

Communicable Diseases Surveillance

Ross River virus infection reports increasing

Ross River virus is a mosquito-borne alphavirus which causes an illness characterised by arthralgia, myalgia, fever and rash. Symptoms may continue for months. Macropods are thought to be the major hosts of Ross River virus, and the illness can be transmitted by many species of mosquito. Ross River virus infection has been reported from all States and Territories in Australia, but is more common in northern States and in coastal areas.

Ross River virus infection occurs predominantly in the summer months in Australia, and an increase in reports for 1997 has commenced. Peaks in Ross River virus infection have occurred in January to April in previous years, including a large outbreak in early 1996 (Figure 1). A rise in the number of infections is expected in January and February. There were 149 reports of Ross River virus infection to the National Notifiable Diseases Surveillance

System for the current period (Table 2), more than twice the number reported for the previous 4 week period. The largest number of reports came from New South Wales and Queensland.

Laboratory reports of Ross River virus infection to LabVISE increased slightly in December, but the January rise is not yet evident (Figure 2). The age distribution of Ross River virus infection cases reported to the National Notifiable Diseases Surveillance System for 1996 shows the highest number of reports were for the 30-60 years age range (Figure 3). The male:female ratio was 1:1.

Persons living in northern Australia and in coastal areas where Ross River virus occurs should take precautions against mosquito bites, particularly in the coming summer months. Precautions include wearing long sleeved clothing and mosquito repellent when outside, and having mosquito screening on houses. Local health authorities may also issue warnings when there is evidence of Ross River virus transmission in an area.

Figure 1. Ross River virus infection notifications to the National Notifiable Diseases Surveillance System, 1994 to January 1997

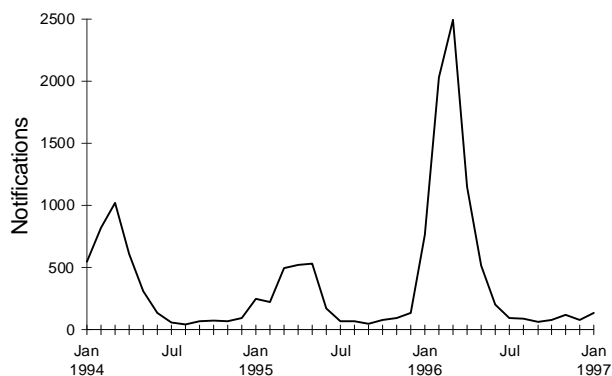
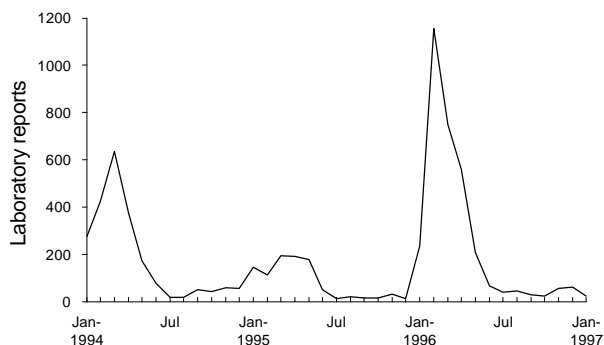


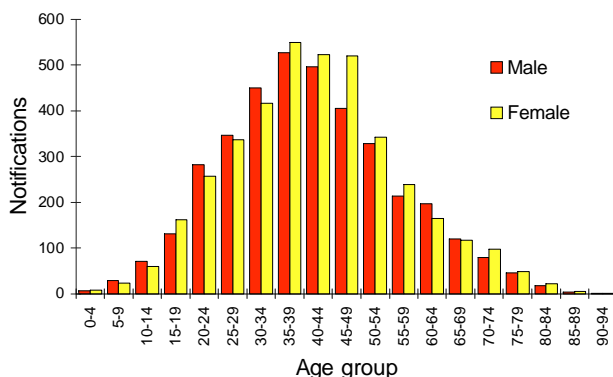
Figure 2. Ross River virus laboratory reports to LabVISE, 1994 to January 1997



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.

