

MONTHLY SURVEILLANCE REPORT

This monthly report contains data and commentary on disease trends and events up to and including the end of September 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 October 2002. As this information may be updated over time, the results should be regarded as provisional only.

Table of contents

1. Major surveillance issues	2
2. Key disease trends	2
Burkholderia pseudomallei	2
Campylobacteriosis	2
Cryptosporidiosis	4
Influenza	5
Leptosporidiosis	6
Measles	6
Meningococcal disease	6
Pertussis	10
Rickettsial disease	13
Salmonellosis	13
Tuberculosis	15
3. Deaths from notifiable diseases	17
4. Outbreaks	18
Final reported outbreaks	18
Interim reported outbreaks	20
A Wellington Office Outbreak	21
5. National surveillance data and trends	22
Disease incidence and rates	22
Monthly totals for September 2002 and preceding 12 months	23
Surveillance data by health district for September 2002	24

1. Major surveillance issues

- *Campylobacteriosis*: 1177 cases were notified in September 2002 - the highest ever recorded total for the month of September.
- *Cryptosporidiosis*: 237 cases were notified in September 2000 - the highest monthly total for the year to date. The majority (76%) of cases reported contact with farm animals.
- *Meningococcal disease*: 71 cases of meningococcal disease were reported during September 2002. (Updated figures indicate 83 notifications in August up from 67 reported in the last Monthly Surveillance Report.). This brings the year-to-date total to 454 cases, including 14 fatalities. Three deaths were reported in September.
- *Pertussis*: 97 cases of pertussis were notified during September 2002, compared to 65 cases during the same month last year. Elevated rates of disease continue throughout many South Island health districts.
- *Salmonellosis*: 130 cases of salmonellosis were notified during September 2002. Southland and Otago health districts reported a surge in cases of *Salmonella* Brandenburg.

2. Key disease trends

Burkholderia pseudomallei

An isolate of *Burkholderia pseudomallei* was received from an Auckland hospital laboratory, where the organism had been isolated from blood of F53y with pneumonia after travel in Asia. *B. pseudomallei*, the etiologic agent of melioidosis, is an exotic organism to New Zealand. The disease is most prevalent in Southeast Asia and northern Australia, and previous cases seen in New Zealand have usually been related to travel in these areas.

Campylobacteriosis

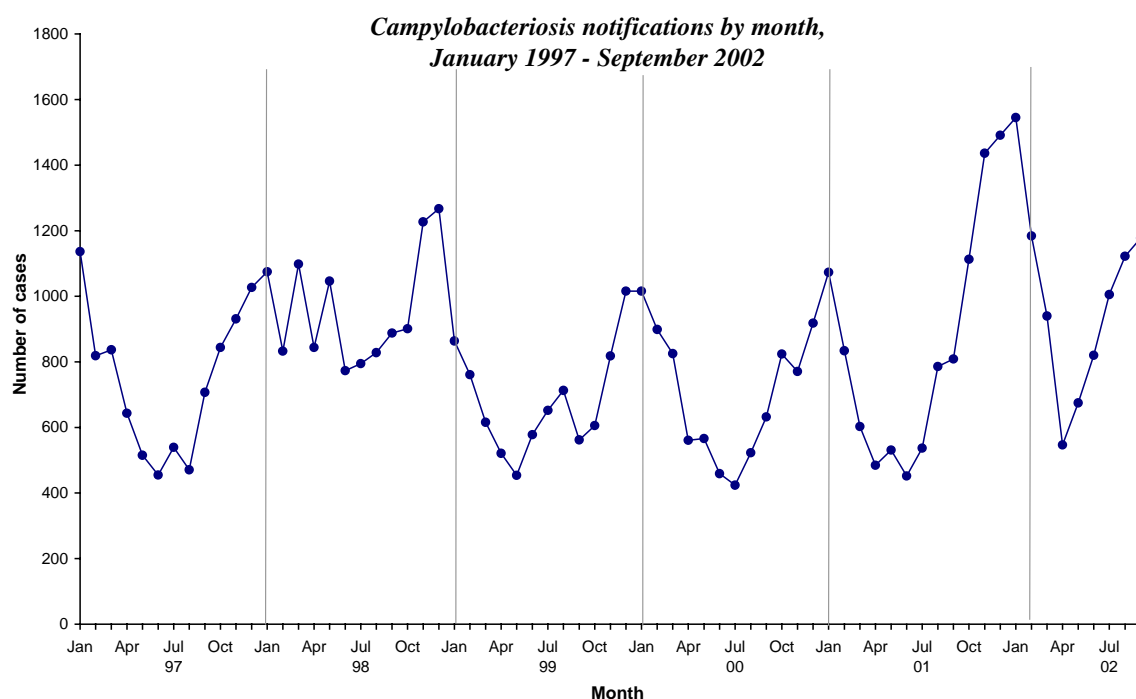
There were 1177 cases of campylobacteriosis notified during September 2002, of whom 1079 (91.7%) were confirmed. By way of contrast, an average of 685 cases per month of September was notified over the seven-year period 1995 to 2001.

Incidence rates in September 2002 were highest in the '1 to 4 years' age group, with a monthly rate of 57.8 per 100 000 population (125 cases), and next highest in the '20 to 29 years' age group with a monthly rate of 50.7 cases per 100 000 (247 cases). In

comparison, the overall monthly rate was 31.5 per 100 000. Approximately 89% of cases (for whom ethnicity was recorded) were of European ethnicity. There were 34 hospitalisations (7.7% of cases for whom this information was recorded).

Of the 1177 September notifications, North West Auckland Health District reported the greatest number with 156 cases. Among all health districts, the incidence rate in September¹ was highest in South Canterbury Health District, with a monthly rate of 47.3 per 100 000 (168 cases), followed by Wellington (46.1 per 100 000), Taranaki (41.7), Central Auckland (41.1) and North West Auckland (36.3) health districts. Over the 12-month period ending 30 September 2002, the incidence rate was highest in the Wellington Health District, with an annual rate of 482.5 per 100 000 population. South Canterbury Health District experienced the next highest rate of 451.7 per 100 000, followed by Central Auckland (431.8) and North West Auckland (422.8) health districts. In comparison, during 2001, the annual rate² of campylobacteriosis was highest in Wellington Health District, whereas during both 1999 and 2000 it was highest in South Canterbury.

The following graph shows campylobacteriosis notifications by month since January 1997. It demonstrates the typically seasonal nature of campylobacteriosis and the unusually high levels of the disease this winter.



Risk factor information was infrequently recorded on the case report forms, with only 16.5% (194/1177) of notifications in September including information on human contact and only 17.8% (210/1177) including information on contact with farm

¹ The incidence rate for September is the number of September notifications from a given region divided by the size of the population of the region and multiplied by 100 000. This ratio represents a monthly notification rate per 100 000 population.

² Both the *crude* annual rate and the *directly age-standardised* annual rate of campylobacteriosis were highest in Wellington during 2001 and highest in South Canterbury during 1999 and 2000.

animals. Of these, 9.8% (19/194) had a history of contact with other symptomatic people, and 31.0% (65/210) reported exposure to farm animals.

To date, 1155 notifications for the month of October have been received.

Cryptosporidiosis

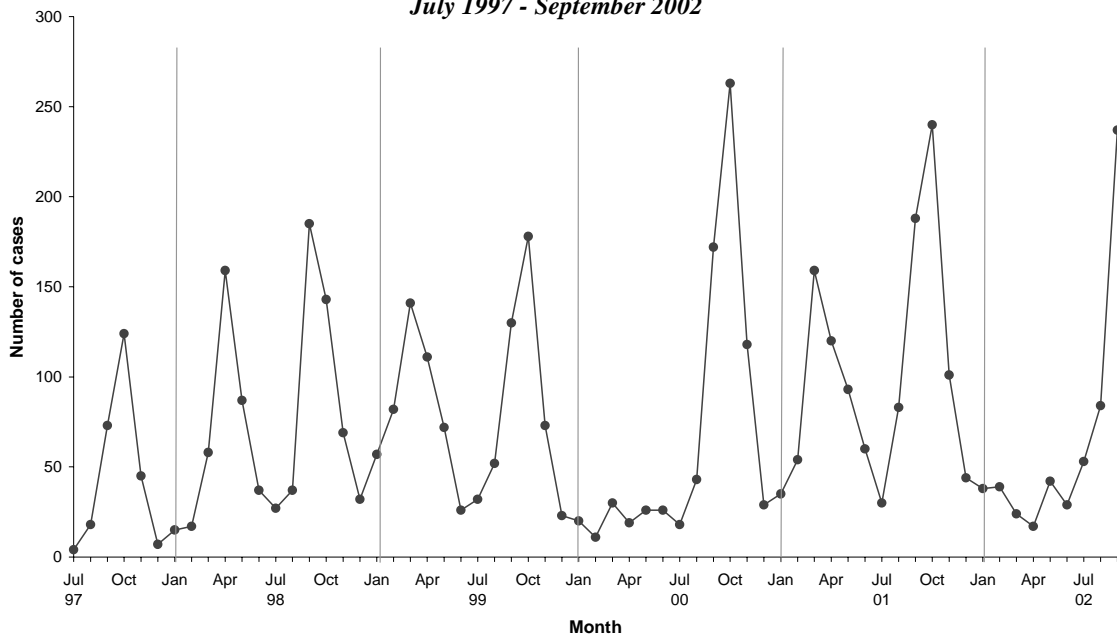
A total of 237 cases of cryptosporidiosis was notified in September 2002, of whom 199 (84.0%) were confirmed. This is the highest monthly total since the beginning of the year, and is more than double the previous high of 89 cases in August. The majority (62.0%) of September cases was aged nine years or less. Among all age groups, the incidence rate was highest in the '1 to 4 years' age group, with a monthly rate of 46.7 cases per 100 000 population, compared to an overall monthly incidence rate of just 6.3 per 100 000.

