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DEPARTMENT OF HEALTH, HOUSING AND COMMUNITY SERVICES

COMMUNICABLE DISEASES NETWORK-AUSTRALIA
A National Network for Communicable Diseases Surveillance

SALMONELLA SURVEILLANCE, AUSTRALIA - ANNUAL REPORT 1990

(Reproduced with acknowledgement from the National Salmonella Surveillance Scheme Quarterly Report [Editor Joan Powling], August 1991)

The total number of notifications received is shown in Table 1.

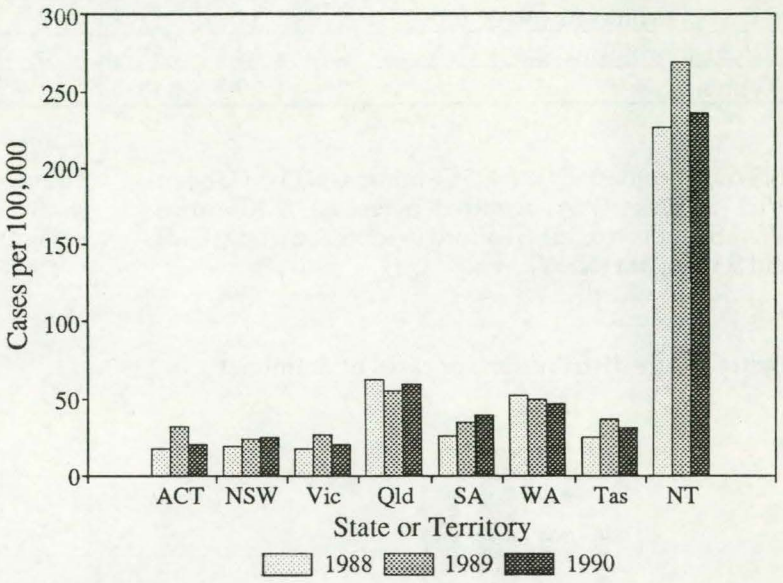
Salmonella Infections

The total number of cases acquired in Australia for the year ended 31st December 1990 was 5435. There were 434 follow-ups, 51 isolations from migrants and refugees and 334 cases acquired overseas.

The total number of notifications of salmonellas decreased in 1990 by 3% and that of shigellas increased by 9%. The number of cases of salmonella infection decreased by 4% Australia-wide and the case rate decreased in all States except South Australia and Queensland (Table 2, Figure 1). The highest percentage decreases in case rate were recorded from Victoria (25%) and Tasmania (19%).

The percentage of S Typhimurium cases is highest in those States with the largest urban populations and is 50% or higher in Victoria, South Australia and New South Wales (Table 3) and lowest in the Northern Territory (8.5%) and Queensland (19%). The latter States also have a high diversity of salmonella serovars for their population size and, in Queensland, the number of cases of S Virchow is of the same order as that for S Typhimurium.

Figure 1. Case rates per 100,000 population* for Salmonella infections, 1988-90.



* 1986 census.

New and unusual salmonella serovars notified during the year were: S Agodi (WA), S Ank (Qld), S Bardo (SA), S Bonn (NSW), S Brisbane (NT), S Bukavu (NT), S Butanton (Vic, acquired overseas), S Duesseldorf

Table 1. Total number of notifications received

	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL
Salmonella	64	1571	1028	1723	594	735	143	392	6250
Shigella	6	108	83	57	44	377	3	216	894
E coli (EPEC)	-	4	3	-	-	-	-	-	7
Vibrio	-	22	2	2	-	1	-	-	27
Yersinia	1	77	24	57	11	-	-	-	170
Total	71	1782	1140	1839	649	1113	146	608	7348

Table 2. Case rates per 100,000 population for Salmonella infections, 1985-90.

YEAR	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL CASES
1990	20.0	25.0	20.0	59.6	39.5	46.3	30.7	235.1	5435
1989	32.1	24.4	26.8	55.6	35.1	49.8	37.4	268.6	5678
1988	17.6	19.6	18.0	62.6	25.8	53.0	25.4	226.6	5298
1987	21.4	16.0	12.3	52.4	23.2	50.2	28.2	236.8	4462
1986	19.2	17.1	12.7	50.4	25.6	52.9	13.3	264.8	4342
1985	55.3	21.4	12.0	43.1	28.6	59.7	18.5	311.9	4743

Table 3. Distribution of Salmonella isolates by State, 1990

	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL
Cases	50	1353	804	1542	533	652	134	364	5432
Serovars	18	82	70	94	51	66	19	57	159
S Typhimurium phage types	10	41	27	29	33	24	11	13	63
S Typhimurium cases	25	668	459	300	269	251	40	31	2043
% STM/total cases	50	49	57	19	50	38	30	8.5	38
S Bovismorbificans phage types	2	14	11	7	8	8	1	2	17
S Bovismorbificans cases	2	69	55	20	31	36	5	3	221
Typhoid cases*	1	19	13	2	3	3	0	2	43

(NSW), S Emmastad (WA), S Gaminara (NT), S Handen (Vic), S Isangi (WA, acquired overseas), S Kisarawe (WA) S Lindern (Qld), S Salford (Vic), S Toowong (Qld) and S Wangata (NSW).

The age distribution for the cases of Salmonella is shown in Figure 2 and the seasonal variation is shown in Figure 3.

Figure 2. Age distribution for cases of Salmonella in 1990.

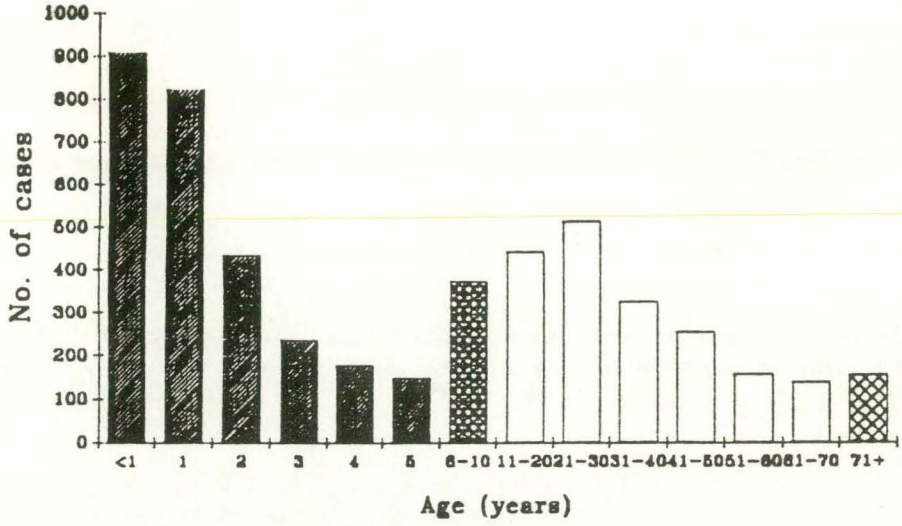


Figure 3. Seasonal variation in Salmonella infection 1989 - 1990.

