

PERTUSSIS REPORT**February 2019**

This report summarises pertussis notifications for the 12-month period ending February 2019 (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 11 March 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.
- A significant decrease in notifications compared with the previous month.
- A significant decrease in pertussis notifications for the current month compared with the same month in 2018.

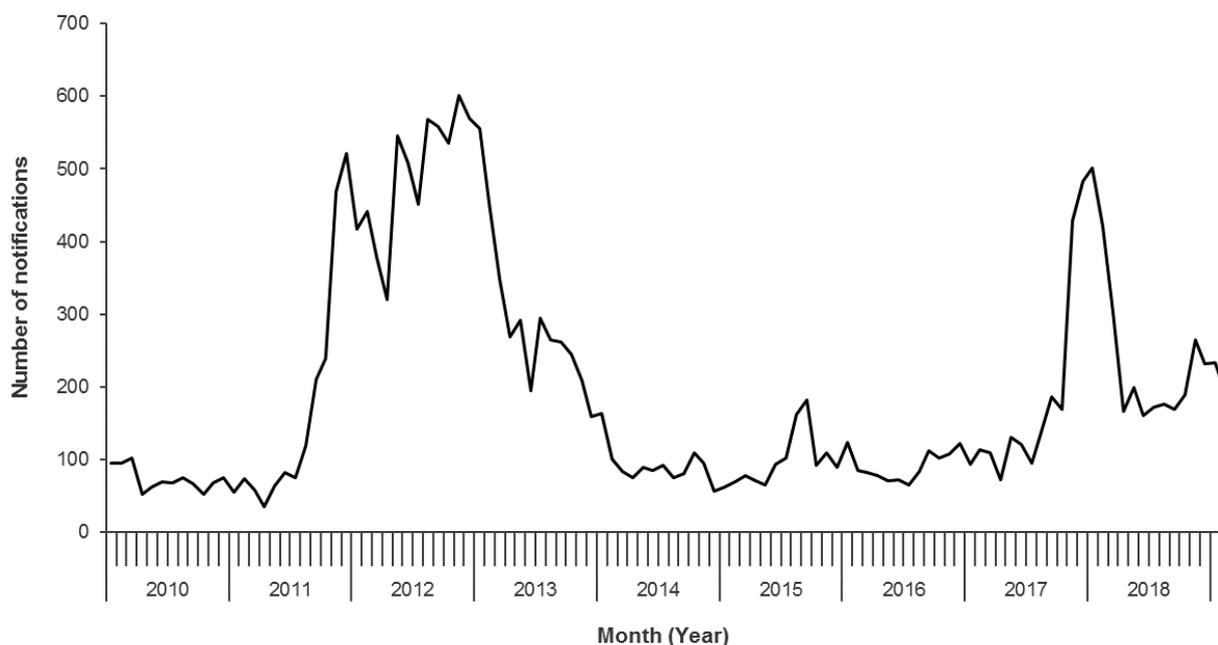
Summary

- In the past month, 190 cases of pertussis were notified. This included 134 confirmed, 53 probable, and three suspect cases. Fifteen (7.9%) cases were aged < 1 year and six of these cases were hospitalised. Of all 190 cases, 24 cases were hospitalised and no deaths were reported.
- For the 12-month period ending February 2019:
 - there was a total of 2452 confirmed, probable and suspect cases of pertussis notified (50.2 cases per 100,000). Of the 2452 cases, 160 cases (6.5%) were aged < 1 year, of which 79 (49.4%) were hospitalised (Table 1). Of all 2452 cases, 215 cases (8.8%) were hospitalised;
 - the highest reported pertussis rates were among those aged < 1 year and 1–4 years (265.7 and 124.2 per 100,000, respectively). Pacific and Māori had the highest notification rates among those aged < 1 year (570.7 and 404.6 per 100,000 respectively), while the highest rate among children aged 1–4 years was in European or Other (153.2 per 100,000) followed by Māori (115.6 per 100,000) (Figure 2);
 - the highest numbers of pertussis cases were reported by Nelson Marlborough (268 cases), Waitemata (263 cases) and Capital and Coast (262 cases) DHBs (Table 2). The DHB with the highest rate was West Coast (457.1 per 100,000, 149 cases), followed by Nelson Marlborough (178.0 per 100,000) and Wairarapa (118.7 per 100,000, 54 cases) DHBs.
- From the beginning of the current national outbreak period (commencing 16 October 2017) to the end of February 2019, there was a total of 4370 cases (2745 confirmed, 1510 probable, and 115 suspect cases).

Trends in pertussis notifications

Figure 1 shows pertussis notifications by calendar month, since January 2010. 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 2010–February 2019



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.