Well over half (76.4%) the September cases (for whom this information was recorded) reported contact with farm animals, and 44.4 % of cases (for whom this information was recorded) reported contact with sick animals. In comparison, during August, 26.7% of cases reported contact with farm animals, and 10.0% reported contact with sick animals; whereas 74.4% reported recreational contact with swimming pool water.

During September, Waikato Health District reported the greatest number of cases (49 cases), followed by Canterbury (26), Manawatu (22), Taranaki (21) and Wellington (21) health districts. Only one September case was reported to have swum at one or other of the two Wellington swimming pools linked to outbreaks of cryptosporidium during June, July and August.

The following graph shows the number of notified cases of cryptosporidiosis each month since January 2000. It demonstrates the typical Spring peak in incidence, which has been particularly prominent these last three years.

*Cryptosporidiosis notifications by month,
July 1997 - September 2002*



To date, 260 notifications (not displayed on the graph) for the month of October have been received.

Influenza

During September (weeks 36– 39), 321 consultations for influenza-like illness were reported to the Influenza Sentinel Surveillance System. Consultations were reported from 87 general practices, and from 22 out of 24 health districts. The average weekly consultation rate for September was 23.4 per 100 000 patient population, compared to a rate of 31.2 per 100 000 patient population during the same month last year. Eastern Bay of Plenty had the highest consultation rate (57.7 per 100 000), followed by West Coast (57.1 per 100 000).

Seventy-two influenza swabs from sentinel surveillance were received by the regional virology laboratories. Of these, five were Influenza A/Moscow/10/99 (H3N2) from South Auckland (3), Central Auckland (1), and Southland (1). Three were typed as Influenza B/Hong Kong/330/01, from North West Auckland (2), and Nelson-Marlborough (1). The distribution by health district for the month of September is shown below.

Distribution of sentinel isolates by health district, September 2002

Type/subtype	NW	CA	SA	NM	SO	Total
A (H3N2)		1	3		1	5
B/Hong Kong/330/01	2			1		3
Total	2	1	3	1	1	8

In addition, a total of 40 influenza viruses were identified from laboratory-based (non-sentinel) surveillance in September. Of these, 21 were Influenza A, of which 11 were further subtyped as Influenza A/Moscow/10/99 (H3N2). Nineteen were typed as Influenza B, of which four were further typed as Influenza B/Hong Kong/330/01.

Leptosporidiosis

Fourteen cases of leptospirosis were notified in September 2002, bringing the year to date total to 111. Leptospirosis notifications exhibit no obvious seasonality. The average number of monthly notifications over the 12-month period ending 30 September was 12. The average number notified each month for the previous 12 month period was eight. Three cases in September were reported from Hawkes Bay, two cases each from Waikato, Taranaki, and Nelson-Marlborough, and one case each from Northland, South Auckland, Manawatu, Tauranga, and Canterbury health districts.

Occupation was recorded for 12 of the 14 cases. Nine cases worked in the meat processing industry and three worked on farms. One case, whose occupation was unknown, was exposed to rats, mice, opossums and hedgehogs on her property. No risk factors were recorded for the one remaining case.

Cases ranged in age from 20 to 63 years. Eleven cases were male and three were female. Of the 11 cases for whom ethnicity was recorded, three were Maori and eight were of European ethnicity. There were two hospitalisations among the eight cases for whom this information was recorded.

To date, 10 leptospirosis notifications have been received for the month of October.

Measles

There were no notified cases or laboratory-reported cases of measles during September, 2002. However, three measles notifications have so far been received for the month of October. Details of these cases will be provided in the next Monthly Surveillance Report.

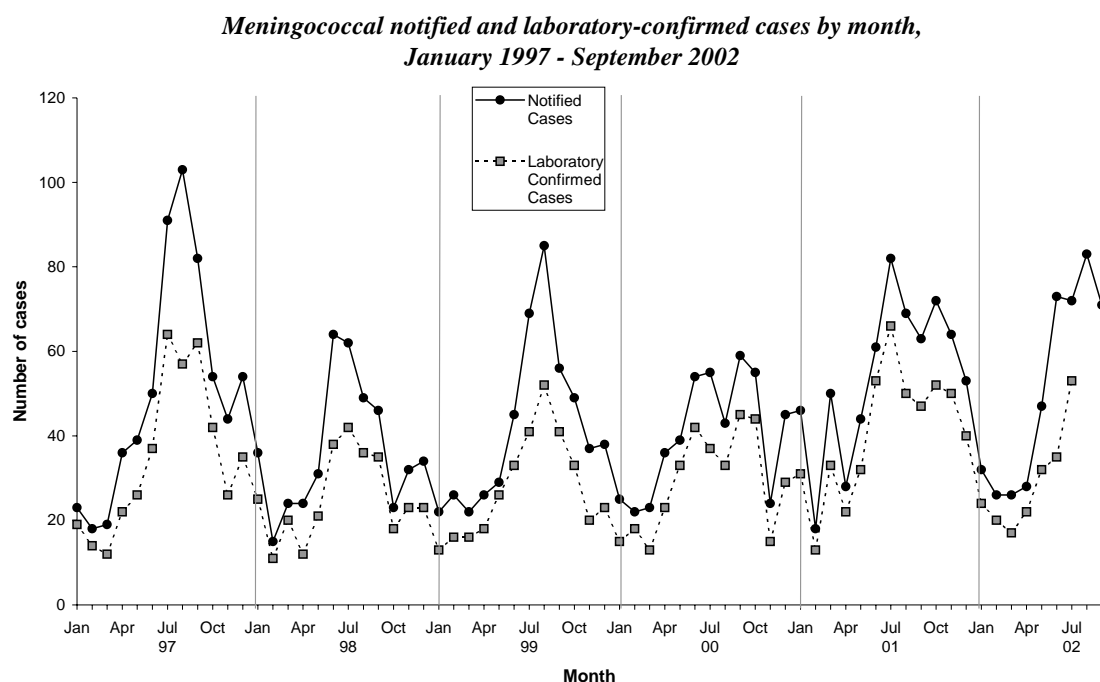
Meningococcal disease

Based on the earliest¹ date available, 71 cases of meningococcal disease were notified during September 2002, bringing the year to date total to 454 cases. As of 31st October, it was not yet known how many September cases had been laboratory

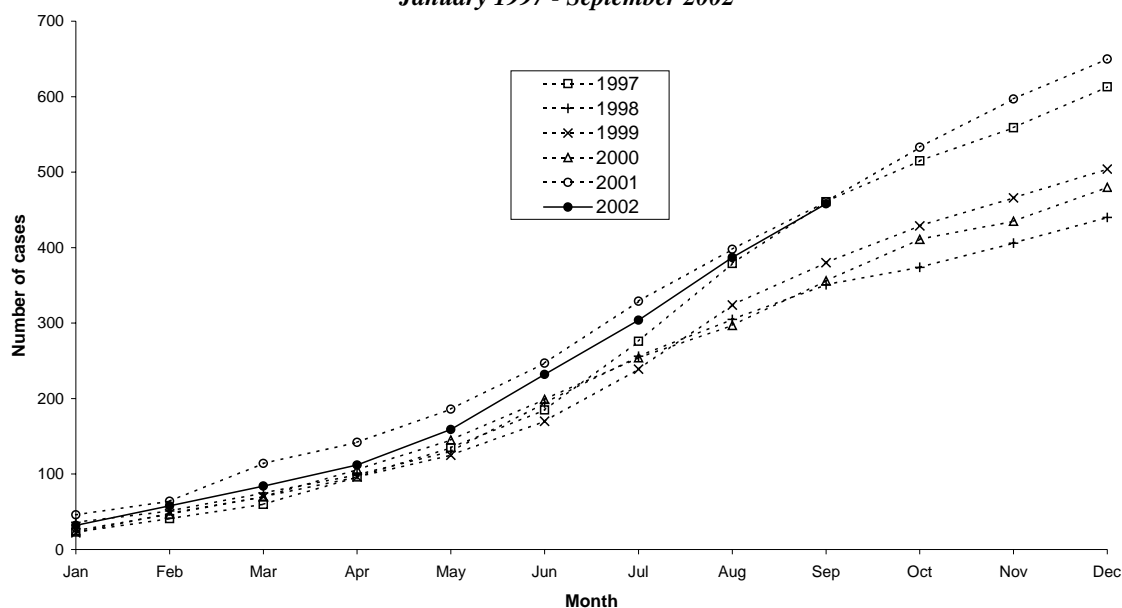
¹ The 'earliest' date refers to the earliest recorded date among the following: the report date, the onset date, the hospitalisation date, and the death date. (The laboratory specimen date was unavailable this month). 'Earliest' date, as opposed to 'report date' alone, is used throughout the analysis of meningococcal disease notification data in this section.

confirmed. In comparison, the average number of cases notified during the month of September over the seven-year period 1995 to 2001 was 63. Updated figures indicate that a total of 83 cases of meningococcal disease were notified during August 2002 (as opposed to the 67 stated in the last Monthly Surveillance Report), compared to an average of 71 per month of August over the seven-year period 1995 to 2001.

