
MONTHLY NOTIFIABLE DISEASE SURVEILLANCE REPORT

Data contained within this monthly report is based on information recorded on EpiSurv by Public Health Service (PHS) staff as at 16 August 2016. Changes made to EpiSurv data after this date will not be reflected in this report. The results presented may be updated and should be regarded as provisional.

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1. Key notifiable disease trends

Campylobacteriosis: 1114 cases of campylobacteriosis (713 confirmed, 394 probable and 7 under investigation) were notified in August 2016 compared to 488 cases notified during the same month of the previous year (Figure 1). For the 12 month period ending 31 August 2016, the highest rates were in Hawke's Bay (552.0 cases per 100,000 population, 627 cases), South Canterbury (235.5 per 100,000 population, 9 cases) and West Coast (189.6 per 100,000 population, 1 case) DHBs, compared to a national rate of 148.4 per 100,000 population. Seventy-nine people were hospitalised. Cases ranged in age from 5 months to 100 years, and the highest number of cases was reported in the 70 years and over age group (244 cases). One interim outbreak was created in August (case numbers yet to be determined) for the Havelock North water-related outbreak.

Chikungunya fever: One confirmed case of chikungunya fever was notified in August 2016, the same number of cases notified as the same month of the previous year. Eighteen cases have been notified in the year to date compared to 47 at the same time in the previous year. The case was a male in the 30–39 years age group from Canterbury DHB. The case had travelled to Brazil during the incubation period for the disease.

Cryptosporidiosis: 133 confirmed cases of cryptosporidiosis were notified in August 2016 compared to 79 cases notified during the same month of the previous year. The 12-month rate in August (20.5 cases per 100,000) was higher than at the same time in the previous year (13.4 per 100,000). The highest numbers of cases were reported from Waikato (25 cases), Northland (18 cases) and Counties Manukau (17 cases) DHBs. Cases ranged in age from 10 months to 89 years, with the highest numbers of cases in the 1–4 years (41 cases), 20–29 years (23 cases) and 5–9 years (21 cases) age groups. Among the cases for which risk factor information was recorded, 52.9% (46/87) had contact with farm animals, 43.8% (28/64) had consumed food from a food premises, 41.1% (30/73) had consumed untreated water, and 28.4% (21/74) had attended school, preschool or childcare during the incubation period for the disease. Two interim *Cryptosporidium* outbreaks were created in August (case numbers yet to be determined).

Dengue fever: 12 cases of dengue fever (10 confirmed and 2 probable) were notified in August 2016 compared to 8 cases notified in the same month of the previous year. All cases had travelled overseas during the incubation period for the disease. Countries visited included: Indonesia and Thailand (3 cases each), Australia, Malaysia, Singapore and Vietnam (2 cases each), Cambodia, Fiji, India, Laos, Philippines and Vanuatu (1 case each). Some cases reported travel to more than one country.

Hepatitis NOS: One confirmed case of hepatitis NOS (hepatitis epsilon) was notified in August 2016. The case was a female in the 50–59 years age group from Canterbury DHB. The case reported being overseas in North America during the incubation period for the disease.

Hydatid disease: Two cases of hydatid disease (1 confirmed and 1 probable) were notified in August 2016. The cases were male, in the 40–49 years and 70 years and over age groups, and from Counties Manukau and Waitemata DHBs, respectively. Both cases were likely to have resulted from historic exposure, one occupational (butcher).

Legionellosis: 14 cases of legionellosis (9 confirmed and 5 under investigation) were notified in August 2016 compared to nine cases notified during the previous month, and seven during the same month of the previous year. Cases were reported from Northland (4 cases), Canterbury (3 cases), Southern (2 cases), Waitemata, Waikato, Bay of Plenty, Lakes and Whanganui (1 case each) DHBs. The *Legionella* species was identified for eight cases as: *L. pneumophila* and *L. longbeachae* (3 cases each), *L. micdadei* and *L. sainthelensi* (1 case each). The increase in notifications for the year to date compared to the same time in the previous year (cumulative total 165 in August 2016 compared to 110 in August 2015) may be due to the LegiNZ study, which began in May 2015 and involves 20 hospitals in 17 DHBs.

Leptospirosis: 14 cases of leptospirosis (7 confirmed and 7 under investigation) were notified in August 2016 compared to two cases notified during the same month of the previous year. After further investigation, two cases have since been found not to meet the case criteria. Cases were reported from Hawke's Bay (3 cases), Waikato and Taranaki (2 cases each), and Waitemata, Capital & Coast, Nelson Marlborough, Canterbury and Southern (1 case each) DHBs. The highest number of cases was in the 50–59 years age group (6 cases). Occupational exposure risk factor information was recorded for 85.7% (6/7) of confirmed cases, all were farmers or farm workers. The other confirmed case had exposure to streams, rivers, or lakes in the 20 days prior to illness. The *Leptospira* species was recorded for three cases, *L. Hardjo* (2 cases) and *L. Ballum* (1 case).

Listeriosis: Three confirmed case of listeriosis were notified in August 2016. All cases were in the 70 years and over age group, and were of European or Other (2 cases) and Pacific peoples (1 case) ethnicity. Cases were reported from Auckland, Counties Manukau and Hawke's Bay DHBs (1 case each). Risk factor information was recorded for all cases; two cases reported an underlying illness, one of which reported receiving immunosuppressive drugs. The other case had no known risk factors recorded. The serotype was identified as *L. monocytogenes* serotype O4 (2 cases) and *L. monocytogenes* serotype O1/2 (1 case).

Lyme disease: Although not strictly notifiable but interesting to note, one probable case of Lyme disease was notified in August 2016. The case was a female in the 40–49 years age group from Canterbury DHB. Overseas travel during the incubation period for the disease was recorded, and the case reported a forest in Switzerland as the location where the disease was probably acquired.

