

Communicable Diseases Surveillance

Salmonellosis

Salmonellae are widely dispersed in nature, being found in the gastrointestinal tracts of domesticated and wild animals, reptiles, birds and insects. Some *Salmonella* serotypes, such as *S. Typhi* and *S. Paratyphi*, are highly adapted to humans and have no other known natural hosts. Other organisms, such as *S. Typhimurium*, have a broad host range and can infect a wide variety of animal hosts and humans.

Sources of non-typhoidal *Salmonella* for human infection are largely contaminated food products, with person-to-person transmission not considered an important route of transmission. The incidence of non-typhoidal salmonellosis has steadily risen in the United States of America, United Kingdom and many other European countries since the early 1980s, with much of this increase attributed to *S. Enteritidis* infection. *S. Enteritidis* can be passed transovarially from chickens to eggs, with infection acquired by consuming raw or partially cooked eggs. However, the organism is not endemic in layer flocks in Australia, and widespread outbreaks caused by *S. Enteritidis* have not been seen here. Prior to the 1980s, *S. Typhimurium* was considered the main cause of food-borne infections throughout the developed world and remains the most commonly reported *Salmonella* serovar causing human infection in Australia.

Non-typhoidal salmonellosis is usually characterised by fever, chills and diarrhoea. Nausea, vomiting and abdominal cramping are frequently present. Bloody diarrhoea may occur but is uncommon. The illness is most often self-limited, with the resolution of fever within two days and the disappearance of diarrhoea within one week. The treatment of uncomplicated non-typhoidal salmonellosis consists of supportive care, including rehydration and electrolyte replacement. Antibiotics are rarely warranted except in infants under two months of age, the elderly and immunosuppressed patients.

Although infection with *Salmonella* is endemic in Australia, notifications usually peak in summer, possibly because warm weather allows *Salmonella* to multiply more easily. In 1996, the National Notifiable Diseases Surveillance System (NNDSS) recorded a gradual increase in notifications starting in September and peaking in January 1997 (Figure 1).

Historical data show that notification rates for non-typhoidal salmonellosis have increased gradually since the 1950s, and more markedly since the late 1980s (Figure 2). Rates vary throughout Australia, and in 1995, the Northern Territory had the highest rate for notifications (212/100,000 population), followed by Queensland (48/100,000), South Australia (44/100,000) and Western Australia (41/100,000). Reports received by the NNDSS from 1991 to 1996 show the highest number of notifications were for the 0 - 4 years age group (47% of notifications), followed by the 5 - 9 (8%) and 20 - 24 (7%) years age groups (Figure 3). The high number of notifications for the younger age groups may reflect a reporting bias due to children being more likely to receive medical care and testing.

