

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'.

Vaccine preventable diseases

While the number of notifications of vaccine preventable diseases remains low when compared with historical data (Figure 1), a significant number of notifications of pertussis continues to be received.

For the 245 pertussis notifications in this reporting period, the male to female ratio is 1:1.8 and the majority of cases (17%) are in the 10-14 age group.

Meningococcal infection

The number of notifications of meningococcal infection is comparable with historical data with 64 notifications being received in this reporting period compared with 64 in the same period last year. Serogroup information is available for 45% of notifications received in 1999 and, of these, 62% are serogroup B and 32% are serogroup C. This is comparable with the proportions reported in the most recent Annual Report of the Australian Meningococcal Surveillance Programme. The male to female ratio for the current reporting period is 1.25:1 while the majority of cases (37%) are in the 0 to 4 years age group, 14% are in the 15-19 age group and 12% are in the 20-24 age group.

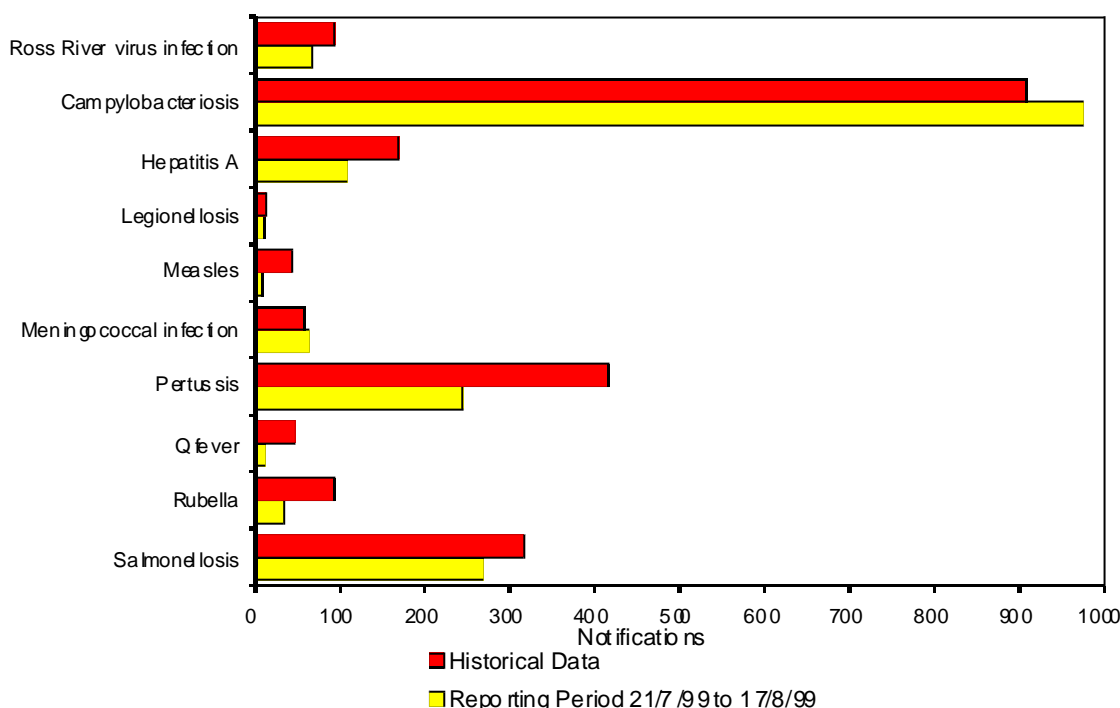
Tables

There were 5,209 notifications to the National Notifiable Diseases Surveillance System (NNDSS) in the four week period, 21 July to 17 August 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 1).

There were 3,222 reports received by the *CDI/Virology* and Serology Laboratory Reporting Scheme (LabVISE) in the four week period, 15 July to 11 August 1999 (Tables 3 and 4).

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 29 to 32, ending 15 August 1999, are included in this issue of *CDI* (Table 5).

