

# Communicable Diseases Surveillance

## *Shigellosis*

Shigellosis is a highly communicable acute bacterial disease involving the large and distal small intestine. Studies have shown that infection may occur following ingestion of only 10 - 100 organisms. Symptoms include diarrhoea, accompanied by fever, nausea and sometimes toxæmia, vomiting and cramps. Mild and asymptomatic infections also occur. Illness is usually self-limited, lasting an average of 4 - 7 days. The severity of the disease is a function of both the host and the particular serotype. The disease is more severe in children, the elderly, the debilitated and the malnourished.

There are four species or serogroups of *Shigella*: Group A, *S. dysenteriae*; Group B, *S. flexneri*; Group C, *S. boydii*; and Group D, *S. sonnei*. The groups are further divided into a number of different serotypes and subtypes. More than one serotype commonly occurs in a particular community. In general, *S. sonnei* is the most common and *S. dysenteriae* the least common in developed countries. *S. flexneri*, *S. boydii* and *S. dysenteriae* generally account for the majority of isolates in developing countries. In Australia, *S. sonnei* appears to be the most common isolate. However, *S. flexneri* is also relatively common, being predominantly reported in Aboriginal communities. *Shigella* is also frequently isolated from recent overseas travellers.

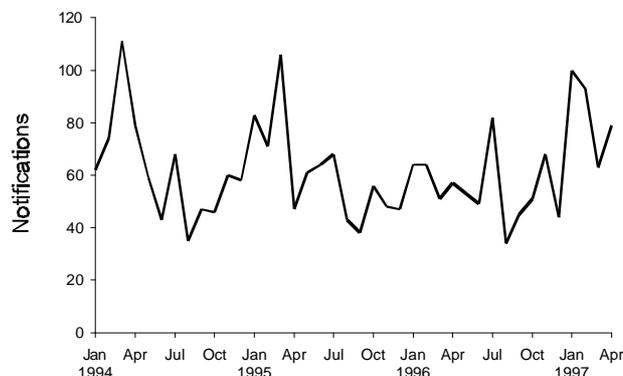
Shigellosis is predominantly spread by personal contact, with the principal route of transmission being the faecal-oral route. The only reservoir is humans. Over-crowding and poor personal hygiene are risk factors for acquiring infection. Less frequently, food vehicles have been implicated in the transmission of the disease. Outbreaks have also been linked to the consumption of contaminated fresh water when swimming. Prevention of infection includes the provision of appropriate sanitary conditions and education regarding personal hygiene.

Although *Shigella* is endemic in Australia, notifications usually peak in the summer months. Flies may contribute to higher transmission rates during these times. National Notifiable Diseases Surveillance System data from 1994 to 1997 show the highest number of notifications for shigellosis usually occur in January, February and March (Figure 1). Notification rates vary throughout Australia and are highest in warmer climates. In 1996, Queensland had the highest number of notifications (239), followed by the Northern Territory (145) and Western Australia (140). The highest number of notifications were for children under 10 years of age, accounting for 47% of reports for that year (Figure 2).

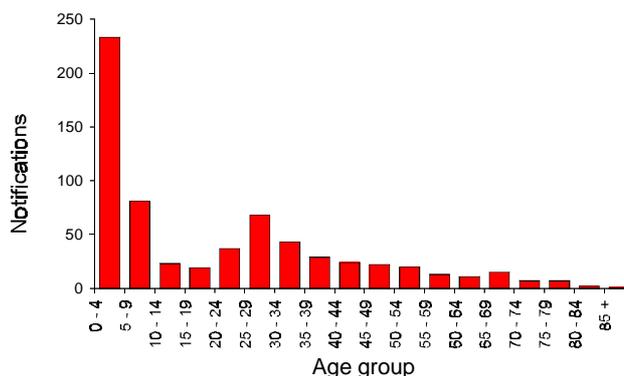
## *National Notifiable Diseases Surveillance System*

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of more than 40 communicable diseases or disease groups