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

Age group (years)	Total			Hospitalised		
	February	Last 12 months	Rate ¹	February	Last 12 months	Percent ²
<1	15	160	265.7	6	79	49.4
1–4	37	306	124.2	6	29	9.5
5–9	20	343	104.8	0	5	1.5
10–14	20	248	79.8	2	5	2.0
15–19	9	160	50.9	0	3	1.9
20+	89	1235	34.1	10	94	7.6
All ages	190	2452	50.2	24	215	8.8

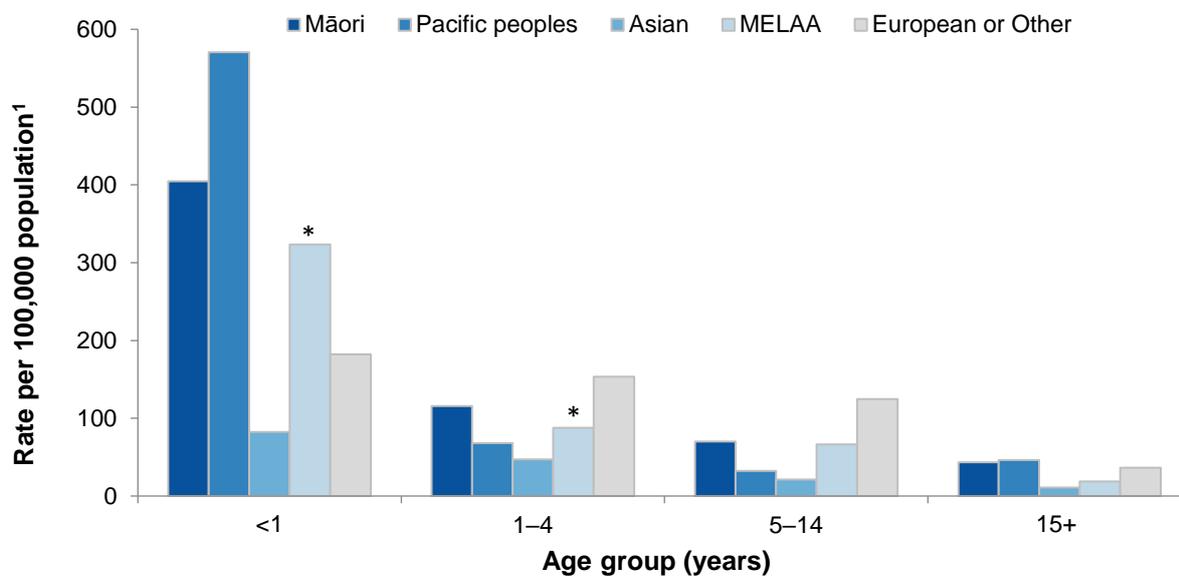
¹ Annual rate for the 12-months ending February 2019 per 100,000 population, calculated using 2018 mid-year population estimates.

² Percentage of notified cases in the last 12 months 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



MELAA: Middle Eastern/Latin American/African.

¹ Annual rate for the 12 months ending February 2019.

* Rate based on fewer than five cases.

Notes:

- Includes confirmed, probable and suspect cases only. Cases still under investigation are excluded.
- Ethnicity is prioritised. Rates are based on the proportion of people in each ethnic group from the 2013 Census applied to the 2018 mid-year population estimates.

