

COMMUNICABLE DISEASES SURVEILLANCE

National Notifiable Diseases Surveillance System

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia-New Zealand. The system coordinates the national surveillance of 41 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 legislation. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see *CDI 1996;20:9-10*.

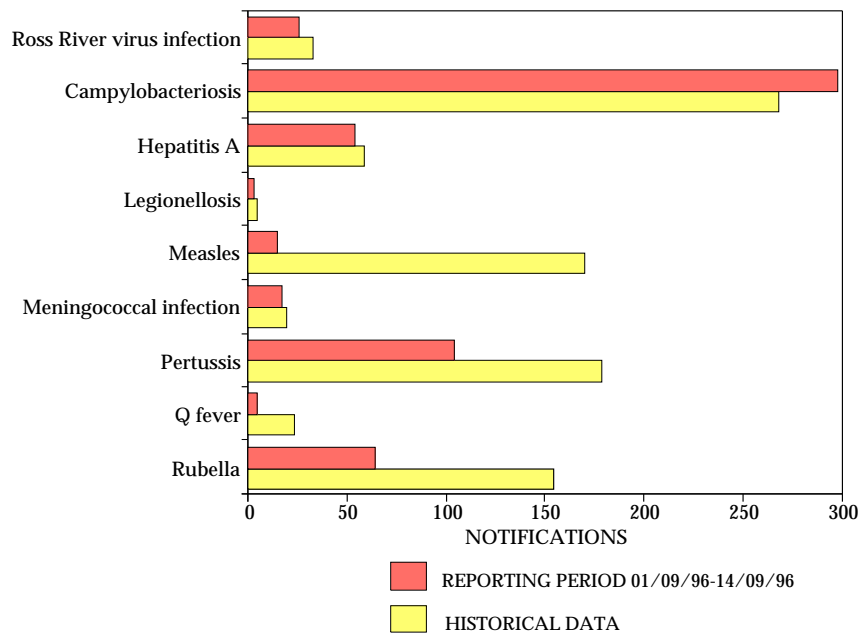
Reporting period 1 to 14 September 1996

There were 1,289 notifications received for this two-week period (Tables 1, 2 and 3). For Victoria new data was only available for the sexually transmissible diseases this fortnight. The numbers of reports for selected diseases have been compared with average data for this period in the previous three years (Figure 1).

One hundred and four notifications of **pertussis** were received this fortnight. The number of cases reported in recent months has been low compared with the same period last year (Figure 2). A total of 1,961 cases with onset dates in 1996 has been received so far. Two hundred and sixty-seven (14%) of these were for children under the age of 5 years, with 624 (32%) being for the under 10 years age group (Figure 3).

Rubella was reported for 64 persons this fortnight. The number of notifications has remained low in recent months (Figure 4). Of the notifications received for 1996, 44% were for the 15 to 24 years age group and the male:female ratio was 1.9:1 (Figure 5).

Figure 1. Selected National Notifiable Diseases Surveillance System reports, and historical data^{1,2}



1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods: the corresponding periods of the last 3 years and the periods immediately preceding and following those.
2. No data were included from Victoria.