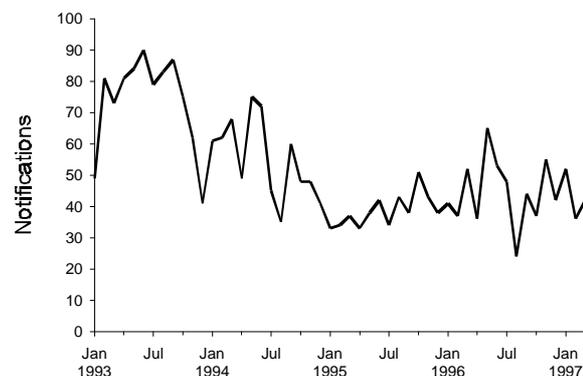
**Figure 1. Shigellosis notifications, 1994 to April 1997, by month of onset**



**Figure 2. Shigellosis notifications, 1996, by age group**



**Figure 3. Q fever notifications, 1993 to 1997, by month of onset**



**Table 1. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 14 to 27 May 1997**

Disease <sup>1,2</sup>	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1997	This period 1996	Year to date 1997	Year to date 1996
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> type B	0	2	1	0	0	0	0	0	3	3	22	23
Measles	1	7	1	2	0	0	6	1	18	22	188	199
Mumps	2	1	1	NN	2	1	4	0	11	3	81	47
Pertussis	2	44	2	23	39	2	35	10	157	110	3074	1300
Rubella	1	1	0	14	10	2	6	6	40	79	600	1161
Tetanus	0	0	0	0	0	0	0	0	0	0	3	1

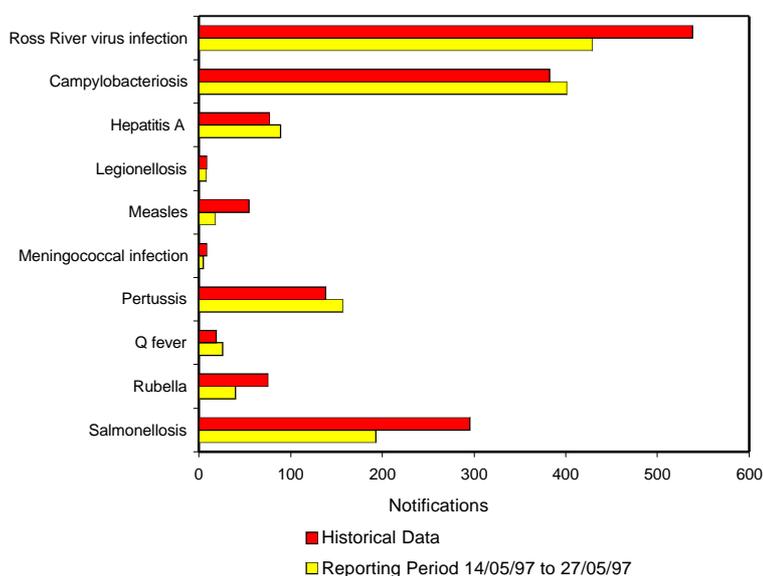
NN. Not Notifiable

1. No notifications of poliomyelitis have been reported since 1986.

2.

Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision, so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

**Figure 4. Selected National Notifiable Diseases Surveillance System reports, and historical data<sup>1</sup>**



1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods, the corresponding periods of the last 3 years and the periods immediately preceding and following those.

endorsed by the National Health and Medical Research Council (NHMRC). Notifications of these diseases are made to State and Territory health authorities under the provisions of their respective public health legislations. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see *CDI 1997;21:5*.