Figure 3. Ross River virus infection notifications to the National Notifiable Diseases Surveillance System, by age and sex, 1996



Reporting period 8 January to 21 January 1997

There were 2,828 notifications received for this two-week period (Tables 1, 2 and 3). The number of reports for selected diseases have been compared with average data for this period in the previous three years (Figure 4).

Notifications of campylobacteriosis continue to be high, with 562 reports received this period. This is consistent with previous years which have shown notifications to be greatest during spring and summer (Figure 5). The 0 - 4 years age group accounted for 102 of the notifications, with 110 notifications in the 20 - 29 years age group.

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 8 to 21 January 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 | 0 | 0 |
| <i>Haemophilus influenzae</i> type B | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 4 | 2 | 5 | 5 |
| Measles | 0 | 5 | 0 | 9 | 1 | 1 | 3 | 0 | 19 | 31 | 27 | 47 |
| Mumps | 0 | 2 | 0 | NN | 0 | 0 | 2 | 2 | 6 | 8 | 10 | 9 |
| Pertussis | 6 | 46 | 0 | 62 | 67 | 2 | 89 | 17 | 289 | 191 | 413 | 263 |
| Rubella | 3 | 1 | 1 | 79 | 34 | 0 | 10 | 2 | 130 | 214 | 153 | 309 |
| Tetanus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

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 8 to 21 January 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) ^{3,4} | 0 | 0 | 2 | 0 | 0 | 0 | 8 | 2 | 12 | 5 | 17 | 5 |
| Barmah Forest virus infection | 0 | 6 | - | 26 | 0 | 0 | 0 | - | 32 | 19 | 34 | 20 |
| Ross River virus infection | 1 | 50 | 6 | 47 | 7 | 2 | 29 | 7 | 149 | 86 | 180 | 95 |
| Dengue | 0 | 1 | 0 | 51 | 0 | - | 0 | 2 | 54 | 3 | 54 | 3 |
| Campylobacteriosis ⁵ | 12 | - | 8 | 295 | 80 | 14 | 84 | 69 | 562 | 570 | 791 | 737 |
| Chlamydial infection (NEC) ⁶ | 6 | NN | 9 | 230 | 0 | 8 | 79 | 31 | 363 | 329 | 426 | 380 |
| Donovanosis | 0 | NN | 1 | 0 | NN | 0 | 0 | 0 | 1 | 3 | 1 | 3 |
| Gonococcal infection ⁷ | 2 | 18 | 21 | 40 | 0 | 0 | 17 | 5 | 103 | 158 | 130 | 193 |
| Hepatitis A | 0 | 17 | 1 | 24 | 7 | 0 | 6 | 3 | 58 | 147 | 78 | 181 |
| Hepatitis B incident | 1 | 0 | 0 | 3 | 0 | 0 | 1 | 1 | 6 | 16 | 9 | 17 |
| Hepatitis C incident | 2 | 0 | 0 | - | 0 | 0 | - | - | 2 | 1 | 2 | 2 |
| Hepatitis C unspecified | 3 | NN | 12 | 190 | NN | 7 | 87 | 8 | 307 | 392 | 381 | 487 |
| Hepatitis (NEC) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | NN | 1 | 0 | 2 | 1 |
| Legionellosis | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 1 | 8 | 9 | 11 | 12 |
| Leptospirosis | 0 | 1 | 0 | 9 | 0 | 0 | 3 | 0 | 13 | 18 | 13 | 19 |
| Listeriosis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 5 | 5 |
| Malaria | 1 | 2 | 0 | 27 | 2 | 1 | 4 | 0 | 37 | 29 | 52 | 34 |
| Meningococcal infection | 0 | 3 | 0 | 7 | 0 | 0 | 3 | 2 | 15 | 13 | 23 | 18 |
| Ornithosis | 0 | NN | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 4 | 5 |
| Q Fever | 0 | 14 | 0 | 16 | 0 | 0 | 1 | 0 | 31 | 28 | 31 | 33 |
| Salmonellosis (NEC) | 2 | 46 | 20 | 160 | 74 | 4 | 15 | 14 | 335 | 347 | 452 | 432 |
| Shigellosis ⁵ | 0 | - | 11 | 15 | 12 | 0 | 1 | 4 | 43 | 38 | 52 | 44 |
| Syphilis | 0 | 6 | 9 | 23 | 0 | 0 | 0 | 3 | 41 | 60 | 53 | 70 |
| Tuberculosis | 1 | 2 | 0 | 12 | 0 | 1 | 9 | 1 | 26 | 56 | 50 | 72 |
| Typhoid ⁸ | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 5 | 3 | 8 |
| Yersiniosis (NEC) ⁵ | 0 | - | 0 | 22 | 1 | 0 | 0 | 0 | 23 | 16 | 28 | 18 |

