MONTHLY SURVEILLANCE REPORT

This monthly report contains data and commentary on disease trends and events up to and including the end of April 2002 (see also forthcoming issues of the *New Zealand Public Health Report*). Its purpose is to provide timely information for use by designated officers and public health service staff. Data contained within is based on information recorded on EpiSurv by public health service staff up until 7th May, 2002. As this information may be updated over time, the results should be regarded as provisional only.

Note: where rates are quoted, "current rate" refers to the rate for the 12 month period ending April 2002 and "previous rate" refers to the rate for the 12 month period ending April 2001.

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1. Major surveillance issues

- *Cholera.* One imported case notified during April, following travel to Thailand and India.

- *Dengue fever*. Eight cases in April, linked to travel to Pacific Islands (Cook Islands and Samoa), Indonesia (Bali) and Australia.

- *Hepatitis A.* Nineteen cases of hepatitis A notified during April 2002, bringing the year to date total to 73. Outbreak investigation confirmed a strong association between the disease and the consumption of raw blueberries.

- *Leptospirosis.* Fourteen cases notified in April. An interim outbreak report has been received from Nelson-Marlborough Health District.

- *Meningococcal disease*. Thirty-four cases of meningococcal disease notified during April 2002, bringing the year to date total to 119. In comparison, 142 cases were notified during the first four months of 2001.

- *Ross River virus.* One confirmed case of Ross River virus infection notified in April, following recent travel to Australia.

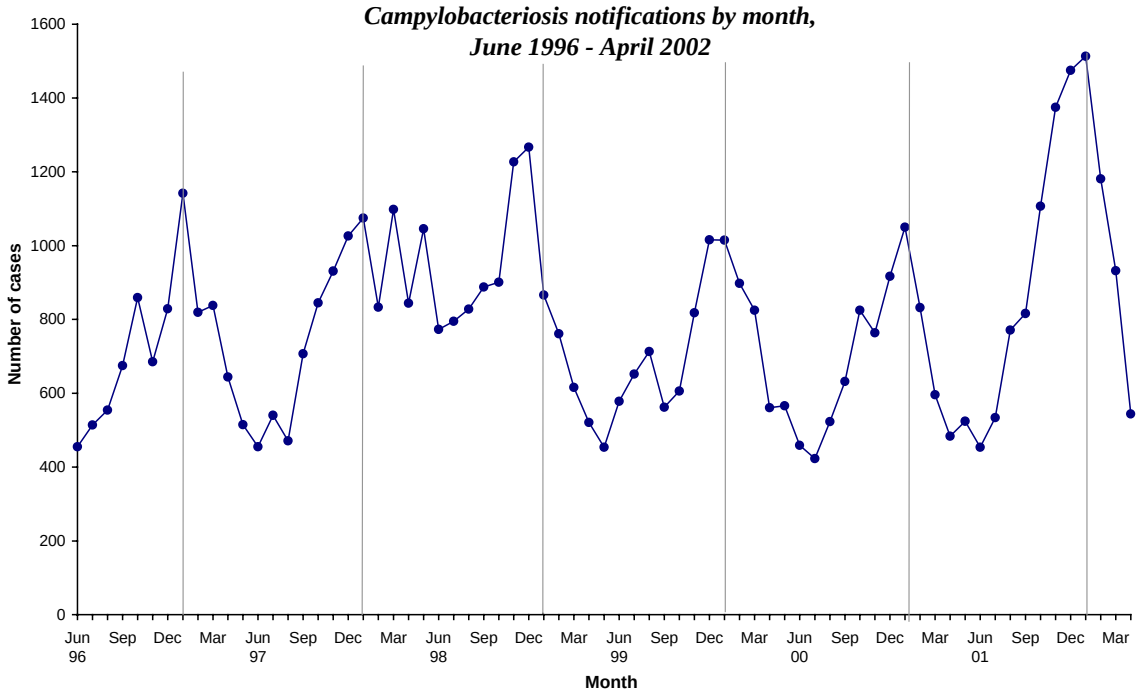
2. Key disease trends

Campylobacteriosis

There were 544 cases of campylobacteriosis notified during April 2002. In comparison, 935 cases were notified in March, 1180 during February and 1545 during January 2002. Of the 544 notified cases, the combined Auckland health districts reported the greatest number, with 188 cases, followed by Canterbury (79), Wellington (46), Otago (32), Hawkes Bay (25) and Southland (22) health districts. All remaining health districts reported fewer than 20 cases. Relative to the size of the population, the four health districts with the highest incidence of campylobacteriosis during April were Central Auckland, Southland, Canterbury and Otago, in that order.

The majority of cases (88.1%) were of European ethnicity. Of the 298 cases for which the information was recorded, there were 23 hospitalisations.

The following graph shows campylobacteriosis notifications by month since June 1996. It demonstrates the marked seasonality of campylobacteriosis incidence and the typical summer peak, which has been particularly pronounced this year.



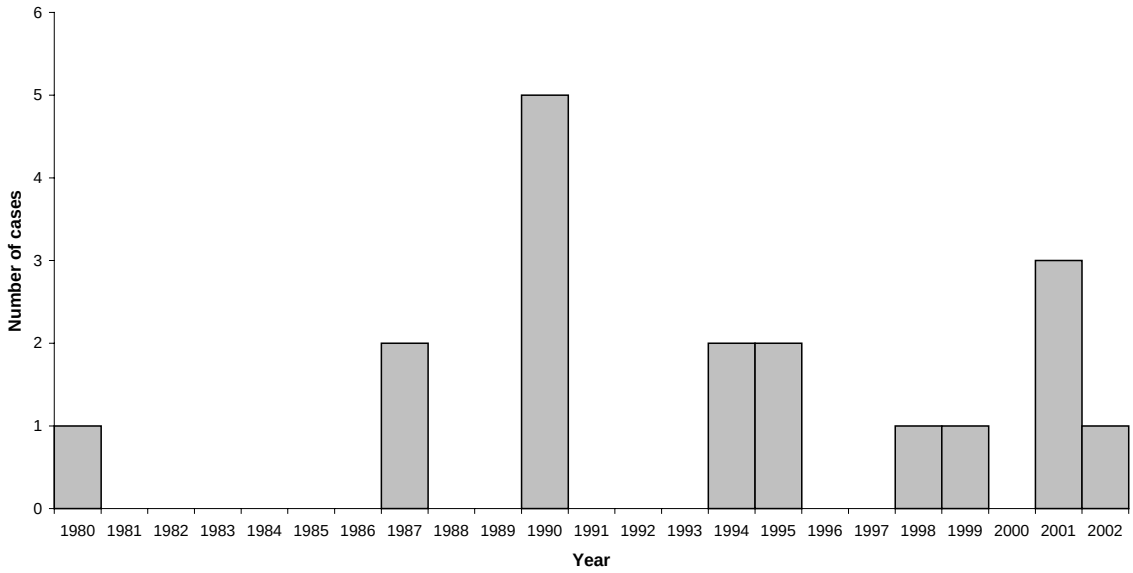
Risk factor information was infrequently recorded on the case report forms, with only 19.3% (105/544) of notifications in April including information on human contact and only 21.0% (114/544) including information on contact with farm animals. Of these, 16.2% (17/105) had a history of contact with other symptomatic people and 29.0% (33/114) reported exposure to farm animals during the incubation period for the disease.

Cholera

One confirmed case of infection with *Vibrio cholerae* O1, biotype El Tor, subtype Ogawa, was notified from North West Auckland in April. The case was a 63 year-old female New Zealander who had recently travelled to India and Thailand. She drank iced water in Bangkok, swam in an Indian hotel swimming pool and had contact with cow dung in New Delhi. This brings the total number of cases of cholera notified since 1980 to 18, six of whom have been notified in the last five years.

The following graph shows the number of notified cases of cholera each year since 1980.

