

# INFECTIOUS DISEASES

## OUTBREAKS OF VIRAL GASTROENTERITIS

Six Public Health Units (Northern Sydney, Central Sydney, Southern Sydney, Eastern Sydney, Western Sector and Hunter) reported outbreaks of gastroenteritis occurring in institutions in July-August. Outbreaks were reported in two private hospitals, four nursing homes, five retirement villages and nine child care centres. Not all cases appear in the tables as most of the outbreaks were reported in August, too late to be included in this edition of the *Bulletin*. But the total number of cases will exceed 800. All outbreaks have been consistent with a viral gastroenteritis and were not related to the consumption of food. Symptoms were usually diarrhoea and vomiting lasting 24 hours. Several individuals required admission to hospital and one death has been reported that was possibly related. A causative organism has been reported in only one case – rotavirus was isolated from a retirement village resident from Eastern Sydney.

The wintertime occurrence of the cases, and the isolation of rotavirus from an adult, suggest rotavirus was the most likely causative organism of the outbreaks. Figure 3 shows rotavirus isolations from Eastern Sydney laboratories this year. Laboratory data are likely to reflect infections in children, as adults with gastroenteritis are less likely to be tested for rotavirus.

Rotavirus usually infects children up to the age of three years. It causes fever, vomiting, watery diarrhoea and, rarely, severe dehydration and death. It seldom causes disease in adults because resistance to the virus is usually acquired in childhood. Outbreaks of gastroenteritis due to rotavirus usually occur in the cooler months.

Norwalk virus is the most common cause of viral gastroenteritis in adults. It causes diarrhoea, vomiting, abdominal pain and myalgia, the gastrointestinal symptoms usually lasting 24-48 hours. Both viruses are transmitted via the faecal-oral route, usually by person-to-person contact or by contact with contaminated surfaces. The possibility of faecal-airborne transmission has also been suggested. Norwalk virus has been associated with waterborne and foodborne outbreaks of gastroenteritis.

Simple infection control measures are recommended for institutions affected by an outbreak of gastroenteritis. These include:

- thorough hand washing before and after contact with patients,
- the wearing of gloves by staff when in contact with the body fluids of patients,
- frequent cleaning of bathrooms and surfaces such as hand rails (twice daily is suggested),
- restriction of patient movement in and out of affected areas,
- discouraging visitors from having close contact with residents; and
- ensuring that staff who experience symptoms of illness seek advice from their medical attendants as to when they should return to work.

## HIV NOTIFICATIONS IN NSW, 1992-1995

In July we reported an apparent slight increase in HIV notifications for 1995 compared with the same period for 1994. A more detailed analysis is presented here.

New diagnoses of HIV infection reported by the NSW HIV State Reference Laboratories have been analysed in six-month periods between January 1992 and June 1995. The 1995 data, however, may be a slight over-estimate (by about 5 per cent) because some incomplete data have been included.

The terms "new diagnosis" and "new infection" are used in this report. A new diagnosis is defined as a case that has newly tested positive for HIV infection, regardless of when the infection was likely to have been contracted. A new infection refers to a case where there is evidence that infection was contracted within the previous 12 months.

Each year since 1986 (with the exception of 1990) the number of notifications of cases of newly diagnosed HIV has been greater for the first six-month period (semester) than for the second semester. Consequently, we present here the comparison of data for the first semester of 1995 with the first semester of 1994.

### Results

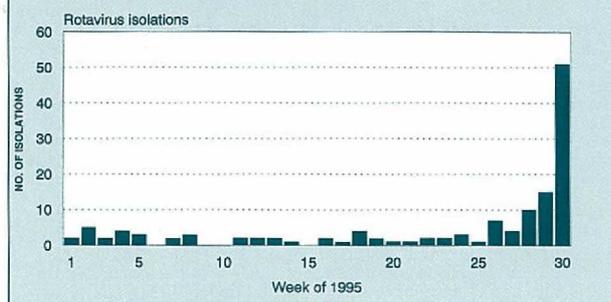
There has been a very significant and decreasing trend of notifications of new diagnoses over time since 1988 ( $p < 0.001$ ). But the total number of new diagnoses for the first semester of 1995 (256) was 10 per cent higher than that for the same period in 1994 (233) (Figure 4).

