

This report summarises pertussis notifications for the period from January to September 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 09 October 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 decrease in pertussis notifications for the current month compared with the same month in 2017.

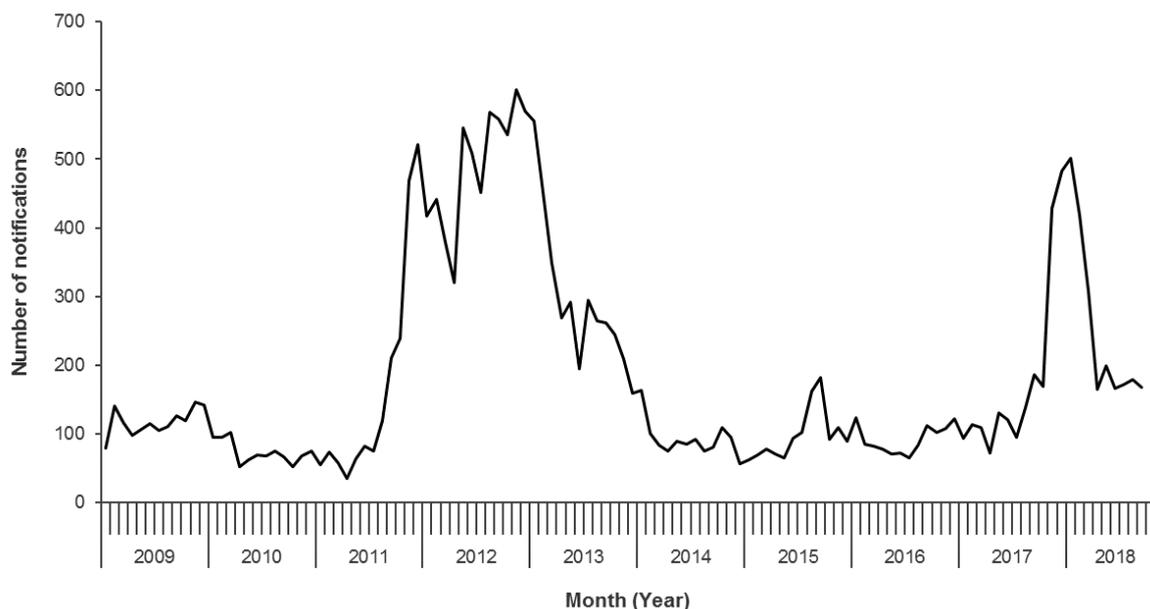
Summary

- In the past month 167 cases of pertussis were notified. This included 97 confirmed, 63 probable, and seven suspect cases. Eleven (6.6%) cases were aged < 1 year and seven of these cases were hospitalised. Of all 167 cases, 17 cases were hospitalised and no deaths were reported.
- For the period January to September 2018:
 - there was a total of 2275 confirmed, probable and suspect cases of pertussis notified (47.5 cases per 100,000). Of the 2275 cases, 131 cases (5.8%) were aged < 1 year, of which 62 (47.3%) were hospitalised (Table 1). Of all 2275 cases, 144 cases (6.3%) were hospitalised;
 - the highest reported pertussis rates were among those aged < 1 year and 1–4 years (216.3 and 118.6 per 100,000, respectively). Māori and Pacific had the highest notification rates among those aged < 1 year (352.6 and 308.3 per 100,000 respectively), while the highest rate among children aged 1–4 years was in European or Other (159.3 per 100,000) followed by Māori (103.3 per 100,000) (Figure 2);
 - the highest numbers of pertussis cases were reported by Nelson Marlborough (318 cases), Waikato (258 cases) and Bay of Plenty (247 cases) DHBs (Table 2). The DHB with the highest rate was West Coast (403.1 per 100,000, 131 cases), followed by Nelson Marlborough (213.7 per 100,000), Bay of Plenty (106.5 per 100,000) and Wairarapa (96.6 per 100,000, 43 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 3276 cases (1942 confirmed, 1236 probable, and 98 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–September 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–September 2018

Age group (years)	Total			Hospitalised		
	September	2018 ¹	Rate ²	September	2018 ¹	Percent ³
<1	11	131	216.3	7	62	47.3
1–4	15	291	118.6	2	18	6.2
5–9	17	306	93.8	0	5	1.6
10–14	18	229	76.0	0	1	0.4
15–19	17	148	46.8	1	4	2.7
20+	89	1170	33.0	7	54	4.6
All ages	167	2275	47.5	17	144	6.3

¹ Cumulative total January–September 2018.

