

This report summarises pertussis notifications for the 12-month period ending March 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 10 April 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.

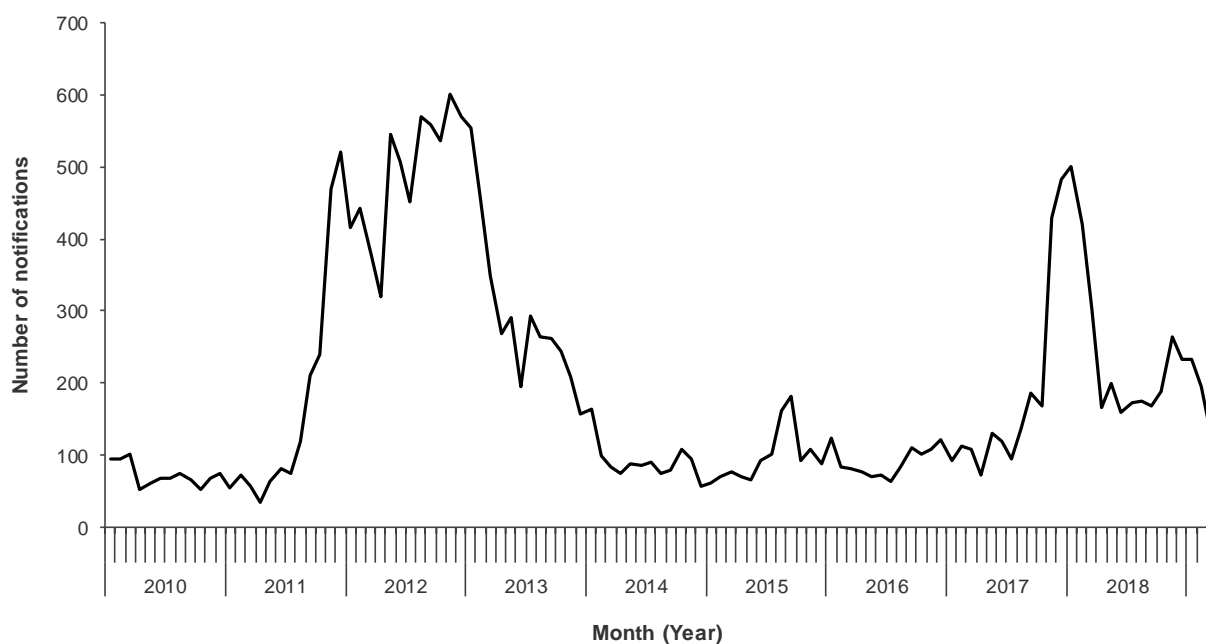
## Summary

- In the past month, 128 cases of pertussis were notified. This included 79 confirmed, 47 probable, and two suspect cases. Eleven (8.6%) cases were aged < 1 year and four of these cases were hospitalised. Of all 128 cases, 11 cases were hospitalised and no deaths were reported.
- For the 12-month period ending March 2019:
  - there was a total of 2282 confirmed, probable and suspect cases of pertussis notified (46.7 cases per 100,000). Of the 2282 cases, 160 cases (7.0%) were aged < 1 year, of which 80 (50%) were hospitalised (Table 1). Of all 2282 cases, 213 cases (9.3%) were hospitalised;
  - the highest reported pertussis rates were among those aged < 1 year and 1–4 years (265.7 and 112.9 per 100,000, respectively). Pacific and Māori had the highest notification rates among those aged < 1 year (606.4 and 391.8 per 100,000 respectively), while the highest rate among children aged 1–4 years was in European or Other (136.1 per 100,000) (Figure 2);
  - the highest numbers of pertussis cases were reported by Waitemata (257 cases), Waikato (251 cases) and Capital and Coast (243 cases) DHBs (Table 2). The DHB with the highest rate was West Coast (386.5 per 100,000, 126 cases), followed by Nelson Marlborough (155.4 per 100,000, 234 cases) and Bay of Plenty (95.4 per 100,000, 226 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 4504 cases (2831 confirmed, 1557 probable, and 116 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–March 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		
	March	Last 12 months	Rate <sup>1</sup>	March	Last 12 months	Percent <sup>2</sup>
<1	11	160	265.7	4	80	50.0
1–4	19	278	112.9	2	29	10.4
5–9	8	310	94.7	0	4	1.3
10–14	14	242	77.8	0	5	2.1
15–19	5	143	45.5	0	2	1.4
20+	71	1149	31.7	5	93	8.1
<b>All ages</b>	<b>128</b>	<b>2282</b>	<b>46.7</b>	<b>11</b>	<b>213</b>	<b>9.3</b>

