

APPENDIX: NATIONAL DATA AND TRENDS

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Comparison of notifiable disease cases and rates for 2009 and 2010

Table 40. Number of cases and rates per 100 000 population for common (10 or more cases reported per year) notifiable diseases in New Zealand, 2009–2010

Disease	2009		2010		Change ^{c, d}
	Cases	Rate	Cases	Rate	
AIDS	28	0.6	39	0.9	→
Campylobacteriosis	7 177	166.3	7 346	168.2	→
Cryptosporidiosis	854	19.8	954	21.8	→
Dengue fever	139	3.2	51	1.2	←
Gastroenteritis ^a	712	16.5	492	11.3	←
Giardiasis	1 639	38.0	1 985	45.4	→
Hepatitis A	44	1.0	46	1.1	→
Hepatitis B ^b	55	1.3	51	1.2	←
Hepatitis C ^b	32	0.7	17	0.4	←
Invasive pneumococcal disease	697	16.1	535	12.2	←
Lead absorption	273	6.3	201	4.6	←
Legionellosis	74	1.7	178	4.1	→
Leptospirosis	69	1.6	81	1.9	→
Listeriosis	28	0.6	23	0.5	←
Malaria	50	1.2	44	1.0	←
Measles	248	5.7	48	1.1	←
Meningococcal disease	133	3.1	97	2.2	←
Mumps	63	1.5	41	0.9	←
Non seasonal influenza A (H1N1)	3 670	85.0	1 826	41.8	←
Paratyphoid fever	25	0.6	19	0.4	←
Pertussis	1 398	32.4	873	20.0	←
Rheumatic fever	140	3.2	168	3.8	→
Rickettsial disease	5	0.1	14	0.3	→
Salmonellosis	1 128	26.1	1 146	26.2	→
Shigellosis	119	2.8	105	2.4	←
Tuberculosis disease	299	6.9	307	7.0	→
Typhoid fever	34	0.8	31	0.7	←
VTEC/STEC infection	143	3.3	138	3.2	←
Yersiniosis	430	10.0	406	9.3	←

^a Cases of gastroenteritis from a common source or foodborne intoxication e.g. staphylococcal intoxication.

^b Only acute cases of this disease are notifiable.

^c ← = significant decrease, → = significant increase, -- = no change, ← = not significant decrease, → = not significant increase

^d The Pearson chi-square test or where necessary Fisher's Exact test were used to determine statistical significance. P-values less than 0.05 are considered to be significant at the 95% level of confidence

Comparison of notifiable disease cases and rates for 2009 and 2010

Table 41. Number of cases of rare (less than 10 cases reported per year) notifiable diseases in New Zealand, 2009–2010

Disease ^a	2009	2010
Barmah Forest virus infection	2	0
Brucellosis	0	1
Chemical poisoning from the environment	6	3
Cholera	0	2
Diphtheria	1	0
<i>Enterobacter sakazakii</i>	0	2
<i>Haemophilus influenzae</i> type b	10	8
Hepatitis NOS	2	3
Hydatid disease	3	4
Leprosy	3	3
Ross River virus infection	3	5
Rubella	4	4
Taeniasis	3	3
Tetanus	1	7
Toxic shellfish poisoning	1	9

^a No cases of the following notifiable diseases were reported in 2009 and 2010: anthrax, congenital rubella, cysticercosis, decompression sickness, HPAI, plague, poliomyelitis, primary amoebic meningo-encephalitis, rabies, SARS, trichinosis, viral haemorrhagic fever and yellow fever.

Deaths from notifiable diseases in EpiSurv, 1997–2010

Table 42. Deaths due to notifiable diseases recorded in EpiSurv, 1997–2010

Disease	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AIDS ^a	34	19	18	19	14	11	10	13	15	14	5	2	2	8
Campylobacteriosis	2	2	1	3	1	1	0	0	1	1	1	0	0	0
Chemical poisoning from the environment	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Creutzfeldt-Jakob disease ^b	3	0	2	3	1	3	4	3	0	5	0	0	0	0
Gastroenteritis	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Giardiasis	1	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> type b	1	0	0	0	1	1	2	0	0	0	0	0	0	1
Hepatitis B	2	0	0	0	1	0	0	0	1	0	1	0	0	0
Hydatid disease	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Invasive pneumococcal disease ^c												8	35	27
Legionellosis ^d	4	1	1	5	2	3	1	1	4	3	1	4	2	5
Listeriosis - non perinatal	2	0	1	2	1	0	2	3	1	0	2	3	2	3
Listeriosis - perinatal	6	0	2	4	1	3	2	2	0	1	2	2	2	4
Malaria	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Meningococcal disease	24	23	23	17	26	18	13	8	14	7	7	8	5	6
Non seasonal influenza A (H1N1) ^e													34	16
Pertussis	0	0	0	0	1	1	1	1	0	0	0	0	0	0
Primary amoebic meningoencephalitis	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Rheumatic fever ^f	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	2	2	1	7	2	1	0	0	1	1	1	1	1	0
Shigellosis	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Tetanus	0	0	0	0	1	0	0	0	0	0	1	0	0	1
Tuberculosis disease	15	8	14	8	2	6	6	6	4	5	3	4	4	8
VTEC/STEC infection	1	1	0	0	0	0	0	0	0	0	0	0	1	0
Yersiniosis	0	2	0	0	0	0	0	1	0	0	0	0	0	0

^a Data source [36]^b Data source [14]^c Invasive pneumococcal disease became notifiable on 17 October 2008^d One further legionellosis death occurred in a laboratory-reported but non-notified case in 2002^e Non seasonal influenza became notifiable on 29 April 2009^f The death was a rheumatic fever occurrence

Note: The numbers in this table are those recorded in EpiSurv where the notifiable disease was the primary cause of death. Information on deaths is most likely to be reported by public health services when it occurs close to the time of notification and investigation.

