

Communicable Diseases Surveillance

Figure 1. Malaria notifications, 1991 to 1997, by month of onset

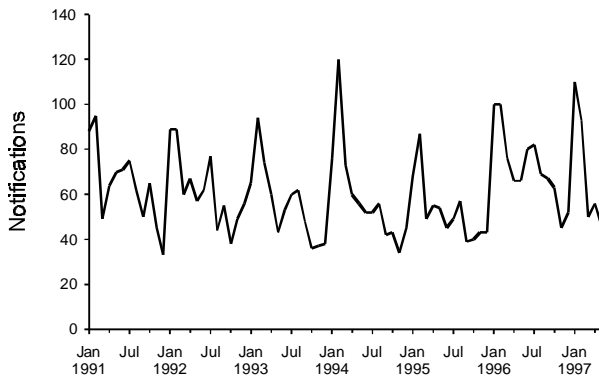


Figure 2. Malaria notifications, 1996, by age group and sex

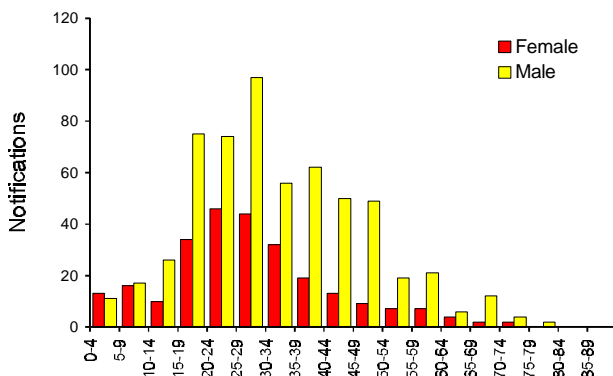
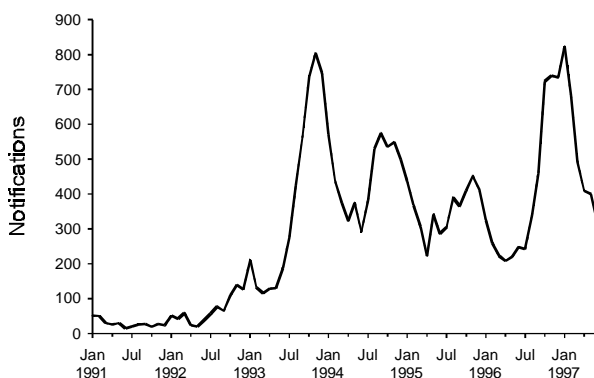


Figure 3. Pertussis notifications, 1991 to 1997, by month of onset



Malaria

Malaria is endemic in many tropical and sub-tropical parts of the world, with an estimated 300 to 500 million cases globally each year. The four species of protozoan parasite which cause human malaria are *Plasmodium falciparum*, *P. vivax*, *P. ovale* and *P. malariae*. Symptoms include fever, chills, headache and nausea. Falciparum malaria is the most serious, with a case fatality rate of 10% in untreated children and non-immune adults. Humans are the only significant mammalian reservoir of human malaria. The parasite is transmitted by the bite of an infective female *Anopheles* mosquito. Travellers to malarious areas should be advised to avoid being bitten by mosquitoes and to use appropriate chemoprophylaxis.

