

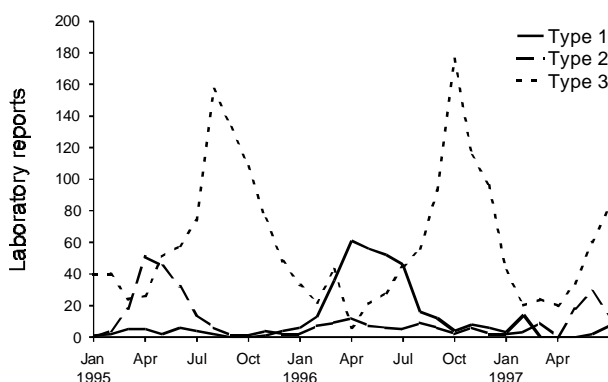
# Communicable Diseases Surveillance

## *Parainfluenza viruses*

The parainfluenza viruses are important respiratory pathogens belonging to the *Paramyxoviridae* family. Four distinct serological types have been isolated from humans, types 1, 2, 3 and 4 (subtypes 4a and 4b). Each of the four types causes acute respiratory tract disease, particularly during the childhood years. These viruses cause a spectrum of disease which varies from inapparent infection to severe lower respiratory tract disease. Parainfluenza virus type 1 is the principal cause of croup (laryngotracheobronchitis) in children. Parainfluenza virus type 2 has similar clinical manifestations to the type 1 virus, but symptoms tend to be less severe. Parainfluenza virus type 3 is a major cause of pneumonia and bronchiolitis in infants under the age of six months. It is second only to respiratory syncytial virus as a cause of lower respiratory tract infection in neonates and young infants. Reports of the type 4 virus are less common and illness tends to be milder.

The parainfluenza viruses are spread directly from person to person or via droplets. The incubation period is between two and six days. Outbreaks in the childcare setting are common. In Australia, epidemics of parainfluenza virus type 1 have been recorded biennially, with reports peaking during the autumn months of April and May (Figure 1). Outbreaks of the type 2 virus have alternated with the type 1 virus, occurring biennially during the autumn months every other year. By contrast Australia has recorded a peak in parainfluenza type 3 activity each year, with reports peaking later, during the winter and early spring months. More reports have been received for males than for females for all virus types, the male:female ratio being approximately 1.5:1 in all cases. The age distribution however, differs with the type of virus. Fifty per cent of the type 3 virus reports were for infants under the age of one year (Figure 2). By contrast a higher percentage of type 1 and 2 reports were seen in the 1 - 4 years age group. Hence infection with the type 3 virus tends to occur earlier in life than does that with the other types.

**Figure 1.** Parainfluenza virus laboratory reports, 1995 to 1997, by type and month of specimen collection



## *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 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 20 August to 2 September 1997

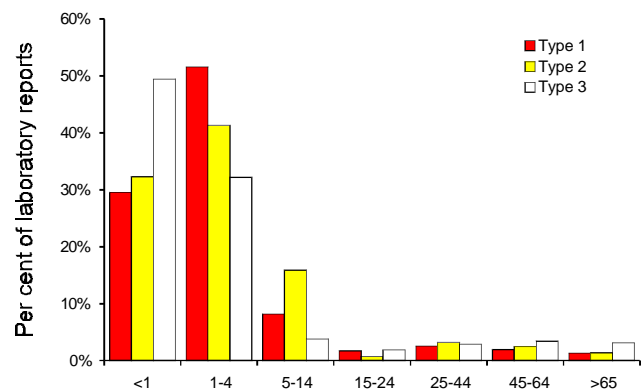
There were 1,860 notifications received for this two week period (Tables 1, 2 and 3). The numbers of reports for selected diseases have been compared with historical data for corresponding periods in the previous three years (Figure 3).

