

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 (ASPEN) 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 ASPEN are referred to as 'consultations' or 'encounters' while data from the LabVISE scheme are referred to as 'laboratory reports'.

Vaccine Preventable Diseases

Pertussis

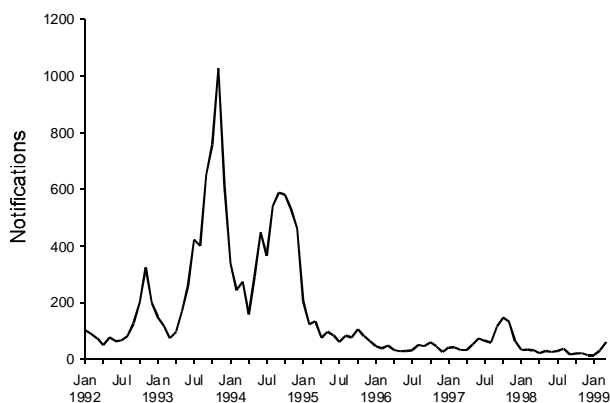
Pertussis notifications remain lower than those seen in the epidemic period of late 1997 and early 1998. The number of notifications with onset in February is the lowest for any month since July 1997. For the current reporting period, the male to female ratio is 1:1.36 and the majority of cases are in the 0 to 4 (13%), 10 to 14 (11%) and 15 to 19 (11%) age groups.

Measles

The number of measles notifications is higher than for the same period of last year, reflecting the outbreak in Victoria which started on 11 February 1999 (Figure 1). Current figures at 7 May 1999 are:

- 74 cases have been reported to the Victorian Department of Human Services;
- 28 of these have been hospitalised;
- 63 cases are in the 18 to 30 year age groups;

Figure 1. Notifications of measles, Australia, 1992 to 1999, by month of onset



- 5 cases of vaccine failure have been identified (all had received one dose of a measles-only vaccine);
- 7 cases are in children aged 8 years or under, all unimmunised.

The frequency of laboratory confirmed cases appears to be decreasing with now only isolated chains of transmission, mainly occurring outside of metropolitan Melbourne (personal communication, Dr Stephen Lambert, Victorian Department of Human Services).

Arbovirus infections

Ross River Virus infection notifications are higher than for the same period of last year with a total of 765 received for this period. The highest numbers are from the Statistical Divisions of Brisbane (292 notifications) and Moreton, Queensland (122).

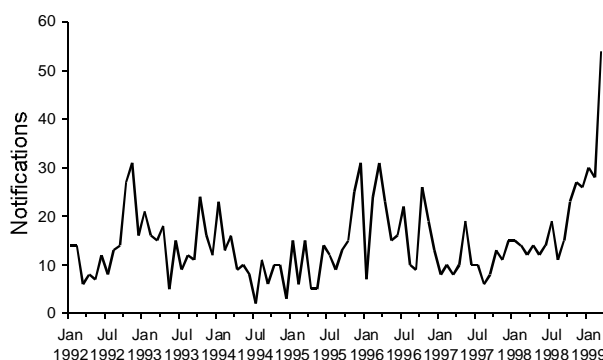
For the current reporting period the male to female ratio is 1:1.1 and the age distribution follows a bell shaped curve with a flattened peak at the three age groups from 35 to 49 (107 to 110 cases each).

Zoonoses

Large numbers of notifications of leptospirosis continue to be received particularly from the Statistical Division (SD) of Far North Queensland (Figure 2).

In the 1997 Annual Report of the National Notifiable Diseases Surveillance System, a total of 126 cases of leptospirosis were reported for Australia with the highest reporting SD being Far North Queensland with 19 cases. In 1998, Far North Queensland reported 62 cases out of an Australian total of 192 and for the year to date for 1999, Far North Queensland has reported 82 cases (Australian total 149). In this reporting period, 37 of the Australian total of 51 notifications have been received from Far North

Figure 2. Notifications of leptospirosis, Australia, 1992 to 1999, by month of onset



Queensland. For the current reporting period all but 3 notifications are in males and 71% are from the 20 to 44 year age groups.

It is likely that the high numbers are associated with the prolonged and heavy wet season in Far North Queensland this year. The floods that followed Cyclone Rona in the Innisfail-Ingham area have probably also contributed (personal communication, Dr Jeffrey Hanna, Tropical Public Health Unit, Cairns). An association between heavy rainfall and floods and an increased incidence of leptospirosis is well recognised.¹

It presents a difficult public health problem as the prevailing conditions clearly cannot be controlled and leptospirosis infection can result in severe disease.² While education of at-risk workers is a possible intervention there

is no guarantee that such intervention would change behaviour.

