

APPENDIX: NATIONAL SURVEILLANCE DATA AND TRENDS

COMPARISON OF NOTIFIABLE DISEASE CASES AND RATES FOR 2008 AND 2009

Table 41. Number of cases and rates per 100 000 population of notifiable diseases in New Zealand, 2008–2009

Disease ^{a,b,c}	2008		2009		Change ^{f,g}	
	Cases	Rates	Cases	Rates		
AIDS	48	1.1	28	0.6	←	
Barmah Forest virus infection	0	0.0	2	0.0		→
Brucellosis	3	0.1	0	0.0	←	
Campylobacteriosis	6694	156.8	7176	166.3		→
Chemical poisoning from the environment	1	0.0	6	0.1		→
Chikungunya fever	1	0.0	1	0.0		–
Cryptosporidiosis	764	17.9	854	19.8		→
Dengue fever	113	2.6	140	3.2		→
Gastroenteritis ^d	687	16.1	714	16.5		→
Giardiasis	1660	38.9	1640	38.0	←	
<i>Haemophilus influenzae</i> type b	9	0.2	11	0.3		→
Hepatitis A	89	2.1	44	1.0	←	
Hepatitis B ^e	38	0.9	55	1.3		→
Hepatitis C ^e	23	0.5	32	0.7		→
Hepatitis NOS	2	0.0	2	0.0		–
Hydatid disease	7	0.2	3	0.1	←	
Lead absorption	317	7.4	368	8.5		→
Legionellosis	73	1.7	78	1.8		→
Leprosy	5	0.1	3	0.1	←	
Leptospirosis	118	2.8	71	1.6	←	
Listeriosis	27	0.6	28	0.6		→
Malaria	40	0.9	50	1.2		→
Measles	12	0.3	253	5.9		→
Meningococcal disease	122	2.9	133	3.1		→
Mumps	76	1.8	63	1.5	←	
Paralytic shellfish poisoning	0	0.0	1	0.0		→
Paratyphoid fever	25	0.6	25	0.6		–
Pertussis	417	9.8	1399	32.4		→
Rheumatic fever	153	3.6	140	3.2	←	
Rickettsial disease	10	0.0	6	0.1	←	
Ross River virus infection	1	0.0	3	0.1		→
Rubella	9	0.2	4	0.1	←	
Salmonellosis	1345	31.5	1129	26.2	←	
Shigellosis	113	2.6	119	2.8		→
Taeniasis	5	0.1	3	0.1	←	
Tetanus	0	0.0	1	0.0		→
Toxic shellfish poisoning	1	0.0	0	0.0	←	
Tuberculosis disease	296	6.9	306	7.1		→
Typhoid fever	29	0.7	35	0.8		→
VTEC/STEC infection	124	2.9	143	3.3		→
Yersiniosis	508	11.9	431	10.0	←	

^a No cases of the following notifiable diseases were reported in 2008 & 2009: anthrax, botulism, cysticercosis, decompression sickness, diphtheria, *E. sakazakii*, HPAI, plague, poliomyelitis, primary amoebic meningo-encephalitis, rabies, SARS, trichinosis, yellow fever.

^b Invasive pneumococcal disease became notifiable on 17 October 2008 and is therefore not included in this table.

^c Non seasonal influenza became notifiable on 29 April 2009 and is therefore not included in this table.

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

^e Only acute cases of this disease are notifiable.

^f ← = Significant decrease, → = Significant increase, – = No change, ⇐ = Not significant decrease, ⇒ = not significant increase

^g The Mantel-Haenszel 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.

DEATHS FROM NOTIFIABLE DISEASES RECORDED IN EPISURV, 1997–2009**Table 42. Deaths due to notifiable diseases recorded in EpiSurv, 1997–2009**

Disease	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
AIDS ^a	34	19	18	19	14	11	10	13	15	14	5	2	2
Campylobacteriosis	2	2	1	3	1	1	0	0	1	1	1	0	0
Chemical poisoning from the environment	0	0	0	0	0	0	0	0	0	0	0	0	1
Creutzfeldt-Jakob disease ^b	3	0	2	3	1	3	4	3	0	5	0	0	0
Gastroenteritis	0	0	0	0	0	1	0	0	0	0	0	0	0
Giardiasis	1	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
Hepatitis B	2	0	0	0	1	0	0	0	1	0	1	0	0
Hydatid disease	0	0	0	1	0	0	0	0	0	0	0	0	0
Invasive pneumococcal disease ^c												8	34
Legionellosis ^d	4	1	1	5	2	3	1	1	4	3	1	4	2
Listeriosis - non perinatal	2	0	1	2	1	0	2	3	1	0	2	3	2
Listeriosis - perinatal	6	0	2	4	1	3	2	2	0	1	2	2	2
Malaria	1	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
Non seasonal influenza A (H1N1) ^e													20
Pertussis	0	0	0	0	1	1	1	1	0	0	0	0	0
Primary amoebic meningoencephalitis	0	0	0	1	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
Salmonellosis	2	2	1	7	2	1	0	0	1	1	1	1	1
Shigellosis	0	0	1	0	0	0	0	0	0	0	0	0	0
Tetanus	0	0	0	0	1	0	0	0	0	0	1	0	0
Tuberculosis	15	8	14	8	2	6	6	6	4	5	3	4	3
VTEC infection	1	1	0	0	0	0	0	0	0	0	0	0	1
Yersiniosis	0	2	0	0	0	0	0	1	0	0	0	0	0

