INFECTIOUS DISEASES – AUGUST 1997

TRENDS

Reports of **arbovirus** infections declined further in June, the tail end of an extended season for 1997. Meanwhile, reports of **hepatitis A** cases rose, to double the historical average for June (Figure 4). Most cases were reported from South Eastern (17) and Central (10) Sydney Areas in July (Table 7). A large proportion of these people had eaten contaminated prawns at a restaurant (see the *NSW Public Health Bulletin*, June-July 1997). Many reports of hepatitis A have also emanated from northern NSW coastal and inland areas (Table 7). South Eastern Sydney Public Health Unit reported 127 cases of **gastroenteritis** in a long-term care facility in June. The Public Health Unit's investigation identified the likely source of this outbreak to be person-to-person spread of a viral agent (probably a Norwalk-like virus). For a guide to the control of such outbreaks see the *NSW Public Health Bulletin*, October 1996, page 128. Hand washing is the most important way to prevent person-to-person transmission of enteric agents.

Early in August, a 17-week-old infant died of **pertussis** in the Sydney Children's Hospital. The child lived on the NSW mid-north coast. In response, the NSW Health Department issued a media release, which again urged parents to ensure their children were fully immunised, and for people with the symptoms of pertussis to seek treatment. A new acellular pertussis vaccine has been licensed for use in Australia, but (as of the end of August) remains unfunded by the Commonwealth Government. The existing whole-cell vaccine remains freely available, and is thought to be as effective as the acellular vaccine. However, the acellular vaccine may result in fewer local reactions at the injection site. The NSW Health Department is negotiating with the Commonwealth Government to ensure that the new vaccine becomes freely available as soon as possible. NSW Health has bought limited stocks of this vaccine and has restricted its use to children with a history of reactions to the current vaccine.

MENINGOCOCCAL DISEASE CLUSTER

The end of winter usually heralds a sharp rise in **meningococcal disease**. The historical peak observed in July and August has not been as clear-cut this year, perhaps because a new strain of the bacteria seems to have been emerging in Sydney over the past year. In August 1996 an outbreak of meningococcal disease caused by *Neisseria meningiditis* serogroup C was reported in the Wentworth Area in western Sydney. Subsequently, further cases of group C have appeared farther afield. Figure 5 shows crude rates of reported meningococcal disease in NSW for the 12 months to June 1997. Interestingly, there is surprisingly little variation from the State average of 3.0 cases/100,000 population, except in the Wentworth Area, with 11.1 reported cases/100,000.

In August, the South Eastern Sydney Public Health Unit investigated three cases of suspected meningococcal disease among college students at the University of NSW who were admitted to hospital between August 15 and 22. All cases reported fever, rash and acute arthritis, but no meningism. The first two cases were close friends who attended the same college. The third case was an unrelated student who attended a different college within the same college complex. The two colleges share a dining room.

Neisseria meningitides serogroup C (NMSC) was identified from throat swabs taken from all three cases and in the blood of one case. The clinicians caring for the cases believe meningococcal disease was the likely diagnosis. Public Health Unit staff ensured that close contacts of cases received the antibiotic rifampicin to prevent further spread of the disease. A college ball planned for August 23 was cancelled to prevent the possible further spread of the disease.

The United States Centers for Disease Control and Prevention (CDC) issued clear guidelines for the control of NMSC in 1997[1]. For vaccination to be considered, the CDC recommends that there be:

- at least three unrelated cases within a closed community; and
- confirmation of NMSC in each case either through blood culture or identification of antigen in cerebrospinal fluid.

Studies in Western Sydney in 1996 and in the US indicate that people infected with NMSC do not carry it for very long – they either become ill or clear the infection rapidly.

The NSW Health Department convened a teleconference of national experts and clinicians treating the cases to discuss further public health action. The panel reviewed the available data, including:

- Cases 1 and 2 were definitely close contacts, and case 3 also may have had contact with case 1 or case 2.
- Only case 2 has been confirmed through blood cultures.
- Because all three suspected cases could be considered contacts, CDC's criteria for vaccination were not fulfilled on two grounds (three independent cases have not occurred and only one case has been confirmed).
- It is unlikely that other members of the college community continue to be at increased risk for this disease.

