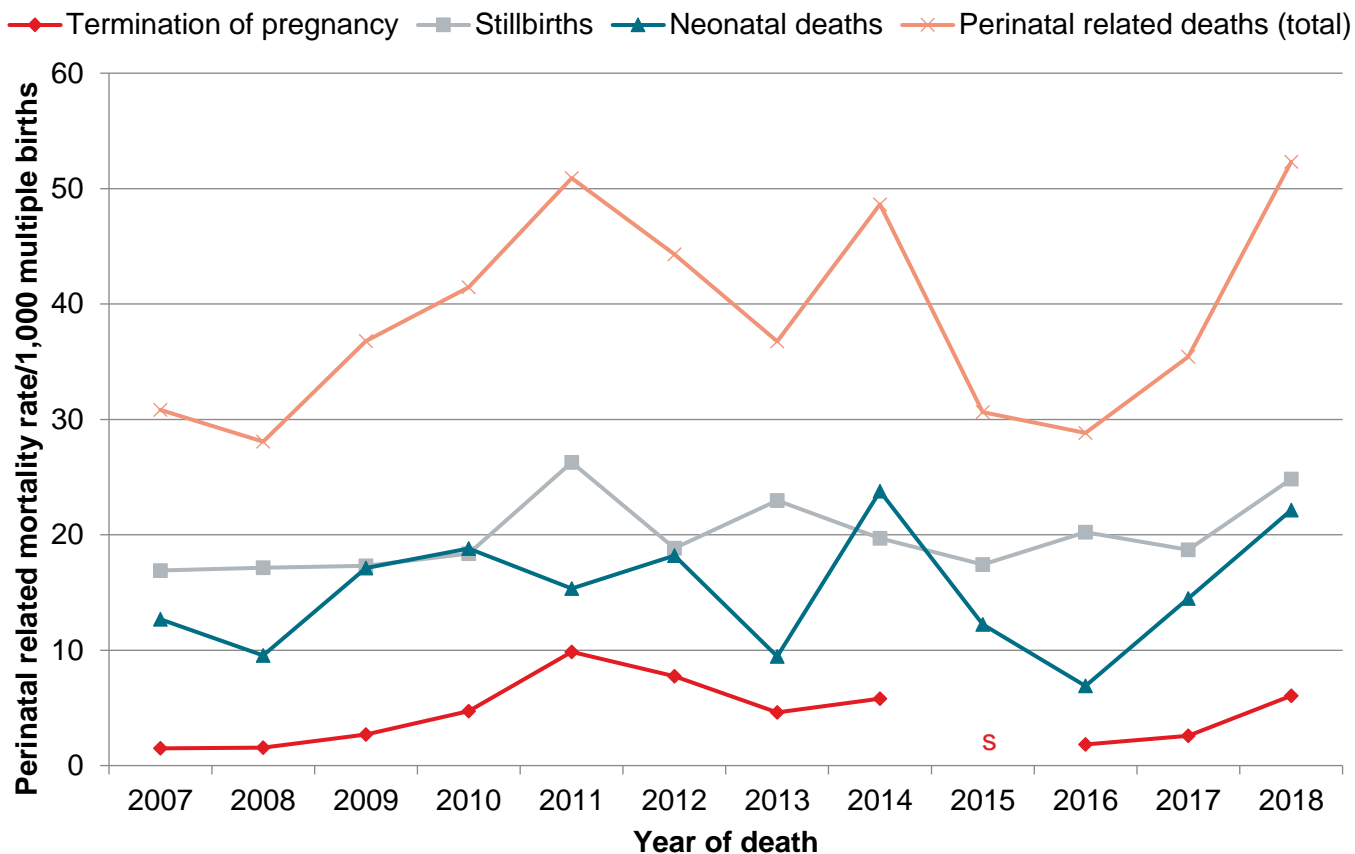


## Multiple pregnancies

Mortality rates for babies born in multiple pregnancies, at 38.6 per 1,000 births, are four times higher than those in singletons, at 9.7 per 1,000 births.<sup>43</sup> The mortality rates in multiple pregnancies have not changed significantly over the period 2007–2018 (Figure 3.25 and Table 3.32). However, there has been a statistically significant reduction in mortality in singletons over this time.<sup>44</sup>

Figure 3.25: Perinatal related mortality rates (per 1,000 births) among babies born in multiple pregnancies by year 2007–2018



Sources: Numerator: PMMRC's perinatal data extract among babies born in multiple pregnancies 2007–2018; Denominator: MAT births among babies born in multiple pregnancies 2007–2018.

