

APPENDIX: NATIONAL SURVEILLANCE DATA AND TRENDS

COMPARISON OF NOTIFIABLE DISEASE CASES AND RATES FOR 2007 AND 2008

Table 37. Number of cases and rates per 100 000 population of notifiable diseases in New Zealand, 2007 - 2008

Disease ^{a,b}	2007		2008		Change ^{e,f}
	Cases	Rates	Cases	Rates	
AIDS	31	0.7	48	1.1	→
Brucellosis	4	0.1	3	0.1	←
Campylobacteriosis	12778	302.2	6693	156.8	←
Chemical Poisoning	13	0.3	1	0.0	←
Chikungunya Fever	1	0.0	1	0.0	-
Cholera	1	0.0	0	0.0	←
Cryptosporidiosis	924	21.9	764	17.9	←
Cysticercosis	2	0.0	0	0.0	←
Dengue fever	114	2.7	114	2.7	
Gastroenteritis ^c	622	14.7	690	16.2	→
Giardiasis	1402	33.2	1662	38.9	→
<i>Haemophilus influenzae</i> type b	15	0.4	9	0.2	←
Hazardous Substances Injury	3	0.1	6	0.1	→
Hepatitis A	42	1.0	91	2.1	→
Hepatitis B ^d	73	1.7	39	0.9	←
Hepatitis C ^d	32	0.8	23	0.5	←
Hepatitis NOS	1	0.0	2	0.0	→
Hydatid Disease	6	0.1	7	0.2	→
Lead Absorption	78	1.8	315	7.4	→
Legionellosis	64	1.5	76	1.8	→
Leprosy	8	0.2	5	0.1	←
Leptospirosis	66	1.6	121	2.8	→
Listeriosis	26	0.6	27	0.6	→
Malaria	25	0.6	40	0.9	→
Measles	24	0.6	12	0.3	←
Meningococcal Disease	104	2.5	122	2.9	→
Mumps	73	1.7	78	1.8	→
Murine Typhus	2	0.0	8	0.2	→
Paralytic Shellfish Poisoning	1	0.0	0	0.0	←
Paratyphoid Fever	23	0.5	25	0.6	→
Pertussis	332	7.9	433	10.1	→
Rheumatic Fever	140	3.3	152	3.6	→
Rickettsial disease	0	0.0	2	0.0	→
Ross River Virus Infection	0	0.0	1	0.0	→
Rubella	11	0.3	9	0.2	←
Salmonellosis	1274	30.1	1346	31.5	→
Shigellosis	129	3.1	113	2.6	←
Taeniasis	1	0.0	5	0.1	→
Tetanus	1	0.0	0	0.0	←
Toxic Shellfish Poisoning	2	0.0	1	0.0	←
Tuberculosis Disease	285	6.7	302	7.1	→
Typhoid Fever	48	1.1	29	0.7	←
VTEC/STEC Infection	100	2.4	128	3.0	→
Yersiniosis	502	11.9	509	11.9	→

^a No cases of the following notifiable diseases were reported in 2007 & 2008: anthrax, Barmah Forest Virus, botulism, Creutzfeldt-Jakob disease, decompression sickness, diphtheria, *E. sakazakii*, HPAI, Japanese encephalitis, Kunjin virus, Lyme disease, Murray Valley encephalitis, plague, poliomyelitis, primary amoebic meningo-encephalitis, rabies, SARS, trichinellosis, yellow fever.

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

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

^d Only acute cases of this disease are currently notifiable.

^e ← = Significant decrease, → = Significant increase, - = No change, ↔ = Not significant decrease, ⇨ = not significant increase

^f 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 - 2008

Table 38. Deaths due to notifiable diseases recorded in EpiSurv, 1997 - 2008

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

^a Data source [9]

^b Data source [12]

^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 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.