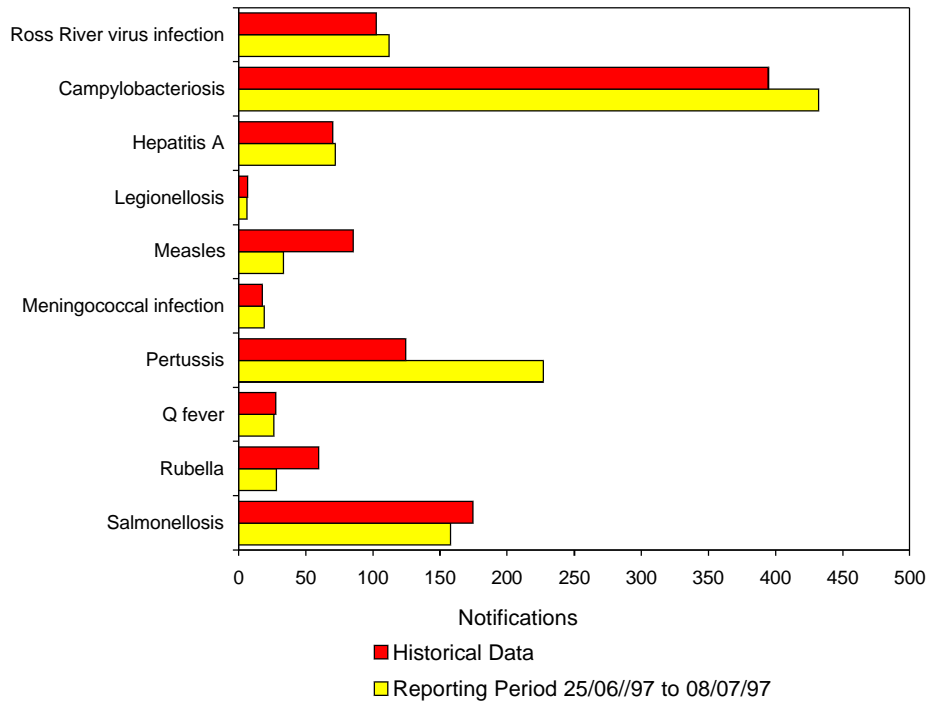
In Australia malaria has been notifiable in most jurisdictions since 1917. In 1949 a peak notification rate of 121.5 per 100,000 population was recorded, this being due to cases in returned servicemen following the Second World War. In 1981 Australia was certified malaria-free by the World Health Organization. However, conditions suitable to maintain endemic malaria exist in parts of Australia north of latitude 19°S, which includes the northern parts of the Northern Territory, Queensland and Western Australia. Effective malaria surveillance is necessary, particularly in the malaria receptive zone, to rapidly detect and manage cases so that Australia's malaria-free status is maintained. Approximately 800 cases of imported malaria occur each year in travellers returning from endemic countries. There is a marked seasonal variation, the peak onset months being January and February (Figure 1), probably reflecting travel patterns. *Plasmodium vivax* is the causative species most commonly reported, and Papua New Guinea is the predominant country of acquisition. During 1996, 848 notifications were recorded by the National Notifiable Diseases Surveillance System. More males were reported than females (male:female ratio 2.3:1), and most cases were for those in the 15 - 29 years age group (Figure 2).

National Notifiable Diseases Surveillance System

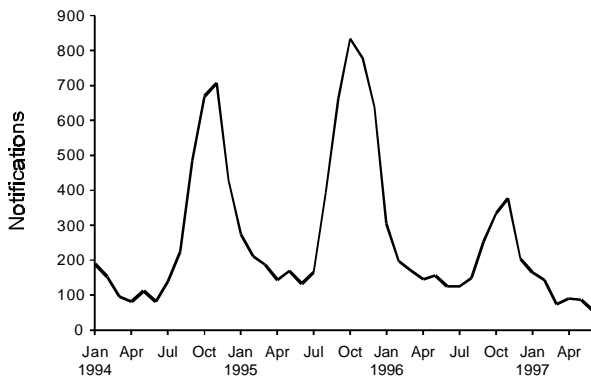
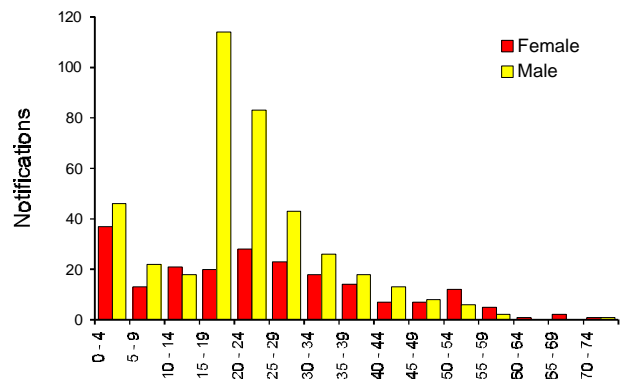
The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of more than 40 communicable diseases or disease groups endorsed by the National Health and Medical Research Council (NHMRC). Notifications of these diseases 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 25 June to 8 July 1997

There were 2,009 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

Figure 4. Selected National Notifiable Diseases Surveillance System reports, and historical data¹

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 5. Rubella notifications, 1994 to 1997, by month of onset**Figure 6. Rubella notifications, 1997, by age group and sex**

for corresponding periods in the previous three years (Figure 4).