There were 23 notifications of meningococcal infection for the current period, bringing the total for the year so far to 310. This is greater than the number for the same period last year. Of the 310 reports, *Neisseria meningitidis* was identified in 112 cases: 16 serogroup A, 65 group B, 27 group C, 2 group W-135, and 2 group Y. In the remaining 198 cases, the serogroup was not stated.

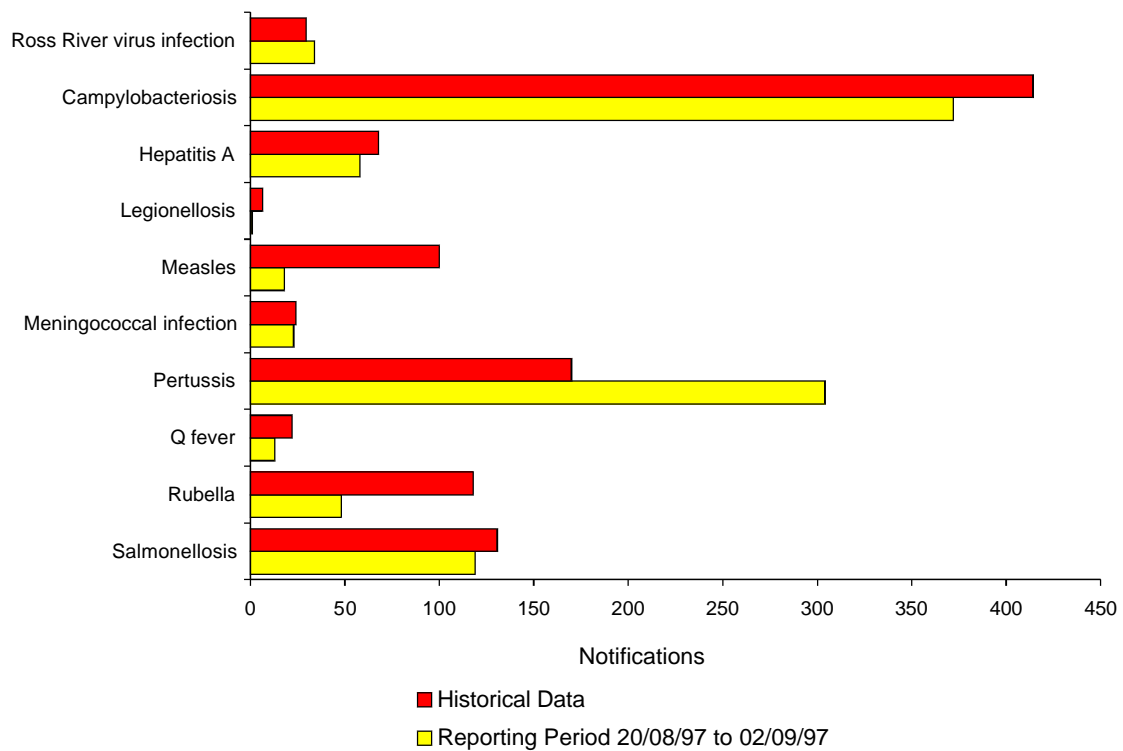
Eleven notifications of mumps were received for the current reporting period. The number of reports has been higher this year than in previous years (Figure 4). The male:female ratio of cases notified since January 1996 was 1:1.1. Forty seven per cent of cases were aged under 10 years (Figure 5).

The 304 notifications of pertussis received for the current period constitutes a further increase from the 278 reported

**Figure 2.** Parainfluenza virus laboratory reports, 1990 to 1997, as a percentage of total reports for that type, and age group