Mortality data for selected notifiable diseases, 2006–2008 (Ministry of Health, NMDS)**Table 43. Reported deaths from selected notifiable diseases, 2006–2008**

Disease	ICD 10 codes	2006		2007		2008 ^a	
		Und ^b	Cont ^c	Und ^b	Cont ^c	Und ^b	Cont ^c
AIDS	B20-B24	17	5	10	8	7	3
Campylobacteriosis	A04.5	3		1			4
Creutzfeldt-Jakob disease	A81.0	3		7		2	
Dengue fever	A90, A91					1	
Hepatitis A	B15				2		1
Hepatitis B	B16		5	2	3	1	3
Hepatitis C	B17.1		1				5
Hydatid disease	B67						1
Legionellosis	A48.1	1		1		3	2
Listeriosis	A32		1	2		1	1
Meningococcal disease	A39	6		7		8	
Salmonellosis	A02	1				1	2
Shigellosis	A03					1	
Tetanus	A33-A35			1			
Tuberculosis	A15-A19, P37.0	11	8	7	8	8	11
Yersiniosis	A04.6					1	1

^a Latest year that data are available^b Underlying – main cause of death^c Contributory – selected contributory cause of death (not main cause of death)

Morbidity data for selected notifiable diseases, 2008–2010 (Ministry of Health, NMDS)

Table 44. Hospital admissions for selected notifiable diseases, 2008–2010

Disease	ICD 10 codes	2008		2009		2010	
		Prin ^a	Oth ^b	Prin ^a	Oth ^b	Prin ^a	Oth ^b
AIDS	B20-B24	26	266	16	285	16	297
Arboviral diseases	A83, A84, A85.2, A92, A93, A94, B33.1	1	0	1	0	1	0
Brucellosis	A23	2	0	0	0	0	0
Campylobacteriosis	A04.5	388	97	473	101	518	106
Cholera	A00	1	0	0	0	1	0
Creutzfeldt-Jakob disease	A81.0	5	9	4	0	5	2
Cryptosporidiosis	A07.2	19	13	19	4	16	14
Cysticercosis	B69	2	0	1	2	4	1
Decompression sickness	T70.3	12	2	24	3	18	2
Dengue fever	A90, A91	35	5	22	3	15	2
Diphtheria	A36	0	0	0	0	2	0
Giardiasis	A07.1	18	21	21	13	18	15
Hepatitis A	B15	19	18	17	7	20	10
Hepatitis B	B16	33	81	27	27	25	23
Hepatitis C	B17.1	12	21	15	29	13	10
Hydatid disease	B67	0	0	2	1	1	0
Lead absorption	T56.0	2	0	5	0	6	0
Legionellosis	A48.1	37	6	33	9	68	11
Leprosy	A30	5	4	0	1	1	3
Leptospirosis	A27	57	7	46	3	57	3
Listeriosis	A32	13	13	11	17	13	18
Malaria	B50-B54	30	0	34	2	40	2
Measles	B05	3	0	29	1	5	0
Meningococcal disease	A39	125	21	167	23	112	22
Mumps	B26	16	4	9	3	10	3
Paratyphoid	A01.1-A01.4	4	0	3	0	6	1
Pertussis	A37	72	11	124	19	132	23
Poliomyelitis	A80	0	1	0	0	0	0
Rheumatic fever	I00, I01, I02	227	46	230	35	254	55
Rickettsial diseases	A75, A77, A78, A79	7	1	6	3	7	1
Rubella	B06	0	1	0	1	1	1
Salmonellosis	A02	118	40	130	28	120	49
Shigellosis	A03	15	4	14	5	21	4
Taeniasis	B689	0	1	0	0	0	1
Tetanus	A33-A35	1	0	1	0	7	1
Tuberculosis	A15-A19, P37.0	205	121	237	146	255	159
Typhoid	A01.0	19	1	25	1	34	1
VTEC/STEC infection	A04.0-A04.4	26	20	24	11	35	24
Yersiniosis	A04.6	23	30	24	22	13	14

^a Principal diagnosis^b Other relevant diagnosis

Note: Hospital admission data may include multiple admissions (to the same or different hospitals) for the same case and admissions may relate to cases first diagnosed in previous years.