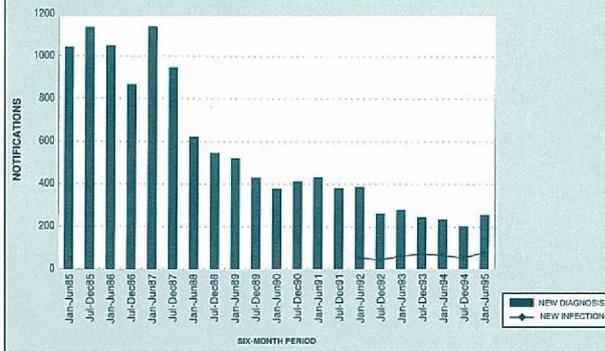
The number of new infections notified has been increasing since 1992 but this trend is not statistically significant. The proportion of new diagnoses that were new infections increased significantly ( $p = 0.001$ ), probably because of more complete reporting. The apparent increase of new infections as a proportion of total diagnoses in the first semester of 1995 (83, 32 per cent) compared with the first semester of 1994 (68, 29 per cent) was not statistically significant. Diagnoses with evidence of infection within three years showed the same pattern as that for new infections. There are no significant trends between 1992 and 1995 when the data are analysed by gender, age group, risk exposure or clinical status as a proportion of total notifications.

Most new diagnoses and new infections occurred in males aged 25-34 years who reported homosexual contact. Most cases were in this group, but there was a significant decrease in numbers (11 per cent) in it when the first

FIGURE 3

WEEKLY ROTAVIRUS REPORTS, NSW  
EASTERN SYDNEY LABORATORY SURVEILLANCE PROGRAM, 1995



**FIGURE 4****HIV NOTIFICATIONS IN NSW  
JANUARY 1985 TO JUNE 1995**

semesters of 1995 and 1994 were compared ( $p=0.01$ ). There was also a significant increase (9 per cent) in the proportion of new diagnoses occurring in individuals aged 35-44 years ( $p=0.02$ ). Eastern Sydney remained the centre of the epidemic, followed by Central Sydney and Northern Sydney.

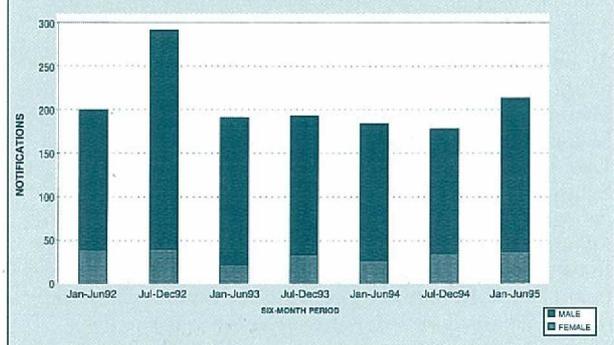
The number of females in NSW who tested positive for HIV infection was too small to discern a trend. But there has been an increase in the number of females newly diagnosed with HIV infection in the first semester of 1995 (26), compared with that for 1994 (14). The numbers for males were 215 and 210 respectively. For 14 diagnoses (5 per cent) in 1995 the gender of the individual was unknown. The change in the proportions for each gender during this period was not statistically significant.

For females, the highest number of notifications occurred among those aged 25-34 and the majority (for both new diagnoses and new infections) reported heterosexual contact only.

Evidence suggests the observed increase was not the result of a recent change in HIV testing patterns, HIV testing policy reported by clinics or the numbers of specimens tested for HIV. Further, there has been no increase in the number of people notified with late-stage HIV infection and this also suggests there has been no increase in the number of people tested.

Sixteen per cent of notifications were diagnosed in the late stage of infection. This is a concern because of the missed opportunities to support these individuals through counselling and treatment.

