

# Communicable Diseases Surveillance

## Highlights

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 are referred to as 'notifications' or 'cases', whereas those from ASPREN are referred to as 'consultations' or 'encounters' while data from the LabVISE scheme are referred to as 'laboratory reports'.

### *Prolonged outbreak of leptospirosis in Queensland*

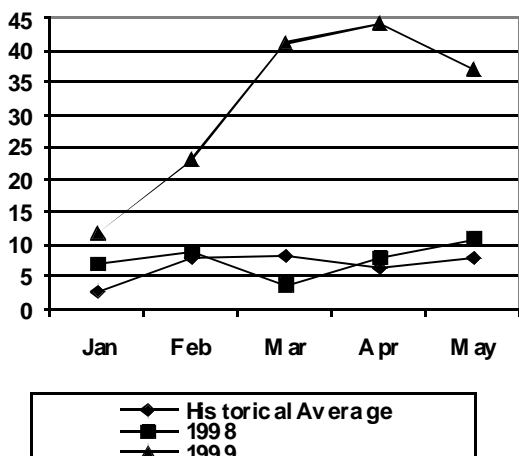
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In Queensland between 50 and 120 notifications of leptospirosis are typically reported annually. In the period 1 January to 18 May this year 153 notifications have been reported to Queensland Health (Figure 1). This is in comparison to 34 notifications for the same period in 1998. Of the notifications, 80% have been reported from Far North Queensland (Figure 2), with the likely cause being the prolonged wet season in this region. The infecting serovars for Queensland are shown in Table 1.

Epidemiological investigations show that the banana (agriculture), meatworker and farming industries account for over 30% of the notifications. Clinical symptoms most commonly reported by respondents are headache (87%),

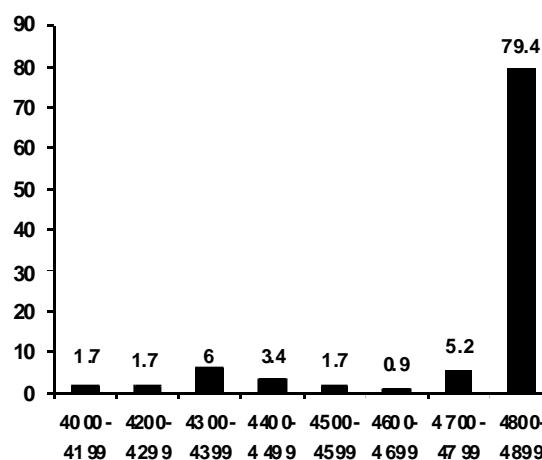
**Figure 1. Notifications of leptospirosis by month, 1 January to 18 May 1999**



chills (83%), severe fever (78%), sweats (72%), myalgia (71%) and arthralgia (59%) (Table 2). Pulmonary haemorrhage was reported in 9% of cases and was associated with the serovars australis and zanoni

Most notifications (75%) are in the 20-49 years age groups while school aged children (5-16 years of age) represent approximately 5% of the notifications. A 50%

**Figure 2. Notifications of leptospirosis by postcode, 1 January to 18 May 1999**



**Table 1. Notifications of leptospirosis by serovar, 1 January to 18 May 1999**

Serovar	% Notifications
positive cultures - unknown	26.5
zanoni	20.0
hardjo	16.1
australis	10.3
szwajizak	6.5
pomona	5.9
kremastos	3.2
canicola	3.2
robinsoni	1.9
tarassovi	1.3
grippotyphosa	1.3
celledoni	1.3
ballum	1.3
medanensis	0.6
bulgarica	0.6

hospitalisation rate is reported with the duration of stay ranging between 1 day and 20 days with an average of 6 days. Of the 153 notifications, 57 isolates have been recovered from either blood, urine or CSF. This is in comparison to 6 isolates recovered for the same period in 1998. All serology based notifications have been confirmed by the Microscopic Agglutination Test.

**Table 2. Notifications of leptospirosis by symptoms, 1 January to 18 May 1999**

Symptom	% Notifications
Headache	87
Chills	83
Severe Fever	78
Sweats	72
Myalgia	71
Arthralgia	59
Nausea	58
Vomiting	51
Back Pain	45
Conjunctival Suffusion	32
Mild Fever	26
Vision Disturbance	25
Respiratory Symptoms	23
Renal Involvement	16
Rash	9
Pulmonary Haemorrhage	9
Diarrhoea	4

## Victorian measles outbreak

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The Victorian measles outbreak, which began in February 1999, appears to have drawn to a close. The last onset date for a laboratory-confirmed case of measles linked with the outbreak was 2 May 1999.