NZHS MORTALITY DATA FOR SELECTED NOTIFIABLE DISEASES, 2004 - 2006**Table 39. Reported deaths from selected notifiable diseases, 2004 - 2006**

Disease	ICD 10 Codes	2004		2005		2006 ^a	
		Underlying ^b	Contributory ^c	Underlying ^b	Contributory ^c	Underlying ^b	Contributory ^c
AIDS	B20- B24	15	2	13	7	17	5
Campylobacteriosis	A04.5	1	1		3	3	
Creutzfeldt-Jakob Disease	A81.0	4		4		3	
Hepatitis B	B16		6	3	5		5
Hepatitis C	B17.1		3		1		1
Legionellosis	A48.1	1	1	2	1	1	
Listeriosis	A32	1					1
Meningococcal Disease	A39	8		13		6	
Pertussis	A37	1		1			
Salmonellosis	A02		1		1	1	
Tuberculosis	A15- A19, P37.0	13	13	5	14	11	8
VTEC/STEC Infection	A44		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)

NZHIS MORBIDITY DATA FOR SELECTED NOTIFIABLE DISEASES, 2006 - 2008

Table 40. Hospital admissions for selected notifiable diseases, 2006 - 2008

Disease	ICD 10 Codes	2006		2007		2008	
		Principal diagnosis	Other relevant diagnosis	Principal diagnosis	Other relevant diagnosis	Principal diagnosis	Other relevant diagnosis
AIDS	B20-B24	35	282	28	261	26	266
Arboviral diseases	A83, A84, A85.2, A92, A93, A94, B33.1	2			2	1	
Brucellosis	A23		1		2	2	
Campylobacteriosis	A04.5	969	212	752	185	388	97
Creutzfeldt-Jakob Disease	A81.0	6		2	5	5	9
Cryptosporidiosis	A07.2	20	10	26	14	19	13
Cysticercosis	B69	2	1	4	2	2	
Decompression sickness	T70.3	8		12	1	12	2
Dengue fever	A90, A91	11	3	45	9	35	5
Diphtheria	A36		1		3		
Giardiasis	A07.1	43	28	20	14	18	21
Hepatitis A	B15	33	14	17	18	19	18
Hepatitis B	B16	35	89	41	90	33	81
Hepatitis C	B17.1	11	13	12	19	12	21
Lead absorption	T56.0	5		12		2	
Legionellosis	A48.1	12	10	18	7	37	6
Leprosy	A30	2		4	6	5	4
Leptospirosis	A27	50	8	41	2	57	7
Listeriosis	A32	13	10	12	17	13	13
Malaria	B50-B54	42	4	37	5	30	
Measles	B05	1	1	5	1	3	
Meningococcal disease	A39	175	31	120	21	125	21
Mumps	B26	9	2	13	2	16	4
Paratyphoid fever	A01.1-A01.4	4		13		4	
Pertussis	A37	60	10	51	10	72	11
Poliomyelitis	A80						1
Rheumatic fever	I00, I01, I02	186	42	206	34	227	46
Rickettsial diseases	A75, A77, A78, A79	16	1	4		7	1
Rubella	B06	1	4		1		1
Salmonellosis	A02	123	39	123	27	118	40
Shigellosis	A03	13	2	27	1	15	4
Taeniasis	B689				2		1
Tetanus	A33-A35	2	2	1		1	
Tuberculosis	A15-A19, P37.0	301	151	229	154	205	121
Typhoid fever	A01.0	30	2	42	2	19	1
VTEC/STEC Infection	A40-A44	16	23	22	24	26	20
Yersiniosis	A04.6	29	26	19	31	23	30

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, 2008

Table 41. Number of cases and rates per 100 000 population of notifiable diseases by ethnic group, 2008