The 1997 population estimates for the Statistical Divisions mentioned in this report are:

Brisbane	1,548,346
Moreton	639,024
Far North Queensland	215,518

References

1. Trevejo, RT, Rigau-Perez JG, et al. Epidemic leptospirosis associated with pulmonary hemorrhage-Nicaragua, 1995. *J Inf Dis* 1998;178:1457-63.
2. Simpson, FG, Green KA, et al. Leptospirosis associated with severe pulmonary haemorrhage in Far North Queensland. *Med J Aust* 1998;169:151-3.

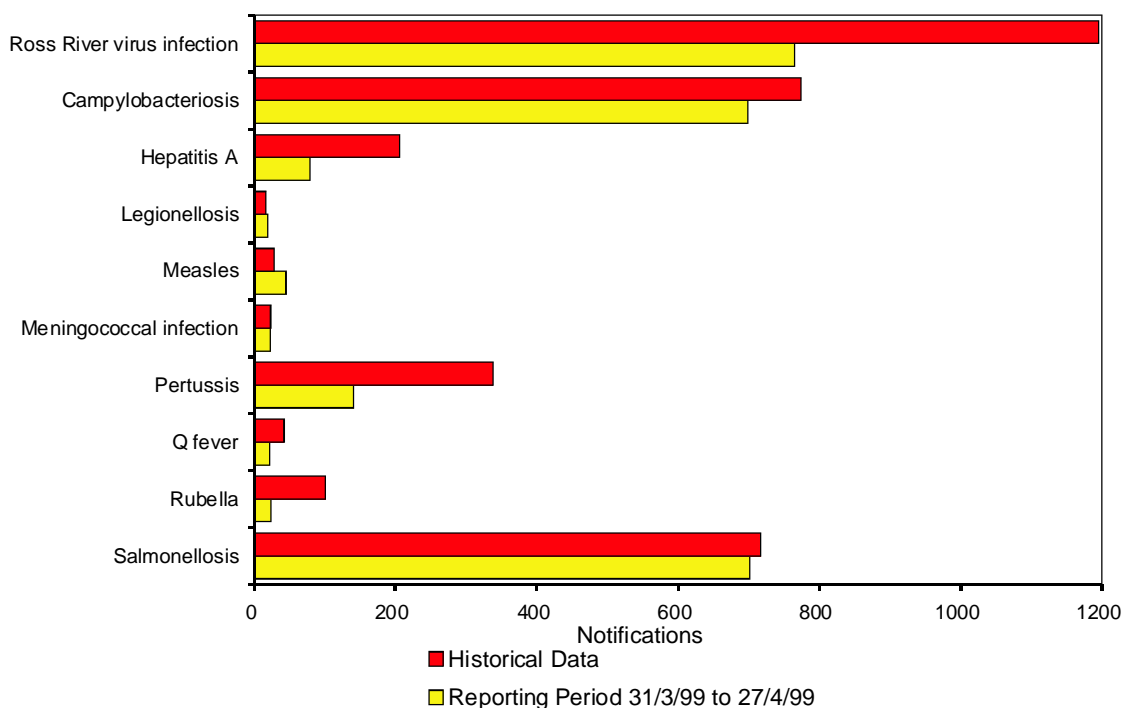
Tables

There were 5,560 notifications to the National Notifiable Diseases Surveillance System (NNDSS) in the four week period, 31 March to 27 April 1999 (Tables 1 and 2). 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 1,403 reports received by the *CDI* Virology and Serology Laboratory Reporting Scheme (LabVISE) in the four week period, 25 March to 21 April 1999 (Tables 3 and 4).

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 13 to 16, ending 25 April 1999, are included in this issue of *CDI* (Table 5).

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 the corresponding 4 week periods of the last 3 years and the 2 week periods immediately preceding and following those.