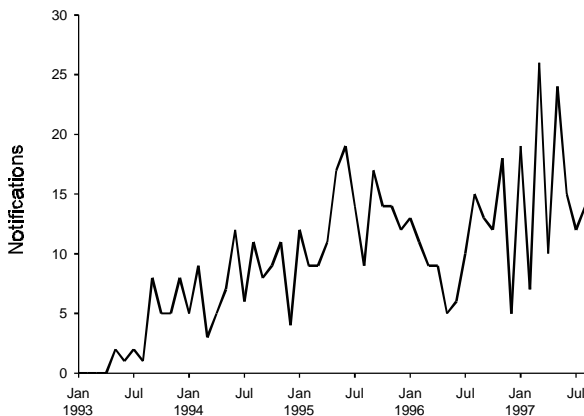


**Figure 3. Selected National Notifiable Diseases Surveillance System reports, and historical data<sup>1</sup>**

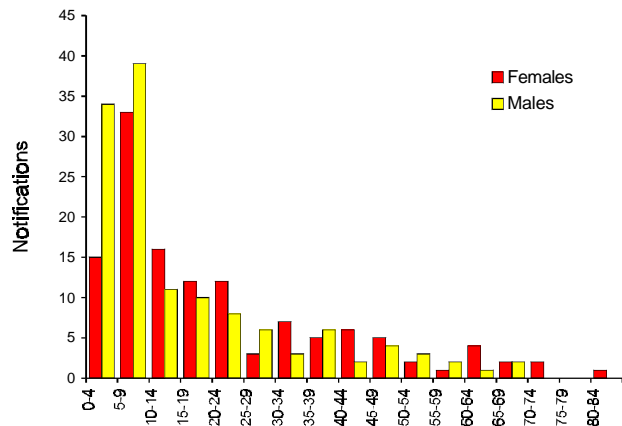


1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods, the corresponding periods of the last 3 years and the periods immediately preceding and following those.

**Figure 4. Mumps notifications, 1993 to 1997, by month of onset**



**Figure 5. Mumps notifications, 1996 and 1997, by age group and sex**



for the previous two week period, these being the highest totals for any reporting period since early March this year.

### *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.

Overall influenza activity started to decline during mid to late August, having peaked in the latter parts of July.

**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 20 August to 2 September 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	0	1	0	0	0	0	0	1	3	35	42
Measles	3	5	0	3	0	0	4	3	18	31	394	320
Mumps	0	1	0	NN	1	1	4	4	11	6	130	79
Pertussis	3	65	0	80	65	5	45	41	304	117	5127	2054
Rubella	3	3	0	14	9	0	17	2	48	74	856	1706
Tetanus	0	0	0	0	0	0	0	0	0	0	7	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.

**Table 2. Notifications of other diseases received by State and Territory health authorities in the period 20 August to 2 September 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	0	1	0	0	0	1	0	2	0	110	41
Barmah Forest virus infection	0	0	-	6	0	0	1	0	7	18	522	702
Campylobacteriosis <sup>4</sup>	8	-	5	150	69	10	95	35	372	394	7648	7925
Chlamydial infection (NEC) <sup>5</sup>	3	NN	14	207	0	6	61	35	326	361	5549	5677
Dengue	0	0	0	0	0	-	0	1	1	1	195	28
Donovanosis	0	NN	0	0	NN	0	0	0	0	1	23	33
Gonococcal infection <sup>6</sup>	2	10	19	45	0	0	3	31	110	181	3275	2830
Hepatitis A	2	14	4	32	0	1	1	4	58	67	2239	1633
Hepatitis B incident	0	0	1	4	0	0	3	0	8	6	158	153
Hepatitis C incident	0	0	0	-	0	0	-	-	0	3	11	38
Hepatitis C unspecified	18	NN	20	103	NN	9	102	15	267	383	6378	6699
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	0	14	13
Legionellosis	0	1	0	0	0	0	0	0	1	8	104	131
Leptospirosis	0	0	0	2	1	0	1	0	4	11	85	166
Listeriosis	0	1	0	0	0	0	0	0	1	2	57	39
Malaria	1	6	0	23	1	0	1	0	32	53	562	602
Meningococcal infection	1	9	1	2	2	0	4	4	23	23	310	262
Ornithosis	0	NN	0	0	0	0	2	0	2	0	39	59
Q Fever	0	4	0	8	0	0	0	1	13	30	406	391
Ross River virus infection	0	12	1	13	0	0	1	7	34	45	6325	7436
Salmonellosis (NEC)	5	20	7	36	6	1	34	10	119	127	4995	4090
Shigellosis <sup>4</sup>	0	-	5	6	3	0	3	2	19	23	577	471
Syphilis	0	10	15	13	0	0	0	0	38	71	819	1075
Tuberculosis	1	9	2	4	1	1	7	1	26	31	643	713
Typhoid <sup>7</sup>	0	0	0	0	1	0	1	0	2	3	51	66
Yersiniosis (NEC) <sup>4</sup>	0	-	0	4	1	0	0	0	5	9	185	174