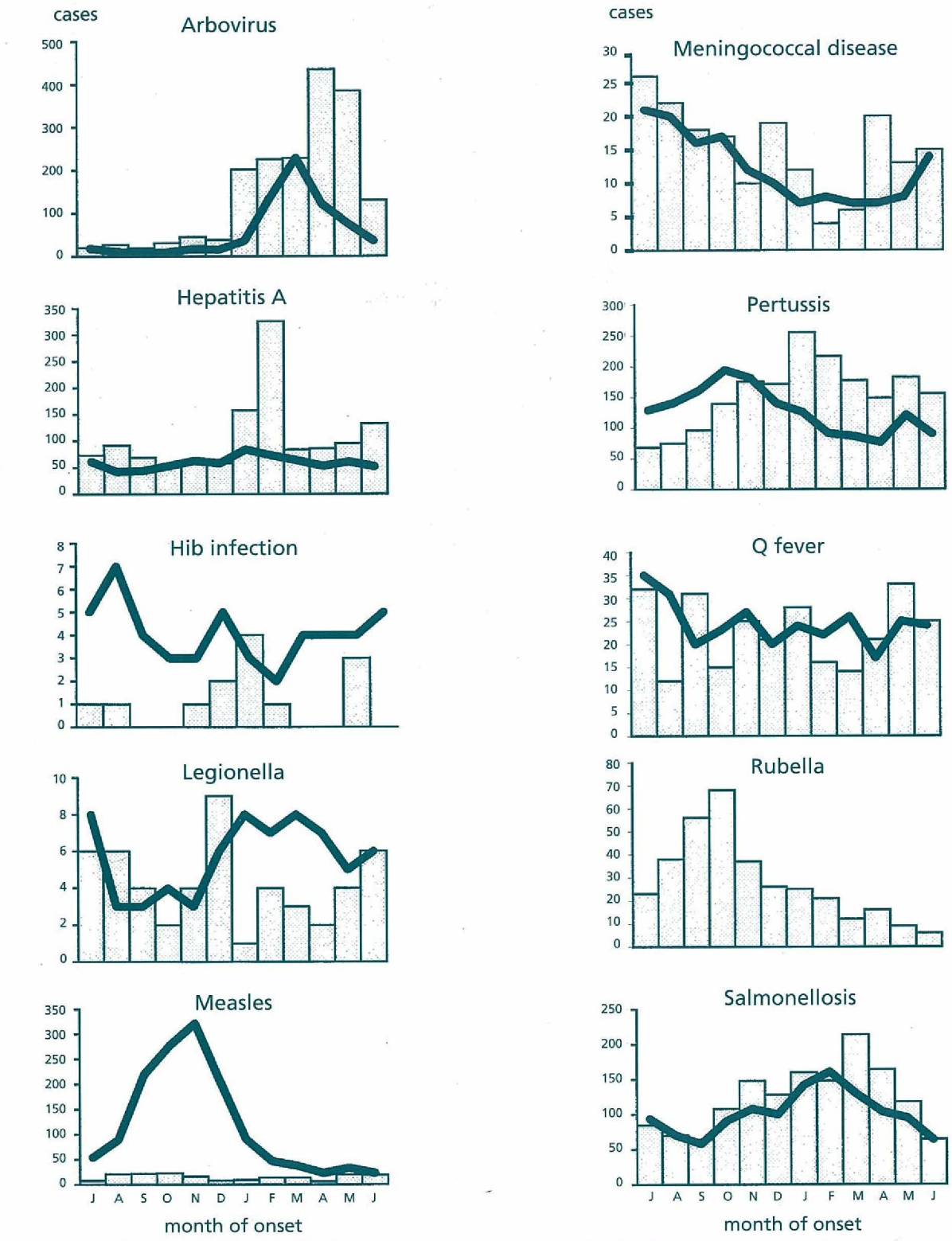
The expert panel agreed that there was no evidence to suggest continuing transmission of NMSC in the college community, and a vaccination program was not indicated.