^a Data source [31]^b Data source [13]^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 recurrence

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.

MINISTRY OF HEALTH MORTALITY DATA FOR SELECTED NOTIFIABLE DISEASES, 2005–2007

Table 43. Reported deaths from selected notifiable diseases, 2005–2007

Disease	ICD 10 codes	2005		2006		2007 ^a	
		Underlying ^b	Contributory ^c	Underlying ^b	Contributory ^c	Underlying ^b	Contributory ^c
AIDS	B20-B24	13	7	17	5	10	8
Campylobacteriosis	A04.5		3	3		1	
Creutzfeldt-Jakob Disease	A81.0	4		3		7	
Hepatitis A	B15						2
Hepatitis B	B16	3	5		5	2	3
Hepatitis C	B17.1		1		1		
Legionellosis	A48.1	2	1	1		1	
Listeriosis	A32				1	2	
Meningococcal Disease	A39	13		6		7	
Pertussis	A37	1					
Salmonellosis	A02		1	1			
Tetanus	A33-A35					1	
Tuberculosis	A15-A19, P37.0	5	14	11	8	7	8

^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)

MINISTRY OF HEALTH MORBIDITY DATA FOR SELECTED NOTIFIABLE DISEASES, 2007–2009

Table 44. Hospital admissions for selected notifiable diseases, 2007–2009

Disease	ICD 10 codes	2007		2008		2009	
		Principal diagnosis	Other relevant diagnosis	Principal diagnosis	Other relevant diagnosis	Principal diagnosis	Other relevant diagnosis
AIDS	B20-B24	28	261	26	266	16	285
Arboviral diseases	A83, A84, A85.2, A92, A93, A94, B33.1		2	1		1	
Brucellosis	A23		2	2			
Campylobacteriosis	A04.5	752	185	388	97	473	101
Cholera	A00	1					
Creutzfeldt-Jakob Disease	A81.0	2	5	5	9	4	
Cryptosporidiosis	A07.2	26	14	19	13	19	4
Cysticercosis	B69	4	2	2		1	2
Decompression sickness	T70.3	12	1	12	2	24	3
Dengue fever	A90, A91	45	9	35	5	22	3
Diphtheria	A36		3				
Giardiasis	A07.1	20	14	18	21	21	13
Hepatitis A	B15	17	18	19	18	17	7
Hepatitis B	B16	41	90	33	81	27	27
Hepatitis C	B17.1	12	19	12	21	15	29
Lead absorption	T56.0	12		2		5	
Legionellosis	A48.1	18	7	37	6	33	9
Leprosy	A30	4	6	5	4		1
Leptospirosis	A27	41	2	57	7	46	3
Listeriosis	A32	12	17	13	13	11	17
Malaria	B50-B54	37	5	30		34	2
Measles	B05	5	1	3		29	1
Meningococcal disease	A39	120	21	125	21	167	23
Mumps	B26	13	2	16	4	9	3
Paratyphoid fever	A01.1-A01.4	13		4		3	
Pertussis	A37	51	10	72	11	124	19
Poliomyelitis	A80				1		
Rheumatic fever	I00, I01, I02	206	34	227	46	230	35
Rickettsial diseases	A75, A77, A78, A79	4		7	1	6	3
Rubella	B06		1		1		1
Salmonellosis	A02	123	27	118	40	130	28
Shigellosis	A03	27	1	15	4	14	5
Taeniasis	B689		2		1		
Tetanus	A33-A35	1		1		1	
Tuberculosis	A15-A19, P37.0	229	154	205	121	237	146
Typhoid fever	A01.0	42	2	19	1	25	1
VTEC/STEC Infection	A04.0-A04.4	22	24	26	20	24	11
Yersiniosis	A04.6	19	31	23	30	24	22

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 ETHNIC GROUP, 2009

Table 45. Number of cases and rates per 100 000 population of notifiable diseases by ethnic group, 2009