Cholera notifications by year, 1980 - 2002



Dengue fever

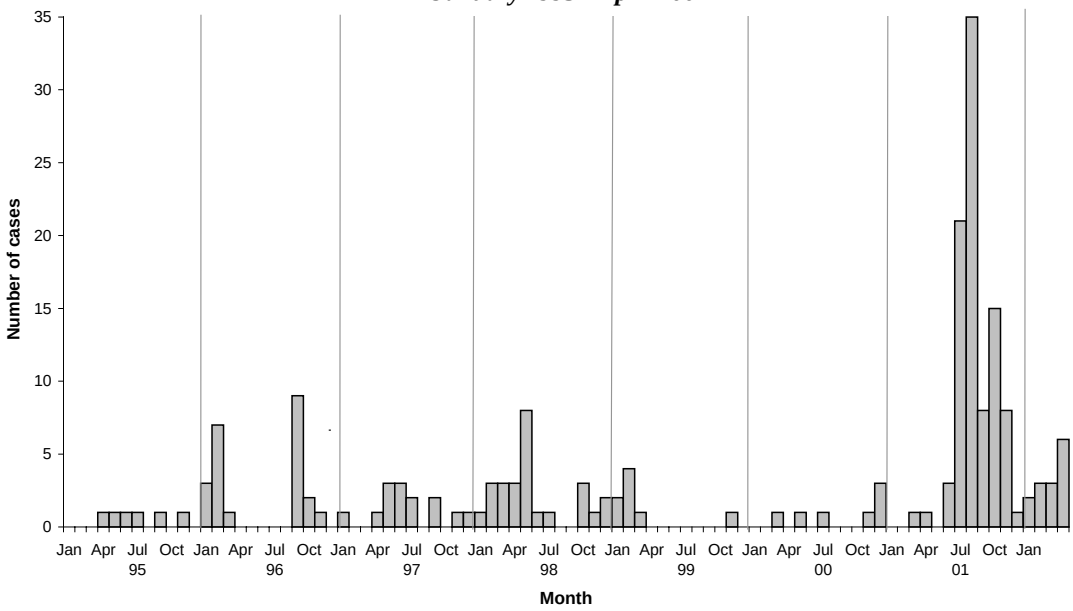
Six cases of dengue fever were notified in April 2002. This is the largest number of monthly notifications since the beginning of the year and brings the year to date total to 14. Five of the April cases have been laboratory confirmed.

The cases, three males and three females, ranged in age from 16 to 53 years. Two cases were hospitalised.

Five cases were New Zealand residents who had travelled recently overseas to Rarotonga (two cases), Bali, Samoa and Australia (one case each). The remaining case was a visitor to New Zealand from Bangkok.

The following graph shows the number of dengue notifications by month since 1995.

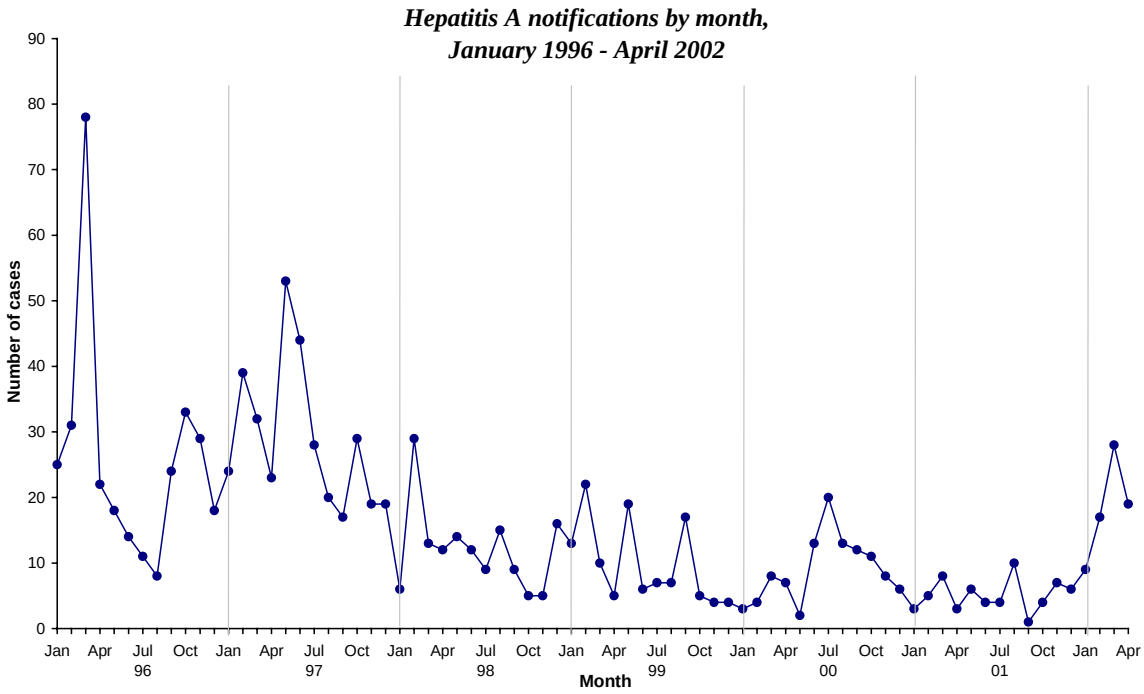
Dengue fever notifications by month, January 1995 - April 2002



Hepatitis A

A total of 19 cases of hepatitis A was notified during April 2002, compared to three cases notified during the same month last year. This brings the year to date total to 73 cases.

The following graph shows the number of cases of hepatitis A notified each month since January 1996.



Of the 19 April notifications, thirteen were notified from the combined Auckland health districts, three from Waikato, two from Hawkes Bay and one from Canterbury health districts.

The following table shows the geographic distribution of the 73 cases notified this year to date.

Notified cases of hepatitis A by health district, January 2002 –April 2002

Health District	**NL**	**NW**	**CA**	**SA**	**WK**	**HB**	**RO**	**WN**	**HU**	**CB**	**SO**
Number of cases	1	13	19	14	15	2	1	2	4	1	1

Of the 17 April cases for whom ethnicity was recorded, ten were European, three were Pacific People, three were of 'Other' ethnicity and one case was Maori. Ages of notified cases ranged from 0 to 88 years. Five cases were hospitalised (31% of the 16 cases for whom the information was recorded).

Information on risk factors was sparsely recorded for April notifications. Three cases reported recent overseas travel: two to Surfers Paradise, Australia, and one to Indonesia. Two cases reported household contact and one case recorded other contact with a previously confirmed case.

A national investigation of the increased number of hepatitis A cases commenced in March, following recognition of a possible dispersed common source of infection among Auckland cases, and has included epidemiological and environmental components. Cases were eligible for inclusion in the epidemiologic investigation if notified with hepatitis A between 1 January and 10 April 2002 and aged over 15 years. Controls were matched to cases by exposure period and region of residence,

using a 2:1 ratio. Study participants were interviewed using a questionnaire which included questions about foods consumed, overseas travel, and potential routes of faecal-oral transmission.

The case-control study included 39 cases and 79 controls. Cases were from Northland (one case), Auckland (27 cases), Waikato (five cases), Rotorua (one case), Wellington (four cases) and Southland (one case). The peak age group among cases was among 16-24 year olds (11 cases, 28.2%), and there were slightly more females (23, 59.0%) than males (16, 41.0%). Analysis of the data showed that illness was significantly associated with consumption of raw blueberries (odds ratio = 7.60; 95% confidence interval: 2.64 - 22.41), and was not confounded by age or other factors. Of the 39 cases, 19 (55.9%) had a history of eating raw blueberries. Illness was not significantly associated with any other exposures.

Influenza

Sentinel surveillance for the 2002 influenza season commenced on Monday 29 April.