Measles: Six cases of measles (3 confirmed and 3 under investigation) were notified in August 2016 compared to zero cases notified during the same month of the previous year (Figure 2). After further investigation, three cases have since been found not to meet the case criteria. Cases were reported from Capital & Coast (2 cases) and Auckland (1 case) DHBs. Cases were in the 5–9 years, 20–29 years and 40–49 years age groups (1 case each). Immunisation information was recorded for all cases, of which two cases were immunised and had received one dose of MMR vaccine. One case was not immunised. Two cases were exposed while on family holiday in Indonesia, and the other case had travelled to Indonesia and Malaysia during the incubation period for the disease. One interim measles outbreak was created in August (case numbers yet to be determined).

Meningococcal disease: 13 cases of meningococcal disease (12 confirmed and 1 under investigation) were notified in August 2016 compared to fifteen cases notified during the same month of the previous year. After further investigation, one case has since been found not to meet the case criteria. The following information relates to confirmed cases only. Cases were reported from Southern (5 cases), Capital & Coast (2 cases), Auckland, Counties Manukau, Bay of Plenty, Hawke's Bay and Canterbury (1 case each) DHBs. Cases were reported in the 20–29 years (4 cases), 1–4 years and 5–9 years (2 cases each), 15–19 years, 40–49 years, 50–59 years and 70 years and over (1 case each) age groups. All cases were hospitalised and one death was reported. All cases were laboratory confirmed and the strain groups were as follows: group B (10 cases, including 6 group B:P1.7-2,4), group C (1 case) and group Y (1 case).

Pertussis: 85 cases of pertussis (29 confirmed, 50 probable, 4 suspect and 2 under investigation) were notified in August 2016 compared to 161 cases in the same month of the previous year. The 12-month rate in August (24.7 cases per 100,000) was higher than at the same time in the previous year (22.6 per 100,000). However, the number of notifications has generally decreased since the 124 notifications in January 2016. Twelve cases were hospitalised and no deaths were reported. Forty percent (34/85) of cases were laboratory-confirmed (8 by culture, 17 by PCR, and 9 by culture and PCR). The highest numbers of cases were reported from Taranaki (15 cases), Canterbury (13 cases) and Waikato (12 cases) DHBs. Cases ranged in age from 1 month to 84 years, with 16.5% (14/85) under 5 years of age (including 8 cases aged less than 1 year). The highest numbers of cases were in the 40–49 years (14 cases) and 15–19 years (13 cases) age groups. One finalised *B. pertussis* outbreak was created in August (4 cases).

Rheumatic fever: 19 cases of rheumatic fever (16 initial attack and 3 recurrent attack) were notified in August 2016 compared to seven cases in the same month of the previous year. All cases were from the North Island: Auckland and Counties Manukau (4 cases each), Waitemata, Tairāwhiti, MidCentral and Capital & Coast (2 cases each), Waikato, Bay of Plenty and Taranaki (1 case each) DHBs. The cases ranged in age from 8 to 31 years, with the highest numbers of cases in the 10–14 years age group (8 cases). Cases were reported in the Pacific Peoples (10 cases), Māori (7 cases), European or Other and Unknown (1 case each) ethnic groups. Eighteen cases were hospitalised. Numbers are based on report date which may not be a good indicator of newly incident cases as a high proportion of notifications have reporting delays.

Taeniasis: One confirmed case of taeniasis was notified in August 2016. The case was a female in the 20–29 years age group from Capital & Coast DHB. The case was a refugee and had been in Ethiopia during the incubation period for the disease.

Tetanus: One case of tetanus (under investigation) was notified in August 2016. The case was a female in the 20–29 years age group from Taranaki DHB and remains under investigation.

VTEC/STEC infection: 33 cases of VTEC/STEC infection (23 confirmed and 10 under investigation) were notified in August compared to 37 cases confirmed during the same month of the previous year. After further investigation, nine cases have since been found not to meet the case criteria. The 12-month rate in August 2016 (10.2 cases per 100,000) was notably higher than at the same time in the previous year (5.5 per 100,000). Cases were reported from Waitemata (7 cases), Hawke's Bay (5 cases), Waikato (4 cases), Northland, Counties Manukau, Bay of Plenty (2 cases each), Whanganui and Nelson Marlborough (1 case each) DHBs. Cases ranged in age from 13 months to 73 years, with the highest number of cases in the 1–4 years age group (6 cases). Five cases were hospitalised. Twenty-one cases have been confirmed by the Enteric Reference Laboratory as being infected with VTEC/STEC, and of these the serotype was identified as *Escherichia coli* O157:H7 (11 cases) and non-O157 (10 cases). Of the cases for which risk factor information was recorded, 66.7% (8/12) had contact with animals, 36.4% (4/11) had contact with children in nappies, and 25.0% (3/12) had contact with a person with similar symptoms during the incubation period for the disease. The increase in notifications for DHBs in the Auckland region may be due to a change in laboratory methods in July 2015; all faecal specimens are now screened for VTEC/STEC using PCR. One finalised outbreak was created in August (2 cases).

Yersiniosis: 84 cases of yersiniosis (82 confirmed and 2 under investigation) were notified in August 2016 compared to 68 cases notified in the same month of the previous year. After further investigation, two cases have since been found not to meet the case criteria. The highest numbers of cases were reported from Canterbury (14 cases) and Waitemata (11 cases) DHBs. Cases ranged in age from 5 months to 85 years, with the highest number of cases in the 30–39 years (14 cases), 20–29 years and 50–59 years (12 cases each) age groups. Twelve cases were hospitalised. The *Yersinia* species involved was identified for 89.0% (73/82) cases; *Y. enterocolitica* (67 cases) and *Y. pseudotuberculosis* (6 cases). The most common *Y. enterocolitica* biotypes reported were biotype 2 (42 cases) and 1A (12 cases). Among the cases for which risk factor information was recorded, 39.3% (11/28) had consumed food from a food premises, 26.5% (9/34) had contact with nappies, 14.6% (6/41) had contact with other symptomatic people, and 11.4% (5/44) had contact with farm animals during the incubation period for the disease.