1. For HIV and AIDS, see *CDI* 1997;21:23. 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.

- Elsewhere Classified.

Table 3. Notifications of rare¹ diseases received by State and Territory health authorities in the period 8 to 21 January 1997

| Disease ² | Total this period | Reporting States or Territories | Total notifications 1997 |
|----------------------|-------------------|---------------------------------|--------------------------|
| Brucellosis | 5 | NSW 1, Qld 3, Vic 1 | 5 |
| Cholera | 1 | NSW | 1 |
| Hydatid infection | | | 2 |

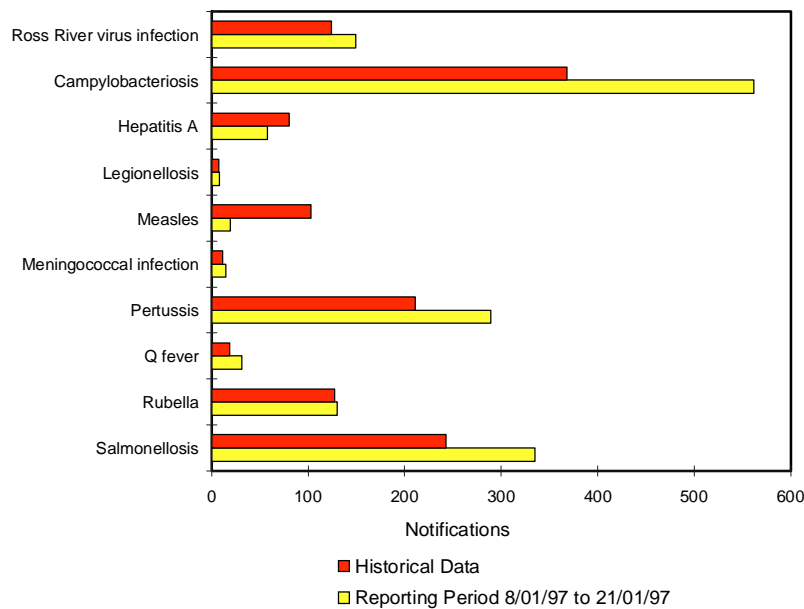
1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1996.
2. No notifications have been received during 1997 for the following rare diseases: botulism; chancroid, leprosy, lymphogranuloma venereum; plague; rabies; yellow fever; or other viral haemorrhagic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

Gonococcal infection was reported for 103 persons this period. Persons in the 15 - 34 years age group represented 77% of the total notifications. The male: female ratio was 2.6:1. Notifications of gonococcal infection have gradually risen in the last three years (Figure 6).

Rubella was reported for 130 persons this period, with 79 notifications from Queensland and 34 from South Australia. The number of notifications appears to be decreasing after being high in recent months. Sixty-eight cases (52%) were for the 15 - 29 years age group. There was a predominance of males, with the male:female ratio being 2.2:1.