Leptospirosis

A total of 14 cases of leptospirosis was notified in April 2002, compared to seven cases during the same period last year. Cases were reported from Nelson-Marlborough (four cases), Hawkes Bay (two), North West Auckland (two), and one case each from Northland, Otago, South Canterbury, Tauranga, Wanganui and West Coast health districts. Three of the four cases notified from the Nelson-Marlborough Health District[1] worked at Alliance Freezing Works in Nelson. Neither place of work nor occupation was recorded for the fourth case.

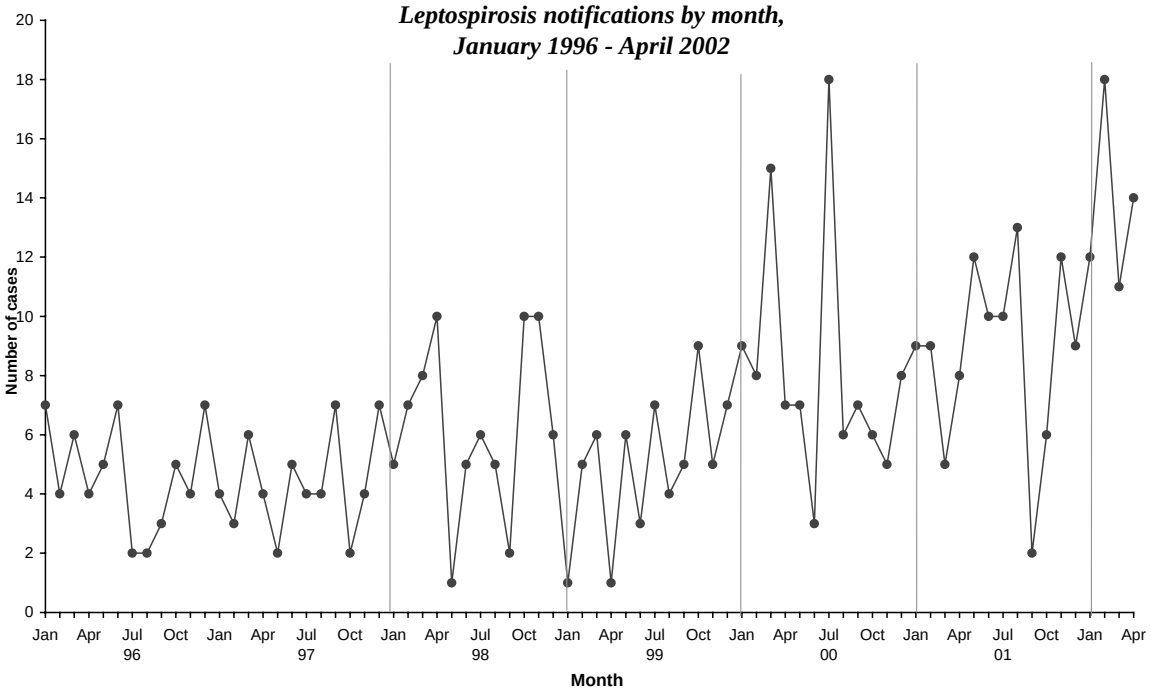
Occupation was recorded for 12 of the 14 cases. Seven cases worked in the meat processing industry and three were farmers. One retired case reported farm contact with dogs, rats and opossums and one beneficiary reported exposure to farm animals through a friend's dairy farm. One of the remaining two cases, for whom occupation was unknown, indicated contact with farm animals. No cases reported recent overseas travel.

Cases ranged in age from 24 days to 55 years. Eleven cases were male and three were female. There were five hospitalisations among the eight cases for whom this information was recorded.

Of the eight cases for whom the serovar was identified and recorded in EpiSurv, three were *Leptospira borgpetersenii* sv hardjo, two were *L. interrogans* sv pomona, two were *L. borgpetersenii sv* ballum and one was *L. interrogans sv* copenhageni.

[1] An 'interim' outbreak report has been received from Nelson-Marlborough Health District. Details of this outbreak will be reported when further information has become available.

The following graph shows leptospirosis notifications by month since January 1996.



Measles

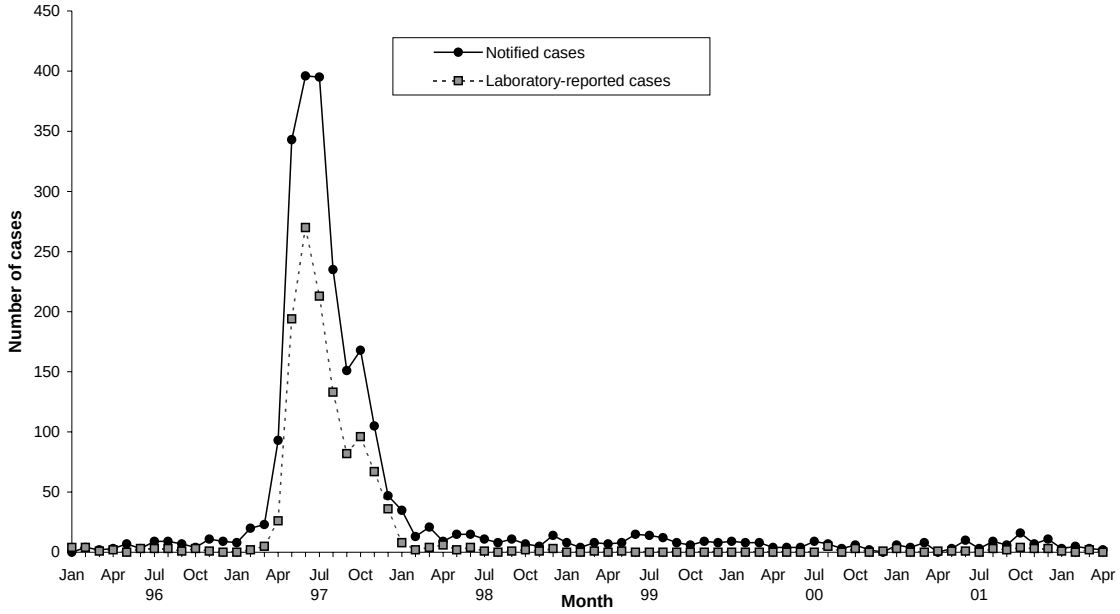
Two ‘probable’ cases of measles were notified during April 2002, bringing the year to date total to 13. One European male aged five years was reported from the Central Auckland Health District, and one three year-old male of ‘Other’ ethnicity was reported from the Waikato Health District. Neither case was laboratory confirmed. The former case received the first two doses of the MMR vaccine, whereas the latter case was unimmunised.

It was not known if either of the notified cases had had contact with another case in the previous three weeks, or whether they attended school, pre-school or childcare. Neither case was overseas during the incubation period.

No cases of measles were laboratory-reported during April.

The following graph shows the number of notified and laboratory-reported cases each month since January 1996.

Measles laboratory-reported and notified cases by month, January 1996 - April 2002



The last measles epidemic began in March 1997 when 23 cases were notified. Of these, five were laboratory confirmed (see the section on measles from the 1997 Annual Surveillance Summary). The timing of future measles epidemics is difficult to predict because of a lack of reliable immunisation coverage data and the unknown impact of measles catch-up immunisation campaigns.

Local public health services should continue efforts to improve measles surveillance by encouraging case notification on suspicion and laboratory investigation of such cases. It is also important to record risk factor information and immunisation status for cases, particularly those that are laboratory confirmed.