Figure 1. 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 preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 21 July to 17 August 1999

Disease ¹	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999 ²	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	1	0	0	0	0	0	0	1	2	26	20
Measles	0	3	0	2	0	1	3	0	9	29	169	224
Mumps	0	3	0	2	1	0	6	4	16	19	112	109
Pertussis	11	86	0	41	29	26	49	3	245	317	2,220	4,582
Rubella ³	1	4	0	14	0	0	14	1	34	67	228	474
Tetanus	0	0	0	0	0	0	0	0	0	0	1	3

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 2. Notifications of diseases received by State and Territory health authorities in the period 21 July to 17 August 1999

Disease ^{1,2,3}	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1999	This period 1998	Year to date 1999 ⁴	Year to date 1998
Arbovirus infection (NEC)	0	0	0	0	0	0	0	0	0	6	70	50
Barmah Forest virus infection	0	14	1	10	0	0	0	1	26	21	487	404
Brucellosis	0	0	0	1	0	0	0	0	1	4	16	28
Campylobacteriosis ⁵	16	-	19	67	224	24	487	139	976	948	7,877	7,204
Chancroid ⁶	0	0	0	0	0	0	0	0	0	0	0	1
Chlamydial infection (NEC) ^{6,7}	11	159	76	94	96	20	232	186	874	707	8,579	6,683
Cholera	0	0	0	0	0	0	0	0	0	0	2	3
Dengue	0	1	1	0	0	0	0	0	2	17	157	356
Donovanosis ⁶	0	0	2	1	NN	0	0	0	3	3	13	25
Gonococcal infection ⁸	6	78	100	38	22	2	57	80	383	384	3,526	3,308
Haemolytic uraemic syndrome ⁹	NN	0	1	0	0	0	NN	0	1	0	12	7
Hepatitis A	5	28	11	11	6	0	24	24	109	155	1,033	1,934
Hepatitis B incident	0	8	3	1	0	2	6	2	22	21	191	171
Hepatitis B unspecified ¹⁰	1	222	0	17	0	2	222	25	489	460	4,355	3,970
Hepatitis C incident	2	3	0	-	4	0	4	5	18	30	191	180
Hepatitis C unspecified ¹⁰	26	518	14	89	80	24	456	92	1,299	1,327	12,429	11,963
Hepatitis (NEC) ¹¹	0	2	0	0	0	0	0	NN	2	1	14	10
Hydatid infection	0	NN	0	0	0	0	2	0	2	5	20	25
Legionellosis	0	3	0	1	3	0	2	2	11	11	177	164
Leprosy	0	0	0	0	0	0	0	2	2	0	3	2
Leptospirosis	0	3	0	1	1	0	0	2	7	19	265	110
Listeriosis	0	0	0	0	0	0	2	0	2	4	29	38
Malaria	1	27	7	3	6	1	6	3	54	54	457	532
Meningococcal infection	0	30	2	4	6	3	15	4	64	64	311	246
Ornithosis	0	NN	0	0	1	0	3	0	4	4	52	26
Q Fever	0	5	0	4	0	0	2	1	12	38	300	337
Ross River virus infection	0	22	9	13	1	1	4	17	67	47	3,922	2,331
Salmonellosis (NEC)	6	58	19	27	32	4	72	51	269	294	5,327	5,300
Shigellosis ⁵	1	-	2	5	4	0	6	10	28	45	379	410
SLTEC, VTEC ¹²	NN	0	0	NN	2	0	NN	NN	2	0	17	8
Syphilis ¹³	1	41	23	36	0	1	1	3	106	135	1,195	907
TTP ¹⁴	0	0	0	0	0	0	0	0	0	0	0	0
Tuberculosis	2	31	1	5	5	0	7	8	59	72	580	606
Typhoid ¹⁵	0	2	0	0	0	0	0	2	4	1	47	48
Yersiniosis (NEC) ⁵	0	-	0	4	1	0	1	0	6	11	100	157

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

2. For HIV and AIDS, see Tables 6 and 7.

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

4. 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.

