

Communicable Diseases Surveillance

Ross River virus infection

Ross River virus is an arthropod-borne virus belonging to the alphavirus group. The major vectors of Ross River virus in Australia are *Culex annulirostris* in inland areas and *Aedes vigilax* in coastal regions.

Disease due to Ross River virus infection is also known as epidemic polyarthritis. Onset most commonly occurs in the late summer and early autumn months. The incubation period is between three and 11 days and infection is frequently subclinical. In those cases which are clinically manifest, signs and symptoms include arthritis, maculopapular rash, malaise, myalgia and fever. Laboratory confirmation is by the detection of a fourfold rise in antibody titre between paired sera.

The National Notifiable Diseases Surveillance System records a peak in Ross River virus infection activity in February and March each year (Figure 1). A total of 6,428

Figure 1. Notifications of Ross River virus infection, 1992 to 1997, by month of specimen collection

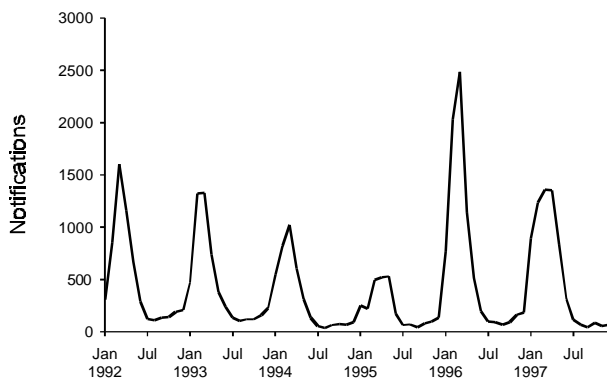


Figure 2. Laboratory reports of Ross River virus, 1992 to 1997, by month of specimen

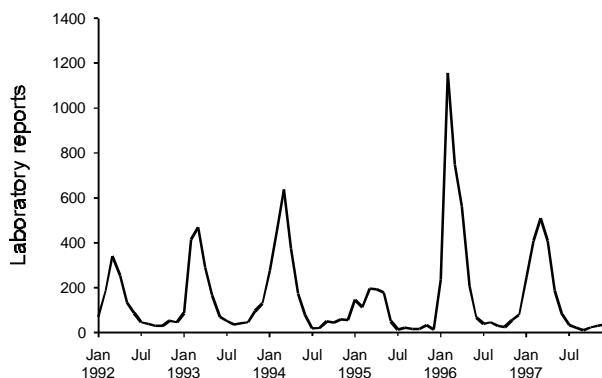
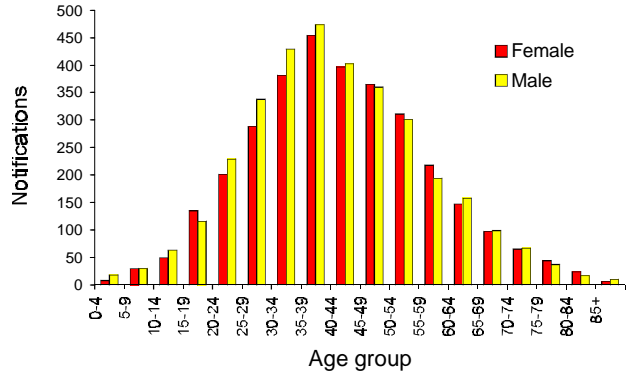


Figure 3. Notifications of Ross River virus infection, 1997, by age group and sex



cases were recorded with onset in 1997, of which 37% were from Queensland and 25% from New South Wales. This is lower than the total for 1996 when a record high number of notifications was received. The Virus and Serology Laboratory Reporting Scheme (LabVISE) records a similar seasonal distribution (Figure 2). In 1997 most cases were in the 30-49 years age group, as is usually the case (Figure 3). The male:female ratio was 1:1.

The most important preventative measure for Ross River virus infection is the avoidance of mosquito bites. This can be achieved by the use of adequate insect screening on windows and doors and the wearing of loose fitting clothing and the use of personal insect repellents when going outside. This is of particular importance at this time of year when infection is more likely to occur.

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 1998;22:4-5.

Reporting period 26 November 1997 to 6 January 1998

There were 5,699 notifications received for this six-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).