There were 227 notifications of pertussis during this period. Of the notifications for the year to date (3,817), the majority of cases were from New South Wales (1,204, 32%), Victoria (979, 26%) and South Australia (781, 20%). There was an increase in the notifications of this disease in the last twelve months compared to the previous two years (Figure 3).

There were 28 cases of rubella reported in this period, bringing the total for the year to 696. Most reports for 1997 so far have been from Queensland (334, 48%), Victoria

(152, 22%) and South Australia (90, 13%). Although the seasonal pattern of rubella notifications has been consistent over the last three years, the number of cases has decreased in the last twelve months compared with the previous two years (Figure 5). The male:female ratio for 1997 so far was 1.9:1, and the highest number of notifications have been for males aged 15-29 years (Figure 6).

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 25 June to 8 July 1997

Disease ^{1,2}	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	1	0
<i>Haemophilus influenzae</i> type b	0	0	1	2	0	0	0	0	3	1	28	34
Measles	4	13	0	1	4	1	5	5	33	10	279	234
Mumps	0	0	0	NN	0	0	6	3	9	1	104	56
Pertussis	0	56	0	31	68	3	55	14	227	106	3817	1601
Rubella	0	0	1	13	1	1	10	2	28	66	696	1455
Tetanus	0	0	0	0	0	0	0	0	0	0	6	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 25 June to 8 July 1997

Disease ^{1,2}	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) ³	0	1	2	0	0	0	1	0	4	3	107	39
Barmah Forest virus infection	0	12	0	6	0	0	0	-	19	19	478	634
Campylobacteriosis ⁴	8	-	15	133	86	18	125	47	432	496	6080	6145
Chlamydial infection (NEC) ⁵	1	NN	25	138	0	18	0	24	206	331	4208	4335
Dengue	0	0	0	0	0	-	0	0	0	0	191	23
Donovanosis	0	NN	1	0	NN	0	0	0	1	0	17	26
Gonococcal infection ⁶	1	29	61	35	0	0	0	16	142	170	2413	2183
Hepatitis A	1	29	7	23	5	0	6	1	72	98	1855	1335
Hepatitis B incident	0	1	0	2	0	0	1	2	6	9	198	257
Hepatitis C incident	0	1	1	-	0	0	-	-	2	3	7	28
Hepatitis C unspecified	9	NN	16	79	NN	6	139	18	267	440	4765	5184
Hepatitis (NEC)	0	0	0	0	1	0	0	NN	1	0	11	10
Legionellosis	0	2	0	0	3	0	0	1	6	6	95	98
Leptospirosis	0	1	0	2	0	0	0	0	3	3	72	129
Listeriosis	0	0	0	0	0	0	2	0	2	1	48	28
Malaria	0	5	0	13	0	0	3	1	22	76	439	462
Meningococcal infection	0	5	1	4	1	1	6	1	19	19	192	149
Ornithosis	0	NN	0	0	1	0	0	0	1	4	35	54
Q Fever	0	13	0	10	0	0	3	0	26	30	318	274
Ross River virus infection	0	50	3	46	4	1	4	4	112	153	6081	7239
Salmonellosis (NEC)	2	24	14	40	18	3	50	7	158	176	4431	3492
Shigellosis ⁴	0	-	7	5	1	1	2	5	21	21	481	359
Syphilis	0	11	20	5	0	0	0	1	37	66	661	801
Tuberculosis	1	6	0	3	1	1	6	1	19	29	501	591
Typhoid ⁷	0	0	0	0	0	0	0	0	0	3	43	57
Yersiniosis (NEC) ⁴	0	-	0	4	3	0	0	0	7	9	157	141

1. For HIV and AIDS, see *CDI* 1997;21:198-199. 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 rare¹ diseases received by State and Territory health authorities in the period 25 June to 8 July 1997

Disease ²	Total this period	Reporting States or Territories	Total notifications 1997
Brucellosis	1	Qld	17
Chancroid			1
Cholera			1
Hydatid infection	2	WA	19
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.