The following graphs show (i) notified and laboratory-confirmed meningococcal disease cases by month since January 1997 and (ii) the cumulative number of meningococcal disease cases each month since 1997. Note that, at the time of this report, the number of laboratory-confirmed cases in August and September was unknown.



*Meningococcal disease cases, cumulative total by month,
January 1997 - September 2002*



Hospitalisation information was recorded for 59 of the 71 September cases, of whom 56 were hospitalised. Three cases were fatal: a two-month-old female from South Auckland Health District, a 75-year-old female from North West Auckland, and a one-year-old female from Eastern Bay of Plenty. This brings the number of fatal cases this year to fourteen.

Ethnicity was recorded for 67 of the 71 cases reported this month. Of these, 40 (60%) were of European ethnicity, 19 (28%) were Maori, 6 (9%) were Pacific Islands people¹ and 2 (3%) of 'Other' ethnicity. In comparison, during 2001, the percentage of cases in the European, Maori and Pacific Islands ethnic groups was respectively 41%, 33% and 24%.

During September, age-specific rates were highest in the 'less than one year' and '1 to 4 years' age categories, with monthly rates of 23.8 per 100 000 (13 cases) and 7.9 per 100 000 (17 cases) respectively; compared to an overall monthly rate of 1.9 per 100 000. Of the 56 cases for whom this information was recorded 27 (48.2%) reported attendance at school or pre-school. South Auckland and Tauranga health districts reported the greatest number of cases (8 cases each). Otago Health District reported the next highest number with six cases. However, monthly incidence rates were highest in Ruapehu and Rotorua health districts, with monthly rates of 21.0 per 100 000 (3 cases) and 7.8 per 100 000 population (5 cases), respectively.

Of the 454 cases notified this year to date, the greatest number was reported by South Auckland Health District (78 cases), followed by Otago (37 cases) and Central Auckland (35 cases) health districts. Over the past 12-month period, annual rates

¹ By convention the 'prioritised' classification of ethnicity is used throughout this report - whereby, irrespective of the number of responses to the ethnicity question, cases are assigned to a *single* ethnic group based on the following hierarchy: Maori, Pacific Islands People, Other ethnicity, European. This can frequently lead to an undercount of the number of cases identifying themselves as Pacific Islands People, since cases identifying with both Maori and Pacific Islands ethnic groups get classified as Maori.

higher than the national average of 17.3 per 100 000 population have been seen in Rotorua (62.0), Taupo (60.3), Otago (37.9), Eastern Bay of Plenty (32.6), South Auckland (28.5), Tauranga (24.0), Hawkes Bay (23.7), West Coast (23.1), Northland (22.8), Ruapehu (21.0), Gisborne (20.5), Waikato (18.5), and Wairarapa (18.3) health districts. The following table displays the number of cases reported this month and since the beginning of the year for each health district.

Notified cases of meningococcal disease for the current month and the year to date

Health District	Sep 2002 notifications	Jan to Sep 2002 notifications
Northland	4	25
North West Auckland	5	29
Central Auckland	5	35
South Auckland	8	78
Waikato	4	32
Tauranga	8	27
Eastern Bay of Plenty	2	13
Gisborne	1	6
Rotorua	5	25
Taupo	2	16
Hawkes Bay	1	27
Taranaki	0	7
Ruapehu	3	3
Wanganui	0	3
Manawatu	2	10
Wairarapa	0	3
Wellington	4	20
Hutt	4	11
Nelson-Marlborough	0	3
West Coast	2	7
Canterbury	3	22
South Canterbury	1	4
Otago	6	37
Southland	1	11
Total	71	454

Pertussis

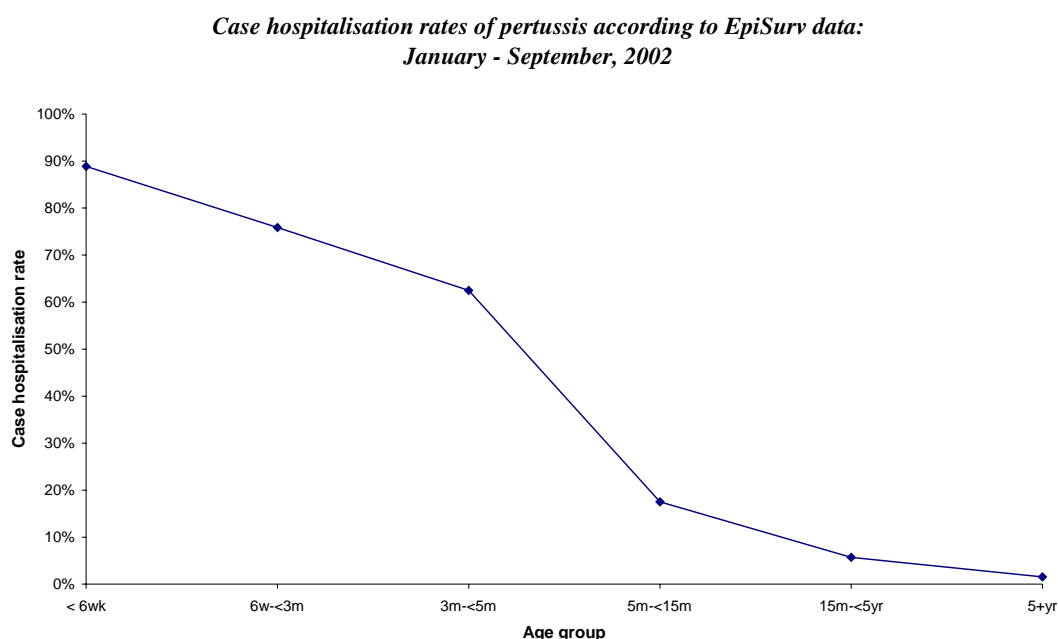
During September 2002, there were 97 cases of pertussis notified, compared to 65 cases during September 2001. Of the September 2002 cases, 71.1% (69/97) were either confirmed by serological means, by PCR or by isolation of *Bordetella pertussis*. Of the remaining 28 cases, six were epidemiologically linked to confirmed cases of the disease and a further nine were recorded as having had a cough lasting two or more weeks and one or more of the following: (i) a cough ending in apnoea or vomiting, (ii) a paroxysmal cough, (iii) an inspiratory whoop.

Hospitalisation information was recorded for 83 of the 97 cases, of whom six (7.2%), all aged under one year, were hospitalised. Among the 785 cases notified this year to date, there have been a total of 65 hospitalisations recorded on EpiSurv. Forty-five (69.2%) hospitalised cases were aged under one year and twelve (18.5%) were aged between one and four years. In comparison, hospital discharge data¹ indicate that the number of hospitalised cases of pertussis from 1 January to 30 September, 2002 totalled 104. Of these, 75 (72.1%) were aged under one year and 21 (20.2%) were aged between one and four years. A little over half (53.8%) these 104 cases could be

¹ Rebecca Kay from NZHIS is thanked for providing the raw hospital discharge data.

matched¹ to EpiSurv notifications. Even allowing for limitations in data quality and the matching process, it appears that many hospitalised cases have not been notified. Accurate case hospitalisation rates are therefore difficult to determine. In fact, several health districts have notified fewer cases since the beginning of the year, than hospital discharge data would indicate were hospitalised.