Table 1. Notifications of diseases received by State and Territory health authorities in the period 31 March to 27 April 1999

Disease ^{1,2,3,4}	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999	Year to date 1998 ⁵
Arbovirus infection (NEC)	0	0	0	2	0	0	2	0	4	11	62	28
Barmah Forest virus infection	0	21	0	46	0	0	2	4	73	67	248	247
Brucellosis	0	0	0	3	0	0	0	0	3	2	8	16
Campylobacteriosis ⁶	22	-	14	207	144	21	208	83	699	675	4,137	3,724
Chancroid	0	0	0	0	0	0	0	0	0	0	0	0
Chlamydial infection (NEC) ⁷	2	NN	46	271	61	16	225	127	748	765	4,155	3,195
Cholera	0	0	0	0	0	0	0	0	0	0	1	2
Dengue	0	1	0	11	1	0	0	1	14	42	138	227
Donovanosis	0	NN	0	0	NN	0	0	0	0	2	5	19
Gonococcal infection ⁸	1	60	60	66	17	0	58	67	329	400	1,757	1,594
Haemolytic uraemic syndrome ⁹	NN	1	NN	0	0	0	NN	0	1	3	10	5
Hepatitis A	0	23	2	33	7	2	4	8	79	204	575	1,046
Hepatitis B incident	0	0	1	4	1	0	6	5	17	30	98	98
Hepatitis B unspecified ¹⁰	7	140	0	69	0	3	63	10	292	453	1,886	2,250
Hepatitis C incident	3	2	0	-	2	0	1	3	11	16	95	80
Hepatitis C unspecified ^{5,10}	22	321	15	206	58	24	493	52	1,191	1,533	6,312	7,109
Hepatitis (NEC) ¹¹	0	0	0	0	0	0	0	NN	0	1	2	7
Hydatid infection	0	0	0	0	2	0	1	0	3	2	9	11
Legionellosis	1	3	0	1	1	0	9	4	19	18	111	73
Leprosy	0	0	0	0	0	0	0	0	0	0	0	1
Leptospirosis	0	3	0	47	0	0	1	0	51	8	149	46
Listeriosis	0	0	0	0	1	0	0	0	1	3	15	23
Malaria	1	9	1	22	0	1	9	2	45	30	268	192
Meningococcal infection	0	10	1	2	0	2	6	2	23	25	115	72
Ornithosis	0	NN	0	0	1	1	11	0	13	3	29	9
Q Fever	0	6	0	14	0	0	2	0	22	42	149	167
Ross River virus infection	1	135	3	517	4	20	27	58	765	438	2,696	1,542
Salmonellosis (NEC)	3	132	38	236	59	24	129	80	701	689	3,772	3,280
Shigellosis ⁶	1	-	13	12	7	0	8	4	45	41	225	221
SLTEC, VTEC ¹²	NN	0	NN	NN	1	0	NN	NN	1	1	11	5
Syphilis ¹³	0	29	26	41	0	0	0	1	97	89	569	410
TTP ¹⁴	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	0	26	1	5	1	4	35	3	75	86	450	406
Typhoid ¹⁵	0	1	0	0	0	0	0	1	2	7	21	42
Yersiniosis (NEC) ⁶	0	-	0	7	1	0	3	0	11	16	68	100

1. Diseases preventable by routine childhood immunisation are presented in Table 2.

2. For HIV and AIDS, see Tables 7 and 8.

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. Data from Victoria for 1998 are incomplete.

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

7. WA: genital only.

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

9. Nationally reportable from August 1998.

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

11. Includes hepatitis D and E.

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

13. Includes congenital syphilis.

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

15. NSW, Qld: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

- Elsewhere Classified.

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 31 March to 27 April 1999

Disease ^{1,2}	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999	Year to date 1998
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
<i>H. influenzae</i> type b infection	0	0	0	0	1	0	0	0	1	1	13	7
Measles	3	0	0	2	1	0	32	7	45	24	141	124
Mumps	0	1	0	3	0	0	7	3	14	14	42	62
Pertussis	6	43	0	17	8	1	64	2	141	350	1,112	3,014
Rubella ³	3	1	0	7	2	2	7	2	24	44	109	223
Tetanus	0	0	0	0	0	0	0	0	0	0	0	2

NN. Not Notifiable

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

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. Includes congenital rubella.

