

This report summarises pertussis notifications for the period from January to October 2018 (a cumulative summary). It includes the distribution of cases by time, age, prioritised ethnicity and DHB. Data contained within this monthly report are based on information recorded on EpiSurv by public health service staff as at 12 November 2018. Changes made to EpiSurv data after this date will not be reflected in this report. The results presented may be further updated and should be regarded as provisional. Cases still under investigation are not included in this report.

- A national pertussis outbreak is ongoing.
- No difference in pertussis notifications for the current month compared with the previous month.
- A non-significant increase in pertussis notifications for the current month compared with the same month in 2017.

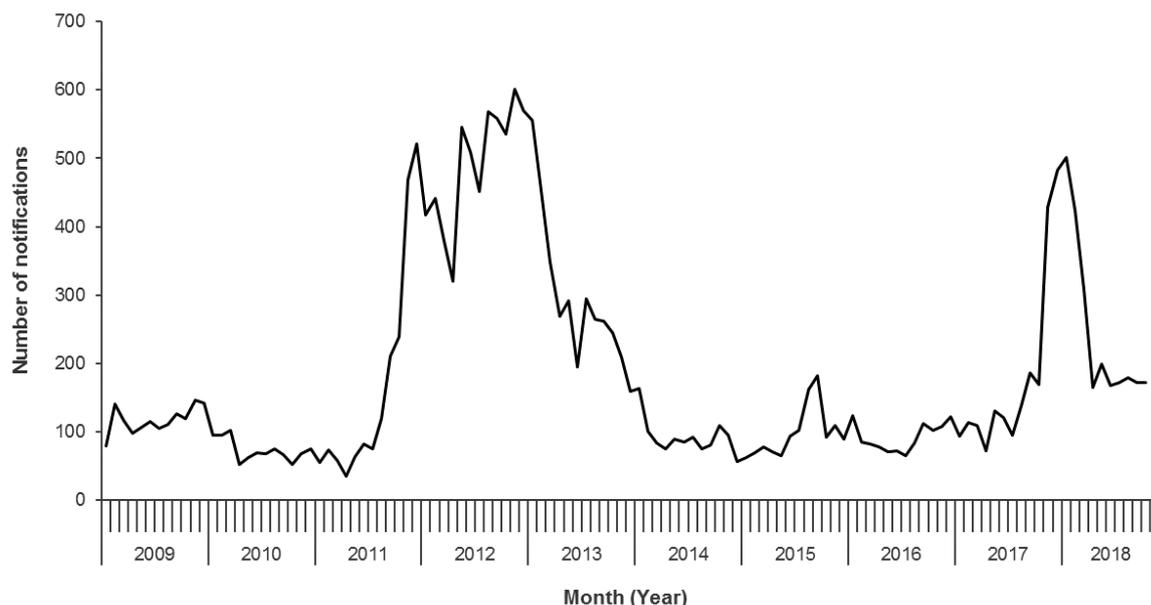
Summary

- In the past month 171 cases of pertussis were notified. This included 104 confirmed, 63 probable, and four suspect cases. Nine (5.3%) cases were aged < 1 year and four of these cases were hospitalised. Of all 171 cases, 16 cases were hospitalised and no deaths were reported.
- For the period January to October 2018:
 - there was a total of 2455 confirmed, probable and suspect cases of pertussis notified (51.2 cases per 100,000). Of the 2455 cases, 142 cases (5.8%) were aged < 1 year, of which 66 (46.5%) were hospitalised (Table 1). Of all 2455 cases, 160 cases (6.5%) were hospitalised;
 - the highest reported pertussis rates were among those aged < 1 year and 1–4 years (234.4 and 125.1 per 100,000, respectively). Pacific and Māori had the highest notification rates among those aged < 1 year (398.9 and 372.2 per 100,000 respectively), while the highest rate among children aged 1–4 years was in European or Other (165.6 per 100,000) followed by Māori (116.1 per 100,000) (Figure 2);
 - the highest numbers of pertussis cases were reported by Nelson Marlborough (345 cases), Waikato (277 cases) and Bay of Plenty (268 cases) DHBs (Table 2). The DHB with the highest rate was West Coast (409.2 per 100,000, 133 cases), followed by Nelson Marlborough (231.9 per 100,000), Bay of Plenty (115.6 per 100,000) and Wairarapa (101.1 per 100,000, 45 cases) DHBs.
- From the beginning of the current national outbreak period (commencing 16 October 2017) to the end of October 2018, there was a total of 3456 cases (2052 confirmed, 1302 probable, and 102 suspect cases).

Trends in pertussis notifications

Figure 1 shows pertussis notifications by calendar month, since January 2009. A four-to-five-year cycle can be seen with large peaks in the number of notifications in 2011/12 and at the end of 2017/early 2018.

Figure 1: Number of pertussis notifications by month and year, January 2009–October 2018



Note: Includes confirmed, probable, and suspect cases only. Cases still under investigation are excluded.