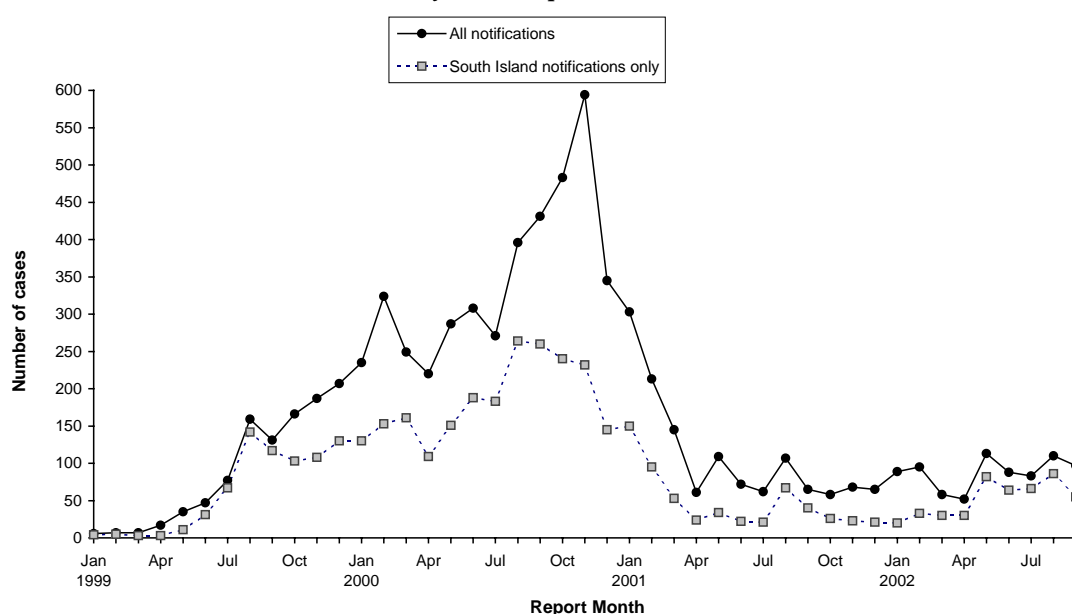
The following graph shows the case hospitalisation rate among different age groups, based on EpiSurv year-to-date notification data. The age groups have been chosen to coincide with the first four pertussis immunisations, scheduled at 6 weeks, 3 months, 5 months and 15 months.



Fifty-five (56.7%) of the 97 September notifications were from the South Island. In comparison, 78.2% of the 110 August notifications were from the South Island. Among health districts, Canterbury reported the greatest number of cases (31 cases), followed by South Canterbury (17) and Waikato (12). The incidence rate in September was highest in South Canterbury, with a monthly rate of 21.8 per 100 000 (17 cases), and next highest in West Coast Health District, with a monthly rate of 9.9 per 100 000 (3 cases). Over the past 12-month period, annual rates of pertussis have also been highest in West Coast and South Canterbury health districts with rates of 224.2 and 198.4 per 100 000, respectively. The following graph shows the number of cases of pertussis notified nationally and from the South Island, each month since January 1999.

¹ The matching algorithm was based on a comparison of date of birth, gender, territorial local authority and hospital admission date from both datasets.

*Notified cases of pertussis by month,
January 1999 - September 2002*



Sixty-eight September notifications (or 79.1% of cases for whom ethnicity was recorded) were European. There were also sixteen Maori cases, one Pacific Islands person and one case of 'Other' ethnicity. Notification rates were highest in the 'less than one year' age group with a monthly rate of 14.6 per 100 000 (8 cases). Rates were next highest in the '5 to 9 years' and the '1 to 4 years' age categories with monthly rates of 8.0 (23 cases) and 7.9 (17 cases), respectively. The cases ranged in age from 24 days to 56 years.

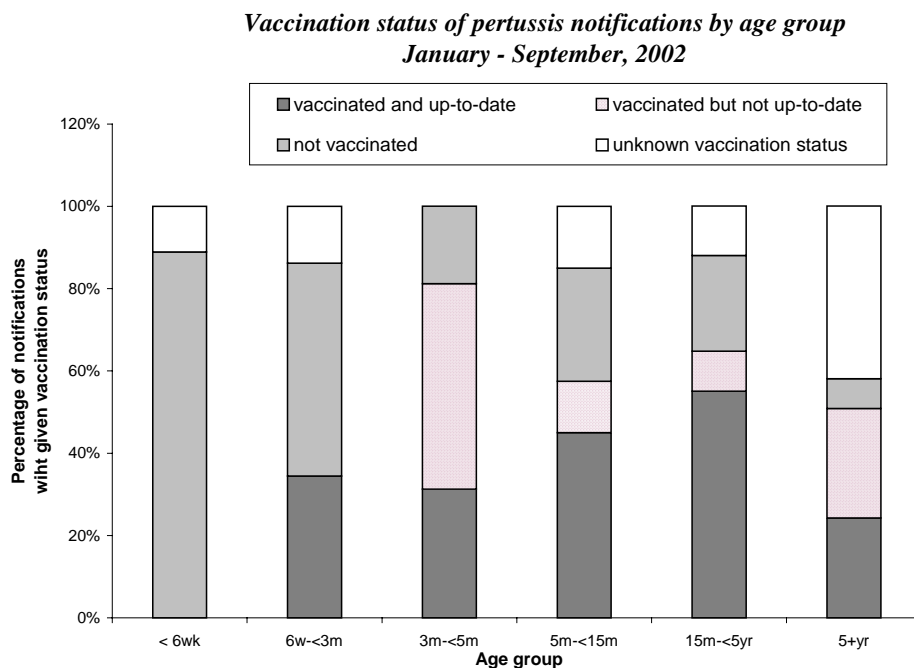
The following table shows the number of doses of pertussis vaccine given to September 2002 cases in each relevant age group.

Age group of pertussis notifications and vaccination received September 2002

Age group	Total Cases	Vaccination status						
		Vaccinated (without dose information)	One dose	Two doses	Three doses	Four doses	Not vaccinated	Unknown status
0-<6 weeks	1	0	(0)	(0)	(0)	(0)	1	0
6 wks-<3 mths	4	0	1	(0)	(0)	(0)	3	0
3-<5 months	2	0	2	0	(0)	(0)	0	0
5-<15 months	2	0	0	0	1	(0)	1	0
15 mths-<5 yrs	16	0	0	1	0	12	3	0
5+ years	72	8	1	2	19	11	2	29
Total	97	8	4	3	20	23	10	29

Bracketed numbers indicate cases ineligible for vaccination

The following graph illustrates the relative proportion of cases in each age group with given vaccination status¹, for pertussis notifications this year-to-date.



To date, 103 pertussis notifications have been received for the month of October.

Rickettsial disease

Two laboratory-confirmed cases of rickettsial disease² were reported from North West Auckland Health District in September, bringing the year to date total to six. The cases, a 47-year-old female cat breeder and a 5-year-old male, were from the same family. No additional information on risk factors was recorded. All but one of the eleven cases notified since January 2001 have been from North West Auckland.

Salmonellosis

A total of 130 cases of Salmonella was notified in September 2002, all but one of whom were laboratory confirmed. This is the highest monthly total since March 2002, although less than the September 2001 figure of 216 notifications. Hospitalisation information was recorded for 55 cases, of whom six (10.9%) were hospitalised. Age-specific rates for the month of September were highest in the 'less than one year' and the '1 to 4 years' age groups, with respectively 25.6 and 11.6 notifications per 100 000, compared to an overall monthly rate of 3.5.

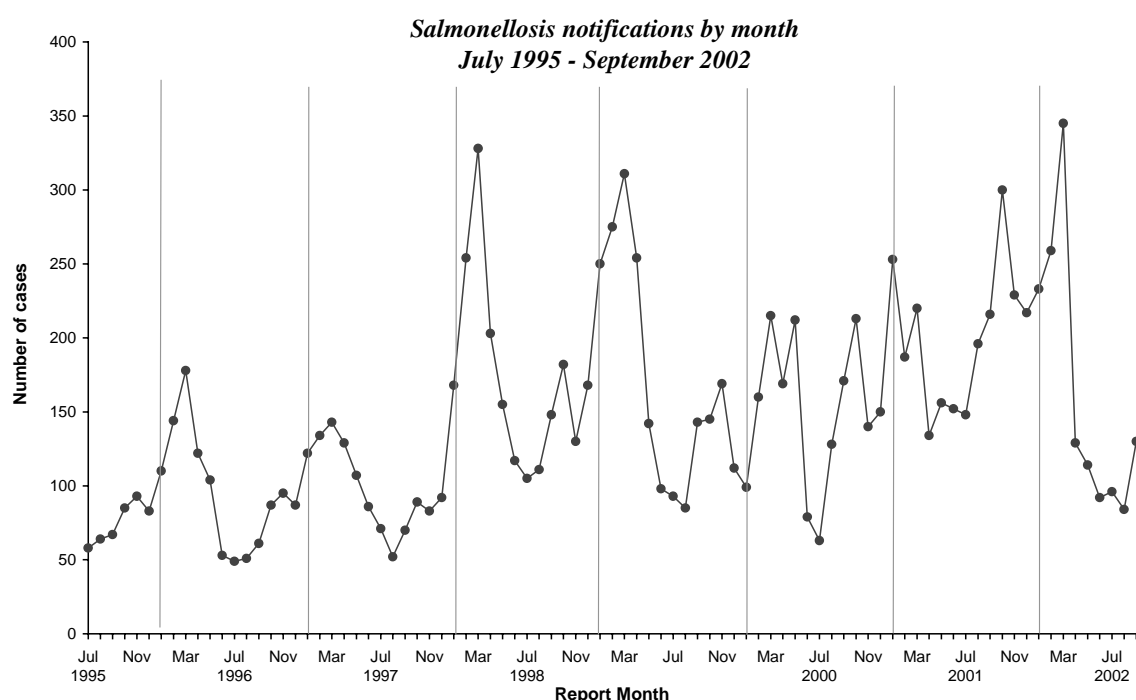
¹ Cases recorded as vaccinated, but without dose information, have been assigned 'unknown' vaccination status.