2. Outbreaks

During August 2016, a total of 81 outbreaks (19 final and 62 interim) were created in EpiSurv (Table 1 and Table 2). Sixty-seven (82.7%) were outbreaks of acute gastroenteritis (12 finalised and 55 interim) involving 782 cases in total. This compares with 21 acute gastroenteritis outbreaks involving 425 cases in total created during the same month of the previous year. Of the 67 acute gastroenteritis outbreaks, the pathogens were recorded as: norovirus (25 outbreaks) and astrovirus (1 outbreak). The most commonly reported mode of transmission in acute gastroenteritis outbreaks (40.3%, 27/67) was person-to-person (21 primary and 6 secondary). Of the outbreaks that had an exposure setting recorded (68.7%, 46/67) the most commonly reported settings were long term care facilities (29 outbreaks) and childcare centres (8 outbreaks).

Table 1. Summary of final outbreaks created in EpiSurv during August 2016

Organism/Toxin/Illness	DHB(s) where exposure occurred	Number of outbreaks	Total number of cases
Astrovirus	Canterbury	1	15
<i>Bordetella pertussis</i>	Taranaki	1	4
Gastroenteritis ¹	Waikato, Lakes, Capital & Coast Canterbury, Southern	7	95
<i>Giardia</i>	Northland, Waitemata	2	8
<i>Moraxella catarrhalis</i> ¹	Tairāwhiti	1	38
Norovirus	Nelson Marlborough, Canterbury	4	136
<i>Salmonella</i> ²	Counties Manukau	1	2
<i>Shigella</i> ²	Bay of Plenty	1	8
VTEC/STEC ¹	Waitemata	1	2
Total		19	308

¹ Includes outbreak reported to PHSs prior to August 2016: VTEC/STEC (1) reported in June, gastroenteritis (2), one reported in June and one reported in July, and *M. catarrhalis* (1) reported in July.

² Include outbreaks with an overseas exposure transmission: *Salmonella* (China) and *Shigella* (Tonga).

Table 2. Summary of interim outbreaks created in EpiSurv during August 2016

Organism/Toxin/Illness	DHB(s) where exposure occurred	Number of outbreaks	Total number of cases
<i>Campylobacter</i> ³	Nelson Marlborough	1	-
<i>Cryptosporidium</i> ^{2, 4}	Hutt Valley, Southern	2	11
Gastroenteritis ^{2, 3}	Northland, Waitemata, Auckland, Counties Manukau, Waikato, Bay of Plenty, Hawke's Bay, MidCentral, Hutt Valley, Capital & Coast, Wairarapa, Canterbury, South Canterbury, Southern	34	174
Influenza A virus ^{1, 3}	Hutt Valley, West Coast	2	1
Measles virus ³	Capital & Coast	1	-
<i>Mycobacterium tuberculosis</i>	Southern	1	3
Norovirus ^{1, 3}	Auckland, Counties Manukau, Bay of Plenty, MidCentral, Hutt Valley, West Coast, Canterbury, Southern	21	362
Varicella zoster virus	West Coast	1	16
Total		62	566

¹ Outbreak involved more than one pathogen therefore individual pathogen outbreak numbers may not sum to group totals.

² Includes outbreak reported to PHSs prior to August 2016: gastroenteritis (1) reported in June and *Cryptosporidium* (1) reported in July.

³ Interim outbreak(s) where total number of cases had not been completed.

⁴ Includes outbreak with an overseas exposure transmission: *Cryptosporidium* (Vietnam).

3. Deaths from notifiable diseases

Five deaths, where the primary cause of death was a notifiable disease, were reported in August 2016 (Table 3).

Table 3. Summary of deaths from notifiable diseases reported during August 2016

Disease	District health board	Age group (years)
Invasive pneumococcal disease	Counties Manukau	60–69
Invasive pneumococcal disease	Canterbury	60–69
Invasive pneumococcal disease	Southern	70+
Gastroenteritis/foodborne intoxication	Bay of Plenty	70+
Meningococcal disease	Southern	20–29

