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December 2017

MONTHLY NOTIFIABLE DISEASE SURVEILLANCE REPORT

Data contained within this monthly report is based on information recorded on EpiSurv by Public Health Service (PHS) staff at 10 January 2017. 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.

Table of contents

1. Key notifiable disease trends

Dengue Fever: 29 confirmed cases of dengue fever were notified in December 2017 compared to 6 cases notified in December 2016. All cases had been overseas during the incubation period. The countries visited included Samoa (23 cases), India, Thailand (2 cases each), Australia, Cambodia, Fiji, Indonesia, Laos and Vanuatu (1 case each). Three cases reported overseas travel to more than one country.

Hepatitis A: 10 cases of hepatitis A (8 confirmed and 2 under investigation) were notified in December 2017 compared to four cases notified in December 2016. The cases were reported from Waitemata (3 cases), Waikato, Canterbury (2 cases each), Northland, Auckland and Counties Manukau (1 case each) DHBs. All cases were laboratory confirmed. Ethnicity was recorded for 80.0% (8/10) cases, and were reported as being in European or Other (4 cases), Asian (2 cases), Māori, and Pacific peoples (1 case each). The cases ranged in age from 2 to 43 years, with the highest number of cases in the 20–29 years (3 cases), 1–4 years, and 30–39 years age groups (2 cases each). Risk factor information was recorded for seven cases: overseas travel (4 cases), contact with a confirmed case (2 cases) , and attending a pre-school or childcare (1 case). One interim hepatitis A outbreak (case numbers yet to be determined) was created in December.

Leptospirosis: 11 cases of leptospirosis (5 confirmed, 1 probable, and 5 under investigation) were notified in December 2017 compared to seven cases notified in December 2016. The cases were reported in the 50–59 years (4 cases) and 15–19 years, 20–29 years, 30–39 years (2 cases each), and 60–69 (1 case) years age groups. Occupation was recorded for all cases. Of these, 8 were engaged in occupation previously identified as high risk exposure to *Leptospira* species: meat workers (5 cases) and farmers or farm workers (3 case). Two cases reported exposure through animal contact. One case did not have any risk factor information recorded.

Meningococcal disease: 14 cases of meningococcal disease (13 confirmed and 1 under investigation) were notified in December 2017 compared to four cases notified in December 2016. The highest number of cases were reported from Waitemata (3 cases), Auckland, Counties Manukau, and Whanganui (2 cases each) DHBs. The highest number of cases were in the 1–4 years (6 cases), 15–19 years (3 years) and less than one year (2 cases) age groups. Thirteen cases were hospitalised and one death was reported. Twelve cases were laboratory confirmed and the group was determined for all of these cases: group B (5 cases, including 1 NZ B:P1.7-2,4), group C (4 cases), group Y (2 cases), and group W (1 case).

Mumps: 190 cases of mumps (87 confirmed, 40 probable and 63 under investigation) were notified in December 2017 compared with eight cases notified in December 2016 (Figure 1). The 12-month rate for the period ending 31 December was 29.0 cases per 100,000 population. The highest numbers of cases were reported from Counties Manukau (89 cases), Auckland (37 cases), and Waitemata (32 cases) DHBs. The highest numbers of cases were in the 20–29 years (78 cases) and 15–19 years (32 cases) age groups. Forty-one cases were recorded as being vaccinated against mumps, of which 35 cases had received two doses of the vaccine and three cases had received just one dose. Three further cases had been vaccinated, but no dose information was available and 20 cases were recorded as non-vaccinated. Vaccination status was unknown for 89 cases. Two final mumps outbreaks (5 cases) was created in December

Pertussis: 522 cases of pertussis (261 confirmed, 162 probable, 15 suspected, and 84 under investigation) were notified in December 2017 compared to 120 cases in December 2016 (Figure 2). The 12-month rate for the period ending 31 December (46.5 cases per 100,000) was higher than for the same period in the previous year (23.3 per 100,000). Thirty-one cases were hospitalised and no deaths were reported. Forty-nine percent (256/522) of cases were laboratory-confirmed (28 by culture, 217 by PCR, and 11 by culture and PCR). The highest number of cases was reported from Nelson Marlborough DHB (135 cases), followed by Canterbury (51 cases), Waikato (49 cases) and Bay of Plenty (45 cases) DHBs. Cases ranged in age from 1 month to 86 years, with 16.5% (86/522) under five years of age (including 32 cases aged less than 1 year). The highest numbers of cases were in the 10–14 years (82 cases), 5–9 years (73 cases), 40–49 years (60 cases) and 1–4 years (54 cases) age groups.