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

6. Notifications from NSW have been received since September 1998, and were first reported in *CD* in Issue 23(9).

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 3. Virology and serology laboratory reports by State or Territory¹ for the reporting period 15 July to 11 August 1999, and total reports for the year

	State or Territory ¹								Total this period	Total reported in 1999 ^{2,3,4}	
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
Measles, mumps, rubella											
Measles virus				2			3			5	140
Mumps virus							1	5		6	37
Rubella virus		1		15			5	2		23	86
Hepatitis viruses											
Hepatitis A virus		1	4	10			1	21		37	274
Hepatitis D virus				1						1	5
Arboviruses											
Barmah Forest virus				1					2	3	129
Dengue not typed									1	1	38
Flavivirus (unspecified)				1						1	15
Ross River virus		2	6	24			2	5	15	54	1,176
Adenoviruses											
Adenovirus not typed/pending		16	4	2			31	58		111	825
Adenovirus type 2							2			2	13
Adenovirus type 3							1			1	28
Adenovirus type 4							4			4	12
Adenovirus type 7							1			1	2
Adenovirus type 40									17	17	54
Herpes viruses											
Cytomegalovirus		20		14		1	27	19		81	780
Epstein-Barr virus		3	1	67			11	36		118	1,623
Herpes virus type 6								2		2	7
Varicella-zoster virus		7	2	39	2	2	46	49		147	1,117
Other DNA viruses											
Molluscum contagiosum								3		3	11
Papovavirus group								2		2	10
Parvovirus		2		10	2	2	26	15		57	303
Picornavirus family											
Coxsackievirus A16							3			3	12
Echovirus not typed/pending							1			1	1
Echovirus type 9		8								8	43
Echovirus type 11		4	1							5	95
Enterovirus not typed/pending		1	1	1	1		5	89		98	560
Enterovirus type 71 (BCR)							3			3	9
Poliovirus type 1 (uncharacterised)		4								4	18
Rhinovirus (all types)		15					4	19		38	291
Ortho/paramyxoviruses											
Influenza A virus		85	6	46			169	157		463	1,120
Influenza A virus H3N2							5			5	23
Influenza B virus		8	1	10			6	18		43	128
Parainfluenza virus type 1		3					2	1		6	32
Parainfluenza virus type 2		3					13	10		26	92
Parainfluenza virus type 3		3		4			7	108		122	479
Paramyxovirus (unspecified)							4			4	4
Respiratory syncytial virus		275		52		4	182	177		690	1,765

Table 3. Virology and serology laboratory reports by State or Territory¹ for the reporting period 15 July to 11 August, and total reports for the year (continued)

	State or Territory ¹								Total this period	Total reported in 1999 ^{2,3,4}
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA		
Other RNA viruses										
HTLV-1								1	1	10
Norwalk agent							7	7	57	
Rotavirus		244	1		1	5	50	90	391	1,106
Other										
<i>Chlamydia psittaci</i>							8	3	11	70
<i>Chlamydia trachomatis</i> not typed		26	23	112			7	133	301	2,070
<i>Chlamydia</i> species		2		1					3	14
<i>Coxiella burnetii</i> (Q fever)		1		16			2	2	21	127
<i>Mycoplasma pneumoniae</i>		6	1	23			37	12	79	772
<i>Rickettsia australis</i>							1		1	3
<i>Rickettsia tsutsugamushi</i>							2		2	2
<i>Rickettsia</i> spp - other								3	3	8
<i>Streptococcus</i> group A			4	23					27	98
<i>Bordetella pertussis</i>		2		51			22	6	81	472
<i>Brucella</i> species				1					1	3
<i>Legionella longbeachae</i>								1	1	29
<i>Yersinia enterocolitica</i>				1					1	10
<i>Leptospira</i> species				8				1	9	2
<i>Treponema pallidum</i>		9	45	23				4	86	201
Total	0	751	100	563	6	16	704	1,082	3,222	16,411

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. In 1999, data from the Institute of Clinical Pathology & Clinical Research, Westmead were under reported up to September.
3. Totals comprise data from all laboratories. 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. A new computer system for processing the virology and serology laboratory reporting scheme data, was implemented in September 1999. Consequently, cumulative figures may have decreased due to better duplicate processing.