Three hundred and thirty-five notifications of salmonellosis were reported this period. One hundred and twenty-six of the cases were in the 0 - 4 years age group. Included

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. Campylobacteriosis notifications, 1994 to 1996, by month of onset

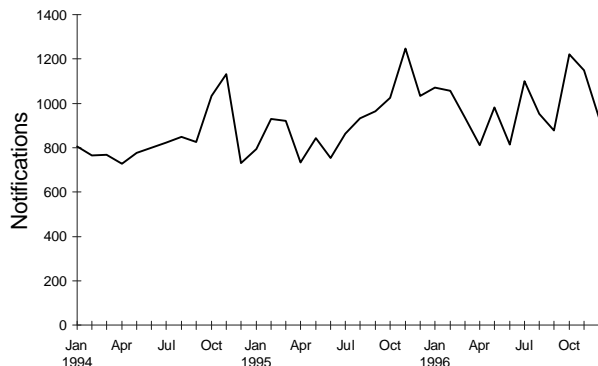
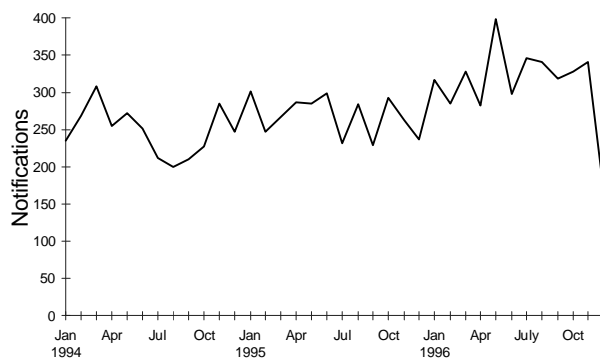


Figure 6. Gonococcal infection notifications, 1994 to 1996, by month of onset



were apparent clusters of 3 or more cases in postcode regions of Queensland (6) and South Australia (6).

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

Data for weeks 1, 2 and 3 ending 5 January, 12 January and 19 January 1997 respectively are included in this issue of CDI (Table 4). The consultation rate for rubella remains low. The rates for chickenpox and gastroenteritis are lower over the two most recent weeks than for the previous four weeks.

In 1997 three new conditions have been included. They are Ross River virus infection, HIV testing (patient initiated), and HIV testing (doctor initiated).

Sentinel Chicken Surveillance Programme

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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 23 flocks are maintained in the north of Western Australia, ten in the Northern Territory, ten in New South Wales and ten in Victoria. The flocks in Western Australia and the Northern Territory are tested all year round but those in Victoria are tested only from November to March, during the main MVE risk season.

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

Sentinel chicken serology was carried out for all of the 23 flocks in Western Australia in November and December 1996. There were no seroconversions to flaviviruses during this period.

A new flock was established at the Arid Zone Research Institute at Alice Springs in November 1996, and this brings the total number of sentinel chicken flocks in the Northern Territory to ten. Six flocks from the Northern Territory were tested in November and December 1996. During this period there were no seroconversions to flaviviruses.

The sentinel chicken flocks in New South Wales and Victoria were bled and tested in December and there were no seroconversions to flaviviruses during this period.

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 1,345 reports received in the CDI Virology and Serology Reporting Scheme this period (Tables 5 and 6).

The number of reports of measles remains low. There were 55 reports received for 1996, compared with less than 153 in 1995 and 1,199 in 1994.

Seventeen reports of influenza B were received this period. Included were 11 males and 6 females, 7 of whom were under the age of 14 years. The number of reports of influenza B rose to 22 in December. Ten of these were from South Australia, 9 from Western Australia and 3 from Victoria. This is the highest monthly total since September 1995 (Figure 7).

Parainfluenza virus type 3 was reported for 35 patients this period, 31 (89%) of whom were under the age of 5 years. The number of reports fell in December after peaking in October (Figure 8).

