

Communicable Diseases Surveillance

Campylobacteriosis

Campylobacteriosis is a common cause of gastroenteritis in Australia, and is the most frequently notified food-borne disease. Since the early 1990s the number of notifications has been increasing (Figure 1). The true incidence of campylobacteriosis in Australia is likely to be underestimated, as many people do not seek medical attention or have a stool culture collected.

Campylobacter species are frequent commensals of the gastrointestinal tracts of both wild and domesticated animals. The usual species infecting humans are *Campylobacter jejuni* and *C. coli*. Human infection with *Campylobacter* most often occurs after the consumption of contaminated meat and poultry. Poultry is often contaminated with *C. jejuni*, which can survive frozen for months. Other sources of *Campylobacter* include water contaminated with animal faeces, unpasteurised milk and milk products, and salads cross-contaminated by raw meat or poultry during food handling. Person-to-person transmission has also been reported.

The incubation period for campylobacteriosis is 2 to 4 days. Fever, headache, myalgia and malaise begin 12 to 24 hours before the onset of diarrhoea and abdominal cramping. The diarrhoea may be severe and bloody, and the patient seriously unwell. Infected persons may excrete the organism in stools for 2 to 3 weeks. The infection is generally self limiting and does not require treatment with antibiotics.

The incidence of campylobacteriosis is higher in developing countries, and a peak in notifications is seen in children under 5 years of age. Most children probably have multiple symptomatic infections while young. Infections in older age groups are mostly asymptomatic. In developed countries, a second peak is also seen in young adults, possibly reflecting a lack of ongoing exposure to the organism (Figure 2).

In 1996, the National Notifiable Diseases Surveillance System (NNDSS) recorded 12,002 notifications of campylobacteriosis. The male:female ratio was 1.1:1. The highest number of notifications was for children in the 0 - 4 years age group, with 2,663 cases (22% of the total).

Campylobacteriosis occurs throughout the year but tends to peak in the summer months. Most cases appear to be sporadic rather than part of well defined outbreaks. A difficulty in detecting outbreaks of *Campylobacter* has been the lack of a practical sub-typing system.

Education to encourage appropriate food handling practices is an important strategy to decrease the burden of illness from *Campylobacter* and other food-borne illnesses in Australia.

Figure 1. Campylobacteriosis, 1991 to 1997, by month of onset

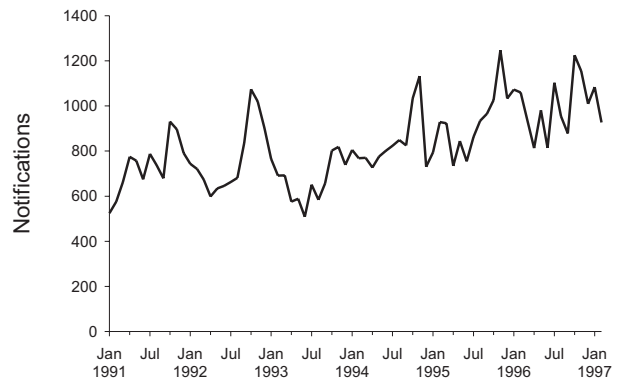
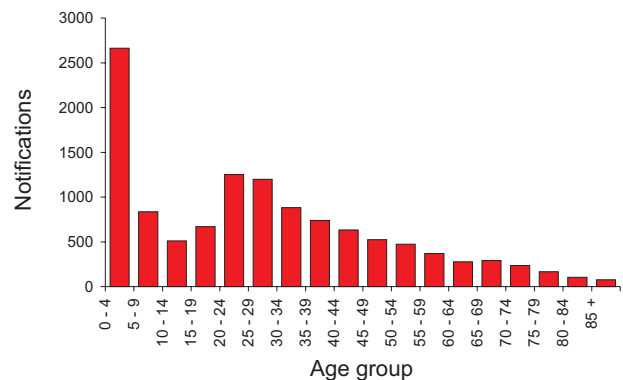


Figure 2. Campylobacteriosis, 1996, by age group



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.