#### Reporting period 14 to 27 May 1997

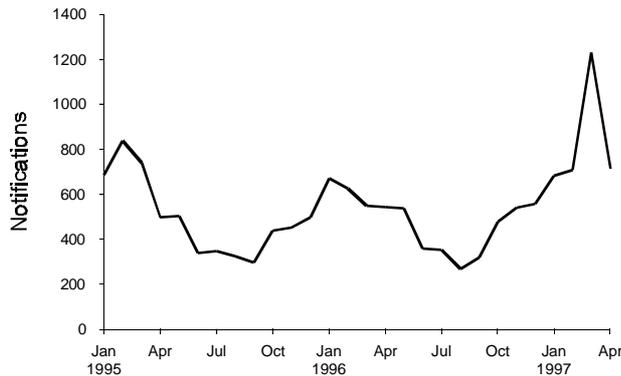
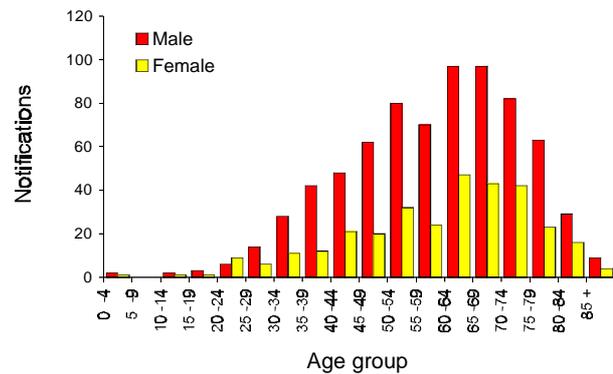
There were 2,545 notifications received for this two week period (Tables 1, 2 and 3). The numbers of reports for selected diseases have been compared with historical data for corresponding periods in the previous three years (Figure 4).

There were 26 notifications of Q fever this period. Of the notifications for the year to date (233), most have been from Queensland (117) and New South Wales (102). The

male:female ratio was 5.6:1 and the highest number of notifications were for the 35 - 39 years age group. There has been a general downward trend in Q fever notifications since a peak reached in mid-1993 (Figure 3).

Reports of salmonellosis remain at a high level with 193 reports received in this period (Figure 5). The majority of reports were from Queensland (54) and New South Wales (45). The number of notifications so far received for 1997 is 3,860. The majority were from Victoria (1,073, 28%) and Queensland (1,032, 27%). The male:female ratio was 1:1 and most cases (1,321, 34%) were in the 0 - 4 years age group.

There were 8 notifications of legionellosis in this period, bringing the total to 70 for the year to date. Legionellosis is most commonly reported for males in the 60 - 69 years age range (Figure 6). Overall, males are more commonly notified than females, the male:female ratio being 2.2:1.

**Figure 5. Salmonellosis notifications, 1995 to 1997, by month of onset****Figure 6. Legionellosis notifications, 1991 to 1996, by age group and sex****Table 2. Notifications of other diseases received by State and Territory health authorities in the period 14 to 27 May 1997**

Disease <sup>1,2</sup>	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1997	This period 1996	Year to date 1997	Year to date 1996
Arbovirus Infection (NEC) <sup>3</sup>	0	1	4	0	0	0	4	0	9	4	93	67
Barmah Forest virus infection	0	19	0	19	0	0	2	-	40	29	405	506
Campylobacteriosis <sup>4</sup>	17	-	12	112	75	13	130	42	401	453	4741	4770
Chlamydial infection (NEC) <sup>5</sup>	7	NN	31	142	0	8	0	39	227	313	3251	2929
Dengue	0	0	0	0	0	-	0	0	0	3	190	23
Donovanosis	0	NN	1	0	NN	0	0	0	1	4	12	23
Gonococcal infection <sup>6</sup>	0	13	94	38	0	1	0	26	172	184	1787	1534
Hepatitis A	0	36	14	24	5	0	7	3	89	93	1534	1069
Hepatitis B incident	0	3	6	3	0	0	3	4	19	7	154	95
Hepatitis C incident	0	1	0	-	0	0	-	-	1	1	6	14
Hepatitis C unspecified	12	NN	19	146	NN	5	128	18	328	391	3504	3748
Hepatitis (NEC)	0	0	0	0	0	0	1	NN	1	0	9	10
Legionellosis	0	2	0	0	3	0	2	1	8	9	70	83
Leptospirosis	0	2	0	0	1	0	1	0	4	9	53	104
Listeriosis	0	1	0	0	1	0	0	1	3	1	40	23
Malaria	1	9	0	45	0	0	4	1	60	17	346	319
Meningococcal infection	0	0	0	2	0	0	3	0	5	12	128	107
Ornithosis	0	NN	0	0	1	0	3	0	4	9	32	39
Q Fever	0	12	0	13	0	0	1	0	26	15	233	190
Ross River virus infection	0	145	24	190	19	1	37	13	429	286	5342	6727
Salmonellosis (NEC)	1	45	18	54	20	2	37	16	193	273	3860	2898
Shigellosis <sup>4</sup>	2	-	10	8	5	0	1	3	29	32	392	282
Syphilis	2	22	17	10	0	0	0	0	51	73	493	610
Tuberculosis	1	8	4	7	1	0	13	2	36	43	397	474
Typhoid <sup>7</sup>	0	1	1	0	0	0	1	0	3	1	37	47
Yersiniosis (NEC) <sup>4</sup>	0	-	0	2	1	0	2	0	5	6	134	111

