

with insect repellent and sleeping under bed nets is effective personal protection. Longer-term protection can be accomplished by eliminating the mosquito breeding sites such as small collections of water in objects like broken bottles, standing water, and even plants which collect and contain rain water.

### Ebola haemorrhagic fever, Gabon

The surveillance and follow-up of all cases of suspected Ebola haemorrhagic fever in Gabon have resulted in the identification of additional cases. As at 30 October, the total number of cases reported since the outbreak started was 25, of which 17 have died. Seventy-five contacts were being followed up.

### Yellow fever, Benin

There have been 86 cases with 65 deaths of yellow fever in the outbreak in the Department of Atakora, Benin, which

began in July. Yellow fever vaccine donated by various agencies has been distributed to 115,000 of the population at risk. A further 500,000 doses are still required. Médecins Sans Frontières has sent a team to the area to assist in the control of the outbreak.

### Crimean-Congo haemorrhagic fever, South Africa

An outbreak of Crimean-Congo haemorrhagic fever has been reported in Oudtshoorn, Western Cape Province, by the National Institute of Virology, Sandringham, among workers at an ostrich farm and slaughterhouse. There has recently been an increase in tick bites among these workers and 32 have been hospitalised with symptoms of the disease. One case has died. Investigations were started on 4 November.

## COMMUNICABLE DISEASES SURVEILLANCE

### National Notifiable Diseases Surveillance System

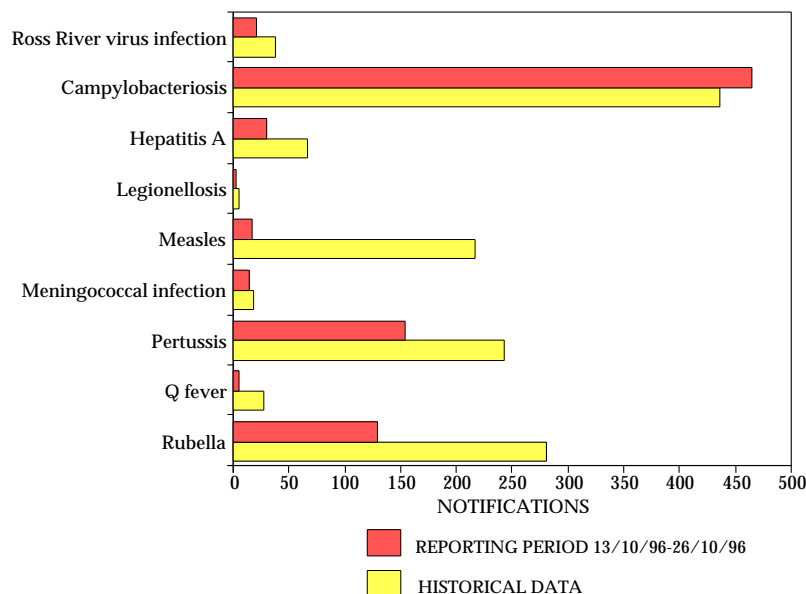
The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of more than 40 communicable diseases or disease groups endorsed by the National Health and Medical Research Council (NHMRC). Notifications of these diseases 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 1996;20:9-10*.

### Reporting period 13 to 26 October 1996

There were 1,778 notifications received for this two-week period (Tables 1, 2 and 3). The numbers of reports for selected diseases have been compared with average data for this period in the previous three years (Figure 1).

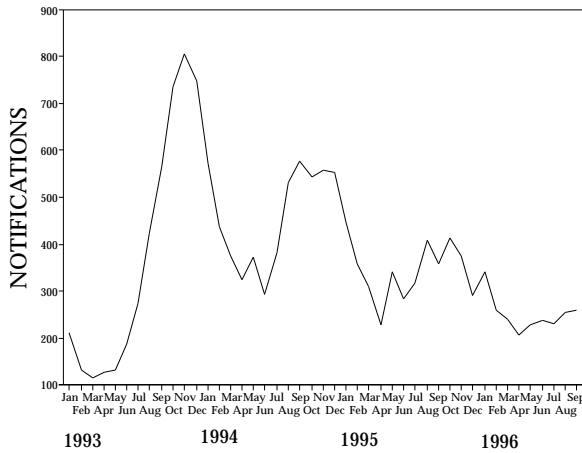
A total of 45 notifications of *Haemophilus influenzae* type b infection with onset in 1996 has been received so far. Of