Table 3. Virology and serology laboratory reports by State or Territory¹ for the reporting period 25 March to 21 April 1999, and total reports for the year

	State or Territory ¹								Total this period	Total reported in CDI in 1999
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Measles, mumps, rubella										
Measles virus					3		46	4	53	101
Mumps virus								2	2	18
Rubella virus		1			3		2		6	27
Hepatitis viruses										
Hepatitis A virus			7	8	10			13	38	149
Hepatitis D virus					1				1	2
Arboviruses										
Ross River virus		5	4	99	10		8	48	174	743
Barmah Forest virus		2	1	14			1	3	21	55
Dengue not typed								4	4	21
Murray Valley encephalitis virus								1	1	1
Kunjin virus								1	1	2
Flavivirus (unspecified)				2					2	13
Adenoviruses										
Adenovirus type 1					1		1		2	12
Adenovirus type 2							1		1	7
Adenovirus type 3					2		2		4	17
Adenovirus type 5					2				2	3
Adenovirus type 37							4		4	8
Adenovirus type 40								2	2	20
Adenovirus not typed/pending		3		3	58		4	12	80	441
Herpes viruses										
Cytomegalovirus				10	81		8	11	110	421
Varicella-zoster virus		2	2	10	44	1	21	15	95	615
Epstein-Barr virus		2	3	28	174		7	32	246	975

Table 3. Virology and serology laboratory reports by State or Territory¹ for the reporting period 25 March to 21 April 1999, and total reports for the year (continued)

	State or Territory ¹								Total this period	Total reported in CDI in 1999	
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
Other DNA viruses											
Papovavirus group							1			1	1
Parvovirus				2	4		12	4		22	136
Picornavirus family											
Echovirus type 2					1					1	2
Echovirus type 6		2			1					3	12
Echovirus type 7							1			1	1
Echovirus type 9		3								3	20
Echovirus type 11		5								5	30
Echovirus type 22		1								1	12
Echovirus type 30		1								1	19
Poliovirus type 2 (uncharacterised)					1					1	10
Rhinovirus (all types)					10		2	3		15	128
Enterovirus not typed/pending			3	1			3	30		37	264
Ortho/paramyxoviruses											
Influenza A virus		1		1	25		2	4		33	227
Influenza A virus H3N2							2			2	3
Influenza B virus					9			1		10	38
Parainfluenza virus type 1					7					7	16
Parainfluenza virus type 2		1			6			1		8	16
Parainfluenza virus type 3					23		2	5		30	278
Respiratory syncytial virus		1		12	25		1	21		60	333
Other RNA viruses											
HTLV-1								2		2	6
Rotavirus		1						24		25	311
Calici virus							1			1	1
Norwalk agent							1			1	30
Other											
<i>Chlamydia trachomatis</i> not typed		4	5	29	76	2		34		150	948
<i>Chlamydia psittaci</i>							10			10	30
<i>Chlamydia</i> species				2						2	5
<i>Mycoplasma pneumoniae</i>			3	9	24		33	1		70	452
<i>Mycoplasma hominis</i>		1								1	2
<i>Coxiella burnetii</i> (Q fever)				4			2	1		7	55
<i>Bordetella pertussis</i>		1		5			32			38	209
<i>Legionella pneumophila</i>					1					1	6
<i>Legionella longbeachae</i>					2			1		3	23
<i>Cryptococcus</i> species		2								2	3
TOTAL		39	28	239	604	3	210	280		1,403	7,278

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

Table 4. Virology and serology laboratory reports by contributing laboratories for the reporting period 25 March to 21 April 1999

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	18
	Royal Prince Alfred Hospital, Camperdown	10
Queensland	Queensland Medical Laboratory, West End	243
	Townsville General Hospital	18
South Australia	Institute of Medical and Veterinary Science, Adelaide	604
Tasmania	Northern Tasmanian Pathology Service, Launceston	3
Victoria	Royal Children's Hospital, Melbourne	68
	Victorian Infectious Diseases Reference Laboratory, Fairfield	141
Western Australia	PathCentre Virology, Perth	209
	Princess Margaret Hospital, Perth	33
	Western Diagnostic Pathology	56
TOTAL		1,403

Table 5. Australian Sentinel Practice Research Network reports, weeks 13 to 16, 1999

Week number	13		14		15		16	
Week ending on	4 April 1999		11 April 1999		18 April 1999		25 April 1999	
Doctors reporting	50		49		51		49	
Total encounters	5411		5993		6817		6563	
Condition	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Influenza	11	2.0	16	2.7	14	2.1	13	2.0
Rubella	0	0.0	0	0.0	0	0.0	0	0.0
Measles	0	0.0	1	0.2	0	0.0	0	0.0
Chickenpox	8	1.5	15	2.5	11	1.6	6	0.9
New diagnosis of asthma	8	1.5	17	2.8	8	1.2	5	0.8
Post operative wound sepsis	10	1.8	3	0.5	8	1.2	5	0.8
Gastroenteritis	30	5.5	62	10.3	68	10.0	46	7.0

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

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 1999;23;58*.