In this context it is worth noting that the Gonococcal Reference Laboratory at the Prince of Wales Hospital has reported an increasing trend in the numbers of gonococcal isolates and anorectal gonorrhoea cases between 1990 and 1993. During the first semester in 1995 the number of gonorrhoea isolates examined (333) was 34 per cent higher than for the same period in 1994 (248). In the first quarter in 1995 there were more isolates from males than for any period in 1994. More isolates were identified from rectal and pharyngeal sites, suggesting a higher proportion of infections resulting from male homosexual contact. There were also more gonorrhoea notifications to the NSW Health Department in 1995 than 1994 (Figure 5).

**FIGURE 5****GONORRHOEA NOTIFICATIONS IN NSW  
JANUARY 1992 TO JUNE 1995 BY GENDER**

### Conclusions

- At this stage, analysis of HIV notifications in NSW from 1992 to 1995 does not confirm any statistically significant change. Data for the second half of 1995 will assist in determining whether or not a real trend exists.
- Comparison of 1995 and 1994 data reveals no statistically significant difference in the number of new diagnoses or new infections detected. However, in view of the previous decreasing trend since 1986, the higher figure for the first semester of 1995 is of concern. This concern is further raised by the apparent increase in cases of gonorrhoea in 1995.
- From 1994 to 1995 there was a statistically significant increase in the proportion of new diagnoses in individuals aged 35-44 and a decrease in those aged 25-34. There were no other significant differences when the data were analysed by gender, age, risk exposure or clinical status.

### Action

The AIDS/Infectious Diseases Branch of the NSW Department of Health has convened a task force, which includes representatives of the AIDS Council of NSW, People Living with HIV/AIDS, the National Centre in HIV Epidemiology and Clinical Research, the National Centre in HIV Social Research and AIDS/Infectious Diseases Branch, to advise on a prevention strategy response. The Task Force has indicated that while no statistically significant trend is discernible at the time, the number of new infections overall remains unacceptable and it proposes to use the opportunity to recommend some specific response strategies.

### SALMONELLA DEATHS

Two notifications of unrelated deaths due to salmonella infection are being investigated by Public Health Units. Both cases were elderly. Preliminary investigations in one case suggest the infection may have been acquired while eating onshore in Noumea during a Pacific Island cruise.

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## Infectious diseases

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No other cases of foodborne illness related to the cruise have been notified.

An unusual cluster of six cases of *Salmonella typhimurium* phage type 179 var 1 has been notified by the Microbiological Diagnostic Unit of the University of Melbourne. Four of the notifications were from the South Western Sydney Area and one each from the Southern Sydney and the Western Sydney Areas. All the cases appeared to be closely related geographically. The dates of collection of specimens were between July 13 and 24, with three specimens dated July 13. The *S. typhimurium* phage type 179 var 1 isolated was unusual in that no antibiotic resistance was detected; phage type 179 is normally resistant to ampicillin or tetracycline. The PHUs are investigating these notifications for a possible foodborne relationship.

### CHOLERA ACQUIRED IN INDONESIA

The Eastern Sydney PHU was notified in July that a patient had been admitted to the Prince Henry Hospital with cholera. *Vibrio cholera* 01, biotype El Tor, serogroup Ogawa was isolated from a stool culture.

The patient and her partner had been on a three-week holiday in Indonesia where they had visited Jakarta, Bali and Lombok. They had stayed in five-star accommodation and eaten in the hotels or in tourist-type restaurants.

The patient had developed watery diarrhoea while on the island of Lombok. She left Indonesia by air the next day, returning directly to Australia. She continued to have moderate to severe diarrhoea, and consulted her general practitioner the following day. A stool specimen was collected and sent to a private laboratory. The next day her condition became worse, with the onset of vomiting. She was admitted to hospital five days after the onset of symptoms with a provisional diagnosis of cholera, confirmed later that day. She was treated with intravenous fluids and doxycycline.

The patient's partner remained well and unaffected. Both he and one other contact were offered antibiotic prophylaxis.