Figure 2. Pertussis notifications, 1994 to 1996, by month of onset

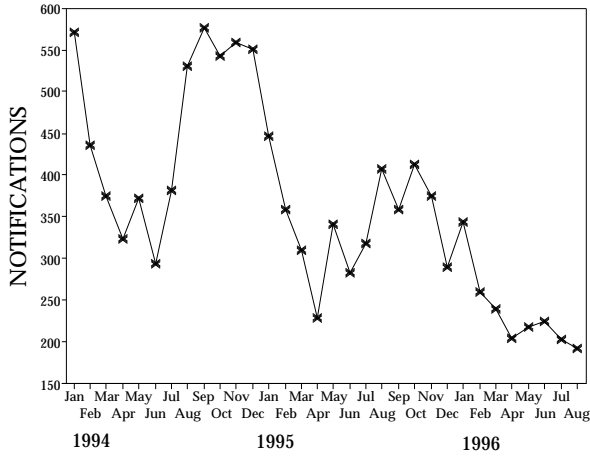


Figure 4. Rubella notifications, 1994 to 1996, by month of onset

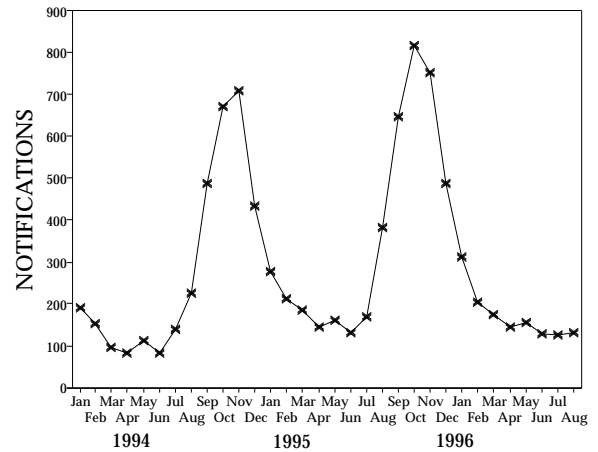


Figure 3. Pertussis notifications, 1996, by age group and sex

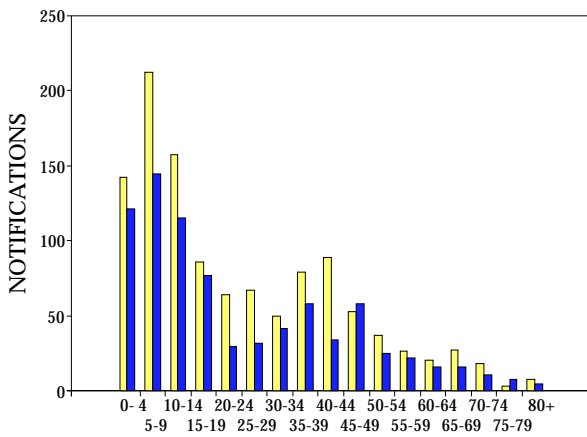


Figure 5. Rubella notifications, 1996, by age group and sex

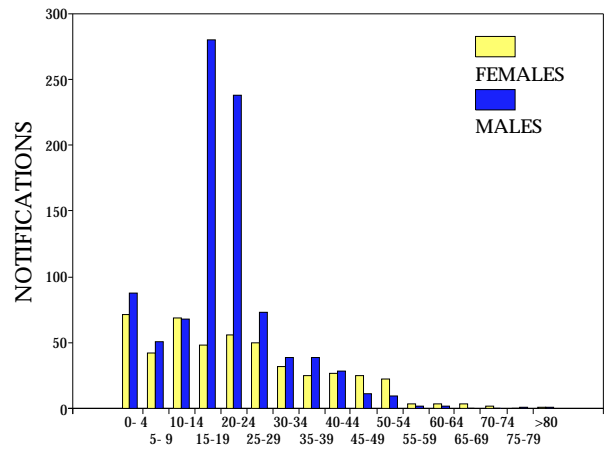


Table 1. Notifications of diseases¹ preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 1 to 14 September 1996

DISEASE	ACT	NSW	NT	Qld	SA	Tas	WA	TOTALS FOR AUSTRALIA ²			
								This period 1996	This period 1995	Year to date 1996	Year to date 1995
Diphtheria	0	0	0	0	0	0	0	0	0	0	0
<i>Haemophilus influenzae</i> B infection	0	0	0	0	1	0	0	1	3	45	51
Measles	0	8	0	4	0	2	1	15	31	345	1037
Mumps	2	0	0	NN	0	0	2	4	7	86	104
Pertussis	2	25	0	31	40	1	5	104	199	2146	2955
Rubella	0	10	0	35	10	3	6	64	213	1732	1883
Tetanus	0	0	0	0	0	0	0	0	0	1	3

NN Not Notifiable.