The number of reports of Barmah Forest virus infection has remained low. In previous years, slight increases in

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 26 November 1997 to 6 January 1998

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	1	0	2	0	0	3	0	6	0	48	51
Measles	9	18	0	46	1	3	13	3	93	34	810	496
Mumps	1	2	0	2	2	0	6	2	15	0	185	128
Pertussis	20	317	7	412	209	3	104	256	1,328	933	9,162	3,943
Rubella	4	1	0	46	17	1	4	5	78	353	1,392	2,816
Tetanus	0	1	0	0	0	0	0	0	1	0	7	2

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 26 November 1997 to 6 January 1998

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	0	0	1	0	0	0	0	1	0	122	50
Barmah Forest virus infection	0	5	-	25	0	0	0	-	30	0	648	833
Campylobacteriosis ⁴	34	-	25	457	217	18	18	138	907	1,424	10,873	12,008
Chlamydial infection (NEC) ⁵	16	NN	132	266	0	2	228	152	796	863	7,905	8,335
Dengue	0	1	0	2	0	-	0	0	3	0	205	43
Donovanosis	0	NN	14	0	NN	0	0	0	14	0	43	48
Gonococcal infection ⁶	0	7	197	79	0	0	338	134	755	417	4,331	4,105
Hepatitis A	8	45	13	54	7	0	28	4	159	152	2,984	2,142
Hepatitis B incident	0	1	2	4	0	0	3	0	10	0	227	225
Hepatitis C incident	1	1	0	-	0	0	-	-	2	0	15	71
Hepatitis C unspecified	34	NN	36	273	NN	6	1	101	451	0	8,675	9,461
Hepatitis (NEC)	0	0	0	0	1	0	1	NN	2	0	17	16
Legionellosis	0	0	1	2	6	0	3	9	21	27	157	189
Leptospirosis	0	3	1	2	0	0	4	0	10	0	123	225
Listeriosis	0	1	0	1	0	0	1	0	3	0	69	68
Malaria	2	4	3	14	2	0	2	3	30	63	725	847
Meningococcal infection	1	6	1	5	1	1	12	3	30	42	482	420
Ornithosis	0	NN	0	0	0	0	1	2	3	0	46	84
Q Fever	0	12	0	22	0	0	4	1	39	66	574	550
Ross River virus infection	0	16	26	47	3	0	7	21	120	209	6,604	7,808
Salmonellosis (NEC)	9	69	55	179	50	4	140	35	541	692	6,717	5,752
Shigellosis ⁴	1	-	18	21	12	0	15	12	79	0	800	669
Syphilis	0	7	41	34	0	1	0	1	84	136	1,191	1,506
Tuberculosis	0	9	0	9	1	0	7	1	27	0	922	1,065
Typhoid ⁷	0	1	1	0	1	0	2	4	9	0	76	84
Yersiniosis (NEC) ⁴	0	-	1	25	2	0	1	0	29	0	244	268

1. For HIV and AIDS, see *CDI* 1997; 21:362. 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.

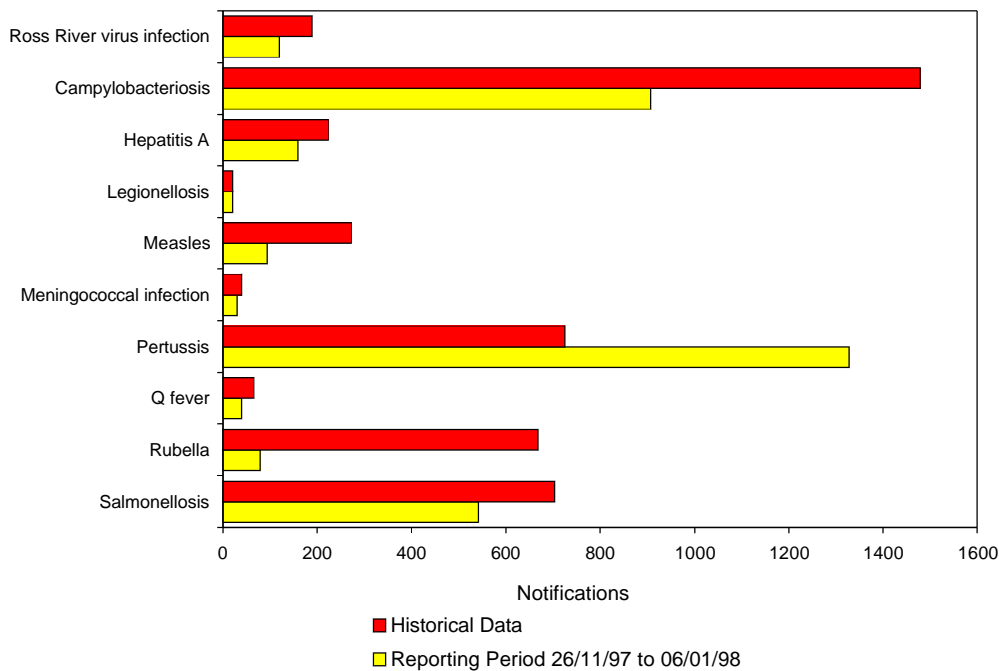
6. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.