1. For HIV and AIDS, Tables 4 and 5. 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: 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

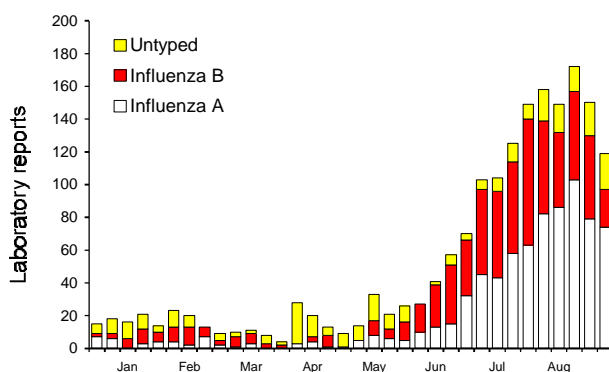
- Elsewhere Classified.

**Table 3. Notifications of rare<sup>1</sup> diseases received by State and Territory health authorities in the period 20 August to 2 September 1997**

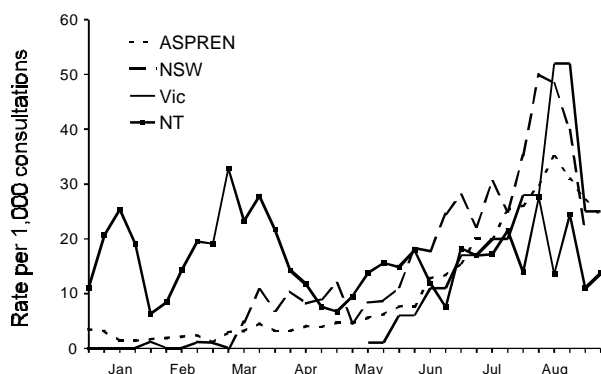
Disease <sup>2</sup>	Total this period	Reporting States or Territories	Total notifications 1997
Brucellosis	1	Qld	22
Chancroid			1
Cholera			2
Hydatid infection	6	Vic	31
Leprosy			8

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.

**Figure 6. Laboratory reports of influenza, 1997, by type and week of specimen collection**



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



Approximately two thirds of laboratory reports for this period were for influenza A.

### Laboratory Surveillance

A total of 449 reports of influenza virus were recorded by the LabVISE scheme this fortnight. Of these 277 were for influenza A, 125 for influenza B and 48 were untyped (Figure 6). The epidemic of influenza B this season is continuing to decline, while a greater proportion of influenza A reports have been received since late July. The number of influenza A and influenza B reports received during August were 336 and 157 respectively.

### Sentinel General Practitioner Surveillance

Reports of consultation rates for influenza-like illness from the New South Wales scheme started to decline through August, having reached a peak rate of 50 consultations per 1,000 in late July (Figure 7). The Department of Human Services Victoria and the Northern Territory scheme, also recorded a lower consultation rate during mid to late August. The ASPREN scheme consultation rate has also fallen since early August.

### Absenteeism Surveillance

Australia Post recorded a national absenteeism rate of 2.6% for the last week of August, having peaked at 3.1% in late July. A particularly low rate, 0.9%, was recorded in South Australia during this week.

