

This report summarises pertussis notifications for the period from January to August 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 13 September 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.
- A non-significant decrease 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.

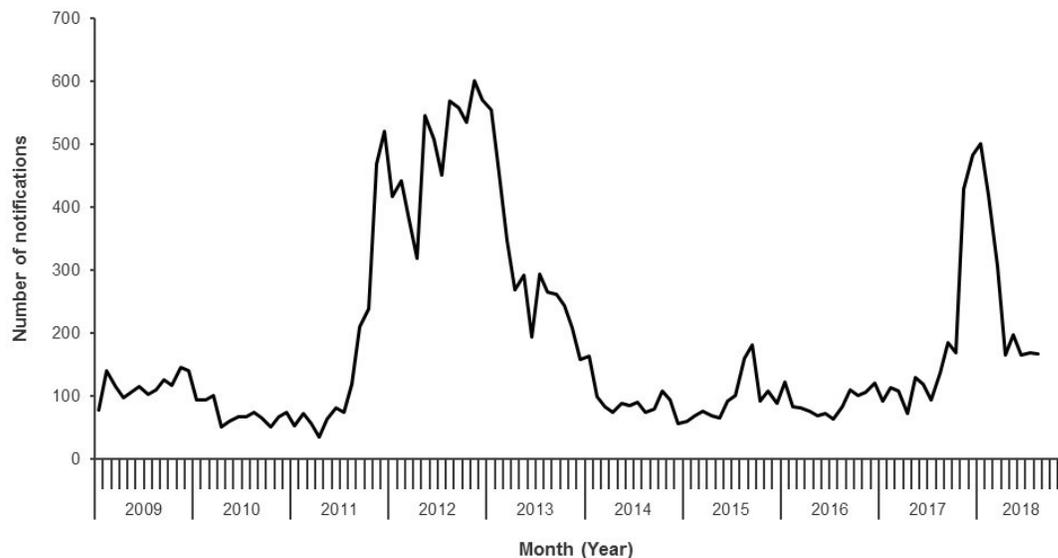
Summary

- In the past month 168 cases of pertussis were notified. This included 83 confirmed, 75 probable, and 10 suspect cases. Ten (6.0%) cases were aged < 1 year and four of these cases were hospitalised. Of all 168 cases, five cases were hospitalised and no deaths were reported.
- For the period January to August 2018:
 - there was a total of 2097 confirmed, probable and suspect cases of pertussis notified (43.7 cases per 100,000). Of the 2097 cases, 120 cases (5.7%) were aged < 1 year, of which 55 (45.8%) were hospitalised (Table 1). Of all 2097 cases, 125 cases (6.0%) were hospitalised;
 - the highest reported pertussis rates were among those aged < 1 year and 1–4 years (198.1 and 111.2 per 100,000, respectively). Māori and Pacific had the highest notification rates among those aged < 1 year (326.5 and 272.0 per 100,000 respectively), while the highest rate among children aged 1–4 years was in European or Other (151.5 per 100,000) followed by Māori (92.2 per 100,000) (Figure 2);
 - the highest numbers of pertussis cases were reported by Nelson Marlborough (293 cases), Waikato (246 cases) and Bay of Plenty (224 cases) DHBs (Table 2). The DHB with the highest rate was West Coast (372.3 per 100,000, 121 cases), followed by Nelson Marlborough (196.9 per 100,000), Bay of Plenty (96.6 per 100,000) and Wairarapa (92.1 per 100,000, 41 cases) DHBs.
- From the beginning of the current national outbreak period (commencing 16 October 2017) to the end of August 2018, there was a total of 3098 cases (1841 confirmed, 1168 probable, and 89 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–August 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–August 2018

Age group (years)	Total			Hospitalised		
	August	2018 ¹	Rate ²	August	2018 ¹	Percent ³
<1	10	120	198.1	4	55	45.8
1–4	18	273	111.2	0	16	5.9
5–9	22	286	87.6	0	5	1.7
10–14	18	211	70.0	0	1	0.5
15–19	11	131	41.4	0	3	2.3
20+	89	1076	30.4	1	45	4.2
All ages	168	2097	43.7	5	125	6.0

¹ Cumulative total January–August 2018.

