

Table 3.23: Perinatal related mortality rates (per 1,000 births) by smoking at registration with maternity care* 2014–2018

Maternal smoking at registration	Total births		Fetal deaths						Neonatal deaths			Perinatal related deaths (total)		
			Termination of pregnancy			Stillbirths								
	N=275,887		n=550			n=1,260			n=655			n=2,465		
	N	%	n	%	Rate	n	%	Rate	n	%	Rate	n	%	Rate
Smoker	37,952	13.8	52	9.5	1.37	248	19.7	6.53	148	22.6	3.93	448	18.2	11.80
Non-smoker	237,849	86.2	498	90.5	2.09	1,012	80.3	4.25	507	77.4	2.15	2,017	81.8	8.48
Unknown	86	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Data not supplied to MAT			15			14			<3			30		

* All data limited to mothers who were registered for care with an LMC (a midwife, obstetrician or GP) claiming from the Section 88 Primary Maternity Services Notice.

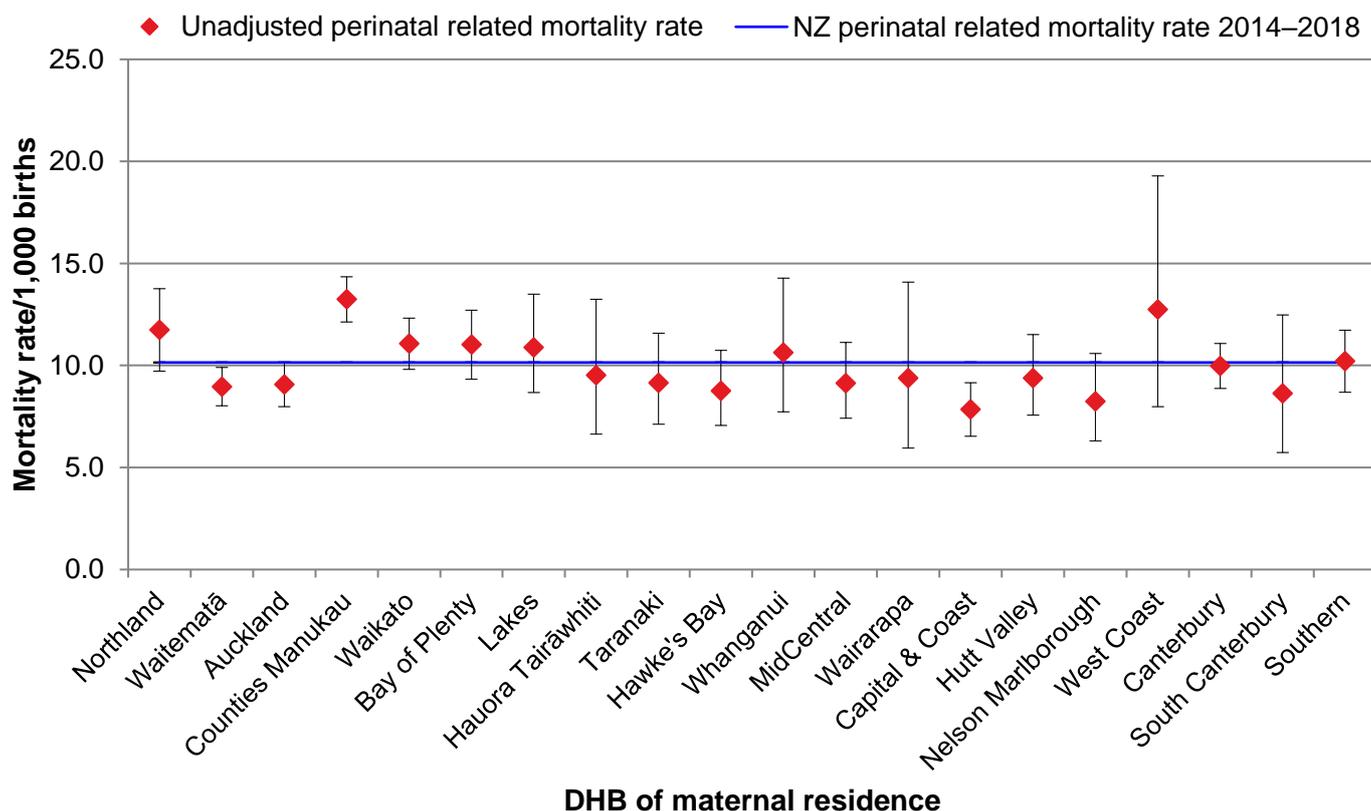
Sources: Numerator: PMMRC’s perinatal data extract where matched to MAT data, 2014–2018; Denominator: MAT births 2014–2018.