Rheumatic fever: Fourteen cases of rheumatic fever - initial attack (6 confirmed, 3 probable, 3 suspect and 2 under investigation) were notified in December 2017. This compares with nine cases (3 initial attack) in December 2016. The cases were reported from Waikato (4 cases), Counties Manukau (3 cases), Waitemata (2 cases), Auckland, Bay of Plenty, Hawke's Bay, Hutt Valley and Capital & Coast (1 case each) DHBs. Cases ranged in age from 6 to 25 years, with cases in the 10–14 years (5 cases), 5–9 cases, 20–29 cases (4 cases each) and 15–19 years (1 case) age groups. Cases were reported in the Māori (7 cases), Pacific peoples (5 cases) and European or Other (2 case) ethnic groups. Thirteen 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.

Shigellosis: 27 cases of shigellosis (26 confirmed and 1 probable) were notified in December 2017 compared with 21 cases notified in December 2016. The 12-month rate for the period ending 31 December (5.3 cases per 100,000 population) was higher than at the same time in the previous year (3.7 per 100,000). The highest number of cases was reported from Auckland (12 cases) DHB. The serotype involved was recorded for 88.9% (24/27) of cases: *S*. sonnei biotype g (10 cases), *S*. flexneri 1b (8 cases), *S*. boydii 13, *S*. boydii 4, S. boydii 8, *S.* flexneri 2a, *S*. flexneri 6 biotype Boyd 88, *S.* sonnei biotype a (1 case each). Information on overseas travel during the incubation period was recorded for 77.8% (21/27) of cases, of which 52.4% (11/21) of cases recorded overseas travel during this period. Countries visited included: India (4 cases), Tonga (3 cases), Egypt, Indonesia, Myanmar, Singapore, Thailand, United States of America, and Vanuatu, (1 case each). Two cases reported overseas travel to more than one country. One interim *Shigella* outbreak (case numbers yet to be determined) was created in December.

VTEC/STEC infection: 43 cases of VTEC/STEC infection (30 confirmed and 13 under investigation) were notified in December 2017 compared to 17 cases notified in December 2016. The 12-month rate for the period ending 31 December 2017 (11.9 cases per 100,000 population) was higher than at the same time period in the previous year (8.9 cases per 100,000 population). The highest numbers of cases were reported from Southern (16 cases) and Waitemata (11 cases) DHBs. Cases ranged in age from 5 months to 92 years, with the highest number of cases in the 70 years and over (12 cases) age group. Eleven cases were hospitalised. Sixteen 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* non-O157 (9 cases) and O157:H7 (7 cases). A further 29 cases were confirmed via PCR testing. Of the cases for which risk factor information was recorded, 66.7% (12/18) had contact with animals and 31.3% (5/16) had recreational contact with water.

2. Outbreaks

During December 2017, a total of 51 outbreaks (14 final and 37 interim) were created in EpiSurv (Table 1 and Table 2). Forty-three (84.3%) were outbreaks of acute gastroenteritis (10 finalised and 33 interim) involving 370 cases in total. This compares with 32 acute gastroenteritis outbreaks involving 461 cases in total created during the same month of the previous year. Of the 43 acute gastroenteritis outbreaks, the pathogens were recorded as norovirus (8 outbreaks) and rotavirus (1 outbreak). The most commonly reported mode of transmission in acute gastroenteritis outbreaks (25.6%, 11/43) was person-to-person (8 primary and 3 secondary). Of the outbreaks that had an exposure setting recorded (55.8%, 24/43) the most commonly reported setting were long term care facilities (7 outbreaks) and childcare centres (4 outbreaks).

Table 1. Summary of final outbreaks created in EpiSurv during December 2017

Organism/Toxin/Illness	DHB(s) where exposure occurred	Number of outbreaks	Total number of cases
Campylobacter[1]	Southern	1	7
Gastroenteritis[1]	Taranaki, MidCentral, Capital & Coast, Canterbury, Southern	5	27
Giardia	Bay of Plenty	1	2
Mumps virus	Capital & Coast	2	5
Norovirus	Waitemata, Auckland, Bay of Plenty, Hawke's Bay	5	42
Total		**14**	**83**

[1] Includes outbreak reported to PHSs prior to November 2017: *Campylobacter* (1) and gastroenteritis (1) reported in November.