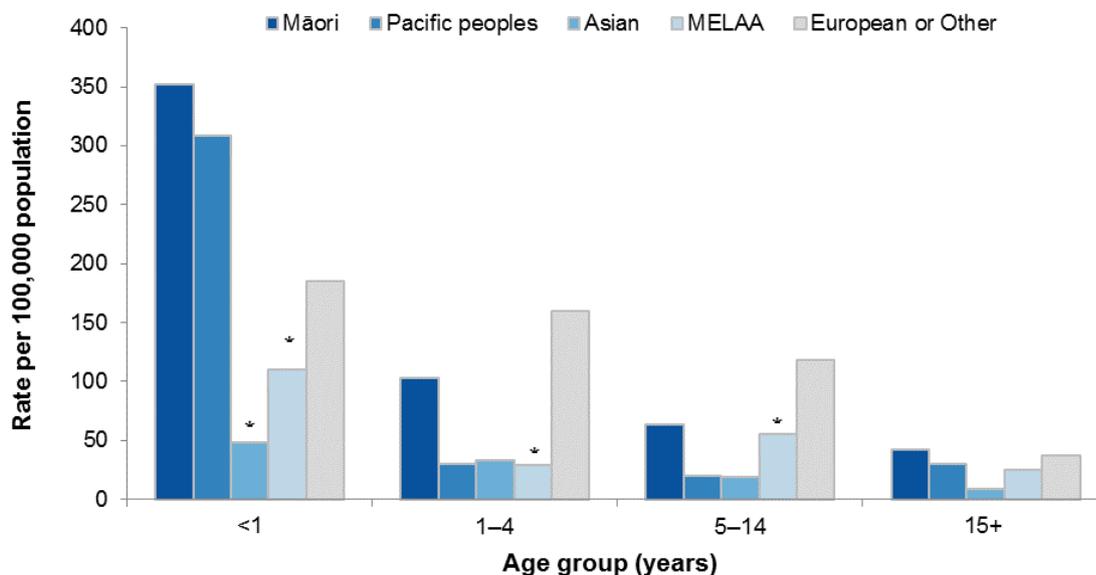
² Rate for January to September per 100,000 population calculated using 2017 mid-year population estimates.

³ Percentage of notified cases for January to September 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–September 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