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

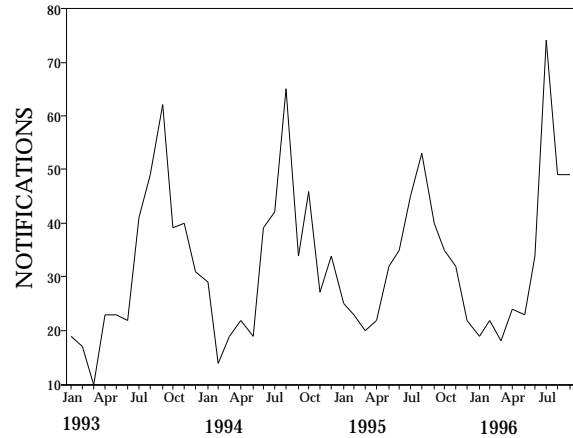


1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods: the corresponding periods of the last 3 years and the periods immediately preceding and following those.

**Figure 2. Pertussis notifications, 1993 to 1996, by month of onset**



**Figure 3. Meningococcal disease notifications, 1993 to 1996, by month of onset**



these, 23 (51%) were for children under the age of 5 years. The number of reports remains low.

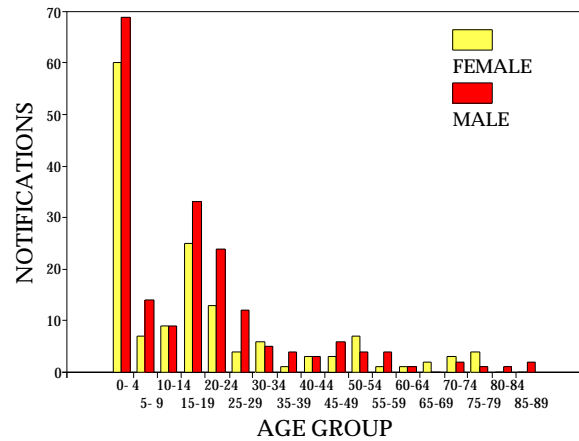
Seventeen notifications of **measles** were received this reporting period. The number of reports remains below that recorded for the same period in recent years.

**Pertussis** was notified for 154 persons this period, fewer than for the same period last year (Figure 2). A total of 2,461 notifications with onset in 1996 has been received of which 758 (31%) were for children under the age of 10 years.

One hundred and twenty-nine cases of **rubella** were reported this period. A total of 229 notifications was received for the month of September which is the lowest number of notifications recorded for this month since 1991.

The number of cases of **meningococcal disease** remained stable through the months of August and September (Figure 3) after peaking in July. Thirty-one per cent of the reports received with 1996 onset dates were from New South Wales. For the year to date 37% of notifications were for the under 5 years age group (Figure 4).

**Figure 4. Meningococcal disease notifications, 1996, by age group and sex**



**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 13 to 26 October 1996**

DISEASE <sup>1</sup>	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA <sup>2</sup>			
									This period 1996	This period 1995	Year to date 1996	Year to date 1995
Diphtheria	0	0	1	0	0	0	0	0	1	0	1	0
<i>Haemophilus influenzae</i> b infection	0	0	0	1	0	0	0	0	1	2	47	57
Measles	0	1	2	3	7	1	2	1	17	38	383	1157
Mumps	0	0	0	NN	1	0	3	3	7	11	102	129
Pertussis	1	4	0	33	61	1	48	6	154	182	2663	3475
Rubella	5	0	0	53	34	0	21	16	129	342	2042	2943
Tetanus	0	0	0	0	0	0	0	0	0	0	1	3