7. NSW, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified

- Elsewhere Classified.

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

1. The historical data are the averages of the number of notifications in the corresponding 4 week periods of the last three years and the two week periods immediately preceding and following these.

November and December have usually been followed by larger numbers of cases in the months January to March (Figure 5).

Although the total number of notifications received for hepatitis A during 1997 was 40% higher than for 1996, the average weekly number of reports received for this six-week period was lower than for any other period in 1997, and similar to the number recorded for the same period last year. The lower current numbers might reflect delays in case presentation or diagnosis.

Two cases of invasive *Haemophilus influenzae* type b infection were notified during the current period; both were

between 1 and 2 years old. Of 47 cases reported during 1997, 10 were less than 1 year of age, 20 were aged between 1 and 5 years, and 17 were over 5 years old.

Reports of meningococcal infection have declined gradually from a peak notification rate of 10-12 per week during September and October to an average of 5 per week, lower than at the same time last year. Currently reported cases ranged in age from less than 1 year to 78 years. Seven cases (23%) were in children less than 5 years old, and 5 cases (17%) were in the age group 20-24 years.

After a rise in the number of notifications for measles during the period September to November, the number of reports has declined during the current period. However,

Table 3. Notifications of rare¹ diseases received by State and Territory health authorities in the period 26 November 1997 to 6 January 1998

Disease ²	Total this period	Reporting States or Territories	Total notifications 1997
Brucellosis	4	Qld, Vic	41
Chancroid			1
Cholera			3
Hydatid infection	7	SA, Vic, WA	59
Leprosy	2	Vic	12

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1997.
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 5. Notifications of Barmah Forest virus infection, 1995 to 1997, by month of onset

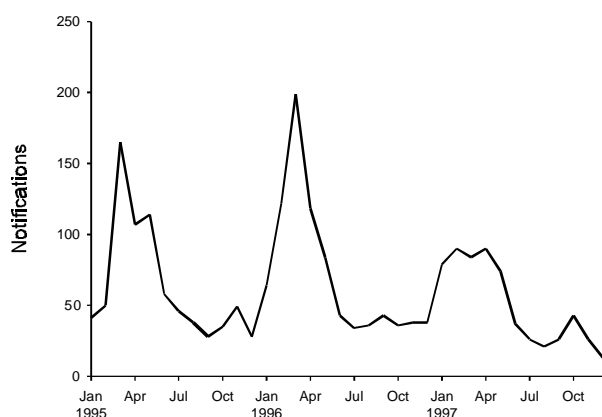
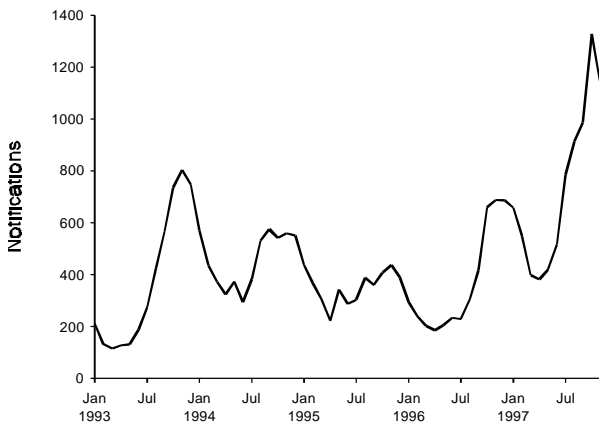


Figure 6. Notifications of pertussis, 1993 to 1997, by month of onset



notifications remain much higher than during the same period in 1996-97. Among current cases, 47 (51%) were in the 0-4 years age group.