As meningococcal infection is more prevalent in the spring months, clinicians are urged to be particularly vigilant for people with suggestive symptoms and to initiate intravenous antibiotics on clinical suspicion. Culture of blood or cerebrospinal fluid samples is an essential diagnostic aid, but collection of samples should not delay administration of antibiotics. Throat swabs should be taken from all suspected cases (but not their contacts) to assist diagnosis should cultures prove negative. Prince of Wales Hospital Department of Microbiology is also developing serological tests to help confirm the diagnosis. Laboratories isolating *Neisseria meningococcus* are urged to forward samples for further characterisation to the microbiology departments at Prince of Wales or Liverpool Hospital.

Continued on page 72 ▶

FIGURE 4

REPORTS OF SELECTED INFECTIOUS DISEASES, NSW, 12 MONTHS TO JUNE 1997, BY MONTH OF ONSET (WITH HISTORICAL COMPARISON)



Because of data collation problems, historical rubella figures are unavailable.

July 96 - June 97 / **Mean July 93 - June 96**

TABLE 7

INFECTIOUS DISEASE NOTIFICATIONS FOR NSW RECEIVED IN JULY 1997 BY AREA HEALTH SERVICES

Condition	Area Health Service																	Period	
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	Total for Jul**	Total to date**
Blood-borne and sexually transmitted																			
AIDS	2	4	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	8	167
HIV infection*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	170
Hepatitis B – acute viral*	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–	–	–	2	36
Hepatitis B – other*	51	51	–	–	70	6	12	8	48	3	1	8	1	7	–	3	3	272	2,299
Hepatitis C – acute viral*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6
Hepatitis C – other*	65	49	–	–	87	29	44	38	112	31	21	17	6	26	–	13	32	570	4,956
Hepatitis D – unspecified*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5
Hepatitis E	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5
Hepatitis, acute viral (NOS)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gonorrhoea*	8	9	–	–	2	1	5	3	32	1	–	1	–	–	–	–	–	62	373
Syphilis	7	6	–	–	3	–	1	1	10	2	1	2	–	–	2	–	–	35	343
Vector-borne																			
Arboviral infection*	3	10	–	–	1	12	15	9	8	4	5	1	5	1	–	7	1	82	1,670
Malaria*	3	5	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	10	102
Zoonoses																			
Brucellosis*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Leptospirosis*	–	–	–	–	–	–	2	–	1	–	–	–	–	–	–	1	1	5	21
Q fever*	–	–	–	–	–	–	3	–	–	5	5	3	6	–	1	–	1	24	166
Respiratory/other																			
Legionnaires' disease	1	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	3	30
Meningococcal (invasive) infection	5	2	–	–	3	1	–	1	8	–	–	–	1	5	–	–	–	26	94
Leprosy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Mycobacterial tuberculosis	2	4	–	–	11	–	–	–	6	–	–	–	1	–	–	–	–	24	211
Mycobacteria other than TB	9	8	–	–	–	–	1	–	4	2	1	1	1	–	–	–	1	28	228
Vaccine-preventable																			
Adverse event after immunisation	–	–	–	–	–	–	–	–	–	–	–	1	–	1	–	–	1	3	26
H.influenzae B (invasive) infection	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10
Measles	1	2	3	–	1	–	9	2	4	–	–	–	1	–	–	–	–	23	99
Mumps*	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	21
Pertussis	16	29	1	1	8	2	74	6	24	8	1	3	3	8	1	3	4	192	1,371
Rubella*	1	1	1	1	–	–	2	1	2	2	–	1	–	2	–	–	1	15	102
Tetanus	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	3
Faecal-oral																			
Cholera*	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	2
Foodborne illness (NOS)	6	–	–	–	–	1	–	–	1	–	–	–	2	–	–	–	1	11	67
Gastroenteritis (instit)	–	–	–	–	12	29	–	–	127	–	–	–	–	–	–	–	–	168	463
Hepatitis A	10	5	–	–	5	3	2	8	17	6	8	8	4	2	4	–	1	83	973
Listeriosis*	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	12
Salmonellosis (NOS)*	5	9	–	–	12	3	5	1	9	5	2	3	–	5	–	1	2	62	985
Typhoid and paratyphoid*	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	16