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 13 to 26 October 1996**

DISEASE <sup>1</sup>	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA <sup>2</sup>			
									This period 1996	This period 1995	Year to date 1996	Year to date 1995
Arbovirus Infection (NEC) <sup>3,4</sup>	0	0	2	0	0	0	0	1	3	4	90	64
Barmah Forest virus infection	0	0	-	11	0	0	0	-	11	15	721	675
Ross River virus infection	0	0	1	15	0	0	0	5	21	31	7520	2447
Dengue	0	0	0	0	0	-	0	0	0	0	30	25
Campylobacteriosis <sup>5</sup>	9	-	2	165	117	19	86	67	465	491	9567	8613
Chlamydial infection (NEC) <sup>6</sup>	12	NN	20	99	0	8	46	43	228	285	5996	5149
Donovanosis	0	NN	1	0	NN	0	0	1	2	6	40	66
Gonococcal infection <sup>7</sup>	2	1	19	18	0	0	9	48	97	125	3087	2569
Hepatitis A	0	2	4	8	0	0	16	0	30	66	1823	1260
Hepatitis B incident	0	0	0	1	0	0	0	2	3	7	172	265
Hepatitis C incident	0	0	1	-	0	-	-	-	1	0	25	63
Hepatitis C unspecified	8	NN	17	152	NN	6	40	33	256	418	7512	7933
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	0	17	10
Legionellosis	0	0	0	1	0	0	1	0	2	1	145	138
Leptospirosis	0	0	0	2	0	2	14	0	18	15	192	110
Listeriosis	0	0	0	1	0	0	0	0	1	0	57	49
Malaria	0	2	4	23	0	0	4	0	33	10	713	523
Meningococcal infection	2	0	0	4	2	1	4	1	14	20	345	327
Ornithosis	0	NN	0	0	0	0	0	0	0	3	56	99
Q fever	0	0	0	4	0	0	1	0	5	22	417	382
Salmonellosis (NEC)	3	8	18	49	13	6	12	18	127	182	4608	4959
Shigellosis <sup>5</sup>	0	-	1	5	0	1	0	2	9	29	535	635
Syphilis	0	2	8	14	0	0	0	2	26	68	1209	1567
Tuberculosis	0	3	1	3	0	1	12	4	24	42	869	841
Typhoid <sup>8</sup>	0	0	0	12	6	0	1	0	19	1	72	60
Yersiniosis (NEC) <sup>5</sup>	0	-	0	0	0	0	0	0	0	9	217	265

1. For HIV and AIDS, see *CDI* 1996;20:486. 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. Tas: includes Ross River virus and dengue.

4. NT, Vic and WA: includes Barmah Forest virus.

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

6. WA: genital only.

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

8. NSW, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

**Table 3. Notifications of rare<sup>1</sup> diseases received by State and Territory health authorities in the period 13 to 26 October 1996**

DISEASE <sup>2</sup>	Total this period	Reporting States or Territories	Year to date 1996
Brucellosis	5	Qld 4, Vic 1	30
Chancroid	0		1
Cholera	0		4
Hydatid infection	2	ACT 1, NSW 1	34
Leprosy	0		9

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1995.

2. No notifications have been received during 1996 for the following rare diseases: botulism; lymphogranuloma venereum; plague; rabies; yellow fever; or other viral haemorrhagic fevers.

## Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network (ASPREN) comprises 99 sentinel general practitioners from throughout the country. A total of approximately 9,000 consultations are recorded each week for 12 conditions. Of these, CDI reports the consultation rate for influenza, rubella, measles, chickenpox, pertussis and gastroenteritis. For further information including case definitions see CDI 1996;20:98-99.

Data for weeks 42 and 43 ending 20 and 27 October respectively are included in this issue of CDI (Table 4). The consultation rate for influenza-like illnesses is now at very low levels. There has been little change in the rate for gastroenteritis since July. Consultation rates for chickenpox have been steady during the last two months. Very small numbers of cases of rubella, measles and pertussis continue to be reported.

## Gonococcal surveillance

John Tapsall, The Prince of Wales Hospital, High Street, Randwick, NSW, 2031 for the Australian Gonococcal Surveillance Programme

The Australian Gonococcal Surveillance Programme (AGSP) reference laboratories in the various States and Territories report data on sensitivity to an agreed 'core' group of antimicrobial agents quarterly. The antibiotics which are currently routinely surveyed are the penicillins, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens. When *in vitro* resistance to a recommended agent is demonstrated in 5% or more of isolates, it is usual to reconsider the inclusion of that agent in current treatment schedules. Additional data are also provided on other antibiotics from time to time. At present all laboratories also test isolates for the presence of high level resistance to the tetracyclines. Tetracyclines are however not a recommended therapy for gonorrhoea. Comparability of data is achieved by means of a standardised system of testing and a programme-specific quality assurance process. Because of the substantial geographic differences in susceptibility patterns in Australia, regional as well as aggregated data are presented.