Figure 1. Salmonellosis notifications by month of onset, 1995 to February 1997

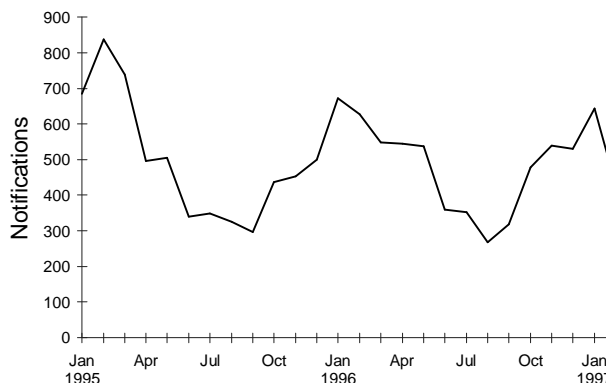


Figure 2. Notification rate for Salmonellosis, 1952-1995

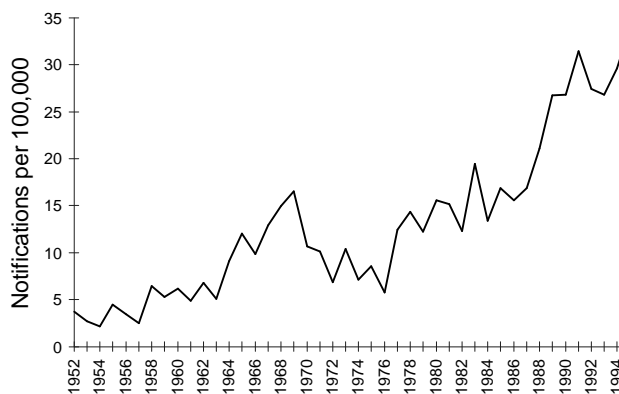
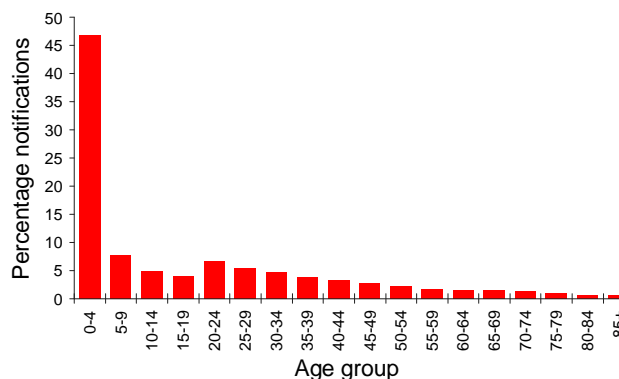


Figure 3. Percentage of Salmonellosis notifications by age group, 1991 to 1996



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 19 February to 4 March 1997

There were 3,029 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 4).

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 19 February to 4 March 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	2	0	0	0	0	2	4	14	13
Measles	0	9	5	2	0	2	1	0	19	19	82	101
Mumps	0	0	1	NN	0	0	0	2	3	6	23	23
Pertussis	7	91	5	49	72	10	61	26	321	144	1574	681
Rubella	0	3	1	25	15	1	10	3	58	102	350	649
Tetanus	0	0	0	0	0	0	0	0	0	0	1	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 19 February to 4 March 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	3	3	0	0	0	8	2	16	11	62	27
Barmah Forest virus infection	0	9	0	27	0	0	3	-	39	58	129	146
Campylobacteriosis ⁵	5	-	11	166	99	6	58	56	401	589	2144	2285
Chlamydial infection (NEC) ⁶	5	NN	64	153	0	2	96	46	366	315	1408	1252
Dengue	0	0	3	5	0	0	0	1	9	7	93	14
Donovanosis	0	NN	1	0	NN	0	0	0	1	5	2	14
Gonococcal infection ⁷	0	9	71	53	0	0	26	21	180	167	659	620
Hepatitis A	9	131	4	92	8	0	58	10	312	112	917	510
Hepatitis B incident	0	1	2	4	0	0	0	8	15	12	45	48
Hepatitis C incident	0	0	0	-	0	0	-	-	0	3	2	10
Hepatitis C unspecified	7	NN	15	127	NN	1	17	33	200	413	1291	1631
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	1	5	6
Legionellosis	0	1	0	0	1	0	2	0	4	10	28	36
Leptospirosis	0	3	0	2	0	0	1	0	6	14	26	45
Listeriosis	0	0	0	1	0	0	1	0	2	2	17	10
Malaria	0	4	8	0	2	0	6	0	20	21	107	117
Meningococcal infection	0	1	1	1	1	0	2	0	6	10	51	47
Ornithosis	0	NN	0	0	1	0	1	0	2	6	16	17
Q Fever	0	4	0	14	0	0	0	0	18	28	115	84
Ross River virus infection	1	87	9	210	53	0	73	24	457	1050	1579	1917
Salmonellosis (NEC)	6	52	12	95	32	7	45	24	273	327	1381	1375
Shigellosis ⁵	0	-	14	11	5	2	0	11	43	39	182	136
Syphilis	0	14	18	17	0	0	0	0	49	66	195	237
Tuberculosis	0	7	2	1	0	1	28	1	40	42	158	203
Typhoid ⁸	0	0	0	0	0	0	0	0	0	2	14	29
Yersiniosis (NEC) ⁵	0	-	0	8	1	0	0	0	9	18	70	64

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. 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.