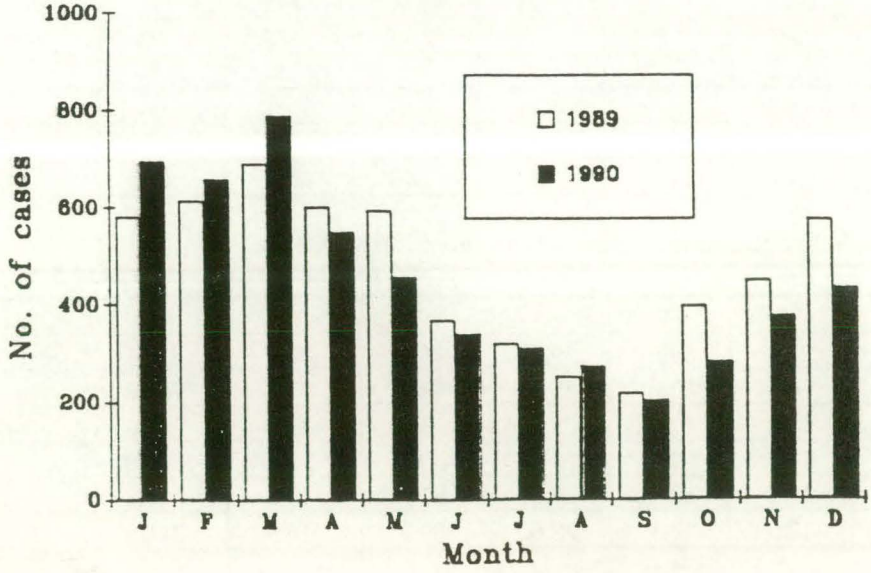


Table 4. Summary of 1990 outbreaks

ORGANISM	LOCALITY	DATE	CASES	NOTES
S Bovismorbificans 21	Sydney	December	17	FP
S Havana	Sydney	November	20	Hospital
S Heidelberg	Melbourne	Dec-Feb '91	7	no details
S Heidelberg	Sydney	Dec-Feb '91	3	no details
S Heidelberg 2	Rockhampton	Nov-Dec	19	FP
S Johannesburg	Melbourne	January	3	Hospital
S Muenchen	Alice Springs	August	3	infants
S Typhimurium 108	Adelaide	Jan-March	22	no details
S Typhimurium 178	Port Augusta, SA	Jan-March	8	no details
S Typhimurium 2	Rosebery, Tas	Nov-Dec	3	no details
S Typhimurium 20	Sydney	Feb-Mar	61	no details
S Typhimurium 30	Adelaide	Jan-Mar	29	no details
S Typhimurium 9	King Island	Nov'89-Feb	7	no details
S Typhimurium RDNC	Melbourne	December	3+	FP
S Typhimurium untypable*	Perth	Dec'89-Mar	75	no details
Sh sonnei biotype a	Darwin	Oct-Dec	17	R Sxt, Tet
Sh sonnei biotype a	Bourke, NSW	Nov'89-Jan	12	no details
V parahaemolyticus	Sydney**	November	12	FP

FP food poisoning, R Sxt, Tet antibiotic resistance

* phage pattern unique to WA isolates

** three separate incidents involving imported seafood.

Outbreaks

There were 15 outbreaks associated with salmonella infections (Table 4), two associated with shigella infections and three separate incidents in Sydney suburbs of food poisoning from imported seafood contaminated with *Vibrio parahaemolyticus*. Of the salmonella infections, three outbreaks were of S Heidelberg and eight were of phage types of S Typhimurium. The highest case numbers were reported from outbreaks of S Typhimurium 20 (61 cases) in Sydney between February and March and of an 'untypable' phage type of S Typhimurium which had a phage pattern specific to isolates from Western Australia (75 cases) between December 1989 and March 1990. No information has emerged regarding the origin of either of these cases.

The *Shigella sonnei* biotype a outbreak in Darwin late in the year persisted into 1991 and several cases, which may be a separate incident, have been reported from the Gove Peninsula. All the early Darwin cases had the same pattern of antibiotic resistance but, again, no details are available.

Shigella Infections 1990

There were 894 notifications of shigella infection for 1990. Of these, 84 were acquired overseas, 29 were from migrants and refugees, and 23 were follow-up isolations leaving a total of 759 which were taken to be acquired in Australia. This is probably an over-estimation as not all notifications were accompanied by comprehensive patient details. The case rates are given in Table 5 together with the corresponding figures for the previous four years.

There was a 9% increase Australia-wide in the number of cases of shigella infection and a 39% increase in the case rate for the Northern Territory. The case rate in the Northern Territory represents an increase of 38% over that for 1989, due to a higher number of cases of *Sh flexneri* 2a and *Sh flexneri* 6. There was an outbreak of *Sh sonnei* biotype a in the Darwin area between October and December but the total number of cases for the Territory remained the same as for 1989 (58). The only other outbreak involving a shigella in 1990 followed on from the increased incidence, late in 1989 and also of *Sh sonnei* biotype a, from Bourke in New South Wales.

Table 5. Shigella infections - case rates per 100,000

YEAR	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL CASES
1990	1.2	1.5	0.9	2.0	2.8	24.5	0.2	129.8	759
1989	0.0	1.4	1.2	1.9	3.2	23.4	0.5	93.6	692
1988	0.4	1.1	0.8	3.8	2.1	14.6	0.9	124.5	656
1987	0.0	1.3	0.6	2.2	3.2	19.8	0.4	120.0	687
1986	0.4	2.3	0.8	2.0	3.2	32.8	0.5	164.7	970

Figure 4. Age distribution for cases of Shigella in 1990.

Sh flexneri 2a (44%), *Sh flexneri* 6 (10%) and *Sh sonnei* biotype a (36%) accounted for 90 % of total cases.

The age distibution of Shigella cases is shown in Figure 4.

Typhoid and Paratyphoid Cases in 1990

The human quarterly reports for 1990 contain details of age and gender of individual typhoid and paratyphoid patients, also details of overseas travel if this has been provided by the notifying laboratory. The numbers of cases from the quarterly S Typhi reports do not always tally with the annual figure due to repeat isolations of untypable or degraded cultures finally producing a known Vi-phage type.

S Typhi

There were 62 notifications during 1990. Of these, four were overseas visitors and fifteen were repeat isolations. Thirty-one cases were known to be from infections acquired overseas, including one refugee from El Salvador. In eleven cases no details were supplied. The one infection known to have been acquired in Australia was from a laboratory worker (F/23 Qld) who had handled a faecal specimen (S Typhi D2) from a Papua New Guinea resident three weeks previously.

Three cases of S Typhi degraded were retyped as Vi-phage type A (M/9 NSW - ex Lebanon), B1 (F/24 NSW - ex Bali) and D2 (F/7 NT - ex Indonesia).

The most common Vi-phage types encountered were B1 with six cases (Indonesia, Thailand, Philippines) and E1 with nine cases (Africa, India, Penang, South America). The other Vi-phage types notified were: 38 (El Salvador, India); 43 and 51 (not specified); A (India, Lebanon); B2 (not specified); D1 (India); D2 (Papua New Guinea, Java, Zimbabwe); E2 (Indonesia) and T (India).

S Paratyphi A

There were 21 notifications and 16 cases. Ten of the cases were reported as overseas acquired and all of these were from Asia; the remainder were sent without patient details. There were 5 cases of phage type 1, four of phage type 5, two of phage type 6, and one each of phage types 2 and 9.

S Paratyphi B

There were 12 notifications and 11 cases, of which only three reported details of overseas travel. The remaining cases, some of which may have been acquired in Australia, were of phage types 3aI (M/7 SA), Beccles var. 5 (F/<1 NT), Dundee (F/26 and M/11 SA) and RDNC (M/2 Qld, M/ns NSW, M/18 WA, F/80 Qld).

Isolations from Blood, Urine and Unusual Sites

There were 66 bacteraemias (excluding enteric fever), 66 isolations from urine and 50 isolations from unusual sites (Table 6).

The bacteraemias were: S 11:i:-; S rough:b:e,n,x; S Adelaide; S Agona; S Bareilly; S Birkenhead; S Bovismorbificans phage types 13 (2), 21, 4 and untypable; S Bredeney (2); S Chester (4); S Dublin (4); S Enteritidis (acquired overseas) (4); S Hadar; S Havana (2); S Heidelberg (4) and phage types 1 and 2; S Javiana (acquired overseas); S Mgulani; S Oranienburg; S Oslo; S Saintpaul; S Sofia subsp. 2 (acquired overseas); S Typhimurium phage types 135, 145 (2), 20, 44, 8, 9 (5), 90, RDNC (2) and untypable; S Virchow (acquired overseas) (6); S Waycross (2); S Welikade; *Sh flexneri* 2a; *V cholerae* non O1 and *V vulnificus*.