DHB of residence

Mortality rates by DHB may vary for a number of reasons. Influences on mortality rates include underlying population characteristics, geographic isolation, resourcing, delivery of care and other factors. Despite this, DHBs are charged with meeting the needs of the population they serve. Furthermore, DHBs that have a mortality rate similar to the national rate may still have groups within their region who do not experience the same level of care and outcomes as others, suggesting that an assessment of any subgroups that are experiencing worse outcomes within each DHB could be beneficial.

Perinatal related mortality rates varied by DHB of residence. The rates in Waitematā and Capital & Coast DHBs were statistically significantly lower than the national rate of 10.15 per 1,000 births. Conversely, the rates in Counties Manukau DHB were statistically significantly higher than the national rate (Figure 3.18 and Table 3.24).

Figure 3.18: Unadjusted perinatal related mortality rates (per 1,000 births, with 95% CIs) by DHB of maternal residence compared with New Zealand perinatal related mortality 2014–2018



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

Table 3.24: Perinatal related mortality rates (per 1,000 births) by DHB of maternal residence 2014–2018

DHB of maternal residence	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
Northland	11,072	3.7	27	4.0	2.44	73	4.7	6.59	30	3.6	2.73	130	4.3	11.74
Waitematā	39,041	13.0	108	16.0	2.77	164	10.6	4.20	78	9.4	2.01	350	11.5	8.96
Auckland	29,548	9.8	85	12.6	2.88	116	7.5	3.93	67	8.1	2.28	268	8.8	9.07
Counties Manukau	41,695	13.9	100	14.9	2.40	279	18.1	6.69	173	20.9	4.19	552	18.1	13.24
Waikato	26,934	9.0	63	9.4	2.34	152	9.8	5.64	83	10.0	3.11	298	9.8	11.06
Bay of Plenty	14,794	4.9	26	3.9	1.76	86	5.6	5.81	51	6.2	3.47	163	5.4	11.02
Lakes	7,624	2.5	16	2.4	2.10	48	3.1	6.30	19	2.3	2.51	83	2.7	10.89
Hauora Tairāwhiti	3,675	1.2	4	0.6	1.09	23	1.5	6.26	8	1.0	2.19	35	1.1	9.52
Taranaki	7,540	2.5	13	1.9	1.72	31	2.0	4.11	25	3.0	3.34	69	2.3	9.15
Hawke's Bay	10,506	3.5	18	2.7	1.71	55	3.6	5.24	19	2.3	1.82	92	3.0	8.76
Whanganui	4,136	1.4	6	0.9	1.45	22	1.4	5.32	16	1.9	3.89	44	1.4	10.64
MidCentral	10,732	3.6	21	3.1	1.96	44	2.8	4.10	33	4.0	3.09	98	3.2	9.13
Wairarapa	2,450	0.8	3	0.4	1.22	15	1.0	6.12	5	0.6	2.06	23	0.8	9.39
Capital & Coast	17,468	5.8	19	2.8	1.09	80	5.2	4.58	38	4.6	2.19	137	4.5	7.84
Hutt Valley	9,801	3.3	12	1.8	1.22	52	3.4	5.31	28	3.4	2.88	92	3.0	9.39
Nelson Marlborough	7,402	2.5	16	2.4	2.16	26	1.7	3.51	19	2.3	2.58	61	2.0	8.24
West Coast	1,727	0.6	3	0.4	1.74	14	0.9	8.11	5	0.6	2.92	22	0.7	12.74
Canterbury	31,582	10.5	78	11.6	2.47	158	10.2	5.00	79	9.5	2.52	315	10.3	9.97
South Canterbury	3,243	1.1	5	0.7	1.54	13	0.8	4.01	10	1.2	3.10	28	0.9	8.63
Southern	16,947	5.6	48	7.1	2.83	91	5.9	5.37	34	4.1	2.02	173	5.7	10.21
Other*	2,288	0.8	<3	x	-	3	0.2	-	8	1.0	-	13	0.4	-
Total	300,205	100.0	673	100.0	2.24	1,545	100.0	5.15	828	100.0	2.78	3,046	100.0	10.15