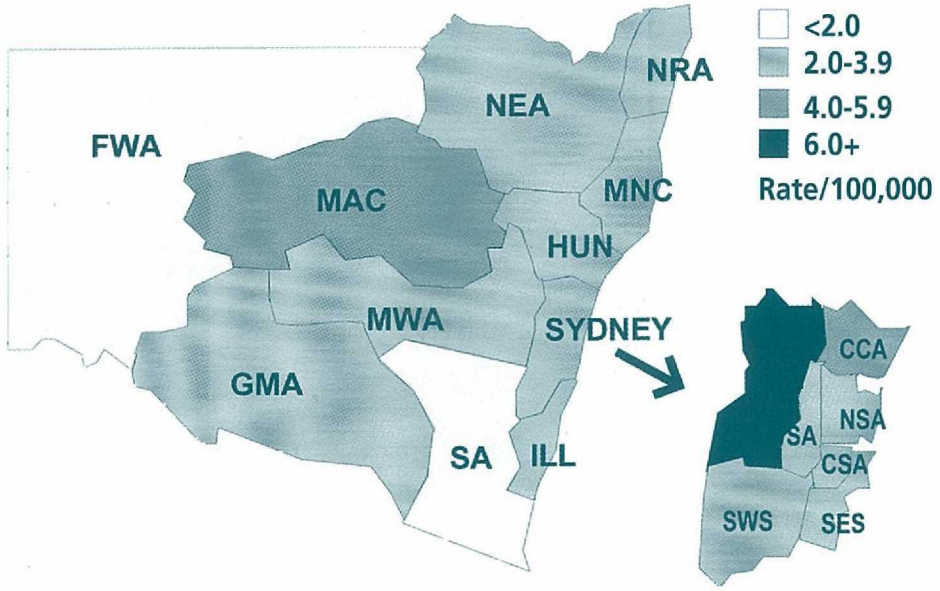
* lab-confirmed cases only
** includes cases with unknown postcode

Abbreviations used in this Bulletin:
CSA Central Sydney Health Area, SES South 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, NRA Northern Rivers Health Area, MNC Mid North Coast Health Area, NEA New England Health Area, MAC Macquarie Health Area, MWA Mid West Health Area, FWA Far West Health Area, GMA Greater Murray Health Area, SA Southern Health Area, 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.

FIGURE 5

REPORTS OF MENINGOCOCCAL DISEASE, NSW, JULY 96 - JUNE 97 BY HEALTH SERVICE AREA



Infectious Diseases – August

► *Continued from page 69*

INFLUENZA SURVEILLANCE

Reports of influenza appear to have begun to decline a little in August (Figure 6). Between August 1 and 24, sentinel laboratories reported 122 diagnoses of influenza A infections and 33 of influenza B infections. In July there were 164 influenza A and 64 influenza B diagnoses.

Reports of influenza-like illness from the NSW Sentinel General Practice Surveillance Scheme are received through five Public Health Units from 5 to 64 general practitioners carrying out 732 to 7,411 consultations a week. These GPs reported higher rates of flu-like illness among their patients in August 1997 than in previous years (>4 per cent), although the peak seems to have passed (Figure 7).

1. Centers for Disease Control. Control and prevention of meningococcal disease and control and prevention of serogroup C meningococcal disease: evaluation and management of suspected outbreaks: recommendations of the Advisory Committee on Immunisation Practices (ACIP). *MMWR* 1997; 46 (no.RR-5).

FIGURE 6

Influenza A and influenza B virus isolations, by fortnight, 1 January to 30 August 1997

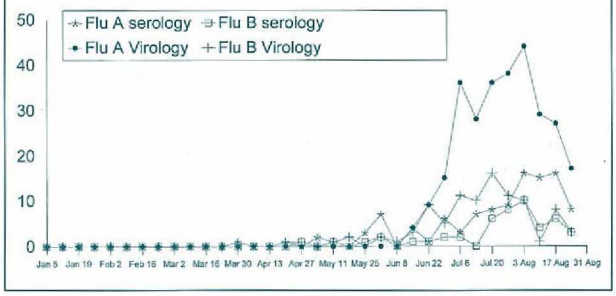
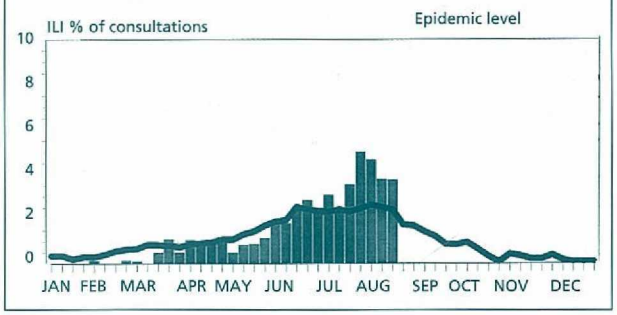