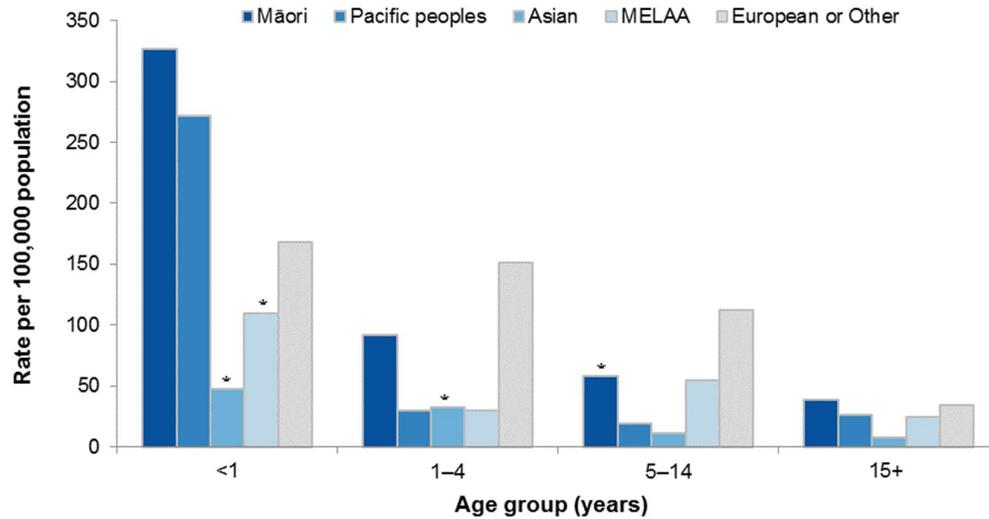
² Rate for January to August per 100,000 population calculated using 2017 mid-year population estimates.

³ Percentage of notified cases for January to August 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–August 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