The isolations from urine were: S 16:l,v:-; S 6,8:r:-; S Anatum (5); S Arizonae 61:l,v:z35; S Birkenhead; S Bovismorbificans phage types 4, 7 and untypable; S Cerro (2); S Chester (2); S Derby; S Enteritidis; S Hadar (2); S Havana (2); S Heidelberg; S Infantis (3); S Litchfield; S Liverpool (2); S Mbandaka (2); S Mgulani; S Muenchen (3); S Orion; S Poona; S Reading; S Saintpaul; S Senftenberg; S Singapore (3); S Typhimurium phage types 1, 12, 135, 170, 5, 9 (5), RDNC (2), untypable (2); S Virchow (5); S Waycross; S untypable; *Sh flexneri* var Y and *Sh sonnei* biotype a.

Table 6. Isolations from unusual sites

ORGANISM	SITE
E coli O26:K60:B6	rectal biopsy
S 16:l,v:-	ovarian cyst
S rough:b:e,n,x*	bile
S Adelaide	CSF, umbilicus
S Agona	umbilicus
S Anatum (2)	pus, testicular cyst
S Arizonae 50:k:z35	ileostomy fluid
S Birkenhead (2)	lymph node, arm wound
S Bovismorbificans	liver cyst
S Bovismorbificans phage type 12	foot wound - osteomyelitis
S Bovismorbificans phage type 13	chest wound
S Cholerae-suis	replacement hip tissue
S Derby	abdominal abscess
S Dublin (2)	splenic abscess, thigh wound
S Enteritidis	sputum
S Havana (3)	sputum, pulmonary oedema fluid, unspecified wound
S Heidelberg	umbilicus
S Mississippi	mammary cyst
S Ohio	eye
S Oranienburg (2)	peritoneum, bile
S Saintpaul	ear
S Typhimurium phage type 135 (3)	unspecified joint, knee, ovary and peritoneum.
S Typhimurium phage type 179	unspecified wound
S Typhimurium phage type 20	ear
S Typhimurium phage type 4	thigh
S Typhimurium phage type 64 (2)	mesenteric lymph node, sputum*
S Typhimurium phage type 9	mesenteric lymph node
RDNC	knee
untypable	appendix
S Virchow (6)	gall bladder, spleen, ankle, bile (2), elbow
S Waycross	perianal swab
V cholerae non O1 (2)	appendiceal abscess, arm burn
V damsela	foot wound

* carrier (M/34 bile - blood also; M/61 sputum)

Infections Acquired Overseas

The infections acquired overseas are presented in Table 7.

Top Ten Salmonellas

The top ten salmonellas for 1990 comprised 67% of the total cases acquired in Australia (5435) and are listed in Table 8, together with their position in 1989. Four of the listed serovars were associated with outbreaks.

S Typhimurium heads the list of the top ten salmonellas for 1990, accounting for 38% of Australian acquired cases (42% in 1989). All of the top ten serovars for 1989 were in the list for 1990 with S Birkenhead the one newcomer. The majority of S Birkenhead isolates were notified from Brisbane and the coastal region extending south as far as Lismore in northern New South Wales.

The top ten phage types of S Typhimurium comprised 61% of the total number of S Typhiumrium cases and are listed in Table 9.

The two most commonly reported phage types of S Typhimurium were 9 and 135 in both 1989 and 1990 and they were of equal abundance in both years also. Those phage types of S Typhimurium encountered for the first time during 1990 were 103 (WA), 131 (Qld), 201b (NT), 29a (NSW) and 78 (SA).

Table 7. Infections acquired overseas

ORGANISM	ORIGIN OF INFECTION
S 3,10:r:-	Fiji
S 6,7:r:-	S-E Asia, Bali
S 6,7:z:-:	Indonesia
S 6,8:e,h:-	Africa
S 9,12:f,g:-	Indonesia
S Agona (9)	India, Indonesia incl. Bali, Taiwan
S Anatum (3)	Thailand
S Arizonae	India
S Bareilly (2)	India, Malaysia
S Berta (31)	Indonesia incl. Bali (24), Thailand (2)
S Blockley (14)	Malaysia, Thailand, Bali, Borneo, Cyprus, Spain
S Bovismorbificans 2:	Solomon Islands
S Bovismorbificans 7	not specified
S Braenderup	not specified
S Butantan	India
S Cerro	not specified
S Cholerae-suis	Indonesia
S Derby (8)	India, Singapore, Indonesia, Vietnam, Mexico
S Eastbourne	not specified
S Emek (2)	Bali, Thailand
S Enteritidis (18)	Egypt, India, Bali, Thailand, Malaysia, Philippines
S Haardt	Malaysia
S Hadar (39)	Bali (20), Thailand, Nepal, Malaysia, New Caledonia, USA
S Heidelberg (3)	Bali, Philippines
S Infantis (5)	India, Egypt
S Isangi	Bali
S Java (3)	Africa, Indonesia, Thailand
S Javiana	not specified
S Kentucky (5)	Indonesia incl. Bali (3)
S Kottbus	Vietnam, Bali, Nepal, Greece
S Krefeld (2)	Thailand
S Lexington	Malaysia
S Litchfield	Bali
S Liverpool	Africa
S Livingstone (2)	Bali
S London (4)	Thailand, Bali, Malaysia
S London var 15+ (3)	Vietnam, Hong Kong

ORGANISM	ORIGIN OF INFECTION
S Mbandaka (4)	Africa, Indonesia, Philippines, Mexico
S Mississippi	Bermuda
S Montevideo (3)	Bali, Thailand
S Muenchen	Africa
S Newport (2)	Vietnam, Sri Lanka
S Oranienburg	Solomon Islands
S Orientalis (3)	Thailand, South America
S Orion var 15+	Lebanon
S Oslo	Bali
S Panama (2)	Thailand
S Paratyphi A1 (3)	India
S Paratyphi A2	Cambodia
S Paratyphi A5 (2)	Indonesia
S Paratyphi A6 (2)	Vietnam
S Paratyphi A9	India
S Paratyphi B 3aI	Chile
S Paratyphi B Dundee:	not specified.
S Paratyphi B RDNC:	Bali
S Poona	Singapore
S Potsdam (4)	not specified
S Rissen	not specified
S Saintpaul (5)	India, Thailand, Malaysia
S Schwarzengrund	Africa
S Senftenberg (4)	Egypt, Pakistan, Indonesia, Philippines
S Sofia subsp. 2 (2)	Malaysia
S Stanley (10)	Bali, Thailand, Philippines
S Tennessee	Singapore
S Typhi 38	India, El Salvador
S Typhi A (2)	India, Lebanon
S Typhi B1 (5)	Thailand, Philippines
S Typhi B2 (2)	not specified
S Typhi D1	India
S Typhi D2 (5)	Indonesia, Papua New Guinea, Zimbabwe
S Typhi E1 (4)	Africa, Malaysia, South America
S Typhi E2 (2)	Indonesia
S Typhi T	India
S Typhimurium 104	Indonesia
S Typhimurium 12	not specified
S Typhimurium 125	not specified
S Typhimurium 12a	not specified
S Typhimurium 135 (3):	not specified
S Typhimurium 120	not specified
S Typhimurium 145	not specified
S Typhimurium 179	Thailand
S Typhimurium 20 (2)	Bali, Chile

ORGANISM	ORIGIN OF INFECTION
S Typhimurium 25 (2):	ietnam
S Typhimurium 8	India
S Typhimurium 9	UK
S Typhimurium RDNC (7)	Indonesia incl. Bali, Nepal, Greece
S Virchow (17)	Indonesia, Malaysia, Pakistan, Thailand,Fiji
S Virginia	not specified
S Welikade	New Caledonia
S Weltevreden (5)	Africa, Thailand, Vietnam
Sh flexneri 4a	Nepal
Sh boydii 1 (2)	Asia, India
Sh boydii 13 (2)	Syria
Sh boydii 14	Nepal
Sh boydii 2 (3)	India, Thailand
Sh boydii 3	India
Sh dysenterieae:	India
Sh dysenterieae 1	India
Sh dysenterieae 3	India
Sh dysenterieae 9	Indonesia
Sh flexneri 1b	not specified
Sh flexneri 2a (12)	Philippines, Thailand, Laos, Vietnam,Central America, Fiji