1. For HIV and AIDS, see *CDI* 1997;21:154. For rarely notified diseases, see Table 3.

2. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

3. NT and WA: includes Barmah Forest virus.

4. NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.

5. WA: genital only.

6. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.

7. NSW, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified

- Elsewhere Classified.

**Table 3. Notifications of rare<sup>1</sup> diseases received by State and Territory health authorities in the period 14 to 27 May 1997**

Disease <sup>2</sup>	Total this period	Reporting States or Territories	Total notifications 1997
Brucellosis	2	Qld	16
Chancroid			1
Cholera			1
Hydatid infection	3	Qld, Vic	14
Leprosy			7

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1996.
2. No notifications have been received during 1997 for the following rare diseases: botulism, lymphogranuloma venereum, plague, rabies, yellow fever, or other viral haemorrhagic fevers.

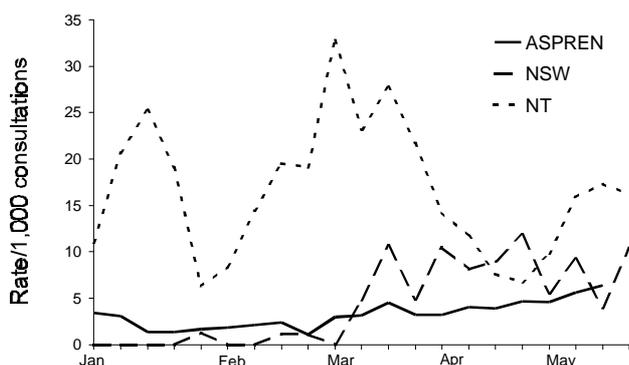
## National Influenza Surveillance, 1997

Three types of data are included in National Influenza Surveillance, 1997. These are sentinel general practitioner surveillance conducted by the Australian Sentinel Practice Research Network, Department of Human Services, Victoria, Department of Health, New South Wales and Department of Health and Community Services, Northern Territory; laboratory surveillance data from the Communicable Diseases Intelligence Virology and Serology Laboratory Reporting Scheme, LabVISE, and the World Health Organization Collaborating Centre for Influenza Reference and Research; and absenteeism surveillance conducted by Australia Post. For further information about these schemes, see *CDI 1997; 21:126*.

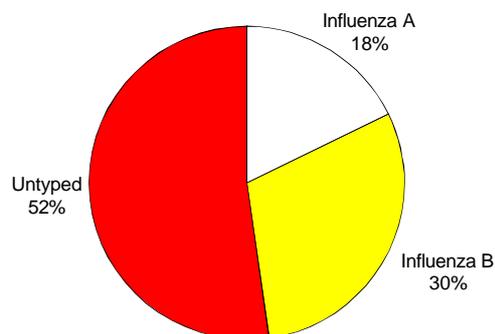
### Sentinel general practitioner surveillance

Consultation rates for influenza-like illness rose to 10.4 per 1,000 encounters in New South Wales over the last fortnight and remained steady at 16.2 per 1,000 encounters in the Northern Territory (Figure 7). The consultation rate recorded by ASPREN rose slightly this period to 6.4 per 1,000 encounters.