1. No notifications of poliomyelitis have been reported since 1986.

2. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision, so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

Table 2. Notifications of other diseases¹ received by State and Territory health authorities in the period 1 to 14 September 1996

DISEASE	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA ²			
									This period	This period	Year to date	Year to date
									1996	1995	1996	1995
Arbovirus Infection (NEC) ^{3,4}	0	0	0	0	0	0	-	0	0	2	128	54
Barmah Forest virus infection	0	4	-	8	0	0	-	-	12	14	642	628
Ross River virus infection	0	2	1	20	1	-	-	2	26	32	7459	2362
Dengue	0	0	0	0	0	-	-	2	2	0	29	22
Campylobacteriosis ⁵	6	-	5	73	146	15	1	52	298	440	8169	7238
Chlamydial infection (NEC) ⁶	3	NN	21	141	0	13	71	41	290	211	5296	4341
Donovanosis	0	NN	0	0	NN	0	0	2	2	4	35	57
Gonococcal infection ⁷	0	14	28	32	0	0	11	34	119	106	2720	2231
Hepatitis A	2	26	3	15	5	0	-	3	54	55	1691	1081
Hepatitis B incident	0	0	0	2	0	0	-	1	3	16	148	237
Hepatitis C incident	2	0	1	-	0	-	-	-	3	2	22	61
Hepatitis C unspecified	8	NN	7	75	NN	1	-	26	117	397	6804	6688
Hepatitis (NEC)	0	1	0	0	0	0	-	NN	1	2	16	10
Legionellosis	0	1	0	1	0	0	-	1	3	3	131	129
Leptospirosis	0	0	0	5	0	0	-	0	5	6	169	90
Listeriosis	0	0	0	1	0	0	-	0	1	4	42	47
Malaria	2	7	0	25	0	0	-	2	37	35	643	487
Meningococcal infection	1	4	0	6	2	0	-	3	17	24	287	252
Ornithosis	0	NN	0	0	0	0	-	0	0	4	60	84
Q fever	0	1	0	3	0	0	-	0	4	15	387	330
Salmonellosis (NEC)	0	24	9	45	15	3	-	8	104	145	4246	4483
Shigellosis ⁵	0	-	6	1	1	0	-	3	11	16	485	575
Syphilis	0	13	10	15	0	0	0	0	38	66	1072	1357
Tuberculosis	2	6	0	3	0	0	-	0	11	50	755	720
Typhoid ⁸	0	0	0	1	0	0	-	0	1	0	61	56
Yersiniosis (NEC) ⁵	0	-	1	8	0	0	-	0	9	5	181	238

- For HIV and AIDS, see Tables 4 and 5. For rarely notified diseases, see Table 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.
 - Tas: includes Ross River virus and dengue.
 - NT, Vic and WA: includes Barmah Forest virus.
 - NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.
 - WA: genital only.
 - NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.
 - NSW, Vic: includes paratyphoid.
- NN Not Notifiable.
 NEC Not Elsewhere Classified.
 - Elsewhere Classified.

Table 3. Notifications of rare¹ diseases received by State and Territory health authorities in the period 1 to 14 September 1996

DISEASES	Total this period	Reporting States or Territories	Year to date 1996
Brucellosis	2	Qld	27
Chancroid	0		1
Cholera	0		3
Hydatid infection	1	Qld	31
Leprosy	0		8

- Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1995.
- No notifications have been received during 1996 for the following rare diseases: botulism; lymphogranuloma venereum; plague; rabies; yellow fever; or other viral haemorrhagic fevers.

National Influenza Surveillance

Australian Sentinel Practice Research Network; Communicable Diseases Intelligence Virology and Serology Reporting Scheme Contributing Laboratories, New South Wales Department of Health; Victorian Department of Health; World Health Organisation Collaborating Centre for Influenza Reference and Research.

National Influenza Surveillance is conducted from May to September each year. Data are combined from a number of sources to provide an indication of influenza activity. Included are sentinel general practitioner surveillance, absenteeism data from a national employer, and laboratory data from LabVISE and the World Health Organization Collaborating Centre for Influenza Reference and Research. For further information, see CDI 1996;20:9-12.

The absenteeism rate recorded by Australia Post appears to have remained steady, but reports for August and the first week of September have been excluded due to an error in the data (Figure 6). Consultation rates for influenza-like illness in New South Wales and Victoria, and those recorded by ASPREN continued to fall (Figure 7). No report was received from the Northern Territory this period.