### Reporting period 1 January to 31 March 1996

The AGSP laboratories examined 727 isolates of *Neisseria gonorrhoeae* for sensitivity to the penicillins, ceftriaxone, quinolones and spectinomycin and for high level resistance to the tetracyclines in the March quarter of 1996.

### Penicillins

The usefulness of this group of antibiotics is progressively reducing and is least effective in Sydney and Melbourne where about 30% of isolates are resistant by one or more mechanisms. Figure 5 shows the proportion of isolates fully sensitive, less sensitive or relatively resistant to the penicillins by chromosomal mechanisms and the proportion of penicillinase-producing gonococci (PPNG) in different regions and as aggregated data for Australia.

Table 4. Australian Sentinel Practice Research Network reports, weeks 42 and 43, 1996

Condition	Week 42, to 20 October 1996		Week 43, to 27 October 1996	
	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Influenza	18	2.8	26	4.0
Rubella	1	0.2	3	0.5
Measles	0	0	0	0
Chickenpox	14	2.2	12	1.8
Pertussis	0	0	1	0.2
Gastroenteritis	105	16.6	104	15.9

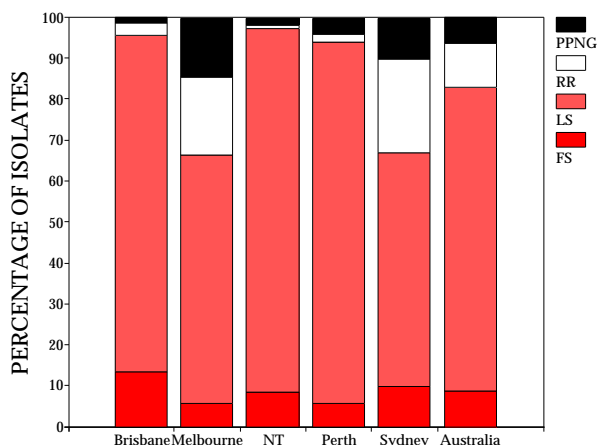
PPNG and relatively resistant isolates usually fail to respond to therapy with the penicillins.

There were 47 PPNG identified in this reporting period (6% of all isolates). These were found in all centres with 20 PPNG reported from Sydney, 16 from Melbourne, 6 from Perth and lower numbers in the other centres. Infections with PPNG were acquired locally, and in Hong Kong, Indonesia, the Philippines and Western Samoa. Seventy-seven (11%) of all isolates were resistant by chromosomal mechanisms, and these so called CMRNG were prominent in Sydney (47 isolates, 23% of the total there) and Melbourne (21 isolates, 19%).

### Ceftriaxone and spectinomycin.

All isolates from all parts of Australia were sensitive to these injectable agents. It should be noted that spectinomycin is still available in Australia, contrary to some recent reports.

Figure 5. Penicillin resistance of gonococcal isolates for Australia and by region, 1 January to 31 March 1996



FS Fully sensitive to penicillin, MIC  $\leq 0.03$ mg/L  
 LS Less sensitive to penicillin, MIC 0.06 - 0.5 mg/L  
 RR Relatively resistant to penicillin, MIC  $\geq 1$  mg/L  
 PPNG Penicillinase-producing *Neisseria gonorrhoeae*

### Quinolone antibiotics

Twenty isolates (3%) had altered resistance to this group of antibiotics (ciprofloxacin, norfloxacin and enoxacin) with 9 showing high level resistance. Eleven quinolone-resistant gonococci (QRNG) were detected in Sydney (6%), 5 in Melbourne (5%) two in Perth and a single QRNG was present in Adelaide and Brisbane. Eight of the 9 strains with high level resistance were detected in Sydney and the other in Perth. Most infections with QRNG were acquired overseas with China and the Philippines identified most often as countries of acquisition.

### High level tetracycline resistance

Thirty-two tetracycline resistance *Neisseria gonorrhoeae* (TRNG) were detected throughout Australia with isolates of this type present in all centres. The highest proportion of TRNG was found in Melbourne where the 8 TRNG represented 7% of all isolates. TRNG were also prominent in Sydney (13 isolates, 7%) and Perth (7 isolates, 5%). Overseas sources of the isolates were identified as Vietnam, Cambodia and Indonesia. Local acquisition was also recorded.

## LabVISE

The Virology and Serology 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 1996;20:9-12*.