<sup>43</sup> Multiple: singleton mortality rate ratio is 3.99, 95% CI 3.71–4.28.

<sup>44</sup> Chi-squared test for trend  $p=0.005$ .

Table 3.32: Perinatal related mortality rates among babies born in multiple pregnancies by year 2007–2018

Year of death	Total multiple births	Fetal deaths				Neonatal deaths		Perinatal related deaths (total)	
		Termination of pregnancy		Stillbirths		n	Rate	n	Rate
		n	Rate	n	Rate				
2007	2,011	3	1.49	34	16.91	25	12.66	62	30.83
2008	1,924	3	1.56	33	17.15	18	9.53	54	28.07
2009	1,849	5	2.70	32	17.31	31	17.11	68	36.78
2010	1,906	9	4.72	35	18.36	35	18.80	79	41.45
2011	1,827	18	9.85	48	26.27	27	15.33	93	50.90
2012	1,806	14	7.75	34	18.83	32	18.20	80	44.30
2013	1,741	8	4.60	40	22.98	16	9.45	64	36.76
2014	1,727	10	5.79	34	19.69	40	23.77	84	48.64
2015	1,665	<3	s	29	17.42	20	12.24	51	30.63
2016	1,631	3	1.84	33	20.23	11	6.90	47	28.82
2017	1,552	4	2.58	29	18.69	22	14.48	55	35.44
2018	1,491	9	6.04	37	24.82	32	22.15	78	52.31
<b>Chi-squared test for trend (p)</b>		<b>0.47</b>		<b>0.20</b>		<b>0.39</b>		<b>0.091</b>	

's' indicates rate suppressed due to small numbers.

Sources: Numerator: PMMRC's perinatal data extract among babies born in multiple pregnancies 2007–2018; Denominator: MAT births among babies born in multiple pregnancies 2007–2018.

### Death investigation

Overall, around 40% of babies had optimal investigation into the cause(s) of their death. 'Optimal investigation' is defined here as post-mortem or karyotype confirming chromosomal abnormality, or clinical examination or investigation confirming the diagnosis. What is considered to be 'optimal' will vary depending on the clinical picture. The rate of optimal investigation was higher for terminations of pregnancy, and lower for stillbirths and neonatal deaths (Table 3.33).

Table 3.33: Perinatal related deaths and completeness of perinatal death investigations 2018

Perinatal death investigation	Fetal deaths				Neonatal deaths		Perinatal related deaths (total)	
	Termination of pregnancy		Stillbirths		n	%	n	%
	n	%	n	%				
<b>Optimal investigation*</b>	67	49.63	125	39.68	58	37.66	250	41.39
Post-mortem	35	25.93	108	34.29	37	24.03	180	29.80
Karyotype	29	21.48	16	5.08	14	9.09	59	9.77
Clinical examination/investigations confirm diagnosis	7	5.19	13	4.13	9	5.84	29	4.80
<b>Partial investigations#</b>	54	40.00	139	44.13	80	51.95	273	45.20
<b>Placental pathology performed*</b>	62	45.93	235	74.60	112	72.73	409	67.72
<b>No investigation^</b>	12	8.89	46	14.60	13	8.44	71	11.75
<b>Unknown</b>	<3	x	5	1.59	3	1.95	10	1.66

\* Optimal investigation is defined as post-mortem or karyotype confirming congenital abnormality, or clinical examination or investigation confirming diagnosis. Note: more than one option can be selected for each case.

# No full post-mortem undertaken; investigations may have included placental pathology, magnetic resonance imaging (MRI), ultrasound scan or x-ray.

+ Includes both placental histology with post-mortem and as part of partial investigation.

^ No post-mortem, placental pathology, MRI, ultrasound scan or x-ray.

'x' indicates percentage not calculated due to small numbers.

Source: PMMRC's perinatal data extract 2018.

Table 3.34 shows the degree to which perinatal deaths were investigated. A higher proportion of Māori mothers was offered a post-mortem that was then not undertaken, and consequently a higher number of Māori babies had no investigation than other ethnic groups. The proportion of women who were not offered a post-mortem for their babies was reasonably consistent among prioritised ethnic groups, with the