### HIV and AIDS Surveillance

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (ACT, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, available from the National Centre in HIV Epidemiology and Clinical Research,

376 Victoria Street, Darlinghurst NSW 2010. Telephone: (02) 9332 4648 Facsimile: (02) 9332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for April 1997, as reported to 31 July 1997, are included in this issue of *CDI* (Tables 4 and 5).

**Table 4. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 30 April 1997, by sex and State or Territory of diagnosis**

										Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1997	This period 1996	Year to date 1997	Year to date 1996
HIV diagnoses	Female	0	0	1	0	0	0	3	0	4	7	26	32
	Male	1	0	0	14	2	0	12	3	32	50	202	251
	Sex not reported	0	0	0	0	0	0	0	0	0	1	12	3
	Total <sup>1</sup>	1	0	1	14	2	0	15	3	36	58	240	286
AIDS diagnoses	Female	0	0	0	2	0	0	1	0	3	2	9	8
	Male	0	7	0	4	1	1	6	0	19	41	79	224
	Total <sup>1</sup>	0	7	0	6	1	1	7	0	22	43	88	232
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	0	3	8
	Male	0	4	0	2	0	0	3	1	10	34	62	177
	Total <sup>1</sup>	0	4	0	2	0	0	3	1	10	34	65	185

1. Persons whose sex was reported as transgender are included in the totals.

**Table 5. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 April 1997, by sex and State or Territory**

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	21	486	5	108	46	4	185	76	931
	Male	179	10422	91	1753	609	78	3557	815	17504
	Sex not reported	0	2055	0	0	0	0	28	0	2083
	Total <sup>1</sup>	200	12976	96	1866	655	82	3779	894	20548
AIDS diagnoses	Female	7	150	0	37	19	2	58	20	293
	Male	80	4136	28	716	305	40	1475	321	7101
	Total <sup>1</sup>	87	4297	28	755	324	42	1540	343	7416
AIDS deaths	Female	2	107	0	27	14	2	39	13	204
	Male	52	2923	22	501	206	26	1155	234	5119
	Total <sup>1</sup>	54	3036	22	530	220	28	1200	248	5338

1. Persons whose sex was reported as transgender are included in the totals.

## Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network (ASPREN) currently comprises 107 general practitioners from throughout the country. Up to 9,000 consultations are reported each week, with special attention to 12 conditions chosen for sentinel surveillance. Of 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 weeks 34 and 35 ending 24 and 31 August respectively are included in this issue of CDI (Table 6). The consultation rate for gastroenteritis has remained at a low level since the beginning of June. During August, the consultation rate for chickenpox was higher than that for July, but remained slightly lower than the rates seen during

June. The consultation rates for measles, pertussis, rubella and Ross River virus infection have remained low for several months. The consultation rates associated with HIV testing have remained at moderate levels throughout the year.

## LabVISE

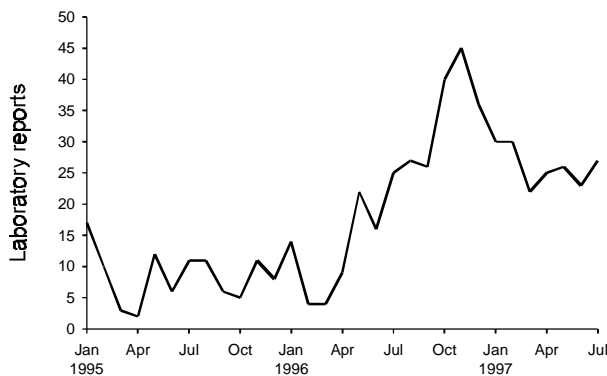
The Virology and Serology Laboratory Reporting Scheme, LabVISE, is a sentinel reporting scheme. Twenty-one laboratories contribute data on the laboratory identification of viruses and other organisms. Data are collated and published in Communicable Diseases Intelligence each fortnight. These data should 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 1,629 reports received in the CDI Virology and Serology Laboratory Reporting Scheme this period (Tables 7 and 8).