Disease	Ethnicity											
	European		Maori		Pacific Peoples		Other Ethnicity		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	3570	132.5	348	61.6	67	29.6	139	37.1	2569		6693	166.2
Cryptosporidiosis	589	21.9	56	9.9	5	2.2	19	5.1	95		764	19.0
Dengue fever	40	1.5	4		39	17.2	14	3.7	17		114	2.8
Gastroenteritis	441	16.4	32	5.7	14	6.2	35	9.3	168		690	17.1
Giardiasis	861	32.0	62	11.0	8	3.5	46	12.3	685		1662	41.3
Haemophilus influenzae type b	2		6	1.1	1						9	0.2
Hepatitis A	33	1.2	14	2.5	13	5.7	24	6.4	7		91	2.3
Hepatitis B	18	0.7	4		6	2.7	7	1.9	4		39	1.0
Hepatitis C	15	0.6	5	0.9			1		2		23	0.6
Hydatid disease	4		1				1		1		7	0.2
Lead absorption	147	5.5	14	2.5	12	5.3	5	1.3	137		315	7.8
Legionellosis	59	2.2	3		1		1		12		76	1.9
Leprosy	1				3	1.3	1				5	0.1
Leptospirosis	78	2.9	26	4.6	1				16		121	3.0
Listeriosis	20	0.7	2		4	1.8	1				27	0.7
Malaria	7	0.3			5	2.2	18	4.8	10		40	1.0
Measles	9	0.3	1				1		1		12	0.3
Meningococcal disease	52	1.9	40	7.1	21	9.3	6	1.6	3		122	3.0
Mumps	33	1.2	16	2.8	12	5.3	6	1.6	11		78	1.9
Paratyphoid fever	7	0.3	1			0.0	12	3.2	5		25	0.6
Pertussis	324	12.0	61	10.8	10	4.4	8	2.1	30		433	10.7
Rheumatic fever	10	0.4	99	17.5	29	12.8	2		12		152	3.8
Rickettsial disease	1								1		2	
Rubella	7	0.3	1			0.0			1		9	0.2
Salmonellosis	820	30.4	108	19.1	19	8.4	51	13.6	348		1346	33.4
Shigellosis	53	2.0	4		13	5.7	12	3.2	31		113	2.8
Tuberculosis disease	35	1.3	48	8.5	52	23.0	157	41.9	10		302	7.5
Typhoid fever			2		12	5.3	10	2.7	5		29	0.7
VTEC/STEC infection	88	3.3	12	2.1	1		5	1.3	22		128	3.2
Yersiniosis	273	10.1	26	4.6	14	6.2	41	10.9	155		509	12.6

Note: Disease rates for ethnic groups and total cases are based on 2006 census data from Statistics New Zealand and should not be compared to disease rates used else-where in the report, which have been calculated using 2008 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, 2008

Table 42. Number of cases and rates per 100 000 population of notifiable diseases by sex, 2008

Disease	Sex							
	Male		Female		Unknown		Total	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Campylobacteriosis	3711	177.4	2888	132.7	94		6693	156.8
Cryptosporidiosis	377	18.0	377	17.3	10		764	17.9
Dengue fever	58	2.8	56	2.6			114	2.7
Gastroenteritis	305	14.6	359	16.5	26		690	16.2
Giardiasis	827	39.5	805	37.0	30		1662	38.9
<i>Haemophilus influenzae</i> type b	3		6	0.3			9	0.2
Hepatitis A	58	2.8	31	1.4	2		91	2.1
Hepatitis B	24	1.1	14	0.6	1		39	0.9
Hepatitis C	12	0.6	11	0.5			23	0.5
Hydatid disease	5	0.2	2				7	0.2
Lead absorption	276	13.2	33	1.5	6		315	7.4
Legionellosis	41	2.0	34	1.6	1		76	1.8
Leprosy	2		3				5	0.1
Leptospirosis	103	4.9	18	0.8			121	2.8
Listeriosis - non perinatal	11	0.5	10	0.5			21	0.5
Malaria	22	1.1	17	0.8	1		40	0.9
Measles	9	0.4	3				12	0.3
Meningococcal disease	72	3.4	50	2.3			122	2.9
Mumps	34	1.6	40	1.8	4		78	1.8
Paratyphoid fever	13	0.6	12	0.6			25	0.6
Pertussis	181	8.7	248	11.4	4		433	10.1
Rheumatic fever	73	3.5	68	3.1	11		152	3.6
Rickettsial disease	1		1				2	
Rubella	5	0.2	4				9	0.2
Salmonellosis	704	33.6	622	28.6	20		1346	31.5
Shigellosis	62	3.0	46	2.1	5		113	2.6
Tetanus	0		0				0	
Tuberculosis disease	162	7.7	140	6.4			302	7.1
Typhoid fever	17	0.8	12	0.6			29	0.7
VTEC/STEC infection	67	3.2	60	2.8	1		128	3.0
Yersiniosis	262	12.5	234	10.8	13		509	11.9

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, 2008

Table 43. Number of cases and rates per 100 000 population of notifiable diseases by age group, 2008