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 30 April to 13 May 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	0	0	0	1	1	0	2	2	20	20
Measles	0	6	0	3	0	0	6	2	17	7	171	177
Mumps	0	1	0	NN	1	1	7	0	10	0	70	44
Pertussis	3	62	0	31	40	3	19	14	172	92	2891	1190
Rubella	0	0	0	30	4	2	7	1	44	71	553	1082
Tetanus	0	0	0	0	0	0	0	0	0	0	3	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 30 April to 13 May 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	1	0	0	0	2	1	5	3	128	63
Barmah Forest virus infection	0	9	-	21	0	0	1	-	31	58	313	477
Campylobacteriosis ⁴	8	-	0	133	78	16	84	45	364	407	4246	4317
Chlamydial infection (NEC) ⁵	4	NN	19	142	2	20	84	32	303	332	3030	2616
Dengue	0	2	0	2	0	-	0	0	4	1	189	20
Donovanosis	0	NN	0	0	NN	0	0	1	1	0	11	19
Gonococcal infection ⁶	2	15	54	35	0	1	21	36	164	195	1611	1350
Hepatitis A	0	38	3	40	1	0	11	2	95	81	1447	976
Hepatitis B incident	0	3	1	3	0	0	4	4	15	12	137	88
Hepatitis C incident	0	0	0	-	0	0	-	-	0	1	5	13
Hepatitis C unspecified	7	NN	11	122	NN	20	64	10	234	362	2985	3357
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	0	9	10
Legionellosis	0	0	0	0	2	0	4	1	7	6	62	74
Leptospirosis	0	2	0	2	0	0	0	0	4	10	47	95
Listeriosis	0	0	0	0	0	0	0	0	0	5	38	22
Malaria	2	10	0	20	2	1	2	0	37	37	286	302
Meningococcal infection	1	6	1	2	1	0	7	1	19	13	125	95
Ornithosis	0	NN	0	0	0	0	6	0	6	1	27	30
Q Fever	0	9	0	16	0	0	0	0	25	21	202	175
Ross River virus infection	2	214	8	278	40	2	50	23	617	441	4958	6441
Salmonellosis (NEC)	6	60	3	67	14	8	48	21	227	261	3697	2625
Shigellosis ⁴	0	-	1	2	4	0	4	14	25	23	364	250
Syphilis	0	16	4	8	0	1	1	2	32	51	449	537
Tuberculosis	0	7	0	2	1	1	17	2	30	47	358	431
Typhoid ⁷	0	1	0	1	0	0	0	0	2	1	35	46
Yersiniosis (NEC) ⁴	0	-	0	7	3	0	0	0	10	9	129	105

1. For HIV and AIDS, see 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 and WA: includes Barmah Forest virus.

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

5. WA: genital only.

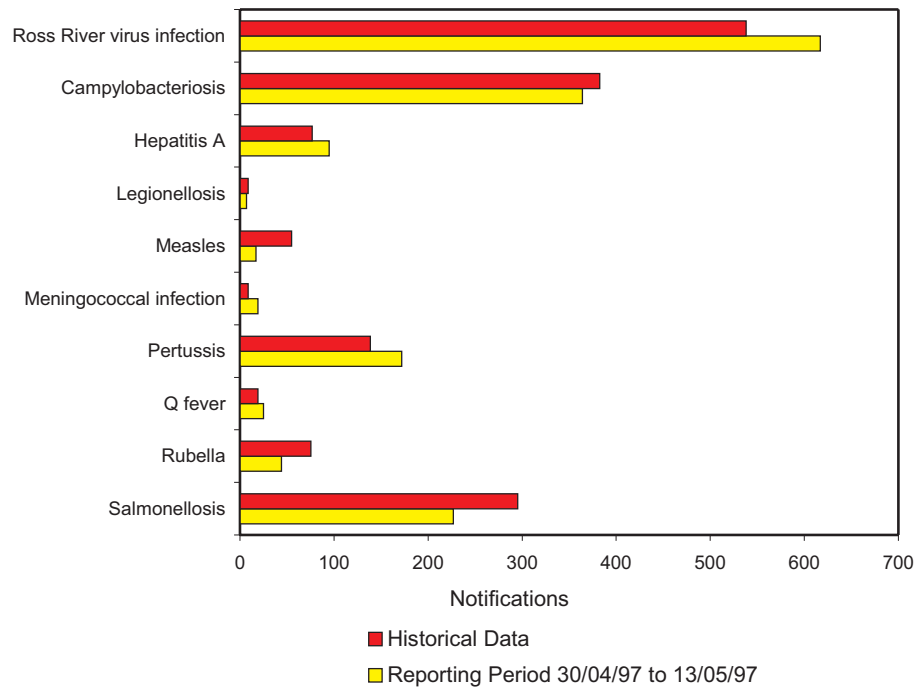
6. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.