Notifiable disease cases and rates by district health board, 2010

Table 45a. Number of cases and rates per 100 000 population of notifiable diseases by DHB, 2010

Disease	District health board ^a																			
	Northland		Waitemata		Auckland		Counties Manukau		Waikato		Lakes		Bay of Plenty		Tairāwhiti		Taranaki		Hawke's Bay	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	183	116.3	843	157.0	655	145.5	534	108.8	680	186.6	183	178.4	322	153.3	37	79.6	265	242.5	317	204.1
Cryptosporidiosis	41	26.1	81	15.1	64	14.2	39	7.9	141	38.7	14	13.6	14	6.7	5	10.8	30	27.5	45	29.0
Dengue fever	2		6	1.1	12	2.7	3		9	2.5	0		3		1		1		0	
Gastroenteritis	4		60	11.2	63	14.0	26	5.3	30	8.2	4		10	4.8	0		13	11.9	4	
Giardiasis	41	26.1	253	47.1	304	67.5	205	41.8	181	49.7	44	42.9	72	34.3	16	34.4	36	32.9	105	67.6
Hepatitis A	1		2		7	1.6	9	1.8	4		1		1		2		0		2	
Hepatitis B	1		2		8	1.8	10	2.0	1		2		1		5	10.8	0		3	
Invasive pneumococcal disease	17	10.8	62	11.5	45	10.0	105	21.4	47	12.9	18	17.5	33	15.7	1		10	9.2	24	15.5
Lead absorption	5	3.2	18	3.4	18	4.0	12	2.4	17	4.7	0		5	2.4	2		4		8	5.2
Legionellosis	10	6.4	24	4.5	16	3.6	14	2.9	6	1.6	1		6	2.9	1		2		4	
Leptospirosis	2		1		0		1		15	4.1	1		3		3		2		11	7.1
Malaria	0		5	0.9	12	2.7	8	1.6	1		0		3		0		1		1	
Measles	31	19.7	2		5	1.1	1		0		1		1		1		0		1	
Meningococcal disease	6	3.8	9	1.7	7	1.6	16	3.3	7	1.9	3		6	2.9	1		1		7	4.5
Mumps	3		7	1.3	1		4		2		0		0		0		4		0	
Non seasonal influenza A (H1N1)	62	39.4	119	22.2	143	31.8	185	37.7	257	70.5	124	120.9	192	91.4	14	30.1	50	45.8	54	34.8
Pertussis	5	3.2	56	10.4	85	18.9	72	14.7	93	25.5	5	4.9	42	20.0	9	19.4	34	31.1	23	14.8
Rheumatic fever	17	10.8	11	2.0	9	2.0	57	11.6	21	5.8	2		7	3.3	7	15.1	2		9	5.8
Salmonellosis	37	23.5	111	20.7	99	22.0	73	14.9	90	24.7	19	18.5	49	23.3	13	28.0	28	25.6	42	27.0
Shigellosis	7	4.4	19	3.5	14	3.1	16	3.3	11	3.0	0		6	2.9	0		0		5	3.2
Tuberculosis disease	6	3.8	34	6.3	64	14.2	62	12.6	22	6.0	3		6	2.9	3		1		11	7.1
Typhoid fever	1		4		9	2.0	7	1.4	2		0		5	2.4	0		0		0	
VTEC/STEC infection	4		14	2.6	8	1.8	7	1.4	24	6.6	8	7.8	13	6.2	8	17.2	4		8	5.2
Yersiniosis	5	3.2	53	9.9	41	9.1	29	5.9	33	9.1	10	9.7	17	8.1	5	10.8	20	18.3	18	11.6

^a Table is continued on following page

Notifiable disease cases and rates by district health board, 2010

Table 45b. Number of cases and rates per 100 000 population of notifiable diseases by DHB, 2010 (continued)

Disease	District health board ^a																			
	Whanganui		MidCentral		Hutt Valley		Capital and Coast		Wairarapa		Nelson Marlborough		West Coast		Canterbury		South Canterbury		Southern	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	98	155.1	248	148.3	343	238.5	592	203.2	73	181.2	235	170.2	66	201.6	931	183.2	122	218.4	619	204.1
Cryptosporidiosis	6	9.5	19	11.4	9	6.3	35	12.0	7	17.4	36	26.1	10	30.6	230	45.3	47	84.1	81	26.7
Dengue fever	1		0		0		6	2.1	0		0		0		3		0		4	
Gastroenteritis	16	25.3	44	26.3	54	37.6	90	30.9	3		8	5.8	7	21.4	44	8.7	0		12	4.0
Giardiasis	23	36.4	29	17.3	51	35.5	146	50.1	17	42.2	48	34.8	10	30.6	282	55.5	20	35.8	102	33.6
Hepatitis A	1		3		1		2		0		0		0		7	1.4	0		3	
Hepatitis B	1		1		2		2		1		1		0		6	1.2	0		4	
Invasive pneumococcal disease	9	14.2	18	10.8	21	14.6	23	7.9	5	12.4	4		1		42	8.3	3		47	15.5
Lead absorption	8	12.7	9	5.4	22	15.3	9	3.1	3		5	3.6	0		24	4.7	7	12.5	25	8.2
Legionellosis	0		3		5	3.5	3		0		1		3		62	12.2	2		15	4.9
Leptospirosis	8	12.7	13	7.8	0		0		2		4		6	18.3	4		0		5	1.6
Malaria	0		0		0		2		0		2		0		7	1.4	0		2	
Measles	0		1		0		2		1		0		1		0		0		0	
Meningococcal disease	0		5	3.0	8	5.6	5	1.7	0		1		1		7	1.4	0		7	2.3
Mumps	0		0		3		4		2		2		0		6	1.2	0		3	
Non seasonal influenza A (H1N1)	33	52.2	60	35.9	21	14.6	107	36.7	12	29.8	31	22.4	17	51.9	273	53.7	43	77.0	29	9.6
Pertussis	5	7.9	41	24.5	35	24.3	99	34.0	5	12.4	27	19.6	14	42.8	166	32.7	12	21.5	45	14.8
Rheumatic fever	2		4		7	4.9	9	3.1	2		0		0		2		0		0	
Salmonellosis	9	14.2	31	18.5	31	21.6	52	17.8	9	22.3	51	36.9	9	27.5	162	31.9	37	66.2	194	64.0
Shigellosis	0		0		2		3		0		2		0		14	2.8	2		4	
Tuberculosis disease	2		9	5.4	13	9.0	28	9.6	1		5	3.6	1		27	5.3	0		9	3.0
Typhoid fever	0		0		0		2		0		0		0		1		0		0	
VTEC/STEC infection	2		1		0		2		2		1		1		24	4.7	0		7	2.3
Yersiniosis	4		11	6.6	23	16.0	56	19.2	3		9	6.5	5	15.3	46	9.1	9	16.1	9	3.0