Disease	Age Group																										
	<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		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	Cases
Campylobacteriosis	174	271.6	752	318.7	327	113.7	271	89.8	467	144.8	1060	186.1	814	139.5	814	128.4	734	141.1	643	170.3	611	164.3	26		6693	156.8	
Cryptosporidiosis	23	35.9	264	111.9	95	33.0	47	15.6	57	17.7	98	17.2	86	14.7	37	5.8	31	6.0	18	4.8	7	1.9	1		764	17.9	
Dengue fever			1		1		5	1.7	8	2.5	23	4.0	13	2.2	20	3.2	24	4.6	14	3.7	5	1.3			114	2.7	
Gastroenteritis	29	45.3	101	42.8	13	4.5	15	5.0	30	9.3	67	11.8	85	14.6	108	17.0	79	15.2	45	11.9	71	19.1	47		690	16.2	
Giardiasis	43	67.1	318	134.8	151	52.5	33	10.9	43	13.3	154	27.0	393	67.4	218	34.4	130	25	120	31.8	56	15.1	3		1662	38.9	
<i>Haemophilus influenzae</i> type b	1		3		1		2						1								1				9	0.2	
Hepatitis A	1		13	5.5	10	3.5	8	2.7	9	2.8	16	2.8	15	2.6	7	1.1	6	1.2	3		3				91	2.1	
Hepatitis B	2								1		6	1.1	10	1.7	9	1.4	5	1.0	3		3				39	0.9	
Hepatitis C									1		12	2.1	4		4		2								23	0.5	
Hydatid disease													1		1		2		2		1				7	0.2	
Lead absorption	2		5	2.1	4		2		16	5.0	46	8.1	61	10.5	71	11.2	68	13.1	31	8.2	9	2.4			315	7.4	
Legionellosis			1									2		6	1	7	1.1	13	2.5	20	5.3	27	7.3			76	1.8
Leprosy												2		1		1		1								5	0.1
Leptospirosis								5	1.6	29	5.1	25	4.3	26	4.1	23	4.4	10	2.6	2		1		1		121	2.8
Listeriosis	1							1		4		2		3		2		3				11	3.0			27	0.6
Malaria	1				2		1		4		14	2.5	7	1.2	6	0.9	3		2						40	0.9	
Measles			8	3.4	1		1		1		1														12	0.3	
Meningococcal disease	18	28.1	33	14.0	13	4.5	9	3.0	13	4.0	7	1.2	4		11	1.7	4		5	1.3	5	1.3			122	2.9	
Mumps			24	10.2	13	4.5	12	4.0	3		6	1.1	11	1.9	6	0.9					3				78	1.8	
Paratyphoid fever	1		3		1				1		5	0.9	4		4		4		1		1				25	0.6	
Pertussis	41	64.0	21	8.9	26	9.0	41	13.6	32	9.9	41	7.2	55	9.4	54	8.5	62	11.9	37	9.8	23	6.2			433	10.1	
Rheumatic fever	2		1		38	13.2	68	22.5	20	6.2	14	2.5	6	1.0	3										152	3.6	
Rickettsial disease																	1		1						2		
Rubella	1		5	2.1					1		1						1								9	0.2	
Salmonellosis	87	135.8	257	108.9	80	27.8	55	18.2	75	23.3	185	32.5	164	28.1	145	22.9	120	23.1	86	22.8	90	24.2	2		1346	31.5	
Shigellosis			13	5.5	4		7	2.3	4		15	2.6	18	3.1	21	3.3	19	3.7	6	1.6	6	1.6			113	2.6	
Tetanus																						1				1	
Tuberculosis disease	1		3		6	2.1	6	2.0	15	4.7	59	10.4	60	10.3	29	4.6	37	7.1	41	10.9	45	12.1			302	7.1	
Typhoid fever			4		7	2.4	1		3		5	0.9	3		2		3		1						29	0.7	
VTEC/STEC infection	5	7.8	39	16.5	10	3.5	5	1.7	11	3.4	17	3.0	10	1.7	10	1.6	4		12	3.2	5	1.3			128	3.0	
Yersiniosis	47	73.4	109	46.2	15	5.2	18	6.0	20	6.2	52	9.1	47	8.1	49	7.7	56	10.8	40	10.6	55	14.8	1		509	11.9	

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 DISTRICT HEALTH BOARD, 2008

Table 44. Number of cases and rates of notifiable diseases per 100 000 population by DHB, 2008