The number of laboratory reports of influenza A continued to fall after peaking at the end of July (Figure 8). In the last fortnight, 123 reports were received. Diagnosis was by virus isolation (37), antigen detection (9), single high titre (70) and four-fold rise in titre (7). There have been 1,399 reports of influenza A for the year to date, 65 of which were H₃N₂. Four reports of influenza B were also received this fortnight. Influenza B activity has remained low this year (Figure 9).

Figure 6. Australia Post absenteeism, 1996, by week

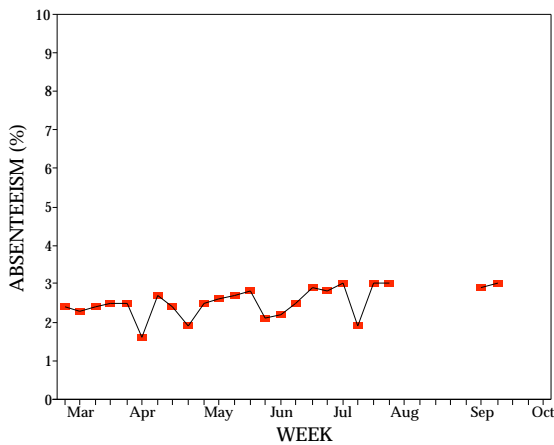


Figure 7. Sentinel general practitioner influenza-like illness consultation reports per 1,000 encounters, 1996, by week

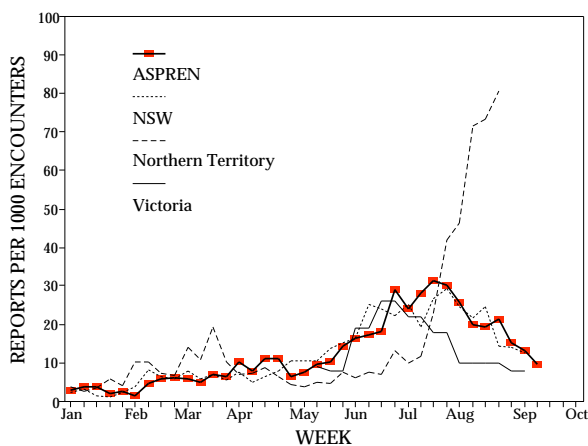


Figure 8. Influenza A laboratory reports, 1996, by method of diagnosis and week of specimen collection

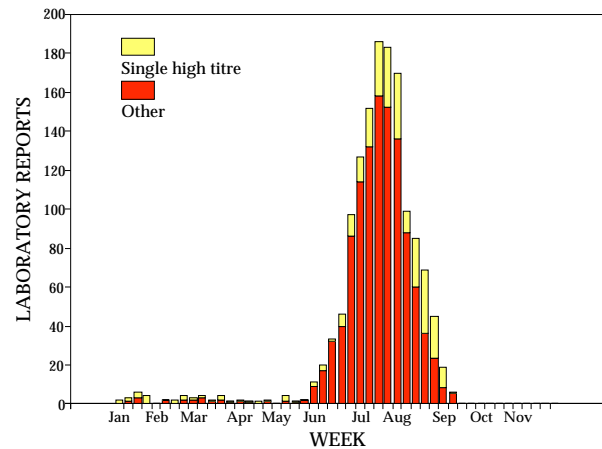


Figure 9. Influenza B laboratory reports, 1996, by method of diagnosis and week of specimen collection

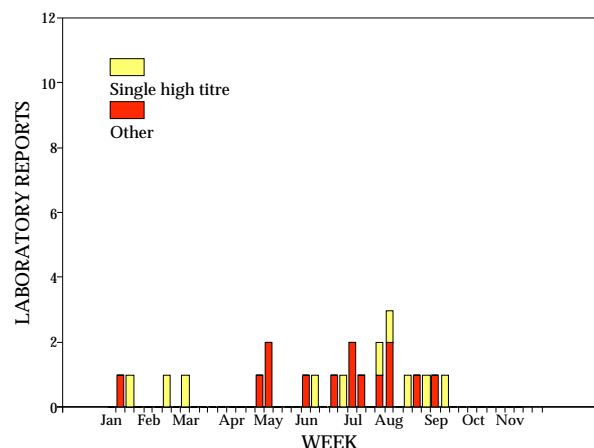


Table 4. Australian Sentinel Practice Research Network reports, weeks 36 and 37, 1996

