

This report summarises pertussis notifications for the period from January to December 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 10 January 2019. 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 significant difference in notifications compared with the previous month.
- A significant decrease in pertussis notifications for the current month compared with the same month in 2017.

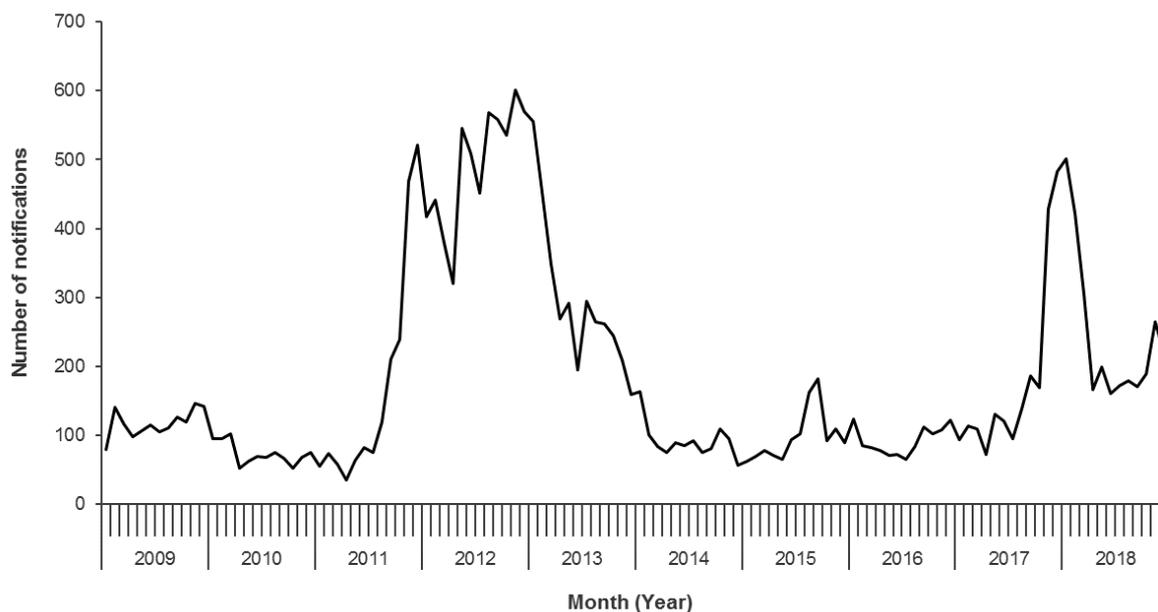
Summary

- In the past month 219 cases of pertussis were notified. This included 175 confirmed, 41 probable, and three suspect cases. Thirteen (5.9%) cases were aged < 1 year and 11 of these cases were hospitalised. Of all 219 cases, 24 cases were hospitalised and no deaths were reported.
- For the period January to December 2018:
 - there was a total of 2943 confirmed, probable and suspect cases of pertussis notified (56.5 cases per 100,000). Of the 2943 cases, 181 cases (6.2%) were aged < 1 year, of which 93 (51.4%) were hospitalised (Table 1). Of all 2943 cases, 222 cases (7.5%) were hospitalised;
 - the highest reported pertussis rates were among those aged < 1 year and 1–4 years (298.8 and 150.0 per 100,000, respectively). Pacific and Māori had the highest notification rates among those aged < 1 year (525.8 and 515.8 per 100,000 respectively), while the highest rate among children aged 1–4 years was in European or Other (194.5 per 100,000) followed by Māori (135.1 per 100,000) (Figure 2);
 - the highest numbers of pertussis cases were reported by Nelson Marlborough (369 cases), Waikato (324 cases) and Bay of Plenty (309 cases) DHBs (Table 2). The DHB with the highest rate was West Coast (467.7 per 100,000, 152 cases), followed by Nelson Marlborough (248.0 per 100,000), Wairarapa (148.3 per 100,000, 66 cases) and Bay of Plenty (133.2 per 100,000) DHBs.
- From the beginning of the current national outbreak period (commencing 16 October 2017) to the end of December 2018, there was a total of 3944 cases (2456 confirmed, 1381 probable, and 107 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–December 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–December 2018

Age group (years)	Total			Hospitalised		
	December	2018 ¹	Rate ²	December	2018 ¹	Percent ³
<1	13	181	298.8	11	93	51.4
1–4	27	368	150.0	0	27	7.3
5–9	35	408	125.0	1	6	1.5
10–14	28	307	101.9	1	3	1.0
15–19	14	191	60.3	0	4	2.1
20+	102	1488	42.0	11	89	6.0
All ages	219	2943	61.4	24	222	7.5

¹ Cumulative total January–December 2018.

