

WHAT IF THERE IS AN OUTBREAK OF VIRAL GASTROENTERITIS?

Outbreaks of viral gastroenteritis increase in winter and are common within families and group settings including nursing homes, hospitals, childcare centres, and schools. Doctors and hospitals are required to notify their local public health unit whenever there are at least two cases of gastroenteritis that are linked.

Public health units are able to:

- advise on how to control the outbreak;
- investigate outbreaks to determine the source and mode of transmission;



- advise on the exclusion of people with viral gastroenteritis from work, school or other public gatherings.

For further information about how to look after children with gastroenteritis see the Gastroenteritis in Children fact sheet jointly developed by the Children's Hospital Westmead at www.chw.edu.au and the Sydney Children's Hospital at www.sch.edu.au.

For more information please contact your doctor, local public health unit, or community health centre.

September–October 2003 ☒

COMMUNICABLE DISEASES REPORT, NSW, FOR JULY 2003

TRENDS

Notifications of communicable diseases for July were consistent with notifications in previous winters with: increased reports of meningococcal disease and invasive pneumococcal disease, and decreased reports of arbovirus infections and salmonellosis (Figure 1 and Table 1).

MEASLES IN WENTWORTH

The Wentworth Public Health Unit reported a measles outbreak, with nine confirmed cases, beginning early June 2003. Eight cases have been linked through contact with the first case. No link has been established in the ninth case.

The outbreak started in June when a young adult (Case 1), who had recently returned from a holiday in Asia, presented to the Emergency Department of a Sydney hospital with a fever and rash. The patient presented again the next day and was admitted. Measles was confirmed five days later by serology (IgM+). The case had no history of immunisation for measles.

Two people who were in the Emergency Department at the same time as Case 1 later became ill with measles. One was a two-month old baby (Case 2) whose onset of rash was eight days after exposure to Case 1. While the

incubation period appears short, measles was confirmed from a nasopharyngeal swab. The other was the baby's father (Case 3) who developed symptoms 12 days after exposure. The mother of the baby was immune to measles, with serology showing her to be IgG positive. The father had not been immunised against measles. Subsequently, the baby's unimmunised sibling developed measles (Case 4), probably contracted from his father (Case 3). Onset of rash in Case 4 was 13 days after the start of the infectious period of Case 3.

While infectious, Case 3 presented to the Emergency Department at the hospital. Ten days later, two more people developed symptoms of measles. One was a staff member of the Emergency Department (Case 5); the other was a child (Case 6), who was present in the Emergency Department at the same time as Case 3. Case 6 was reported to have been immunised outside Australia. Measles was confirmed in Cases 5 and 6 by immunofluorescence from a throat swab.

Subsequently, another member of staff of the hospital also contracted measles (Case 7), over 35 years of age, which would be considered to be outside the risk age (based on likely natural immunity from exposure as a child). Exposure is likely to have been with Case 5, the staff member from the Emergency Department.

Case 6 had attended church while infectious, and a member of the church congregation who had been in contact with Case 6 developed symptoms 10 days later (Case 8). Measles was confirmed by serology.

The further case in the Wentworth area was a young adult (Case 9). Although Case 9 lives in the same local government area as Cases 1–8, no other link has been established.

Two other confirmed cases of measles in Western Sydney, and one confirmed case in South East Sydney, were subsequently reported, but no links have been established to the Wentworth cluster.

Contact tracing for the nine cases in the Wentworth Area was extensive and involved telephoning possible contacts who might have been exposed while attending: the Emergency Department; a local medical centre (several occasions); a childcare centre; and the church attended by Cases 6 and 8. A letter was translated for members of the church congregation. Possible contacts were advised to be immunised with measles, mumps and rubella (MMR) vaccine or given immunoglobulin as prophylaxis.

This investigation highlights the need for clinicians to consider measles as a diagnosis in people presenting with fever and rash. Patients presenting with possible measles should be immediately isolated from other patients to minimise the risk of transmission within health care settings. In addition, health care managers and health care workers should ensure that they are immune to measles (either through previous known infection or receipt of two doses of a measles-containing vaccine); and, if in doubt, seek measles immunisation.

