

Communicable Diseases Surveillance

Communicable Diseases Surveillance consists of data from various sources. The National Notifiable Diseases Surveillance System (NNDSS) is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The *CDI* Virology and Serology Laboratory Reporting Scheme (LabVISE) is a sentinel surveillance scheme. The Australian Sentinel Practice Research Network (ASPREN) is a general practitioner-based sentinel surveillance scheme. In this report, data from the NNDSS and ASPREN are referred to as 'notifications' while data from the LabVISE scheme are referred to as 'laboratory reports'.

Vaccine preventable diseases

The number of notifications of *Haemophilus influenzae* type b (Hib) infection is lower than for the same period last year, with 4 cases reported for the year to date compared to 13 cases in the same period in 1997. Three of the 4 cases were children under the age of 5 years. The low rate of Hib notifications continues the trend which has been seen since the introduction of the conjugated Hib vaccine to the standard childhood vaccination schedule in April 1993 (Figure 1).

The epidemic of pertussis in Australia continues with 2,018 notifications for the year to date compared with 1,632 in the same period in 1997. There were over 10,000 notifications in 1997; the highest yearly number recorded since the inception of the current NNDSS in 1991, and two and a half times the number reported in 1996 (Figure 2). The highest numbers of cases for this period were from New South Wales (330) and Queensland (198). The majority of reports for this year have been for those aged 5-9 years (21% of total reports), 10-14 years (16%) and 0-4 years (13%).

The number of pertussis laboratory reports also peaked in November 1997 and has since declined (Figure 3). A similar trend has been observed in the ASPREN scheme. However, a large number of reports continues to be received.

The ASPREN consultation rates for vaccination of older children and adults with tetanus/diphtheria (Td) vaccine, and of children with pertussis-containing vaccine (included this year for the first time) have continued at a steady rate. Consultation rates for other conditions, including rubella and measles, have remained low or steady.

Vectorborne diseases

A total of 386 notifications of Ross River virus infection with onset in 1998 has been received so far. Of these 227 were for January and 153 for February, which is markedly lower than for the same period last year. The male:female ratio was 1.1:1 and 69% of reports were for those in the 25-54 years age group. Sixty-six laboratory reports of Ross River virus infection were received this four week period. The number of laboratory reports rose in January but remained low for the time of year. ASPREN has also not yet recorded any rise in consultation rates for Ross River virus infection.

Figure 1. Notifications of *Haemophilus influenzae* type b, 1991 to 1998, by month of onset and age group

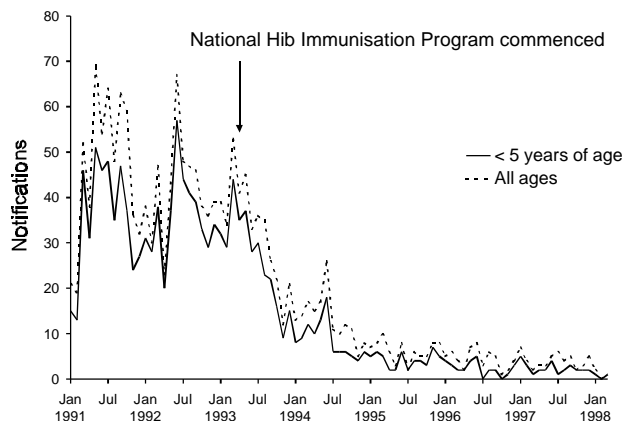


Figure 2. Notifications of pertussis, 1992 to 1998, by month of onset

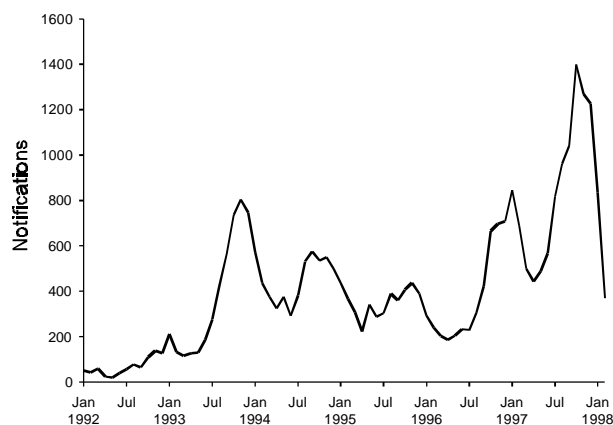


Figure 3. Laboratory reports of *Bordetella pertussis*, 1992 to 1998, by month of specimen collection