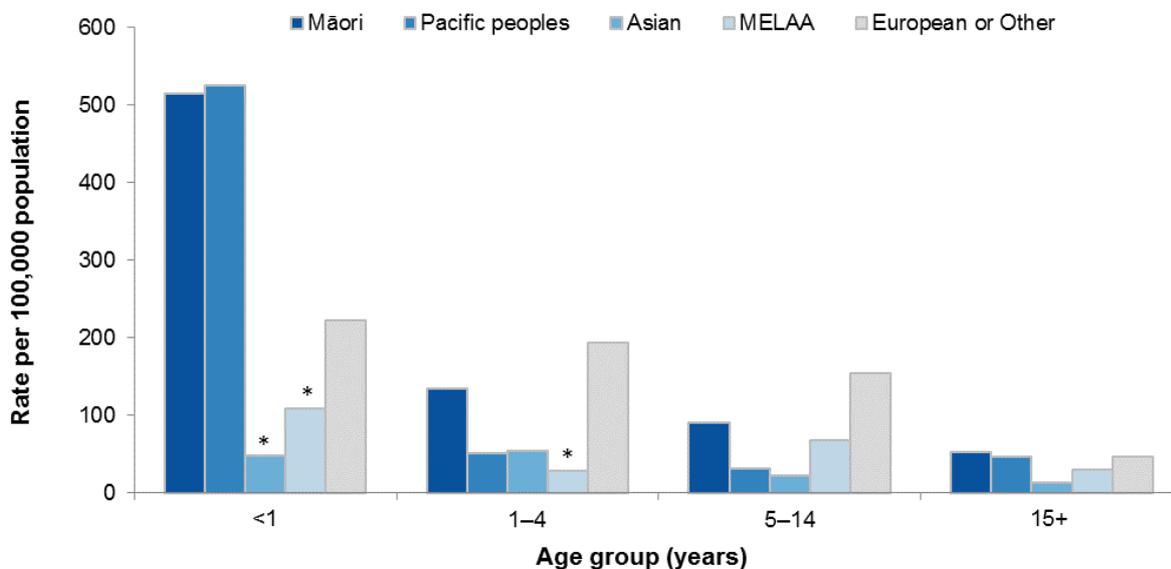
² Rate for January to December per 100,000 population calculated using 2017 mid-year population estimates.

³ Percentage of notified cases for January to December 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–December 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