4. Trends in selected diseases to August 2016

Figure 1. Campylobacteriosis notifications by month, January 2009–August 2016

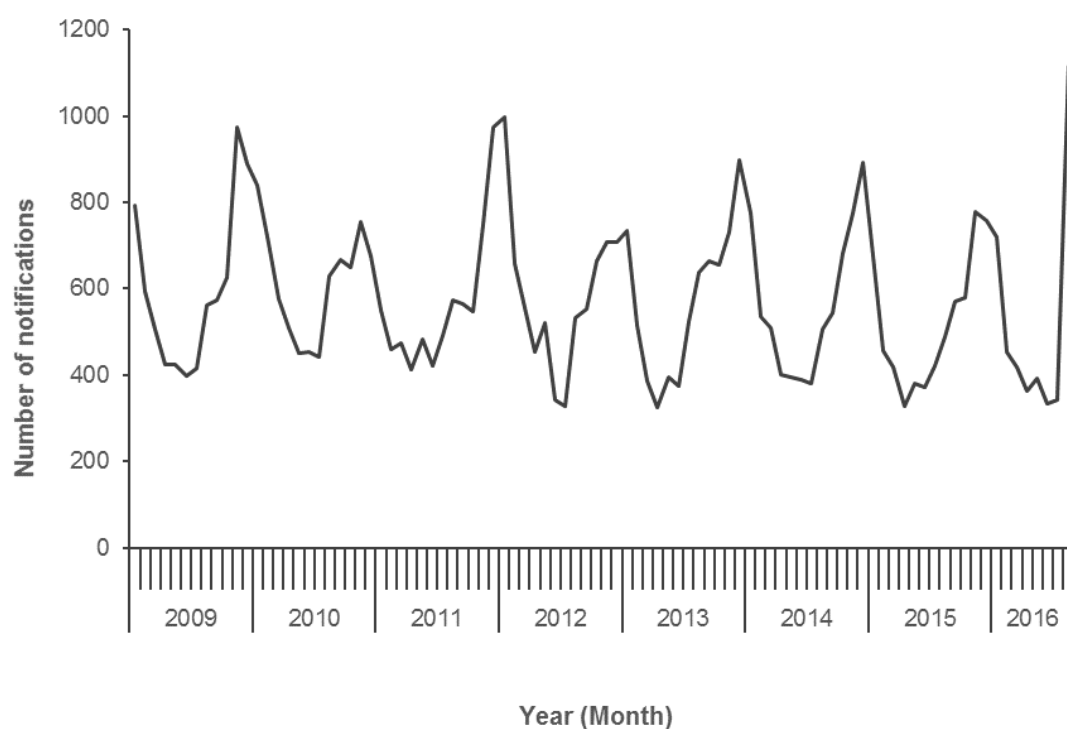
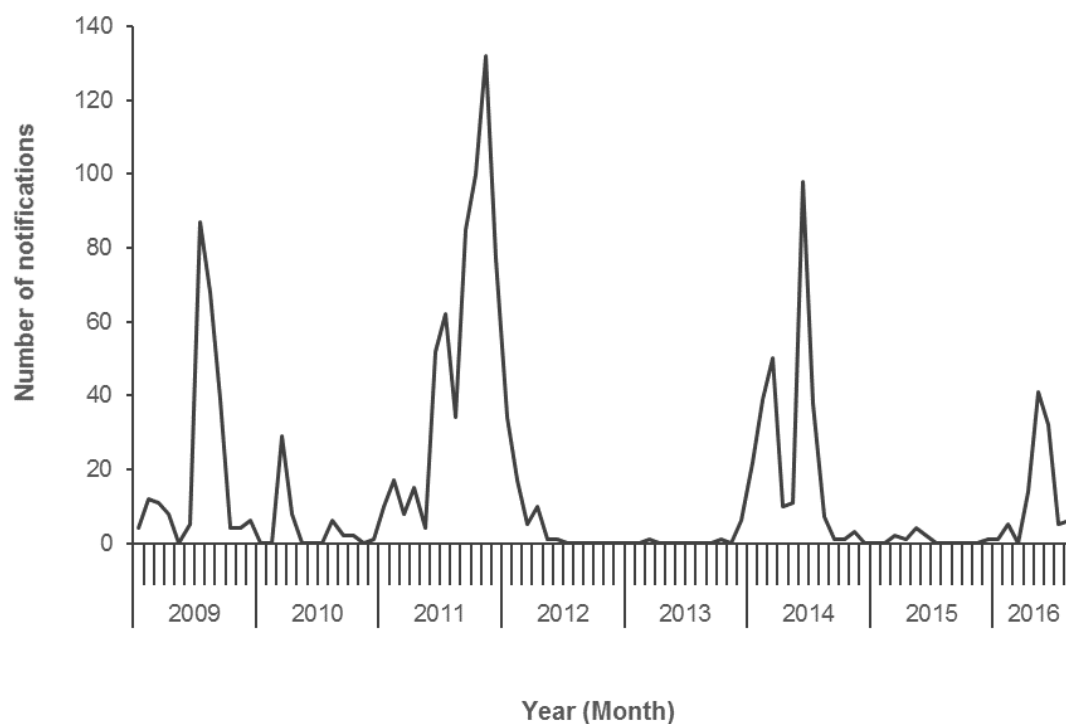


Figure 2. Measles notifications by month, January 2009–August 2016



5. Data tables

National Notifiable Disease Surveillance Data August 2016

Disease	Current Year - 2016 ¹			Previous Year - 2015		
	August 2016 Cases	Cumulative total since 1 January	Current 12 Month Rate ²	August 2015 Cases	Cumulative total since 1 January	Current 12 Month Rate ²
Campylobacteriosis	1114	4137	148.4	488	3534	139.9
Cryptosporidiosis	133	508	20.5	79	260	13.4
Dengue fever	12	151	3.8	8	102	3
Gastroenteritis ³	59	358	12.1	28	306	14
Giardiasis	134	1120	35.1	137	1016	32.7
Haemophilus influenzae type b	3	4	0.1	0	3	0.1
Hepatitis A	1	25	0.9	5	32	1.2
Hepatitis B ⁴	2	20	0.7	4	21	0.7
Hepatitis C ⁴	4	24	0.8	2	21	0.5
Invasive pneumococcal disease	49	290	9.9	55	281	10.1
Legionellosis	14	165	6.6	7	110	3.7
Leptospirosis	14	64	1.7	2	47	1.5
Listeriosis	3	27	0.8	0	15	0.4
Malaria	3	23	0.8	4	24	0.8
Measles	6	104	2.3	0	9	0.3
Meningococcal disease	13	47	1.6	15	38	1.2
Mumps	2	4	0.2	2	7	0.3
Paratyphoid fever	3	24	0.8	1	23	0.6
Pertussis	85	667	24.7	161	698	22.6
Rheumatic fever ⁵	19	113	3.1	7	84	2.9
Rickettsial disease	0	5	0.2	2	5	0.2
Rubella	1	4	0.1	0	0	0
Salmonellosis	99	758	23.9	58	710	22.5
Shigellosis	21	103	2.9	7	79	2.5
Tuberculosis disease	21	195	6.5	20	194	6.4
Typhoid fever	3	31	1.1	3	23	0.8
Viral Haemorrhagic Fever	0	1	0	0	0	0
VTEC/STEC infection	33	334	10.2	37	195	5.5
Yersiniosis	84	492	17	68	346	16.6

¹ These data are provisional.