Meningococcal disease

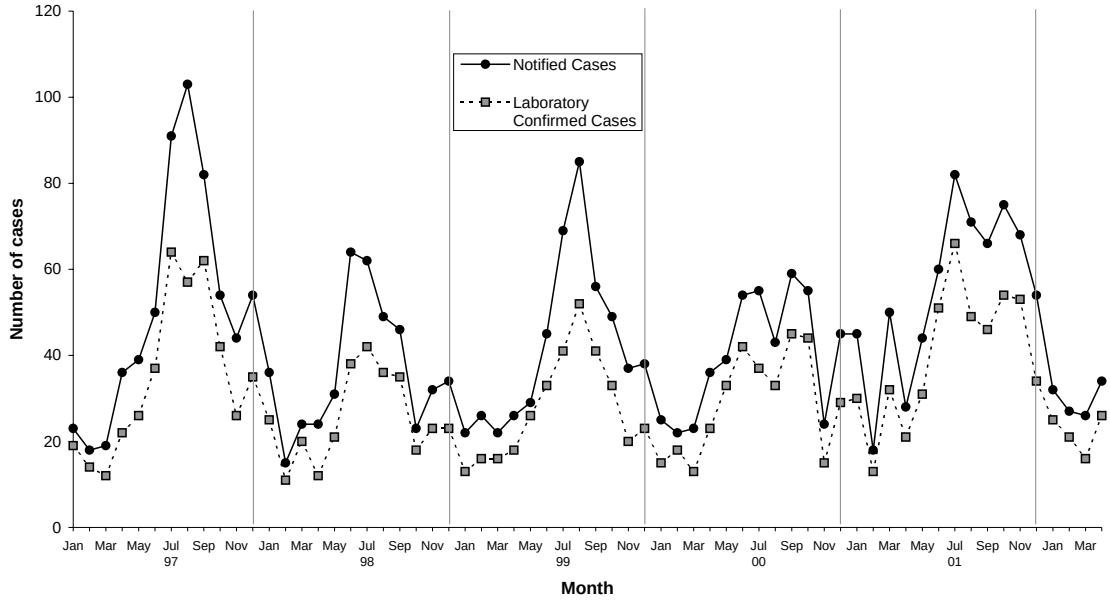
A total of 34 cases of meningococcal disease was notified during April 2002, bringing the year to date total to 119. In contrast, 142 cases had been notified this time last year, with 28 cases for April 2001.

Of the 34 cases notified during April this year, 26 (76.5%) had been laboratory confirmed at the time of this report.

One of the cases notified this month was fatal; a nine month old male from the South Auckland Health District. This brings the number of fatal cases this year to five.

Note: the data plotted below was derived using the earliest available data for the case (i.e. onset or hospitalisation date, if available, rather than report date).

Meningococcal notified and laboratory-confirmed cases by month, January 1997 - April 2002



Pertussis

During April 2002, 51 cases of pertussis were notified, compared to 58 cases in March and 96 cases in February 2002. Of these, 56.9% (29/51) were either confirmed by isolation of *Bordetella pertussis* or were recorded as having had contact with a confirmed case of the disease. A further seven cases (13.7%) were recorded as 'probable' cases. Seven hospitalisations (or 22.6% of cases for whom this information was recorded) were reported.

Thirty-four cases (or 87.2% of cases for whom ethnicity was recorded) were European. There were also four Maori cases, and one case of 'Other' ethnicity. The majority (60.8%) of cases were aged nine years or less.

There were two outbreaks of pertussis reported in April[2], both from West Coast Health District. Together they accounted for a total of five cases.

The following table shows the number of doses of pertussis vaccine given to April 2002 cases in each relevant age group.

[2] Final report has not yet been received.

Age group of pertussis notifications and vaccination received, April 2002.

Age group	Total Cases	Immunisation status[3]						
		One dose	Two doses	Three doses	Four doses	Immunised (no dose info)	Not immunised	Unknown status
0-6 weeks	2	(0)	(0)	(0)	(0)	0	1	1
6 wks-2 mths	2	0	(0)	(0)	(0)	0	1	1
3-4 months	0	0	0	(0)	(0)	0	0	0
5-14 months	4	0	0	2	(0)	0	1	1
15 mths-4 yrs	8	0	0	1	3	0	2	2
5+ years	35	0	1	9	9	3	1	12
Total	**51**	**0**	**1**	**12**	**12**	**3**	**6**	**17**

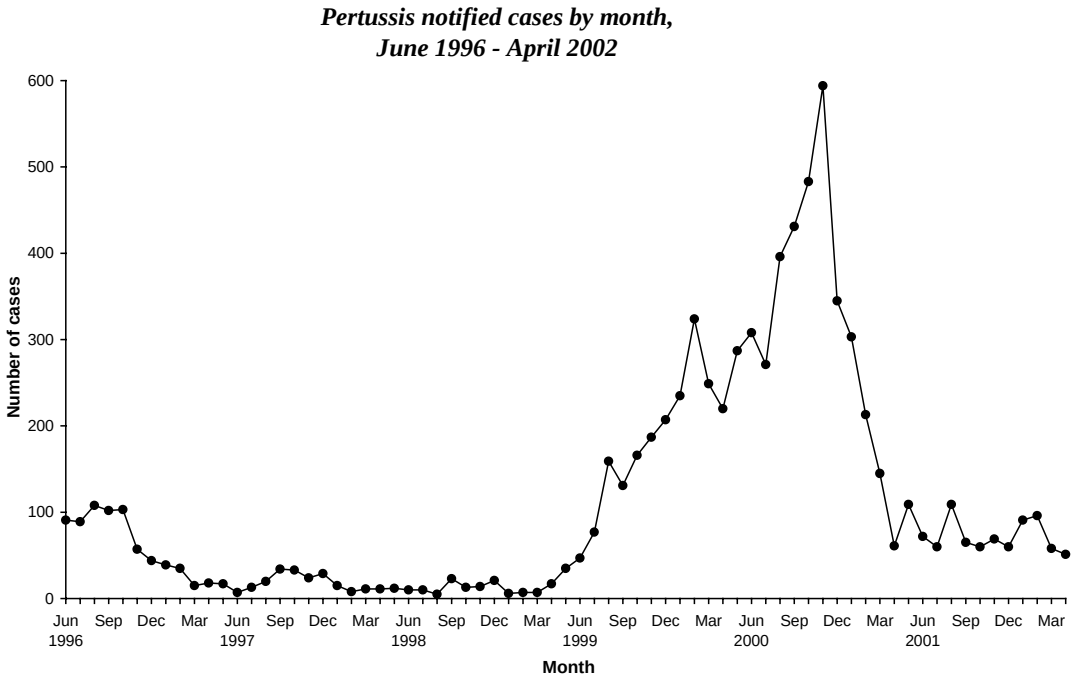
[1] Bracketed numbers indicate cases ineligible for vaccination

A total of 6757 cases of pertussis have been notified since the current epidemic began in June 1999. Of these, 3190 (47.2%) cases have been laboratory confirmed by isolation and a further 13% were epidemiologically linked to a confirmed case. There have been 506 hospitalisations (8.1% of cases for whom this information was recorded) and one death reported.

Incidence is still well above the inter-epidemic level of about 15 cases a month. April notifications were highest in Canterbury (14 cases), West Coast (8), South Canterbury (6), Wellington (6), Waikato (4) and North West Auckland (4) health districts.[4]

The following graph shows the number of notified cases each month since June 1996, when pertussis became notifiable**.**

[4] Since June 1999, the greatest number of notifications has been from Canterbury Health District (23% of all notifications); followed by Nelson-Marlborough and Waikato health districts, each accounting for 12% of notifications.



Ross River virus infection

One confirmed case of Ross River virus infection was notified in April from Central Auckland Health District. The case was a 65 year-old European male who had recently travelled to Australia. This brings the total number of cases reported since the disease became notifiable in the late 1970s to ten. The other nine cases were notified in 1980, 1997, 1998, 1999, 2000 (two cases), and 2001 (three cases).