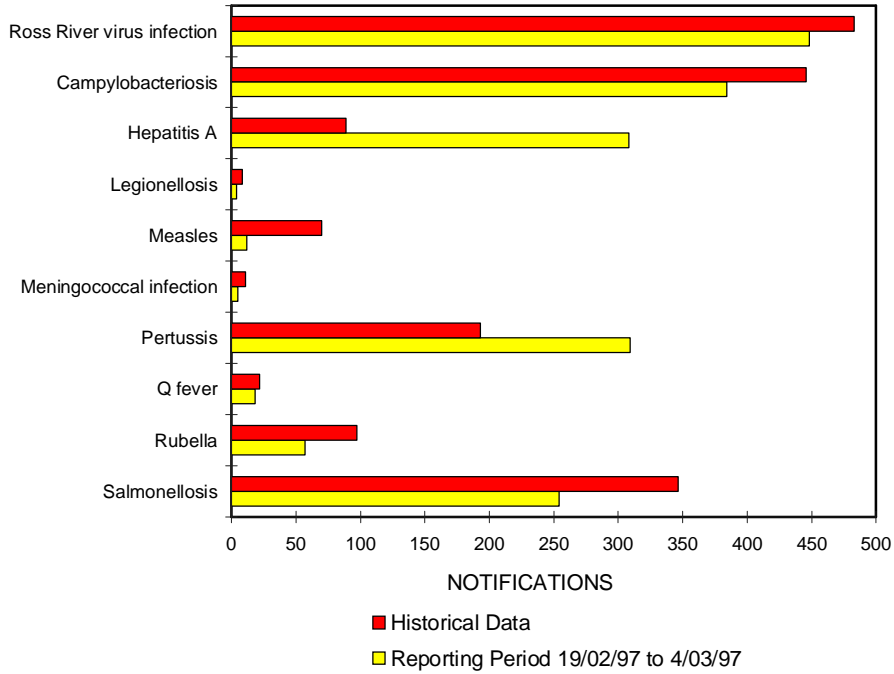
- Elsewhere Classified.

Table 3. Notifications of rare¹ diseases received by State and Territory health authorities in the period 19 February to 4 March 1997

Disease ²	Total this period	Reporting States or Territories	Total notifications 1997
Brucellosis			10
Chancroid	1	WA	1
Cholera			1
Hydatid infection	1	WA	3
Leprosy			3

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1995.
2. No notifications were received during 1997 for the following rare diseases: botulism; lymphogranuloma venereum; plague; rabies; yellow fever; or other viral haemorrhagic fevers.

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. Hepatitis A infection notifications, 1995 to February 1997, by month of onset

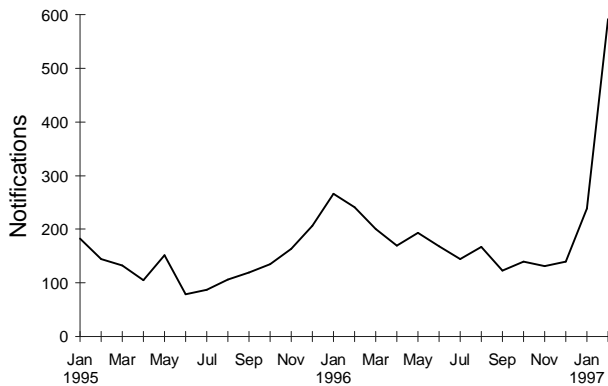
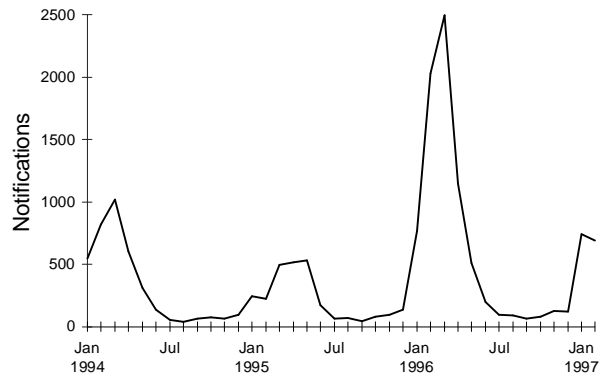


Figure 6. Ross River virus infection notifications, 1994 to February 1997, by month of onset



There was a large increase in notifications of hepatitis A infection received this period, with a total of 312 reports (Figure 5). The increase in reports with onset dates in January and February has been attributed to large outbreaks in several States associated with the consumption of oysters from Wallis Lake, New South Wales (see *CDI* 1997;21:46). One hundred and thirty-one reports were from New South Wales, 92 from Queensland and 58 from Victoria. Reports were evenly distributed throughout the 15 - 59 years age range. The male:female ratio was 1.4:1.

The number of Ross River virus infection notifications continues to be high, with 743 and 690 reports received with onset dates of January and February respectively (Figure 6). The majority of notifications were reported from Queensland (210), New South Wales (87) and Victoria (73). Forty-six per cent of reports were for the 25 - 44 years age range.