^a Table is continued from previous page

Note: Where fewer than five cases have been notified a rate has not been calculated and the cell has been left blank

Notifiable disease cases and rates by sex, 2010

Table 46. Number of cases and rates per 100 000 population of notifiable diseases by sex, 2010

Disease	Sex							
	Male		Female		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	4 093	190.9	3 207	144.3	46		7 346	168.2
Cryptosporidiosis	482	22.5	466	21.0	6		954	21.8
Dengue fever	26	1.2	24	1.1	1		51	1.2
Gastroenteritis	217	10.1	261	11.7	14		492	11.3
Giardiasis	995	46.4	979	44.0	11		1 985	45.4
<i>Haemophilus influenzae</i> type b	4		4		0		8	0.2
Hepatitis A	23	1.1	23	1.0	0		46	1.1
Hepatitis B	39	1.8	11	0.5	1		51	1.2
Hepatitis C	10	0.5	7	0.3	0		17	0.4
Hydatid disease	3		1		0		4	
Invasive pneumococcal disease	279	13.0	256	11.5	0		535	12.2
Lead absorption	175	8.2	26	1.2	0		201	4.6
Legionellosis	99	4.6	79	3.6	0		178	4.1
Leprosy	2		1		0		3	
Leptospirosis	69	3.2	12	0.5	0		81	1.9
Listeriosis - non perinatal	8	0.4	9	0.4	0		17	0.4
Malaria	34	1.6	10	0.4	0		44	1.0
Measles	26	1.2	21	0.9	1		48	1.1
Meningococcal disease	48	2.2	49	2.2	0		97	2.2
Mumps	16	0.7	25	1.1	0		41	0.9
Non seasonal influenza A (H1N1)	857	40.0	969	43.6	0		1 826	41.8
Paratyphoid fever	8	0.4	11	0.5	0		19	0.4
Pertussis	351	16.4	522	23.5	0		873	20.0
Rheumatic fever	80	3.7	88	4.0	0		168	3.8
Rickettsial disease	6	0.3	8	0.4	0		14	0.3
Rubella	2		2		0		4	
Salmonellosis	561	26.2	577	26.0	8		1 146	26.2
Shigellosis	50	2.3	55	2.5	0		105	2.4
Tetanus	3		4		0		7	0.2
Toxic shellfish poisoning	3		6	0.3	0		9	0.2
Tuberculosis disease	154	7.2	153	6.9	0		307	7.0
Typhoid fever	18	0.8	12	0.5	1		31	0.7
VTEC/STEC infection	67	3.1	70	3.1	1		138	3.2
Yersiniosis	225	10.5	181	8.1	0		406	9.3

Note: Where fewer than five cases have been notified a rate has not been calculated and the cell has been left blank.

Notifiable disease cases and rates by age group, 2010

Table 47. Number of cases and rates per 100 000 population of notifiable diseases by age group, 2010