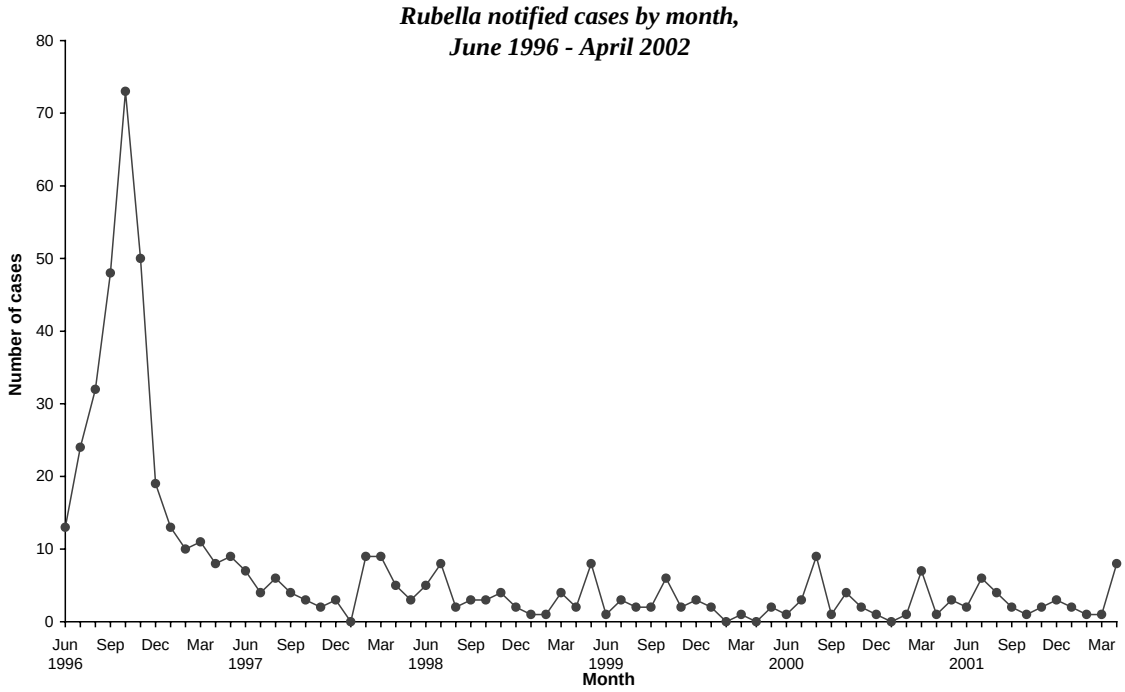
Rubella

Eight cases of rubella were notified during April 2002 from Wairarapa (three cases), Hawkes Bay (two), West Coast (one), Northland (one) and Hutt (one) health districts. Six cases were European, one was Maori and one was of unknown ethnicity. A 19 month-old European female from Lower Hutt, has been laboratory confirmed. She was immunised with a single dose of MMR vaccine at 15 months of age. One other case - a one year-old European male notified by Northland Health District - reported contact with a confirmed case of rubella. No cases were hospitalised.

There were no laboratory-reported [5] cases of rubella during April 2002.

The following graph illustrates the number of cases of rubella notified each month since June 1996.

[5] Laboratory reporting of cases is based on specimen date as opposed to notification date.



The table below illustrates the associated risk factors for notified cases.

Rubella notifications by age, immunisation status, and recorded risk factors, April 2002.

Health District	Lab-confirmed	Age	Contact with a case	Overseas during incubation	Immunisation status	Number of doses of MMR vaccine
Hawkes Bay	Not done	2y	No	No	No	0
Hawkes Bay	No	1y	No	No	Yes	1
Northland	Not done	12m	Yes	No	No	0
West Coast	Not done	11m	Unknown	No	No	0
Hutt	Yes	19m	Unknown	No	Yes	1
Wairarapa	Awaiting results	12m	Unknown	Unknown	Unknown	0
Wairarapa	Not done	6m	Unknown	Unknown	Unknown	0
Wairarapa	Awaiting results	3m	Unknown	Unknown	No	0

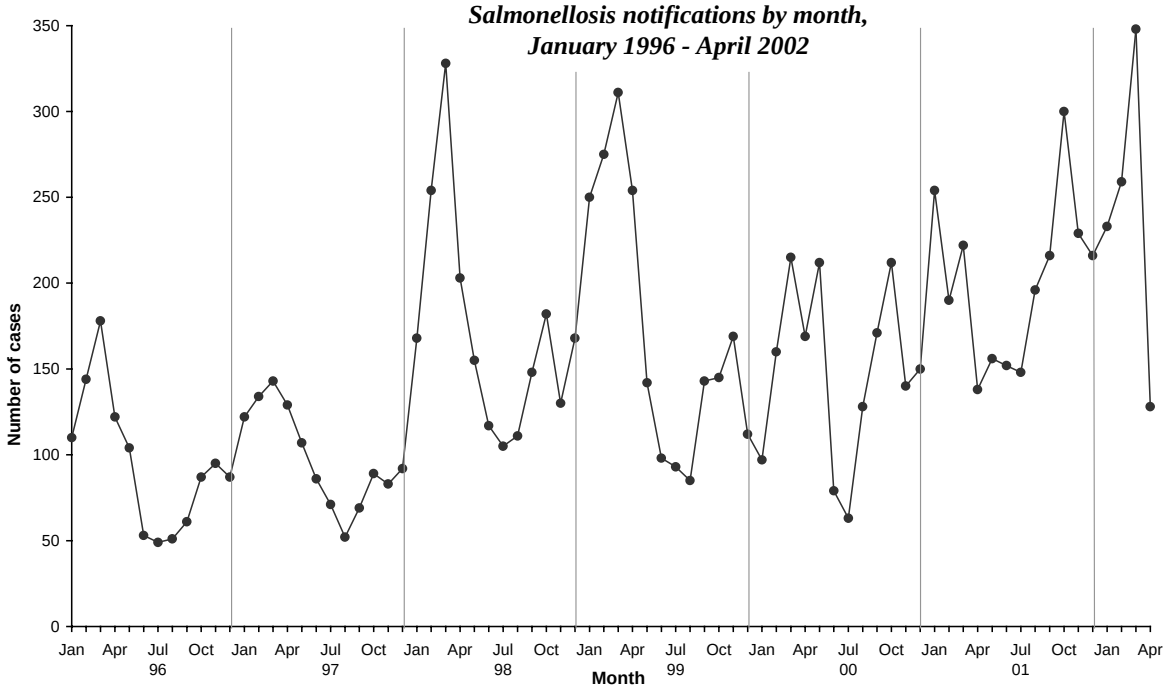
Salmonellosis

There were 128 salmonellosis notifications in April 2002, compared with 138 cases notified in the same month last year. This follows the highest monthly total ever recorded for salmonellosis (348 cases in March 2002).

Rates higher than the national rate of 69.1 per 100 000 were seen in Nelson Marlborough (156.9), South Canterbury (115.2), Otago (104.1), West Coast (98.9), Hawkes Bay (97.5), Southland (92.6), Taupo (82.5), Wellington (78.8), Wairarapa (75.8), and Wanganui (73.6).

Four completed reports from salmonellosis outbreaks were received in April, two from Auckland health districts and one each from Wellington and Nelson, relating to two outbreaks in February and two outbreaks in March. The mode of transmission was known for three of these four outbreaks, and all were foodborne. Four interim outbreaks were also reported during April from Auckland (3 outbreaks with a total of 7 cases) and Otago (one outbreak with two cases) health districts.