ORGANISM	ORIGIN OF INFECTION
Sh flexneri 3a (4)	Thailand, Vietnam, Indonesia, India
Sh flexneri 5b	India
Sh flexneri 6 (4)	India, Africa
Sh flexneri var X	India
Sh flexneri var Y	India
Sh sonnei biotype a (19):	Indonesia (5) incl. Bali and Timor, Thailand (2), Vietnam, Nepal, India (2), Africa incl. Zimbabwe, Fiji (3), Western Samoa, Greece
Sh sonnei biotype f	Malaysia.
Sh sonnei biotype g (24)	India (7), Bali (5), Thailand (2), Central America (2), Mexico, Egypt
V cholerae O1	Indonesia
V cholerae O1 El Tor	Indonesia
V parahaemolyticus (2)	India, Thailand
Y enterocolitica:	South America

Table 8. Top ten Salmonellas, 1990

SEROVAR	NO. OF CASES	POS'N 1989	% OF TOP 10	% OF TOTAL	ORIGIN/NO. OF CASES
S Typhimurium	2057	1	56.5	37.9	NSW 674, Vic 469
S Virchow	268	3	7.4	4.9	Qld 217
S Bovismorbificans	233	-	6.4	4.3	NSW 80, Vic 55
S Saintpaul	221	4	6.1	4.1	Qld 144
S Anatum	150	8	4.1	2.7	Qld 43, NT 43
S Chester	149	9	4.1	2.7	Qld 57, NSW 31
S Muenchen*	147	5	4.0	2.7	Qld 50, WA 30, NSW 24
S Birkenhead	146	-	4.0	2.7	Qld 78, NSW 42
S Infantis	139	6	3.8	2.6	NSW 38, Vic 27

Table 9. Top ten Phage Types of S Typhimurium

SEROVAR	NO. OF CASES	POS'N 1989	% OF TOP 10	% OF TOTAL	ORIGIN/NO. OF CASES
9	341	1	27.3	16.6	Vic 145, NSW 109
135	244	2	19.6	11.9	NSW 85, Qld 55, Vic 41
170	131	4	10.5	6.4	Vic 47, NSW 41, Qld 40
20	98	-	7.8	4.8	NSW 67
untypable*	88	-	7.1	4.3	WA 88
12a	87	5	7.0	4.2	NSW 27, WA 22, Qld 20
145	79	-	6.3	3.8	Vic 35, NSW 28
108	67	9	5.4	3.2	SA 34, Vic 18
179	58	7	4.6	2.8	NSW 32, Vic 11
101	55	-	4.4	2.7	NSW 26, Qld 16
TOTAL	1248		100	60.7	

* phage pattern unique to WA isolates

AUSTRALIAN HIV SURVEILLANCE REPORT, VOLUME 7 NUMBER 8 (31 AUGUST 1991)

The National Centre in HIV Epidemiology and Clinical Research reports that as of 31 July 1991 a total of 15149 diagnoses of HIV infection and 2738 cases of AIDS had been reported in Australia. For the most recent period, 1 July to 31 July 1991, 24 new cases of AIDS and 78 new diagnoses of HIV infection were reported.

The following tables provide more detailed information on a State/Territory basis.

Readers should note that cumulative figures are subject to retrospective revision, which may result in apparent discrepancies between the number of new cases for the reporting month and the increment in the cumulative figure from the previous report.

Table 1. New diagnoses of AIDS and deaths from AIDS occurring in the period 1 July to 31 July 1991, by sex and State/Territory in which the diagnosis was made.

STATE/ TERRITORY	CASES			DEATHS		
	Male	Female	Total	Male	Female	Total
ACT	1	0	1	0	0	0
NSW	12	0	12	14	0	14
NT	0	0	0	0	0	0
Qld	0	0	0	1	0	1
SA	1	0	1	0	0	0
Tas	0	0	0	0	0	0
Vic	9	0	9	11	0	11
WA	1	0	1	0	0	0
TOTAL	24	0	24	26	0	26

Table 2. Cumulative cases of AIDS and deaths from AIDS by sex and State/Territory in which diagnosis was made, to 31 July 1991.

STATE/ TERRITORY	CASES			DEATHS		
	Male	Female	Total	Male	Female	Total
ACT	36	1	37	21	1	22
NSW	1640	48	1688	1070	35	1105
NT	8	0	8	3	0	3
Qld	204	8	212	139	7	146
SA	91	3	94	47	1	48
Tas	14	1	15	8	1	9
Vic	547	12	559	329	6	335
WA	117	8	125	74	3	77
TOTAL	2657	81	2738	1691	54	1745

Table 3. Number of new diagnoses of HIV infection in the period 1 July to 31 July 1991 and cumulative since the introduction of HIV antibody testing to 31 July 1991 by sex and State/Territory.

STATE/ TERRITORY	July 1991[1]			CUMULATIVE TO 31 July 1991			
	Male	Female	Total	Male	Female	Sex not reported	Total
ACT	0	0	0	17	0	97	114
NSW[2]	33	3	37	7761	397	1963	10121
NT	1	0	1	59	5	0	64
Qld	12	1	13	1062	46	0	1108
SA[3]	-	-	-	333	27	0	360
Tas	0	0	0	52	3	0	55
Vic	27	0	27	2617	81	5	2703
WA	0	0	0	592	32	0	624
TOTAL[4]	73	4	78	12493	591	2065	15149

1. Dashes indicate that counts were unavailable for period.
2. Total for NSW includes 1 person whose sex was not reported.
3. Cumulative counts to 18 May 1990.
.4. Total for July includes 1 person whose sex was not reported.

AIDS UPDATE, INTERNATIONAL

(Based on Weekly Epidemiological Record 1991;66:197-198, Australian HIV Surveillance Report 1991;7(S3):25 and In Point of Fact, World Health Organization, May 1991)

As at 1 July 1991, a global total of 372,015 cases of AIDS had been reported to the World Health Organization (Table 1). This represents an increase of 57,404 over the six month period since 31 December 1990.

Taking into account under-diagnosis, under-reporting and delay in reporting the World Health Organization (WHO) estimates that, as of early 1991, the cumulative global total of AIDS cases is more than 1.5 million. It is estimated that more than one million adult AIDS cases may have occurred worldwide, and that more than 500,000 paediatric AIDS cases resulting from perinatal transmission may have occurred, with over 90% of the paediatric cases in sub-Saharan Africa.

The WHO also estimates that by April 1991, at least 9-10 million HIV infections may have occurred in adults worldwide, and about one million children may have been infected with HIV.

While the HIV infection rate appears to be slowing in some industrialised countries, the incidence of new infections is increasing markedly in developing countries, especially in sub-Saharan Africa, but also in Asia, Latin America and the Caribbean. AIDS takes 10 years on average to develop, so cases will continue to develop from the existing pool of HIV-infected persons for many years, no matter how successfully the further spread of HIV is curbed.

Table 1. Cumulative AIDS cases, by country/area, reported to the WHO as at 1 July 1991.