Overall influenza activity continued to rise this fortnight, particularly the sentinel general practitioner consultation rate recorded by the Department of Health, New South Wales. Reports of both influenza A and B are being received, approximately two thirds of which are for influenza B.

Sentinel General Practitioner Surveillance

The consultation rate for the New South Wales scheme rose to 34 per 1,000 encounters in the latter part of June. The ASPREN consultation rate rose to 20 per 1,000 encounters this period. Data from the Northern Territory show a slight rise in the latter part of June (Figure 7). The Department of Human Services Victoria, recorded a rate of 17 consultations per 1,000 encounters for the last two weeks of June.

Laboratory Surveillance

Eighty reports of influenza virus were recorded by the LabVISE scheme this fortnight. Of these, 34% were for influenza A, 60% for influenza B and 6% untyped. Of the influenza B reports 65% were for children aged between one and 14 years. For influenza A reports, 89% were for children less than five years of age (Figure 8). The number of reports remained high in early June (Figure 9).

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

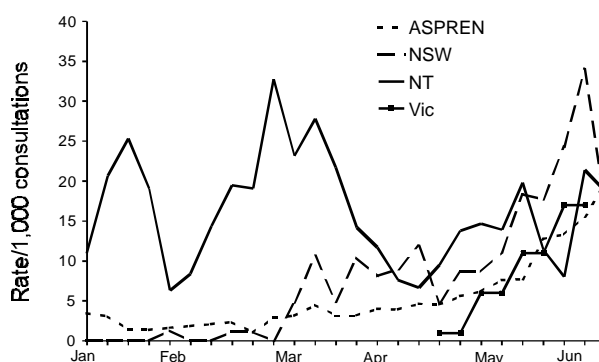


Figure 8. Laboratory reports of influenza, 1997, by type and age group

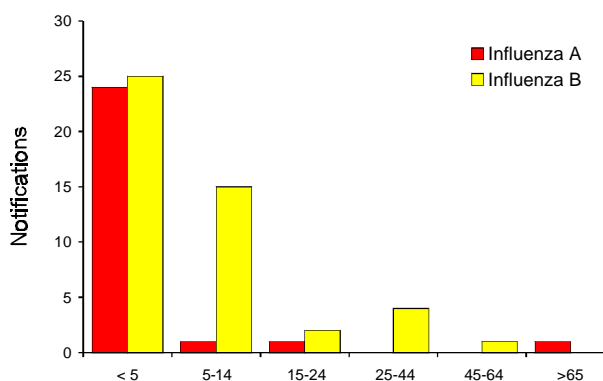


Figure 9. Laboratory reports of influenza, 1997, by type and week of specimen collection

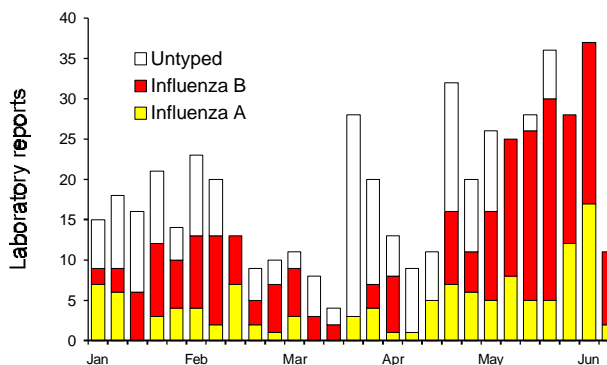


Table 4. Australian Sentinel Practice Research Network reports, weeks 26 and 27, 1997

Condition	Week 26, to 29 June 1997		Week 27, to 6 July 1997	
	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Chickenpox	11	1.7	3	0.7
Gastroenteritis	62	9.8	30	7.0
HIV testing (doctor initiated)	9	1.4	7	1.6
HIV testing (patient initiated)	4	0.6	4	0.9
Influenza	126	20.0	94	22.0
Measles	0	0.0	1	0.2
Pertussis	3	0.5	0	0.0
Ross River virus infection	0	0.0	0	0.0
Rubella	3	0.5	1	0.2

Absenteeism Surveillance

Australia Post recorded a national absenteeism rate of 2.8% in both weeks of this reporting period. This has remained stable throughout the season so far.