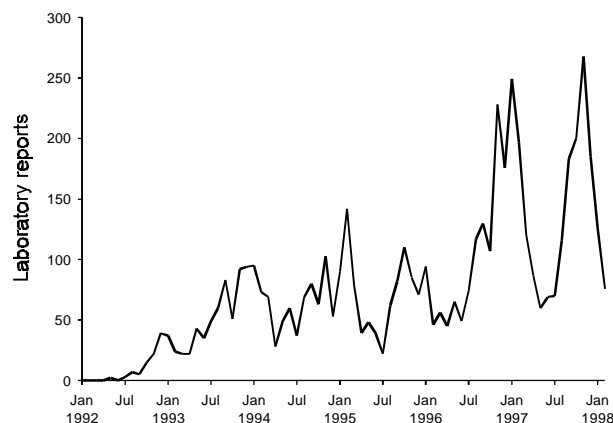
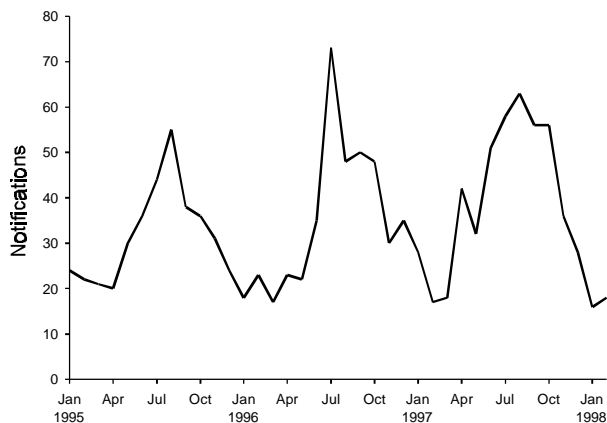


Figure 4. Notifications of meningococcal infection, 1995 to 1998, by month of onset



The number of cases of Barmah Forest virus infection reported to the NNDSS rose in January and February with 47 and 36 cases with onset in those months respectively. These numbers are low compared to previous recent years.

Eighty cases of dengue were notified this four week period, bringing the total reported this year so far to 95. Of these 77 cases (81%) were reported from Queensland, including 48 cases in persons resident in the Statistical Division of Far North. Thirty-nine of the 95 cases (41%) had a date of onset in December, 29 (31%) in January and 22 (23%) in February. The male:female ratio was 1.3:1; 56 (59%) of cases were in the age range 25-54 years.

Notifications of malaria have been received from all jurisdictions except South Australia during the current period, 33 (49%) of the 68 reports being from Queensland, mostly from the Statistical Divisions of Far North (15 cases; 22%) and Brisbane (11 cases; 16%). The male:female ratio was 2.2:1; 31 cases (46%) were in the age range 15-30 years.

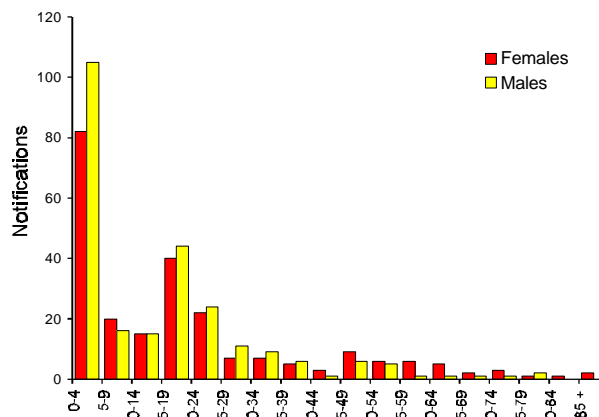
Meningococcal disease

Thirty-four notifications of meningococcal disease have been received with onset in 1998. This is average for the time of year. A total of 486 notifications was received with onset in 1997, slightly more than the previous year. A peak in the number of reports was observed in August (Figure 4). The male:female ratio was 1.1:1 and most cases were in the 0-4 (39% of total) and 15-19 (17%) years age groups (Figure 5).

Enteroviruses

Twenty-five laboratory reports of enterovirus were received this period of which 13 were untyped. Three reports of coxsackie virus type B3 were received from New South Wales, Tasmania and Victoria. Also included were two reports each of coxsackie virus types A16 and B2, all from Victoria. Enterovirus reports usually peak in the summer months. However no single virus type seems to have predominated this season.