Age

The number of pertussis notifications, rates and hospitalisations by age group are shown in Table 1 (cumulative total for 2018).

Table 1: Number of (confirmed, probable and suspect) pertussis notifications, rates and hospitalisations by age group, January–October 2018

Age group (years)	Total			Hospitalised		
	October	2018 ¹	Rate ²	October	2018 ¹	Percent ³
<1	9	142	234.4	4	66	46.5
1–4	15	307	125.1	3	21	6.8
5–9	17	324	99.3	0	5	1.5
10–14	23	252	83.6	1	2	0.8
15–19	10	159	50.2	0	4	2.5
20+	97	1271	35.9	8	62	4.9
All ages	171	2455	51.2	16	160	6.5

¹ Cumulative total January–October 2018.

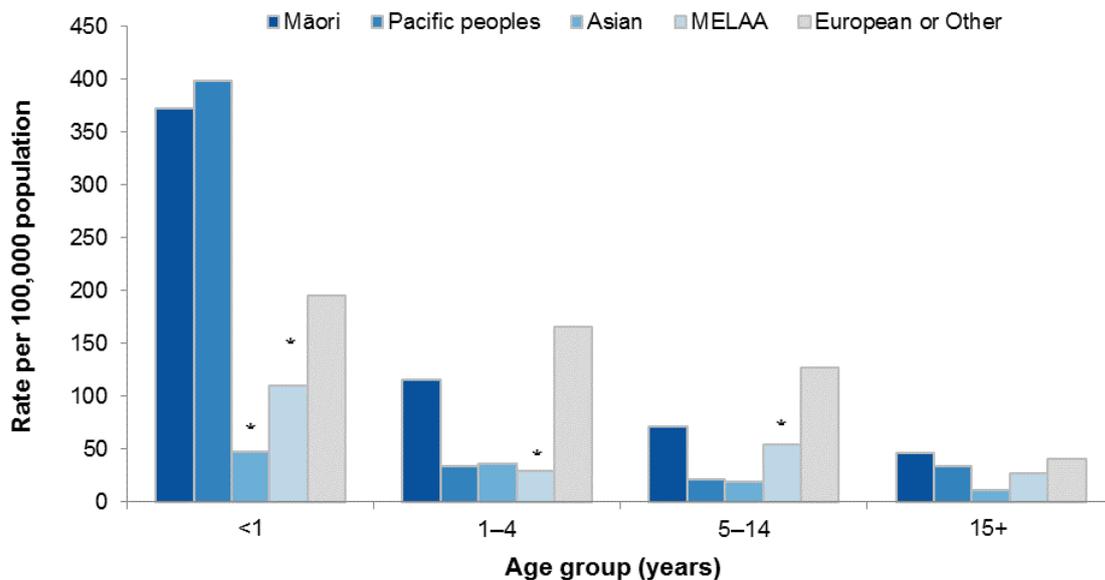
² Rate for January to October per 100,000 population calculated using 2017 mid-year population estimates.

³ Percentage of notified cases for January to October that were hospitalised.

Ethnicity

Pertussis rates by age group and ethnicity are shown in Figure 2.

Figure 2: Pertussis rates by age group and ethnicity, January–October 2018



Note: Includes confirmed, probable and suspect cases only. Ethnicity is prioritised. Rates are based on the proportion of people in each ethnic group from the 2013 Census applied to the 2017 mid-year population estimates.

MELAA: Middle Eastern/Latin American/African.

* Rate based on fewer than five cases.

District health board

The numbers and rates of pertussis notifications by DHB are shown in Table 2 below.

Table 2: Number of (confirmed, probable and suspect) pertussis notifications, rate and hospitalisations by district health board, 2018