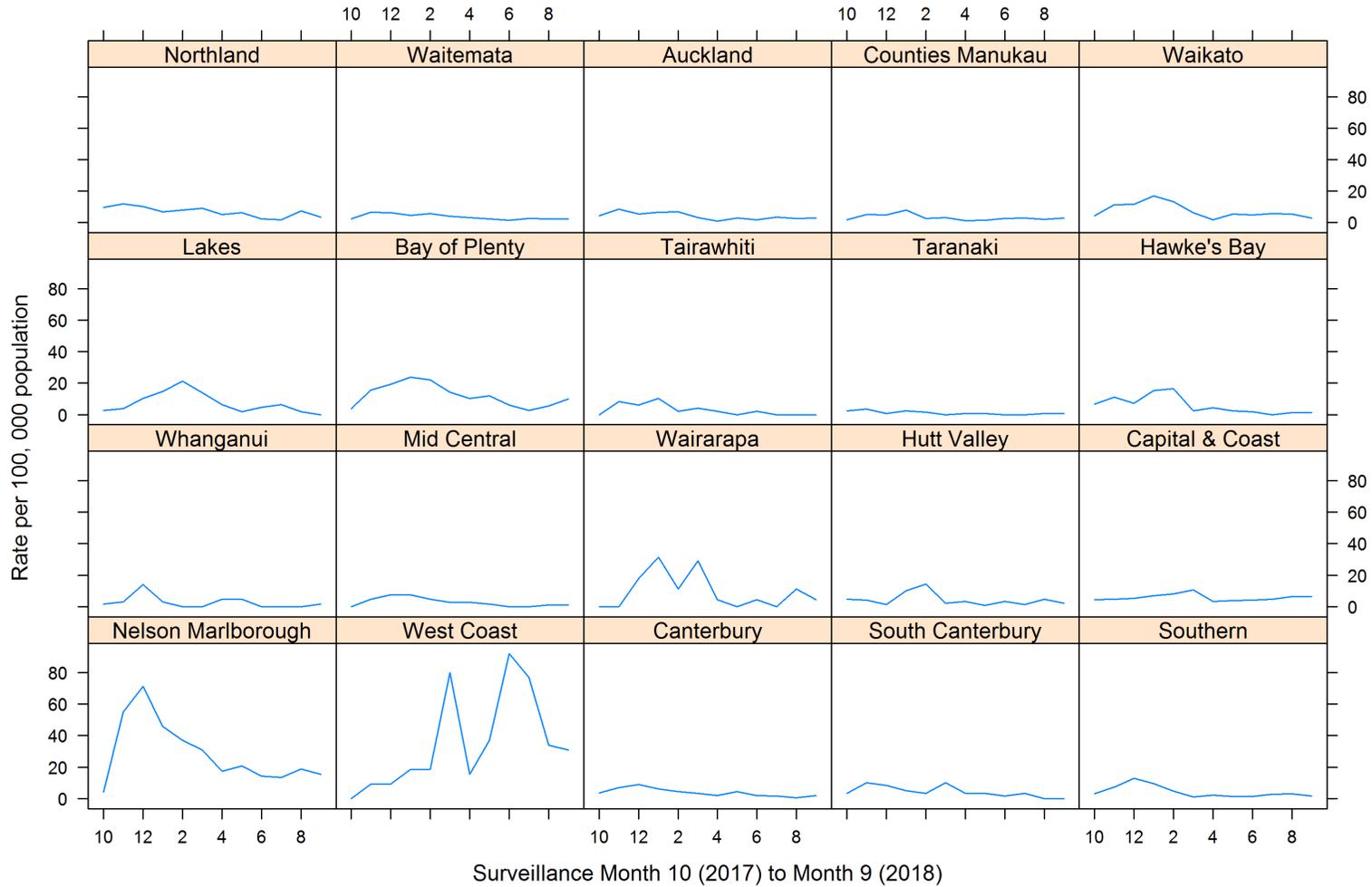
District health board	Total			Hospitalised			<1 year		
	September	2018 ¹	Rate ²	September	2018 ¹	Percent ³	September	2018 ¹	Rate ²
Northland	6	88	50.2	0	5	5.7	0	10	433.3
Waitemata	14	174	28.7	3	20	11.5	0	6	73.9
Auckland	16	167	31.9	1	15	9.0	0	3	51.2
Counties Manukau	16	149	27.3	7	32	21.5	2	15	177.6
Waikato	12	258	63.1	2	22	8.5	2	17	304.0
Lakes	0	77	71.0	0	1	1.3	0	0	0.0
Bay of Plenty	23	247	106.5	0	4	1.6	0	7	230.9
Tairāwhiti	0	10	20.6	0	0	0.0	0	0	0.0
Taranaki	1	9	7.6	0	1	11.1	0	0	0.0
Hawke's Bay	2	74	45.1	0	4	5.4	1	8	363.3
Whanganui	1	9	14.0	0	1	11.1	0	1	116.3
MidCentral	2	38	21.5	1	8	21.1	0	7	317.6
Hutt Valley	3	62	41.9	1	2	3.2	1	1	50.2
Capital & Coast	20	170	54.4	2	8	4.7	2	13	361.5
Wairarapa	2	43	96.6	0	0	0.0	1	1	192.3
Nelson Marlborough	23	318	213.7	0	3	0.9	2	22	1392.4
West Coast	10	131	403.1	0	3	2.3	0	3	828.7
Canterbury	11	145	26.3	0	9	6.2	0	12	185.6
South Canterbury	0	18	30.2	0	3	16.7	0	1	149.7
Southern	5	88	27.1	0	3	3.4	0	4	111.6
Overall	167	2275	47.5	17	144	6.3	11	131	214.1

¹ Cumulative notifications January–September 2018.

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

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

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