**Figure 7. Sentinel general practitioner influenza consultation rates, 1997, by week and scheme**



**Figure 8. Laboratory reports of influenza, 1997, by type**



### Laboratory surveillance

Forty-three reports of influenza virus were recorded by the LabVISE scheme this fortnight, 11 influenza A, 8 influenza B and 24 untyped. For the year to date, 293 reports of influenza have been received. More than half of these are untyped and, of those that have been typed, the majority are influenza B (Figure 8). If there is the same proportion of influenza A and B among the untyped, 63% of all reports would be influenza B. Overall the male:female ratio was 1:1 and 20% of patients were over 65 years of age. The number of laboratory reports remains average for the time of year.

### Absenteeism surveillance

Australia Post recorded a national absenteeism rate of 2.6% and 2.7% over the last fortnight, similar to previous weeks.

## Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network (ASPREN) comprises 99 sentinel general practitioners from throughout the country. Approximately 9,000 consultations are recorded each week for 12 conditions. Of

**Table 4. Australian Sentinel Practice Research Network reports, week 20, to 18 May 1997**

Condition	Week 20, to 18 May 1997	
	Reports	Rate per 1,000 encounters
Chickenpox	19	2.5
Gastroenteritis	84	10.9
HIV testing (doctor initiated)	3	0.4
HIV testing (patient initiated)	16	2.1
Influenza	49	6.4
Measles	0	0.0
Pertussis	2	0.3
Ross River virus infection	3	0.4
Rubella	2	0.3

these, CDI reports the consultation rates for chickenpox, gastroenteritis, HIV testing (doctor initiated), HIV testing (patient initiated), influenza, measles, pertussis, Ross River virus infection and rubella. For further information including case definitions see CDI 1997;21:6.

Data for week 20 ending 18 May is included in this issue of CDI (Table 4). The consultation rate for chickenpox is slightly higher than in recent weeks. The consultation rate for gastroenteritis has continued at relatively low levels since mid-January 1997. Consultation rates for HIV testing have remained slightly higher than the rates experienced during April. Consultation rates for Ross River virus infection, measles, rubella and pertussis remain low.

## LabVISE

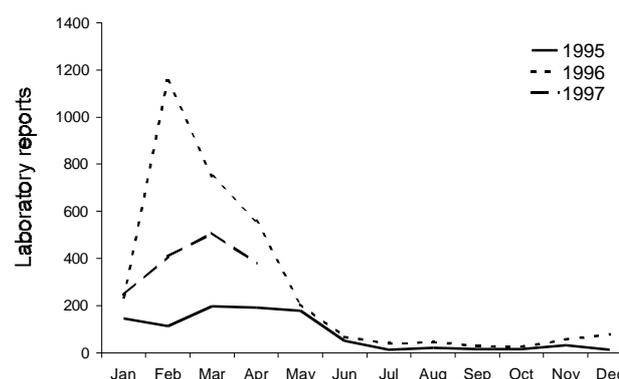
The Virology and Serology Laboratory Reporting Scheme, LabVISE, is a sentinel reporting scheme. Twenty-one laboratories contribute data on the laboratory identification of viruses and other organisms. Data are collated and published in Communicable Diseases Intelligence each fortnight. These data should be interpreted with caution as the number and type of reports received is subject to a number of biases. For further information, see CDI 1997;21:8-9.

There were 708 reports received in the CDI Virology and Serology Laboratory Reporting Scheme this period (Tables 5 and 6).

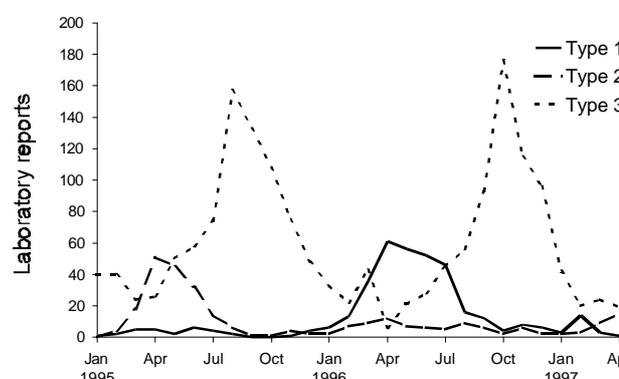
Fifty-one reports of Ross River virus were received this fortnight for 26 males and 25 females. Fewer reports have been received for the year to date than for the same period in 1996 (Figure 9).