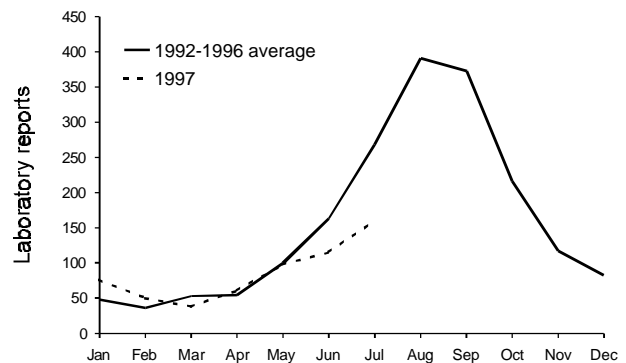
**Table 6. Australian Sentinel Practice Research Network reports, weeks 34 and 35, 1997**

Condition	Week 34, to 24 August 1997		Week 35, to 31 August 1997	
	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Chickenpox	6	0.9	11	1.9
Gastroenteritis	47	6.8	51	8.9
HIV testing (doctor initiated)	2	0.3	7	1.2
HIV testing (patient initiated)	9	1.3	11	1.9
Influenza	168	24.1	124	21.6
Measles	0	0.0	0	0.0
Pertussis	2	0.3	3	0.5
Ross River virus infection	2	0.3	0	0.0
Rubella	3	0.4	1	0.2

**Figure 8. Parvovirus laboratory reports, 1995 to 1997, by month of specimen collection**



**Figure 9. Rotavirus laboratory reports, 1992 to 1996 average and 1997, by month of specimen collection**



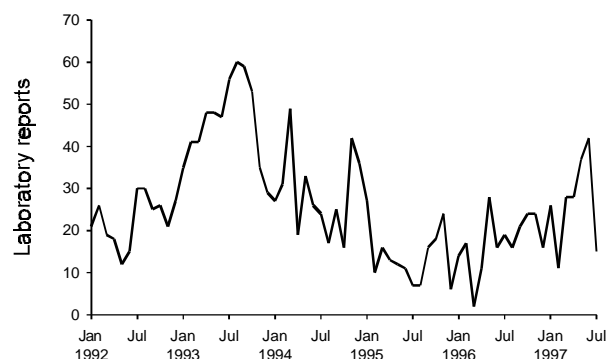
Eleven reports of Ross River virus were received this fortnight; 91% of these were from Western Australia. The number of reports has fallen in the past few months after peaking in March.

The number of parvovirus reports has declined after peaking in November 1996 (Figure 8). There were 8 reports of parvovirus received this fortnight. For the year to date, 197 reports have been received. Most were for females in the 25 - 44 years age range.

One hundred and twenty-nine reports of rotavirus were received this period, for 53 females and 76 males. Ninety-five per cent of reports were for children under five years of age. The total number of reports for the year to date so far is lower than in previous years (Figure 9).

Two reports of Q fever were received this period. The number of reports has declined after peaking in June 1997. The highest number of Q fever reports received in this scheme was in August 1993 (Figure 10).

**Figure 10. Q fever laboratory reports, 1992 to 1997, by month of specimen collection.**



**Table 7. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 14 to 27 August 1997, historical data<sup>2</sup>, and total reports for the year**