Disease	Ethnicity													
	European		Māori		Pacific Peoples		Asian		Other Ethnicity		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	5389	200.0	461	81.5	172	76.0	398	116.8	39	115.1	717		7176	178.2
Cryptosporidiosis	705	26.2	65	11.5	18	8.0	23	6.7	4		39		854	21.2
Dengue fever	61	2.3	3		49	21.7	16	4.7	3		8		140	3.5
Gastroenteritis	505	18.7	39	6.9	10	4.4	36	10.6	6	17.7	118		714	17.7
Giardiasis	1265	47.0	94	16.6	12	5.3	76	22.3	55	162.4	138		1640	40.7
<i>Haemophilus influenzae</i> type b	3		6	1.1	1		1						11	0.3
Hepatitis A	18	0.7	6	1.1	1		15	4.4	2		2		44	1.1
Hepatitis B	25	0.9	9	1.6	11	4.9	5	1.5	2		3		55	1.4
Hepatitis C	23	0.9	4		2		2				1		32	0.8
Invasive pneumococcal disease	387	14.4	181	32.0	93	41.1	24	7.0	2		17		704	17.5
Lead absorption	233	8.6	22	3.9	15	6.6	13	3.8	5	14.8	80		368	9.1
Legionellosis	70	2.6	3		2		1		2				78	1.9
Leptospirosis	62	2.3	9	1.6									71	1.8
Listeriosis	15	0.6	5	0.9	3		1		4				28	0.7
Malaria	10	0.4	1		6	2.7	17	5.0	10	29.5	6		50	1.2
Measles	212	7.9	22	3.9	8	3.5	8	2.3			3		253	6.3
Meningococcal disease	59	2.2	49	8.7	17	7.5	4		2		2		133	3.3
Mumps	44	1.6	10	1.8	1		5	1.5			3		63	1.6
Non seasonal influenza A (H1N1)	1581	58.7	826	146.1	618	273.1	312	91.5	65	191.9	266		3668	91.1
Paratyphoid fever	13	0.5					11	3.2			1		25	0.6
Pertussis	1089	40.4	171	30.2	61	27.0	39	11.4	7	20.7	32		1399	34.7
Rheumatic fever	4		81	14.3	53	23.4	1				1		140	3.5
Salmonellosis	814	30.2	126	22.3	37	16.4	77	22.6	8	23.6	67		1129	28.0
Shigellosis	56	2.1	5	0.9	28	12.4	18	5.3	2		10		119	3.0
Tuberculosis disease	42	1.6	54	9.6	32	14.1	159	46.7	15	44.3	4		306	7.6
Typhoid fever	2				18	8.0	13	3.8	2				35	0.9
VTEC/STEC infection	111	4.1	20	3.5	3		2		1		6		143	3.6
Yersiniosis	247	9.2	37	6.5	12	5.3	98	28.8	2		35		431	10.7

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 else-where in the report, which have been calculated using 2009 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 AND RATES BY SEX, 2009

Table 46. Number of cases and rates per 100 000 population of notifiable diseases by sex, 2009

Disease	Sex							
	Male		Female		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	3976	187.8	3119	141.9	81		7176	166.3
Cryptosporidiosis	384	18.1	463	21.1	7		854	19.8
Dengue fever	57	2.7	83	3.8			140	3.2
Gastroenteritis	276	13.0	407	18.5	31		714	16.5
Giardiasis	838	39.6	781	35.5	21		1640	38.0
<i>Haemophilus influenzae</i> type b	7	0.3	4				11	0.3
Hepatitis A	26	1.2	18	0.8			44	1.0
Hepatitis B	42	2.0	13	0.6			55	1.3
Hepatitis C	12	0.6	19	0.9	1		32	0.7
Invasive pneumococcal disease	369	17.4	335	15.2			704	16.3
Lead absorption	316	14.9	36	1.6	16		368	8.5
Legionellosis	50	2.4	28	1.3			78	1.8
Leptospirosis	64	3.0	7	0.3			71	1.6
Listeriosis - non perinatal	6	0.3	12	0.5			18	0.4
Malaria	32	1.5	18	0.8			50	1.2
Measles	136	6.4	117	5.3			253	5.9
Meningococcal disease	59	2.8	74	3.4			133	3.1
Mumps	35	1.7	28	1.3			63	1.5
Non seasonal influenza A (H1N1)	1667	78.7	1944	88.4	57		3668	85.0
Paratyphoid fever	16	0.8	9	0.4			25	0.6
Pertussis	596	28.1	798	36.3	5		1399	32.4
Rheumatic fever	83	3.9	57	2.6			140	3.2
Salmonellosis	555	26.2	564	25.7	10		1129	26.2
Shigellosis	57	2.7	61	2.8	1		119	2.8
Tuberculosis disease	158	7.5	148	6.7			306	7.1
Typhoid fever	15	0.7	19	0.9	1		35	0.8
VTEC/STEC infection	59	2.8	82	3.7	2		143	3.3
Yersiniosis	220	10.4	207	9.4	4		431	10.0