Figure 5. Notifications of meningococcal infection, 1997 by age group and sex



Respiratory viruses

The LabVISE scheme has received 63 laboratory reports of influenza with specimen collection dates in 1998. Of these 48 were influenza A and 15 influenza B. This is average for the time of year.

Twenty-four laboratory reports of parainfluenza virus type 1 have been received for the year to date. Outbreaks of this virus have been documented by the LabVISE scheme in alternate years, peaking in April and May. The last epidemic year was 1996, so we can expect more reports in the coming months. The number of parainfluenza virus type 3 laboratory reports has continued to decline after peaking in September last year. Reports of respiratory syncytial virus are also at their usual low level for the time of year.

There were 4,893 notifications to the National Notifiable Diseases Surveillance System (NNDSS) for this four week period, 4 February to 3 March 1998 (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 6). 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.

There were 988 reports received in the CDI Virology and Serology Laboratory Reporting Scheme (LabVISE) this four week period, 29 January to 25 February (Tables 4 and 5). 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* every four weeks. 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.

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 5 to 8, ending 8, 15, 22 February and 1 March 1998 are included in this issue of *CDI* (Table 6). ASPREN currently comprises about 100 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. *CDI* reports the consultation rates for all of these. For further information, including case definitions, see *CDI* 1998;22:5-6.

Table 1. Notifications of rare¹ diseases received by State and Territory health authorities in the period 4 February to 3 March 1998

Disease ²	Total this period	Reporting States or Territories	Total notifications 1998
Brucellosis	2	Qld	11
Cholera	1	NSW	1
Hydatid infection	1	SA	8
Leprosy	1	WA	1

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1998.
2. No notifications have been received during 1998 for the following rare diseases: botulism, lymphogranuloma venereum, plague, rabies, yellow fever, or other viral haemorrhagic fevers.

Table 2. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 4 February to 3 March 1998

Disease ^{1,2}	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1998	This period 1997	Year to date 1998	Year to date 1997
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
<i>H. influenzae</i> type b infection	0	0	0	2	0	0	0	0	2	5	4	13
Measles	4	8	0	8	0	3	14	6	43	40	89	78
Mumps	0	5	1	2	1	0	4	2	15	4	24	24
Pertussis	3	330	1	198	95	11	21	75	734	823	2018	1632
Rubella ³	3	2	0	21	2	1	13	10	52	152	108	379
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
3. Includes congenital rubella

Table 3. Notifications of other diseases received by State and Territory health authorities in the period 4 February to 3 March 1998

Disease ^{1,2}	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1998	This period 1997	Year to date 1998	Year to date 1997
Arbovirus infection (NEC) ³	0	2	2	2	0	0	0	1	7	20	12	41
Barmah Forest virus infection	0	18	-	23	1	0	6	6	54	74	111	152
Campylobacteriosis ⁴	70	-	13	405	125	26	13	115	767	976	1621	2205
Chlamydial infection (NEC) ⁵	22	NN	65	312	0	10	185	125	719	670	1457	1341
Dengue	2	5	1	69	0	0	0	3	80	34	95	90
Donovanosis	0	NN	1	0	NN	0	0	0	1	0	10	1
Gonococcal infection ⁶	5	76	73	71	0	1	48	85	359	256	807	515
Hepatitis A	8	121	3	101	8	1	27	11	280	754	560	935
Hepatitis B incident	1	4	1	5	0	1	1	0	13	21	30	39
Hepatitis C incident	0	2	0	-	0	0	-	-	2	0	11	1
Hepatitis C unspecified	24	NN	29	271	NN	23	0	90	437	669	893	1443
Hepatitis (NEC)	0	1	0	0	0	0	0	NN	1	1	1	6
Legionellosis	0	1	0	2	2	0	9	9	23	8	37	26
Leptospirosis	0	1	0	7	0	0	1	1	10	12	26	26