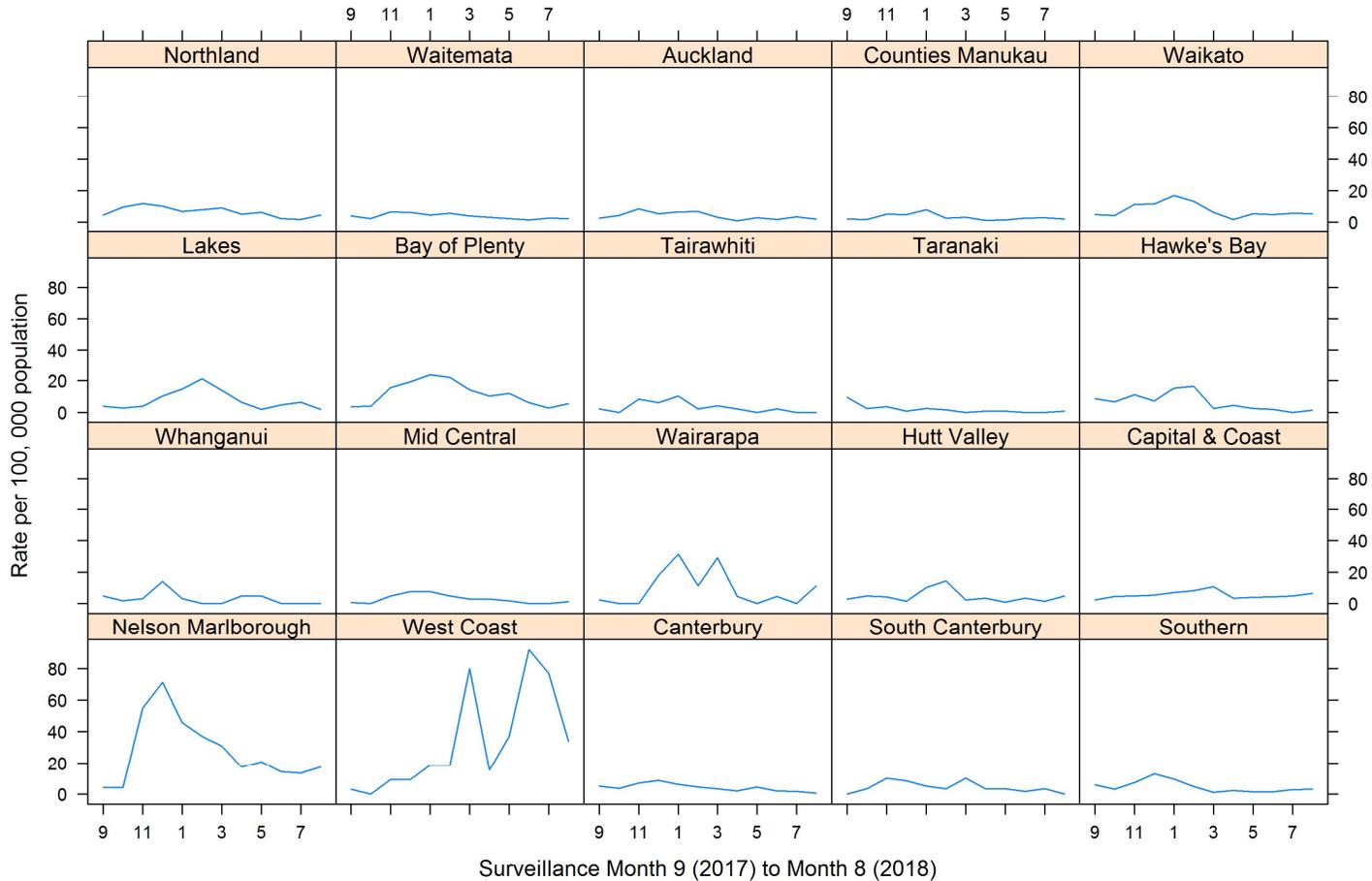
District health board	Total			Hospitalised			<1 year		
	August	2018 ¹	Rate ²	August	2018 ¹	Percent ³	August	2018 ¹	Rate ²
Northland	8	77	43.9	0	5	6.5	1	10	433.3
Waitemata	14	160	26.4	0	17	10.6	1	6	73.9
Auckland	11	148	28.3	0	13	8.8	0	3	51.2
Counties Manukau	11	132	24.1	1	24	18.2	1	13	153.9
Waikato	22	246	60.2	2	20	8.1	2	15	268.2
Lakes	2	77	71.0	0	1	1.3	0	0	0.0
Bay of Plenty	13	224	96.6	0	4	1.8	1	7	230.9
Tairāwhiti	0	10	20.6	0	0	0.0	0	0	0.0
Taranaki	1	8	6.8	0	1	12.5	0	0	0.0
Hawke's Bay	2	72	43.9	1	4	5.6	1	7	317.9
Whanganui	0	8	12.5	0	1	12.5	0	1	116.3
MidCentral	2	36	20.4	0	7	19.4	1	7	317.6
Hutt Valley	7	59	39.9	0	1	1.7	0	0	0.0
Capital & Coast	20	150	48.0	0	6	4.0	1	11	305.9
Wairarapa	5	41	92.1	0	0	0.0	0	0	0.0
Nelson Marlborough	26	293	196.9	0	3	1.0	1	20	1265.8
West Coast	11	121	372.3	0	3	2.5	0	3	828.7
Canterbury	3	134	24.3	0	9	6.7	0	12	185.6
South Canterbury	0	18	30.2	0	3	16.7	0	1	149.7
Southern	10	83	25.6	1	3	3.6	0	4	111.6
Overall	168	2097	43.7	5	125	6.0	10	120	196.1

¹ Cumulative notifications January–August 2018.

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

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

Figure 3: Pertussis rates per 100,000 population by DHB, October 2017 to August 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>