Cholera vaccine provides only partial protection (50 per cent), and therefore immunisation is not recommended for travellers to countries where cholera is endemic. When travelling in such countries, drinking water should always be boiled or sterilised, and no uncooked food should be eaten unless it has been peeled, regardless of the standard of facilities.

### INFLUENZA SURVEILLANCE

Influenza activity remained stable in July and decreased in the first week of August.

Data from the General Practitioner Sentinel Network representing about 73 doctors and 9,500 consultations a week were received up to the third week of July. The consultation rates for influenza-like-illness (ILI) in NSW for June and July were about 4 per cent (Figure 6). The rate for the third week of July (3.8 per cent) was slightly lower than for the previous two weeks. The ILI consultation rate reported by the South East PHU has sharply declined since early July, following the epidemic level rates (>10 per cent)

FIGURE 6

#### INFLUENZA-LIKE ILLNESS

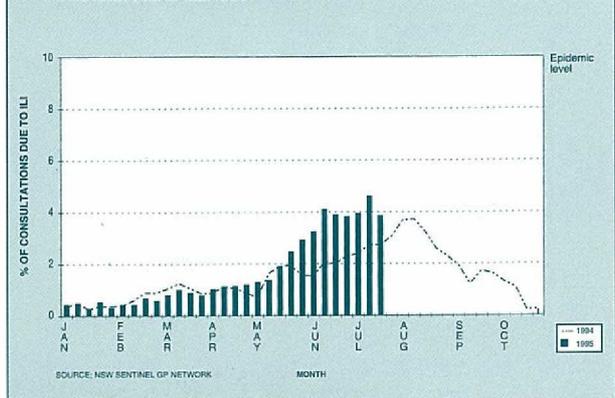
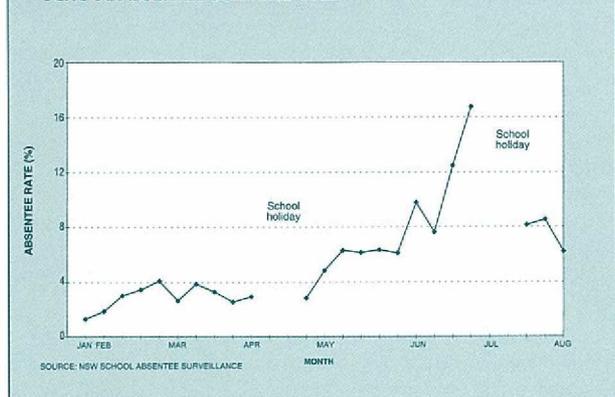


FIGURE 7

#### SCHOOL ABSENTEE SURVEILLANCE



since the second week of May. The Eastern Sydney, Western Sydney and Wentworth, and South West PHUs have also reported decreasing rates. However the rates reported by the Northern Districts PHU steadily increased from early May to the third week of July.

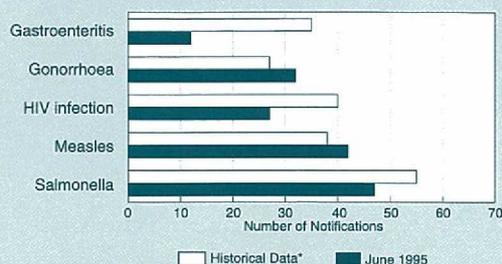
School absenteeism was reported by five PHUs representing 13 schools and 9,200 pupils. The absentee rate in the first week of August was a moderate 6.2 per cent (Figure 7).

For the first week of August the serology laboratories of the Prince of Wales and Westmead Hospitals reported 10 isolates of influenza A and 10 of influenza B. Influenza B was more common in July (40) than in June (5), while influenza A was less common (41 in July, 28 in June).

For the first week of August the virology departments of Westmead, Royal Alexandra Hospital for Children and Liverpool Hospitals reported the following isolates: 1 influenza A, 3 influenza B, 26 RSV, 2 parainfluenza 3 and 8 rhinovirus. The total numbers for July were 9 influenza A, 18 influenza B, 236 RSV, 9 parainfluenza 3, 1 parainfluenza 2, 12 rhinovirus and 6 adenovirus. A significant number of isolates of influenza B continues to be identified, while the number of influenza A isolates in July was a third of that in June. RSV isolates, which were expected to be high throughout the winter months, have sharply declined since the third week of July.