	States and Territory <sup>1</sup>							Total this fortnight	Historical data <sup>2</sup>	Total reported In CDI in 1997
	NSW	NT	Qld	SA	Tas	Vic	WA			
<b>Measles, mumps, rubella</b>										
Measles virus			1					1	2	43
Mumps virus							3	3	1.8	32
Rubella virus			2	2		1	3	8	19.8	425
<b>Hepatitis viruses</b>										
Hepatitis A virus		2					13	15	14.5	563
<b>Arboviruses</b>										
Ross River virus				1			10	11	14.3	2,023
Dengue not typed							3	3	1.3	57
<b>Adenoviruses</b>										
Adenovirus type 2						2		2	1.3	27
Adenovirus type 3						1		1	1.7	19
Adenovirus type 5						1		1	1.2	6
Adenovirus type 7						2		2	0.5	7
Adenovirus type 40						1		1	0.7	12
Adenovirus not typed/pending	3		16	11		11	5	46	50	704
<b>Herpes viruses</b>										
Cytomegalovirus	6		2	9		7	3	27	53.3	860
Varicella-zoster virus				4	1	12	29	46	46.8	999
Epstein-Barr virus	11	2		26		2	20	61	75.3	1,857
<b>Other DNA viruses</b>										
Parvovirus				2		5	1	8	10.3	266
<b>Picornavirus family</b>										
Coxsackievirus A9						1		1	0.2	7
Rhinovirus (all types)			28			1	4	33	30	469
Enterovirus not typed/pending			8				16	24	36	466
<b>Ortho/paramyxoviruses</b>										
Influenza A virus	48		9	50		80	40	227	115.3	862
Influenza A virus H1N1			1					1	4.3	1
Influenza A virus H3N2			49					49	3.8	60
Influenza B virus	7		39	35		19	24	124	27.8	741
Influenza virus - typing pending				48				48	0.3	321
Parainfluenza virus type 1	1			2		2		5	7.2	51
Parainfluenza virus type 2	1			6		2		9	2.5	110
Parainfluenza virus type 3	6		32	7		14	28	87	44.8	652
Parainfluenza virus typing pending				3			1	4	2.5	200
Respiratory syncytial virus	22		34	139	5	155	82	437	299.2	3,602
Paramyxovirus (unspecified)						2		2	0.7	15

**Table 7. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 14 to 27 August 1997, historical data<sup>2</sup>, and total reports for the year, continued**

	States and Territory <sup>1</sup>							Total this fortnight	Historical data <sup>2</sup>	Total reported In <i>CDI</i> in 1997
	NSW	NT	Qld	SA	Tas	Vic	WA			
<b>Other RNA viruses</b>										
Rotavirus	21			20	3	71	14	129	152	886
Norwalk agent						1		1	2	68
<b>Other</b>										
<i>Chlamydia trachomatis</i> not typed	5	17	20	16	2	4	76	140	129.5	3,469
<i>Chlamydia psittaci</i>						1	1	2	4.2	49
<i>Mycoplasma pneumoniae</i>	5	1		6	3	5	6	26	27.7	1,246
<i>Coxiella burnetii</i> (Q fever)						1	1	2	5.7	241
<i>Rickettsia tsutsugamushi</i>			1					1	1.5	21
<i>Bordetella pertussis</i>						16	20	36	29	1,212
<i>Legionella longbeachae</i>							3	3	0.5	22
<b>TOTAL</b>	136	22	244	387	14	420	406	1,629	1,221.80	22,676

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 8. Virology and serology laboratory reports by contributing laboratories for the reporting period 14 to 27 August 1997**

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	26
	Royal Prince Alfred Hospital, Camperdown	25
	South West Area Pathology Service, Liverpool	86
Queensland	State Health Laboratory, Brisbane	241
South Australia	Institute of Medical and Veterinary Science, Adelaide	386
Tasmania	Northern Tasmanian Pathology Service, Launceston	14
Victoria	Microbiological Diagnostic Unit, University of Melbourne	2
	Monash Medical Centre, Melbourne	33
	Royal Children's Hospital, Melbourne	295
	Victorian Infectious Diseases Reference Laboratory, Fairfield	90
Western Australia	PathCentre Virology, Perth	257
	Princess Margaret Hospital, Perth	124
	Western Diagnostic Pathology	50
TOTAL		1629