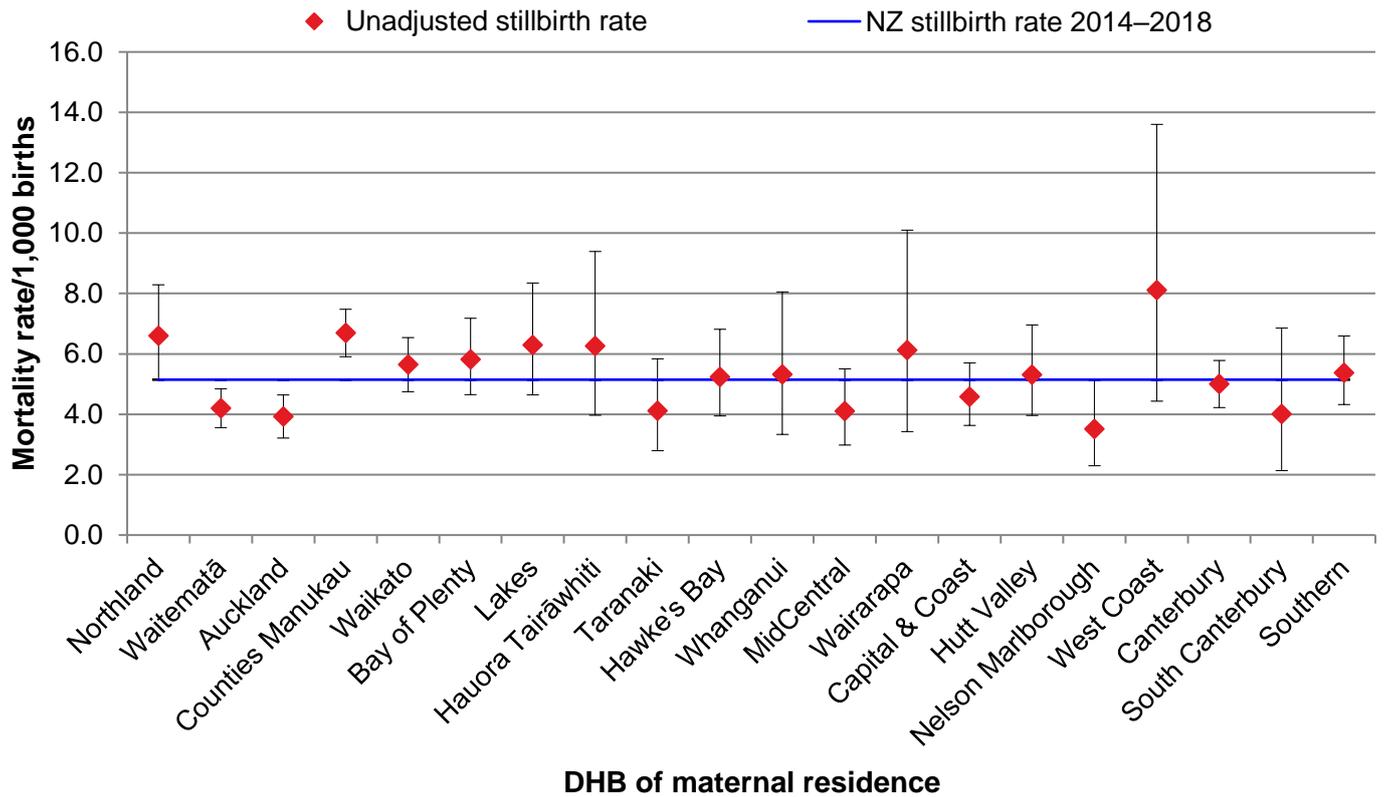
* Other includes Overseas, Unknown and Other.

'x' indicates percentage suppressed due to small numbers.

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

Stillbirth rates varied substantially by DHB of residence. Compared with mothers nationally, mothers in Waitematā and Auckland DHBs had statistically significantly lower rates. In contrast, mothers living in Northland and Counties Manukau DHBs had statistically significantly higher rates than the national rate (Figure 3.19).