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 1 February 1999 to 30 April 1999.

There were 219 reports of serious adverse events following vaccination for this reporting period (Table 6). Onset dates were from 1997 to 1998, the majority (96%)

being in 1998. Reports were received from Australian Capital Territory (19), Northern Territory (2), Queensland (99), South Australia (11), Tasmania (1), Victoria (15) and Western Australia (72). No reports were received from New South Wales for this period. The majority of reports received were from Queensland (45%).

The most frequently reported events following vaccination were persistent screaming (119 cases, 55%), followed by other reactions (44 cases, 20%), temperature of 40.5° C or more (25 cases, 11.4%) and hypotonic/hyporesponsive episodes (18 cases, 8%).

Twenty-one of the 219 cases were hospitalised of which 20 had recovered at the time of reporting. There was incomplete information on recovery status on 17 cases while all the other cases had recovered at the time of reporting.

One hundred and ninety-six (89%) cases were associated with Diphtheria-Tetanus-Pertussis (DTP), vaccine either alone or in combination with other vaccines. Of these 61% of reports were associated with the first dose of DTP and 32% with the second dose.

Table 6. Adverse events following vaccination reported in the period 1 February to 30 April 1999¹

Event	Vaccines											Reporting States or Territories	Total reports for this period	
	DTP	DTP/Hib	DTP/OPV/ Hib	DTP/OPV/Other	DTP/OPV/MMR	DTP/OPV/Hib/ Hep B	DTP/MMR	MMR	Hib/OPV/Other	Hep B/Other	Hep B			Other ¹
Persistent screaming	74	3	40	1									ACT, Qld, Vic, WA	118
Hypotonic/ Hyporesponsive	8	1	8									1	Qld, SA, Vic, WA	18
Temperature	18		6									1	ACT, Qld, Vic, WA	25
Convulsions	3	1	1						1				ACT, Qld, SA, Vic, WA	6
Anaphylaxis		1					1	2	1					5
Other	19	2	8		1	1		2	2	1	2	6	ACT, NT, Qld, SA, Vic, WA	44
Total	122	8	63	1	1	1	1	4	4	1	3	7		216²

1. Includes influenza vaccination, DTPa, CDT, OPV, Hepatitis B vaccine, pneumococcal vaccination, BCG, ADT and rabies immunoglobulin (HRIG)
 2. 3 cases have missing events

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.

abulations 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/nchechr>.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 31 December 1998, as reported to 31 March 1999, are included in this issue of CDI (Tables 7 and 8).

Table 7. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 31 December 1998, 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	1	0	2	5	4	90	77
	Male	0	14	2	8	1	0	11	0	36	53	622	703
	Sex not reported	0	1	0	0	0	0	0	0	1	1	8	13
	Total ¹	0	17	2	8	1	1	11	2	42	58	622	794
AIDS diagnoses	Female	0	1	0	0	0	1	0	0	2	3	15	27
	Male	1	12	1	0	0	0	4	0	18	27	249	324
	Total ¹	1	14	1	0	0	1	4	0	21	30	265	351
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	0	8	14
	Male	0	2	0	2	0	0	5	0	9	11	136	220
	Total ¹	0	2	0	2	0	0	5	0	9	11	144	235

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 31 December 1998, by sex and State or Territory

		State or Territory									Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
HIV diagnoses	Female	22	580	8	131	57	5	199	102	1,104	
	Male	186	10,499	104	1,863	648	77	3,749	869	17,995	
	Sex not reported	0	259	0	0	0	0	24	0	283	
	Total ¹	208	11,357	112	2,001	705	82	3,985	974	19,424	
AIDS diagnoses	Female	8	169	0	45	20	3	67	25	337	
	Male	85	4,514	33	784	326	43	1,583	343	7,711	
	Total ¹	93	4,695	33	831	346	46	1,657	370	8,071	
AIDS deaths	Female	2	113	0	30	15	2	47	16	225	
	Male	63	3,115	24	547	224	28	1,235	244	5,480	
	Total ¹	65	3,235	24	579	239	30	1,288	261	5,721	

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