Disease	Age Group																									
	<1		1-4		5-9		10-14		15-19		20-29		30-39		40-49		50-59		60--69		70+		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	178	279.3	780	314.4	367	128.0	278	94.0	498	154.5	1 228	203.4	842	147.6	919	144.9	850	156.6	713	175.4	682	173.6	11		7 346	168.2
Cryptosporidiosis	34	53.4	286	115.3	121	42.2	81	27.4	54	16.7	110	18.2	113	19.8	77	12.1	41	7.6	18	4.4	16	4.1	3		954	21.8
Dengue fever	0		0		0		2		2		15	2.5	10	1.8	9	1.4	6	1.1	7	1.7	0		0		51	1.2
Gastroenteritis	31	48.6	88	35.5	6	2.1	11	3.7	15	4.7	51	8.4	69	12.1	64	10.1	53	9.8	45	11.1	43	10.9	16		492	11.3
Giardiasis	27	42.4	395	159.2	185	64.5	46	15.6	35	10.9	197	32.6	451	79.0	284	44.8	172	31.7	145	35.7	46	11.7	2		1 985	45.4
<i>Haemophilus influenzae</i> type b	4		1		0		0		0		0		1		0		0		2		0		0		8	0.2
Hepatitis A	0		0		6	2.1	4		7	2.2	12	2.0	6	1.1	6	0.9	4		1		0		0		46	1.1
Hepatitis B	0		1		0		0		1		12	2.0	15	2.6	11	1.7	9	1.7	1		1		0		51	1.2
Hepatitis C	0		1		0		0		0		7	1.2	5	0.9	3		1		0		0		0		17	0.4
Hydatid disease	0		0		0		0		0		1		0		0		0		1		2		0		4	
Invasive pneumococcal disease	22	34.5	43	17.3	13	4.5	10	3.4	17	5.3	16	2.7	35	6.1	50	7.9	61	11.2	91	22.4	177	45.0	0		535	12.2
Lead absorption	2		2		3		0		6	1.9	12	2.0	25	4.4	52	8.2	53	9.8	36	8.9	10	2.5	0		201	4.6
Legionellosis	1		0		1		0		2		4		19	3.3	21	3.3	42	7.7	46	11.3	42	10.7	0		178	4.1
Leprosy	0		0		0		0		0		0		0		2		0		1		0		0		3	
Leptospirosis	0		0		1		0		3		13	2.2	20	3.5	21	3.3	14	2.6	8	2.0	1		0		81	1.9
Listeriosis	1		1		0		0		0		3		2		1		2		5	1.2	8	2.0	0		23	0.5
Malaria	0		2		2		1		5	1.6	13	2.2	5	0.9	6	0.9	6	1.1	4		0		0		44	1.0
Measles	3		9	3.6	7	2.4	10	3.4	10	3.1	6	1.0	3		0		0		0		0		0		48	1.1
Meningococcal disease	27	42.4	23	9.3	7	2.4	5	1.7	12	3.7	8	1.3	3		5	0.8	3		1		3		0		97	2.2
Mumps	0		15	6.0	5	1.7	6	2.0	1		7	1.2	4		1		2		0		0		0		41	0.9
Non seasonal influenza A (H1N1)	84	131.8	166	66.9	165	57.5	140	47.3	159	49.3	362	60.0	276	48.4	227	35.8	174	32.1	47	11.6	26	6.6	0		1 826	41.8
Paratyphoid fever	0		0		1		1		1		7	1.2	3		4		2		0		0		0		19	0.4
Pertussis	86	134.9	119	48.0	90	31.4	47	15.9	54	16.7	84	13.9	106	18.6	111	17.5	72	13.3	69	17.0	35	8.9	0		873	20.0
Rheumatic fever	0		0		43	15.0	79	26.7	23	7.1	19	3.1	2		1		1		0		0		0		168	3.8
Rickettsial disease	0		0		0		0		1		0		1		7	1.1	4		0		1		0		14	0.3
Rubella	0		3		0		0		0		0		0		0		1		0		0		0		4	
Salmonellosis	56	87.9	216	87.1	76	26.5	48	16.2	62	19.2	155	25.7	133	23.3	127	20.0	111	20.4	79	19.4	81	20.6	2		1 146	26.2
Shigellosis	1		12	4.8	9	3.1	5	1.7	3		20	3.3	7	1.2	14	2.2	17	3.1	14	3.4	3		0		105	2.4
Tetanus	0		1		0		0		0		0		0		1		0		1		4		0		7	0.2
Tuberculosis disease	1		2		3		7	2.4	17	5.3	61	10.1	68	11.9	43	6.8	31	5.7	40	9.8	34	8.7	0		307	7.0
VTEC/STEC infection	9	14.1	64	25.8	13	4.5	4		2		8	1.3	7	1.2	6	0.9	8	1.5	9	2.2	8	2.0	0		138	3.2
Yersiniosis	44	69.0	108	43.5	12	4.2	20	6.8	14	4.3	39	6.5	31	5.4	35	5.5	53	9.8	29	7.1	21	5.3	0		406	9.3

Note: Where fewer than five cases have been notified a rate has not been calculated and the cell has been left blank

Notifiable disease cases and rates by ethnic group, 2010

Table 48. Number of cases and rates per 100 000 population of notifiable diseases by ethnic group, 2010

Disease	Ethnicity													
	Māori		Pacific Peoples		Asian		Other ethnicity		European		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	451	79.8	132	58.3	345	101.2	49	144.6	5 556	206.2	813		7 346	182.4
Cryptosporidiosis	69	12.2	12	5.3	22	6.5	8	23.6	790	29.3	53		954	23.7
Dengue fever	1		2		7	2.1	1		36	1.3	4		51	1.3
Gastroenteritis	30	5.3	4		19	5.6	6	17.7	384	14.3	49		492	12.2
Giardiasis	113	20.0	9	4.0	58	17.0	42	124.0	1 519	56.4	244		1 985	49.3
<i>Haemophilus influenzae</i> type b	4		1		0		0		3		0		8	0.2
Hepatitis A	3		10	4.4	18	5.3	0		12	0.4	3		46	1.1
Hepatitis B	10	1.8	7	3.1	7	2.1	1		24	0.9	2		51	1.3
Hepatitis C	4		1		0		0		11	0.4	1		17	0.4
Invasive pneumococcal disease	127	22.5	82	36.2	18	5.3	3		285	10.6	20		535	13.3
Lead absorption	8	1.4	0		3		0		164	6.1	26		201	5.0
Legionellosis	10	1.8	6	2.7	9	2.6	1		146	5.4	6		178	4.4
Leptospirosis	10	1.8	2		0		0		66	2.5	3		81	2.0
Listeriosis	1		5		1		0		16	0.6	0		23	0.6
Malaria	0		7	3.1	21	6.2	2		11	0.4	3		44	1.1
Measles	7	1.2	0		0		0		41	1.5	0		48	1.2
Meningococcal disease	42	7.4	17	7.5	2		0		36	1.3	0		97	2.4
Mumps	5		4		11	3.2	0		21	0.8	0		41	1.0
Non seasonal influenza A (H1N1)	386	68.3	137	60.5	176	51.6	39	115.1	1 051	39.0	37		1 826	45.3
Paratyphoid fever	1		0		7	2.1	0		8	0.3	3		19	0.5
Pertussis	114	20.2	56	24.7	10	2.9	7	20.7	645	23.9	41		873	21.7
Rheumatic fever	104	18.4	58	25.6	1		0		5		0		168	4.2
Rickettsial disease	0		0		1		0		13	0.5	0		14	0.3
Rubella	0		0		0		0		4		0		4	0.1
Salmonellosis	110	19.5	34	15.0	55	16.1	7	20.7	839	31.1	101		1 146	28.5
Shigellosis	17	3.0	15	6.6	15	4.4	4		46	1.7	8		105	2.6
Tuberculosis disease	36	6.4	45	19.9	179	52.5	12	35.4	30	1.1	5		307	7.6
Typhoid fever	0		12	5.3	15	4.4	0		3		1		31	0.8
VTEC/STEC infection	10	1.8	4		1		3		118	4.4	2		138	3.4
Yersiniosis	27	4.8	17	7.5	86	25.2	6	17.7	228	8.5	42		406	10.1