Table 4. Virology and serology laboratory reports by contributing laboratories for the reporting period 15 July to 11 August 1999

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	100
	New Children's Hospital, Westmead	264
	Royal Prince Alfred Hospital, Camperdown	103
	South West Area Pathology Service, Liverpool	264
Queensland	Queensland Medical Laboratory, West End	648
	Townsville General Hospital	22
Tasmania	Northern Tasmanian Pathology Service, Launceston	14
Victoria	Royal Children's Hospital, Melbourne	380
	Victorian Infectious Diseases Reference Laboratory, Fairfield	325
Western Australia	PathCentre Virology, Perth	758
	Princess Margaret Hospital, Perth	344
Total		3,222

Table 5. Australian Sentinel Practice Research Network reports, weeks 29 to 32, 1999

Week number	29		30		31		32	
Week ending on	25 July 1999		1 August 1999		8 August 1999		15 August 1999	
Doctors reporting	55		53		57		53	
Total encounters	7,071		7,222		7,933		7,004	
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	109	15.4	97	13.4	116	14.6	115	16.4
Rubella	1	0.1	1	0.1	0	0.0	0	0.0
Measles	0	0.0	0	0.0	0	0.0	1	0.1
Chickenpox	19	2.7	9	1.2	17	2.1	14	2.0
New diagnosis of asthma	12	1.7	9	1.2	13	1.6	21	3.0
Post operative wound sepsis	7	1.0	6	0.8	7	0.9	8	1.1
Gastroenteritis	50	7.1	49	6.8	53	6.7	55	7.9

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

National Influenza Surveillance, 1999

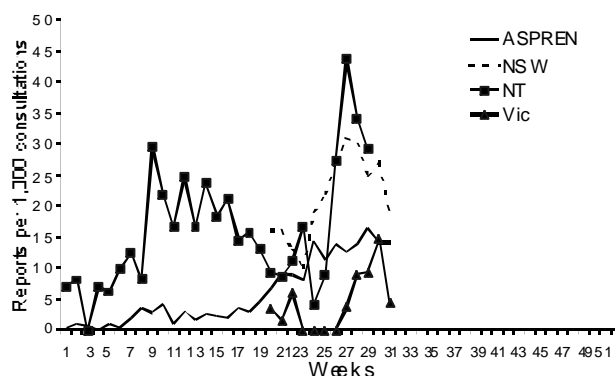
Three types of data are included in National Influenza Surveillance, 1999. These are sentinel general practitioner surveillance conducted by the Australian Sentinel Practice Research Network, Department of Human Services (Victoria), Department of Health (New South Wales) and the Tropical Influenza Surveillance Scheme, Territory Health (Northern Territory); laboratory surveillance data from the Communicable Diseases Intelligence Virology and Serology Laboratory Reporting Scheme, LabVISE, and the World Health Organization Collaborating Centre for Influenza Reference and Research; and absenteeism surveillance conducted by Australia Post. For further information about these schemes, see CDI 1999; 23:56.

Sentinel general practitioner surveillance

Over the last 4 week reporting period up until 11 August 1999, a peak in the rate of reports of influenza consultations occurred in all sentinel reporting schemes. This peak was a second peak of influenza consultations for the surveillance schemes in Victoria and the Northern Territory. The Tropical Influenza Surveillance Program

(NT) (45/1000) and NSW Sentinel Scheme (31/1000) reported the highest rates. These occurred in early to mid

Figure 2 Sentinel general practitioner influenza consultation rates, 1999, by scheme



August. The NSW peak rate was similar to the peak rate (42.9/1000) reported in the NSW Sentinel Surveillance Scheme in early August 1998.