² Rate is based on the cumulative total for the current year (12 months up to and including August 2016) or the previous year (12 months up to and including August 2015), expressed as cases per 100,000. This includes cases still under investigation.

³ Cases of gastroenteritis from a common source or foodborne intoxication.

⁴ Only acute cases of this disease are currently notifiable.

⁵ Numbers are based on report date. This may not be a good indicator of newly incident cases as a high proportion of notifications have substantial reporting delays.

Other notifiable infectious disease reported in August: Chikungunya fever (1), Hepatitis NOS (1), Hydatid disease (2), Lyme Disease (1), Taeniasis (1), Tetanus (1), Zika virus (2).

Notifiable Disease Surveillance Data by District Health Board August 2016

Disease		Cases ¹ and current rate ² for August 2016 by District Health Board ³																			
		Northland	Waitemata	Auckland	Counties Manukau	Waikato	Lakes	Bay of Plenty	Tairāwhiti	Taranaki	Hawke's Bay	Wanganui	MidCentral	Hutt Valley	Capital and Coast	Wairarapa	Nelson Marlborough	West Coast	Canterbury	South Canterbury	Southern
Campylobacteriosis	Cases	40	76	34	35	46	11	23	3	15	627	12	22	12	40	7	10	1	62	9	29
	Rate	170.5	147	106.1	94.1	149.3	132.6	111.5	126.6	182.1	552	153.4	141.2	116.7	120.9	134.3	129.1	189.6	135.5	235.5	166.2
Cryptosporidiosis	Cases	18	16	8	17	24	2	3	1	1	6	2	8	2	12	1	4	0	4	0	4
	Rate	41.6	25.2	19.4	18.2	33.8	13.4	6.8	19	18.1	18.7	22.4	28.5	8.3	15.3	32.4	11.7	12.2	16	22.2	20.7
Dengue fever	Cases	0	2	0	0	1	0	2	0	1	1	0	1	1	2	0	0	0	0	0	1
	Rate	0.6	3.3	4.7	7.5	3.3	1	5.4	6.3	1.7	3.7	0	2.3	2.8	6.3	2.3	3.5	0	2.7	0	2.5
Gastroenteritis	Cases	0	6	10	3	1	2	12	1	0	0	1	3	1	10	0	0	1	8	0	0
	Rate	3	11.3	25.9	10	3.1	20	15.3	6.3	6.9	1.9	17.6	26.1	16.7	25.6	20.8	2.1	15.3	6.1	1.7	5.7
Giardiasis	Cases	5	21	15	9	11	4	4	5	1	14	6	3	4	10	2	2	0	8	1	9
	Rate	34.5	34.6	40	33.9	31	56.3	35.2	135	30.2	51.1	30.4	16.9	21.5	46.2	32.4	33.1	18.3	30.4	29	26.1
Haemophilus influenzae type b	Cases	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis A	Rate	0	0	0.2	0.4	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Hepatitis B	Rate	1.2	1.6	1.2	1.5	0	0	0.9	0	0.9	0	0	0	0.7	1	0	2.1	0	0.6	0	0.6
	Cases	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis C	Rate	1.2	0.3	1.4	0.4	0.8	1.9	0.9	0	2.6	1.2	0	0.6	0	1	0	0	0	0.4	0	0.6
	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0
Invasive pneumococcal	Rate	2.4	0.2	0.2	0	0	1	0	0	3.5	1.2	0	0	1.4	0.3	2.3	3.5	3.1	1.5	5.1	1.3
	Cases	3	6	6	10	2	2	6	0	0	3	0	0	2	2	0	1	0	4	0	2
Legionellosis	Rate	17.2	7.5	10.4	14.6	9	19.1	15.8	16.9	4.3	9.3	6.4	6.4	8.3	8.6	9.3	6.2	0	7	15.4	8.6
	Cases	4	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	3	0	2