Note: Disease rates for ethnic groups and total cases are based on 2006 census data from Statistics New Zealand and should not be compared with disease rates used elsewhere in the report, which have been calculated using 2010 mid-year population estimates from Statistics New Zealand. Where fewer than five cases have been notified, a rate has not been calculated and the cell has been left blank

Notifiable disease cases by year and source, 1988-2010

Table 49. Number of notifiable disease cases by year and source, 1988–1999

Disease	Source	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
AIDS	N	38	59	73	78	50	70	44	49	76	43	29	33
Campylobacteriosis	N	2 796	4 187	3 850	4 148	5 144	8 101	7 714	7 442	7 635	8 924	11 572	8 161
Cholera	N	0	0	5	0	0	0	2	2	0	0	1	1
Creutzfeldt-Jakob disease	N									2	1	0	2
Cryptosporidiosis	N									119	357	866	977
Dengue fever	N	1	3	2	3	1	1	0	6	23	14	26	9
Gastroenteritis	N									555	310	492	601
Giardiasis	N									1 235	2 127	2 183	1 793
<i>Haemophilus influenzae</i> type b	N									26	9	11	10
	L	107	121	143	148	166	118	75	14	24	8	10	9
Hepatitis A	N	176	134	150	224	288	257	179	338	311	347	145	119
Hepatitis B	N	370	309	242	227	221	145	133	125	104	138	88	94
Hepatitis C	N	20	13	11	25	89	91	79	88	59	92	102	96
Hydatid disease	N	2	0	4	0	4	4	1	5	3	2	2	8
Influenza	S	136	119	343	183	317	423	441	521	673	743	127	425
Legionellosis	N	62	17	20	14	11	24	66	33	36	63	43	51
	L			21	42	60	76	121	76	60	109	107	65
Leprosy	N	2	4	1	4	5	3	1	1	10	3	3	10
Leptospirosis	N	99	90	117	106	70	116	70	65	56	52	75	59
	L	192	182	229	176	218	234	168	183	140	84	117	76
Listeriosis	N	7	10	16	26	16	11	8	13	10	35	17	19
Malaria	N	25	27	32	39	29	58	34	41	107	65	73	46
Measles	N									68	1984	164	107
Meningococcal disease	N	83	49	53	71	153	202	208	394	473	609	439	507
Mumps	N									76	90	85	56
Paratyphoid fever	N	2	0	1	1	2	10	7	24	20	25	18	17
Pertussis	N									1 022	284	153	1 046
Rheumatic fever - initial attack	N	153	148	90	97	70	81	98	88	110	93	66	97
Rubella	N									306	80	53	35
Salmonellosis	N	1 128	1 860	1 619	1 244	1 239	1 340	1 522	1 334	1 141	1 177	2 069	2 077
Shigellosis	N	145	137	197	152	124	128	185	191	167	117	122	147
Tetanus	N	1	0	0	0	8	2	2	2	3	0	2	6
Tuberculosis disease	N	295	303	348	335	327	323	352	391	352	323	365	446
Typhoid fever	N	15	17	7	9	11	14	24	21	15	16	31	10
VTEC/STEC infection	N						3	3	6	7	13	48	64
Yersiniosis	N									330	488	546	503