Table 2. Summary of interim outbreaks created in EpiSurv during December 2017

Organism/Toxin/Illness	DHB(s) where exposure occurred	Number of outbreaks	Total number of cases[1]
Gastroenteritis	Waitemata, Auckland Counties Manukau, Waikato, Bay of Plenty, Taranaki, Hawke's Bay, Hutt Valley Capital & Coast, Nelson Marlborough, Canterbury, Southern	29	56
Hepatitis A virus	Waikato	1	7
Mycobacterium tuberculosis	Auckland, Waikato	2	19
Norovirus	Capital & Coast, Southern	3	176
Rotavirus	Capital & Coast	1	29
Shigella	Auckland	1	-
Total		**37**	**287**

[1] Interim outbreak(s) where total number of cases had not been completed.

3. Deaths from notifiable diseases

Three deaths, where the primary cause of death was a notifiable disease, was reported in December 2017 (Table 3).

Table 3. Summary of deaths from notifiable diseases reported during December 2017

Disease	District health board	Age group (years)
Invasive pneumococcal disease	Waikato	70+
Invasive pneumococcal disease	Canterbury	70+
Meningococcal disease	Waitemata	20 to 29

4. Trends in selected diseases to December 2017

Figure 1. Mumps virus notifications by month, January 2010–December 2017

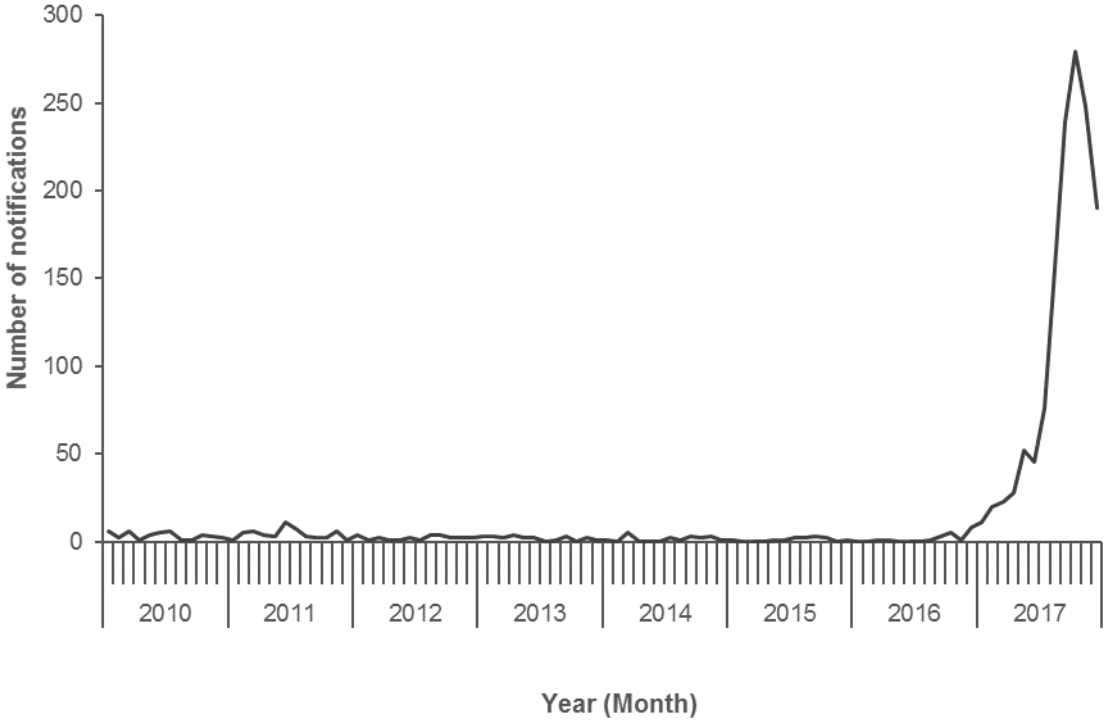
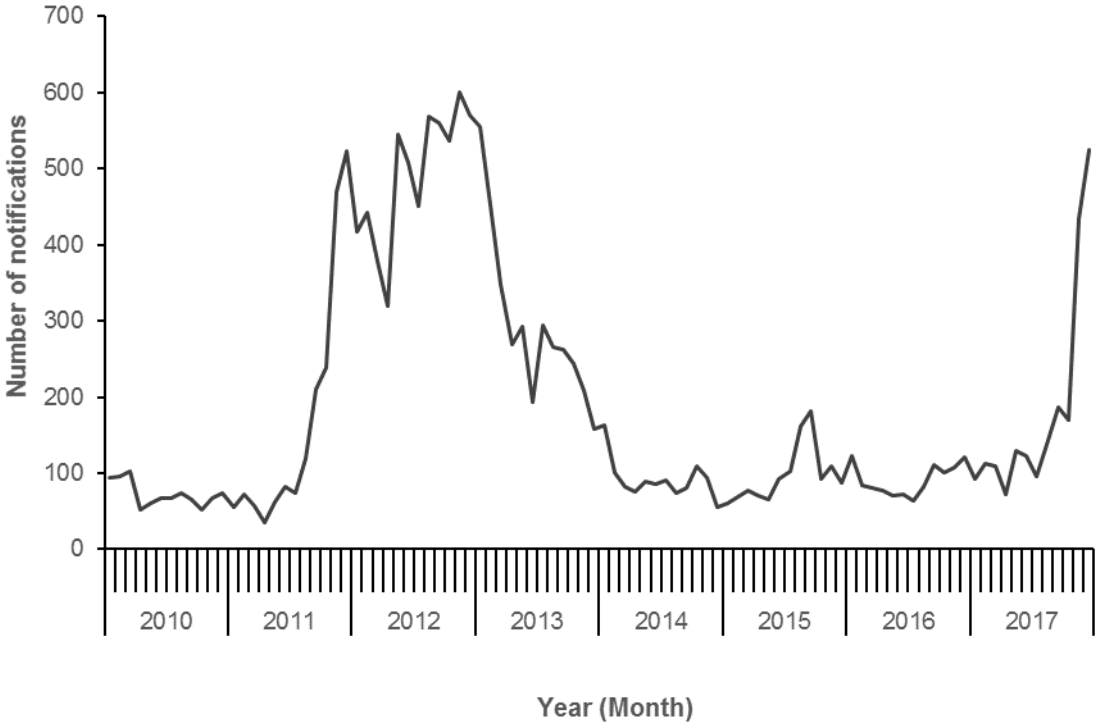