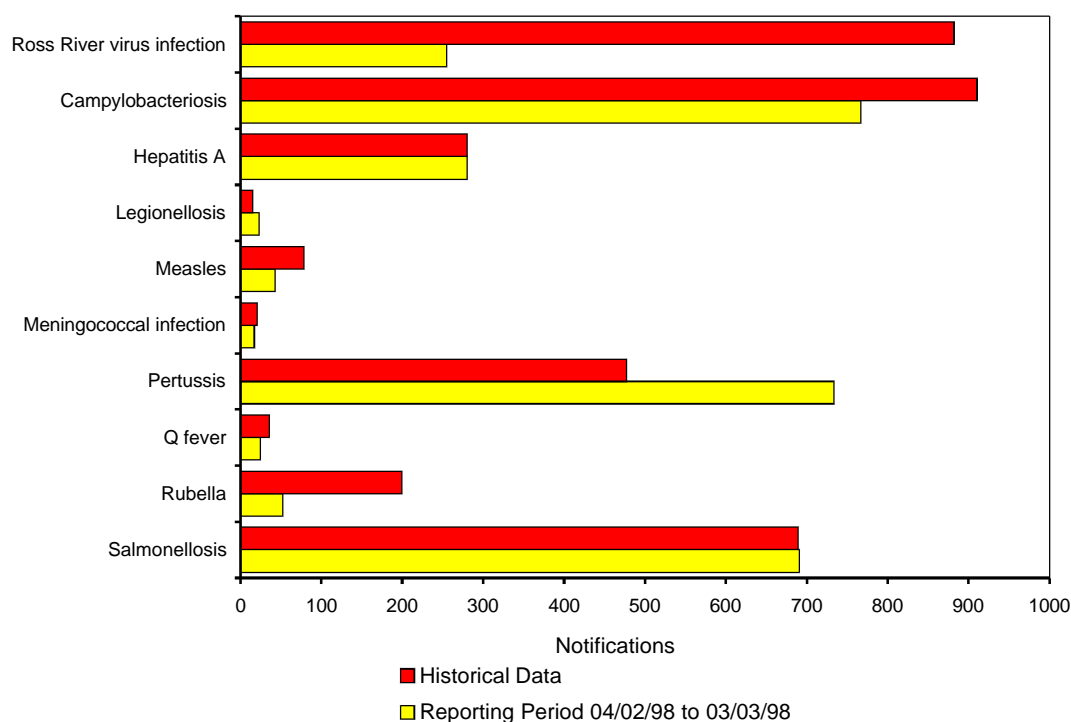
Table 3. Notifications of other diseases received by State and Territory health authorities in the period 4 February to 3 March 1998, continued

Disease ^{1,2}	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1998	This period 1997	Year to date 1998	Year to date 1997
Listeriosis	1	2	0	0	0	0	0	0	3	8	12	17
Malaria	3	13	5	33	0	1	10	3	68	44	122	124
Meningococcal infection	0	6	1	4	0	0	3	3	17	18	37	48
Ornithosis	0	NN	0	0	0	0	1	0	1	11	3	17
Q Fever	0	8	0	17	0	0	0	0	25	41	61	102
Ross River virus infection	0	20	28	136	6	1	10	54	255	1121	511	1656
Salmonellosis (NEC)	13	138	34	322	34	29	76	45	691	640	1580	1397
Shigellosis ⁴	0	-	15	15	8	0	6	5	49	94	126	181
Syphilis ⁷	2	26	23	21	0	1	0	3	76	119	195	212
Tuberculosis	1	22	3	9	7	0	14	7	63	93	142	178
Typhoid ⁸	0	5	0	4	0	1	2	1	13	8	26	18
Yersiniosis (NEC) ⁴	0	-	0	22	4	0	2	0	28	31	69	70

- For HIV and AIDS, see Tables 7 and 8. For rarely notified diseases, see Table 1.
- 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.
- NT: includes Barmah Forest virus.
- NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.

- WA: genital only.
- NT, Qld, SA and Vic: includes neonatal gonococcal ophthalmia.
- Includes congenital syphilis
- NSW, Vic: includes paratyphoid.
- NN Not Notifiable.
- NEC Not Elsewhere Classified

Figure 6. Selected National Notifiable Diseases Surveillance System reports, and historical data¹



- The historical data are the averages of the number of notifications in the corresponding 4 week periods of the last 3 years and the 2 week periods immediately preceding and following those.

Table 4. Virology and serology laboratory reports by State or Territory¹ for the reporting period 29 January to 25 February 1998, and total reports for the year