Condition	Week 36, to 8 September 1996		Week 37, to 15 September 1996	
	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Influenza	104	13.1	66	9.4
Rubella	1	0.1	1	0.1
Measles	0	0	0	0
Chickenpox	8	1.0	21	3.0
Pertussis	1	0.1	2	0.3
Gastroenteritis	124	15.6	93	13.3

Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network (ASPREN) comprises 99 sentinel general practitioners from throughout the country. A total of approximately 9,000 consultations are recorded each week for 12 conditions. Of these, CDI reports the consultation rate for influenza, rubella, measles, pertussis and gastroenteritis. For further information including case definitions see CDI 1996;20:98-99.

Data for weeks 36 and 37 ending 8 and 15 September respectively are included in this issue of CDI (Table 4). The consultation rate for gastroenteritis has remained steady since mid-July. Consultation rates for chickenpox have fluctuated in recent weeks, after remaining level over the previous three months. Cases of rubella, measles and pertussis continue to be reported in low numbers.

Gonococcal surveillance

John Tapsall, The Prince of Wales Hospital, High Street, Randwick, NSW 2031, for the Australian Gonococcal Surveillance Programme

Australian Gonococcal Surveillance Programme (AGSP) reference laboratories in the various States and Territories report data on sensitivity to an agreed 'core' group of antimicrobial agents quarterly. The antibiotics which are currently routinely surveyed are the penicillins, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens. Additional data are also provided on other antibiotics from time to time. At present all laboratories also test isolates for the presence of high level resistance to the tetracyclines. Tetracyclines are however not a recommended therapy for gonorrhoea. Comparability of data is achieved through the use of a standardised system of testing and a programme-specific quality assurance programme. Because of the geographic differences in susceptibility patterns, regional as well as aggregated data are presented.

Reporting period 1 October to 31 December 1995

The AGSP reference laboratories examined 595 isolates of *Neisseria gonorrhoeae* for sensitivity to the penicillins,

ceftriaxone, ciprofloxacin and spectinomycin and for high level resistance to tetracyclines in the December quarter of 1995.

Penicillins

This group of antibiotics still remains useful in some parts of Australia where resistant strains are infrequently encountered, but is least effective in Sydney and Melbourne where about 30% of isolates were penicillin resistant.

Figure 10 shows the proportion of strains fully sensitive to penicillin, less sensitive, relatively resistant or penicillinase-producing (PPNG) in different regions, and aggregated data for Australia. Infections with strains which are PPNG or in the relatively resistant category usually fail to respond to the penicillins.

There were 45 PPNG detected throughout Australia in this quarter (8% of all isolates). Sixteen of these were in Sydney (11% of isolates there), 11 in Melbourne (13%) and Perth (8%), 4 in Brisbane (4%), 2 in Hobart and 1 in Darwin. Most of the 'imported' isolates were from infections acquired in south-east Asian countries.

There were 41 isolates resistant to penicillin by chromosomal mechanisms (CMRNG). These were detected in Sydney (24 isolates, 17% of strains there), Melbourne (14 strains, 17%) and Perth (3, 2%).

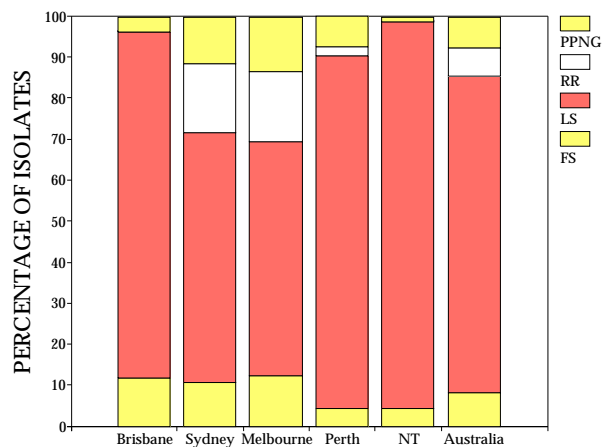
Ceftriaxone and spectinomycin

All 595 strains from all parts of Australia were sensitive to these injectable agents.