7. NSW, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified

- Elsewhere Classified.

Figure 3. 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.

Reporting period 30 April to 13 May 1997

There were 2,714 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).

Seventeen reports of measles were received this reporting period, six each from New South Wales and Victoria and three from Queensland. The number of notifications

remains low (Figure 4). One hundred and fifty-nine reports of measles have been received with onset in 1997. Of these, 81 (51%) were in the 0 - 4 years age group and 23 (15%) were in the 5 - 9 years age group. The male:female ratio was 1:1.1.

Reports of Ross River virus infection remain at a high level, with 617 reports received in this period (Figure 5). The majority of reports were from Queensland (278) and New South Wales (214). There have been 4,815 infections notified so far for 1997. The peak number of reports for

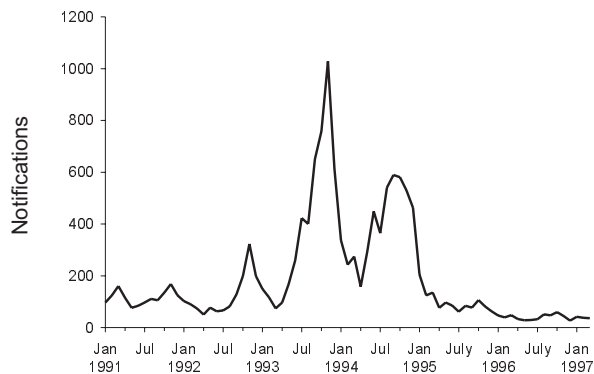
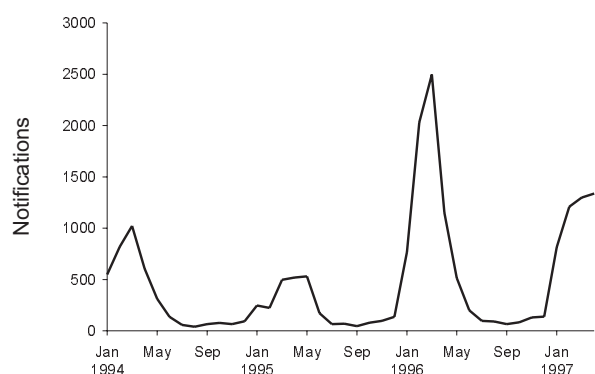
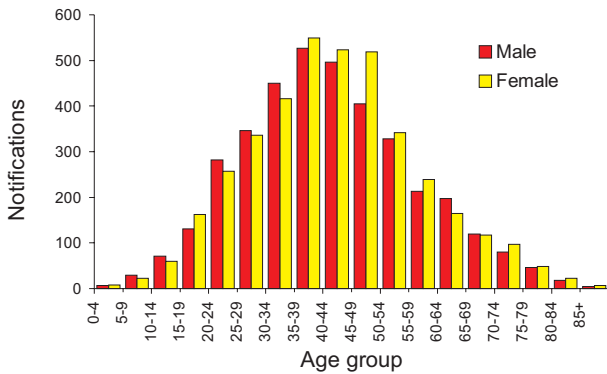
Figure 4. Measles notifications, 1991 to 1997, by month of onset**Figure 5. Ross River virus notifications, 1994 to 1997, by month of onset**

Figure 6. Ross River virus notifications, 1996, by age group and sex



1997 remains well below that received for 1996. However more reports have been received for the year to date than the total annual notifications for 1994 or 1995. Notifications in 1996 were highest in the 30 - 49 year age range (Figure 6).