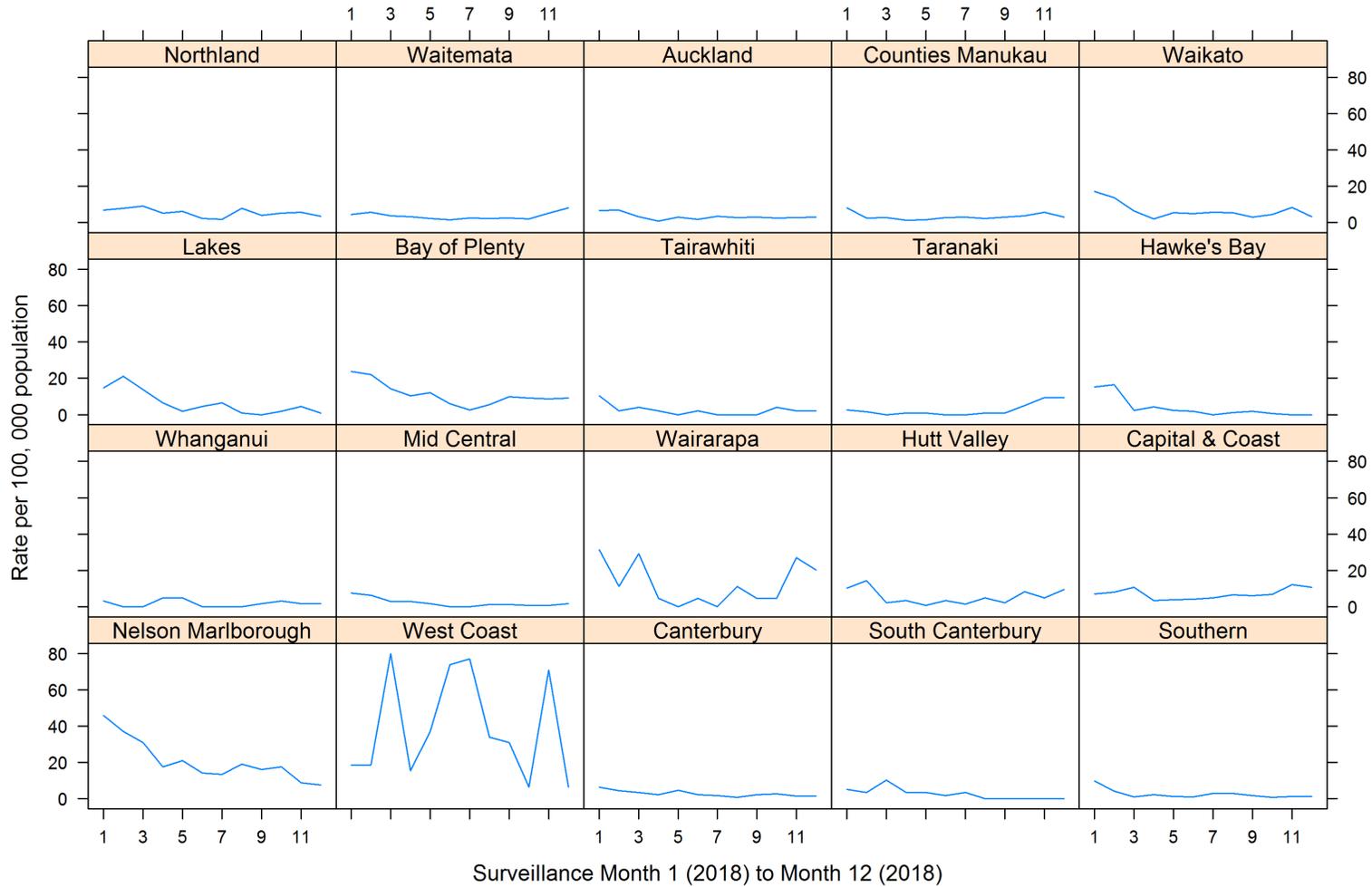
District health board	Total			Hospitalised			<1 year		
	December	2018 ¹	Rate ²	December	2018 ¹	Percent ³	December	2018 ¹	Rate ²
Northland	6	115	65.6	1	9	7.8	1	16	693.2
Waitemata	49	267	44.1	5	31	11.6	3	12	147.7
Auckland	16	210	40.1	3	27	12.9	2	9	153.7
Counties Manukau	16	215	39.3	7	64	29.8	3	28	331.5
Waikato	13	324	79.3	1	25	7.7	0	20	357.7
Lakes	1	84	77.4	0	1	1.2	0	1	66.0
Bay of Plenty	21	309	133.2	1	8	2.6	1	10	329.8
Tairāwhiti	1	14	28.9	0	0	0.0	0	0	0.0
Taranaki	11	37	31.3	0	2	5.4	0	0	0.0
Hawke's Bay	0	76	46.4	0	4	5.3	0	8	363.3
Whanganui	1	13	20.3	0	1	7.7	0	1	116.3
MidCentral	3	46	26.0	2	10	21.7	1	10	453.7
Hutt Valley	14	95	64.2	2	5	5.3	1	2	100.3
Capital & Coast	33	261	83.5	0	8	3.1	0	15	417.1
Wairarapa	9	66	148.3	0	2	3.0	0	4	769.2
Nelson Marlborough	11	369	248.0	2	6	1.6	1	25	1582.3
West Coast	2	152	467.7	0	4	2.6	0	4	1105.0
Canterbury	8	178	32.3	0	9	5.1	0	12	185.6
South Canterbury	0	18	30.2	0	3	16.7	0	1	149.7
Southern	4	94	29.0	0	3	3.2	0	3	83.7
Overall	219	2943	61.4	24	222	7.5	13	181	295.8

¹ Cumulative notifications January–December 2018.

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

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

Figure 3: Pertussis rates per 100,000 population by DHB, January to December 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>