FIGURE 7

NSW general practitioner sentinel surveillance of influenza-like illness, January 1 to August 24, 1997, by week of consultation (columns), with historical comparisons (1993 to 1996, line)



TRENDS

The Statewide **pertussis** outbreak continued through to the end of July (Figure 8). In July 249 cases were reported. To the end of August, more than 1,700 cases had been reported in NSW (Table 8). The number of cases of **meningococcal disease** in July was more than the expected number for this time of year. Among the cases reported in August was a cluster of three at a college complex at the University of NSW (see page 69).

Figure 9 shows the reported incidence of **Q fever** by Area for the 12 months to July 1997 and illustrates that this disease is a problem in the northern and western parts of the State. Although an effective vaccine has been available for some years, there is some difficulty in achieving good vaccine coverage among people at risk, particularly those who work with or slaughter farm animals.

SIXTH NSW INFANT DIES FROM WHOOPING COUGH

In September a seven-week-old boy died of pertussis at the New Children's Hospital (Westmead). The child had lived in Blacktown in Western Sydney. He was too young to have been immunised against pertussis. He had a two-week history of coughing and was admitted to hospital late in August. Laboratory tests confirmed pertussis as the cause of death.

Record numbers of pertussis cases have been reported in NSW in the past 12 months. Between January 1 and the end of August, 1,726 cases had been reported. By contrast, 1,171 cases were reported from January to December in 1996, and 1,389 were reported in 1995.

The death of the child from the Western Sydney Area is the sixth death from pertussis in NSW in the past 12 months.

In response, NSW Health has:

- issued a press release, which again urges parents to ensure their children have been fully immunised;
- continued negotiations with the Commonwealth Government to ensure funding for the new acellular pertussis vaccine (as of September unfunded by the Commonwealth Government);
- begun developing new investigation and prevention protocols for all Public Health Units; and
- developed a new case investigation form that will identify barriers to the prevention of pertussis.

INFLUENZA SURVEILLANCE

Reports of influenza appear to have begun to decline a little in August (Figure 6). During the period August 24 to 30, 25 cases of influenza A and six cases of influenza B were reported. Reports of influenza-like illness from the NSW Sentinel General Practitioner Surveillance Scheme are received through five Public Health Units from 5 to 64 doctors carrying out 732 to 7,411 consultations a week. Surveillance shows a jump in the percentage of consultations for influenza-like illness compared with previous years (Figure 6).