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, 2009

Table 47. Number of cases and rates per 100 000 population of notifiable diseases by age group, 2009

Disease	Age Group																								Total		
	<1		1 to 4		5 to 9		10 to 14		15 to 19		20 to 29		30 to 39		40 to 49		50 to 59		60 to 69		70+		Unknown				
	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	156	247.3	818	337.4	370	128.4	325	109.2	495	153.2	1262	215.7	838	145.4	887	139.7	773	145.5	666	169.5	563	147.8	23		7176	166.3	
Cryptosporidiosis	29	46.0	267	110.1	102	35.4	69	23.2	44	13.6	93	15.9	131	22.7	58	9.1	30	5.6	15	3.8	13	3.4	3		854	19.8	
Dengue fever					2		2		6	1.9	25	4.3	23	4.0	30	4.7	30	5.6	19	4.8	3				140	3.2	
Gastroenteritis	31	49.2	87	35.9	7	2.4	12	4.0	18	5.6	67	11.5	64	11.1	87	13.7	80	15.1	53	13.5	171	44.9	37		714	16.5	
Giardiasis	36	57.1	331	136.5	127	44.1	55	18.5	23	7.1	153	26.2	373	64.7	243	38.3	153	28.8	111	28.3	26	6.8	9		1640	38.0	
Hepatitis A			2		4		6	2.0	3		6	1.0	4		9	1.4	6	1.1	4						44	1.0	
Hepatitis B	1								1		15	2.6	7	1.2	17	2.7	3		8	2.0	3				55	1.3	
Hepatitis C									2		9	1.5	12	2.1	9	1.4										32	0.7
Invasive pneumococcal disease	36	57.1	66	27.2	34	11.8	26	8.7	29	9.0	45	7.7	71	12.3	55	8.7	62	11.7	90	22.9	190	49.9			704	16.3	
Lead absorption			5	2.1	2		1		19	5.9	46	7.9	77	13.4	96	15.1	68	12.8	39	9.9	15	3.9			368	8.5	
Legionellosis					1				1		1		6	1.0	11	1.7	12	2.3	22	5.6	24	6.3			78	1.8	
Leptospirosis									2		9	1.5	17	2.9	23	3.6	14	2.6	5	1.3	1				71	1.6	
Listeriosis							1		2		5	0.9	4		1		2		3		10	2.6			28	0.6	
Malaria	1		1		5	1.7	5	1.7	4		17	2.9	5	0.9	5	0.8	3		3		1				50	1.2	
Measles	29	46.0	76	31.3	31	10.8	53	17.8	36	11.1	12	2.1	13	2.3	2		1								253	5.9	
Meningococcal disease	28	44.4	35	14.4	10	3.5	4		21	6.5	8	1.4	4		11	1.7	4		5	1.3	3				133	3.1	
Mumps	1		18	7.4	17	5.9	7	2.4	4		2		7	1.2	4		1		2						63	1.5	
Non seasonal influenza A (H1N1)	153	242.6	259	106.8	267	92.7	306	102.8	445	137.7	787	134.5	483	83.8	420	66.2	337	63.4	89	22.7	61	16.0	61		3668	85.0	
Paratyphoid fever	1		1						2		8	1.4	6	1.0	3		2		1		1				25	0.6	
Pertussis	116	183.9	142	58.6	147	51.0	103	34.6	120	37.1	112	19.1	180	31.2	190	29.9	143	26.9	93	23.7	53	13.9			1399	32.4	
Rheumatic fever			2		37	12.8	68	22.9	16	5.0	16	2.7	1												140	3.2	
Salmonellosis	78	123.7	218	89.9	68	23.6	38	12.8	60	18.6	144	24.6	136	23.6	121	19.1	115	21.6	72	18.3	75	19.7	4		1129	26.2	
Shigellosis	2		11	4.5	8	2.8	4		4		25	4.3	17	2.9	18	2.8	12	2.3	12	3.1	6	1.6			119	2.8	
Tuberculosis disease	3		9	3.7	6	2.1	4		15	4.6	64	10.9	54	9.4	51	8.0	40	7.5	30	7.6	30	7.9			306	7.1	
Typhoid fever			1		3		2		6	1.9	11	1.9	6	1.0	6	0.9									35	0.8	
VTEC/STEC infection	9	14.3	53	21.9	15	5.2	3		9	2.8	12	2.1	8	1.4	7	1.1	11	2.1	9	2.3	7	1.8			143	3.3	
Yersiniosis	41	65.0	94	38.8	19	6.6	14	4.7	17	5.3	40	6.8	42	7.3	48	7.6	45	8.5	36	9.2	34	8.9	1		431	10.0	