	State or Territory ¹								Total this period	Total reported in <i>CDI</i> in 1998	
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
Measles, mumps, rubella											
Measles virus		1					4			5	20
Mumps virus					1		1			2	8
Rubella virus		1					1			2	24
Hepatitis viruses											
Hepatitis A virus		6	1	5	2		1	1		16	59
Arboviruses											
Ross River virus		2	4	35	4		2	19		66	226
Barmah Forest virus								1		1	8
Dengue not typed							1	1		2	5
Stratford virus								1		1	1
Flavivirus (unspecified)			1	8			4			13	18
Adenoviruses											
Adenovirus type 1							1			1	5
Adenovirus type 2							2			2	7
Adenovirus type 3							4			4	8
Adenovirus type 4							1			1	1
Adenovirus type 5							1			1	1
Adenovirus type 7					1		1			2	4
Adenovirus type 8							3			3	3
Adenovirus type 40								1		1	1
Adenovirus not typed/pending		6			24	2		4		36	144
Herpes viruses											
Cytomegalovirus		7		15	7	4	14	12		59	210
Varicella-zoster virus		5		12	14	2	26	17		76	295
Epstein-Barr virus		5		16	61		14	14		110	385
Other DNA viruses											
Contagious pustular dermatitis (Orf virus)								1		1	6
Parvovirus	1				4		4	1		10	35
Picornavirus family											
Coxsackievirus A16							2			2	3
Coxsackievirus B2							2			2	2
Coxsackievirus B3		1				1	1			3	6
Coxsackievirus B4							1			1	2
Coxsackievirus B untyped/pending		1								1	1
Echovirus type 11		1								1	3
Poliovirus type 2 (vaccine strain)						2				2	2
Rhinovirus (all types)		10			10		4	2		26	120
Enterovirus not typed/pending		2		1	1			9		13	79
Ortho/paramyxoviruses											
Influenza A virus					19	1		8		28	118
Influenza B virus					6			2		8	42
Parainfluenza virus type 1		6		1				10		17	32
Parainfluenza virus type 2								2		2	6
Parainfluenza virus type 3		5			1			13		19	138
Parainfluenza virus typing pending						1				1	1
Respiratory syncytial virus		5		2	10		3	23		43	204

Table 4. Virology and serology laboratory reports by State or Territory¹ for the reporting period 29 January to 25 February 1998, and total reports for the year, continued

	State or Territory ¹								Total this period	Total reported in CDI in 1998
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Other RNA viruses										
HTLV-1			1						1	8
Rotavirus		10			1	17		17	45	85
Astrovirus							1		1	3
Norwalk agent							1		1	13
Small virus (like) particle							1		1	2
Other										
<i>Chlamydia trachomatis</i> not typed	1	26	3	30	38	11	1	51	161	751
<i>Chlamydia psittaci</i>						2	3		5	16
<i>Mycoplasma pneumoniae</i>		6		14	49	2	16	2	89	376
<i>Coxiella burnetii</i> (Q fever)				1			1		2	15
<i>Rickettsia australis</i>						1			1	3
<i>Rickettsia</i> spp - other								2	2	2
<i>Salmonella</i> species								1	1	5
<i>Bordetella pertussis</i>		3	1	17			44	20	85	430
<i>Legionella pneumophila</i>								1	1	1
<i>Legionella longbeachae</i>					2			5	7	13
Protozoa										
<i>Toxoplasma gondii</i>							1		1	1
TOTAL	2	109	11	157	255	46	167	241	988	3,957

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

Table 5. Virology and serology laboratory reports by contributing laboratories for the reporting period 29 January to 25 February 1998

State or Territory	Laboratory	Reports
New South Wales	New Children's Hospital, Westmead	30
	Royal Prince Alfred Hospital, Camperdown	19
	South West Area Pathology Service, Liverpool	46
Queensland	Queensland Medical Laboratory, West End	183
South Australia	Institute of Medical and Veterinary Science, Adelaide	253
Tasmania	Northern Tasmanian Pathology Service, Launceston	4
	Royal Hobart Hospital	41
Victoria	Royal Children's Hospital, Melbourne	58
	Victorian Infectious Diseases Reference Laboratory, Fairfield	112
Western Australia	PathCentre Virology, Perth	161
	Princess Margaret Hospital, Perth	81
TOTAL		988

Table 6. Australian Sentinel Practice Research Network reports, weeks 5 to 8, 1998