Disease	Campylobacteriosis		Cryptosporidiosis		Dengue Fever		Gastroenteritis		Giardiasis		Hepatitis A		Hepatitis B		Hepatitis C		Lead Absorption		Legionellosis		Leptospirosis		Listeriosis		Malaria		Measles		Meningococcal Disease		Mumps		Paratyphoid Fever		Pertussis		Rheumatic Fever		Rubella		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						
Northland	249	161.0	40	25.9	1		7	4.5	42	27.1	5	3.2					4					8	5.2	1		2				9	5.8	4		9	5.8	12	7.8			43	27.8	2		8	5.2	10	6.5	14	9.0			
Waitemata	881	169.2	18	3.5	19	3.6	129	24.8	189	36.3	7	1.3	8	1.5	1		56	10.8	5	1.0	3		2		5	1.0			7	1.3	7	1.3	5	1	21	4	12	2.3	1		110	21.1	18	3.5	50	9.6	1		14	2.7	43	8.3
Auckland	699	159.6	16	3.7	31	7.1	107	24.4	262	59.8	12	2.7	10	2.3	2		103	23.5	10	2.3			3		13	3.0	2		10	2.3	8	1.8	3		8	1.8	10	2.3			98	22.4	24	5.5	54	12.3	7	1.6	14	3.2	47	10.7
Counties Manukau	624	131.8	17	3.6	30	6.3	59	12.5	174	36.8	15	3.2	1		4		36	7.6	9	1.9	3		6	1.3	8	1.7			15	3.2	11	2.3	5	1.1	28	5.9	24	5.1	1		94	19.9	21	4.4	57	12.0	13	2.7	12	2.5	35	7.4
Waikato	574	161.1	113	31.7	2		31	8.7	113	31.7	4		1		1		19	5.3	6	1.7	18	5.1	4					11	3.1	9	2.5	3		85	23.9	32	9.0			127	35.7	5	1.4	20	5.6	1		18	5.1	33	9.3	
Lakes	154	151.7	17	16.7	3		4		44	43.3	1		1		3		6	5.9	1		4										3		4		8	7.9			26	25.6	1		4		4		14	13.8				
Bay of Plenty	257	125.1	31	15.1	4		23	11.2	59	28.7	1		2		3		9	4.4	7	3.4	2		3					3		5	2.4	14	6.8	11	5.4	2		75	36.5	5	2.4	8	3.9	3		17	8.3					
Tairāwhiti	41	89.3	5	10.9			2		11	24.0			1				1				17	37.0							1		2		4		7	15.3			2		2		3									
Taranaki	204	189.4	29	26.9			3		12	11.1	2		2		3		3		2		6	5.6			1				4		2		1		39	36.2	1		3		6	5.6	12	11.1								
Hawke's Bay	305	198.9	28	18.3	3		7	4.6	64	41.7	1						6	3.9	6	3.9	9	5.9			2			12	7.8	5	3.3	8	5.2	10	6.5	2		36	23.5	2		5	3.3	1		31	20.2					
Whanganui	89	140.6	12	19.0			21	33.2	15	23.7	9	14.2	1				9	14.2	1		9	14.2	1						5	7.9	1		2		1		14	22.1			3		1		1		5	7.9				
MidCentral	196	119.0	33	20.0	2		41	24.9	27	16.4	20	12.1	1				11	6.7	1		3		1					3		1		14	8.5	7	4.2			42	25.5			7	4.2	1		8	4.9					
Hutt	298	210.0	18	12.7	1		31	21.8	41	28.9	1		1		1		4		2						1				4		3		7	4.9	4		49	34.5	4		17	12	2		1		24	16.9				
Capital and Coast	578	203.2	26	9.1	4		64	22.5	218	76.7	4		2		2		10	3.5	3				1		1				8	2.8	6	2.1	2		51	17.9	14	4.9			91	32.0	10	3.5	25	8.8	2		6	2.1	66	23.2
Wairarapa	50	125.8	18	45.3			3		13	32.7	2		1		1		4				1		1						2		6	15.1	1		23	57.9					1		1									
Nelson-Marlborough	198	145.9	31	22.8	1		7	5.2	53	39.1	1		1				1		2		4							6	4.4	1		34	25.1			67	49.4	7	5.2	5	3.7	3		14	10.3							
West Coast	54	166.8	19	58.7			10	30.9	21	64.9										1	5	15.4			1				1		5	15.4			10	30.9	1				1		14	43.2								
Canterbury	661	133.3	136	27.4	13	2.6	123	24.8	190	38.3	4		7	1.4	3		26	5.2	12	2.4	15	3.0	3		3		7	1.4	9	1.8	13	2.6	4		89	17.9	1		2		186	37.5	6	1.2	28	5.6	1		22	4.4	97	19.6
South Canterbury	145	262.2	57	103.1			6	10.8	17	30.7							2		3									2		9	16.3			9	16.3			37	66.9	1		4		3		12	21.7					
Otago	274	146.3	43	23.0			12	6.4	61	32.6	1						6	3.2	2		7	3.7	2		2			5	2.7	1		13	6.9			1		129	68.9	3		1		4		9	4.8					
Southland	162	146.2	57	51.4					36	32.5	1		1				5	4.5	1		2				1				5	4.5			22	19.9			43	38.8	2		1		1		10	9.0						
Total	6693	156.8	764	17.9	114	2.7	690	16.2	1662	38.9	91	2.1	39	0.9	23	0.5	315	7.4	76	1.8	121	2.8	27	0.6	40	0.9	12	0.3	122	2.9	78	1.8	25	0.6	433	10.1	152	3.6	9	0.2	1346	31.5	113	2.6	302	7.1	29	0.7	128	3.0	509	11.9