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

Table 48. Number of cases and rates of notifiable diseases per 100 000 population by DHB, 2009

Disease	Campylobacteriosis		Cryptosporidiosis		Dengue Fever		Gastroenteritis		Giardiasis		Hepatitis A		Hepatitis B		Invasive pneumococcal disease		Lead Absorption		Legionellosis		Leptospirosis		Malaria		Measles		Meningococcal Disease		Mumps		Non seasonal influenza		Pertussis		Rheumatic Fever		Salmonellosis		Shigellosis		Tuberculosis		Typhoid Fever		VTEC/STEC Infection		Yersiniosis	
	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	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Northland	208	133.5	37	23.8	4	3			64	41.1	1	3	32	20.5	4	2	7	4.5							4	6	3.9	3	180	115.6	20	12.8	16	10.3	32	20.5	3	8	5.1		6	3.9	11	7.1				
Waitemata	913	172.8	74	14.0	17	3.2	82	15.5	155	29.3	3	6	1.1	64	12.1	41	7.8	13	2.5	1		7	1.3	15	2.8	6	1.1	5	0.9	333	63.0	118	22.3	8	1.5	88	16.7	23	4.4	49	9.3	5	0.9	9	1.7	51	9.7	
Auckland	810	182.4	56	12.6	30	6.8	98	22.1	212	47.7	9	2.0	13	2.9	52	11.7	85	19.1	9	2.0	2		6	1.4	8	1.8	11	2.5	4	372	83.8	66	14.9	13	2.9	106	23.9	19	4.3	63	14.2	8	1.8	18	4.1	69	15.5	
Counties Manukau	685	142.2	51	10.6	38	7.9	44	9.1	202	41.9	6	1.2	8	1.7	91	18.9	52	10.8	7	1.5	1		19	3.9	3		19	3.9	3	312	64.8	73	15.2	41	8.5	100	20.8	26	5.4	66	13.7	13	2.7	9	1.9	34	7.1	
Waikato	661	183.6	109	30.3	6	1.7	24	6.7	148	41.1	3	1		83	23.1	24	6.7	1	17	4.7	3		1		9	2.5	7	1.9	180	50.0	233	64.7	22	6.1	104	28.9	7	1.9	16	4.4	1		27	7.5	28	7.8		
Lakes	205	201.4	13	12.8	2		12	11.8	65	63.9	1	1		29	28.5	9	8.8	1	2							5	4.9	1	50	49.1	31	30.5	3		27	26.5			7	6.9	5	4.9	10	9.8				
Bay of Plenty	317	152.6	27	13.0	4		5	2.4	63	30.3	2	3		50	24.1	9	4.3	9	4.3	3		2		1		9	4.3	5	2.4	105	50.5	62	29.8	5	2.4	41	19.7	4	12	5.8	9	4.3	6	2.9				
Tairāwhiti	36	77.9	10	21.6	2				11	23.8		1		9	19.5	7	15.2												50	108.2	13	28.1	10	21.6	32	69.3	1	6	13.0	4		3						
Taranaki	233	215.3	24	22.2	1				45	41.6		1		20	18.5	5	4.6	1	3			1				3	2	33	30.5	42	38.8	1		20	18.5					14	12.9	15	13.9					
Hawke's Bay	336	218.3	36	23.4	4	11	7.1	66	42.9	4	1		35	22.7	6	3.9	5	3.2	4		1		1		7	4.5	1	174	113.1	28	18.2	5	3.2	58	37.7	1	8	5.2	4		15	9.7						
Whanganui	139	220.1	9	14.3	1	16	25.3	21	33.3		1		12	19.0	7	11.1			3				1		1			71	112.4	6	9.5			12	19.0			1		3								
MidCentral	236	142.3	29	17.5	4	108	65.1	18	10.8	2	2		17	10.2	13	7.8	1	6	3.6			1		10	6.0		79	47.6	27	16.3	1		31	18.7	1	6	3.6	3		4								
Hutt	355	248.8	19	13.3	2	53	37.1	35	24.5	3			30	21.0	14	9.8	1								6	4.2	3	213	149.3	53	37.1	6	4.2	35	24.5	4	10	7.0	2		25	17.5						
Capital and Coast	692	240.2	129	44.8	14	4.9	89	30.9	167	58.0	3	2		30	10.4	12	4.2	2	1		3		1		11	3.8	8	2.8	515	178.8	104	36.1	7	2.4	59	20.5	8	2.8	20	6.9	6	2.1	5	1.7	42	14.6		
Wairarapa	69	172.6	13	32.5	1	2		12	30.0		2		12	30.0	3	2	1		1						1	2		54	135.1	10	25.0			19	47.5	1				1		1						
Nelson-Marlborough	173	126.5	24	17.5		10	7.3	48	35.1		2		22	16.1	10	7.3	2	2		2		2		1		1		80	58.5	93	68.0	1		40	29.2	2	4			2		2						
West Coast	42	128.9	18	55.2	1	90	276.2	13	39.9		2				3	5	15.3	2	7	21.5	1		1		1		65	199.4	29	89.0			10	30.7	1	2			1		12	36.8						
Canterbury	545	108.6	97	19.3	7	1.4	52	10.4	190	37.9	6	1.2	5	1.0	58	11.6	30	6.0	14	2.8	7	1.4	3	170	33.9	12	2.4	14	2.8	599	119.3	317	63.1	1		149	29.7	10	2.0	22	4.4	2		16	3.2	67	13.3	
South Canterbury	103	185.4	28	50.4		3		10	18.0					6	10.8	5	9.0	1	2					2		3		77	138.6	27	48.6			34	61.2	1	2			2		10	18.0					
Otago	253	134.2	28	14.9	1	9	4.8	51	27.1		1			32	17.0	23	12.2	3						35	18.6	5	2.7	80	42.4	19	10.1			76	40.3	4	2			4		19	10.1					
Southland	165	147.6	23	20.6	1	3		44	39.3	1				20	17.9	9	8.0	1	4					2		4		46	41.1	28	25.0			56	50.1	3	2			2		4						
Total	7176	166.3	854	19.8	140	3.2	714	16.5	1640	38.0	44	1.0	55	1.3	704	16.3	368	8.5	78	1.8	71	1.6	50	1.2	253	5.9	133	3.1	63	1.5	3668	85.0	1399	32.4	140	3.2	1129	26.2	119	2.8	306	7.1	35	0.8	143	3.3	431	10.0