Leptospirosis	Rate	17.8	8.3	5.1	5.9	6.1	3.8	12.2	0	3.5	5.6	3.2	9.9	4.9	3.7	9.3	2.8	6.1	6.8	6.8	4.5
	Cases	0	1	0	0	2	0	1	0	2	3	1	0	0	1	0	1	0	1	0	1
Listeriosis	Rate	7.7	0.3	0	1.2	4.1	1	1.8	0	5.2	7.5	3.2	1.7	0	0.7	0	1.4	6.1	0.8	0	1.6
	Cases	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Malaria	Rate	0	0.9	1	1	0.5	0	2.3	0	0	1.2	1.6	0	2.1	0.7	0	2.1	0	0.4	0	1
	Cases	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Measles	Rate	0.6	1.2	2.4	0.8	0.3	0	0.9	0	0	0.6	0	0.6	1.4	0	2.3	0.7	0	0.6	0	0.3
	Cases	0	0	1	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1
Meningococcal disease	Rate	3.6	0.2	0.4	1.2	14.8	0	0	0	0	0	0	12.2	0.7	1.7	0	2.1	0	0.2	0	0.3
	Cases	0	0	1	1	0	0	1	0	0	1	0	0	0	3	0	0	0	1	0	5
Mumps	Rate	1.8	1	0.4	2.5	1.5	1.9	3.2	2.1	0	1.2	1.6	1.2	0	2.7	0	0.7	3.1	0.4	0	5.1
	Cases	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paratyphoid fever	Rate	1.8	0.3	0	0.4	0	0	0	0	0	0.6	0	0	0	0.3	0	0	0	0	0	0.3
	Cases	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Pertussis	Rate	0	0.3	1.8	1.2	0	1	0.5	0	0	1.9	0	0	0.7	1	4.6	0	0	1	0	0.6
	Cases	0	8	7	3	12	10	3	0	15	1	0	0	1	2	0	4	0	13	3	3
Q fever	Rate	4.2	17	14.7	16.3	34.8	23.9	13.5	2.1	39.7	10.6	41.5	8.7	15.3	25.2	4.6	39.4	6.1	64.8	11.9	22.9
	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ⁴	Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cases	0	2	4	4	1	0	1	2	1	0	0	2	0	2	0	0	0	0	0	0
Rickettsial disease	Rate	1.8	2.4	5.5	9	1.8	3.8	3.2	8.4	1.7	3.7	0	2.9	2.1	2	0	0	0	0.8	0	0.6
	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	Rate	0	1	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cases	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	Rate	0	0.2	0	0.2	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.2	0	0
	Cases	3	11	7	5	8	4	4	1	1	4	0	4	2	12	1	2	1	19	1	9
Shigellosis	Rate	20.2	21.9	21.4	12.3	21.5	22.9	17.2	130.8	18.1	21.8	6.4	25.6	22.2	22.3	25.5	19.3	24.5	25.9	54.6	45.9
	Cases	0	6	2	3	4	0	2	1	0	0	0	0	0	1	0	1	0	0	0	1
Tuberculosis disease	Rate	1.2	4.9	4.9	6.3	3.3	0	2.3	2.1	0	0.6	0	0.6	0.7	2.7	0	1.4	0	1.9	0	1.9
	Cases	0	1	3	4	2	1	1	0	0	0	0	0	0	2	0	2	0	3	1	1
Typhoid fever	Rate	0.6	6.1	10.8	11.3	7.4	6.7	5	2.1	1.7	10	3.2	4.1	2.1	7.6	0	2.8	3.1	6.5	1.7	2.5
	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1
Viral Haemorrhagic Fever	Rate	0	0.3	2.7	4	1	0	1.8	0	0	0	0	0	0	0.3	0	1.4	0	0.4	0	0.6
	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VTEC/STEC infection	Rate	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cases	2	12	1	5	4	0	2	0	0	5	1	0	0	0	0	1	0	0	0	0
Yersiniosis	Rate	30.3	20	11	15.5	11.8	6.7	11.3	0	8.6	4.4	4.8	3.5	2.8	1.3	0	6.9	9.2	4.2	0	6.7
	Cases	5	12	6	8	7	2	2	0	1	5	0	2	2	6	0	2	0	15	2	7
	Rate	11.3	15.5	16.1	11.5	11.8	19.1	11.3	16.9	12.1	9.3	8	7	23.6	29.6	6.9	4.8	21.4	33.1	34.1	17.2