A total of 36 reports of parainfluenza virus were received this period. Included were parainfluenza virus type 2 (15), type 3 (16) and untyped (5). The number of reports of parainfluenza virus type 2 has risen recently (Figure 10). As the last epidemic year for this virus was 1995 and outbreaks tend to occur in alternate years in Australia, we can expect more reports in the coming months. By contrast peaks in parainfluenza virus type 3 activity are recorded each year during late winter and early autumn.

**Figure 9. Ross River virus laboratory reports, 1995 to 1997, by month of specimen collection**



**Figure 10. Parainfluenza virus laboratory reports, 1995 to 1997, by month of specimen collection**



Ten reports of Q fever were reported this fortnight. Included were 8 males aged 17 - 52 years and 2 females in the 33 - 36 years age range.

Reports of respiratory syncytial virus rose to 169 in April which is average for the time of year. Two hundred and four reports were received this fortnight. Of these, 63% were for patients under one year of age and 93% were for children under the age of 5 years.

**Table 5. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 8 to 21 May 1997, historical data<sup>2</sup>, and total reports for the year**

	State or Territory <sup>1</sup>						Total this fortnight	Historical data <sup>2</sup>	Total reported in CDI in 1997
	NSW	Qld	SA	Tas	Vic	WA			
<b>Measles, mumps, rubella</b>									
Rubella virus			4				4	14.2	371
<b>Hepatitis viruses</b>									
Hepatitis A virus			4				4	18.2	399
Hepatitis D virus		3					3	1	13
<b>Arboviruses</b>									
Ross River virus		37	11		3		51	182.7	1,699
Barmah Forest virus		2					2	16.8	157
Dengue type 2		3					3	0.2	47
Dengue not typed		1					1	0.3	39
Flavivirus (unspecified)		1					1	1.5	22

**Table 5. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 8 to 21 May 1997, historical data<sup>2</sup>, and total reports for the year, continued**

	State or Territory <sup>1</sup>						Total this fortnight	Historical data <sup>2</sup>	Total reported in CDI in 1997
	NSW	Qld	SA	Tas	Vic	WA			
<b>Adenoviruses</b>									
Adenovirus type 2					2		2	0.3	21
Adenovirus type 3					2		2	2.2	16
Adenovirus type 4					1		1	0.2	4
Adenovirus type 8					1		1	1.7	6
Adenovirus not typed/pending	9	14	2		17	1	43	32.5	437
<b>Herpes viruses</b>									
Cytomegalovirus	6	10	1	1	7	10	35	59.8	569
Varicella-zoster virus	3	3	10		21	1	38	37	662
Epstein-Barr virus	4		29		5		38	71.5	1,320
<b>Other DNA viruses</b>									
Poxvirus group not typed					1		1	0	2
Parvovirus	1				8		9	4.8	185
<b>Picornavirus family</b>									
Coxsackievirus B2	1				1		2	0.2	10
Coxsackievirus B3	2						2	0.2	5
Echovirus type 5	1						1	0	4
Echovirus type 30					2		2	0.5	2
Poliovirus type 2 (uncharacterised)	1				1		2	0	8
Poliovirus type 3 (uncharacterised)	1						1	0.3	2
Rhinovirus (all types)	5	10			2		17	26.7	280
Enterovirus not typed/pending		8					8	26	290
<b>Ortho/paramyxoviruses</b>									
Influenza A virus		6			5		11	24	162
Influenza B virus	2	3			3		8	5.3	130
Influenza virus - typing pending			24				24	0.5	169
Parainfluenza virus type 2	2	1	1		11		15	9.2	48
Parainfluenza virus type 3	3	2	1		10		16	10.5	366
Parainfluenza virus typing pending			5				5	1	176
Respiratory syncytial virus	83	16	3	1	101		204	163.2	641
<b>Other RNA viruses</b>									
Rotavirus	2		16		21		39	48	417
Norwalk agent					1		1	1.2	55
<b>Other</b>									
<i>Chlamydia trachomatis</i> not typed	13	14	19	3	2	3	54	142.2	2,231
<i>Chlamydia psittaci</i>					1		1	3.2	40
<i>Chlamydia</i> species	1						1	2	17
<i>Mycoplasma pneumoniae</i>	15	2	3		6		26	17.2	808
<i>Coxiella burnetii</i> (Q fever)	7	2			1		10	8	151
<i>Rickettsia australis</i>		1					1	1.2	11
<i>Bordetella pertussis</i>				1	14		15	13.8	966
<i>Cryptococcus</i> species						1	1	0.8	11
<i>Leptospira hardjo</i>		2					2	1.8	12
<b>TOTAL</b>	<b>162</b>	<b>141</b>	<b>133</b>	<b>6</b>	<b>250</b>	<b>16</b>	<b>708</b>	<b>951.7</b>	<b>12,981</b>