FIGURE 9

REPORTS OF Q FEVER, NSW, AUG 96 - JULY 97 BY HEALTH SERVICE AREA

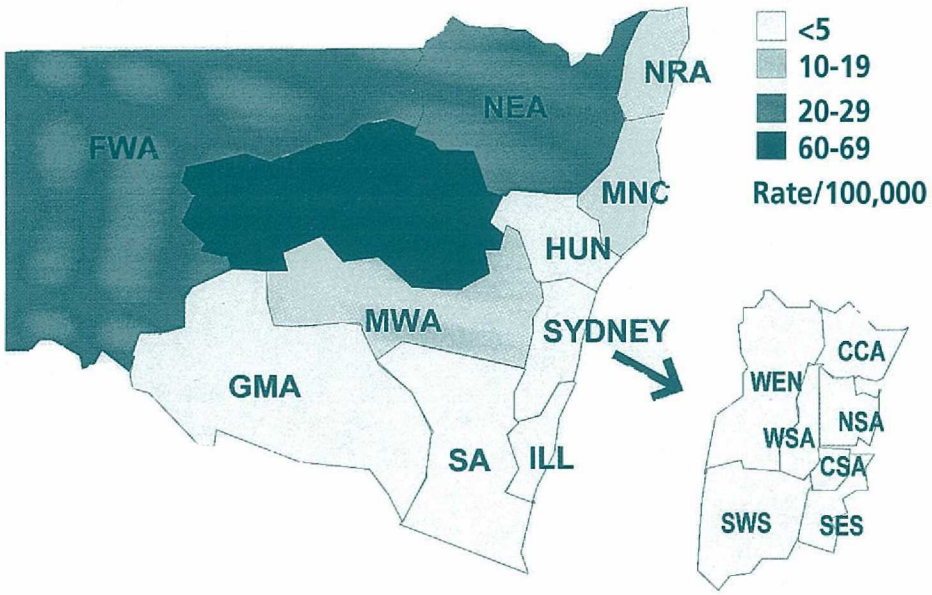
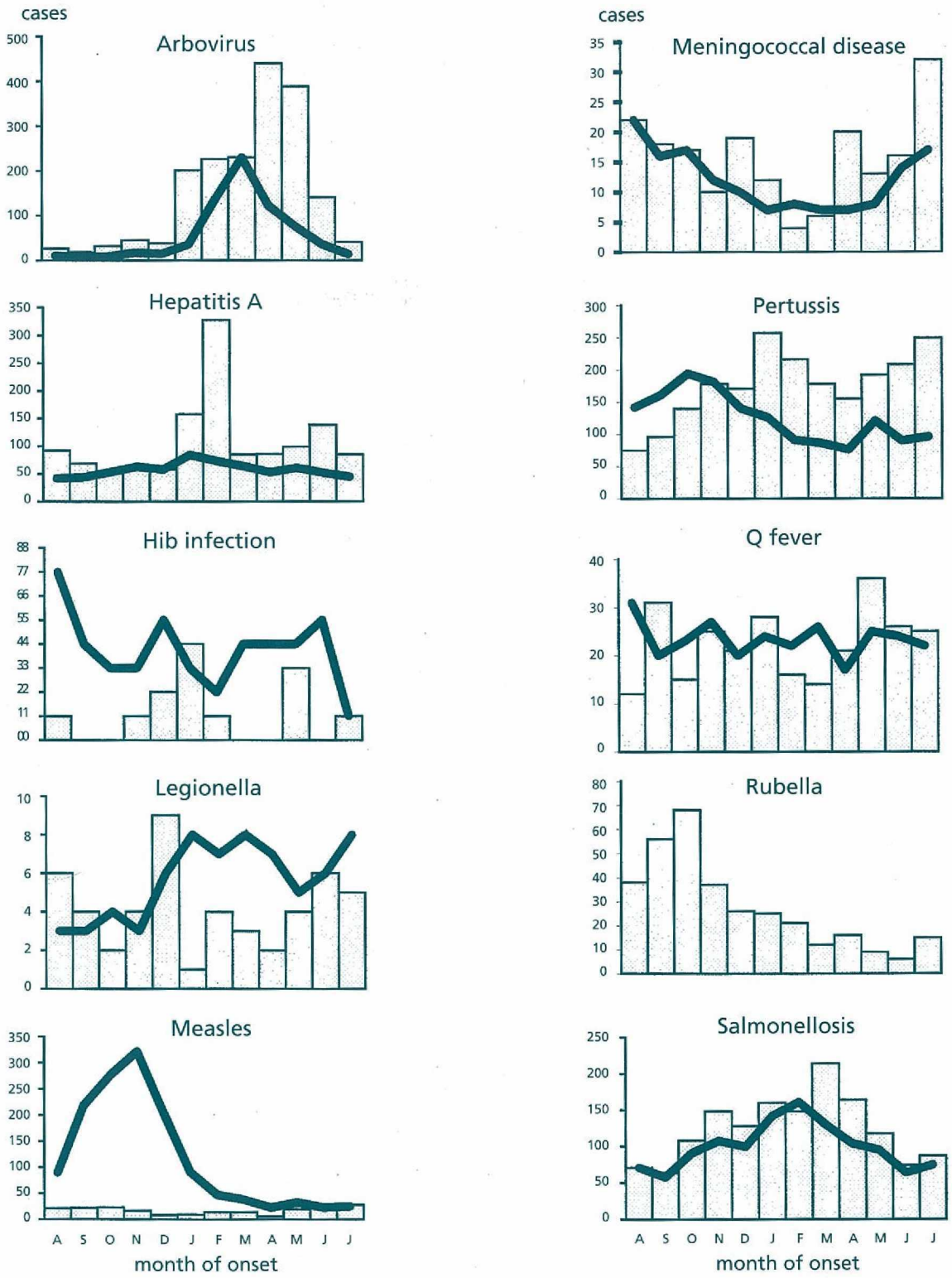