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 - 2008

Table 45. Number of notifiable disease cases by year and source, 1988 - 2008

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
AIDS	Notification	38	59	73	78	50	70	44	49	76	43	29	33	26	26	17	33	38	49	29	31	48
Campylobacteriosis	Notification	2796	4187	3850	4148	5144	8101	7714	7442	7635	8924	11572	8161	8418	10146	12494	14788	12215	13836	15873	12778	6693
Cholera	Notification	0	0	5	0	0	0	2	2	0	0	1	1	0	3	1	1	2	0	0	1	0
Creutzfeldt-Jakob Disease	Notification									2	1	0	2	3	1	3	6	8	3	5	8	5
Cryptosporidiosis	Notification									119	357	866	977	775	1208	975	817	611	889	737	924	764
Dengue Fever	Notification	1	3	2	3	1	1	0	6	23	14	26	9	7	93	70	55	8	11	19	114	114
Gastroenteritis	Notification									555	310	492	601	727	940	1087	1026	1363	557	937	622	690
Giardiasis	Notification									1235	2127	2183	1793	1688	1604	1547	1570	1514	1231	1214	1402	1662
<i>H. influenzae</i> type b	Notification									26	9	11	10	13	11	3	12	4	7	9	15	9
	Laboratory	107	121	143	148	166	118	75	14	24	8	10	9	10	8	3	9	3	6	8	13	4
Hepatitis A	Notification	176	134	150	224	288	257	179	338	311	347	145	119	107	61	106	70	49	51	123	42	91
Hepatitis B	Notification	370	309	242	227	221	145	133	125	104	138	88	94	79	56	67	61	38	59	62	73	39
Hepatitis C	Notification	20	13	11	25	89	91	79	88	59	92	102	96	80	58	53	40	24	29	35	32	23
Hydatid Disease	Notification	2	0	4	0	4	4	1	5	3	2	2	8	3	7	2	0	1	2	0	6	7
Influenza	Sentinel isolates	136	119	343	183	317	423	441	521	673	743	127	425	73	313	241	230	231	273	315	239	466
Legionellosis	Notification	62	17	20	14	11	24	66	33	36	63	43	51	61	46	49	77	62	85	52	64	76
	Laboratory			21	42	60	76	121	76	60	109	107	65	56	56	53	82	75	83	54	72	74
Leprosy	Notification	2	4	1	4	5	3	1	1	10	3	3	10	4	3	4	4	3	2	4	8	5
Leptospirosis	Notification	99	90	117	106	70	116	70	65	56	52	75	59	98	99	140	113	102	85	88	66	121
	Laboratory	192	182	229	176	218	234	168	183	140	84	117	76	114	113	181	149	113	109	67	42	72
Listeriosis	Notification	7	10	16	26	16	11	8	13	10	35	17	19	22	18	19	24	26	20	19	26	27
Malaria	Notification	25	27	32	39	29	58	34	41	107	65	73	46	111	54	61	46	33	32	30	25	40
Measles	Notification									68	1984	164	107	64	82	21	67	32	19	20	24	12
	Laboratory	5	5	7	355	53	4	4	15	25	1220	35	2	9	21	6	15	10	3	1	3	7
Meningococcal Disease	Notification	83	49	53	71	153	202	208	394	473	609	439	507	477	648	555	542	343	226	160	104	122
Mumps	Notification									76	90	85	56	50	56	64	56	45	61	47	73	78
	Laboratory	5	105	26	23	10	25	245	66	20	14	8	5	2	22	18	11	12	7	9	18	15
Paratyphoid Fever	Notification	2	0	1	1	2	10	7	24	20	25	18	17	24	32	16	18	28	25	23	23	25
Pertussis	Notification									1022	284	153	1046	4140	1334	1068	585	3485	2719	1120	332	433
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	137
Rubella	Notification									306	80	53	35	26	30	33	26	23	13	8	11	9
	Laboratory	95	114	168	81	27	244	104	1581	339	21	2	0	0	3	4	3	3	7	3	5	8
Salmonellosis	Notification	1128	1860	1619	1244	1239	1340	1522	1334	1141	1177	2069	2077	1795	2417	1880	1401	1081	1382	1335	1274	1346
Shigellosis	Notification	145	137	197	152	124	128	185	191	167	117	122	147	115	157	112	87	140	183	102	129	113
Tetanus	Notification	1	0	0	0	8	2	2	2	3	0	2	6	1	4	1	2	1	1	1	1	0
Tuberculosis	Notification	295	303	348	335	327	323	352	391	352	323	365	446	354	369	381	423	375	330	351	285	302
Typhoid Fever	Notification	15	17	7	9	11	14	24	21	15	16	31	10	21	27	23	20	31	30	42	48	29
VTEC/STEC Infection	Notification						3	3	6	7	13	48	64	67	76	73	104	89	92	87	100	128
Yersiniosis	Notification									330	488	546	503	396	429	472	436	407	383	453	502	509