Country/ Area	Number of cases	Date of report	Country/ Area	Number of cases	Date of report
AFRICA			Swaziland	33	31/03/91
Algeria	45	20/05/90	Togo	100	01/06/90
Angola	104	31/12/88	Tunisia	66	22/11/90
Benin	124	21/08/90	Uganda	21719	31/12/90
Botswana	87	17/01/90	United Republic of Tanzania	8163	19/02/91
Burkina Faso	978	11/06/90	Zaire	11732	31/01/90
Burundi	3305	31/08/90	Zambia	4036	31/12/90
Cameroon	429	30/04/91	Zimbabwe	6716	30/03/91
Cape Verde	32	30/06/90	TOTAL	92957	
Central African Republic	662	31/12/89	AMERICAS		
Chad	59	19/12/90	Anguilla	4	30/09/90
Comoros	2	30/04/90	Antigua and Barbuda	3	31/03/89
Congo	2405	31/12/90	Argentina	920	31/12/90
Cote d'Ivoire	6836	01/03/91	Bahamas	599	31/12/90
Djibouti	58	31/12/90	Barbados	192	31/03/91
Egypt	27	31/12/90	Belize	12	31/03/90
Equatorial Guinea	3	27/06/89	Bermuda	172	31/03/91
Ethiopia	636	18/12/90	Bolivia	25	31/12/90
Gabon	117	31/12/90	Brazil	18118	30/03/91
Gambia	123	11/03/91	British Virgin Islands	3	31/12/90
Ghana	1732	31/07/90	Canada	4885	06/05/91
Guinea	161	30/07/90	Cayman Islands	7	31/12/91
Guinea-Bissau	157	26/03/91	Chile	255	31/12/90
Kenya	9139	31/05/90	Colombia	1285	31/12/90
Lesotho	11	27/04/90	Costa Rica	232	31/12/90
Liberia	5	01/04/90	Cuba	73	31/12/90
Libyan Arab Jamahiriya	1	14/02/90	Dominica	12	30/06/90
Madagascar	2	28/01/91	Dominican Republic	1506	31/03/91
Malawi	7160	08/01/90	Ecuador	127	31/12/90
Mali	338	30/06/90	El Salvador	357	31/03/91
Mauritania	16	15/04/90	French Guiana	232	30/09/90
Mauritius	5	05/04/90	Grenada	21	31/12/90
Morocco	70	31/12/90	Guadeloupe	195	24/04/90
Mozambique	209	16/05/91	Guatemala	165	31/03/91
Namibia	311	31/05/90	Guyana	145	31/03/91
Niger	149	20/07/90	Haiti	3086	31/12/90
Nigeria	48	15/03/90	Honduras	1133	31/03/91
Reunion	49	17/05/90	Jamaica	201	31/12/90
Rwanda	3407	30/06/90	Martinique	177	31/03/91
Sao Tome and Principe	1	30/09/90	Mexico	6510	31/03/91
Senegal	307	08/03/90	Montserrat	1	30/09/90
Seychelles	0	07/05/91	Netherlands Antilles & Aruba	85	01/10/90
Sierra Leone	40	30/04/91	Nicaragua	11	31/12/90
Somalia	13	23/12/90	Panama	249	30/09/90
South Africa	764	06/05/91	Paraguay	26	28/02/91
Sudan	265	01/10/90	Peru	398	31/12/90

Country/ Area	Number of cases	Date of report	Country/ Area	Number of cases	Date of report
Saint Kitts & Nevis	32	31/12/90	Viet Nam	0	31/01/91
Saint Lucia	33	31/12/90	Yemen	0	05/03/90
Saint Vincent & the Grenadines	25	31/12/90	TOTAL	1109	
Suriname	83	31/12/90	EUROPE		
Trindidad and Tobago	736	31/03/91	Albania	0	31/03/91
Turks and Caicos Islands	20	31/03/91	Austria	557	31/03/91
United States of America	179136	11/06/91	Belgium	852	31/03/91
Uruguay	169	31/03/91	Bulgaria	9	31/12/90
Venequela	1061	31/12/90	Czechoslovakia	25	31/03/91
TOTAL	222717		Denmark	805	31/05/91
ASIA			Finland	78	31/03/91
Afghanistan	0	30/04/90	France	14449	31/03/91
Bahrain	0	30/04/90	Germany	6303	30/04/91
Bangladesh	1	30/09/90	Greece	457	31/03/91
Bhutan	0	30/09/90	Hungary	58	31/05/91
Brunei Darussalam	2	31/01/91	Iceland	16	31/12/90
Burma *see* Myanmar			Ireland	193	31/03/91
China	6[a]	20/04/91	Italy	9053	31/03/91
Cyprus	19	31/07/90	Luxembourg	37	31/03/91
Democratic People's Republic of Korea	0	30/11/90	Malta	15	31/12/90
Hong Kong	45	01/07/91	Monaco	6	31/03/91
India	65	31/03/91	Netherlands	1683	30/04/91
Indonesia	15	31/03/91	Norway	214	31/05/91
Iran (Islamic Republic of)	19	31/12/90	Poland	57	31/03/91
Iraq	0	30/04/90	Portugal	663	31/05/91
Israel	147	31/03/91	Romania	1436	31/05/91
Japan	378	30/04/91	San Marino	1	31/12/90
Jordan	11	20/08/90	Spain	8199	31/03/91
Kuwait	1	14/02/90	Sweden	557	31/03/91
Lebanon	24	31/12/90	Switzerland	1778	31/03/91
Macao	1	31/01/90	USSR	48	31/12/90
Malaysia	28	01/07/90	United Kingdom	4454	31/03/91
Maldives	0	30/11/90	Yugoslavia	192	31/05/91
Mongolia	0	31/12/90	TOTAL	52195	
Myanmar	0	31/12/90	OCEANIA		
Nepal	4	30/04/91	Australia	2678	01/07/91
Oman	19	31/08/90	Cook Islands	0	31/01/91
Pakistan	14	31/12/90	Federated States of Micronesia	1	02/05/90
Philippines	51	31/07/91	Fiji	3	31/01/91
Qatar	23	29/08/90	French Polynesia	25	15/05/91
Republic of Korea	7	01/02/91	Guam	8	31/01/91
Saudi Arabia	28	16/06/90	Kiribati	0	19/02/91
Singapore	23	31/07/91	Mariana Islands	0	25/02/90
Sri Lanka	8	31/12/90	New Caledonia and Dependencies	16	01/07/91
Syrian Arab Republic	9	08/10/90	New Zealand	274	01/07/91
Thailand	106	15/04/91	Palau	0	31/01/91
Turkey	47	30/04/91	Papua New Guinea	37	01/07/91
United Arab Emirates	8	21/10/90	Samoa	1	31/01/91

Country/ Area	Number of cases	Date of report	Country/ Area	Number of cases	Date of report
Solomon Islands	0	31/01/91	Vanuatu	0	04/03/91
Tonga	2	18/02/91	TOTAL	3037	
Tuvalu	0	31/01/91	WORLD TOTAL	372015	

a Does not include 30 cases in the Province of Taiwan

Table 2. AIDS and HIV in the WHO Western Pacific Region by country*.

COUNTRY/ AREA	CUMULATIVE AIDS CASES				AIDS Rate**	Cumulative HIV diagnoses	Ratio HIV/AIDS
	Male	Female	Children <15 years	TOTAL			
American Samoa	0	0	0	0	0.0	0	-
Australia	2597	81	24	2678	15.7	15064	5.6
Brunei	2	0	0	2	0.7	6	3.0
Cambodia	0	0	0	0	0	0	-
China	6	0	0	6	0.0	493	82.2
Cook Islands	0	0	0	0	0.0	0	-
Fed. S. Micronesia	1	0	0	1	1.0	5	5.0
Fiji	1	2	0	3	0.4	7	2.3
French Polynesia	20	5	1	25	13.9	96	3.8
Guam	7	1	0	8	6.7	26	3.3
Hong Kong	44	1	2	45	0.8	212	4.7
Japan	366	12	N/A	378	0.3	1663	4.4
Kiribati	0	0	0	0	0.0	0	-
Korea	5	2	0	7	0.0	131	18.7
Laos	0	0	0	0	0.0	1	-
Macao	1	0	0	1	0.2	3	3.0
Malaysia	25	3	0	28	0.2	1042	37.2
Marshall Islands	1	1	0	2	4.9	2	1.0
Nauru	0	0	0	0	0.0	0	-
New Caledonia	15	1	1	16	9.4	50	3.1
New Zealand	265	9	4	274	8.1	658	2.4
Niue	0	0	0	0	0.0	0	-
N. Mariana Islands	0	0	0	0	0.0	0	-
Palau	0	0	0	0	0.0	0	-
Papua New Guinea	23	14	1	37	0.9	85	213
Philippines	40	11	2	51	0.1	240	4.7
Samoa	1	0	0	1	0.6	1	1.0
Singapore	23	0	0	23	0.9	62	2.7
Solomon Islands	0	0	0	0	0.0	0	-
Taiwan	28	2	0	30	0.0	186	6.2
Tokelau	0	0	0	0	0.0	0	0.0
Tonga	2	0	0	2	1.7	3	1.5
Tuvalu	0	0	0	0	0.00	0	-
Vanuatu	0	0	0	0	0.00	0	-
Vietnam	0	0	0	0	0.00	0	-
Wallis anf Futuna	0	0	0	0	0.00	0	-
TOTAL	3473	145	35	3618	-	20035	5.5

* Based on reports available at 1 July 1991.