A CASE OF MENINGOCOCCAL DISEASE AND CHICKENPOX

The South Eastern Sydney Public Health Unit reported that in July, a young adult (Patient A) presented to an Emergency Department with a three-day history of headache and rhinorrhoea, and a one-day history of rash. On examination, his temperature was 37.8 degrees celsius and he had a vesicular rash on his torso, upper and lower limbs, and hands. The provisional diagnosis was chickenpox.

Ten days earlier Patient A had a two-hour contact in a bar with another young adult (Patient B) who was later diagnosed with invasive meningococcal disease.

The South Eastern Sydney Public Health Unit recommended that clinicians test Patient A's blood for culture, meningococcal serology, and nucleic acid testing by polymerase chain reaction (PCR), along with a throat swab. Additionally, vesicular lesions were swabbed, and blood was taken for varicella serology. Patient A stayed in the Emergency Department overnight for observation.

The following day, serology results were available; *Neisseria meningitidis* IgM antibody was [low] positive. Further blood samples were taken for culture, meningococcal and varicella serology, and meningococcal PCR. Patient A was treated with 1g of ceftriaxone. Patient A's partner, who had developed an influenza-like illness, was also given 1g of ceftriaxone. Patient A's rash had extended considerably, and again a clinical diagnosis of chickenpox was made.

Urgent immunofluorescence testing was performed on Patient A's vesicle fluid, and it was found to be positive for varicella (the virus that causes chickenpox). In the meantime, Patient B was confirmed to have serogroup B invasive meningococcal disease.

Further serology results on Patient A were reported: total meningococcal IgM was equivocal, but IgM was positive for *N. meningitidis* C-capsule (indicating serogroup C infection). Patient A not only had confirmed chickenpox (varicella IgM also positive) but invasive meningococcal disease, albeit of a different serogroup to Patient B. W135 was isolated from the throat swab (there is antigenic cross reaction between C and W135). Patient A's close contacts were followed-up and managed according to national protocol.

ENTERIC DISEASES

Three outbreaks of gastroenteritis in institutions were reported in separate area health services in July. The Central Sydney Public Health Unit reported a large outbreak in a nursing home involving 70 residents and seven staff. Public Health Unit staff visited the nursing home and provided advice on infection control procedures.

The Central Coast Public Health Unit also reported an outbreak in a nursing home. This outbreak involved 12 people.

The Hunter Public Health Unit reported an outbreak involving two groups of approximately 20 people attending a recreational centre used for school camps. The illness was suggestive of Norovirus infection. ❏

FIGURE 1

REPORTS OF SELECTED COMMUNICABLE DISEASES, NSW, JANUARY 1998 TO JULY 2003, BY MONTH OF ONSET

Preliminary data: case counts in recent months may increase because of reporting delays.
 Laboratory-confirmed cases only, except for measles, meningococcal disease and pertussis
 BFV = Barmah Forest virus infections, RRV = Ross River virus infections
 LI = Legionella longbeachae infections, Lp = L. pneumophila infections
 Gp C and Gp B = disease due to serogroup C and serogroup B infection, other/unk = other or unknown serogroups