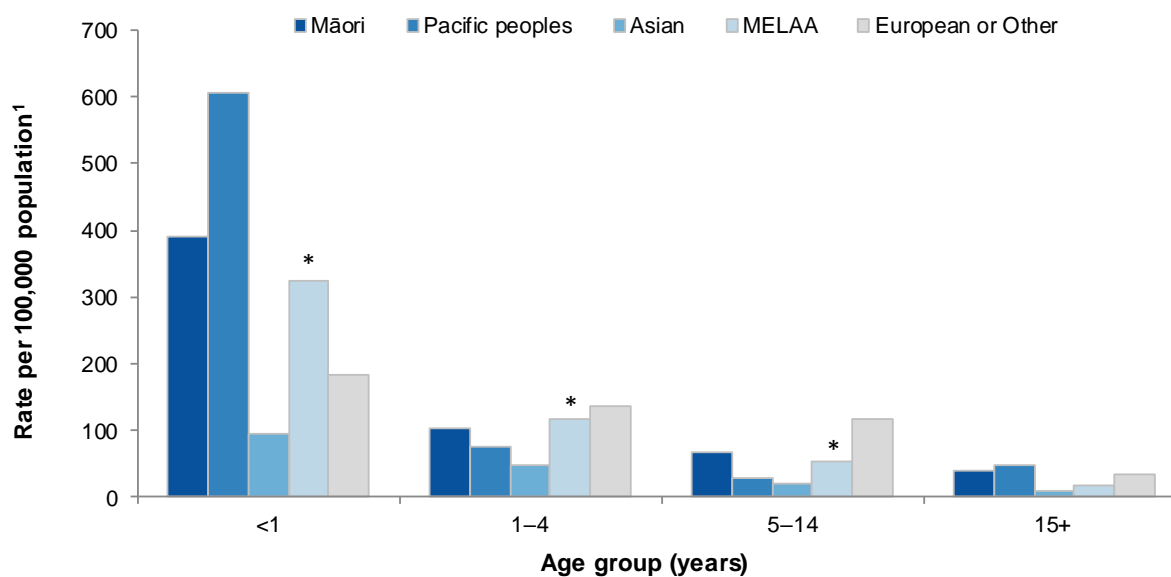
<sup>1</sup> Annual rate for the 12-months ending March 2019 per 100,000 population, calculated using 2018 mid-year population estimates.

<sup>2</sup> 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.

<sup>1</sup> Annual rate for the 12 months ending March 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.