² Both cases were notified as murine typhus.

Of the 38 cases for whom overseas travel information was recorded, 9 (23.7%) had been overseas during the incubation period. The most commonly visited country was Bali (6 cases). One case each had travelled to Thailand and Fiji. One case did not record a travel destination.

September notifications were highest in Southland (18 cases) and Otago (15 cases) health districts. Incidence rates were also highest in Southland and Otago, with monthly rates of 16.7 and 9.0 per 100 000, respectively. Annual rates of disease for the 12-month period ending September 2002 were highest in Nelson-Marlborough (138.1 cases per 100 000) and South Canterbury (115.2) health districts.

The following graph shows the number of Salmonellosis notifications each month since July 1995.



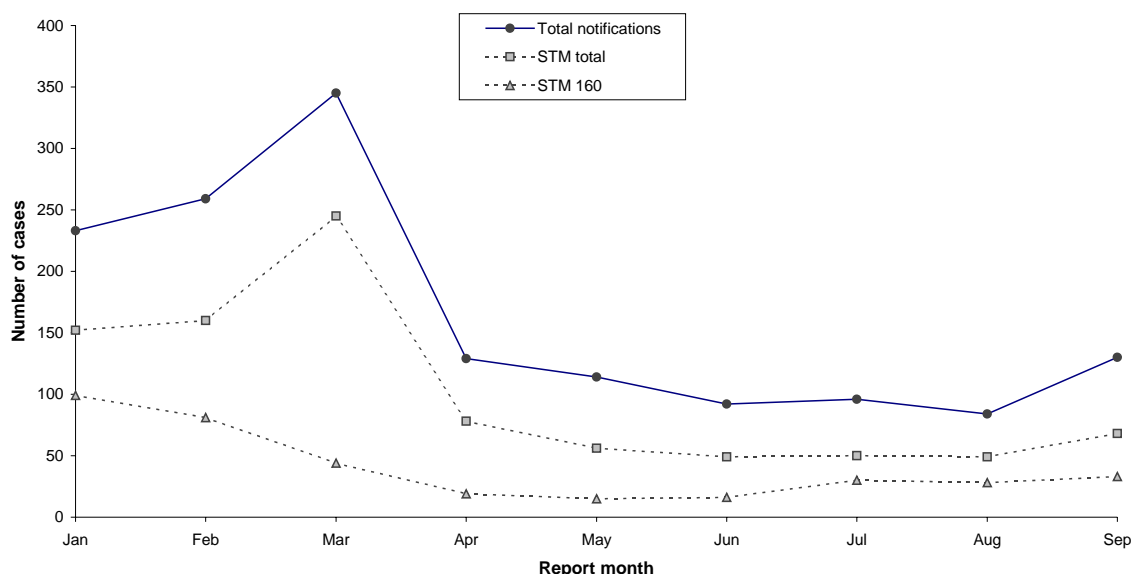
Of the 130 notifications, 129 could be matched to human cases identified by the ESR Enteric Reference Laboratory (ERL)¹. The predominant type identified was *S. Typhimurium* 160 (STM 160) with 33 cases (25.4% of notifications). The next most commonly identified types among September notifications were *Salmonella* Brandenburg (30 cases), *S. Typhimurium* 135 (9 cases), *S. Typhimurium* 1 (9 cases), and *Salmonella* Enteritidis phage type 4 (7 cases). Five of the seven cases identified as *Salmonella* Enteritidis phage type 4 recorded overseas travel to Bali during the incubation period².

The following graph illustrates the trend in the number of *S. Typhimurium* isolations among notified cases, since the beginning of the year.

¹ Note that over 95% of notifications this year to date can be matched to ERL reported cases.

² Of the 20 cases of *Salmonella* Enteritidis phage type 4 notified this year to date, 16 recorded overseas travel during the incubation period. Of these, 13 reported travel to Bali.

Salmonella notifications by month
January 02 - September 02



The increase in notifications this month appears partly due to a large increase in cases of *Salmonella* Brandenburg in the lower South Island. Thirty cases of *Salmonella* Brandenburg were notified in September, whereas an average of only 3.5 cases per month were notified for the first eight months of the year. All but one of the 18 salmonellosis notifications from Southland Health District in September were identified as *Salmonella* Brandenburg. The remaining 13 cases of this type were reported by Otago (8 cases), South Canterbury (3 cases), Canterbury (1) and Taranaki (1) health districts. Information of risk factors for these cases was infrequently recorded.

To date, 138 salmonellosis notifications for the month of October, have been received.

Tuberculosis

Thirty cases of tuberculosis disease¹ were notified in September 2002, bringing the year to date total to 272 cases. For the past twelve months, between 23 and 42 cases, and an average of 32 cases, have been notified each month. Of the 30 September notifications, 18 (60.0%) were recorded as being confirmed. Twenty-six cases were reported by hospital-based practitioners. There were 16 hospitalisations (64.0% of the 25 cases for whom this information was recorded). Five cases were reported to have an immunosuppressive illness. The age of cases ranged between 13 years and 79 years. Seven cases recorded contact with a confirmed case of the disease.

During September, incidence was highest in North West Auckland, Central Auckland and South Auckland health districts (5 cases each), followed by Hawkes Bay Health District (4 cases). During the 12-month period ending 30 September 2002, the annual

¹ This total includes new cases, relapses and reactivations.

rate of tuberculosis disease was highest in Central Auckland Health District, with a rate of 23.4 cases per 100 000.

Ethnicity was recorded for 23 of the 30 cases. Of these, 11 were of 'Other' ethnicity, six were Maori, four Pacific Islands people and two European. Ten of the 11 cases of 'Other' ethnicity were known to have been born overseas: in India (4 cases), Cambodia (2), and one case each in China, Indonesia, Somalia and Denmark. All four Pacific Islands people were born out of New Zealand: in Samoa (3 cases), and Tonga (1). One case of European ethnicity was born in South Africa. Date of arrival was recorded for 14 of the 15 overseas born cases. Of these, three cases had arrived in the previous 12 months, eight cases between one and five years ago, and three cases over five years ago.

To date, 47 tuberculosis notifications for the month of October have been received.

3. Deaths from notifiable diseases

The table below lists all deaths from notifiable diseases (with the exception of AIDS and CJD) in cases notified this year to date. It should be noted that the 'report date' refers to the date when the relevant Public Health Unit was first notified of the case and not necessarily when the case record was updated to reflect the death. Therefore report dates may in some instances pre-date death dates.

Disease	Health district	Age	Sex	Report date	Death date
Campylobacteriosis	Canterbury	82y	female	20 Feb 02	17 Feb 02
<i>Haemophilus influenzae b</i> (Hib)	Canterbury	86y	female	30 May 02	11 Jul 01
Pertussis	Taupo	9m	female	7 Jun 02	4 Oct 01
Legionellosis	Canterbury	62y	male	22 Mar 02	15 Mar 02
	South Canterbury	73y	male	3 May 02	8 May 02
	Canterbury	81y	female	15 May 02	23 May 02
Perinatal listeriosis	Central Auckland	33w gestation	N/A	15 Apr 02	13 Apr 02
	Tauranga	Unknown	N/A	8 Aug 02	Unknown
Meningococcal disease	Waikato	1y	male	8 Feb 02	10 Feb 02
	North West Auckland	42y	male	25 Feb 02	25 Feb 02
	North West Auckland	4m	male	22 Mar 02	21 Mar 02
	Otago	18y	male	29 Mar 02	31 Mar 02
	South Auckland	9m	male	3 Apr 02	2 Apr 02
	Central Auckland	6m	male	12 May 02	12 May 02
	Tauranga	69y	female	4 Jun 02	4 Jun 02
	South Auckland	16y	female	14 Jun 02	13 Jun 02
	Northland	1y	male	2 Jul 02	2 Jul 02
	Canterbury	17y	female	10 Jul 02	11 Jul 02
	Waikato	7y	female	8 Aug 02	6 Aug 02
	South Auckland	2m	female	11 Sep 02	11 Sep 02
	North West Auckland	75y	female	18 Sep 02	16 Sep 02
	Eastern Bay of Plenty	1y	female	24 Sep 02	24 Sep 02
	South Auckland	27y	female	15 Mar 02	24 Mar 02
Tuberculosis disease	South Auckland	73y	male	17 Jun 02	22 May 02
	South Auckland	57y	female	12 Aug 02	8 Aug 02
	North West Auckland	69y	male	17 Sep 02	20 Sep 02

4. Outbreaks

This Monthly Surveillance Report includes data on outbreaks for which final reports had been entered into EpiSurv during September 2002 and on outbreaks that were initially reported during September 2002 but were still listed as 'interim' on 10 October 2002.