Laboratory surveillance

For the year to date, a total of 1,130 laboratory reports of influenza have been received. Of these, 1,012 (90%) were influenza A and 118 (10%) were influenza B (Figure 3). The number of influenza A reports to date is less than the previously recorded high noted in 1998 (Figure 4). As the rates of clinical reporting through the sentinel surveillance schemes has not increased the laboratory figures represent a decrease in laboratory testing.

Figure 3. Laboratory reports of influenza, 1999, by type and by week of specimen collection

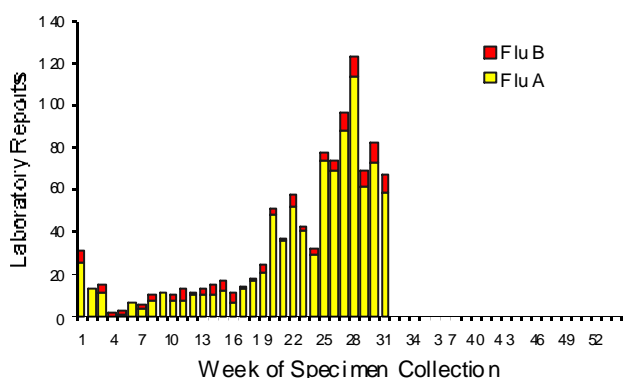
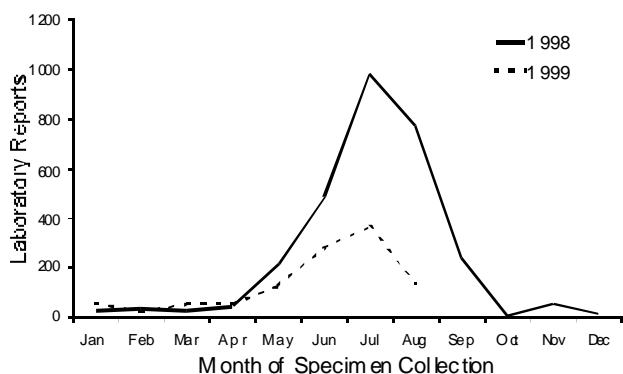


Figure 4 Laboratory reports of influenza, 1999, by month of specimen collection

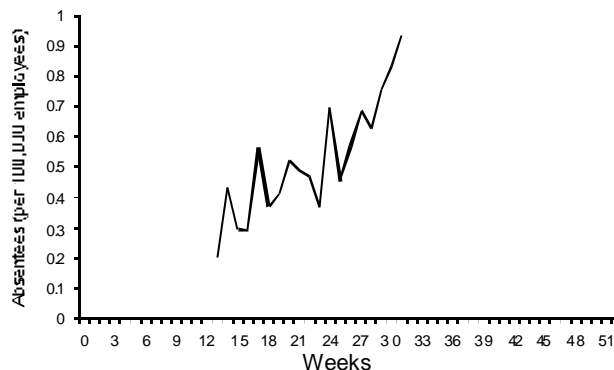


Absenteeism surveillance

The average rates for the last 4 week reporting period were 0.86% and the maximum rate was 0.95%. These rates represent a marked increase compared to a similar

period in 1998 in which the maximum reported rate was 0.29%. This reflects an ongoing trend noted in the previous report. These rates were greater than the previously reported period in May 1999 of 0.45% (Figure 5).

Figure 5. Absenteeism rates in Australia Post, 1999



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/ncheccr>.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 to 30 April 1999, as reported to 31 July 1999, are included in this issue of CDI (Tables 6 and 7).