Although the average weekly number of reports for pertussis during the current period (221 per week) was slightly lower than in the previous six-week period (285 per week), the number of cases remained very high, and was more than 40% above the number reported during the corresponding period one year ago (Figure 6). Total notifications reported during 1997 were 2.3 times the total reported in 1996. Among current cases, 51 of 1,328 (3.8%) were in children under one year of age, and 73 (5.5%) were in children 1-4 years old. The predominant age groups affected were 5-9 years and 10-14 years (23.2% of cases occurring in each age group).

Table 4. Australian Sentinel Practice Research Network reports, weeks 50 and 51, 1997

Condition	Week 50, to 14 December 1997		Week 51, to 21 December 1997	
	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Chickenpox	11	1.6	15	2.3
Gastroenteritis	76	11.0	73	11.2
HIV testing (doctor initiated)	14	2.0	8	1.2
HIV testing (patient initiated)	8	1.2	17	2.6
Influenza	13	1.9	4	0.6
Measles	0	0	0	0
Pertussis	6	0.9	2	0.3
Ross River virus infection	1	0.1	2	0.3
Rubella	1	0.1	2	0.3

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* 1998;22:5-6.

Data for weeks 50 and 51, ending 14 and 21 December 1997 respectively, are included in this issue of *CDI* (Table 4). During this reporting period, the consultation rates for pertussis and chickenpox remained moderately high in comparison to 1996 rates. For the other conditions, consultation rates have remained low or steady. There was no increase in the consultation rate for Ross River virus infection.

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* 1998;22:8.

There were 1,492 reports received in the *CDI* Virology and Serology Laboratory Reporting Scheme this four week period (Tables 5 and 6).

The number of reports of Barmah Forest virus have been low recently. However this is expected to increase in the coming months.

Figure 7. Influenza laboratory reports, 1995 to 1997, by type and month of specimen

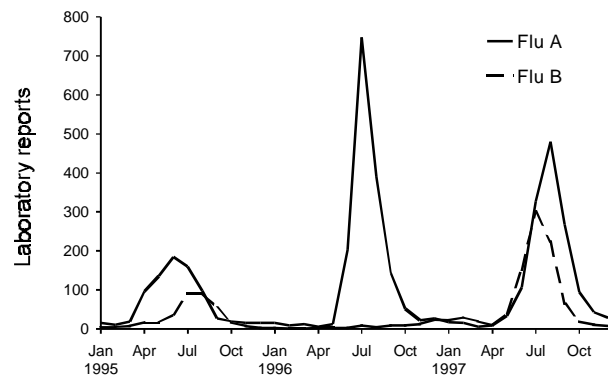


Figure 8. Parainfluenza type 3 laboratory reports, 1995 to 1997, by month of specimen collection

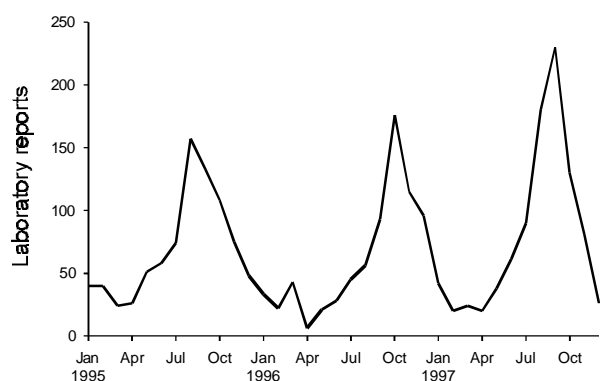


Figure 9. *Mycoplasma pneumoniae* laboratory reports, 1993 to 1997, by month of specimen collection

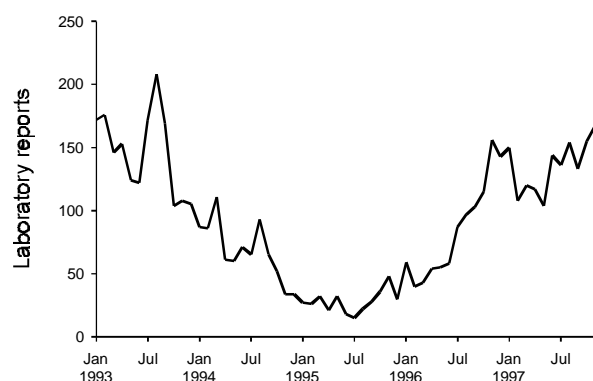


Table 5. Virology and serology laboratory reports by State or Territory¹ for the reporting period 4 December 1997 to 6 January 1998, and total reports for the year