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 BY YEAR AND SOURCE, 1988–2009

Table 49. Number of notifiable disease cases by year and source, 1988–2009

Note: Cell is blank where data are unavailable.

Disease	Source	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
AIDS	Notification	38	59	73	78	50	70	44	49	76	43	29	33	26	26	17	33	38	49	29	31	48	28
Campylobacteriosis	Notification	2796	4187	3850	4148	5144	8101	7714	7442	7635	8924	11572	8161	8418	10146	12494	14788	12215	13836	15873	12778	6694	7176
Cholera	Notification	0	0	5	0	0	0	2	2	0	0	1	1	0	3	1	1	2	0	0	1	0	0
Creutzfeldt-Jakob Disease	Notification									2	1	0	2	3	1	3	6	8	3	5	8	5	8
Cryptosporidiosis	Notification									119	357	866	977	775	1208	975	817	611	889	737	924	764	854
Dengue Fever	Notification	1	3	2	3	1	1	0	6	23	14	26	9	7	93	70	55	8	11	19	114	113	140
Gastroenteritis	Notification									555	310	492	601	727	940	1087	1026	1363	557	937	622	687	714
Giardiasis	Notification									1235	2127	2183	1793	1688	1604	1547	1570	1514	1231	1214	1402	1660	1640
<i>H. influenzae</i> type b	Notification									26	9	11	10	13	11	3	12	4	7	9	15	9	11
	Laboratory	107	121	143	148	166	118	75	14	24	8	10	9	10	8	3	9	3	6	8	13	4	8
Hepatitis A	Notification	176	134	150	224	288	257	179	338	311	347	145	119	107	61	106	70	49	51	123	42	89	44
Hepatitis B	Notification	370	309	242	227	221	145	133	125	104	138	88	94	79	56	67	61	38	59	62	73	38	55
Hepatitis C	Notification	20	13	11	25	89	91	79	88	59	92	102	96	80	58	53	40	24	29	35	31	23	32
Hydatid Disease	Notification	2	0	4	0	4	4	1	5	3	2	2	8	3	7	2	0	1	2	0	6	7	3
Influenza	Sentinel isolates	136	119	343	183	317	423	441	521	673	743	127	425	73	313	241	230	231	273	315	239	466	624
Legionellosis	Notification	62	17	20	14	11	24	66	33	36	63	43	51	61	46	49	77	62	85	52	64	73	78
	Laboratory			21	42	60	76	121	76	60	109	107	65	56	56	53	82	75	83	54	72	74	77
Leprosy	Notification	2	4	1	4	5	3	1	1	10	3	3	10	4	3	4	4	3	2	4	8	5	3
Leptospirosis	Notification	99	90	117	106	70	116	70	65	56	52	75	59	98	99	140	113	102	85	87	66	118	71
	Laboratory	192	182	229	176	218	234	168	183	140	84	117	76	114	113	181	149	113	109	67	42	72	60
Listeriosis	Notification	7	10	16	26	16	11	8	13	10	35	17	19	22	18	19	24	26	20	19	26	27	28
Malaria	Notification	25	27	32	39	29	58	34	41	107	65	73	46	111	54	61	46	33	32	30	25	40	50
Measles	Notification									68	1984	164	107	64	82	21	66	32	19	18	24	12	253
Meningococcal Disease	Notification	83	49	53	71	153	202	208	394	473	609	439	507	477	648	555	542	343	226	160	104	122	133
Mumps	Notification									76	90	85	56	50	56	64	56	45	61	47	73	76	63
Paratyphoid Fever	Notification	2	0	1	1	2	10	7	24	20	25	18	17	24	32	16	18	28	25	23	23	25	25
Pertussis	Notification									1022	284	153	1046	4140	1334	1068	585	3485	2719	1120	332	417	1399
Rheumatic Fever (initial attack)	Notification	153	148	90	97	70	81	98	88	110	93	66	97	108	114	87	148	75	76	104	133	138	123
Rubella	Notification									306	80	53	35	26	30	33	26	23	13	8	11	9	4
Salmonellosis	Notification	1128	1860	1619	1244	1239	1340	1522	1334	1141	1177	2069	2077	1795	2417	1880	1401	1081	1382	1335	1275	1345	1129
Shigellosis	Notification	145	137	197	152	124	128	185	191	167	117	122	147	115	157	112	87	140	183	102	129	113	119
Tetanus	Notification	1	0	0	0	8	2	2	2	3	0	2	6	1	4	1	2	1	1	1	1	0	1
Tuberculosis	Notification	295	303	348	335	327	323	352	391	352	323	365	446	354	369	381	423	375	330	350	283	296	306
Typhoid Fever	Notification	15	17	7	9	11	14	24	21	15	16	31	10	21	27	23	20	31	30	42	48	29	35
VTEC/STEC Infection	Notification						3	3	6	7	13	48	64	67	76	73	104	89	92	87	100	124	143
Yersiniosis	Notification									330	488	546	503	396	429	472	436	407	383	453	502	508	431