Final reported outbreaks

Final reports on 36 outbreaks were received in September 2002. These outbreaks involved 390 cases, 134 of whom were laboratory-confirmed. Ten cases were hospitalised.

Ten Norwalk-like virus (NLV) outbreaks accounting for 203 cases (52.1%) were reported. These outbreaks were reported from Auckland (6 outbreaks), Wellington (3), and South Canterbury (1) health districts. Six outbreaks occurred in rest homes, of which five were attributed to person-to-person transmission and one to foodborne transmission.

Four *Cryptosporidium parvum* outbreaks accounting for 77 cases (19.7%) were reported. These outbreaks were reported from Wellington (2 outbreaks), Rotorua (1), and Manawatu (1) health districts. The Wellington outbreaks were attributed to environmental transmission in swimming and spa pools, and together accounted for 72 cases. The Rotorua outbreak was attributed to person to person and zoonotic transmission in home, farm and childcare settings; while the Manawatu outbreak was attributed to waterborne, person to person, and zoonotic transmission in a home setting.

Summary of final reported outbreaks, September 2002

Organism/Toxin/Illness	Number of outbreaks	Total number of cases
<i>Campylobacter</i>	5	15
<i>Clostridium perfringens</i>	1	5
<i>Cryptosporidium parvum</i>	4	77
<i>E. coli</i> O157	1	3
Gastroenteritis	8	24
<i>Giardia</i>	1	11
<i>Neisseria meningitidis</i> c	2	8
Norwalk-like virus	10	203
Rotavirus	1	37
<i>Salmonella</i>	1	2
<i>Staphylococcus aureus</i>	2	5
Total	36	390

Details of final reported outbreaks, September 2002¹

Pathogen/ toxin/ illness	Health district ²	Month ³	No. ill	Lab Conf ⁴	No. Hosp	Setting	Mode of transmission (vehicle/source)	Evidence ⁵
<i>Campylobacter</i>	AK	Jun02	2	1	0	Restaurant / cafe	Foodborne (chicken, bacon & avocado burger)	Epi-H
<i>Campylobacter</i>	AK	Jun02	4	3	0	Takeaways	Foodborne (chicken in combination kebab)	Epi-H Lab Env
<i>Campylobacter</i>	AK	Aug02	2	2	0	Home	Unknown	Nil
<i>Campylobacter</i>	CB	Aug02	3	2	0	Restaurant / cafe	Foodborne (chicken meal)	Epi-H
<i>Campylobacter</i>	CB	Sep02	4	3	0	Home	Foodborne (chicken meal)	Epi-H
<i>Clostridium perfringens</i>	WG	Aug02	5	5	0	Restaurant / cafe	Foodborne	Epi-H
<i>Cryptosporidium parvum</i>	RO	Aug02	2	2	0	Home; farm; child care centre	Person to person; zoonotic	Epi-H Oth
<i>Cryptosporidium parvum</i>	MW	Aug02	3	1		Home	Waterborne; person to person; zoonotic	Epi-H Lab
<i>Cryptosporidium parvum</i>	WN	Jun02	24	16	0	Swimming / spa pool	Environmental	Epi-H Env
<i>Cryptosporidium parvum</i>	WN	Jul02-Aug02	48	42	0	Swimming / spa pool	Environmental	Epi-H Env
<i>E. coli</i> O157	CB	Sep02	3	3	0	Home; farm	Person to person; zoonotic	Epi-H
Gastroenteritis	AK	May02	3	0	0		Unknown	Epi-H
Gastroenteritis	AK	Jun02	2	0	0	Takeaways	Foodborne (chicken & chips, curry chicken on rice)	Epi-H Env
Gastroenteritis	AK	Jul02	3	0	0	Restaurant / cafe	Foodborne (burger & chips meal)	Epi-H
Gastroenteritis	AK	Jul02	2	0	0	Restaurant / cafe	Foodborne (kiwi burger)	Epi-H
Gastroenteritis	AK	Aug02	2	0	0	Home	Unknown	Nil
Gastroenteritis	AK	Aug02	2	0	0		Unknown	Epi-H
Gastroenteritis	AK	Sep02	3	0	0	Restaurant / cafe	Foodborne (garlic bread)	Epi-H
Gastroenteritis	WN	Aug02	7	1	0	Corporate office; other food outlet	Foodborne	Epi-S Lab
Giardia	WN		11	11	0	Home; child care centre; school; swimming / spa pool	Person to person; environmental	Epi-H
<i>Neisseria meningitidis</i> c	OT	Aug02	6	6	6	School	Person to person	Nil
<i>Neisseria meningitidis</i> c	WC	Sep02	2	2	2	Home; school	Person to person	
Norwalk-like virus	AK	Jun02	2	1	0	Restaurant / cafe; takeaways	Foodborne (chicken fried rice, rogan josh, chicken tikka masala)	Epi-H Lab Env
Norwalk-like virus	AK	Jul02	2	1	0	Home	Unknown	Epi-H
Norwalk-like virus	AK	Aug02	26	5	0	Rest home	Foodborne (contaminated food); person to person	Epi-H
Norwalk-like virus	AK	Aug02	41	9	0	Rest home	Person to person	Epi-H
Norwalk-like virus	AK	Aug02	12	2	0	Hospital (acute care)	Person to person	Epi-H
Norwalk-like virus	AK	Sep02	3	1	0		Unknown	Epi-H
Norwalk-like virus	WN	Aug02	22	1	0	Rest home	Person to person	Epi-H Oth
Norwalk-like virus	WN	Aug02	24	2	1	Rest home	Person to person	Nil
Norwalk-like virus	WN	Aug02	49	5	0	Rest home	Person to person	Epi-H
Norwalk-like virus	SC	May02	22	2	1	Rest home	Person to person	Oth
Rotavirus	WN	Jun02	37	2	0	Child care centre	Person to person	
Salmonella	AK	Jul02	2	1	0	Home	Foodborne (undercooked scrambled egg)	Epi-H
Staphylococcus aureus	AK	May02	2	1	0	Restaurant / cafe	Foodborne (battered rock oysters)	Epi-H
Staphylococcus aureus	AK	Jul02	3	1	0	Takeaways	Foodborne (takeaway chicken)	Epi-H Env

1 Blank fields indicate that no information had been entered in the applicable field in the outbreak report.

2 Health district of the PHU that reported the outbreak: AK=Auckland; WG=Wanganui; MW=Manawatu; RO=Rotorua; WN=Wellington; OT=Otago; CB=Canterbury; WC=West Coast; SC=South Canterbury.

3 Month outbreak commenced.

4 Number of microbiologically-confirmed cases.

5 Evidence for mode of transmission and vehicle/source: Epi-H=cases had history of exposure to implicated source; Epi-S=statistical evidence from cohort or case-control study; Env=evidence from environmental investigation; Lab=pathogen/toxin/chemical suspected to have caused illness identified in implicated source or from investigation of food handler; Oth=other; Nil=no evidence collected.

Interim reported outbreaks

Interim reports on 20 outbreaks were made in September 2002, involving at least 70 cases.¹ Among outbreaks, the most commonly recorded illness or pathogen was gastroenteritis (13/20 outbreaks). Together these outbreaks accounted for 78.6% (55/70) of cases. The following table lists all interim outbreak reports made in September. Details of these outbreaks will be provided once final reports have been received.

Interim reported outbreaks, September 2002¹

Pathogen/toxin/ illness	Health district ²	Month ³	No. ill	Lab Conf ⁴	No. Hosp	Setting	Evidence ⁵
<i>Campylobacter</i>	CB	Aug02	6	3	0	Restaurant / cafe	
<i>Campylobacter</i>	OT	Jul02	4	4	0	Home	
<i>Campylobacter jejuni</i>	RO	Aug02		1	0	Home	Epi-H
<i>Clostridium perfringens</i>	CB	Aug02	1	1	0	Restaurant / cafe	
<i>Cryptosporidium parvum</i>	AK		2	2			
<i>Cryptosporidium parvum</i>	WN				0		
Gastroenteritis	NL	Aug02	15		0	Rest home	Nil
Gastroenteritis	AK		2				
Gastroenteritis	AK		4				
Gastroenteritis	AK		2				
Gastroenteritis	AK		4				
Gastroenteritis	AK		2				
Gastroenteritis	AK		2				
Gastroenteritis	AK		3				
Gastroenteritis	AK		4				
Gastroenteritis	AK		10				
Gastroenteritis	AK		5				
Gastroenteritis	AK		2				
Gastroenteritis	TK				0		
<i>Mycobacterium tuberculosis</i>	SC	Feb02	2	2	2	Home	

¹ Blank fields indicate that no information had been entered in the applicable field in the outbreak report.