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.

Australian Sentinel Practice Research Network

Data for weeks 26 and 27 ending 29 June and 6 July respectively are included in this issue of CDI (Table 4). The rate of reporting for gastroenteritis has remained stable in recent weeks whilst that for chickenpox has fallen. The consultation rate for measles, pertussis and rubella remains low.

Sentinel Chicken Surveillance Programme

Sentinel chicken flocks are used to monitor flavivirus activity in Australia. The main viruses of concern are Murray Valley encephalitis (MVE) and Kunjin which cause the potentially fatal disease Australian encephalitis in humans. Currently 24 flocks are maintained in the north of Western Australia, 10 in the Northern Territory, 10 in New South Wales and in Victoria. The flocks in Western Australia and the Northern Territory are tested year round but those in New South Wales and Victoria are tested only from November to March, during the main risk season.

Results are coordinated by the Arbovirus Laboratory in Perth and reported bimonthly. For more information see CDI 1997;21:6-7

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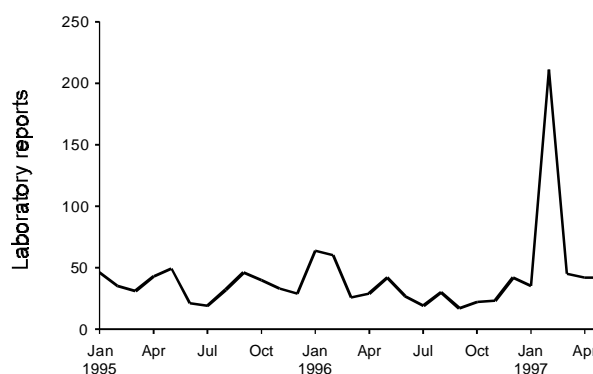
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The seroconversions in the Northern Territory flocks in April and May 1997 were reported in the CDI 21:155-156 and CDI 21:183. Additional seroconversions in the chickens housed at the Arid Zone Research Institute in Alice Springs have now been confirmed but not yet reported. Seven of the nine chickens at Alice Springs seroconverted to MVE virus in April. These seroconversions were confirmed in May 1997.

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

Figure 10. Hepatitis A laboratory reports, 1995 to 1997, by month of specimen collection



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 1,050 reports received in the *CDI* Virology and Serology Laboratory Reporting Scheme this period (Tables 5 and 6).

Twenty-seven reports of hepatitis A were received this fortnight. The number of reports has declined in recent months following the highest monthly total recorded by this scheme, in February (211). This reflects the outbreak associated with oysters in New South Wales (Figure 10).

The number of reports of Ross River virus continues to decline with 19 cases being reported this fortnight. Nine of these were received from Queensland. Fewer reports have been received for the year to date than for the same period in 1996.

Three hundred and ninety reports of respiratory syncytial virus were received for this period. Ninety-six per cent of reports were from patients under 4 years of age. The year to date figures are lower than average for the same period in recent years (Figure 11).

Thirty-seven cases of pertussis were reported this fortnight. The male:female ratio was 1:1.7 with 19 (51%) of reports from patients in the 25 to 64 years age group. The number of reports has declined in recent months after peaking in January (Figure 12).

Figure 11. Respiratory syncytial virus laboratory reports, 1994 to 1996 average and 1997, by month of specimen collection

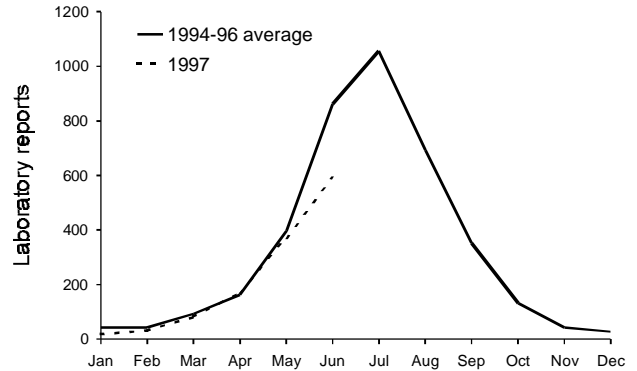


Figure 12. Pertussis laboratory reports, 1995 to 1997, by month of specimen collection