Table 4. Australian Sentinel Practice Research Network reports, weeks 1, 2 and 3, 1997

| Condition | Week 1, to 5 January 1997 | | Week 2, to 12 January 1997 | | Week 3, to 19 January 1997 | |
|---------------------------------|---------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | Reports | Rate per 1,000 encounters | Reports | Rate per 1,000 encounters | Reports | Rate per 1,000 encounters |
| Influenza | 16 | 3.5 | 23 | 3.4 | 7 | 1.8 |
| Rubella | 4 | 0.9 | 1 | 0.1 | 2 | 0.5 |
| Measles | 0 | 0.0 | 0 | 0.0 | 1 | 0.3 |
| Chickenpox | 20 | 4.4 | 15 | 2.2 | 9 | 2.3 |
| Pertussis | 2 | 0.4 | 5 | 0.7 | 0 | 0.0 |
| Gastroenteritis | 100 | 21.8 | 100 | 14.7 | 51 | 12.8 |
| Ross River virus infection | | | 6 | 0.9 | 4 | 1.0 |
| HIV testing (patient initiated) | | | 13 | 1.9 | 7 | 1.8 |
| HIV testing (doctor initiated) | | | 7 | 1.0 | 2 | 0.5 |

Figure 7. Influenza B laboratory reports, 1995 to 1996, by month of specimen collection

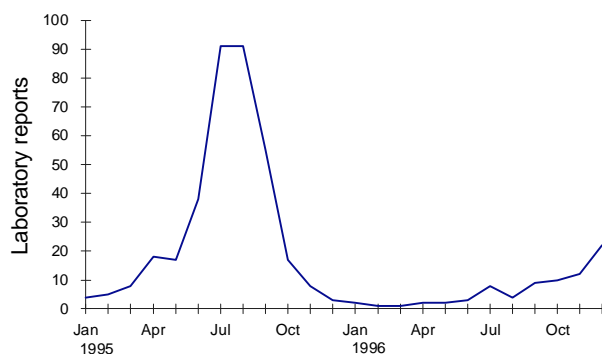


Figure 8. Parainfluenza virus type 3 laboratory reports, 1994 to 1996, by month of specimen collection

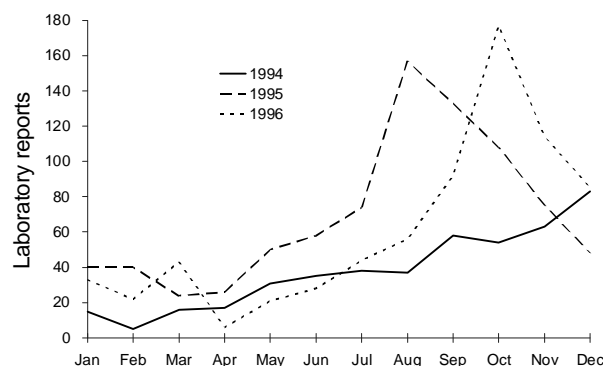


Table 5. Virology and serology laboratory reports by State or Territory¹ for the reporting period 2 to 15 January 1997, historical data², and total reports for the year