N: Notification, L: Laboratory, S: Sentinel isolates

Notifiable disease cases by year and source, 1988-2010

Table 50. Number of notifiable disease cases by year and source, 2000–2010

Disease	Source	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AIDS	N	26	26	17	33	38	49	29	31	48	28	39
Campylobacteriosis	N	8 418	10 146	12 494	14 788	12 215	13 836	15 873	12 778	6 694	7 177	7 346
Cholera	N	0	3	1	1	2	0	0	1	0	0	2
Creutzfeldt-Jakob disease	N	3	1	3	6	8	3	5	8	5	8	5
Cryptosporidiosis	N	775	1 208	975	817	611	889	737	924	764	854	954
Dengue fever	N	7	93	70	55	8	11	19	114	113	139	51
Gastroenteritis	N	727	940	1 087	1 026	1 363	557	937	622	687	712	492
Giardiasis	N	1 688	1 604	1 547	1 570	1 514	1 231	1 214	1 402	1 660	1 639	1 985
<i>Haemophilus influenzae</i> type b	N	13	11	3	12	4	7	9	15	9	10	8
	L	10	8	3	9	3	6	8	13	4	8	8
Hepatitis A	N	107	61	106	70	49	51	123	42	89	44	46
Hepatitis B	N	79	56	67	61	38	59	62	72	38	55	51
Hepatitis C	N	80	58	53	40	24	29	35	30	22	32	17
Hydatid disease	N	3	7	2	0	1	2	0	6	7	3	4
Influenza	S	73	313	241	230	231	273	315	239	466	624	
Legionellosis	N	61	46	49	77	62	85	52	64	73	74	178
	L	56	56	53	82	75	83	54	72	74	77	
Leprosy	N	4	3	4	4	3	2	4	8	5	3	3
Leptospirosis	N	98	99	140	113	102	85	87	66	118	69	81
	L	114	113	181	149	113	109	67	42	72	60	58
Listeriosis	N	22	18	19	24	26	20	19	26	27	28	23
Malaria	N	111	54	61	46	33	32	30	25	40	50	44
Measles	N	64	82	21	66	32	19	18	24	12	248	48
Meningococcal disease	N	477	648	555	542	343	226	160	104	122	133	97
Mumps	N	50	56	64	56	45	61	47	73	76	63	41
Paratyphoid fever	N	24	32	16	18	28	25	23	23	25	25	19
Pertussis	N	4 140	1 334	1 068	585	3 485	2 719	1 120	332	417	1 398	873
Rheumatic fever - initial attack	N	108	114	87	148	75	76	104	133	139	124	155
Rubella	N	26	30	33	26	23	13	8	11	9	4	4
Salmonellosis	N	1 795	2 417	1 880	1 401	1 081	1 382	1 335	1 275	1 339	1 128	1 146
Shigellosis	N	115	157	112	87	140	183	102	129	113	119	105
Tetanus	N	1	4	1	2	1	1	1	1	0	1	7
Tuberculosis disease	N	354	369	381	423	375	330	350	282	293	299	307
Typhoid fever	N	21	27	23	20	31	30	42	48	29	34	31
VTEC/STEC infection	N	67	76	73	104	89	92	87	100	124	143	138
Yersiniosis	N	396	429	472	436	407	383	453	502	508	430	406