Figure 2. Pertussis notifications by month, January 2010– December 2017



5. Data tables

National Notifiable Disease Surveillance Data December 2017

Disease	Current Year - 2017[1]			Previous Year - 2016		
	December 2017 Cases	Cumulative total since 1 January	Current 12 Month Rate[2]	December 2016 Cases	Cumulative total since 1 January	Current 12 Month Rate[2]
Campylobacteriosis	637	6483	138.2	795	7456	158.9
Cryptosporidiosis	39	1192	25.4	48	1062	22.6
Dengue fever	29	165	3.5	6	191	4.1
Gastroenteritis[3]	21	322	6.9	25	510	10.9
Giardiasis	116	1648	35.1	101	1616	34.4
Haemophilus influenzae type b	0	4	0.1	0	2	0
Hepatitis A	10	58	1.2	4	35	0.7
Hepatitis B[4]	4	39	0.8	4	34	0.7
Hepatitis C[4]	4	23	0.5	3	31	0.7
Invasive pneumococcal disease	36	525	11.2	34	480	10.2
Legionellosis	28	232	4.9	21	247	5.3
Leptospirosis	11	156	3.3	7	85	1.8
Listeriosis	3	21	0.4	3	36	0.8
Malaria	3	43	0.9	1	26	0.6
Measles	1	16	0.3	0	103	2.2
Meningococcal disease	14	116	2.5	4	75	1.6
Mumps	190	1360	29	8	20	0.4
Paratyphoid fever	3	47	1	1	32	0.7
Pertussis	522	2184	46.5	120	1093	23.3
Rheumatic fever[5]	14	161	3.4	3	136	2.9
Rickettsial disease	0	4	0.1	0	5	0.1
Rubella	0	0	0	0	3	0.1
Salmonellosis	83	1123	23.9	71	1091	23.2
Shigellosis	27	249	5.3	21	174	3.7
Tuberculosis disease	38	320	6.8	31	294	6.3
Typhoid fever	3	61	1.3	1	38	0.8
VTEC/STEC infection	43	559	11.9	17	418	8.9
Yersiniosis	47	924	19.7	69	858	18.3

[1] These data are provisional.