| | State or Territory ¹ | | | | | | | | Total this fortnight | Historical data ² | Total reported in CDI in 1997 | |
|--------------------------------|---------------------------------|-----|----|-----|----|-----|-----|----|----------------------|------------------------------|-------------------------------|-----|
| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | | | | |
| Measles, mumps, rubella | | | | | | | | | | | | |
| Measles virus | | | | | | | 1 | | 1 | 24.2 | 8 | |
| Mumps virus | | | | | | | | 2 | 2 | 2.5 | 6 | |
| Rubella virus | | 1 | 1 | 60 | 28 | | | 2 | 1 | 93 | 57.0 | 214 |
| Hepatitis viruses | | | | | | | | | | | | |
| Hepatitis A virus | | 4 | 1 | 14 | 6 | | 1 | | 3 | 29 | 20.5 | 68 |
| Hepatitis D virus | | | | | 1 | | | | | 1 | 0.8 | 5 |
| Arboviruses | | | | | | | | | | | | |
| Ross River virus | | | 10 | 17 | 1 | | 1 | | 20 | 49 | 37.7 | 142 |
| Barmah Forest virus | | | 2 | 17 | | | | | 1 | 20 | 6.7 | 39 |
| Kunjin virus | | | | | | | | | 1 | 1 | 0.2 | 1 |
| Flavivirus (unspecified) | | | | 3 | | | 1 | | | 4 | 0.8 | 4 |
| Adenoviruses | | | | | | | | | | | | |
| Adenovirus type 1 | | | | | 2 | | 2 | | | 4 | 2.3 | 8 |
| Adenovirus type 2 | | | | | 3 | | 3 | | | 6 | 3.2 | 10 |
| Adenovirus type 3 | | | | | | | 7 | | | 7 | 8.3 | 8 |
| Adenovirus type 5 | | | | | | | 1 | | | 1 | 0.2 | 1 |
| Adenovirus type 6 | | | | | 2 | | | | | 2 | 0.0 | 2 |
| Adenovirus type 7 | | | | | | | 3 | | | 3 | 3.0 | 4 |
| Adenovirus type 8 | | | | | | | 4 | | | 4 | 0.7 | 4 |
| Adenovirus type 19 | | | | | | | 1 | | | 1 | 0.0 | 1 |
| Adenovirus type 40 | | | | | | | 1 | | | 1 | 0.0 | 5 |
| Adenovirus type 42 | | | | | | | 1 | | | 1 | 0.0 | 1 |
| Adenovirus not typed/pending | | 4 | | | 12 | | 2 | | 3 | 21 | 46.5 | 160 |
| Herpes viruses | | | | | | | | | | | | |
| Cytomegalovirus | | 6 | | 37 | 6 | 1 | 12 | | 3 | 65 | 57.8 | 145 |
| Varicella-zoster virus | 1 | 4 | 1 | 68 | 12 | | 25 | | 10 | 121 | 54.2 | 228 |
| Epstein-Barr virus | | 12 | 5 | 111 | 40 | | 10 | | 20 | 198 | 93.2 | 456 |
| Other DNA viruses | | | | | | | | | | | | |
| Papovavirus group | | 1 | | | | | | | | 1 | 0.0 | 1 |
| Molluscum contagiosum | | | | | | | 1 | | | 1 | 0.3 | 2 |
| Parvovirus | | | | | | | 38 | | | 38 | 8.0 | 78 |

Table 5. Virology and serology laboratory reports by State or Territory¹ for the reporting period 2 to 15 January 1997, historical data², and total reports for the year, continued