Quinolone antibiotics

In this quarter, 15 isolates throughout Australia displayed altered quinolone sensitivity (3% of all strains). These were

Figure 10. Penicillin resistance of gonococcal isolates for Australia and by region, 1 October - 31 December 1995



PPNG Penicillinase-producing *Neisseria gonorrhoeae*
 RR Relatively resistant to penicillin, MIC ≥ 1 mg/L
 LS Less sensitive to penicillin, MIC 0.06 - 0.5 mg/L
 FS Fully sensitive to penicillin, MIC ≤ 0.03mg/L

detected in Melbourne (5 isolates - 6%), Sydney (6 isolates - 4%), Perth (3 strains - 2%) and in a single isolate in Adelaide. Strains with high level quinolone resistance were detected in Sydney, Melbourne and Perth.

Patients were infected with QRNG in China, Indonesia, Hong Kong, Japan, the Philippines, the Middle East and within Australia.

High level tetracycline resistance (TRNG)

Twenty-eight TRNG were detected throughout Australia (5% of the total) in this quarter. Eleven were in Sydney (8% of strains there), 5 in Melbourne (6%), 7 (5%) in Perth, four in Brisbane and a single strain in the Northern Territory. This is similar to the numbers of TRNG detected in the September quarter of 1995 and approximates the proportion of TRNG seen in the December quarter of 1994.

Infections with TRNG were acquired in Indonesia, Thailand and Singapore and, increasingly, through local contact.

Serious Adverse Events Following Vaccination Surveillance Scheme

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

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

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

Results for the reporting period 7 July to 14 September 1996

There were 29 reports of serious adverse events following vaccination for this reporting period. Reports were re-

ceived from the Australian Capital Territory (6), the Northern Territory (3), Queensland (7), Victoria (5) and Western Australia (8).

The reports included cases of persistent screaming, hypotonic/hyporesponsive episodes, temperature of 40.5°C or more, convulsions, one episode of anaphylaxis and 6 'other' events (Table 5). The 'other' events included 4 large local reactions, two episodes of rash and one of unwillingness to use the legs following vaccination.

Four children were hospitalised. All cases recovered.

LabWISE

The Virology and Serology Reporting Scheme, LabWISE, is a sentinel reporting scheme. Twenty-one laboratories contribute data on the laboratory identification of viruses and other organisms. Data are collated and published in Communicable Diseases Intelligence each fortnight. These data should be interpreted with caution as the number and type of reports received is subject to a number of biases. For further information, see CDI 1996:20:9-12.

There were 1,384 reports received in the CDIVirology and Serology Reporting Scheme this period (Tables 6 and 7).

Thirty-eight reports of **rubella virus** were received this period. The number of reports is similar to that for the same time last year but below that for 1994 (Figure 11).

Ross River virus was reported for 21 patients this fortnight. The number of reports received in recent months is low, which is usual for the time of year (Figure 12).

The number of reports of **parainfluenza virus type 3** has been low so far this year compared with last year (Figure 13).

One hundred and seven reports of **rotavirus** were received this fortnight for 53 males and 54 females. Ninety-three per cent of reports were for children under the age of 5 years. The number of reports received was average through the month of July (Figure 14).

Table 5. Adverse events following vaccination for the period 7 July to 14 September 1996

Event	Vaccines					Reporting States or Territories	Total reports for this period
	DTP	DTP/OPV/Hib	DTP/Hib	DTP/OPV	MMR		
Persistent screaming	3	6	2			ACT, NT, Qld, Vic, WA	11
Hypotonic/hyporesponsive episode	1	1	1		1	ACT, Vic, WA	4
Temperature $\geq 40.5^{\circ}\text{C}$	1	1	2			Qld, WA	4
Anaphylaxis					1	WA	1
Convulsions			1		2	Qld, Vic, WA	3
Other	2	2	1	1		ACT, NT, Qld, Vic	6
Total	7	10	7	1	4		29

Figure 11. Rubella virus laboratory reports, 1994, 1995 and 1996, by month of specimen collection