**FIGURE 8**

**SELECTED INFECTIOUS DISEASES  
JUNE 1995 COMPARED WITH HISTORICAL DATA**



\*Historical data: the average number of notifications diagnosed in the same month in the previous three years

**TABLE 2**

**INFECTIOUS DISEASE NOTIFICATIONS FOR 1995  
BY SELECTED MONTH OF ONSET FOR NOTIFICATIONS  
RECEIVED BY JULY 31, 1995**

Condition	Apr	May	Jun	Jul	Total
Adverse event after immunisation	2	4	4	3	13
AIDS	22	29	25	8	84
Arboviral infection	118	79	22	11	230
Brucellosis	-	1	-	-	1
Foodborne illness (NOS)	25	6	6	4	41
Gastroenteritis (instit)	35	38	12	105	190
Gonorrhoea infection	29	42	32	7	110
H. influenzae epiglottitis	2	-	-	-	2
H. influenzae infection (NOS)	1	-	-	-	1
H. influenzae meningitis	-	-	2	2	4
H. influenzae septicaemia	-	1	-	-	1
Hepatitis A - acute viral	32	51	29	9	121
Hepatitis B - acute viral	8	5	4	1	18
Hepatitis B - chronic/carrier	36	55	41	7	139
Hepatitis B - unspecified	324	395	362	143	1,224
Hepatitis C - acute viral	3	13	7	3	26
Hepatitis C - unspecified	543	771	643	221	2,178
Hepatitis D - unspecified	2	-	2	-	4
Hepatitis, acute viral (NOS)	-	-	-	1	1
Hydatid disease	-	-	3	-	3
HIV infection	35	48	27	20	130
Legionnaires' disease	2	7	6	1	16
Leptospirosis	1	-	-	-	1
Malaria	10	17	1	3	31
Measles	34	62	42	23	161
Meningococcal infection (NOS)	3	1	-	-	4
Meningococcal meningitis	2	3	12	8	25
Meningococcal septicaemia	-	1	3	2	6
Mumps	-	1	2	2	5
Mycobacterial atypical	29	17	6	-	52
Mycobacterial infection (NOS)	9	19	12	5	45
Mycobacterial tuberculosis	14	22	14	3	53
Pertussis	66	141	102	47	356
Q fever	11	15	15	9	50
Rubella	5	17	7	6	35
Salmonella (NOS)	97	102	47	38	284
Syphilis infection	63	91	59	38	251
Tuberculosis - non-active	5	4	11	1	21
Typhoid and paratyphoid	5	-	-	1	6

**TABLE 3**

**SUMMARY OF NSW INFECTIOUS DISEASE NOTIFICATIONS  
JULY 1995**

Condition	Number of cases notified		Cumulative	
	July 1994	July 1995	July 1994	July 1995
Adverse reaction	4	3	26	12
AIDS	40	8	313	168
Arboviral infection	7	11	349	459
Brucellosis	-	-	-	1
Cholera	-	-	-	-
Diphtheria	-	-	-	-
Foodborne illness (NOS)	5	4	135	275
Gastroenteritis (instit.)	47	105	159	205
Gonorrhoea	32	7	217	221
H influenzae epiglottitis	-	-	18	3
H influenzae B - meningitis	-	2	10	7
H influenzae B - septicaemia	1	-	9	4
H influenzae infection (NOS)	-	-	8	2
Hepatitis A	38	9	328	313
Hepatitis B	379	151	2,562	2,682
Hepatitis C	777	224	5,202	4,550
Hepatitis D	1	-	14	10
Hepatitis, acute viral (NOS)	-	1	1	1
HIV infection	35	20	268	276
Hydatid disease	2	-	10	7
Legionnaires' disease	10	1	46	49
Leptosy	-	-	2	1
Leptospirosis	-	-	11	2
Listeriosis	-	-	4	7
Malaria	12	3	127	79
Measles	37	23	347	383
Meningococcal meningitis	6	8	35	37
Meningococcal septicaemia	5	2	18	13
Meningococcal infection (NOS)	2	-	8	10
Mumps	-	2	3	7
Mycobacterial tuberculosis	32	3	253	143
Mycobacterial - atypical	40	-	311	199
Mycobacterial infection (NOS)	2	5	20	70
Pertussis	98	47	852	578
Plague	-	-	-	-
Poliomyelitis	-	-	-	-
Q fever	16	9	169	101
Rubella	4	6	61	64
Salmonella infection (NOS)	57	38	703	757
Syphilis	68	38	620	489
Tetanus	-	-	2	-
Typhoid and paratyphoid	3	1	19	24
Typhus	-	-	-	-
Viral haemorrhagic fevers	-	-	-	-
Yellow fever	-	-	-	-