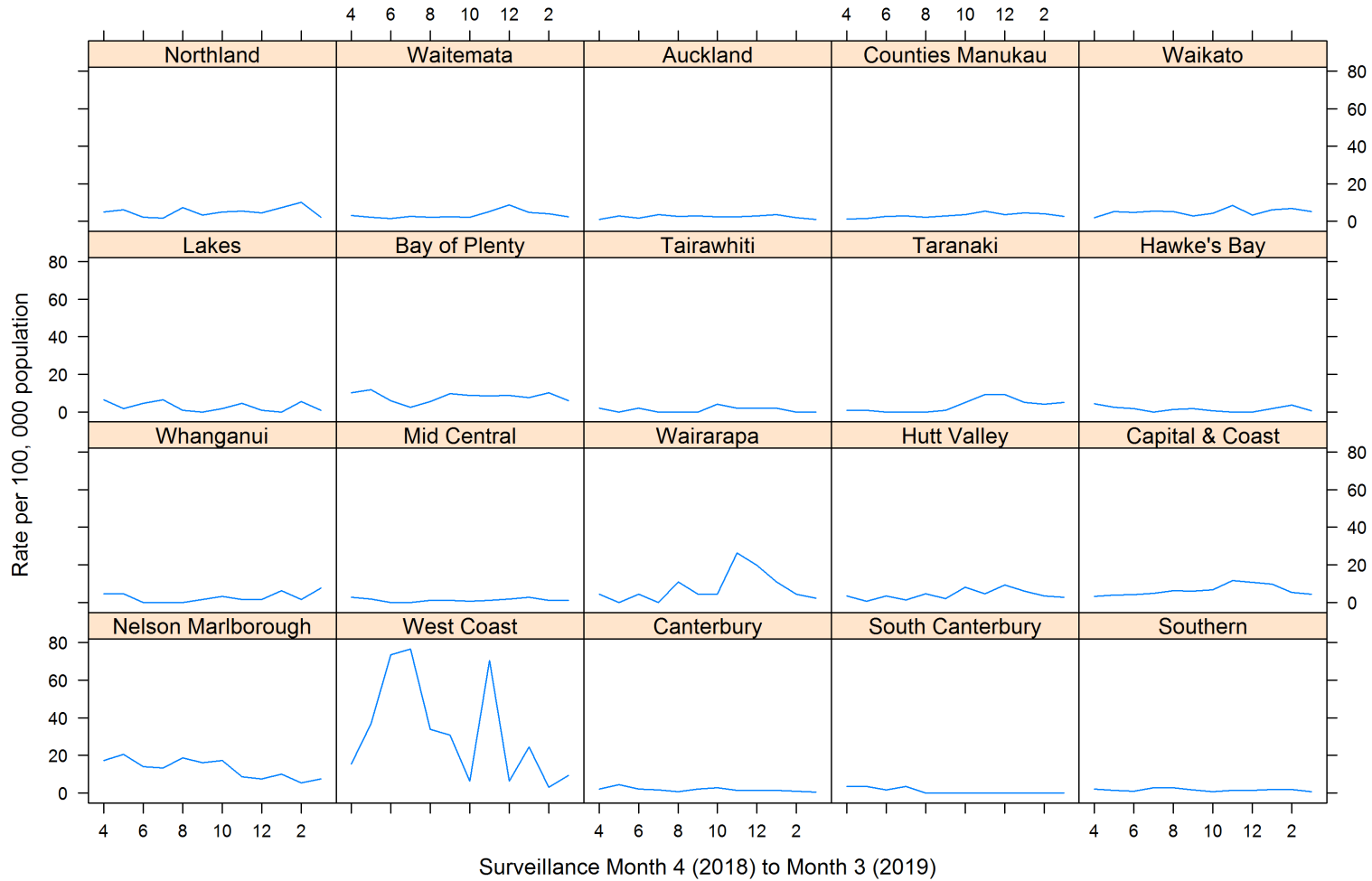
**Table 2: Number of (confirmed, probable and suspect) pertussis notifications, rate and hospitalisations by district health board**

District health board	Total			Hospitalised			Age <1 year		
	March	Last 12 months	Rate <sup>1</sup>	March	Last 12 months	Percent <sup>2</sup>	March	Last 12 months	Rate <sup>1</sup>
Northland	4	108	60.3	0	10	9.3	0	15	652.2
Waitemata	15	257	41.4	1	34	13.2	1	13	159.8
Auckland	6	157	29.2	1	20	12.7	0	9	157.0
Counties Manukau	15	209	37.4	5	73	34.9	2	31	365.9
Waikato	22	251	60.3	2	22	8.8	2	18	320.1
Lakes	1	37	33.7	0	0	0.0	0	1	65.8
Bay of Plenty	14	226	95.4	0	4	1.8	1	12	381.9
Tairāwhiti	0	7	14.3	0	0	0.0	0	0	0.0
Taranaki	6	48	40.1	0	4	8.3	1	2	126.1
Hawke's Bay	1	30	18.1	1	3	10.0	1	4	181.8
Whanganui	5	21	32.4	0	1	4.8	0	1	117.4
MidCentral	2	27	15.1	0	6	22.2	0	4	179.1
Hutt Valley	4	74	49.5	1	7	9.5	0	4	202.0
Capital & Coast	14	243	76.5	0	3	1.2	1	11	310.2
Wairarapa	1	42	92.3	0	4	9.5	0	4	743.5
Nelson Marlborough	11	234	155.4	0	5	2.1	1	15	947.0
West Coast	3	126	386.5	0	3	2.4	0	3	854.7
Canterbury	2	117	20.8	0	10	8.5	0	11	168.6
South Canterbury	0	7	11.7	0	2	28.6	0	0	0.0
Southern	2	61	18.5	0	2	3.3	1	2	55.5
<b>Overall</b>	<b>128</b>	<b>2282</b>	<b>46.7</b>	<b>11</b>	<b>213</b>	<b>9.3</b>	<b>11</b>	<b>160</b>	<b>265.7</b>

<sup>1</sup> Annual rate for the 12 months ending March 2019 per 100,000 population, calculated using 2018 mid-year population estimates.

<sup>2</sup> Percentage of notified cases in the last 12 months that were hospitalised.

**Figure 3: Pertussis rates per 100,000 population by DHB, April 2018–March 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>