² Health district of the PHU that reported the outbreak: AK=Auckland; NL=Northland; RO=Rotorua; TK=Taranaki; WN=Wellington; CB=Canterbury; OT=Otago; SC=South Canterbury.

³ Month outbreak commenced.

⁴ Microbiologically-confirmed cases.

⁵ Evidence for mode of transmission and vehicle/source: Epi-H=cases had history of exposure to implicated source; Epi-S=statistical evidence from cohort or case-control study; Env=evidence from environmental investigation; Lab=pathogen/toxin/chemical suspected to have caused illness identified in implicated source or from investigation of food handler; Oth=other; Nil=no evidence collected.

¹ Total cases were recorded for 17 of the 20 outbreaks.

A Wellington Office Outbreak

On 29th August 2002, Regional Public Health (RPH) was informed of a possible food-borne outbreak of gastroenteritis following an office morning tea. The morning tea, held on 27th August 2002, was attended by one work team from a large Wellington business. The food for the function was obtained from a small Wellington lunch bar. In addition, a birthday cake, which had been bought at a supermarket, was eaten. The health and safety officer for the business telephoned RPH to report a high incidence of gastroenteritis in the morning tea group. She also stated that she was aware of a high number of absences due to gastro-intestinal illness in staff on another floor. The outbreak investigation confirmed that 20 people were exposed and 14 became ill. Of those who became ill, seven met the case definition. Their symptoms, along with the incubation period and duration of illness, indicated that a Norwalk-Like Virus might have caused the outbreak. Three faecal samples: one from a case, one from an unwell person who had consumed food purchased from the implicated premise but worked on the other floor, and one from the premise owner and principal food handler, later confirmed the presence of Norwalk-Like Viruses. A site visit to the premise¹ was made in the week after the event. The food preparation process and general condition of the premise was assessed, and recommendations were made.

This report highlights the importance of the exclusion of food handlers following gastro-intestinal symptoms. In addition, the isolation of Norwalk-like Viruses from the premise owner, nine days after her gastro-intestinal symptoms had reportedly ceased, reinforces the importance of hand hygiene for food handlers at all times.

(Reported by Kerry Sexton, Public Health Medicine Registrar, Hutt Valley District Health Board).

Contributors to this report include Liza Lopez, Trev Margolin, Kerry Sexton and Elizabeth Sneyd. The report is edited by Elizabeth Sneyd and reviewed by Jose M Ortega. For further details on items contained in this report contact either of the following:

Elizabeth Sneyd
phone 04 914 0779
email: elizabeth.sneyd@esr.cri.nz

Jose M Ortega
phone 04 914 0694
email: jose.ortega@esr.cri.nz
Fax: 04 914 0770

An electronic version of this report and previous month's reports may be downloaded from the Public Health Surveillance section on ESR's Website (www.esr.cri.nz).

¹ There were two further instances between the 27th and 29th of August, in which the implicated premise was linked to gastro-intestinal illness, however no follow-up was possible due to the lack of contact details.

5. National surveillance data and trends

Disease incidence and rates

Disease ¹	Current year - 2002 ²			Previous year - 2001		
	Sep 2002 cases	Cumulative total since 1 January	Current rate ³	Sep 2001 cases	Cumulative total since 1 January	Previous rate ³
AIDS	4	16	0.6	1	19	0.7
Campylobacteriosis	1177	9011	349.2	809	6106	230.6
Cholera	0	1	0.1	0	2	0.1
Cryptosporidiosis	237	568	25.5	188	823	33.0
Dengue fever	0	60	2.2	8	69	2.0
Gastroenteritis ⁴	71	729	26.0	99	699	24.8
Giardiasis	107	1211	42.9	125	1209	42.0
<i>H. influenzae</i> type b disease	0	3	0.1	0	10	0.4
Hepatitis A	2	94	3.0	1	44	1.8
Hepatitis B (acute) ⁵	5	52	1.7	1	43	1.5
Hepatitis C (acute) ⁵	8	45	1.6	6	46	1.6
Hydatid disease	0	1	0.1	1	4	0.2
Influenza ⁶	103	675	18.6	49	645	20.0
Lead absorption	5	73	2.5	10	108	3.9
Legionellosis ⁶	4	38	1.3	0	46	2.0
Leprosy	0	2	0.1	0	3	0.1
Leptospirosis	14	111	3.7	2	78	2.6
Listeriosis	1	13	0.5	3	13	0.4
Malaria	6	53	1.7	3	43	2.5
Measles	0	21	1.5	6	48	1.5
Meningococcal disease ⁷	77	456	17.2	69	461	15.7
Mumps	6	45	1.4	8	50	1.7
Paratyphoid	0	13	0.6	2	24	0.9
Pertussis	97	785	26.1	65	1143	68.7
Rheumatic fever	5	70	2.1	7	109	3.8
Rickettsial disease	2	6	0.2	0	3	0.1
Rubella	1	30	0.9	2	26	0.9
Salmonellosis	130	1486	59.7	216	1672	58.2
Shigellosis	4	91	3.0	16	136	4.4
Tetanus	0	1	0.1	0	3	0.1
Tuberculosis	30	272	10.1	28	269	9.6
Typhoid	0	19	0.7	2	20	0.7
VTEC / STEC infection	6	60	1.9	7	64	2.1
Yersiniosis	25	350	12.9	28	298	10.2

Notes: ¹ Other notifiable infectious diseases reported in September: Nil

² These data are provisional

³ Rate is based on the cumulative total for the current year (12 months up to and including September 2002) or the previous year (12 months up to and including September 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

Monthly totals for September 2002 and preceding 12 months

Disease	Sep 2002	Aug 2002	Jul 2002	Jun 2002	May 2002	Apr 2002	Mar 2002	Feb 2002	Jan 2002	Dec 2001	Nov 2001	Oct 2001	Sep 2001
AIDS	4	1	1	1	1	3	1	3	1	4	1	2	1
Campylobacteriosis	1177	1122	1005	820	675	547	938	1183	1544	1491	1436	1112	809
Cholera	0	0	0	0	0	1	0	0	0	0	0	1	0
Cryptosporidiosis	237	89	53	29	42	17	24	39	38	44	101	240	188
Dengue fever	0	8	13	8	17	6	3	3	2	1	8	15	8
Gastroenteritis ²	71	68	62	144	86	72	102	62	62	72	71	100	99
Giardiasis	107	122	128	128	167	132	152	145	130	117	142	135	125
Haemophilus influenzae type b	0	0	0	1	2	0	0	0	0	0	1	0	0
Hepatitis A	2	2	2	7	9	18	28	17	9	6	7	4	1
Hepatitis B (acute) ³	5	6	6	7	7	5	3	5	8	2	5	6	1
Hepatitis C (acute) ³	8	7	3	5	6	4	8	2	2	5	4	4	6
Hydatid disease	0	1	0	0	0	0	0	0	0	0	0	3	1
Influenza ⁴	103	136	230	151	30	16	3	3	3	1	1	19	49
Lead absorption	5	10	9	7	14	5	7	9	7	7	11	4	10
Legionellosis ⁴	4	4	7	5	4	3	4	0	7	5	3	3	0
Leprosy	0	0	1	1	0	0	0	0	0	0	0	0	0
Leptospirosis	14	6	14	10	16	14	8	18	11	10	12	5	2
Listeriosis	1	3	2	0	0	1	2	2	2	1	3	1	3
Malaria	6	3	6	5	6	6	3	8	10	5	4	2	3
Measles	0	4	3	1	2	2	3	4	2	6	10	19	6
Meningococcal disease ⁵	77	85	67	70	44	30	27	24	32	57	66	65	69
Mumps	6	4	4	6	7	4	5	6	3	2	1	3	8
Paratyphoid	0	2	2	2	3	1	3	0	0	1	3	4	2
Pertussis	97	110	83	88	113	52	58	95	89	65	68	58	65
Rheumatic Fever	5	8	4	2	9	1	9	16	16	4	3	1	7
Rickettsial disease	2	2	0	1	1	0	0	0	0	0	0	2	0
Rubella	1	5	1	5	8	6	1	1	2	3	1	0	2
Salmonellosis	130	87	95	92	115	130	345	259	233	217	229	300	216
Shigellosis	4	8	12	10	13	12	10	11	11	5	6	10	16
Tetanus	0	0	0	0	1	0	0	0	0	1	0	0	0
Tuberculosis	30	37	42	23	27	26	24	27	36	42	29	36	28
Typhoid	0	0	2	1	3	2	6	4	1	4	3	0	2
VTEC/STEC infection	6	6	7	4	11	8	2	5	11	1	4	7	7
Yersiniosis	25	30	30	33	42	33	42	44	71	38	34	59	28