**PUBLIC HEALTH EDITORIAL STAFF**

The editor of the Public Health Bulletin is Dr Michael Frommer, Director, Research and Development, NSW Health Department. Dr Lynne Madden is production manager.

The Bulletin aims to provide its readers with population health data and information to motivate effective public health action. Articles, news and comments should be 1,000 words or less in length and include a summary of the key points to be made in the first paragraph. References should be set out using the Vancouver style, the full text of which can be found in *British Medical Journal* 1988; 296:401-5.

Please submit items in hard copy and on diskette, preferably using WordPerfect, to the editor, NSW Public Health Bulletin, Locked Mail Bag 961, North Sydney 2059. Facsimile (02) 391 9029.

Please contact your local Public Health Unit to obtain copies of the NSW Public Health Bulletin.

**TABLE 4**

**INFECTIOUS DISEASE CUMULATIVE NOTIFICATIONS FOR 1995  
RECEIVED BY JULY 31, 1995**

Condition	CCA	CSA	CW	ESA	HUN	ILL	NC	ND	NSA	SE	SSA	SW	SWS	WEN	WN	WSA	U/K	Total
AIDS	2	42	-	54	7	1	14	-	19	-	10	-	6	6	-	7	-	168
Arboviral infection	6	4	-	7	10	24	178	41	3	150	3	11	-	2	18	2	-	459
Brucellosis	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Gonorrhoea infection	2	41	6	83	3	9	13	6	7	5	13	-	13	2	9	9	-	221
Hepatitis B - acute viral	-	3	1	6	-	-	4	2	-	1	-	-	3	1	8	3	-	32
Hepatitis B - chronic/carrier	15	-	9	147	-	-	4	9	2	-	10	-	-	5	7	63	-	271
Hepatitis B - unspecified	18	269	8	43	56	55	35	4	286	17	354	14	882	11	5	322	-	2,379
Hepatitis C - acute viral	1	-	-	4	-	-	-	-	-	1	-	-	-	2	33	1	-	42
Hepatitis C - unspecified	138	495	196	698	281	287	442	79	299	144	300	143	529	78	15	384	-	4,508
Hepatitis D - unspecified	-	-	-	1	-	-	4	-	1	-	1	-	3	-	-	-	-	10
HIV infection	4	42	1	102	9	7	6	-	14	-	13	-	15	7	-	16	40	276
Hydatid disease	-	-	1	1	-	-	1	-	1	-	-	2	-	-	-	1	-	7
Legionnaires' disease	1	2	-	3	8	5	1	2	6	-	-	-	3	1	1	16	-	49
Leprosy	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Leptospirosis	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	2
Malaria	3	5	-	7	8	4	8	1	19	1	3	3	4	3	-	10	-	79
Meningococcal infection (NOS)	1	-	-	1	1	-	2	-	-	-	2	1	1	-	1	-	-	10
Meningococcal meningitis	5	1	3	2	7	3	3	2	3	2	2	-	3	1	-	-	-	37
Meningococcal septicaemia	-	3	-	-	5	-	1	-	-	-	1	-	-	-	-	-	-	13
Mycobacterial atypical	7	28	-	43	12	6	8	6	26	1	17	3	27	4	6	5	-	199
Mycobacterial infection (NOS)	3	5	-	1	6	-	3	-	3	-	4	-	39	1	-	5	-	70
Mycobacterial tuberculosis	2	21	2	9	4	4	3	2	18	1	22	3	6	3	3	40	-	143
Q fever	-	1	7	-	9	2	24	4	-	-	-	1	1	-	31	1	-	101
Syphilis infection	5	54	9	86	12	10	44	25	19	5	35	2	76	8	71	28	-	489
Tuberculosis - non-active	1	-	-	-	-	5	1	-	16	-	24	1	-	-	1	2	-	51