PREVALENCE OF ANTIMICROBIAL RESISTANCE, 1994–2008

Table 50. Prevalence of antimicrobial resistance, 1994–2008

Pathogen	Antimicrobial	Percent resistance ^a (number tested)				
		1994-1996	1997-1999	2000-2002	2003-2005	2006-2008
<i>S. aureus</i> ^b	methicillin	2.8 (58283)	4.9 (136356)	7.2 (251448)	7.4 (219363)	8.2 (242146)
	erythromycin	8.0 (54870)	10.8 (134350)	12.0 (221394)	12.0 (164220)	12.1 (98055)
	co-trimoxazole	0.8 (32926)	0.6 (91391)	1.2 (149166)	2.0 (126840)	1.3 (89071)
	fluoroquinolone				7.3 (47116)	7.9 (28846)
	fusidic acid				19.7 (25609)	15.7 (32730)
	mupirocin	10.1 (9291)	18.2 (37173)	20.0 (91555)	16.7 (48423)	12.9 (67154)
Methicillin-resistant <i>S. aureus</i> ^c	erythromycin	31.5 (2249)	26.2 (1303)	40.0 (1409)	46.3 (1596)	37.5 (3146)
	co-trimoxazole	8.6 (2249)	1.8 (1303)	6.7 (1409)	7.4 (1596)	2.8 (3068)
	fluoroquinolone			40.0 (1409)	50.3 (1596)	37.4 (3000)
	fusidic acid			7.0 (1409)	9.2 (1596)	11.6 (3011)
	mupirocin	6.4 (2244)	6.0 (1303)	8.5 (1409)	9.5 (1596)	7.5 (2926)
	rifampicin	0.3 (2249)	0.8 (1303)	0.7 (1409)	0.5 (1596)	0.7 (1336)
<i>S. pneumoniae</i> , non-invasive disease ^b	penicillin ^d	9.5 (7076)	19.0 (10976)	26.5 (12859)	27.0 (15037)	30.0 (14104)
	erythromycin	8.3 (6832)	14.5 (11212)	18.6 (14404)	19.9 (10222)	21.3 (7273)
	tetracycline	10.5 (5019)	11.2 (5993)	15.4 (9476)	18.1 (6796)	19.0 (5496)
<i>S. pneumoniae</i> , invasive disease ^e	penicillin ^f	3.4 (989)	15.0 (1182)	15.3 (1494)	17.2 (1560)	20.3 (1707)
	erythromycin	2.6 (989)	5.7 (910)	7.2 (1494)	9.9 (1560)	12.2 (1707)
	cefotaxime ^f	1.8 (989)	7.3 (1182)	6.2 (1494)	11.5 (1560)	13.2 (1707)
<i>Enterococcus</i> spp ^b	amoxicillin ^g	1.5 (7373)	2.4 (17548)	3.0 (22566)	2.8 (26492)	3.7 (35746)
	vancomycin	0.2 (1141)	0.5 (4752)	0.3 (7505)	0.1 (9948)	1.3 (20291)
<i>E. coli</i> , urinary isolates ^b	amoxicillin ^g	55.9 (48706)	56.0 (138712)	54.4 (194799)	50.7 (117009)	49.9 (117456)
	co-amoxiclav	10.6 (42666)	12.2 (136326)	9.6 (194950)	8.5 (127750)	9.6 (117965)
	trimethoprim	19.6 (48098)	22.6 (111710)	22.3 (207837)	21.5 (138748)	22.1 (128276)
	nitrofurantoin	1.6 (48123)	1.7 (124362)	1.5 (206149)	1.4 (139738)	1.3 (127682)
	fluoroquinolone	0.5 (40032)	0.6 (118917)	1.6 (201382)	2.4 (135803)	4.6 (110769)