FIGURE 8

REPORTS OF SELECTED INFECTIOUS DISEASES, NSW, 12 MONTHS TO JULY 1997, BY MONTH OF ONSET (WITH HISTORICAL COMPARISON)



Because of data collation problems, historical rubella figures are unavailable.

Aug 96 - July 97 / **Mean Aug 93 - July 96**

TABLE 8

INFECTIOUS DISEASE NOTIFICATIONS FOR NSW RECEIVED IN AUGUST 1997 BY AREA HEALTH SERVICES

Condition	Area Health Service																	Period	
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	Total for Aug**	Total to date**
Blood-borne and sexually transmitted																			
AIDS	–	–	–	–	–	–	1	1	1	–	–	–	–	–	–	–	–	3	173
HIV infection*	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	2	211
Hepatitis B – acute viral*	1	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	3	40
Hepatitis B – other*	41	38	1	–	11	7	5	6	26	2	4	4	–	3	1	2	2	153	2,523
Hepatitis C – acute viral*	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	9
Hepatitis C – other*	68	41	2	–	11	33	34	23	110	31	17	15	11	23	2	21	20	463	5,564
Hepatitis D – unspecified*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6
Hepatitis E	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	6
Hepatitis, acute viral (NOS)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Gonorrhoea*	7	2	–	–	2	2	–	–	25	3	1	–	2	–	1	–	–	45	429
Syphilis	11	2	–	–	1	–	2	1	15	–	–	–	2	3	1	–	–	38	385
Vector-borne																			
Arboviral infection*	1	–	1	1	–	3	2	6	3	2	1	5	4	2	2	3	–	36	1,723
Malaria*	–	6	–	1	2	–	1	–	2	1	–	1	1	–	–	–	–	15	119
Zoonoses																			
Brucellosis*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3
Leptospirosis*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1	22
Q fever*	–	–	–	–	–	–	1	–	–	2	4	5	9	3	1	1	1	27	193
Respiratory/other																			
Legionnaires' disease	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	34
Meningococcal (invasive) infection	1	4	1	2	1	5	–	–	5	–	1	–	–	4	–	2	–	26	128
Leprosy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Mycobacterial tuberculosis	1	7	–	–	–	–	–	–	6	–	–	1	–	–	–	1	–	16	251
Mycobacteria other than TB	11	3	–	–	–	2	–	–	3	–	2	–	–	–	–	–	–	21	243
Vaccine-preventable																			
Adverse event after immunisation	–	–	–	–	–	–	–	–	4	1	–	1	–	–	–	–	–	6	33
H.influenzae B (invasive) infection	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	2	11
Measles	3	5	1	1	–	–	2	–	5	–	1	1	–	1	–	1	–	21	130
Mumps*	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	22
Pertussis	17	45	19	11	13	4	57	21	19	25	15	1	4	19	–	2	7	279	1,726
Rubella*	3	–	1	–	1	–	–	1	2	4	–	–	–	1	–	–	1	14	123
Tetanus	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3
Faecal-oral																			
Cholera*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
Foodborne illness (NOS)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	2	69
Gastroenteritis (instit)	–	–	–	–	–	60	–	–	–	–	–	–	–	–	–	–	–	60	600
Hepatitis A	12	4	7	–	3	2	4	2	10	5	6	10	4	6	3	–	–	78	1,074
Listeriosis*	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–	1	–	3	15
Salmonellosis (NOS)*	7	10	7	9	5	3	5	6	8	1	6	3	3	1	–	–	1	75	1,083
Typhoid and paratyphoid*	1	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	2	18

* lab-confirmed cases only
** includes cases with unknown postcode