District health board

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

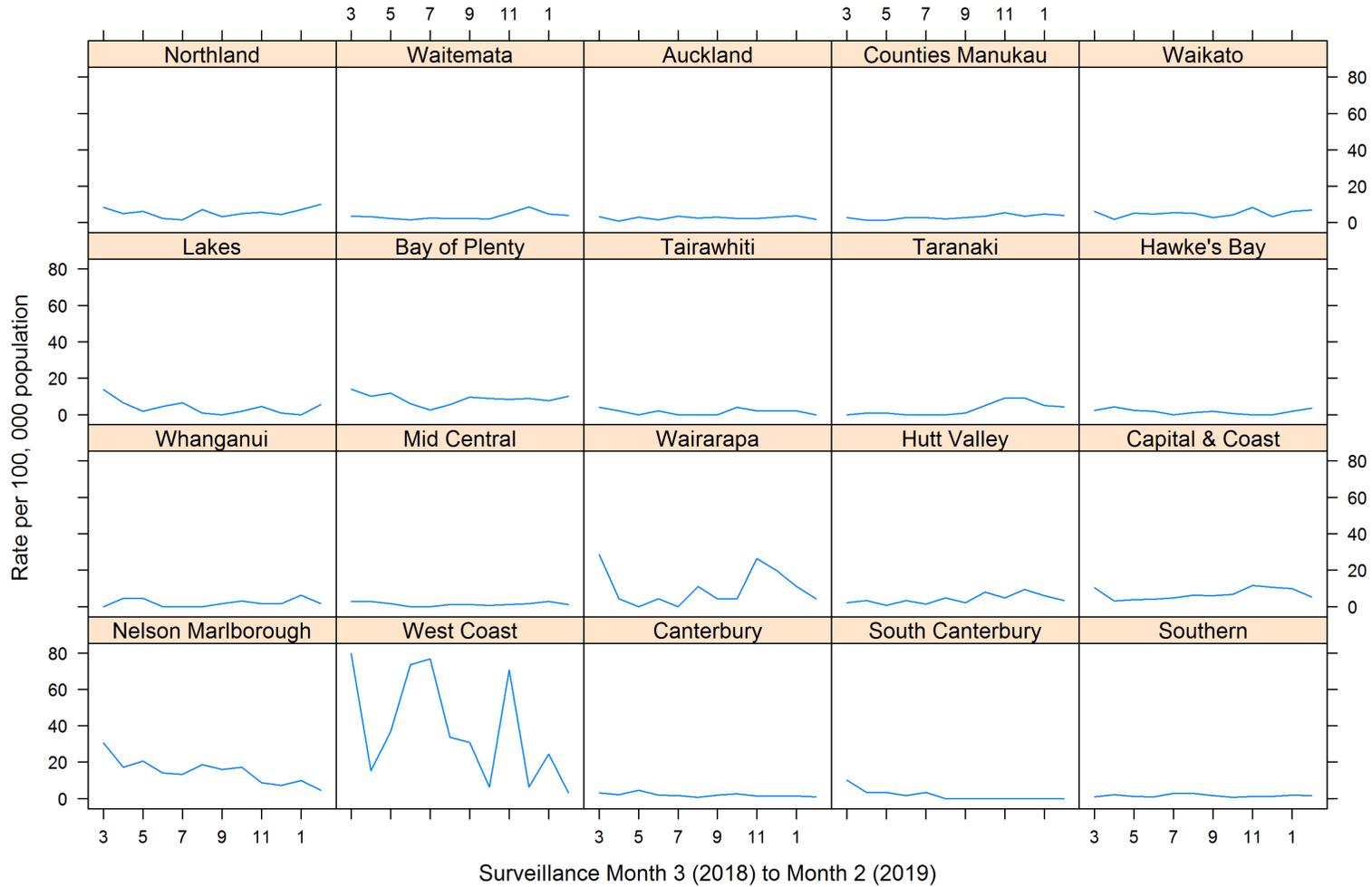
Table 2: Number of (confirmed, probable and suspect) pertussis notifications, rate and hospitalisations by district health board

District health board	Total			Hospitalised			Age <1 year		
	February	Last 12 months	Rate ¹	February	Last 12 months	Percent ²	February	Last 12 months	Rate ¹
Northland	18	119	66.4	4	10	8.4	2	15	652.2
Waitemata	25	263	42.4	2	36	13.7	1	12	147.5
Auckland	10	168	31.3	1	19	11.3	3	9	157.0
Counties Manukau	22	208	37.3	9	72	34.6	3	31	365.9
Waikato	29	255	61.2	3	23	9.0	2	17	302.3
Lakes	6	51	46.5	0	0	0.0	0	1	65.8
Bay of Plenty	24	245	103.4	0	4	1.6	1	11	350.1
Tairāwhiti	0	9	18.3	0	0	0.0	0	0	0.0
Taranaki	5	42	35.1	1	4	9.5	1	1	63.1
Hawke's Bay	6	33	19.9	0	2	6.1	0	3	136.4
Whanganui	1	16	24.7	0	1	6.3	0	1	117.4
MidCentral	2	30	16.7	0	6	20.0	0	5	223.8
Hutt Valley	5	73	48.8	1	6	8.2	0	4	202.0
Capital & Coast	17	262	82.5	1	4	1.5	1	12	338.4
Wairarapa	2	54	118.7	1	4	7.4	0	4	743.5
Nelson Marlborough	7	268	178.0	0	5	1.9	0	16	1010.1
West Coast	1	149	457.1	0	4	2.7	0	3	854.7
Canterbury	5	133	23.6	1	10	7.5	1	12	183.9
South Canterbury	0	13	21.7	0	3	23.1	0	1	152.2
Southern	5	61	18.5	0	2	3.3	0	2	55.5
Overall	190	2452	50.2	24	215	8.8	15	160	265.7

¹ Annual rate for the 12 months ending February 2019 per 100,000 population, calculated using 2018 mid-year population estimates.

² Percentage of notified cases in the last 12 months that were hospitalised.

Figure 3: Pertussis rates per 100,000 population by DHB, March 2018–February 2019



Note: Includes confirmed, probable and suspect cases only. Rate calculated using 2018 mid-year population estimates.

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