There were 95 notifications of hepatitis A this period. The majority of reports were from Queensland (40) and New South Wales (38). Equal numbers of males and females were notified. The highest number of notifications was for the 5 - 9 years age group (17) followed by the 25 - 29 years age group (11). More reports for the year to date (1,447) have been received than for the same period in 1996 (976).

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

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

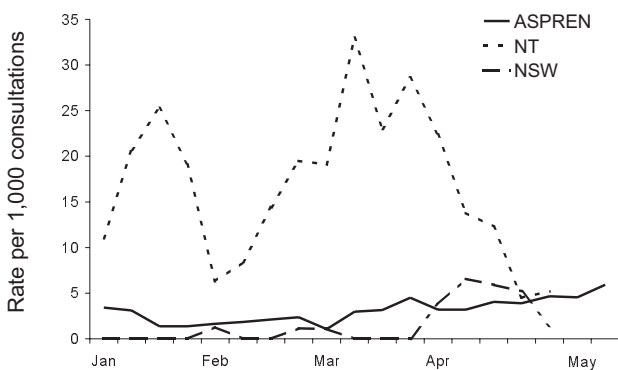


Table 3. Notifications of rare¹ diseases received by State and Territory health authorities in the period 30 April to 13 May 1997

Disease ²	Total notifications 1997 ³
Brucellosis	14
Chancroid	1
Cholera	1
Hydatid Infection	8
Leprosy	7

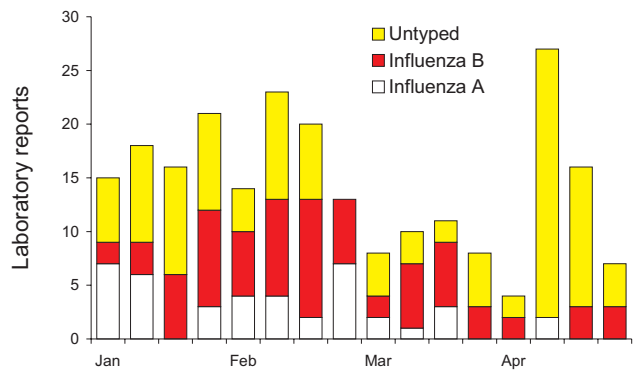
1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1996.
2. No notifications have been received during 1997 for the following rare diseases: botulism, lymphogranuloma venereum, plague, rabies, yellow fever, or other viral haemorrhagic fevers.
3. No notifications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

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.

Sentinel general practitioner surveillance

The ASPREN consultation rate for influenza-like illness rose slightly this fortnight to 5.9 per 1,000 encounters (Figure 7). This is low for the time of year; a rate of 10 per 1,000 encounters was recorded for a similar period in 1996. The consultation rate for influenza-like illness recorded by the New South Wales Sentinel General Practice Scheme rose to 6 per 1,000 encounters in early April but has since fallen.

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



Laboratory surveillance

Twenty-seven reports of influenza virus were recorded by the LabVISE scheme this fortnight, 4 influenza A, 5 influenza B and 18 untyped. For the year to date 250 reports of influenza have been received. Included were 41 reports of influenza A (16%), 80 of influenza B (32%) and 129 (52%) untyped influenza (Figure 8). Overall the male:female ratio was 1:1 and 20% of patients were over 65 years of age. The number of laboratory reports remains average for the time of year.

Absenteeism surveillance

Australia Post recorded a national absenteeism rate of 2.4% and 2.6% for the last two weekly periods, similar to previous weeks.

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.