Notes: ¹ Later data are provisional

² Cases of gastroenteritis from a common source or foodborne intoxication eg, staphylococcal intoxication or toxic shellfish poisoning

³ Only acute cases of this disease are currently notifiable

⁴ Surveillance data based on laboratory-reported cases only

⁵ These totals 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 - September 2002

Cases this month

Current rate¹

Disease	Cases for September 2002, ² and current rate ^{1,2} by health district ^{3,4}																							
	Northland	NW Auckland	Central Auckland	South Auckland	Waikato	Tairāngia	Eastern BOP	Gisborne	Rotorua	Taupo	Taranaki	Ruapehu	Hawkes Bay	Wanganui	Manawatu	Wairarapa	Wellington	Hutt	Nelson-Marl	West Coast	Canterbury	South Cant	Otago	Southland
AIDS ⁵	0	4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0			0.3	0.8	0	0	1.6	0	0	0	0	0	0	0	5.2	0	0	0	0	0	0	0
Campylobacteriosis	36	156	151	117	105	26	2	11	16	7	43	0	49	14	17	5	117	39	19	8	125	37	39	37
	218.3	422.8	431.8	309.1	381.1	273.3	169.2	234.4	272.9	330.0	335.5	119.0	346.9	270.6	218.8	264.0	482.5	385.2	160.2	296.7	348.6	451.7	357.6	347.1
Cholera	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	0.2	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	3	6	6	6	49	2	1	2	2	7	21	0	17	2	22	2	21	4	0	3	26	12	13	9
	15.0	10.5	6.8	6.4	43.7	17.8	12.2	11.4	24.8	63.5	33.0	21.0	37.6	15.4	35.3	23.5	57.6	17.4	12.3	36.3	20.2	57.6	45.8	68.5
Dengue fever	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	1.9	5.4	3.7	1.6	1.5	2.0	0	0	12.7	1.9	0	0	1.7	3.4	0	0.8	4.6	0	0	2.7	0	1.2	0
Gastroenteritis	1	10	8	3	4	0	0	0	0	1	1	0	2	0	0	1	7	6	1	0	18	0	1	7
	7.1	20.9	29.1	10.1	9.1	1.5	4.1	15.9	7.8	3.2	13.6	0	9.8	30.8	34.7	18.3	33.5	34.1	13.9	13.2	82.9	32.0	30.7	16.7
Giardiasis	0	12	12	8	10	3	0	0	1	0	2	0	6	1	7	0	11	7	0	3	16	2	5	1
	17.8	44.9	65.5	36.7	51.8	50.3	20.4	45.5	31.0	41.3	16.5	0	89.2	46.2	27.2	28.7	50.1	57.6	30.2	59.3	37.8	26.9	28.9	16.7
<i>H. influenzae</i> type b 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	0.2	0	0	0	0	0	0	0	0	1.0	0	0.7	0	0.7	0	0	0	0	0	0.2	0	0	0
Hepatitis A	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.7	4.0	7.9	6.4	5.5	0	0	0	1.6	6.3	0	0	2.8	0	1.4	2.6	1.6	3.8	1.6	0	0.2	0	0	0.9
Hepatitis B	0	0	0	0	1	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	1.4	1.6	3.0	1.3	1.9	3.1	0	11.4	0	3.2	1.0	7.0	2.8	1.7	1.4	0	2.0	0	0	0	2.0	0	1.2	0
Hepatitis C	0	0	1	1	0	2	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	1	0	0
	0	0.7	0.5	1.1	0.3	12.4	2.0	0.0	6.2	3.2	0.0	0.0	1.4	0.0	0.7	2.6	3.5	1.5	0.0	6.6	1.2	3.8	0.6	0.0
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	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0.2	0	0	0
Lead absorption	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0
	4.3	1.9	2.2	0.5	3.6	2.3	2.0	11.4	0	3.9	0	1.4	3.4	4.1	2.6	0.4	0.8	0.8	0	0	3.5	6.4	6.6	2.8
Legionellosis ⁶	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0
	2.1	0.5	0.8	0.5	1.3	0.8	0	0	0	6.3	1.0	7.0	0.7	1.7	0	5.2	1.6	2.3	1.6	0	3.0	1.3	2.4	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	0	0	1	2	1	0	0	0	0	2	0	3	0	1	0	0	0	2	0	1	0	0	0
	6.4	1.9	0	0.3	7.1	5.4	2.0	11.4	0	3.9	14.0	21.6	5.1	7.5	2.6	0.8	0	6.5	6.6	1.0	14.1	2.4	0	1.9
Listeriosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	0	0.5	0.3	0.5	0.3	3.1	0	0	0	0	0	0	0	0	0	0	0.4	0.8	0	0	0.7	1.3	0.6	0.9
Malaria	0	0	1	1	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	0	1.2	0.8	1.3	2.6	3.1	0	0	3.1	3.2	1.0	14.0	1.4	0	6.8	0	2.0	0.8	2.5	0	1.7	2.6	1.8	0
Measles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1.4	0.5	0.5	1.3	0.6	1.5	0	2.3	0	0	0	0	0.7	0	0.7	0	2.4	0	4.9	16.5	2.7	1.3	1.2	6.5
Meningococcal disease ⁶	5	5	4	9	3	8	2	1	7	4	0	3	1	0	2	1	4	4	0	2	3	1	6	2
	22.8	9.5	15.0	28.5	18.5	24.0	32.6	20.5	62.0	63.5	9.7	21.0	23.0	6.9	9.5	20.9	10.2	12.9	4.1	23.1	6.5	9.0	37.9	12.0
Mumps	0	2	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
	1.4	1.9	1.1	1.1	0.3	1.5	2.0	0	1.6	0	0	0	3.5	1.7	0	0	1.2	0.8	3.3	3.3	1.0	1.3	2.4	3.7
Paratyphoid	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	1.2	0.8	0.8	0.6	0	0	0	0	0	0	0	1.4	0	0	0	1.2	0.8	0.8	0	0	1.3	0	0
Pertussis	0	9	5	1	12	0	1	0	0	0	3	0	0	0	2	1	1	7	4	3	31	17	0	0
	6.4	17.0	9.5	8.8	37.6	7.0	4.1	4.6	3.1	6.3	8.7	7.0	10.4	10.3	10.9	10.5	26.8	28.8	65.4	224.2	46.8	198.4	4.2	35.2
Rheumatic fever	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
	7.1	0.5	4.1	6.4	1.9	3.9	4.1	4.6	3.1	0	1.0	7.0	1.4	1.7	0	0	1.2	0.8	0	0	0.2	0	0	0
Rickettsial disease	0	2	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	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	0.7	0.2	0.5	0.3	0	0.8	4.1	0	0	0	1.0	0	8.4	0	0	5.2	1.2	0.8	2.5	3.3	0.5	0	0.6	0
Salmonellosis	1	9	8	7	12	1	1	1	2	0	4	1	11	1	6	2	5	3	4	2	10	6	15	18
	47.8	43.5	52.2	45.8	57.0	34.1	57.1	68.3	52.7	82.5	59.1	35.0	92.6	68.5	53.7	68.0	58.3	40.2	138.1	65.9	55.5	115.2	78.9	90.7
Shigellosis	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	1.4	3.7	6.8	6.7	0.6	2.3	0	0	4.7	3.2	1.9	0	4.2	0	0	0	1.6	0.8	0	0	3.5	5.1	1.8	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	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0
Tuberculosis	0	5	5	5	2	1	0	1	0	0	0	0	4	0	0	0	3	1	0	0	1	1	0	1
	9.3	10.5	23.4	17.6	8.1	8.5	0	6.8	6.2	12.7	0	0	12.5	6.9	4.8	13.1	11.4	13.7	1.6	3.3	5.5	6.4	4.8	2.8
Typhoid	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	1.2	1.4	3.2	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	0	0
VTEC / STEC	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	1	0	0
	0.7	0.9	1.6	0.8	4.5	1.5	12.2	0	4.7	3.2	4.8	0	0.7	0	2.0	0	0.8	0.8	0	0	3.2	1.3	1.8	2.8
Yersiniosis	0	1	1	2	4	1	0	0	0	0	1	0	1	0	0	1	5	2	0	0	2	2	1	1
	2.1	13.5	17.4	11.4	11.7	19.4	6.1	11.4	9.3	19.0	3.9	14.0	11.1	6.9	8.2	7.8	15.4	9.9	4.9	36.3	15.7	24.3	16.3	12.0

1 Current rate is based on the cumulative total for the 12 months up to and including September 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