¹ These data are provisional.

² Current rate is based on the cumulative total for the 12 months up to and including August 2016 expressed as cases per 100,000. This includes cases still under investigation.

³ Further data are available from the local Medical Officer of Health.

⁴ Rates are based on report date. This may not be a good indicator of newly incident cases as a high proportion of notifications have substantial reporting delays.

Notifiable Disease Surveillance Data by District Health Board August 2016

		Cases ¹ and current rate ² for August 2016 by District Health Board ³																			
		Northland	Waitemata	Auckland	Counties Manukau	Waikato	Lakes	Bay of Plenty	Tairāwhiti	Taranaki	Hawke's Bay	Whanganui	MidCentral	Hutt Valley	Capital and Coast	Wairarapa	Nelson Marlborough	West Coast	Canterbury	South Canterbury	Southern
Disease	Cases	40	76	34	35	46	11	23	3	15	627	12	22	12	40	7	10	1	62	9	29
	Rate	170.5	147	106.1	94.1	149.3	132.6	111.5	126.6	182.1	552	153.4	141.2	116.7	120.9	134.3	129.1	189.6	135.5	235.5	166.2
Cryptosporidiosis	Cases	18	16	8	17	24	2	3	1	1	6	2	8	2	12	1	4	0	4	0	4
	Rate	41.6	25.2	19.4	18.2	33.8	13.4	6.8	19	18.1	18.7	22.4	28.5	8.3	15.3	32.4	11.7	12.2	16	22.2	20.7
Dengue fever	Cases	0	2	0	0	1	0	2	0	1	1	0	1	1	2	0	0	0	0	0	1
	Rate	0.6	3.3	4.7	7.5	3.3	1	5.4	6.3	1.7	3.7	0	2.3	2.8	6.3	2.3	3.5	0	2.7	0	2.5
Gastroenteritis	Cases	0	6	10	3	1	2	12	1	0	0	1	3	1	10	0	0	1	8	0	0
	Rate	3	11.3	25.9	10	3.1	20	15.3	6.3	6.9	1.9	17.6	26.1	16.7	25.6	20.8	2.1	15.3	6.1	1.7	5.7
Giardiasis	Cases	5	21	15	9	11	4	4	5	1	14	6	3	4	10	2	2	0	8	1	9
	Rate	34.5	34.6	40	33.9	31	56.3	35.2	135	30.2	51.1	30.4	16.9	21.5	46.2	32.4	33.1	18.3	30.4	29	26.1
Haemophilus influenzae type b	Cases	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	0	0.2	0.4	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis A	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	Rate	1.2	1.6	1.2	1.5	0	0	0.9	0	0.9	0	0	0	0.7	1	0	2.1	0	0.6	0	0.6
Hepatitis B	Cases	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	1.2	0.3	1.4	0.4	0.8	1.9	0.9	0	2.6	1.2	0	0.6	0	1	0	0	0	0.4	0	0.6
Hepatitis C	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0
	Rate	2.4	0.2	0.2	0	0	1	0	0	3.5	1.2	0	0	1.4	0.3	2.3	3.5	3.1	1.5	5.1	1.3
Invasive pneumococcal disease	Cases	3	6	6	10	2	2	6	0	0	3	0	0	2	2	0	1	0	4	0	2
	Rate	17.2	7.5	10.4	14.6	9	19.1	15.8	16.9	4.3	9.3	6.4	6.4	8.3	8.6	9.3	6.2	0	7	15.4	8.6
Legionellosis	Cases	4	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	3	0	2
	Rate	17.8	8.3	5.1	5.9	6.1	3.8	12.2	0	3.5	5.6	3.2	9.9	4.9	3.7	9.3	2.8	6.1	6.8	6.8	4.5
Leptospirosis	Cases	0	1	0	0	2	0	1	0	2	3	1	0	0	1	0	1	0	1	0	1
	Rate	7.7	0.3	0	1.2	4.1	1	1.8	0	5.2	7.5	3.2	1.7	0	0.7	0	1.4	6.1	0.8	0	1.6
Listeriosis	Cases	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Rate	0	0.9	1	1	0.5	0	2.3	0	0	1.2	1.6	0	2.1	0.7	0	2.1	0	0.4	0	1
Malaria	Cases	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	Rate	0.6	1.2	2.4	0.8	0.3	0	0.9	0	0	0.6	0	0.6	1.4	0	2.3	0.7	0	0.6	0	0.3
Measles	Cases	0	0	1	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1
	Rate	3.6	0.2	0.4	1.2	14.8	0	0	0	0	0	0	12.2	0.7	1.7	0	2.1	0	0.2	0	0.3
Meningococcal disease	Cases	0	0	1	1	0	0	1	0	0	1	0	0	0	3	0	0	0	1	0	5
	Rate	1.8	1	0.4	2.5	1.5	1.9	3.2	2.1	0	1.2	1.6	1.2	0	2.7	0	0.7	3.1	0.4	0	5.1
Mumps	Cases	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	1.8	0.3	0	0.4	0	0	0	0	0	0.6	0	0	0	0.3	0	0	0	0	0	0.3
Paratyphoid fever	Cases	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Rate	0	0.3	1.8	1.2	0	1	0.5	0	0	1.9	0	0	0.7	1	4.6	0	0	1	0	0.6
Pertussis	Cases	0	8	7	3	12	10	3	0	15	1	0	0	1	2	0	4	0	13	3	3
	Rate	4.2	17	14.7	16.3	34.8	23.9	13.5	2.1	39.7	10.6	41.5	8.7	15.3	25.2	4.6	39.4	6.1	64.8	11.9	22.9
Q fever	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ⁴	Cases	0	2	4	4	1	0	1	2	1	0	0	2	0	2	0	0	0	0	0	0
	Rate	1.8	2.4	5.5	9	1.8	3.8	3.2	8.4	1.7	3.7	0	2.9	2.1	2	0	0	0	0.8	0	0.6
Rickettsial disease	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	1	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	Cases	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	0.2	0	0.2	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.2	0	0
Salmonellosis	Cases	3	11	7	5	8	4	4	1	1	4	0	4	2	12	1	2	1	19	1	9
	Rate	20.2	21.9	21.4	12.3	21.5	22.9	17.2	130.8	18.1	21.8	6.4	25.6	22.2	22.3	25.5	19.3	24.5	25.9	54.6	45.9
Shigellosis	Cases	0	6	2	3	4	0	2	1	0	0	0	0	0	1	0	1	0	0	0	1
	Rate	1.2	4.9	4.9	6.3	3.3	0	2.3	2.1	0	0.6	0	0.6	0.7	2.7	0	1.4	0	1.9	0	1.9
Tuberculosis disease	Cases	0	1	3	4	2	1	1	0	0	0	0	0	0	2	0	2	0	3	1	1
	Rate	0.6	6.1	10.8	11.3	7.4	6.7	5	2.1	1.7	10	3.2	4.1	2.1	7.6	0	2.8	3.1	6.5	1.7	2.5
Typhoid fever	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1
	Rate	0	0.3	2.7	4	1	0	1.8	0	0	0	0	0	0	0.3	0	1.4	0	0.4	0	0.6
Viral Haemorrhagic Fever	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VTEC/STEC infection	Cases	2	12	1	5	4	0	2	0	0	5	1	0	0	0	0	1	0	0	0	0
	Rate	30.3	20	11	15.5	11.8	6.7	11.3	0	8.6	4.4	4.8	3.5	2.8	1.3	0	6.9	9.2	4.2	0	6.7
Yersiniosis	Cases	5	12	6	8	7	2	2	0	1	5	0	2	2	6	0	2	0	15	2	7
	Rate	11.3	15.5	16.1	11.5	11.8	19.1	11.3	16.9	12.1	9.3	8	7	23.6	29.6	6.9	4.8	21.4	33.1	34.1	17.2

¹ These data are provisional.

² Current rate is based on the cumulative total for the 12 months up to and including August 2016 expressed as cases per 100,000. This includes cases still under investigation.

³ Further data are available from the local Medical Officer of Health.

⁴ Rates are based on report date. This may not be a good indicator of newly incident cases as a high proportion of notifications have substantial reporting delays.