Table 6. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 30 April 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	1	0	3	0	0	1	0	5	6	23	26
	Male	0	21	1	11	2	0	14	4	53	56	191	240
	Sex not reported	0	0	0	0	0	0	0	0	0	2	1	4
	Total ¹	0	22	1	14	2	0	15	4	58	64	215	270
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	2	3	5
	Male	0	5	1	0	1	0	1	0	8	23	29	95
	Total ¹	0	5	1	0	1	0	1	0	8	25	32	100
AIDS deaths	Female	1	0	0	0	0	0	0	0	1	0	1	2
	Male	1	1	0	0	1	0	0	0	3	11	32	46
	Total ¹	2	1	0	0	1	0	0	0	4	11	34	48

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

Table 7. 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	23	587	8	137	57	5	203	108	1,128
	Male	188	10,589	106	1,899	654	77	3,790	882	18,185
	Sex not reported	0	258	0	0	0	0	25	0	283
	Total ¹	211	11,433	113	2,029	709	82	4,016	988	19,581
AIDS diagnoses	Female	8	173	0	46	21	3	67	26	344
	Male	86	4,534	35	792	328	44	1,591	344	7,754
	Total ¹	94	4,719	35	840	349	47	1,665	372	8,121
AIDS deaths	Female	3	113	0	30	15	2	47	16	226
	Male	65	3,129	24	556	226	28	1,248	245	5,521
	Total ¹	68	3,250	24	588	241	30	1,301	262	5,764

1. Persons whose sex was reported as transgender 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 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 May to 31 August 1999.

There were 55 reports of serious adverse events following vaccination for this reporting period (Table 8). Onset dates were from 1996 to 1999, the majority (80%) being in 1999. Reports were received from the Australian Capital Territory (2), New South Wales (5), the Northern Territory (8), Queensland (19), South Australia (8), Victoria (8) and Western Australia (5) for this period.

The most frequently reported events following vaccination were other reactions (16 cases, 29%) followed by persistent screaming (14 cases, 26%), convulsions (12 cases, 22%), hypotonic/hyporesponsive episodes (6 cases, 11%), temperature of 40.5°C or more (5 cases, 9%). There was one case of acute flaccid paralysis reported and the diagnosis of the child was confirmed as Guillain-Barré Syndrome based on nerve conduction tests. The child had recovered 3 weeks after onset of symptoms. One death within 30 days of immunisation was reported from Victoria. The baby was 3 months old, and the cause of death was determined to be sudden infant death syndrome (SIDS) by the coroner.

Thirty-seven (67%) cases were associated with Diphtheria-Tetanus-Pertussis (DTP) vaccine, either alone or in combination with other vaccines. The number of adverse events reported during this period were lower than reported in the previous 2 years. One possible explanation could be the introduction of acellular pertussis vaccine. This could have resulted in the decrease in the persistent screaming reaction which used to be reported predominantly with the whole cell pertussis vaccine.

Seventeen of the 55 cases were hospitalised, of which 16 had recovered at the time of reporting. There was incomplete information on the recovery status of 6 cases, while all the other cases had recovered at the time of reporting.

Table 8. Adverse events following vaccination reported in the period 1 May to 31 August 1999¹

Event	Vaccines											Reporting States or Territories	Total reports for this period
	DTP	DTP, Hib	DTP, OPV, Hib	DTP, OPV, HEB	DTP, OPV	OPV, Other	MMR	Hib, OPV	Hib	Hep B	Other ²		
Persistent screaming	3	1	8	1				1				ACT, NSW, NT, Qld, Vic, WA	14
Hypotonic/hyporesponsive episode		1	2			1	1					Qld, Vic	5
Temperature of 40.5°C or more	1	1	2		1							ACT, NT, WA	5
Convulsions	4	2	1				4			1		NSW, Qld, SA, Vic, WA	12
Acute flaccid paralysis ³					1							NSW	1
Death			1									Vic	1
Other	3		3			1			1	2	6	NT, Qld, SA, Vic	16
TOTAL	11	5	17	1	2	2	5	1	1	3	6		54⁴

1. Events with onset dates from 1996 to 1999 were reported in this period.

2. Includes influenza vaccination, DTPa, CDT, OPV, Hepatitis B vaccine, pneumococcal vaccination, BCG, ADT and rabies immunoglobulin (HRIG)

3. This was a case of Guillain-Barré Syndrome

4. 1 child with an adverse event had no vaccine specified.