Table 4. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 December 1996, by sex and State or Territory of diagnosis

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Totals for Australia			
										This period 1996	This period 1995	Year to date 1996	Year to date 1995
HIV diagnoses	Female	0	0	0	0	0	0	0	0	0	3	63	72
	Male	1	25	0	8	3	1	16	5	59	48	784	765
	Sex not reported	0	0	0	0	0	0	0	0	0	0	6	8
	Total ¹	1	25	0	8	3	1	16	5	59	48	854	847
AIDS diagnoses	Female	0	1	0	0	0	0	0	0	1	1	27	32
	Male	0	11	0	3	1	0	8	2	25	53	527	728
	Total ¹	0	12	0	3	1	0	8	2	26	54	554	762
AIDS deaths	Female	0	0	0	1	0	0	0	0	1	2	16	39
	Male	0	11	0	1	1	0	5	3	21	48	436	600
	Total ¹	0	11	0	2	1	0	5	3	22	50	452	640

1. Persons whose sex was reported as transsexual 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 31 December 1996, by sex and State or Territory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	18	476	4	98	44	4	178	76	898
	Male	176	10348	86	1710	599	78	3500	801	17298
	Sex not reported	0	2045	0	0	0	0	28	0	2073
	Total ¹	194	12883	90	1813	643	82	3715	880	20300
AIDS diagnoses	Female	7	148	0	32	18	2	56	19	282
	Male	80	4088	27	701	295	36	1448	316	6991
	Total ¹	83	4137	26	702	302	34	1428	321	7033
AIDS deaths	Female	2	106	0	27	14	2	38	12	201
	Male	52	2890	22	490	204	25	1136	229	5048
	Total ¹	54	3002	22	519	218	27	1180	242	5264

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

Table 6. Australian Sentinel Practice Research Network reports, weeks 18 and 19, 1997

Condition	Week 18, to 4 May 1997		Week 19, to 11 May 1997	
	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Chickenpox	4	0.5	10	1.7
Gastroenteritis	93	11.3	65	11.0
HIV testing (doctor initiated)	14	1.7	5	0.8
HIV testing (patient initiated)	22	2.7	16	2.7
Influenza	50	6.1	35	5.9
Measles	0	0.0	0	0.0
Pertussis	0	0.0	2	0.3
Ross River virus infection	0	0.0	3	0.5
Rubella	0	0.0	0	0.0

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) 332 4648 Facsimile: (02) 332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for December 1996, as reported to 31 March 1997, are included in this issue of *CDI* (Tables 4 and 5).

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 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 18 and 19 ending 4 and 11 May respectively are included in this issue of *CDI* (Table 6). The consultation rate for chickenpox has remained steady at rates similar to those seen during the autumns of 1995 and 1996. The consultation rate for gastroenteritis has continued at low levels since mid-January 1997. Consultation rates for HIV testing have been slightly higher in the current reporting period than the rates experienced during the previous six weeks. Consultation rates for Ross River virus infection have been slightly lower during the last six reporting weeks than during the summer and early autumn. The numbers of reported cases of measles, rubella and pertussis have remained low during 1997.

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 24 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 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*

Sentinel chicken serology was carried out for 24 flocks in Western Australia in March and April 1997. There has been widespread Murray Valley encephalitis and Kunjin activity in the north of Western Australia during this period. Table 7 shows the number of confirmed seroconversions to flaviviruses from the Kimberley, Pilbara and Gascoyne regions.

Six flocks of sentinel chickens from the Northern Territory were tested in March and April. There were seroconversions in the flocks at Katherine, Coastal Plains Research Station and Tennant Creek in April. These are preliminary results and have yet to be confirmed. All the chickens at Tennant Creek seroconverted, four to Murray Valley encephalitis, three to Murray Valley encephalitis and Kunjin, two to Kunjin, and one to flavivirus only. Two of the chickens at Katherine seroconverted, one to Murray Valley encephalitis and Kunjin, and one to Kunjin only. There was one new seroconversion to both Murray Valley encephalitis and Kunjin viruses at the Coastal Plains Research Station.