** AIDS cases per 100,000 total current population

N/A Not available

The WHO has forecast that 10 to 20 million new HIV infections may be expected in adults during the 1990s, mostly in the developing world. Thus, for the year 2000, the WHO projects a cumulative total of close to 30 million adult HIV infections, of which more than 90% will be in developing countries. During the same decade, it is projected that 10 million or more children will have been born with HIV, the majority in sub-Saharan Africa. Thus the total number of HIV infections for the year 2000 is projected to be about 40 million.

The cumulative total of adult AIDS cases projected by WHO for the year 2000 is close to 10 million, of which almost 90% will be in the developing countries. In addition to the 10 million children infected with HIV by the end of the decade, it is expected that more than 10 million children will be orphaned during the 1990s as their parents die of AIDS.

More details on AIDS and HIV in the WHO Western Pacific Region are presented in Table 2. Australia has the highest number of reported AIDS cases in the region (2,678), followed by Japan (378) and New Zealand (274). Australia also has the highest cumulative AIDS rate (15.7 per 100,000 current population) followed by French Polynesia (13.9), New Caledonia (9.4), New Zealand (8.1) and Guam (6.7).

The ratio between reports of HIV diagnoses and AIDS cases is a measure of how recent the HIV epidemic is in a country, with a high ratio indicating a large number of HIV cases which have not progressed to AIDS. The reported ratios are high for China (82.2) and Malaysia (37.2).

OVERSEAS BRIEFS

In the last two weeks, the following information regarding cholera cases and recently infected areas has been supplied by the World Health Organization.

Cholera in Africa Update

Angola has reported 2810 cases with 163 deaths for the period 8 July to 29 August.

Cameroon has issued revised figures of 3560 cases and 729 deaths from 1 May to 29 August.

There were 1109 cases and 54 deaths in **Chad** from 5 to 28 August and 686 cases and 44 deaths from 29 August to 8 September. The Bet, Biltine and Njamena Prefectures have recently been declared infected.

Ghana had 949 cases and 9 deaths from 1 to 12 July and a further 2210 cases and 68 deaths from 13 July to 29 August. Recently infected areas are the Central, Upper East and Volta regions of the country.

There were 147 cases and 8 deaths in **Niger** for the period 22 to 28 July and 332 cases and 27 deaths from 29 July to 29 August.

Revised figures have been issued for **Nigeria**. There were 48200 cases and 6354 deaths from January to 18 August. Areas newly reported infected are Akwa Ibom, Abuja, Ananmbra, Benue, Imo, Katsina, Lagos, Niger, Ogun and Plateau States.

Rwanda reported 26 cases and 2 deaths for the period 1 to 31 May.

Cholera in the Americas Update

The cholera pandemic has now spread to **Panama** which reported its first 4 cases (2 suspected) on 13 September, and 9 further cases and 1 death on 14 September. Darien Province has been declared infected.

There were 2 cases from 6 to 9 September in **Bolivia**, and 2 further cases from 10 to 17 September. La Paz Department has recently been declared infected.

In **Brazil**, there were 47 cases from 21 to 28 August, 37 cases from 29 August to 6 September and 13 cases from 7 to 12 September. Sao Paulo Department has recently been declared infected.

Colombia reported 1720 cases and 3 deaths from 11 to 23 September. Recently infected areas are Bolivar, Boyaca, Risaralda and Sucre Departments.

Ecuador reported 1272 cases and 6 deaths from 18 to 31 August. Morona Province has recently been declared infected.

There were 12 cases and 1 death in **El Salvador** from 8 to 14 September, and 51 cases and 1 death from 15 to 21 September.

Guatemala reported 476 cases and 1 death for the period 25 August to 7 September. Amatitlan, Huehuetenango and Totonicapan Departments are newly infected.

In **Mexico**, there were 110 cases and 2 deaths from 1 to 10 September. Oaxaca State has recently been declared infected.

The latest figures for **Peru** are 10097 cases and 37 deaths from 16 August to 3 September and 7664 cases and 87 deaths from 4 to 11 September.

The **United States of America** reported 1 case on 19 August.

Cholera in Asia Update

Japan reported 19 cases and 1 death for the period 23 to 30 August.

There were 48 cases from 14 to 20 August in **Iraq**.

The **Republic of Korea** reported 3 cases for the period 24 August to 2 September.

Singapore reported 1 case for the period 25 to 31 August.

Hong Kong reported 1 case on 12 September.

Information has now been received that the following areas of **India,** previously listed as infected, are not cholera-infected: Andaman and Nicobar Islands, Arunachal Pradesh State, Bihar State, Daman and Diu Territories, Himachal Pradesh State, Jammu and Kashmir State, Lakshadweep Territory, Mizoram State, Nagaland State, Pondicherry Territory, Rajasthan State and Tripura State.

Cholera in Europe Update

Romania reported 23 cases from 4 to 16 September.

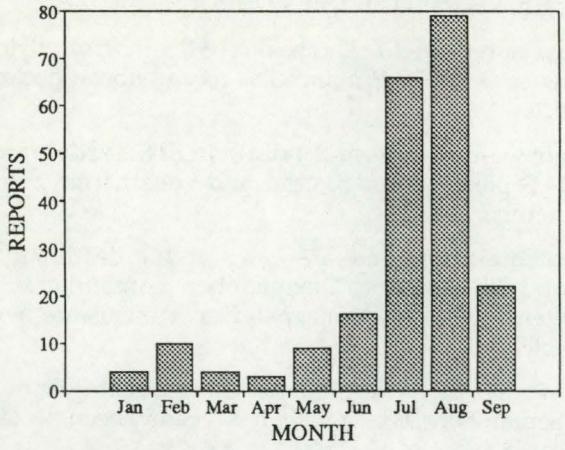
COMMUNICABLE DISEASES SURVEILLANCE

There were 51 reports of influenza received this period. Forty-six of these were **influenza B,** three were **influenza A,** one was **influenza A H1N1** and one was untyped.

Five of the influenza B isolates were identified as 'Yamagata-like' and one was 'Vic/2/87-like'. One influenza B case was a 67 year old woman who had myocarditis as the reported syndrome.

The peak in influenza B activity seems to have passed for the season, with only 22 cases reported for September so far, giving a total of 214 cases for the year (Figure 1).

Figure 1. Influenza B reports for 1991, by month.



There were two reports of invasive *Haemophilus influenzae* **type b** infection. One patient was a male in the age group 1-12 months who had meningitis. The organism, which was β-lactamase positive, was isolated from this patient's CSF. The other patient was a female who had respiratory symptoms. The organism was isolated from this patient's blood.

Two cases of *Cryptococcus* infection were reported. Both cases were in males with meningitis. One was caused by *Cryptococcus neoformans* var. *neoformans*; the species of the other was not reported. In both cases, the organism was isolated from serum and CSF.