Week number	5		6		7		8	
Week ending on	8 February 1998		15 February 1998		22 February 1998		1 March 1998	
Doctors reporting	53		53		52		47	
Total consultations	6,115		6,574		6,398		5,960	
Condition	Rate per 1,000		Rate per 1,000		Rate per 1,000		Rate per 1,000	
	Reports	population	Reports	population	Reports	population	Reports	population
Influenza	3	0.5	8	1.2	20	3.1	8	1.3
Rubella	0	0.0	0	0.0	2	0.3	1	0.2
Measles	1	0.2	2	0.3	1	0.2	0	0.0
Chickenpox	6	1.0	7	1.1	11	1.7	3	0.5
Pertussis	4	0.7	4	0.6	4	0.6	0	0.0
HIV testing (patient initiated)	11	1.8	16	2.4	11	1.7	14	2.3
HIV testing (doctor initiated)	6	1.0	11	1.7	10	1.6	12	2.0
Td (ADT) vaccine	39	6.4	45	6.8	36	5.6	46	7.7
Pertussis vaccination	50	8.2	42	6.4	57	8.9	40	6.7
Reaction to pertussis vaccine	3	0.5	5	0.8	1	0.2	3	0.5
Ross River virus infection	0	0.0	0	0.0	3	0.5	1	0.2
Gastroenteritis	83	13.6	88	13.4	75	11.7	72	12.1

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) 9332 4648 Facsimile: (02) 9332 1837.

Table 7. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 30 September 1997, by sex and State or Territory of diagnosis

										Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1997	This period 1996	Year to date 1997	Year to date 1996
HIV diagnoses	Female	0	5	0	0	2	0	2	1	10	7	58	56
	Male	0	29	1	0	2	0	13	0	45	84	500	614
	Sex not reported	0	6	0	0	0	0	0	0	6	0	21	4
	Total ¹	0	40	1	0	4	0	15	1	61	91	579	675
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	2	17	23
	Male	0	11	0	3	2	0	2	0	18	57	189	477
	Total ¹	0	11	0	3	2	0	2	0	18	59	206	500
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	0	9	15
	Male	0	7	0	2	0	0	3	0	12	37	166	375
	Total ¹	0	7	0	2	0	0	3	0	12	37	176	390

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

Table 8. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 September 1997, by sex and State or Territory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	21	500	5	114	49	4	190	81	964
	Male	179	10,622	92	1,772	620	77	3,627	829	17,818
	Sex not reported	0	2,062	0	1	0	0	28	0	2,091
	Total ¹	200	13,197	97	1,892	669	81	3,855	913	20,904
AIDS diagnoses	Female	7	153	0	40	19	2	59	23	303
	Male	80	4,213	30	743	317	41	1,491	331	7,246
	Total ¹	87	4,377	30	785	336	43	1,557	356	7,571
AIDS deaths	Female	2	112	0	27	14	2	41	14	212
	Male	52	3,015	23	519	212	26	1,176	239	5,262
	Total ¹	54	3,134	23	548	226	28	1,223	254	5,490

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

HIV and AIDS diagnoses and deaths following AIDS reported for September 1997, as reported to 31 December 1997, are included in this issue of *CDI* (Tables 7 and 8).

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 causes the potentially fatal disease Australian encephalitis in humans. Currently 26 flocks are maintained in the north of Western Australia, seven in the Northern Territory, nine 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 1998;22:7

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Sentinel chicken serology was carried out for 25 of the 28 flocks in Western Australia in January and February 1998. There were no seroconversions to flaviviruses during this period. However, there were three seroconversions in the Kununurra flock in early March. Two of these had antibodies to MVE virus and one had antibodies to both MVE and Kunjin viruses. There was also a human case caused by Kunjin virus reported from Kununurra in late February. More details will be available in the next report.

Six flocks of sentinel chickens from the Northern Territory were tested in January and February 1998. There were two seroconversions to Kunjin virus in the Tennant Creek flock, one in January and one in February. The February seroconversion is yet to be confirmed.

There have been no seroconversions to flaviviruses in January or February 1998 from the sentinel chicken flocks located in New South Wales and Victoria.

Overseas briefs

Source: World Health Organization (WHO) and Pacific Public Health Surveillance Network

Influenza in the northern hemisphere

The number of influenza virus isolates increased markedly in Canada during January and early February 1998 while the United States of America experienced a widespread epidemic. In Asia, widespread activity was reported in Israel, Islamic Republic of Iran and Japan. Countries in Europe had a low level of activity until late January but are now also reporting increasing influenza activity.

The recommendations for the composition of the 1998-1999 influenza vaccine for the northern hemisphere were issued on 18 February by the WHO, as follows:

- an A/Sydney/5/97(H3N2)-like virus;
- an A/Beijing/262/95(H1N1)-like virus;
- a B/Beijing/184/93-like virus.

Cholera

Comoros Islands. As of 16 February, 282 cases with 10 deaths (case fatality rate 3.5%) have been reported, mainly in Moroni (the capital city) and surrounding villages, and Mbéni 40 km north of Moroni. The causative organism