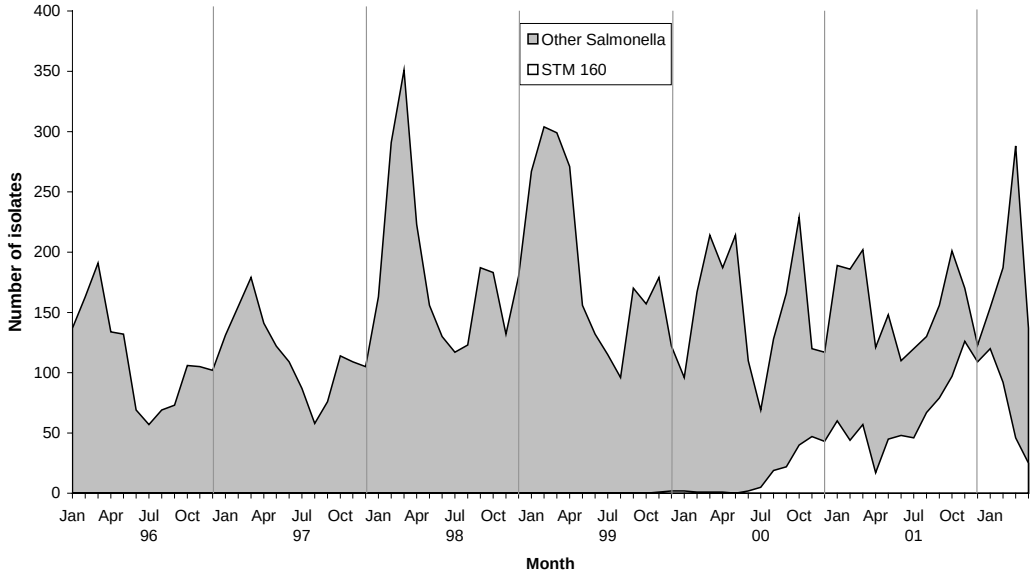
The following graph shows the number of salmonellosis notifications each month since January 1996.



The ESR Enteric Reference Laboratory (ERL) identified 162 human cases from *Salmonella* isolates received during April 2002. The predominant types identified were *S.* Typhimurium phage 1 (STM 1) (27 cases), *S.* Typhimurium 160 (STM 160) (25), *S.* Enteritidis phage type 9a (19) and *S.* Typhimurium 156 (11). The contribution of STM 160 to the total *Salmonella* burden appears to be declining. This follows a 15-month period during which this type has increasingly dominated salmonellosis in New Zealand.

The following graph illustrates the contribution of STM 160 to the total *Salmonella* burden, since January 1996.

Salmonella Typhimurium phage type 160 and Other Salmonella, January 1996 - April 2002



The following table shows the percentage of total laboratory isolates of each major serotype, identified each month since the beginning of the year. It illustrates the fluctuation in the relative makeup of Salmonella over the past four months.

***Salmonella* serotype**	Jan	Feb	Mar	Apr
Brandenburg	1.1%	2.5%	2.1%	2.5%
Enteritidis phage type 4	0.4%	0.0%	0.3%	0.6%
Enteritidis phage type 9a	3.6%	3.9%	4.8%	11.7%
Infantis	5.8%	6.5%	4.8%	2.5%
Typhimurium phage type 1	4.4%	6.1%	39.8%	16.7%
Typhimurium phage type 101	0.4%	2.2%	2.4%	3.7%
Typhimurium phage type 135	15.3%	10.4%	4.8%	4.9%
Typhimurium phage type 156	1.1%	5.0%	4.2%	6.8%
Typhimurium phage type 160	43.8%	33.0%	13.8%	15.4%
Typhimurium phage type 23	0.4%	1.4%	1.2%	0.6%
Typhimurium phage type 9	1.1%	0.4%	1.2%	1.9%
Other	22.6%	28.7%	20.7%	32.7%
Total	100.0%	100.0%	100.0%	100.0%

3. Deaths from notifiable diseases (excluding AIDS)

One death from notifiable diseases was reported in April 2002.

Disease	No. of deaths reported Apr 2002	Cumulative no. of deaths reported in 2002
Campylobacteriosis	0	1
Legionellosis	0	1
Meningococcal disease	1	5
Tuberculosis disease	0	1
Total	**1**	**8**

4. Outbreaks

Outbreaks, for which ESR received sufficient information to report on during April 2002, are summarised in the table below and individually listed in the following pages.

Summary of April 2002 recorded outbreaks:

Organism/Toxin/Illness	Number of outbreaks	Total number of cases
Bacillus cereus	2	6
Bordetella pertussis	2	5
Campylobacter	2	13
Clostridium perfringens	2	11
Cryptosporidium	1	4
Gastroenteritis	12	57
Hepatitis A	1	2
Leptospira	1	2
Mycobacterium tuberculosis	1	2
Norwalk-like virus	4	70
Salmonella	4	56
Unknown Illness	1	2
Yersinia enterocolitica	1	2
Total	**34**	**232**

An additional 14 preliminary outbreak reports were received during April 2002 from Auckland (gastroenteritis, salmonellosis and yersiniosis), Nelson (leptospirosis) and Otago (gastroenteritis and salmonellosis) health districts. A national hepatitis A report is also being completed. These outbreaks will be reported in the monthly table, when further information has become available.

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Completed outbreak reports received by ESR during April 2002:

Suspected pathogen/ toxin/illness	Public Health Service	Month of OB	Duration of OB (days)	Cases			Est. no. exposed	Setting	Suspected mode of transmission	Probable factors contributing to OB
				Lab Conf	Oth Conf	Prob.				
Bacillus cereus	Auckland	Feb02	1	0	0	2	3	Home	Foodborne (fried rice)	Inadequate reheating of previously cooked food; inadequate cooling or refrigeration
Bacillus cereus	Canterbury	Mar02	2	3	0	1	4	Supermarket / delicatessen	Foodborne (precooked chicken)	Unknown
Bordetella pertussis	West Coast	Mar02-Apr02	12	2	0	0	Unk	Home; school	Person to person	Exposure to infected people
Bordetella pertussis	West Coast	Apr02	1	3	0	0	unk	Home; school	Person to person	Exposure to infected people
Campylobacter	Canterbury	Jan02-Feb02	46	9	0	0	N / A	Sushi outlet	Foodborne (chicken sushi)	Inadequate cooling or refrigeration; inadequate floor space ; cross contamination
Campylobacter	Canterbury	Jan02 - Feb02	22	4	0	0	N / A	Restaurant / café; sushi outlet; hospital (acute care)	Foodborne (chicken sushi)	Inadequate cooling or refrigeration; cross contamination

Outbreaks cont.

Suspected pathogen/ toxin/illness	Public Health Service	Month of OB	Duration of OB (days)	Lab Conf	Cases Oth Conf	Prob.	Est. no. exposed	Setting	Suspected mode of transmission	Probable factors contributing to OB
Clostridium perfringens	Auckland	Feb02	2	2	0	3	10	Restaurant / cafe	Foodborne (crumbed chicken)	Unknown
Clostridium perfringens	Wellington	Mar02	1	0	6	0	10	Restaurant / cafe	Foodborne	Unknown
Cryptosporidium parvum	West Coast	Feb02-Mar02	32	1	3	0	5	Home	Person to person	Exposure to infected people
Gastroenteritis	Auckland	Oct01	2	0	0	3	3	Restaurant / cafe	Foodborne	Unknown
Gastroenteritis	Auckland	Nov01	2	0	0	2	7	Home; takeaways	Foodborne (fish and chips)	Unknown
Gastroenteritis	Auckland	Dec01	1	0	0	2	2	Home	Foodborne (courgette)	Chemical contamination (natural toxin)
Gastroenteritis	Auckland	Dec01	1	0	0	2	2	Unknown	Unknown	Unknown
Gastroenteritis	Auckland	Jan02	1	0	0	2	2	Restaurant / cafe	Foodborne (fried chicken)	Inadequate cooling or refrigeration
Gastroenteritis	Auckland	Jan02	1	0	0	2	2	Unknown	Foodborne (smoked salmon club sandwiches)	Inadequate cooling or refrigeration
Gastroenteritis	Auckland	Mar02	2	0	0	3	3	Home	Unknown	Unknown
Gastroenteritis	Auckland	Apr02	2	0	0	3	Unk	Supermarket / delicatessen	Unknown	Unknown

Outbreaks cont.