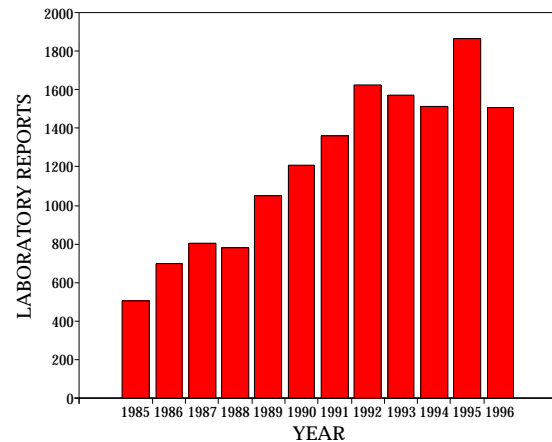
There were 1,090 reports received in the *CDI* Virology and Serology Reporting Scheme during this period (Tables 5 and 6).

In the last fortnight, 143 reports of **Epstein-Barr virus** were received with diagnosis by IgM detection (109), single high titre (32), four-fold rise in titre (1) and nucleic acid detection (1). The number of laboratory reports for 1996 to date are equivalent to the total number reported in 1994 (Figure 6). There is no apparent seasonal pattern to laboratory reports of Epstein-Barr virus.

Reports of **parainfluenza virus type 3** have continued to increase and could increase further as data for October may be incomplete. There have been 92 reports with specimen collection in October, but this remains well below the peak in August 1995 (Figure 7). In the last fortnight, 74 reports were received with diagnosis by virus isolation (44), antigen detection (28) and single high titre (2). Parainfluenza virus type 3 is most commonly reported in the first 12 months of life. Bronchiolitis and pneumonia are the most common clinical syndromes.

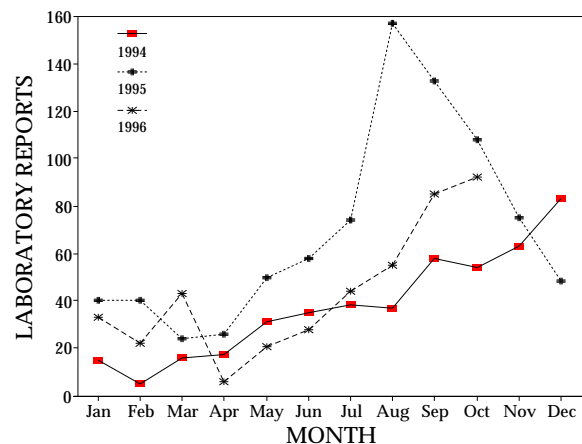
In the last fortnight, 14 reports of **rhinovirus** were received. The number of laboratory reports is currently below the numbers reported for the same period in 1994 and 1995 (Figure 8).