NSW population	
Male	50%
<5	7%
5-24	28%
25-64	52%
65+	13%
Rural*	42%

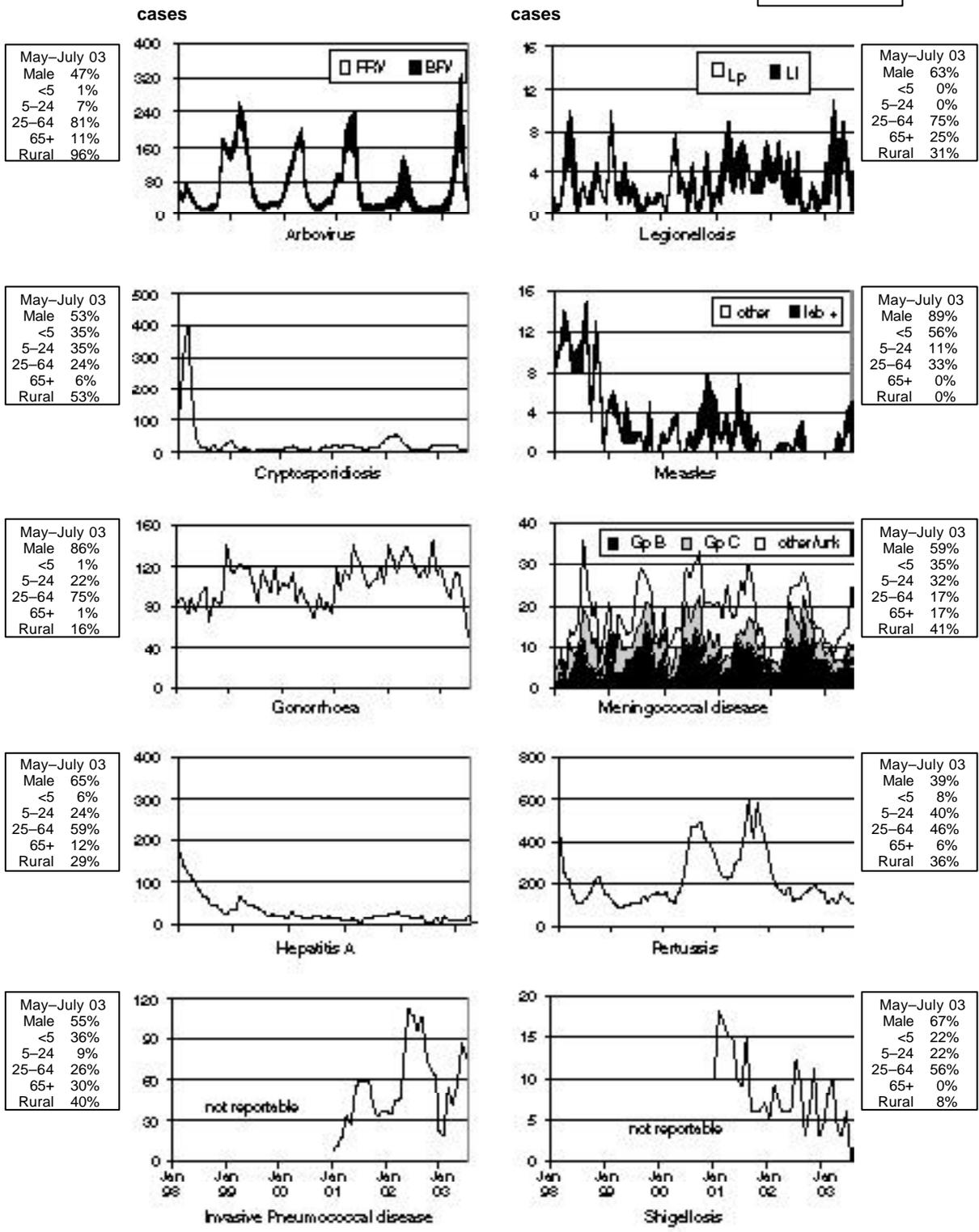


TABLE 1 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN JULY 2003 BY AREA HEALTH SERVICES