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.

2. The historical data are the averages of the numbers of reports in 6 previous 2 week reporting periods, the corresponding periods of the last 2 years and the periods immediately preceding and following those.

**Table 6. Virology and serology laboratory reports by contributing laboratories for the reporting period 8 to 21 May 1997**

State of Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	31
	The New Children's Hospital, Westmead	35
	Royal Prince Alfred Hospital, Camperdown	9
	South West Area Pathology Service, Liverpool	86
Queensland	State Health Laboratory, Brisbane	139
South Australia	Institute of Medical and Veterinary Science, Adelaide	133
Tasmania	Northern Tasmanian Pathology Service, Launceston	6
Victoria	Microbiological Diagnostic Unit, University of Melbourne	2
	Monash Medical Centre, Melbourne	28
	Royal Children's Hospital, Melbourne	144
	Victorian Infectious Diseases Reference Laboratory, Fairfield	79
Western Australia	Royal Perth Hospital	16
TOTAL		708

## Overseas briefs

Source: World Health Organization (WHO)

### *Anthrax, Ghana*

An outbreak of human anthrax has been reported from a village in Bolgatanga District in the Upper East Region. The outbreak began in mid-April when district health services identified 26 active cases and 14 deaths.

The outbreak was rapidly brought under control and appears to have been related to the consumption of carcasses of cattle which had died of a sudden illness. A total of 185 cases occurred, of whom 26 died. Widespread health education has been important in the control of the outbreak. The District Veterinary Service has organised mass immunisation of cattle. The slaughter and sale of cattle in the area is temporarily banned.

**Editor:** Bronwen Harvey  
**Deputy Editor:** Graham Andrews  
**Assistant Editor:** Margaret Curran

#### **Editorial Advisory Board**

Charles Watson (Chair), Margaret Burgess, Scott Cameron, Jeffrey Hanna, John Kaldor, Margery Kennett, Cathy Mead, Christine Roberts

#### **Editorial and Production Staff**

Ross Andrews, Scott Crerar, Kim Moser, Htoo Myint, Graeme Oliver, David Witteveen.

Contributions covering any aspects of communicable diseases are invited. Instructions to authors can be found in *CDI* 1997;21:9.

*CDI* is produced fortnightly by the National Centre for Disease Control, Department of Health and Family Services, GPO Box 9848 Canberra ACT 2601; fax: (06) 289 7791, telephone: (06) 289 1555. For subscriptions or change of address please fax (06) 269 1212 or write to PO Box 462, Fyshwick ACT 2609.

Opinions expressed in *CDI* are those of the authors and not necessarily those of the Department of Health and Family Services or the Communicable Diseases Network Australia New Zealand. Data may be subject to revision.

*CDI* is available on the *CDI* Bulletin Board System on (06) 281 6695, and via Internet on 'ftp://ftp.health.gov.au' in directory /pub/CDI and on 'http://www.health.gov.au' in /hfs/pubs/cdi/cdihtml.htm. NNDSS data are available on 'http://www.health.gov.au/hfs/pubs/nndss/nndss1.htm'

Consent for copying all or part of *CDI* can be obtained from the Manager, Commonwealth Information Services, Australian Government Publishing Service, GPO Box 84 Canberra ACT 2601.