There has been one further laboratory-confirmed case of measles in Melbourne in May, a 12 year old male who is visiting from Indonesia. He arrived in Australia on 8 May to stay with his three older sisters who are attending university in Melbourne. He developed prodromal symptoms on 15 May and there have been no secondary cases linked to him at this stage (7 June 1999). None of his sisters were unwell with a measles-like illness at the time of his arrival.

The preliminary total of notified cases for the outbreak is 75, with 63 (84%) of these in the 18 to 30 years age group. Some of the cases in this age group appeared to falsely believe they were immune to measles either through parental reporting of childhood infection, or through a false belief of previous immunisation. Many thought that measles immunisation was included in the schoolgirl rubella program, or that parental reports of being 'up-to-date' with all immunisations afforded them protection against measles.

A complete report of the outbreak will be published in *Communicable Diseases Intelligence* in the near future.

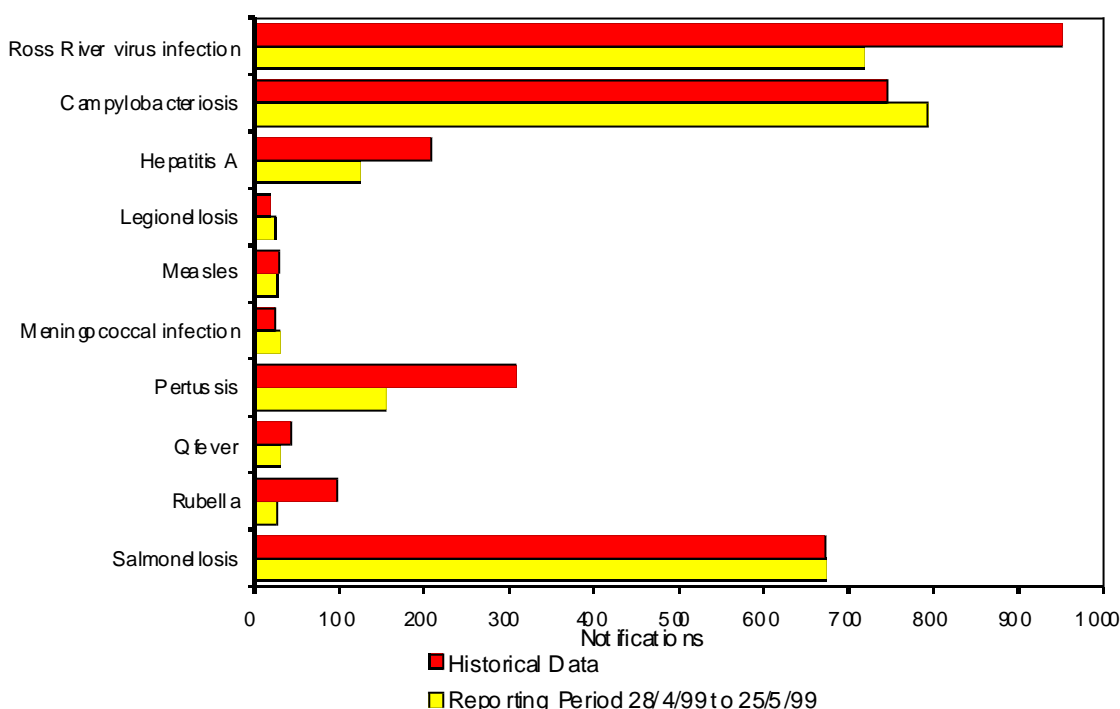
# Tables

There were 6,590 notifications to the National Notifiable Diseases Surveillance System (NNDSS) in the four week period, 28 April to 25 May 1999 (Tables 3 and 4). The numbers of reports for selected diseases have been compared with historical data for corresponding periods in the previous three years (Figure 3).

There were 1,266 reports received by the *CDI/Virology* and Serology Laboratory Reporting Scheme (LabVISE) in the four week period, 22 April to 19 May 1999 (Tables 5 and 6).

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 17 to 20, ending 23 May 1999, are included in this issue of *CDI* (Table 7).

**Figure 3. Selected National Notifiable Diseases Surveillance System reports, and historical data<sup>1</sup>**



1. 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 3. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 28 April to 25 May 1999**

Disease <sup>1,2</sup>									This period 1999	This period 1998	Year to date 1999	Year to date 1998
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
<i>H. influenzae</i> type b infection	0	0	0	0	0	0	0	1	1	1	15	7
Measles	4	1	1	3	2	0	11	6	28	24	141	137
Mumps	1	3	0	5	1	0	8	4	22	15	55	67
Pertussis	8	62	0	29	13	1	41	2	156	391	1,222	3,216
Rubella <sup>3</sup>	4	1	0	9	0	0	9	4	27	66	129	266
Tetanus	0	0	0	0	0	0	0	0	0	0	0	2

NN. Not Notifiable

- No notification of poliomyelitis has been received since 1978.
- 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.