PREVALENCE OF ANTIMICROBIAL RESISTANCE, 1994 - 2007

Table 46. Prevalence of antimicrobial resistance, 1994 – 2007

Pathogen	Antimicrobial	Percent resistance ^a (number tested)				
		1994-1996	1997-1999	2000-2002	2003-2005	2006-2007
<i>S. aureus</i> ^b	methicillin	2.8 (58283)	4.9 (136356)	7.2 (251448)	7.4 (219363)	7.9 (149622)
	erythromycin	8.0 (54870)	10.8 (134350)	12.0 (221394)	12.0 (164220)	11.6 (68204)
	co-trimoxazole	0.8 (32926)	0.6 (91391)	1.2 (149166)	2.0 (126840)	1.3 (59911)
	fluoroquinolone				7.3 (47116)	7.2 (21919)
	fusidic acid				19.7 (25609)	15.6 (25669)
	mupirocin	10.1 (9291)	18.2 (37173)	20.0 (91555)	16.7 (48423)	13.0 (55979)
Methicillin-resistant <i>S. aureus</i> ^c	erythromycin	31.5 (2249)	26.2 (1303)	40.0 (1409)	46.3 (1596)	37.7 (597)
	co-trimoxazole	8.6 (2249)	1.8 (1303)	6.7 (1409)	7.4 (1596)	2.5 (597)
	fluoroquinolone			40.0 (1409)	50.3 (1596)	44.2 (597)
	fusidic acid			7.0 (1409)	9.2 (1596)	9.7 (597)
	mupirocin	6.4 (2244)	6.0 (1303)	8.5 (1409)	9.5 (1596)	7.0 (597)
	rifampicin	0.3 (2249)	0.8 (1303)	0.7 (1409)	0.5 (1596)	0.8 (597)
<i>S. pneumoniae</i> , non-invasive disease ^b	penicillin ^d	9.5 (7076)	19.0 (10976)	26.5 (12859)	27.0 (15037)	32.3 (8598)
	erythromycin	8.3 (6832)	14.5 (11212)	18.6 (14404)	19.9 (10222)	22.6 (3782)
	tetracycline	10.5 (5019)	11.2 (5993)	15.4 (9476)	18.1 (6796)	20.3 (2931)
<i>S. pneumoniae</i> , invasive disease ^e	penicillin ^d	3.4 (989)	15.0 (1182)	15.3 (1494)	17.2 (1560)	19.2 (1077)
	erythromycin	2.6 (989)	5.7 (910)	7.2 (1494)	9.9 (1560)	12.4 (1077)
	cefotaxime ^d	1.8 (989)	7.3 (1182)	6.2 (1494)	11.5 (1560)	12.1 (1077)
<i>Enterococcus</i> spp ^b	amoxicillin ^f	1.5 (7373)	2.4 (17548)	3.0 (22566)	2.8 (26492)	3.5 (20789)
	vancomycin	0.2 (1141)	0.5 (4752)	0.3 (7505)	0.1 (9948)	1.0 (11410)
<i>E. coli</i> , urinary isolates ^b	amoxicillin ^f	55.9 (48706)	56.0 (138712)	54.4 (194799)	50.7 (117009)	49.1 (68330)
	co-amoxiclav	10.6 (42666)	12.2 (136326)	9.6 (194950)	8.5 (127750)	8.6 (64121)
	trimethoprim	19.6 (48098)	22.6 (111710)	22.3 (207837)	21.5 (138748)	21.7 (68288)
	nitrofurantoin	1.6 (48123)	1.7 (124362)	1.5 (206149)	1.4 (139738)	1.1 (69295)
	fluoroquinolone	0.5 (40032)	0.6 (118917)	1.6 (201382)	2.4 (135803)	4.9 (58480)