	State or Territory ¹								Total this period	Total reported in CDI in 1997
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Measles, mumps, rubella										
Measles virus	8	3			1				12	75
Mumps virus					2			1	3	46
Rubella virus	3	1		3	5			1	13	554
Hepatitis viruses										
Hepatitis A virus	9	1	3	7	1			1	22	702
Hepatitis D virus					1				1	19
Hepatitis E virus	1								1	4
Arboviruses										
Ross River virus	1	1	5	7	2			36	52	2,137
Barmah Forest virus								1	1	234
Dengue not typed								1	1	61
Flavivirus				2					2	25
Adenoviruses										
Adenovirus type 1					2				2	32
Adenovirus type 2					1				1	43
Adenovirus type 3					1				1	24
Adenovirus not typed/pending	2	8			42			9	61	1,062
Herpes viruses										
Herpes virus type 6								1	1	6
Cytomegalovirus	9	20		10	7	1		19	66	1,137
Varicella-zoster virus	11	2		29	21			38	101	1,414
Epstein-Barr virus	9	2	1	18	55		6	26	117	2,533
Other DNA viruses										
Contagious pustular dermatitis (Orf virus)								5	5	9
Parvovirus				1	3				4	345
Picornavirus family										
Coxsackievirus B3	1						1		2	12
Coxsackievirus B4	1								1	4
Echovirus type 11	1								1	1

Table 5. Virology and serology laboratory reports by State or Territory¹ for the reporting period 4 December 1997 to 6 January 1998, and total reports for the year, continued

	State or Territory ¹								Total this period	Total reported in <i>CDI</i> in 1997
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Echovirus type 22	1								1	1
Rhinovirus (all types)	4	15			12			25	56	644
Enterovirus not typed/pending		1	1					26	28	604
Ortho/paramyxoviruses										
Influenza A virus	26	8			28			4	66	1,445
Influenza B virus	15	2			6			2	25	947
Parainfluenza virus type 1	1	2							3	72
Parainfluenza virus type 2	1			1					2	119
Parainfluenza virus type 3	12	19			10			21	62	1,192
Respiratory syncytial virus	84	14	1	2	15		1	7	124	4,798
Other RNA Viruses										
Rotavirus		2			6	4		4	16	1,561
Other										
<i>Chlamydia trachomatis</i> not typed	56	6	32	41	50		4	75	264	4,675
<i>Chlamydia psittaci</i>		1						1	2	59
<i>Chlamydia</i> species				1					1	31
<i>Mycoplasma pneumoniae</i>	2	1	3	41	72	1	10	6	136	1,926
<i>Coxiella burnetii</i> (Q fever)				3					3	304
<i>Rickettsia australis</i>						1			1	14
<i>Bordetella pertussis</i>	8	1	2	79			52	78	220	2,092
<i>Legionella longbeachae</i>					3			2	5	40
<i>Cryptococcus</i> species	2	1							3	23
TOTAL	268	111	50	245	346	7	74	391	1,492	31,042

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

Influenza was reported for 91 patients this period including 66 reports of influenza A and 25 reports of influenza B. This is average for the time of year (Figure 7).

Sixty-two reports of parainfluenza virus type 3 were received this period for 33 males and 29 females. Fifty per cent of reports were for infants under the age of one year. The number of reports has continued to fall after peaking in September (Figure 8).

One hundred and thirty-six reports of *Mycoplasma pneumoniae* were received this period. Included were 63 males and 73 females (male:female ratio 1:1.2). Most reports were received for patients in the 5-14 years age group (53% of total) followed by those in the 25-44 years age group (24%). Following a rise in late 1996 an increased number of laboratory reports was received throughout 1997 (Figure 9).

Table 6. Virology and serology laboratory reports by contributing laboratories for the reporting period 4 December 1997 to 6 January 1998

State or Territory	Laboratory	Reports
Australian Capital Territory	Woden Valley Hospital, Canberra	301
New South Wales	New Children's Hospital, Westmead	68
Queensland	Queensland Medical Laboratory, West End	266
South Australia	Institute of Medical and Veterinary Science, Adelaide	346
Tasmania	Northern Tasmanian Pathology Service, Launceston	7
Victoria	Microbiological Diagnostic Unit, University of Melbourne Royal Children's Hospital, Melbourne	4 68
Western Australia	PathCentre Virology, Perth Western Diagnostic Pathology	361 71
TOTAL		1,492