Notifiable Disease Surveillance Data for the 12 months ending August-2016 by District Health Board

Disease	Cases for the 12 months ending August 2016 ^{1 2} by District Health Board																		
	Total	Northland	Waitemata	Auckland	Counties Manukau	Waikato	Lakes	Bay of Plenty	Tairāwhiti	Taranaki	Hawke's Bay	Whanganui	MidCentral	Hutt Valley	Capital and Coast	Wairarapa	Nelson Marlborough	West Coast	Canterbury
Campylobacteriosis	6821	287	846	520	491	583	139	247	60	211	886	96	243	168	364	58	187	62	713
Cryptosporidiosis	944	70	145	95	95	132	14	15	9	21	30	14	49	12	46	14	17	4	84
Dengue fever	174	1	19	23	39	13	1	12	3	2	6	0	4	4	19	1	5	0	14
Gastroenteritis	555	5	65	127	52	12	21	34	3	8	3	11	45	24	77	9	3	5	32
Giardiasis	1614	58	199	196	177	121	59	78	64	35	82	19	29	31	139	14	48	6	160
Haemophilus influenzae type b	4	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Hepatitis A	40	2	9	6	8	0	0	2	0	1	0	0	0	1	3	0	3	0	3
Hepatitis B	33	2	2	7	2	3	2	2	0	3	2	0	1	0	3	0	0	0	2
Hepatitis C	38	4	1	1	0	0	1	0	0	4	2	0	0	2	1	1	5	1	8
Invasive pneumococcal disease	456	29	43	51	76	35	20	35	8	5	15	4	11	12	26	4	9	0	37
Legionellosis	303	30	48	25	31	24	4	27	0	4	9	2	17	7	11	4	4	2	36
Leptospirosis	80	13	2	0	6	16	1	4	0	6	12	2	3	0	2	0	2	2	4
Listeriosis	38	0	5	5	5	2	0	5	0	0	2	1	0	3	2	0	3	0	2
Malaria	37	1	7	12	4	1	0	2	0	0	1	0	1	2	0	1	1	0	3
Measles	105	6	1	2	6	58	0	0	0	0	0	0	21	1	5	0	3	0	1
Meningococcal disease	73	3	6	2	13	6	2	7	1	0	2	1	2	0	8	0	1	1	2
Mumps	10	3	2	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0
Paratyphoid fever	35	0	2	9	6	0	1	1	0	0	3	0	0	1	3	2	0	0	5
Pertussis	1137	7	98	72	85	136	25	30	1	46	17	26	15	22	76	2	57	2	341
Q fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ³	141	3	14	27	47	7	4	7	4	2	6	0	5	3	6	0	0	0	4
Rickettsial disease	8	0	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	4	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Salmonellosis	1099	34	126	105	64	84	24	38	62	21	35	4	44	32	67	11	28	8	136
Shigellosis	135	2	28	24	33	13	0	5	1	0	1	0	1	1	8	0	2	0	10
Tuberculosis disease	297	1	35	53	59	29	7	11	1	2	16	2	7	3	23	0	4	1	34
Typhoid fever	51	0	2	13	21	4	0	4	0	0	0	0	0	0	1	0	2	0	2
Viral Haemorrhagic Fever	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
VTEC /STEC infection	469	51	115	54	81	46	7	25	0	10	7	3	6	4	4	0	10	3	22
Yersiniosis	780	19	89	79	60	46	20	25	8	14	15	5	12	34	89	3	7	7	174
Total	15482	631	1916	1509	1466	1373	353	618	225	395	1153	190	516	367	984	124	401	104	1830

¹ These data are provisional.

² Further data are available from the local Medical Officer of Health.

³ Numbers are based on report date. This may not be a good indicator of newly incident cases as a high proportion of notifications have substantial reporting delays.

National Notifiable Disease Surveillance Data August 2016

Disease	Current Year - 2016 ¹			Previous Year - 2015		
	August 2016 Cases	Cumulative total since 1 January	Current 12 Month Rate ²	August 2015 Cases	Cumulative total since 1 January	Current 12 Month Rate ²
Campylobacteriosis	1114	4137	148.4	488	3534	139.9
Cryptosporidiosis	133	508	20.5	79	260	13.4
Dengue fever	12	151	3.8	8	102	3
Gastroenteritis ³	59	358	12.1	28	306	14
Giardiasis	134	1120	35.1	137	1016	32.7
Haemophilus influenzae type b	3	4	0.1	0	3	0.1
Hepatitis A	1	25	0.9	5	32	1.2
Hepatitis B ⁴	2	20	0.7	4	21	0.7
Hepatitis C ⁴	4	24	0.8	2	21	0.5
Invasive pneumococcal disease	49	290	9.9	55	281	10.1
Legionellosis	14	165	6.6	7	110	3.7
Leptospirosis	14	64	1.7	2	47	1.5
Listeriosis	3	27	0.8	0	15	0.4
Malaria	3	23	0.8	4	24	0.8
Measles	6	104	2.3	0	9	0.3
Meningococcal disease	13	47	1.6	15	38	1.2
Mumps	2	4	0.2	2	7	0.3
Paratyphoid fever	3	24	0.8	1	23	0.6
Pertussis	85	667	24.7	161	698	22.6
Rheumatic fever ⁵	19	113	3.1	7	84	2.9
Rickettsial disease	0	5	0.2	2	5	0.2
Rubella	1	4	0.1	0	0	0
Salmonellosis	99	758	23.9	58	710	22.5
Shigellosis	21	103	2.9	7	79	2.5
Tuberculosis disease	21	195	6.5	20	194	6.4
Typhoid fever	3	31	1.1	3	23	0.8
Viral Haemorrhagic Fever	0	1	0	0	0	0
VTEC/STEC infection	33	334	10.2	37	195	5.5
Yersiniosis	84	492	17	68	346	16.6

¹ These data are provisional.

² Rate is based on the cumulative total for the current year (12 months up to and including August 2016) or the previous year (12 months up to and including August 2015), expressed as cases per 100,000. This includes cases still under investigation.

³ Cases of gastroenteritis from a common source or foodborne intoxication.

⁴ Only acute cases of this disease are currently notifiable.

⁵ Numbers are based on report date. This may not be a good indicator of newly incident cases as a high proportion of notifications have substantial reporting delays.

Other notifiable infectious disease reported in August: Chikungunya fever (1), Hepatitis NOS (1), Hydatid disease (2), Lyme Disease (1), Taeniasis (1), Tetanus (1), Zika virus (2).