Table 7. Sentinel Chicken Surveillance Programme seroconversions, Western Australia, March and April 1997

	March			April				Total
	MVE	Kunjin	MVE and Kunjin	MVE	Kunjin	MVE and Kunjin	Flavivirus only	
Kimberley								
Kalumburu				2		1	1	4
Wyndham				1		1		2
Kununurra	3			1		5		9
Fitzroy Crossing				1				1
Derby	2	1		1	1	3		8
Broome	2		1	5		4		12
Pilbara								
Karratha						3		3
Harding Dam				8	1	1		10
Panawonica				1				1
Tom Price				4		2		6
Paraburdoo			1	2		5		8
Ophthalmia (Newman)	1	1	1	3		2	1	9
Whaleback Mine (Newman)					1	2		3
Exmouth						1		1
Gascoyne								
Carnarvon						1		1

The sentinel chicken surveillance programs in New South Wales and Victoria finished at the end of February 1997, and will resume in November.

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 773 reports received in the CDI Virology and Serology Laboratory Reporting Scheme this period (Tables 8 and 9).

Laboratory reports of respiratory syncytial virus usually peak in July and are continuing to increase as expected (Figure 9). There were 75 reports received this fortnight

Figure 9. Respiratory syncytial virus laboratory reports, 1995 to 1997, by month of specimen collection

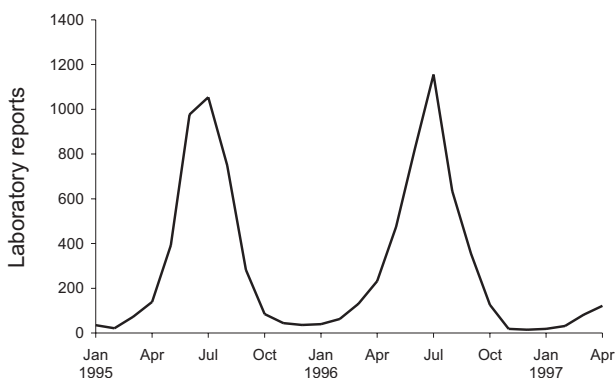
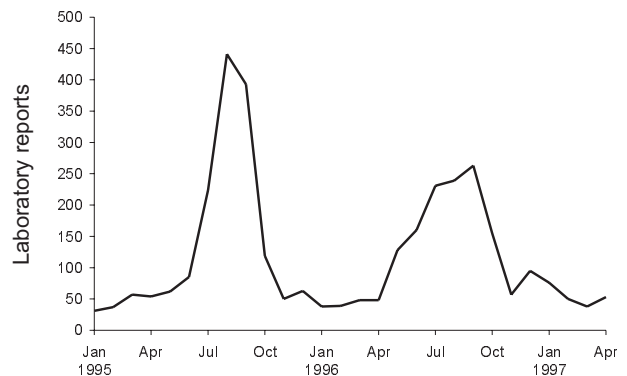


Figure 10. Rotavirus laboratory reports, 1995 to 1997, by month of specimen collection



with diagnosis by antigen detection (50), virus isolation (19), single high titre (3) and four-fold rise in titre (one). Two reports did not indicate the method of diagnosis.

Laboratory reports of rotavirus increased in April. Reports usually peak in July or August (Figure 10). There were 32 reports received this fortnight, with diagnosis by antigen detection (30), virus isolation (one) and single high titre (one).

Reports of rhinovirus are low in comparison with previous years (Figure 11). Two reports were received in the last fortnight.

Figure 11. Rhinovirus laboratory reports, 1995 to 1997, by month of specimen collection

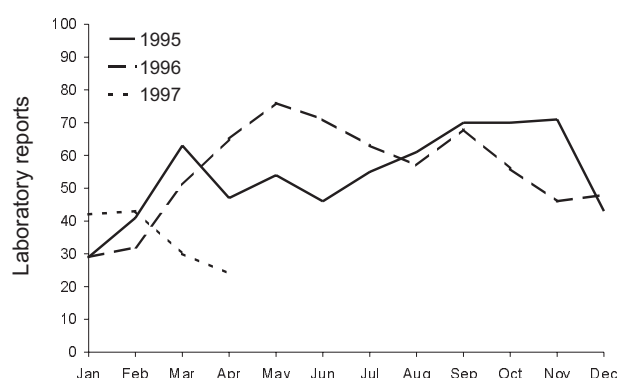


Table 8. Virology and serology laboratory reports by State or Territory¹ for the reporting period 24 April to 7 May 1997, historical data², and total reports for the year