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.

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 October 1996, as reported to 31 January 1997, are included in this issue of *CDI* (Tables 4 and 5).

Table 4. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 October 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	2	0	0	0	0	0	1	3	1	58	64
	Male	0	29	1	11	5	0	18	4	68	70	661	658
	Sex not reported	0	1	0	0	0	0	0	0	1	0	5	8
	Total ¹	0	32	1	11	5	0	18	5	72	71	725	732
AIDS diagnoses	Female	0	1	0	0	0	0	0	0	1	2	18	27
	Male	0	7	0	1	1	0	0	2	11	59	344	602
	Total ¹	0	8	0	1	1	0	0	2	12	61	362	630
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	6	14	35
	Male	0	6	1	0	0	0	1	2	10	45	318	494
	Total ¹	0	6	1	0	0	0	1	2	10	51	332	530

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 October, by sex and State or Territory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	15	531	3	102	45	4	169	78	947
	Male	174	10237	85	1679	592	76	3466	794	17103
	Sex not reported	0	2049	0	0	0	0	42	0	2091
	Total ¹	189	12831	88	1786	637	80	3686	875	20172
AIDS diagnoses	Female	7	143	0	30	18	2	48	18	266
	Male	76	4001	26	670	285	32	1373	303	6766
	Total ¹	83	4154	26	702	303	34	1428	323	7053
AIDS deaths	Female	2	106	0	24	13	2	37	11	195
	Male	50	2849	22	470	197	21	1087	224	4920
	Total ¹	52	2961	22	496	210	23	1130	236	5130

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

Serious Adverse Events Following Vaccination Surveillance Scheme

The Serious Adverse Events Following Vaccination Surveillance Scheme is a national surveillance scheme which monitors the serious adverse events that occur rarely following vaccination. More details of the scheme were published in *CDI* 1995:19; 273-274.

Acceptance of a report does not imply a causal relationship between administration of the vaccine and the medical outcome, or that the report has been verified as to the accuracy of its contents.

It is estimated that 250,000 doses of vaccines are administered every month to Australian children under the age of six years.

Results for the reporting period 24 November 1996 to 4 March 1997

There were 65 reports of serious adverse events following vaccination for this reporting period. Onset dates ranged from 1989 to 1997, with the majority (66%) in 1996. Reports were received from the Australian Capital Territory (7), the Northern Territory (6), Queensland (5), South Australia (41) and Victoria (6).

The 65 reports included cases of persistent screaming, hypotonic/hypo-responsive episodes, temperature of 40.5°C or more, convulsions, anaphylaxis and 17 'other' events (Table 6). The 'other' events included acute urticarial rash (9), severe local reactions (4), collapse (1), persistent drowsiness following HepB/BCG (1), Bell's palsy following ADT/OPV (1) and leg pain and oedema following rabies immunoglobulin (1).

Fourteen cases were hospitalised. All cases recovered.

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 1,684 reports received in the *CDI* Virology and Serology Reporting Scheme this period (Tables 7 and 8).

Rubella was reported for 46 patients this fortnight, all diagnosed by IgM detection. Included were 9 females in the 15 - 44 years age group. The number of reports received with specimen collection dates in January remained high.

A total of 34 reports of influenza B with specimen collection dates in 1997 have been received. Forty-four per cent of reports were for children under the age of 5 years. Epidemics of this virus have been recorded by this scheme in alternate years. The last epidemic year for influenza B was 1995 (Figure 7). Only 8 reports of influenza A have been received with specimen collection dates in 1997.

One hundred and eighty-two reports of pertussis were received this fortnight. The male:female ratio was 1:1.2 and 36% of reports were for the 5 - 14 years age group. The number of reports received remained high through January (Figure 8).

Ross River virus infection was reported for 229 patients in the LabVISE scheme this period. The male:female ratio was 1.3:1 and 84% of patients were in the 25 - 64 years age group. Diagnosis was by IgM detection (212) and four-fold rise in titre (17). There has been a rise in the number of reports received for January and February (Figure 9).