- Includes congenital rubella.

**Table 4. Notifications of diseases received by State and Territory health authorities in the period 28 April to 25 May 1999**

Disease <sup>1,2,3,4</sup>	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999	Year to date 1998
Arbovirus infection (NEC)	0	0	0	0	0	0	1	0	1	15	61	35
Barmah Forest virus infection	0	45	0	58	0	0	1	8	112	80	332	287
Brucellosis	0	0	0	0	0	0	0	0	0	2	8	17
Campylobacteriosis <sup>5</sup>	21	-	20	211	157	23	259	102	793	702	4,652	4,031
Chancroid	0	0	0	0	0	0	0	0	0	1	0	1
Chlamydial infection (NEC) <sup>6</sup>	13	NN	64	347	77	22	255	144	922	965	4,936	3,741
Cholera	0	0	0	0	0	0	0	0	0	0	2	2
Dengue	0	2	0	5	1	0	0	3	11	45	144	242
Donovanosis	0	NN	0	0	NN	0	0	1	1	1	6	19
Gonococcal infection <sup>7</sup>	2	87	81	78	11	1	59	77	396	492	2,054	1,885
Haemolytic uraemic syndrome <sup>8</sup>	NN	0	0	0	0	0	NN	0	0	3	11	6
Hepatitis A	1	40	2	41	11	0	10	20	125	282	667	1,213
Hepatitis B incident	0	1	0	5	2	0	7	7	22	21	116	105
Hepatitis B unspecified <sup>9</sup>	8	224	0	61	0	4	173	15	485	545	2,397	2,525
Hepatitis C incident	4	2	0	-	5	0	11	12	34	23	124	94
Hepatitis C unspecified <sup>9</sup>	25	496	15	253	64	24	645	64	1,586	1,752	7,465	7,992
Hepatitis (NEC) <sup>10</sup>	0	1	0	0	0	0	0	NN	1	1	3	7
Hydatid infection	0	0	0	0	1	0	3	0	4	2	11	12
Legionellosis	1	5	0	4	2	0	8	5	25	25	125	87
Leprosy	0	0	0	0	0	0	0	0	0	0	0	1
Leptospirosis	0	3	0	35	0	1	1	0	40	16	176	58
Listeriosis	0	1	0	1	0	0	0	0	2	2	17	23
Malaria	2	9	0	18	1	0	4	2	36	42	294	215
Meningococcal infection	0	15	2	1	1	3	7	2	31	27	135	84
Ornithosis	0	NN	0	0	0	0	10	0	10	4	30	12
QFever	0	15	0	16	0	0	0	0	31	53	171	196
Ross River virus infection	1	166	5	425	2	21	22	77	719	536	3,136	1,826
Salmonellosis (NEC)	4	125	46	222	46	13	138	80	674	758	4,195	3,645
Shigellosis <sup>5</sup>	1	-	12	16	9	0	10	10	58	59	256	259
SLTEC, VTEC <sup>11</sup>	NN	0	0	NN	0	0	NN	NN	0	1	11	5
Syphilis <sup>12</sup>	0	31	27	67	0	0	0	5	130	101	684	464
TTP <sup>13</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	0	31	3	13	9	1	30	7	94	84	541	451
Typhoid <sup>14</sup>	0	2	0	0	0	0	2	1	5	3	26	43
Yersiniosis (NEC) <sup>5</sup>	0	-	0	5	0	0	2	1	8	22	75	110

1. Diseases preventable by routine childhood immunisation are presented in Table 3.

2. For HIV and AIDS, see Tables 9 and 10.

3. 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.

4. No notifications have been received during 1999 for the following rare diseases: lymphogranuloma venereum, plague, rabies, yellow fever, or other viral haemorrhagic fevers.

5. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.

6. WA: genital only.

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

8. Nationally reportable from August 1998.

9. Unspecified numbers should be interpreted with some caution as the magnitude may be a reflection of the numbers of testings being carried out.

10. Includes hepatitis D and E.

11. Infections with *Shiga*-like toxin (verotoxin) producing *E. Coli* (SLTEC/VTEC) became nationally reportable in August 1998.

12. Includes congenital syphilis.

13. Thrombotic thrombocytopenic purpura became nationally reportable in August 1998.

14. NSW, Qld: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

- Elsewhere Classified.