N: Notification, L: Laboratory, S: Sentinel isolates

Prevalence of antimicrobial resistance, 1997-2009

Table 51. Prevalence of antimicrobial resistance, 1997–2009

Pathogen	Antimicrobial	Percent resistance ^a (number tested)				
		1997-1999	2000-2002	2003-2005	2006-2008	2009
<i>S. aureus</i> ^b	methicillin	4.9 (136 356)	7.2 (251 448)	7.4 (219 363)	8.2 (242 146)	9.0 (94 486)
	erythromycin	10.8 (134 350)	12.0 (221 394)	12.0 (164 220)	12.1 (98 055)	12.2 (75 122)
	co-trimoxazole	0.6 (91 391)	1.2 (149 166)	2.0 (126 840)	1.3 (89 071)	1.2 (68 603)
	fluoroquinolone			7.3 (47 116)	7.9 (28 846)	7.4 (9 243)
	fusidic acid			19.7 (25 609)	15.7 (32 730)	15.1 (19 388)
	mupirocin	18.2 (37 173)	20.0 (91 555)	16.7 (48 423)	12.9 (67 154)	11.6 (20 960)
Methicillin-resistant <i>S. aureus</i> ^c	erythromycin	26.2 (1 303)	40.0 (1 409)	46.3 (1 596)	37.5 (3 146)	35.8 (3 343)
	co-trimoxazole	1.8 (1 303)	6.7 (1 409)	7.4 (1 596)	2.8 (3 068)	2.2 (3 324)
	fluoroquinolone		40.0 (1 409)	50.3 (1 596)	37.4 (3 000)	31.0 (3 150)
	fusidic acid		7.0 (1 409)	9.2 (1 596)	11.6 (3 011)	18.2 (3 098)
	mupirocin	6.0 (1303)	8.5 (1 409)	9.5 (1 596)	7.5 (2 926)	8.5 (2 880)
	rifampicin	0.8 (1303)	0.7 (1 409)	0.5 (1 596)	0.7 (1 336)	
<i>S. pneumoniae</i> , non-invasive disease ^b	penicillin ^d	19.0 (10 976)	26.5 (12 859)	27.0 (15 037)	30.0 (14 104)	22.4 (5 732)
	erythromycin	14.5 (11 212)	18.6 (14 404)	19.9 (10 222)	21.3 (7 273)	18.4 (4 526)
	tetracycline	11.2 (5 993)	15.4 (9 476)	18.1 (6 796)	19.0 (5 496)	16.7 (3 664)
<i>S. pneumoniae</i> , invasive disease ^e	penicillin ^f	15.0 (1 182)	15.3 (1 494)	17.2 (1 560)	20.3 (1 707)	17.7 (665)
	erythromycin	5.7 (910)	7.2 (1 494)	9.9 (1 560)	12.2 (1 707)	9.6 (665)
	cefotaxime ^f	7.3 (1 182)	6.2 (1 494)	11.5 (1 560)	13.2 (1 707)	8.9 (665)
<i>Enterococcus</i> spp ^b	amoxicillin ^g	2.4 (17 548)	3.0 (22 566)	2.8 (26 492)	3.7 (35 746)	3.6 (14 525)
	vancomycin	0.5 (4 752)	0.3 (7 505)	0.1 (9 948)	1.3 (20 291)	0.4 (7 346)
<i>E. coli</i> , urinary isolates ^b	amoxicillin ^g	56.0 (138 712)	54.4 (194 799)	50.7 (117 009)	49.9 (117 456)	51.4 (70 396)
	co-amoxiclav	12.2 (136 326)	9.6 (194 950)	8.5 (127 750)	9.6 (117 965)	10.7 (72 636)
	trimethoprim	22.6 (111 710)	22.3 (207 837)	21.5 (138 748)	22.1 (128 276)	24.1 (77 889)
	nitrofurantoin	1.7 (124 362)	1.5 (206 149)	1.4 (139 738)	1.3 (127 682)	1.6 (77 373)
	fluoroquinolone	0.6 (118 917)	1.6 (201 382)	2.4 (135 803)	4.6 (110 769)	7.7 (67 761)
	ESBL positive				2.6 (2 307)	3.0 (1 127)
<i>E. coli</i> , non-urinary isolates ^{b,h}	co-amoxiclav	21.8 (15 948)	17.5 (11 508)	15.2 (5 059)	15.1 (3 249)	20.2 (1 140)
	cefuroxime	4.5 (6 893)	4.2 (6 576)	3.4 (3 956)	4.5 (2 534)	6.4 (956)
	gentamicin	0.9 (13 789)	2.4 (10 392)	2.6 (5 290)	5.3 (3 896)	4.5 (1 327)
	fluoroquinolone	0.8 (10 800)	2.4 (8 821)	3.9 (4 212)	8.1 (3 808)	9.1 (1 284)
	ESBL positive				2.6 (2 307)	3.0 (1 127)
<i>P. aeruginosa</i> ^b	gentamicin	9.5 (20 542)	10.5 (25 561)	6.1 (23 148)	4.3 (23 399)	2.5 (10 088)
	tobramycin	2.8 (11 033)	3.6 (10 421)	3.3 (7 616)	3.4 (9 388)	1.6 (4 757)
	ceftazidime	5.2 (11 147)	3.9 (13 253)	4.3 (16 031)	3.2 (18 163)	1.9 (8 549)
	fluoroquinolone	9.9 (16 551)	9.3 (22 869)	8.3 (23 761)	7.1 (23 961)	6.0 (10 145)
	imipenem/meropenem			4.8 (9 956)	4.9 (13 703)	2.6 (7 178)
	piperacillin/tazobactam			1.5 (4 928)	2.5 (11 960)	1.5 (5 393)
	ESBL positive				2.6 (2 307)	3.0 (1 127)
<i>H. influenzae</i> , non-invasive disease ^b	amoxicillin ^g	19.3 (18 852)	21.9 (28 476)	19.9 (19 529)	22.0 (24 823)	26.5 (10 089)
	co-amoxiclav	0.6 (15 040)	0.8 (16 333)	1.0 (14 090)	2.6 (15 123)	
	co-trimoxazole	14.7 (13 964)	17.3 (22 443)	18.2 (15 939)	20.2 (13 098)	21.8 (13 098)
	tetracycline	1.5 (13 007)	1.2 (15 633)	0.8 (12 783)	0.8 (11 263)	1.2 (11 263)
<i>H. influenzae</i> , invasive disease ^e	amoxicillin ^g	11.5 (122)	19.2 (125)	31.6 (155)	36.9 (176)	35.9 (64)
	co-amoxiclav	1.6 (122)	1.6 (125)	9.7 (155)	23.9 (176)	20.3 (64)
	cefuroxime	4.9 (122)	0.8 (125)	9.7 (155)	23.9 (176)	20.3 (64)
<i>N. meningitidis</i> , invasive disease ^e	penicillin ⁱ	7.9 (431)	7.5 (796)	12.0 (551)	19.5 (231)	22.4 (76)
	rifampicin	0 (431)	0 (796)	0.2 (551)	0.0 (231)	2.6 (76)
<i>N. gonorrhoeae</i> ^{b,j}	penicillin	10.4 (1 437)	7.1 (2 782)	5.8 (4 700)	7.5 (6 028)	12.4 (1 543)
	fluoroquinolone	1.8 (1 437)	6.3 (2 349)	14.3 (4 195)	20.1 (7 315)	29.9 (2 746)
<i>M. tuberculosis</i> ^b	isoniazid	8.2 (757)	8.5 (811)	8.9 (872)	6.6 (725)	9.0 (245)
	rifampicin	1.3 (757)	0.7 (811)	1.0 (872)	0.6 (725)	2.9 (245)
	MDR ^k	0.9 (757)	0.5 (811)	1.0 (872)	0.4 (725)	2.9 (245)

^a intermediate resistance not included in resistant category unless otherwise stated (refer footnotes d, f and i below)

^b collated clinical laboratory data

^c MRSA tested by ESR up until 2007, thereafter collated clinical laboratory data

^d penicillin non-susceptible (intermediate resistant and resistant), according to the CLSI interpretive criteria for the oral treatment of non-meningitis infections

^e invasive disease isolates tested by ESR

^f penicillin resistant and cefotaxime non-susceptible (intermediate resistant and resistant), according to the CLSI interpretive criteria for the parenteral treatment of meningitis

^g ampicillin used in laboratory testing

^h from 2004, data based on *E. coli* from bacteraemia

ⁱ penicillin reduced susceptibility (MIC 0.12-0.5 mg/L)

^j data from northern North Island only up until 2000, thereafter national data used

^k multidrug resistant (ie, resistant to at least isoniazid and rifampicin)