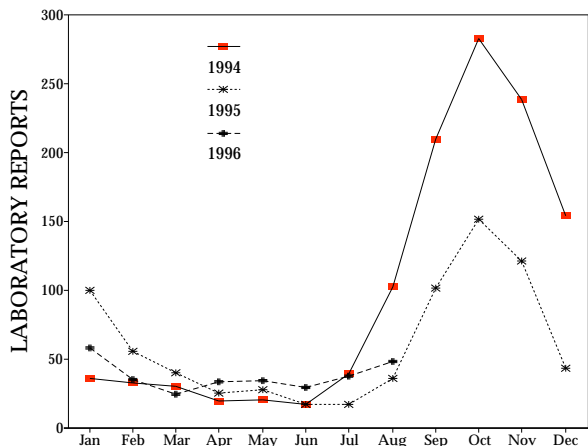


Figure 13. Parainfluenza virus type 3 laboratory reports, 1994, 1995 and 1996, by month of specimen collection

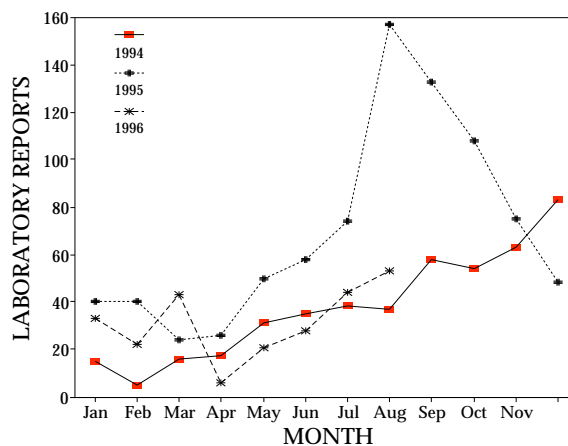


Figure 12. Ross River virus laboratory reports, 1993 to 1995 average and 1996, by month of specimen collection

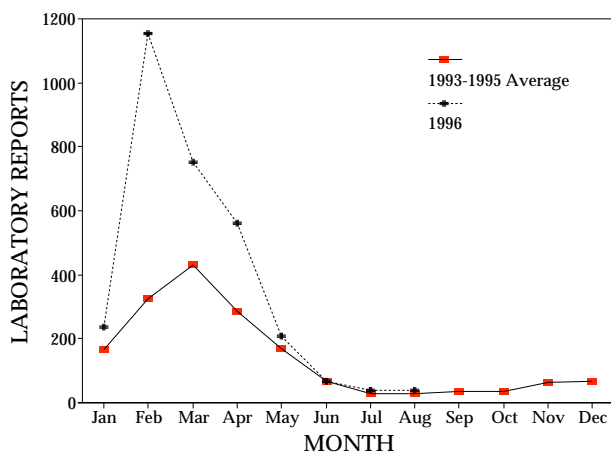


Figure 14. Rotavirus laboratory reports, 1991 to 1995 average and 1996, by month of specimen collection

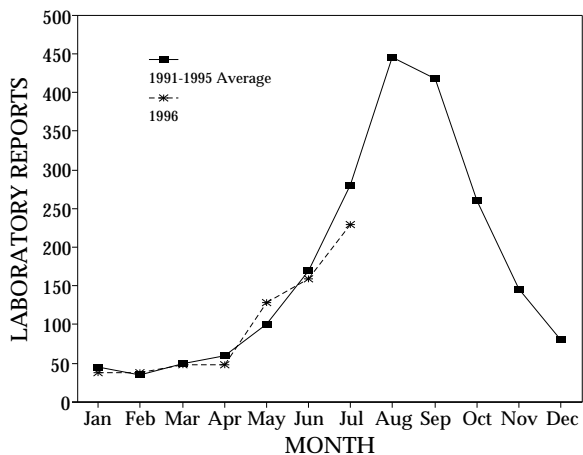


Table 6. Virology and serology laboratory reports by State or Territory¹ for the reporting period 5 to 18 September 1996, historical data², and total reports for the year