[2] Rate is based on the cumulative total for the current year (12 months up to and including December 2017) or the previous year (12 months up to and including December 2016), 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 December: Hepatitis NOS (1) , Leprosy (1) , Toxic shellfish poisoning (2)

Notifiable Disease Surveillance Data by District Health Board December 2017

Disease		Cases[1] and current rate[2] for December 2017 by District Health Board[3]																			
		Northland	Waitemata	Auckland	Counties Manukau	Waikato	Lakes	Bay of Plenty	Tairawhiti	Taranaki	Hawke's Bay	Whanganui	MidCentral	Hutt Valley	Capital and Coast	Wairarapa	Nelson Marlborough	West Coast	Canterbury	South Canterbury	Southern
Campylobacteriosis	Cases	26	80	54	49	43	10	19	3	28	28	9	23	20	36	11	18	6	85	15	74
	Rate	148.2	129.7	104.9	87.4	140.7	148.2	100.6	110.9	193.5	167.3	146	155	103.5	113.2	181.2	146.2	187.7	159.9	246.6	233.3
Cryptosporidiosis	Cases	3	5	2	4	1	0	4	2	1	0	0	1	0	2	0	2	0	4	5	3
	Rate	30.9	18.3	16.8	26.2	30	18.8	14.6	54.4	21.4	12.4	28.6	33.9	4.8	11.4	45.9	56.7	18.5	27.8	62.5	46.1
Dengue fever	Cases	0	3	6	11	1	0	2	0	0	0	0	0	2	1	0	0	0	2	0	1
	Rate	1.2	3.2	6.5	8.2	2.3	2.8	2.2	2.1	2.6	1.2	3.2	2.3	2.1	2.9	0	2	0	3.5	3.4	0.6
Gastroenteritis	Cases	3	0	2	2	0	1	3	0	0	0	1	1	1	1	1	0	1	1	0	3
	Rate	7.6	3.9	9.9	3.7	1.8	8.4	4.9	2.1	0	1.2	25.4	21.8	15.1	16.6	2.3	0.7	15.4	7	3.4	3.8
Giardiasis	Cases	8	16	27	7	8	1	9	1	3	4	0	3	1	4	0	4	0	8	4	8
	Rate	46.1	29.8	42.6	35.4	42.1	46	46.3	79.5	22.3	40.3	31.7	19.5	18.5	36.5	66.5	32.1	15.4	26.9	42.2	29.2
Haemophilus influenzae type b	Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	0	0.2	0	0.3	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0.3
Hepatitis A	Cases	1	3	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	Rate	1.8	1.2	1.2	3.9	1.8	0	0	0	0	0	0	2.3	0	1	0	0	0	0.9	0	0.6
Hepatitis B	Cases	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	Rate	1.2	0.7	0.6	1.3	0.5	0	0	2.1	0.9	1.2	3.2	3.4	0	0.7	0	1.4	0	0.4	0	0.9
Hepatitis C	Cases	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
	Rate	1.2	0.3	0.6	0	0	0	0	0	2.6	0.6	0	0.6	0	0.7	0	2	0	0.4	0	1.3
Invasive pneumococcal	Cases	0	1	1	4	5	1	4	0	1	3	1	0	1	4	2	2	2	3	0	1
	Rate	15.2	8	8.1	14.8	12	15.9	20.3	14.6	9.4	14.3	19	10.3	8.2	11.1	18.3	10.2	18.5	7.2	6.8	10
Legionellosis	Cases	2	7	3	1	1	1	0	0	0	1	0	1	1	0	0	1	0	5	0	4
	Rate	14	4.4	2	3.7	1.8	4.7	7.5	0	1.7	1.2	0	1.7	4.1	0.7	0	6.8	12.3	13.3	6.8	5.6
Leptospirosis	Cases	0	0	0	0	3	0	1	1	0	1	0	2	1	0	0	1	0	0	0	1
	Rate	4.7	1.2	0.2	0	13.5	2.8	3.1	2.1	4.3	9.3	12.7	5.7	1.4	0	9.2	4.1	9.2	2.2	5.1	2.2