A case of *Legionella pneumophila* **serogroup** 4 was reported. The patient was a male (age group 65 - 74 years) who had lower respiratory tract symptoms.

A total of 19 cases of **rubella** was reported. Three were males aged 19, 22 and 29 years from Tasmania. One was in a woman of child-bearing age (43 years) and one was a one month old boy.

There were 20 reports of **hepatitis A** this fortnight. Sixteen of these were in adult males.

A further 231 reports of **rotavirus** were received this fortnight . As for last fortnight, the majority of these were from Sydney laboratories (142 cases) and from Canberra (36 cases). The total for the year is now 1723.

A further 24 reports of **varicella-zoster virus** (chicken pox) have been received this period. There were 5 from laboratories in New South Wales, 7 from Victoria, 7 from Western Australia, 4 from South Australia and one from the ACT.

There were 10 reports of **Q fever** this fortnight. Three of the patients were described as meatworkers and two were described as farmers.

A further report of **echovirus type 17** were received from a New South Wales laboratory. The patient was a 2 year old boy who had encephalitis. There has now been a total of 41 reports of echovirus type 17 cases this year.

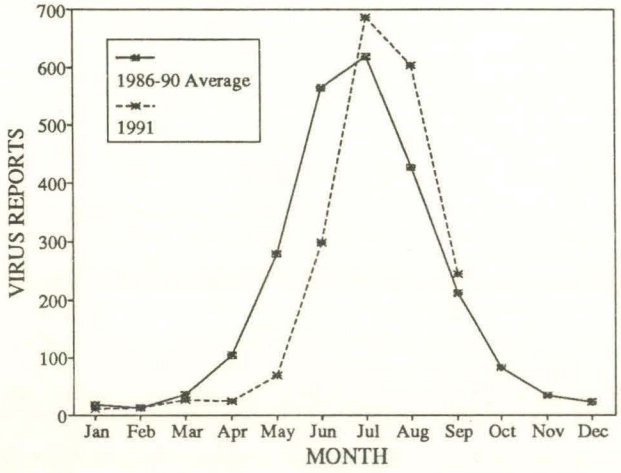
Measles was reported in a further 7 patients, bringing the total for the year to 177 reports.

There were 15 reports of **hepatitis C,** bringing the total for the year to 732. The patients included a 12 year old male with Von Willebrand's disease.

There were two reports of dengue virus from a Brisbane laboratory. One patient, a male aged 19 years who had been overseas, had **dengue type 1.** The other patient was a 28 year old female who had **dengue type 2.** She had travelled to Papua New Guinea 3 weeks prior to the diagnosis.

A further 248 cases of **respiratory syncytial virus** were reported this period, bringing the total for the year to 1974. For Australia as a whole, the peak in respiratory syncytial virus activity seems to have occurred slightly later than average this year (Figure 2). Although the figures for September are incomplete, it appears that there was a peak in New South Wales and the ACT, Victoria and Queensland in July, and later peaks in South Australia and Western Australia (Figures 3 and 4).

Figure 2. Respiratory syncytial virus reports by month, 1986-90 and 1991.



The final figures for 1990 for the National Notifiable Diseases Reports are published on page 368 if this issue. It should be noted that the diseases on this list are not the same as those on the list for 1991, and that they have been updated since they were supplied for the Annual Report of the Commonwealth Department of Health, Housing and Community Services.

One amendment has become necessary for the uncompleted National Notifiable Diseases table that was published in the last issue of *CDI* (**15**:345). HIV infection has become fully notifiable in South Australia, so the superscript 6 should be deleted from the South Australian HIV infection square.

Figure 3. Respiratory syncytial virus reports from laboratories in New South Wales and the ACT, Victoria and Queensland, by month, 1991.

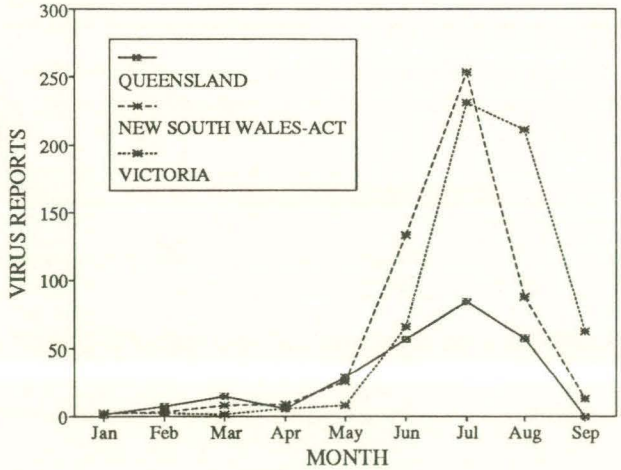
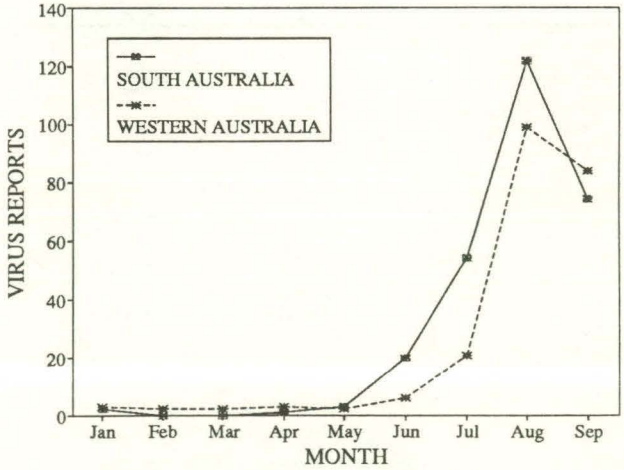
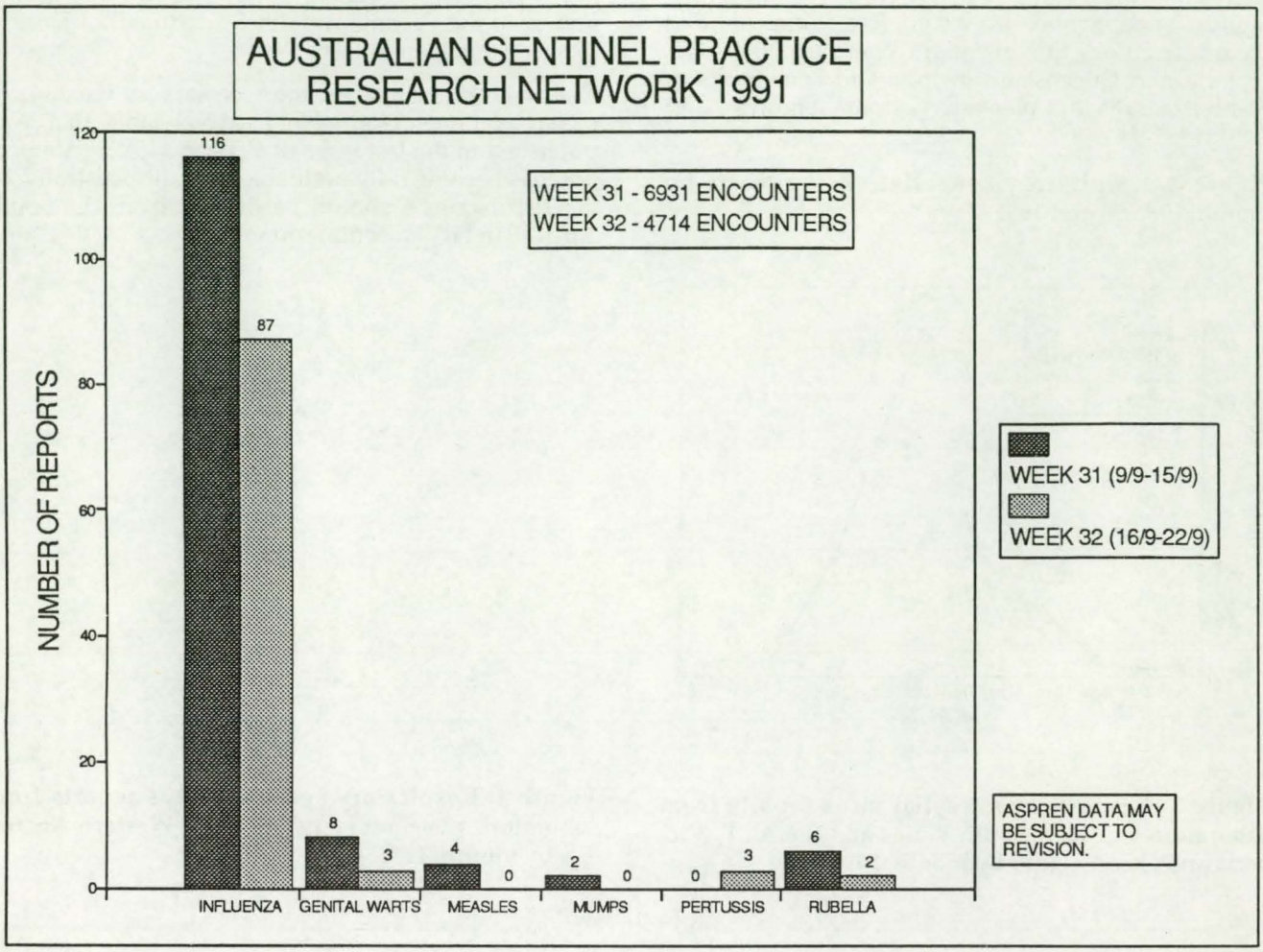