Table 6. Adverse events following vaccination for the period 24 November 1996 to 4 March 1997

Event	Vaccines							Reporting States or Territories	Total reports for this period
	DTP	DTP/Hib	DTP/OPV/Hib	DTP/OPV	DTP/Hib/Hep B	MMR	Other ¹		
Persistent screaming	9		13					ACT, NT, Qld, SA, Vic	22
Hypotonic/hypo-responsive episode	7		9					ACT, NT, Qld, SA, Vic	16
Temperature of 40.5°C or more	2		2					ACT, SA	4
Convulsions	1	1			2			SA, Vic	4
Anaphylaxis	2							NT, SA	2
Other	3	4	3	1		1	5	ACT, NT, Qld, SA, Vic	17
TOTAL	24	5	27	1	2	1	5		65

1. Includes Hepatitis B vaccine, ADT, BCG, pneumococcal vaccine and rabies immunoglobulin

Figure 7. Influenza B laboratory reports, 1995 to 1997, by month of specimen collection

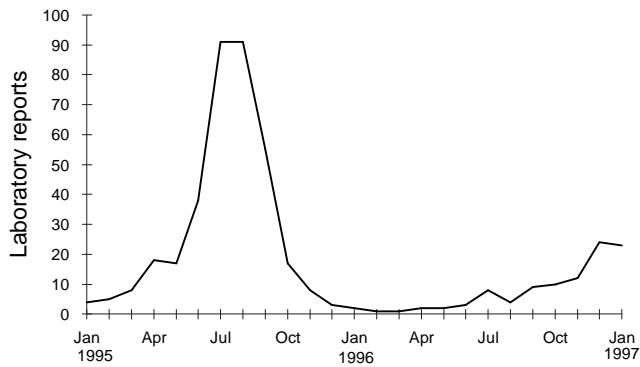
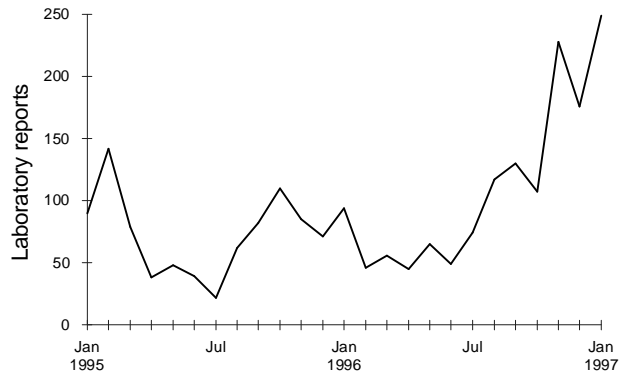


Figure 8. Pertussis laboratory reports 1995 to 1997, by month of specimen collection



The LabWISE scheme received 132 reports of hepatitis A this fortnight. The male:female ratio was 1.4:1 and 49% of patients were in the 25 - 44 years age group. The number of reports rose markedly in February, reflecting the outbreak associated with oysters (Figure 10).

Figure 9. Ross River virus laboratory reports, 1994 to 1997, by month of specimen collection

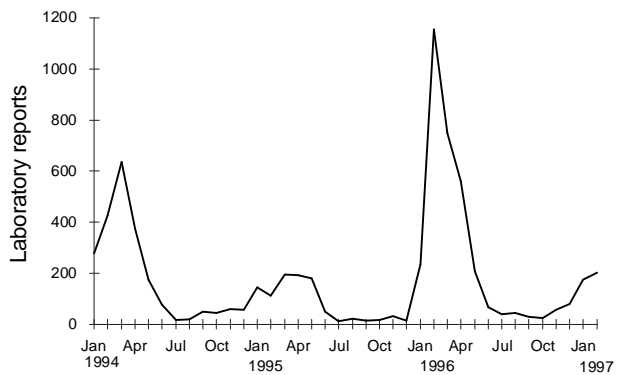


Figure 10. Hepatitis A laboratory reports, 1995 to 1997, by month of specimen collection

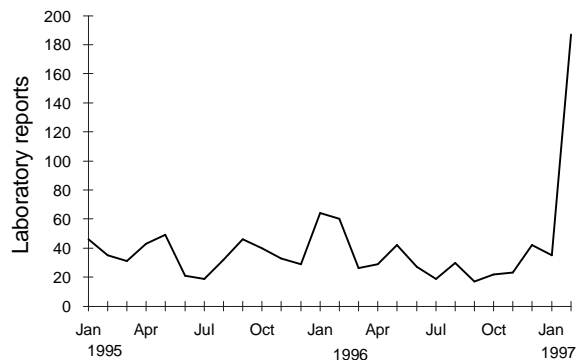


Table 7. Virology and serology laboratory reports by State or Territory¹ for the reporting period 13 February to 26 February 1997, historical data², and total reports for the year