Condition	Area Health Service														Total						
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	CHS	for July*	To date*	
Blood-borne and sexually transmitted																					
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital)*	78	70	49	20	46	20	56	27	91	25	24	17	18	32	2	27	22	6	633	4,061	
Gonorrhoea*	17	6	8	2	3	2	1	1	24	2	1	4	1	-	-	1	2	-	75	744	
Hepatitis B - acute viral*	-	-	-	2	-	-	1	1	1	-	-	-	-	-	-	-	-	-	5	45	
Hepatitis B - other*	56	32	66	2	1	5	10	4	40	5	-	2	2	1	1	-	2	5	235	1,837	
Hepatitis C - acute viral*	1	-	1	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	6	55	
Hepatitis C - other*	68	23	85	38	-	37	37	39	54	30	3	10	12	11	-	12	14	40	517	3,768	
Hepatitis D - unspecified*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
Syphilis	19	-	7	-	10	3	-	1	30	-	-	3	-	1	-	1	2	-	81	529	
Vector-borne																					
Barmah Forest virus*	-	-	-	1	-	-	-	-	-	22	5	-	-	-	-	-	-	-	28	363	
Ross River virus*	-	1	-	-	-	1	1	1	-	14	4	-	1	1	2	1	-	-	27	441	
Arboviral infection (Other)*	-	1	-	-	-	1	1	-	2	1	-	-	-	-	-	-	-	-	5	60	
Malaria*	1	1	-	-	-	1	-	-	1	2	-	-	-	-	-	-	-	-	6	80	
Zoonoses																					
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Leptospirosis*	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	2	31	
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Psittacosis*	-	1	3	-	2	-	2	-	1	1	-	-	-	-	-	-	-	-	10	33	
Q fever*	-	-	-	-	-	-	5	-	-	3	-	8	4	-	-	1	-	-	21	207	
Respiratory and other																					
Blood lead level*	1	2	-	5	1	-	11	1	1	-	4	1	4	-	-	-	-	-	31	296	
Influenza*	4	-	6	1	-	-	-	4	1	1	1	2	-	-	-	2	1	-	23	131	
Invasive pneumococcal infection*	7	8	10	5	19	10	16	8	12	2	3	-	1	3	-	1	4	-	110	374	
<i>Legionella longbeachae</i> infection*	-	-	1	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	3	26	
<i>Legionella pneumophila</i> infection*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	18	
Legionnaires-disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Meningococcal infection (invasive)*	2	1	2	2	1	-	3	3	5	2	1	-	-	-	-	-	1	-	23	97	
Tuberculosis	3	7	3	-	2	-	2	-	5	-	-	-	-	-	-	-	-	-	22	199	
Vaccine-preventable																					
Adverse event after immunisation	-	1	-	2	-	2	4	-	1	-	-	-	-	3	-	1	-	-	14	112	
<i>H. Influenzae</i> b infection (invasive)*	-	-	2	4	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	4	
Measles	-	-	2	4	-	-	-	-	1	-	-	-	-	-	-	-	-	-	7	11	
Mumps*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	
Pertussis	14	16	27	11	14	3	19	12	27	3	11	3	2	5	-	2	6	175	1,025		
Rubella*	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	2	20	
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Enteric																					
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cryptosporidiosis*	-	3	4	-	1	-	1	-	-	2	1	-	1	-	-	-	-	-	13	126	
Giardiasis*	8	10	17	9	6	2	11	3	10	-	-	1	3	2	-	4	-	-	87	597	
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
Hepatitis A*	1	1	1	2	1	-	1	-	-	-	-	-	-	-	-	-	2	-	9	65	
Hepatitis E*	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	
Listeriosis*	1	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	4	20	
Salmonellosis (not otherwise specified)*	5	9	14	3	14	2	9	1	10	6	1	2	3	3	-	2	1	-	85	1,324	
Shigellosis*	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	38	
Typhoid and paratyphoid*	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	19	
Verotoxin producing <i>E. coli</i> *	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

* lab-confirmed cases only + includes cases with unknown postcode ** HIV and AIDS data are reported separately in the NSW Public Health Bulletin each quarter

CSA = Central Sydney Area	WEN = Wentworth Area	HUN = Hunter Area	NRA = Northern Rivers Area	MAC = Macquarie Area	GMA = Greater Murray Area
NSA = Northern Sydney Area	SWS = South Western Sydney Area	ILL = Illawarra Area	MNC = North Coast Area	MWA = Mid Western Area	SA = Southern Area
WSA = Western Sydney Area	CCA = Central Coast Area	SES = South Eastern Sydney Area	NEA = New England Area	FWA = Far West Area	CHS = Corrections Health Service