**Figure 6. Epstein-Barr virus laboratory reports, 1985 to September 1996, by year of specimen collection<sup>1</sup>**

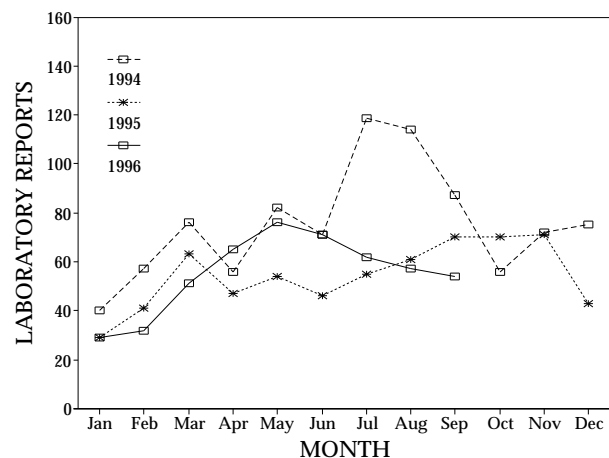


1. 1996 laboratory reports include specimen collection until 30 September

**Figure 7. Parainfluenza virus type 3 laboratory reports, 1994, 1995 and 1996, by month of specimen collection**



**Figure 8. Rhinovirus laboratory reports, 1994, 1995 and 1996, by month of specimen collection**



**Table 5. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 17 to 30 October 1996, 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 this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
<b>MEASLES, MUMPS, RUBELLA</b>											
Measles virus					1			1	2	23.8	46
Mumps virus					2				2	2.7	35
Rubella virus		4		27	19		1	4	55	95.5	532
<b>HEPATITIS VIRUSES</b>											
Hepatitis A virus			2	3	1			3	9	16.2	361
Hepatitis D virus				3	2				5	1.2	18
<b>ARBOVIRUSES</b>											
Ross River virus			3	12				5	20	15.5	3,113
Barmah Forest virus			3	2				2	7	6.0	194
<b>ADENOVIRUSES</b>											
Adenovirus type 1					3				3	1.3	19
Adenovirus type 2					4				4	3.8	28
Adenovirus type 3							2		2	1.2	66
Adenovirus type 5					3				3	.8	8
Adenovirus type 7					1				1	1.3	24
Adenovirus type 8							1		1	.8	6
Adenovirus type 40							1		1	.0	30
Adenovirus not typed/pending		3		21	6		8	20	58	43.3	1,229
<b>HERPES VIRUSES</b>											
Cytomegalovirus		3		16	5	1	2	28	55	64.7	1,383
Varicella-zoster virus		2		10	12	1	9	2	36	43.0	1,032
Epstein-Barr virus		6	2	56	52		6	21	143	81.0	1,768
<b>OTHER DNA VIRUSES</b>											
Poxvirus group not typed							1		1	.3	4
Parvovirus	1			5	3		8		17	3.0	182
<b>PICORNA VIRUS FAMILY</b>											
Coxsackievirus B2						3			3	1.0	10
Coxsackievirus B5							3		3	.0	11
Echovirus type 5							1		1	.0	1
Rhinovirus (all types)				7	7				14	27.8	632
Enterovirus not typed/pending				21					21	31.7	762
<b>ORTHO/PARAMYXOVIRUSES</b>											
Influenza A virus		1		12	7		2		22	10.3	1,468
Influenza A virus H3N2				2					2	1.3	70
Influenza B virus				1					1	6.7	52
Parainfluenza virus type 1					2		1		3	.0	303
Parainfluenza virus type 2					4				4	1.5	69
Parainfluenza virus type 3		7	1	30	7		15	14	74	33.0	599
Parainfluenza virus typing pending								1	1	1.3	19
Respiratory syncytial virus		6		8	34	5	37	8	98	59.0	4,027
Paramyxovirus (unspecified)							5		5	.8	23
<b>OTHER RNA VIRUSES</b>											
Rotavirus		26			13	19	19	11	88	108.8	1,467
Small virus (like) particle							1		1	1.8	15
<b>OTHER</b>											
<i>Chlamydia trachomatis</i> not typed		1	74	24	35	3	5	46	188	94.0	3,267
<i>Chlamydia</i> species				3					3	4.8	71
<i>Mycoplasma pneumoniae</i>		9		9	5	4	13	14	54	21.7	688
<i>Coxiella burnetii</i> (Q fever)		2		3			3		8	9.7	163
<i>Bordetella pertussis</i>							47		47	29.2	552
<i>Bordetella</i> species		2		13					15	17.7	250
<i>Cryptococcus</i> species				1				1	2	.2	10
<i>Leptospira hardjo</i>				1	1				2	.0	19
<i>Leptospira</i> species				4					4	.8	57
<i>Schistosoma</i> species							1		1	5.5	229
<b>TOTAL</b>	<b>1</b>	<b>72</b>	<b>85</b>	<b>294</b>	<b>229</b>	<b>36</b>	<b>192</b>	<b>181</b>	<b>1,090</b>	<b>874.2</b>	<b>24,912</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 17 to 30 October 1996**

STATE OR TERRITORY	LABORATORY	REPORTS
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	14
	Royal Alexandra Hospital for Children, Camperdown	16
	South West Area Pathology Service, Liverpool	27
Queensland	Queensland Medical Laboratory, West End	170
	State Health Laboratory, Brisbane	144
South Australia	Institute of Medical and Veterinary Science, Adelaide	228
Tasmania	Northern Tasmanian Pathology Service, Launceston	12
	Royal Hobart Hospital, Hobart	23
Victoria	Microbiological Diagnostic Unit, University of Melbourne	3
	Monash Medical Centre, Melbourne	22
	Royal Children's Hospital, Melbourne	116
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	55
Western Australia	Princess Margaret Hospital, Perth	47
	Royal Perth Hospital	43
	Western Diagnostic Pathology	170
<b>TOTAL</b>		<b>1090</b>

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