<i>E. coli</i> , non-urinary isolates ^{b,h}	co-amoxiclav	22.8 (7358)	21.8 (15948)	17.5 (11508)	15.2 (5059)	15.1 (3249)
	cefuroxime	3.2 (6309)	4.5 (6893)	4.2 (6576)	3.4 (3956)	4.5 (2534)
	ESBL positive					2.6 (2307)
	gentamicin	0.8 (10352)	0.9 (13789)	2.4 (10392)	2.6 (5290)	5.3 (3896)
	fluoroquinolone	0.5 (4717)	0.8 (10800)	2.4 (8821)	3.9 (4212)	8.1 (3808)
<i>P. aeruginosa</i> ^b	gentamicin	12.5 (9556)	9.5 (20542)	10.5 (25561)	6.1 (23148)	4.3 (23399)
	tobramycin	3.9 (6757)	2.8 (11033)	3.6 (10421)	3.3 (7616)	3.4 (9388)
	ceftazidime	5.0 (4832)	5.2 (11147)	3.9 (13253)	4.3 (16031)	3.2 (18163)
	fluoroquinolone	8.8 (8123)	9.9 (16551)	9.3 (22869)	8.3 (23761)	7.1 (23961)
	Imipenem/meropenem				4.8 (9956)	4.9 (13703)
	Piperacillin/tazobactam				1.5 (4928)	2.5 (11960)
<i>H. influenzae</i> , non-invasive disease ^b	amoxicillin ^g	12.0 (12244)	19.3 (18852)	21.9 (28476)	19.9 (19529)	22.0 (24823)
	co-amoxiclav	1.1 (9839)	0.6 (15040)	0.8 (16333)	1.0 (14090)	2.6 (15123)
	co-trimoxazole	11.9 (6605)	14.7 (13964)	17.3 (22443)	18.2 (15939)	20.2 (13098)
	tetracycline	1.0 (7810)	1.5 (13007)	1.2 (15633)	0.8 (12783)	0.8 (11263)
<i>H. influenzae</i> , invasive disease ^e	amoxicillin ^g	21.8 (179)	11.5 (122)	19.2 (125)	31.6 (155)	36.9 (176)
	co-amoxiclav	3.4 (179)	1.6 (122)	1.6 (125)	9.7 (155)	23.9 (176)
	cefuroxime	3.4 (179)	4.9 (122)	0.8 (125)	9.7 (155)	23.9 (176)
<i>N. meningitidis</i> , invasive disease ^e	penicillin ⁱ	3.9 (659)	7.9 (431)	7.5 (796)	12.0 (551)	19.5 (231)
	rifampicin	0 (659)	0 (431)	0 (796)	0.2 (551)	0.0 (231)
<i>N. gonorrhoeae</i> ^{b,j}	penicillin	11.6 (879)	10.4 (1437)	7.1 (2782)	5.8 (4700)	7.5 (6028)
	fluoroquinolone	0.7 (864)	1.8 (1437)	6.3 (2349)	14.3 (4195)	20.1 (7315)
<i>M. tuberculosis</i> ^b	isoniazid	4.6 (438)	8.2 (757)	8.5 (811)	8.9 (872)	6.6 (725)
	rifampicin	0.7 (438)	1.3 (757)	0.7 (811)	1.0 (872)	0.6 (725)
	MDR ^k	0.7 (438)	0.9 (757)	0.5 (811)	1.0 (872)	0.4 (725)

^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 bacteraemiaⁱ penicillin reduced susceptibility (MIC 0.12-0. 5 mg/L)^j data from northern North Island only up until 2000, thereafter national data used multidrug resistant (ie, resistant to at least isoniazid and rifampicin)