**TABLE 5**

**VACCINE PREVENTABLE AND RELATED CONDITIONS, CUMULATIVE NOTIFICATIONS FOR 1995  
BY PUBLIC HEALTH UNIT, RECEIVED BY JULY 31, 1995**

Condition	CCA	CSA	CW	ESA	HUN	ILL	NC	ND	NSA	SE	SSA	SW	SWS	WEN	WN	WSA	Total
Adverse event after immunisation	-	-	-	-	1	-	3	2	-	2	2	5	-	4	-	1	20
H. influenzae epiglottitis	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-	-	3
H. influenzae infection (NOS)	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2
H. influenzae meningitis	-	1	-	-	-	-	3	-	-	-	-	-	1	-	-	-	2
H. influenzae septicaemia	-	-	-	-	1	-	-	-	1	-	1	-	-	-	-	-	4
Measles	11	23	6	52	36	53	22	32	12	5	30	8	24	37	-	32	383
Mumps	-	-	-	1	-	2	2	-	1	-	-	-	-	-	-	-	7
Pertussis	22	18	8	20	30	41	156	6	47	16	27	33	33	51	11	59	578
Rubella	-	-	-	4	5	2	9	5	1	-	12	1	-	4	1	20	64

**TABLE 6**

**FOODBORNE INFECTIOUS DISEASE CUMULATIVE NOTIFICATIONS FOR 1995  
BY PUBLIC HEALTH UNIT, RECEIVED BY JULY 31, 1995**

Condition	CCA	CSA	CW	ESA	HUN	ILL	NC	ND	NSA	SE	SSA	SW	SWS	WEN	WN	WSA	Total
Foodborne illness (NOS)	16	9	-	-	162	-	-	1	4	-	-	8	36	-	20	19	275
Gastroenteritis (insti)	-	33	-	-	2	-	45	-	34	1	-	-	1	84	2	3	205
Hepatitis A - acute viral	8	51	32	80	13	7	15	-	26	-	22	10	25	3	3	18	313
Listeriosis	-	1	1	1	-	-	-	1	1	1	-	-	-	-	-	-	7
Salmonella (NOS)	18	41	14	48	58	39	90	49	79	31	69	21	62	34	29	74	756
Typhoid and paratyphoid	-	1	-	7	-	-	1	-	2	-	5	-	3	1	-	4	24
Vibrio infection (non-cholera)	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1

*Abbreviations used in this Bulletin:*

CSA Central Sydney Health Area, SSA Southern Sydney Health Area, ESA Eastern Sydney Health Area, SWS South Western Sydney Health Area, WSA Western Sydney Health Area, WEN Wentworth Health Area, NSA Northern Sydney Health Area, CCA Central Coast Health Area, ILL Illawarra Health Area, HUN Hunter Health Area, NC North Coast Public Health Unit, ND Northern District Public Health Unit, WN Western New South Wales Public Health Unit, CW Central West Public Health Unit, SW South West Public Health Unit, SE South East Public Health Unit, OTH Interstate/Overseas, U/K Unknown, NOS Not Otherwise Stated.

Please note that the data contained in this Bulletin are provisional and subject to change because of late reports or changes in case classification. Data are tabulated where possible by area of residence and by the disease onset date and not simply the date of notification or receipt of such notification.