Table 5. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 22 April to 19 May 1999, and total reports for the year

	State or Territory <sup>1</sup>								Total this period	Total reported in CDI in 1999	
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
<b>Measles, mumps, rubella</b>											
Measles virus							12	5	17	118	
Mumps virus								8	8	26	
Rubella virus				9					2	11	38
<b>Hepatitis viruses</b>											
Hepatitis A virus		2		7			1	12	22	171	
<b>Arboviruses</b>											
Ross River virus		6	1	88			4	56	155	898	
Barmah Forest virus		1		21			1	5	28	83	
Dengue not typed			1					8	9	30	
<b>Adenoviruses</b>											
Adenovirus type 3							1		1	18	
Adenovirus type 40			1					5	6	26	
Adenovirus not typed/pending		16		8			21	17	62	503	
<b>Herpes viruses</b>											
Herpes virus type 6								1	1	3	
Cytomegalovirus		12		15			35	7	69	490	
Varicella-zostervirus		9	3	20			31	35	98	713	
Epstein-Barr virus		14	1	50			6	26	97	1,072	
<b>Other DNA viruses</b>											
Papovavirus group								4	4	5	
Molluscum contagiosum								3	3	6	
Contagious pustular dermatitis (Orf virus)								3	3	8	
Parvovirus			1	3			13	8	25	161	
<b>Picornavirus family</b>											
Echovirus type 6		1							1	13	
Echovirus type 9		3							3	23	
Echovirus type 11		5					1		6	36	
Echovirus type 19		1							1	1	
Rhinovirus (all types)		11		1				11	23	151	
Enterovirus not typed/pending		1	2	2			6	51	62	326	
<b>Ortho/paramyxoviruses</b>											
Influenza A virus		4	1	5			14	12	36	263	
Influenza A virus H1N1							1		1	1	
Influenza B virus							3	7	10	48	
Parainfluenza virus type 1		1		1			1		3	19	
Parainfluenza virus type 2							9		9	25	
Parainfluenza virus type 3		5		1			13		19	297	
Respiratory syncytial virus		64		18		1	12	20	115	448	
<b>Other RNA viruses</b>											
Rotavirus		12		1			17	15	45	356	
Astrovirus							1		1	1	
Norwalk agent							4		4	34	

**Table 5. Virology and serology laboratory reports by State or Territory<sup>1</sup> for the reporting period 22 April to 19 May 1999, and total reports for the year (continued)**

	State or Territory <sup>1</sup>								Total this period	Total reported in <i>CDI</i> in 1999
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
<b>Other</b>										
<i>Chlamydia trachomatis</i> not typed		15	15	63		2	15	82	192	1,140
<i>Chlamydia psittaci</i>							2		2	32
<i>Chlamydia</i> species				1					1	6
<i>Mycoplasma pneumoniae</i>		14	1	17			23	6	61	513
<i>Coxiella burnetii</i> (Q fever)				8			2		10	65
<i>Salmonella</i> species								1	1	2
<i>Bordetella pertussis</i>		5		23			12	1	41	250
<b>TOTAL</b>		202	27	362		3	261	411	1,266	8,419

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

**Table 6. Virology and serology laboratory reports by contributing laboratories for the reporting period 22 April to 19 May 1999**

State or Territory	Laboratory	Reports
New South Wales	New Children's Hospital, Westmead	52
	Royal Prince Alfred Hospital, Camperdown	13
	South West Area Pathology Service, Liverpool	123
Queensland	Queensland Medical Laboratory, West End	361
	Townsville General Hospital	25
Tasmania	Northern Tasmanian Pathology Service, Launceston	3
Victoria	Monash Medical Centre, Melbourne	30
	Royal Children's Hospital, Melbourne	144
	Victorian Infectious Diseases Reference Laboratory, Fairfield	86
Western Australia	PathCentre Virology, Perth	429
<b>TOTAL</b>		1,266

Table 7. Australian Sentinel Practice Research Network reports, weeks 17 to 20, 1999

Week number	17		18		19		20	
Week ending on	2 May 1999		9 May 1999		16 May 1999		23 May 1999	
Doctors reporting	53		53		54		47	
Total encounters	6,109		6,717		7,271		5,938	
Condition	Rate per 1,000		Rate per 1,000		Rate per 1,000		Rate per 1,000	
	Reports	encounters	Reports	encounters	Reports	encounters	Reports	encounters
Influenza	22	3.6	26	3.9	30	4.1	40	6.7
Rubella	0	0.0	0	0.0	2	0.3	0	0.0
Measles	1	0.2	0	0.0	0	0.0	0	0.0
Chickenpox	6	1.0	7	1.0	15	2.1	9	1.5
New diagnosis of asthma	5	0.8	12	1.8	8	1.1	10	1.7
Post operative wound sepsis	7	1.1	8	1.2	3	0.4	3	0.5
Gastroenteritis	53	8.7	62	9.2	82	11.3	55	9.3

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 1999;23:55

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 1999;23:58.