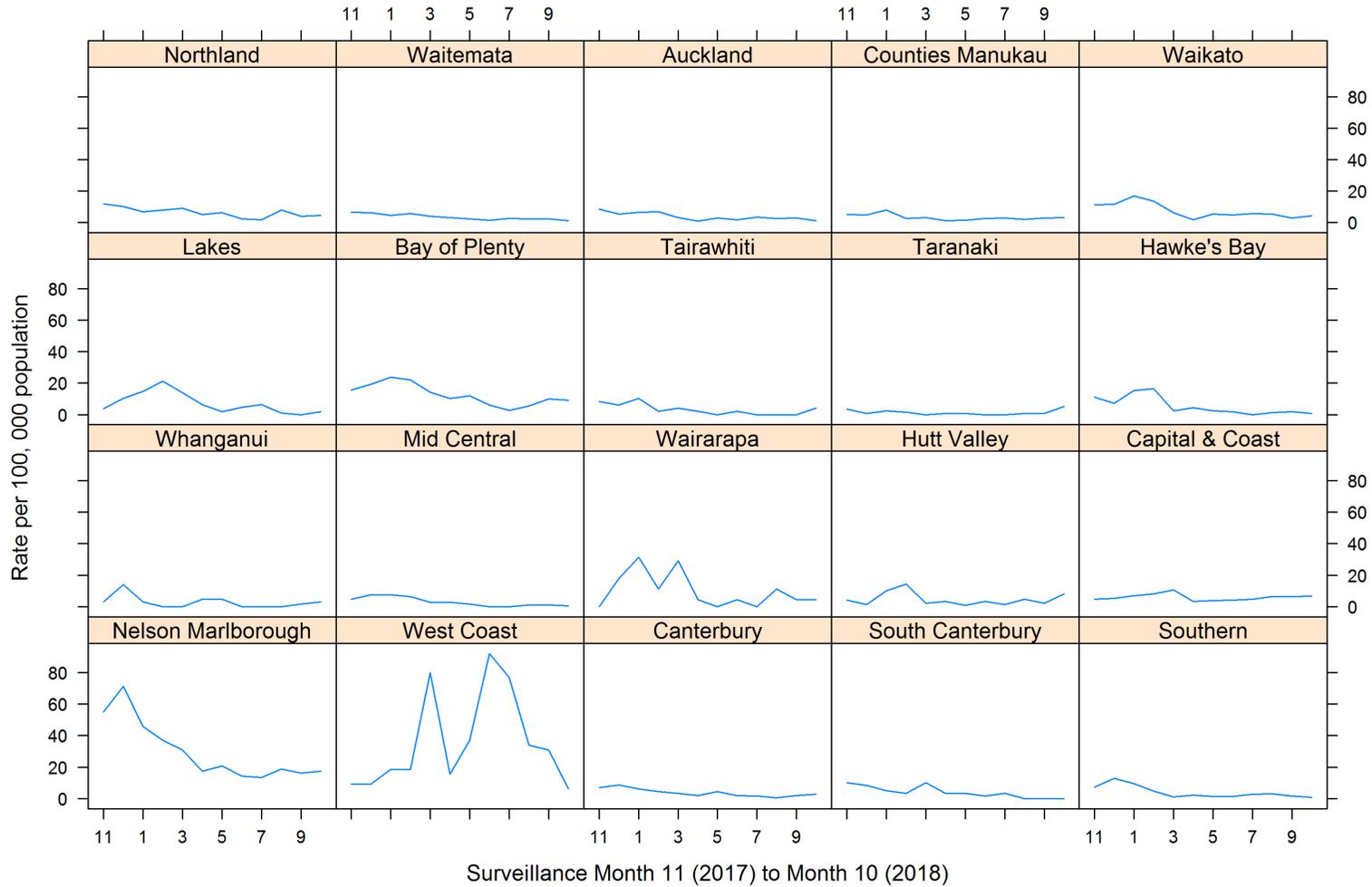
District health board	Total			Hospitalised			<1 year		
	October	2018 ¹	Rate ²	October	2018 ¹	Percent ³	October	2018 ¹	Rate ²
Northland	8	98	55.9	0	5	5.1	0	10	433.3
Waitemata	7	182	30.0	3	23	12.6	0	6	73.9
Auckland	6	173	33.0	3	18	10.4	0	3	51.2
Counties Manukau	17	166	30.4	6	38	22.9	5	20	236.8
Waikato	18	277	67.8	0	22	7.9	0	17	304.0
Lakes	2	78	71.9	0	1	1.3	1	1	66.0
Bay of Plenty	21	268	115.6	1	5	1.9	0	7	230.9
Tairāwhiti	2	12	24.7	0	0	0.0	0	0	0.0
Taranaki	6	15	12.7	0	1	6.7	0	0	0.0
Hawke's Bay	1	76	46.4	0	4	5.3	0	8	363.3
Whanganui	2	11	17.2	0	1	9.1	0	1	116.3
MidCentral	1	42	23.8	0	8	19.0	0	9	408.3
Hutt Valley	12	74	50.0	1	3	4.1	0	1	50.2
Capital & Coast	21	191	61.1	0	8	4.2	2	15	417.1
Wairarapa	2	45	101.1	0	0	0.0	1	2	384.6
Nelson Marlborough	26	345	231.9	1	4	1.2	0	22	1392.4
West Coast	2	133	409.2	1	4	3.0	0	3	828.7
Canterbury	15	161	29.2	0	9	5.6	0	12	185.6
South Canterbury	0	18	30.2	0	3	16.7	0	1	149.7
Southern	2	90	27.8	0	3	3.3	0	4	111.6
Overall	171	2455	51.2	16	160	6.5	9	142	232.0

¹ Cumulative notifications January–October 2018.

² Rate for January to October per 100,000 population calculated using 2017 mid-year population estimates.

³ Percentage of notified cases for January to October that were hospitalised.

Figure 3: Pertussis rates per 100,000 population by DHB, November 2017 to October 2018



Note: Includes confirmed, probable and suspect cases only. Rate calculated using 2017 mid-year population estimates.

This report is available at: <http://www.surv.esr.cri.nz/surveillance/PertussisRpt.php>