Suspected pathogen/ toxin/illness	Public Health Service	Month of OB	Duration of OB (days)	Lab Conf	Cases Oth Conf	Prob.	Est. no. exposed	Setting	Suspected mode of transmission	Probable factors contributing to OB
Gastroenteritis	Waikato	Mar02	1	0	5	0	120	Home	Foodborne (fettucine - chicken, pasta, cheese, creamy sauce)	Inadequate reheating of cooked food; undercooking; inadequate cooling or refrigeration; contamination from an infected food handler; improper storage prior to preparation
Gastroenteritis	Waikato	Mar02-Apr02	6	0	17	0	unk	Hospital (acute care)	Person to person; environmental	Exposure to infected people; exposure to contaminated environment(s)
Gastroenteritis	Nelson	Apr02	4	3	0	8	22	Caterers; golf club	Foodborne; person to person	Contamination from an infected food handler
Gastroenteritis	Nelson	Apr02	1	2	0	3	7	Childs play area / food outlet	Unknown	Unknown
Hepatitis A	Auckland	Jan02	6	2	0	0	2	Unknown	Unknown	Unknown
Leptospira	Manawatu	Jan02	15	2	0	0	unk	Meat processing workplace	Zoonotic	Exposure to infected animals or animal products; occupational workplace exposure

Outbreaks cont.

Suspected pathogen/ toxin/illness	Public Health Service	Month of OB	Duration of OB (days)	Lab Conf	Cases Oth Conf	Prob.	Est. no. exposed	Setting	Suspected mode of transmission	Probable factors contributing to OB
Mycobacterium tuberculosis	Wanganui	Sept01-Dec01	121	0	0	2	6	Home	Person to person	Exposure to infected people
Norwalk-like virus	Auckland	Mar02	1	3	0	2	5	Home	Foodborne (BBQ sausages)	Unknown
Norwalk-like virus	Eastern BOP	Aug01	2	2	0	2	13	Restaurant/cafe; hotel/motel	Foodborne (oysters); person to person	Sharing common hand towels; contamination from an infected food handler
Norwalk-like virus	Wanganui	Mar02	2	3	6	0	11	Restaurant / cafe	Person to person	Exposure to infected people
Norwalk-like virus	Wellington	Mar02	4	3	0	49	187	Camp	Foodborne; person to person	Contamintion from an infected food handler; food handler also caring for sick people
Salmonella	Auckland	Feb02	8	24	0	1	25	Restaurant / café; bakery	Foodborne (potato topped savouries)	Inadequate reheating of previously cooked food; improper hot holding; contamination from an infected food handler

Outbreaks cont.

Suspected pathogen/ toxin/illness	Public Health Service	Month of OB	Duration of OB (days)	Lab Conf	Cases Oth Conf	Prob.	Est. no. exposed	Setting	Suspected mode of transmission	Probable factors contributing to OB
Salmonella	Auckland	Feb02	1	2	0	0	2	Takeaways	Foodborne (ham roll)	Unknown
Salmonella	Wellington	Mar02	2	2	0	2	4	Unknown	Foodborne	Unknown
Salmonella	Nelson	Mar02	7	13	0	12	Unk	Camp	Unknown	Unknown
Unknown Illness (originally suspected Leptospirosis)	Canterbury	Jan02	8	2	0	0	2	Swimming hole in river downstream of dairy farms (near Tauranga)	Environmental	Exposure to infected animals or animal products; exposure to contaminated environment(s); exposure to untreated recreational water
Yersinia enterocolitica	Manawatu	Mar02	3	2	0	0	4	Home; child care centre	Person to person	Exposure to infected people

5. National surveillance data and trends

Disease[1]	Current year - 2002 [2]			Previous year - 2001		
	Apr 2002 cases	Cumulative total since 1 January	Current rate[3]	Apr 2001 cases	Cumulative total since 1 January	Previous rate[3]
AIDS	3	8	0.7	0	7	0.6
Campylobacteriosis	544	4204	303.9	485	2995	217.0
Cholera	1	1	0.1	0	0	0
Creutzfeldt-Jakob disease	0	0	0	1	1	0.1
Cryptosporidiosis	17	117	25.6	120	368	28.4
Dengue fever	6	14	2.8	1	2	0.2
Gastroenteritis[4]	72	299	26.1	58	267	20.2
Giardiasis	131	556	44.5	118	495	43.1
H. influenzae type b disease	0	0	0.2	2	4	0.3
Hepatitis A	19	73	3.1	3	19	2.8
Hepatitis B (acute)[5]	5	23	1.5	4	23	2.0
Hepatitis C (acute)[5]	5	18	1.6	4	17	2.0
Hydatid disease	0	0	0.2	0	1	0.1
Influenza[6]	16	25	18.0	4	17	7.0
Lead absorption	4	27	2.9	13	49	3.5
Legionellosis[6]	3	14	1.1	10	29	2.0
Leprosy	0	0	0.1	0	1	0.1
Leptospirosis	14	53	3.4	7	30	2.4
Listeriosis	1	7	0.5	0	5	0.4
Malaria	6	27	1.5	3	24	3.1
Measles	2	13	2.1	0	18	1.4
Meningococcal disease[7]	36	120	16.8	36	141	13.8
Mumps	8	22	1.7	3	16	1.3
Paratyphoid	1	3	0.8	0	5	0.7
Pertussis	51	293	23.9	61	733	102.9
Rheumatic fever	1	38	2.8	15	49	4.7
Rubella	8	12	0.9	1	9	0.9
Salmonellosis	128	968	69.1	138	804	52.4
Shigellosis	13	45	3.6	8	67	3.8
Tetanus	0	0	0.1	1	1	0.1
Tuberculosis	26	115	9.9	22	123	9.7
Typhoid	2	13	0.7	4	14	0.7
VTEC / STEC infection	9	28	2.1	6	25	1.6
Yersiniosis	33	192	12.4	29	159	10.4

Notes: [1] Other notifiable infectious diseases reported in April: Ross river virus infection
[2] These data are provisional
[3] Rate is based on the cumulative total for the current year (12 months up to and including April 2002) or the previous year (12 months up to and including April 2001), expressed as cases per 100 000
[4] Cases of gastroenteritis from a common source or foodborne intoxication eg, staphylococcal intoxication or toxic shellfish poisoning
[5] Only acute cases of this disease are currently notifiable
[6] Surveillance data based on laboratory-reported cases only
[7] These totals and rates are based on the EpiSurv report date as opposed to the earliest available date used in the meningococcal disease section

Surveillance data by health district - April 2002

Cases this month | Current rate[1]