	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	4	5	12.5	17
Mumps virus								3	3	2.5	10
Rubella virus		1		43					46	31.0	309
Hepatitis Viruses											
Hepatitis A virus	2	6	8	95			6	15	132	27.0	290
Hepatitis D virus				1					1	0.2	7
Hepatitis E virus				1					1	0.0	2
Arboviruses											
Ross River virus		8	22	58	2		15	124	229	279.0	510
Barmah Forest virus			4	8				8	20	19.0	72
Dengue not typed			3					10	13	1.0	28
Flavivirus (unspecified)				1					1	1.8	8
Adenoviruses											
Adenovirus type 2							1		1	0.8	13
Adenovirus type 4							1		1	0.0	2
Adenovirus type 37							1		1	0.0	1
Adenovirus not typed/pending				3			2	11	16	39.7	252
Herpes Viruses											
Herpes virus type 6								1	1	0.0	1
Cytomegalovirus	2	3	1	46		1	3	17	73	64.0	322
Varicella-zoster virus	4	6	1	48			8	28	95	56.5	429
Epstein-Barr virus		11	5	121			8	53	198	99.7	858
Other Dna Viruses											
Parvovirus		1					13	1	15	5.7	117
Picornavirus Family											
Coxsackievirus B5		1							1	0.0	4
Echovirus type 7						1			1	0.2	15
Poliovirus type 2 (uncharacterised)		1				1			2	0.2	5
Rhinovirus (all types)		4		3			2	12	21	16.3	167
Enterovirus not typed/pending				11				31	42	31.5	183
Ortho/Paramyxoviruses											
Influenza A virus	1		1					1	3	6.8	118
Influenza B virus		1	1	3			1	13	19	1.8	76
Parainfluenza virus type 1					1			10	11	2.3	29
Parainfluenza virus type 2							1		1	2.2	11
Parainfluenza virus type 3	1			1			6	14	22	16.5	303
Respiratory syncytial virus	30	8		3			5	2	48	22.5	192
Other RNA Viruses											
HTLV-1			1					3	4	0.2	6
Rotavirus						1	1	4	6	17.0	237
Nonwalk agent							2		2	0.0	38

Table 7. Virology and serology laboratory reports by State or Territory¹ for the reporting period 13 February to 26 February 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			
Other											
<i>Chlamydia trachomatis</i> not typed	45	9	21	142		1	19	109	346	125.7	1,292
<i>Chlamydia psittaci</i>	1							2	3	4.5	29
<i>Chlamydia</i> species				2					2	7.3	10
<i>Mycoplasma pneumoniae</i>	10	12	2	43			11	25	103	20.0	516
<i>Coxiella burnetii</i> (Q fever)		1		4					5	6.2	73
<i>Rickettsia australis</i>						1	1		2	0.2	8
<i>Rickettsia tsutsugamushi</i>				1					1	0.2	2
<i>Rickettsia</i> spp - other			1					1	2	0.2	3
<i>Bordetella pertussis</i>		3	1	38		1	94	45	182	29.5	687
<i>Legionella longbeachae</i>								2	2	0.8	10
<i>Cryptococcus</i> species								1	1	0.8	4
TOTAL	96	76	72	676	3	7	202	552	1,684	953.2	7,266

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 8. Virology and serology laboratory reports by contributing laboratories for the reporting period 13 February to 26 February 1997

State or Territory	Laboratory	Reports
Australian Capital Territory	Woden Valley Hospital, Canberra	101
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	22
	Royal Alexandra Hospital for Children, Camperdown	13
Queensland	Queensland Medical Laboratory, West End	730
	State Health Laboratory, Brisbane	20
South Australia	Institute of Medical and Veterinary Science, Adelaide	1
Tasmania	Northern Tasmanian Pathology Service, Launceston	5
	Royal Hobart Hospital, Hobart	1
Victoria	Microbiological Diagnostic Unit, University of Melbourne	18
	Monash Medical Centre, Melbourne	23
	Royal Children's Hospital, Melbourne	104
	Victorian Infectious Diseases Reference Laboratory, Fairfield	62
Western Australia	PathCentre Virology, Perth	523
	Royal Perth Hospital	10
	Western Diagnostic Pathology	51
TOTAL		1684