Listeriosis	Cases	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	Rate	1.2	0.2	0.6	0.7	0.3	0	1.3	0	0	0.6	1.6	0.6	0	0	0	1.4	0	0.2	1.7	0
Malaria	Cases	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
	Rate	2.3	0.8	1.4	0.7	0.8	0.9	0.4	0	1.7	0.6	0	0	0.7	2	0	2	0	0.6	0	0.6
Measles	Cases	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0.6	0.3	0.2	0	0	0	0.9	0	0	0	0	4	0.7	0	0	0	0	0.2	1.7	0
Meningococcal disease	Cases	1	3	2	2	1	1	1	0	1	0	2	0	0	0	0	0	0	0	0	0
	Rate	3.5	2.2	2	3.9	2.5	1.9	4	2.1	0.9	3.1	4.8	1.1	1.4	2.9	2.3	0	9.2	2	0	2.2
Mumps	Cases	7	32	37	90	6	1	1	0	0	0	0	3	4	4	0	2	0	1	0	2
	Rate	18.1	50.6	62.1	90.4	19.3	2.8	2.2	0	7.7	1.9	11.1	6.3	8.2	7.5	0	8.2	0	4.1	0	15.1
Paratyphoid fever	Cases	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rate	0	1.5	2.2	0.7	0.3	0	0.9	4.2	0.9	6.2	0	1.1	0	1	0	0.7	0	0.2	0	0
Pertussis	Cases	19	39	29	29	50	10	45	3	1	12	9	14	2	16	8	138	3	51	5	42
	Rate	42.6	33.9	33.7	22.3	49.1	45	56.9	37.7	48.8	62.6	31.7	22.4	38.4	50.6	25.2	191.9	30.8	45.8	30.4	73.7
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	1	3	4	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0
	Rate	6.4	2.4	4.7	9.9	5.3	2.8	3.1	6.3	0	3.1	1.6	1.1	3.4	1.6	0	0.7	0	0.7	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	0	0.4	0.2	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0
Rubella	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
Salmonellosis	Cases	3	7	10	6	7	2	4	1	2	1	0	4	0	7	2	1	1	11	4	10
	Rate	35	18.1	23.7	13.3	26.3	22.5	16.3	46	23.1	18	17.5	21.8	15.1	25.4	29.8	20.5	15.4	37.4	37.2	31.4
Shigellosis	Cases	0	3	12	4	1	0	0	0	0	0	1	0	0	3	0	0	0	2	0	1
	Rate	4.7	5.4	11.8	10.9	1.5	3.8	1.8	2.1	1.7	6.8	3.2	1.7	2.1	6.2	0	0.7	3.1	3.2	0	5.3
Tuberculosis disease	Cases	0	3	5	6	7	0	1	1	0	0	0	0	4	2	0	2	0	6	0	1
	Rate	2.3	6.9	12.4	11	7.3	2.8	3.5	2.1	4.3	7.4	0	4	10.3	6.2	9.2	4.1	0	6.5	0	2.8
Typhoid fever	Cases	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Rate	0	1	3.5	4.1	0.5	1.9	0	0	0	0.6	1.6	1.1	0.7	0	0	0.7	0	0.2	0	1.3
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VTEC/STEC infection	Cases	3	11	2	4	0	0	2	0	1	0	1	0	1	0	0	1	0	0	1	16
	Rate	41.4	14.1	7.7	11.4	8.8	11.3	10.6	2.1	10.3	6.8	9.5	2.9	1.4	3.3	2.3	5.5	6.2	4.4	20.3	43.9
Yersiniosis	Cases	0	6	7	6	2	0	0	0	4	1	0	0	3	4	2	1	0	7	0	4
	Rate	12.8	19.6	20.5	12.9	14.8	19.7	24.7	20.9	21.4	21.1	15.9	9.2	26	27.4	34.4	5.5	9.2	30.2	28.7	16.9

[1] These data are provisional.

[2] Current rate is based on the cumulative total for the 12 months up to and including December 2017 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.