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 in 1999. CDI reports the consultation rates for seven of these. For further information, including case definitions, see CDI 1999;23:55-56.

## Additional Reports

### *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 cause 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 1999;23:57-58*

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#### March/April 1999

Sentinel chicken serology was carried out for 26 of the 27 flocks in Western Australia in March and April 1999. There were a large number of seroconversions to flaviviruses in both the Kimberley and Pilbara flocks during this period. The number of chickens positive for flavivirus antibodies by ELISA and the virus (or viruses) they were infected with is shown in Table 8. In addition there were also a number of unconfirmed seroconversions to MVE virus (not shown in the table) from Broome and Derby in the Kimberley and from Pardoo and Newman in the Pilbara.

Serum samples from all of the seven Northern Territory sentinel chicken flocks were tested in our laboratory in March and April 1999. There was one seroconversion to MVE in the Beatrice Hill Farm flock (near Darwin) in March. In addition there were two seroconversions during April 1999, one to MVE at Gove and one to a flavivirus only from Leanyer. The April seroconversions have not yet been confirmed.

The sentinel chicken programs in Victoria and New South Wales have now finished for the season.

Details of the locations of all chicken flocks are given in *Commun Dis Intell* 1999;23:57-58.

**Table 8. Flavivirus seroconversions in Western Australian sentinel chicken flocks in March and April 1999**

Location	March 1999				April 1999		
	MVE	KUN	MVE/KUN	FLAVI	MVE	KUN	MVE/KUN
<b>Kimberley</b>							
Kalumburu	4		1				
Wyndham	3						
Kununurra	1						
Halls Creek	7				1		
Fitzroy Crossing	5						
<b>Pilbara</b>							
Port Hedland					4	1	
Harding Dam*	5				12		
Pardoo	4		2	1			
Tom Price	4		1		5		1
Paraburdoo	4		1		3	1	
Onslow					3		
Newman*	5	1			1		
<b>Gascoyne</b>							
Camaron							

\* 2 flocks of 12 chickens at these sites

MVE – Antibodies to Murray Valley encephalitis virus detected by ELISA

KUN – Antibodies to Kunjin virus detected by ELISA

MVE/KUN – Antibodies to both MVE and KUN viruses detected by ELISA

FLAVI – Antibodies to a flavivirus only (not MVE or KUN) detected by ELISA

## 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, and annually in HIV/AIDS and related diseases in Australia Annual Surveillance Report. The reports are 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; <http://www.med.unsw.edu.au/ncher>.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 31 January 1999, as reported to 30 April 1999, are included in this issue of CDI (Tables 9 and 10).

**Table 9. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 January 1999, by sex and State or Territory of diagnosis**

										Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999	Year to date 1998
HIV diagnoses	Female	0	2	0	0	0	0	0	1	3	2	3	2
	Male	0	23	0	8	1	0	8	3	43	62	43	62
	Sex not reported	0	0	0	0	0	0	1	0	1	0	1	0
	Total <sup>1</sup>	0	25	0	8	1	0	9	4	47	64	47	64
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	2	0	2
	Male	0	3	0	0	0	0	1	0	4	26	4	26
	Total <sup>1</sup>	0	3	0	0	0	0	1	0	4	28	4	28
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	0	0	0
	Male	0	7	0	5	0	0	3	1	16	12	16	12
	Total <sup>1</sup>	0	8	0	5	0	0	3	1	17	12	17	12

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

**Table 10. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 April 1999, by sex and State or Territory**

		State or Territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	22	582	8	131	57	5	199	103	1,107
	Male	187	10,521	104	1,871	649	77	3,757	872	18,038
	Sex not reported	0	259	0	0	0	0	25	0	284
	Total <sup>1</sup>	209	11,381	112	2,009	706	82	3,994	978	19,471
AIDS diagnoses	Female	8	169	0	45	20	3	67	26	338
	Male	85	4,517	33	784	326	44	1,584	343	7,716
	Total <sup>1</sup>	93	4,698	33	831	346	47	1,658	371	8,077
AIDS deaths	Female	2	113	0	30	15	2	47	16	225
	Male	63	3,122	24	552	224	28	1,238	245	5,496
	Total <sup>1</sup>	65	3,243	24	584	239	30	1,291	262	5,738

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