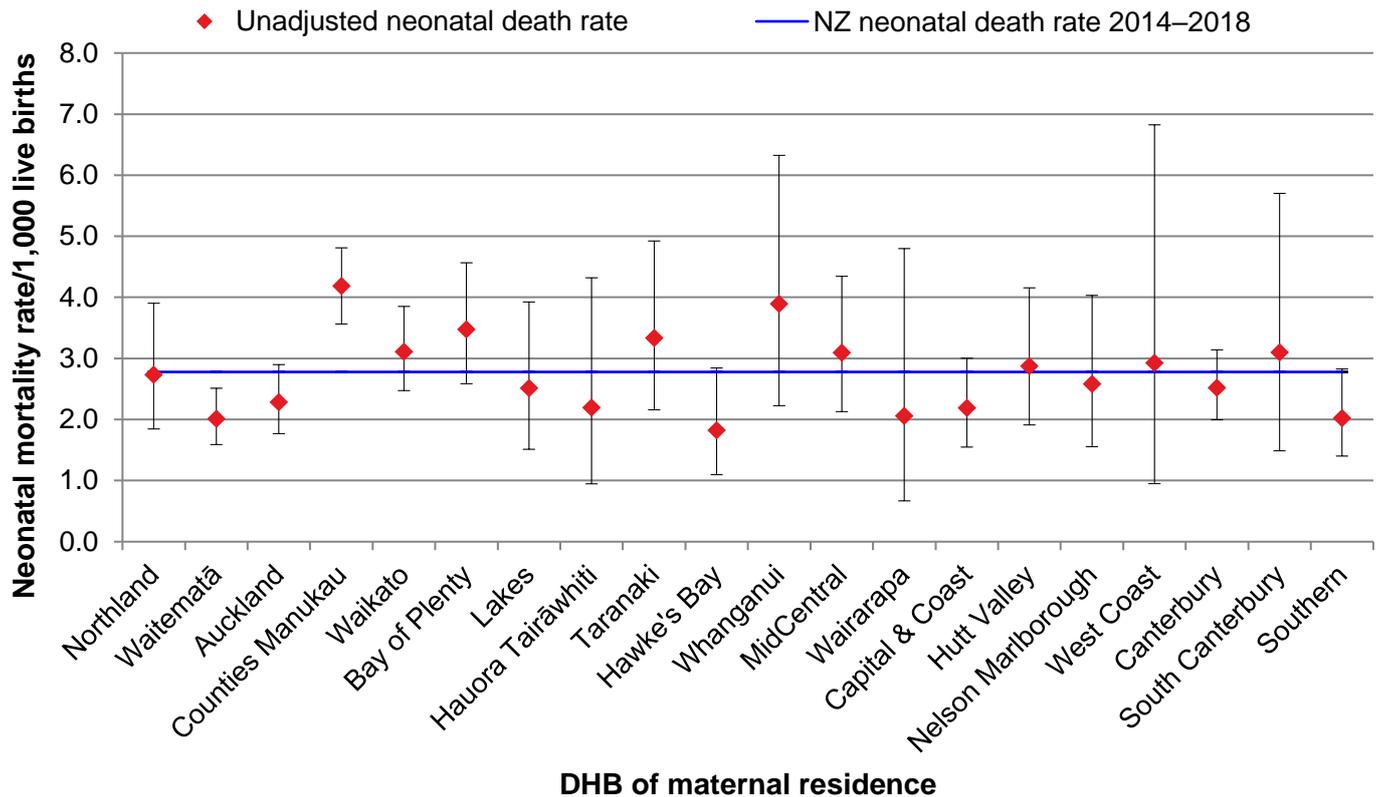
Figure 3.19: Unadjusted stillbirth rates (per 1,000 births, with 95% CIs) by DHB of maternal residence compared with average stillbirth rates 2014–2018



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

Because they involve smaller numbers, the neonatal death rates by DHB of residence are more prone to variation and have wider confidence intervals. When compared with the national rate, Waitematā DHB had a statistically significantly lower rate, while Counties Manukau DHB had a statistically significantly higher rate (Figure 3.20).

Figure 3.20: Unadjusted neonatal mortality rates (per 1,000 live births, with 95% CIs) by DHB of maternal residence compared with New Zealand neonatal mortality 2014–2018



Sources: Numerator: PMMRC's perinatal data extract, neonatal deaths only, 2014–2018; Denominator: MAT births excluding fetal deaths 2014–2018.

Gestational age and birthweight

Perinatal related mortality by gestational age has seen little change over the period 2010–2018. While the risk of death appears highest from 41 weeks' gestation onwards, this is influenced by the number of ongoing pregnancies (the denominator). As there are fewer ongoing pregnancies at this gestational age compared with 23–24 weeks' gestation, the mortality ratio (per 1,000 ongoing pregnancies) is higher from 41 weeks (Figure 3.21). While the rate of death at later gestational ages is lower (1.70 per 1,000 births at ≥41 weeks' gestation compared with 735.54 per 1,000 births at 23–24 weeks' gestation) (Table 3.25), a higher proportion of pregnancies at this gestational age is at risk of adverse outcomes.