Disease	Cases for April 2002,[2] and current rate[1,2] by health district[3,4]																						
	Northland	NW Auck	Central Auck	South Auck	Waikato	Tauranga	Eastern BoP	Gisborne	Rotorua	Taupo	Taranaki	Ruapehu	Hawkes Bay	Wanganui	Manawatu	Wairarapa	Wellington	Hutt	Nelson-Marl	West Coast	Canterbury	South Cant	Otago	Southland
AIDS[3]	0			2	1	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0
	0			1.7	0.3	1.5	0	0	0	0	0	0	0	0	0	0	0.3		0	0	0.7	0	0	0
Campylobacteriosis	19	64	79	45	30	6	3	6	10	1	13	0	25	6	13	3	46	15	10	2	79	15	32	22
	184.8	335.8	336.1	245.5	355.1	271.0	185.5	193.4	265.1	358.6	326.7	168.0	314.2	253.5	220.8	258.7	463.2	386.0	143.8	237.4	310.0	367.3	279.9	259.2
Cholera	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0.5	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	0	2	0	1	1	0	0	0	1	0	0	0	0	0	2	0	2	0	3	1	1	1	1	1
	17.8	12.3	10.3	10.9	57.7	20.9	16.3	13.7	37.2	69.8	20.4	14.0	41.1	39.4	31.9	18.3	32.3	12.9	11.4	33.0	14.9	65.3	43.3	63.9
Dengue fever	0	0	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2.9	3.5	6.8	4.5	1.6	2.3	0	0	1.6	12.7	1.0	0	0	0	2.7	0	2.4	3.0	0.8	0	2.5	1.3	1.2	1.9
Gastroenteritis	0	8	15	1	0	0	0	0	0	0	2	0	0	0	2	3	2	1	9	1	20	1	5	2
	13.6	21.6	31.5	9.3	4.9	6.2	10.2	63.7	18.6	38.1	25.2	0	7.0	24.0	18.3	20.9	25.2	21.2	25.3	16.5	81.7	2.6	47.0	9.3
Giardiasis	4	20	23	15	8	3	1	0	1	0	1	0	14	5	4	1	6	4	2	0	12	0	4	3
	22.1	50.0	62.0	39.4	47.3	58.8	48.9	63.7	37.2	31.7	26.2	21.0	82.2	39.4	33.3	20.9	57.2	38.7	43.3	46.2	38.8	26.9	28.3	17.6
H. influenzae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
type b disease	0.7	0	0.3	0	0	0	0	0	0	0	1.9	0	0.7	0	0	0	0.4	0	0	0	0.2	0	0	0
Hepatitis A	0	5	5	3	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
	0.7	4.0	6.8	8.8	5.5	0	0	4.6	1.6	0	0	0	1.4	0	0	2.6	2.4	4.6	0	0	0.7	0	0	0.9
Hepatitis B	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0
	0.7	1.2	2.2	0.5	2.3	2.3	0.0	2.3	0.0	6.3	0.0	0.0	2.8	0.0	1.4	0.0	2.4	0.8	1.6	3.3	1.7	0.0	2.4	0.0
Hepatitis C	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	1	0	0
	0.7	0.2	0.5	0.5	0.3	15.5	2.0	0	6.2	6.3	0	0	1.4	0	0	0	3.5	2.3	0	6.6	1.2	2.6	0.6	1.9
Hydatids disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.7	0.2	0	0	0	0	0	2.3	0	0	0	0	0	0	0	0	0.4	0	0	0	0.5	0	0	0
Influenza[5]	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0
	0	0	64.2	0	52.5	0	0	0	0	0	0	0	0	0	0	0	22.1	0	0	0	50.8	0	9.6	0
Lead absorption	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	2.9	1.4	2.4	1.1	4.5	3.1	2.0	6.8	3.1	0	3.9	7.0	2.8	0	5.4	2.6	0	0	2.5	0	3.2	10.2	8.4	4.6
Legionellosis[5]	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2.9	0.5	0.8	0.8	2.3	0	0	0	0	3.2	0	0	0.7	1.7	0	5.2	1.6	3.0	0.8	0	1.7	1.3	0.6	0
Leprosy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0.3	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptospirosis	1	2	0	0	0	1	0	0	0	0	0	0	2	1	0	0	0	0	4	1	0	1	1	0
	11.4	1.9	0	0.5	6.5	5.4	4.1	20.5	1.6	3.2	2.9	14.0	13.9	1.7	5.4	2.6	1.2	0	4.9	3.3	1.2	11.5	1.2	0.9
Listeriosis	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.7	0.7	0.5	0.5	0.3	1.5	0	2.3	0	0	1.0	0	0	0	0	0	0.4	0.8	0	0	0.5	1.3	1.2	0
Malaria	0	1	0	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0
	0.7	0.7	0.8	0.8	1.3	1.5	0	0	3.1	3.2	1.0	14.0	0.7	0	7.5	0	0.8	0.8	3.3	3.3	2.7	1.3	1.8	0
Measles	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1.4	0.7	1.1	1.1	0.6	6.2	0	4.6	0	0	1.9	0	3.5	0	0.7	0	2.4	0	5.7	13.2	3.5	0	2.4	9.3
Meningococcal	1	1	3	6	4	3	0	0	6	2	0	0	0	0	2	0	0	0	0	0	3	0	5	0
disease[6]	23.5	8.8	19.3	29.0	22.0	15.5	32.6	27.3	52.7	44.4	9.7	7.0	19.5	8.6	14.9	28.7	7.9	12.9	7.4	13.2	4.5	5.1	31.9	9.3
Mumps	0	0	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	2
	4.3	0.9	1.9	0.8	0.3	0.8	4.1	0	3.1	0	0	0	2.8	0	0.7	0	2.0	2.3	2.5	0	2.0	0	5.4	2.8
Paratyphoid	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0.7	2.4	1.1	1.3	0.8	0	0	0	0	1.0	0	2.1	0	0	0	0.8	0.8	0.8	0	0.2	0	0	0
Pertussis	0	4	1	1	4	0	0	1	1	1	0	0	0	1	0	0	6	1	1	8	14	6	0	1
	15.0	15.4	10.1	11.2	48.6	14.7	2.0	6.8	4.7	6.3	6.8	21.0	9.1	6.9	5.4	2.6	30.4	53.1	121.8	82.4	27.9	29.4	8.4	41.7
Rheumatic fever	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6.4	0.9	5.2	10.9	2.6	2.3	12.2	6.8	0	3.2	1.0	7.0	2.8	1.7	0	2.6	0.8	0.8	0	0	0.2	0	0	0
Rubella	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	0	0	1	0	0	0	0
	0.7	0.2	0.3	0.5	0	0	0	0	0	0	1.0	0	5.6	0	0	7.8	1.6	0	0.8	3.3	1.7	0	0	1.9
Salmonellosis	6	10	11	8	13	2	4	2	1	2	1	0	5	2	5	1	13	2	10	1	15	6	5	3
	56.4	50.7	62.5	54.6	55.7	54.2	57.1	63.7	62.0	82.5	63.0	56.0	97.5	73.6	53.7	75.8	78.8	63.7	156.9	98.9	62.7	115.2	104.1	92.6
Shigellosis	1	3	1	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
	0.7	5.6	7.3	8.5	1.9	1.5	0	2.3	3.1	3.2	2.9	0	4.2	3.4	0	0	0	1.5	1.6	0	3.7	2.6	3.6	0.9
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	1.6	0	1.0	0	0	0	0	0	0	0	0.8	0	0	0	0	0
Tuberculosis	2	3	5	4	2	0	0	0	0	1	0	0	2	0	0	2	4	1	0	0	0	0	0	0
	12.8	9.3	21.2	17.3	6.5	7.7	4.1	2.3	7.8	22.2	0	0	12.5	5.1	7.5	13.1	13.4	9.1	3.3	3.3	6.0	9.0	1.8	2.8
Typhoid	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1.4	1.6	2.4	0	0	0	0	0	0	0	0	0	0	0.7	0	1.2	0	0	0	0.2	0	0	0
VTEC / STEC	0	1	1	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
	0.7	1.6	1.4	0	6.8	3.1	4.1	4.6	6.2	0	1.9	0	0	1.7	1.4	0	0.8	0.8	0.8	0	3.2	0	4.2	1.9
Yersiniosis	0	11	2	5	2	0	0	0	1	0	0	2	0	0	5	0	1	0	0	0	2	0	1	1
	7.1	12.3	14.7	12.8	13.3	18.6	10.2	11.4	12.4	15.9	6.8	14.0	11.1	13.7	9.5	5.2	11.8	12.1	3.3	33.0	12.9	20.5	12.6	10.2

1 Current rate is based on the cumulative total for the 12 months up to and including April 2002 expressed as cases per 100 000

2 These data are provisional

3 AIDS data is reported for the greater Auckland and Wellington areas, rather than by health district

4 Further data are available from the local medical officer of health

5 Surveillance data based on laboratory-reported cases only

6 These totals and rates are derived from the EpiSurv report date as oppoosed to the earliest available date used in the meningococcal disease section.