	State or Territory ¹							Total this fortnight	Historical data ²	Total reported in CDI in 1997
	NSW	NT	Qld	SA	Tas	Vic	WA			
Measles, mumps, rubella										
Measles virus				1				1	4.2	26
Mumps virus				2		1		3	3.7	20
Rubella virus			1	2				3	13.7	367
Hepatitis viruses										
Hepatitis A virus		10		1			2	13	18.2	395
Arboviruses										
Ross River virus		15	57	37		12	10	131	185.3	1,648
Barmah Forest virus			4				3	7	16.7	155
Dengue type 2			8					8	0	44
Dengue type 3			1					1	0	1
Flavivirus (unspecified)			1			1		2	2.2	21
Adenoviruses										
Adenovirus type 2				1				1	0.5	19
Adenovirus not typed/pending	2		3	8		7	3	23	36.2	394
Herpes viruses										
Cytomegalovirus			3	6	1	4	26	40	57.3	534
Varicella-zoster virus			2	8	1	1	5	17	37	624
Epstein-Barr virus	6	2	1	28		7	6	50	68.7	1,282
Other DNA viruses										
Poxvirus group not typed	1							1	0	1
Parvovirus				2		3		5	4.7	176
Picornavirus family										
Echovirus type 5						1		1	0	3
Echovirus type 31				1				1	0	1
Echovirus type 33				1				1	0	1
Echovirus not typed/pending				1				1	0	1
Rhinovirus (all types)				2				2	24.8	263

Table 8. Virology and serology laboratory reports by State or Territory¹ for the reporting period 24 April to 7 May 1997, historical data², and total reports for the year, continued

	State or Territory ¹							Total this fortnight	Historical data ²	Total reported in <i>CDI</i> in 1997
	NSW	NT	Qld	SA	Tas	Vic	WA			
Ortho/paramyxoviruses										
Influenza A virus			4					4	16.2	151
Influenza B virus			2			1	2	5	4	122
Influenza virus - typing pending				17			1	18	0	145
Parainfluenza virus type 2	1					1		2	11.3	33
Parainfluenza virus type 3			2	2		3	3	10	13	350
Parainfluenza virus typing pending				11				11	0.8	171
Respiratory syncytial virus	6		1	7		45	16	75	92.8	437
Other RNA viruses										
Rotavirus				11		5	16	32	36.2	378
Norwalk agent			1					1	1.5	54
Other										
<i>Chlamydia trachomatis</i> not typed	4	112		31	2		46	195	132	2,177
<i>Chlamydia psittaci</i>						3		3	3.8	39
<i>Mycoplasma pneumoniae</i>	18	2		4		9	3	36	17.3	782
<i>Coxiella burnetii</i> (Q fever)	6		5					11	5.7	141
<i>Rickettsia tsutsugamushi</i>			10					10	0.2	15
<i>Bordetella pertussis</i>						39		39	11.5	951
<i>Legionella pneumophila</i>						1		1	0.5	8
<i>Cryptococcus</i> species							5	5	1	10
<i>Leptospira canicola</i>			1					1	0	1
<i>Leptospira pomona</i>			2					2	0.2	8
TOTAL	44	141	109	184	4	144	147	773	821	11,949

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 9. Virology and serology laboratory reports by contributing laboratories for the reporting period 24 April to 7 May 1997

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	40
	Royal Prince Alfred Hospital, Camperdown	3
Queensland	State Health Laboratory, Brisbane	108
South Australia	Institute of Medical and Veterinary Science, Adelaide	184
Tasmania	Royal Hobart Hospital, Hobart	4
Victoria	Monash Medical Centre, Melbourne	38
	Royal Children's Hospital, Melbourne	83
	Victorian Infectious Diseases Reference Laboratory, Fairfield	24
Western Australia	Princess Margaret Hospital, Perth	51
	Royal Perth Hospital	43
	Western Diagnostic Pathology	195
TOTAL		773