<i>E. coli</i> , non-urinary isolates ^{b,g}	co-amoxiclav	22.8 (7358)	21.8 (15948)	17.5 (11508)	15.2 (5059)	13.4 (2082)
	cefuroxime	3.2 (6309)	4.5 (6893)	4.2 (6576)	3.4 (3956)	4.5 (1693)
	ESBL positive					2.3 (1252)
	gentamicin	0.8 (10352)	0.9 (13789)	2.4 (10392)	2.6 (5290)	5.4 (2491)
	fluoroquinolone	0.5 (4717)	0.8 (10800)	2.4 (8821)	3.9 (4212)	8.1 (2446)
<i>P. aeruginosa</i> ^b	gentamicin	12.5 (9556)	9.5 (20542)	10.5 (25561)	6.1 (23148)	4.6 (13776)
	tobramycin	3.9 (6757)	2.8 (11033)	3.6 (10421)	3.3 (7616)	3.9 (5087)
	ceftazidime	5.0 (4832)	5.2 (11147)	3.9 (13253)	4.3 (16031)	3.0 (10711)
	fluoroquinolone	8.8 (8123)	9.9 (16551)	9.3 (22869)	8.3 (23761)	6.9 (13985)
<i>H. influenzae</i> , non-invasive disease ^b	amoxicillin ^f	12.0(12244)	19.3 (18852)	21.9 (28476)	19.9 (19529)	20.0 (14440)
	co-amoxiclav	1.1 (9839)	0.6 (15040)	0.8 (16333)	1.0 (14090)	1.8 (8199)
	co-trimoxazole	11.9 (6605)	14.7 (13964)	17.3 (22443)	18.2 (15939)	20.3 (6840)
	tetracycline	1.0 (7810)	1.5 (13007)	1.2 (15633)	0.8 (12783)	0.9 (6106)
<i>H. influenzae</i> , invasive disease ^e	amoxicillin ^f	21.8 (179)	11.5 (122)	19.2 (125)	31.6 (155)	33.9 (112)
	co-amoxiclav	3.4 (179)	1.6 (122)	1.6 (125)	9.7 (155)	18.8 (112)
	cefuroxime	3.4 (179)	4.9 (122)	0.8 (125)	9.7 (155)	18.8 (112)
<i>N. meningitidis</i> , invasive disease ^e	penicillin ^h	3.9 (659)	7.9 (431)	7.5 (796)	12.0 (551)	15.8 (152)
	rifampicin	0 (659)	0 (431)	0 (796)	0.2 (551)	0 (152)
<i>N. gonorrhoeae</i> ^{b,i}	penicillin	11.6 (879)	10.4 (1437)	7.1 (2782)	5.8 (4700)	7.7 (3996)
	fluoroquinolone	0.7 (864)	1.8 (1437)	6.3 (2349)	14.3 (4195)	16.8 (4479)
<i>M. tuberculosis</i> ^b	isoniazid	4.6 (438)	8.2 (757)	8.5 (811)	8.9 (872)	7.9 (483)
	rifampicin	0.7 (438)	1.3 (757)	0.7 (811)	1.0 (872)	0.6 (483)
	MDR ^j	0.7 (438)	0.9 (757)	0.5 (811)	1.0 (872)	0.6 (483)

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

^b collated clinical laboratory data

^c MRSA isolates tested by ESR

^d includes intermediate resistant and resistant isolates

^e invasive disease isolates tested by ESR

^f ampicillin used in laboratory testing

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

^h reduced susceptibility (MIC 0.12-0.5 mg/L)

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

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