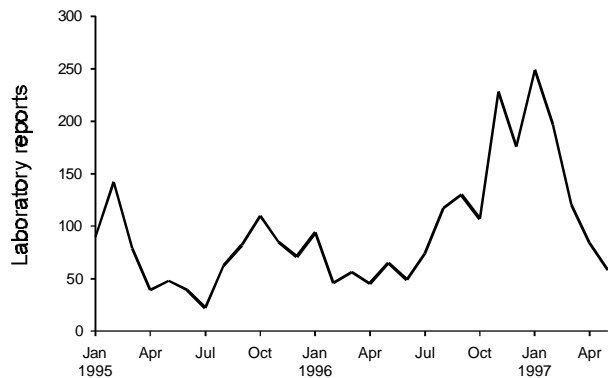


Table 5. Virology and serology laboratory reports by State or Territory¹ for the reporting period 19 June to 2 July 1997, historical data², and total reports for the year

	State or Territory ¹						Total this fortnight	Historical data ²	Total reported in <i>CDI</i> in 1997
	NSW	NT	Qld	SA	Vic	WA			
Measles, mumps, rubella									
Measles virus						3	3	2	36
Rubella virus			1	3	1		5	13.7	396
Hepatitis viruses									
Hepatitis A virus	2	10	12	3			27	16.3	481
Hepatitis D virus			1				1	0.7	14
Arboviruses									
Ross River virus		2	9	6		2	19	54.8	1,949
Barmah Forest virus	1		2			1	4	9.3	186
Adenoviruses									
Adenovirus not typed/pending	5		23	7		7	42	38	527
Herpes viruses									
Cytomegalovirus	4	1	14	2	1	3	25	60.7	673
Varicella-zoster virus	1		15	5	1		22	41.3	802
Epstein-Barr virus	10	1	13	29	2	11	66	80.7	1,582
Other DNA viruses									
Parvovirus			3	3			6	7.5	219
Picornavirus family									
Poliovirus type 1 (uncharacterised)	1						1	0.7	4
Rhinovirus (all types)			35	2			37	24.7	364
Enterovirus not typed/pending	1		23				24	40	370
Ortho/paramyxoviruses									
Influenza A virus	17			1	8	1	27	94.5	230
Influenza B virus	7		14	1	8	18	48	9.5	259
Influenza virus - typing pending				5			5	0	194
Parainfluenza virus type 2	1		14	3	1		19	9.7	77
Parainfluenza virus type 3	5		10	4	3	3	25	23.8	436
Respiratory syncytial virus	120		106	24	82	58	390	455.2	1,511
Other RNA viruses									
Rotavirus	3			10		3	16	67.7	521
Other									
<i>Chlamydia trachomatis</i> not typed	4	40	23	17	3	37	124	156.5	2,829
<i>Mycoplasma pneumoniae</i>	24		15	4	11	7	61	22.7	999
<i>Coxiella burnetii</i> (Q fever)	3		6				9	8.2	211
<i>Bordetella pertussis</i>			6		31		37	19.8	1,077
<i>Legionella pneumophila</i>			2				2	0	15
<i>Legionella longbeachae</i>				3			3	1.5	19
<i>Legionella</i> species			1				1	0.5	12
TOTAL	209	54	348	132	152	155	1,050	1,259.80	15,995

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 19 June to 2 July 1997

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	62
	Royal Prince Alfred Hospital, Camperdown	27
	South West Area Pathology Service, Liverpool	116
Queensland	Queensland Medical Laboratory, West End	133
	State Health Laboratory, Brisbane	225
South Australia	Institute of Medical and Veterinary Science, Adelaide	132
Victoria	Microbiological Diagnostic Unit, University of Melbourne	3
	Monash Medical Centre, Melbourne	106
	Royal Children's Hospital, Melbourne	41
Western Australia	Princess Margaret Hospital, Perth	97
	Western Diagnostic Pathology	108
TOTAL		1,050