	State or Territory ¹								Total this fortnight	Historical data ²	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
MEASLES, MUMPS, RUBELLA											
Measles virus				2	1			2	5	23.7	41
Mumps virus								2	2	2.0	32
Rubella virus		1		30			3	4	38	34.3	428
HEPATITIS VIRUSES											
Hepatitis A virus			3	4	4			3	14	13.3	339
ARBOVIRUSES											
Ross River virus			7	4				10	21	6.5	3,083
Barmah Forest virus		1		2				1	4	3.0	180
Dengue not typed								1	1	1.0	13
ADENOVIRUSES											
Adenovirus type 1							1		1	3.0	15
Adenovirus type 2							1		1	1.5	22
Adenovirus type 3							1		1	1.8	63
Adenovirus type 40								2	2	.0	28
Adenovirus not typed/pending	1	10		25	5		4	27	72	43.5	1,082
HERPES VIRUSES											
Cytomegalovirus		4		28			7	18	57	55.8	1,253
Varicella-zoster virus		3		14	3	1	9	15	45	29.7	941
Epstein-Barr virus		9	1	35			13	49	107	42.3	1,534
OTHER DNA VIRUSES											
Parvovirus				10			4		14	4.0	147
PICORNA VIRUS FAMILY											
Coxsackievirus B3								1	1	.3	1
Coxsackievirus B4								1	1	.3	2
Coxsackievirus B5							2		2	.2	5
Echovirus type 4		1							1	.0	2
Echovirus type 7							1		1	.0	11
Poliovirus type 1 (uncharacterised)		1							1	.5	13
Poliovirus not typed/pending								1	1	.2	1
Rhinovirus (all types)		1		9	3		2	12	27	40.3	558
Enterovirus not typed/pending				27				23	50	37.7	693
ORTHO/PARAMYXOVIRUSES											
Influenza A virus		11	6	18	15		5	67	122	57.8	1,373
Influenza A virus H3N2				1					1	4.2	65
Influenza B virus								4	4	17.3	44
Parainfluenza virus type 1		2		2	4			3	11	2.5	292
Parainfluenza virus type 2				3	1				4	.7	63
Parainfluenza virus type 3		5		6			2	24	37	41.5	442
Parainfluenza virus typing pending		1						1	2	2.2	15
Respiratory syncytial virus		69		37	51		19	54	230	211.3	3,698
OTHER RNA VIRUSES											
HTLV-1								1	1	.2	7
Rotavirus		62			17		9	19	107	175.3	1,157

Table 6. Virology and serology laboratory reports by State or Territory¹ for the reporting period 5 to 18 September 1996, historical data², and total reports for the year, continued

	State or Territory ¹								Total this fortnight	Historical data ²	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
OTHER											
<i>Chlamydia trachomatis</i> - A-K							1		1	.0	1
<i>Chlamydia trachomatis</i> not typed	1	9	39	47	21		1	89	207	76.8	2,950
<i>Chlamydia psittaci</i>			1		1				2	3.3	73
<i>Mycoplasma pneumoniae</i>		11		9			11	18	49	20.3	557
<i>Coxiella burnetii</i> (Q fever)				1				2	3	3.7	141
<i>Rickettsia tsutsugamushi</i>				1					1	.2	10
<i>Bordetella pertussis</i>							93	6	99	24.5	434
<i>Bordetella</i> species				13					13	4.8	228
<i>Legionella longbeachae</i>								1	1	.7	13
<i>Legionella</i> species								2	2	.5	10
<i>Leptospira</i> species								1	1	.0	52
<i>Schistosoma</i> species							8	8	16	4.2	224
TOTAL	2	201	57	328	126	1	197	472	1,384	997.0	22,479

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. The historical data are the averages of the numbers of reports in 6 previous 2 week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 7. Virology and serology laboratory reports by contributing laboratories for the reporting period 5 to 18 September 1996

STATE OR TERRITORY	LABORATORY	REPORTS
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	29
	Royal Alexandra Hospital for Children, Camperdown	79
	Royal Prince Alfred Hospital, Camperdown	16
	South West Area Pathology Service, Liverpool	68
Queensland	Queensland Medical Laboratory, West End	231
	State Health Laboratory, Brisbane	117
South Australia	Institute of Medical and Veterinary Science, Adelaide	124
Victoria	Monash Medical Centre, Melbourne	27
	Royal Children's Hospital, Melbourne	105
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	67
Western Australia	PathCentre Virology, Perth	312
	Princess Margaret Hospital, Perth	93
	Western Diagnostic Pathology	116
TOTAL		1384