| | State or Territory ¹ | | | | | | | | Total this fortnight | Historical data ² | Total reported in CDI in 1997 |
|--|---------------------------------|-----|----|-----|-----|-----|-----|-----|----------------------|------------------------------|-------------------------------|
| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | | | |
| Picornavirus family | | | | | | | | | | | |
| Coxsackievirus A16 | | | | | | | 2 | | 2 | 0.0 | 3 |
| Coxsackievirus B2 | | 4 | | | | | | 2 | 6 | 0.8 | 7 |
| Coxsackievirus B5 | | | | | 1 | | 1 | | 2 | 0.7 | 2 |
| Echovirus type 5 | | 1 | | | | | | | 1 | 0.0 | 1 |
| Echovirus type 7 | | 1 | | | 2 | 1 | 3 | | 7 | 0.0 | 11 |
| Poliovirus type 1 (uncharacterised) | | 1 | | | | | | | 1 | 0.3 | 2 |
| Poliovirus type 2 (uncharacterised) | | 2 | | | | | | | 2 | 0.5 | 3 |
| Rhinovirus (all types) | | 4 | | 2 | 6 | | 13 | 2 | 27 | 25.7 | 123 |
| Enterovirus not typed/pending | | 4 | | 11 | | | 1 | 8 | 24 | 40.0 | 133 |
| Ortho/Paramyxoviruses | | | | | | | | | | | |
| Influenza A virus | | | | 2 | | | 1 | 3 | 6 | 8.8 | 85 |
| Influenza B virus | | | | | 7 | | 3 | 7 | 17 | 2.0 | 41 |
| Influenza virus - typing pending | | | | | 24 | | | | 24 | 0.0 | 25 |
| Parainfluenza virus type 1 | | | | | | | | 1 | 1 | 1.2 | 16 |
| Parainfluenza virus type 2 | | 1 | | | | | | | 1 | 0.7 | 10 |
| Parainfluenza virus type 3 | | 3 | | 8 | 13 | | 6 | 5 | 35 | 27.8 | 241 |
| Parainfluenza virus typing pending | | | | | 20 | | | | 20 | 1.0 | 20 |
| Respiratory syncytial virus | | 2 | | 2 | 1 | 1 | 3 | | 9 | 19.3 | 46 |
| Other RNA viruses | | | | | | | | | | | |
| Rotavirus | | 3 | | | 26 | 8 | 4 | 2 | 43 | 39.7 | 138 |
| Astrovirus | | | | | | | 1 | | 1 | 0.0 | 1 |
| Norwalk agent | | | | | | | 24 | | 24 | 2.0 | 29 |
| Other | | | | | | | | | | | |
| <i>Chlamydia trachomatis</i> not typed | | 11 | 17 | 110 | 35 | 6 | 11 | 21 | 211 | 121.3 | 677 |
| <i>Chlamydia psittaci</i> | | | | | | | 15 | | 15 | 8.8 | 18 |
| <i>Chlamydia</i> species | | 1 | | | | | | | 1 | 2.2 | 3 |
| <i>Mycoplasma pneumoniae</i> | | 12 | | 27 | 2 | | 27 | 16 | 84 | 17.3 | 298 |
| <i>Coxiella burnetii</i> (Q fever) | | 9 | | 5 | | | | | 14 | 10.7 | 53 |
| <i>Rickettsia australis</i> | | | | 1 | | | | | 1 | 0.5 | 3 |
| <i>Bordetella pertussis</i> | | 3 | | 28 | | | 47 | 9 | 87 | 32.5 | 339 |
| <i>Legionella longbeachae</i> | | | | | | | | 1 | 1 | 0.7 | 6 |
| <i>Legionella</i> species | | | | 3 | | | | | 3 | 0.2 | 3 |
| TOTAL | 1 | 94 | 37 | 526 | 250 | 17 | 283 | 137 | 1,345 | 792.7 | 3,938 |

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 2 to 15 January 1997

| State or Territory | Laboratory | Reports |
|--------------------|--|---------|
| New South Wales | Institute of Clinical Pathology & Medical Research, Westmead | 22 |
| | Royal Alexandra Hospital for Children, Camperdown | 17 |
| | Royal Prince Alfred Hospital, Camperdown | 5 |
| | South West Area Pathology Service, Liverpool | 24 |
| Queensland | Queensland Medical Laboratory, West End | 557 |
| | State Health Laboratory, Brisbane | 12 |
| South Australia | Institute of Medical and Veterinary Science, Adelaide | 249 |
| Tasmania | Royal Hobart Hospital, Hobart | 16 |
| Victoria | Microbiological Diagnostic Unit, University of Melbourne | 10 |
| | Monash Medical Centre, Melbourne | 16 |
| | Royal Children's Hospital, Melbourne | 63 |
| | Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital | 198 |
| Western Australia | PathCentre Virology, Perth | 93 |
| | Western Diagnostic Pathology | 63 |
| TOTAL | | 1,345 |