Figure 4. Respiratory syncytial virus reports from laboratories in South Australia and Western Australia, by month, 1991.




AUSTRALIAN SENTINEL PRACTICE RESEARCH NETWORK 1991
WEEK 31 - 6931 ENCOUNTERS
WEEK 32 - 4714 ENCOUNTERS
NUMBER OF REPORTS
120
100
80
60
40
20
0
116
87
8
3
4
0
2
0
0
3
6
2
INFLUENZA
GENITAL WARTS
MEASLES
MUMPS
PERTUSSIS
RUBELLA
WEEK 31 (9/9-15/9)
WEEK 32 (16/9-22/9)
ASPREN DATA MAY BE SUBJECT TO REVISION.

National Notifiable Diseases Reports 1/1/90-31/12/90

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTAL
AIDS	10	356	2	54	21	4	105	25	577
Amoebiasis	1	0	0	1	0	0	6	0	8
Ankylostomiasis	0	0	NN	0	0	2	0	0	2
Anthrax	0	0	0	0	0	0	0	0	0
Arbovirus Infection	0	289	92	1484	23	12	78	30	2008
Brucellosis	0	5	0	41	0	0	0	0	46
Campylobacter infection	105	1917	324	561	1296	264	396	820	5683
Chancroid	0	0	0	0	NN	NN	5	13	18
Cholera	0	1	0	0	0	0	0	0	1
Congenital rubella syndrome	0	0	0	0	2	NN	0	0	2
Diphtheria	0	0	4	3	0	0	0	0	7
Donovanosis	0	0	42	49	NN	0	0	0	91
Giardiasis	22	621	0	NN	0	0	174	0	817
Genital herpes	40	972	22	1436	NN	NN	NN	NN	2470
Gonococcal ophthalmia neonatorum	NN	0	0	0	0	NN	0	0	0
Gonorrhoea	18	403	558	489	173	3	402	275	2321
Hepatitis A (infectious)	7	36	145	196	99	6	41	0	530
Hepatitis B (serum)	58	426	27	1783	36	57	583	0	2970
Hepatitis - unspecified	14	54	7	569	5	11	47	NN	707
Hydatid disease	1	2	0	8	2	2	0	1	16
Lassa fever	0	0	0	0	0	0	0	0	0
Legionnaires disease	3	27	0	24	19	0	13	4	90
Leprosy	0	5	8	1	1	0	13	3	31
Leptospirosis	0	49	0	22	6	3	37	4	121
Lymphogranuloma venereum	0	0	NN	0	NN	NN	0	NN	0
Malaria	24	193	13	499	33	5	87	28	882
Marburg disease	0	0	0	0	0	0	0	0	0
Measles	30	388	3	47	43	NN	342	27	880
Meningococcal infections	3	84	26	19	21	12	83	47	295
Non-specific urethritis	63	1479	10	1	NN	NN	2477	NN	4030
Ornithosis	4	1	0	3	15	0	0	0	23
Pertussis	43	149	11	159	172	2	75	251	862
Plague	0	0	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0	0	0
Q fever	1	156	0	235	21	NN	18	0	431
Rabies	0	0	0	0	0	0	0	0	0
Salmonella infections	39	1486	404	1357	636	155	487	0	4564
Shigella infections	2	146	209	92	94	3	64	0	610
Smallpox	0	0	0	0	0	0	0	0	0
Syphilis	10	333	437	729	83	2	111	49	1754
Tetanus	0	2	NN	0	2	0	2	0	6
Trachoma	0	2	0	0	3	0	NN	0	5
Tuberculosis (all forms)	27	346	62	136	89	17	353	134	1164
Typhoid fever	1	44	0	0	3	0	22	0	70
Typhus (all forms)	0	0	0	4	0	0	0	0	4
Vibrio parahaemolyticus infection	NN	22	0	NN	1	0	0	0	23
Yellow fever	0	0	0	0	0	0	0	0	0
Yersinia infections	NN	133	6	67	197	NN	27	3	433

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 11/09/91 TO 24/09/91

CODE 018 - MICROBIOLOGICAL DIAGNOSTIC UNIT, UNIVERSITY OF MELBOURNE (VIC)
CODE 019 - FAIRFIELD HOSPITAL, MELBOURNE (VIC)
CODE 065 - STATE HEALTH LABORATORY SERVICES, PERTH (WA)
CODE 066 - PRINCESS MARGARET HOSPITAL, PERTH (WA)
CODE 110 - INSTITUTE OF MEDICAL & VETERINARY SCIENCE, ADELAIDE (SA)
CODE 111 - ROYAL CHIDLDRENS HOSPITAL, MELBOURNE (VIC)
CODE 112 - INSTITUTE OF CLINICAL PATHOLOGY & MEDICAL RESEARCH, WESTMEAD (NSW)
CODE 113 - PRINCE HENRY/PRINCE OF WALES HOSPITALS, SYDNEY (NSW)
CODE 114 - ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, CAMPERDOWN (NSW)
CODE 115 - STATE HEALTH LABORATORY, BRISBANE (QLD)
CODE 116 - WODEN VALLEY HOSPITAL, GARRAN (ACT)

		018	019	065	066	110	111	112	113	114	115	116	TOTAL
0100	ADENOVIRUS NOT TYPED	0	0	2	6	9	9	2	5	0	1	1	35
0101	ADENOVIRUS TYPE 1	0	2	0	0	0	0	1	0	0	0	0	3
0102	ADENOVIRUS TYPE 2	0	2	0	0	0	0	1	0	1	0	0	4
0103	ADENOVIRUS TYPE 3	0	5	0	0	0	0	1	0	0	0	0	6
0104	ADENOVIRUS TYPE 4	0	1	0	0	0	0	0	0	0	0	0	1
0108	ADENOVIRUS TYPE 8	0	2	0	0	0	0	0	0	0	0	0	2
0109	ADENOVIRUS TYPE 9	0	0	0	0	0	0	0	0	2	0	0	2
0126	ADENOVIRUS TYPE 26	0	1	0	0	0	0	0	0	0	0	0	1
0137	ADENOVIRUS TYPE 37	0	1	0	0	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	0	0	1	0	0	2	0	0	3
0201	INFLUENZA A VIRUS	0	0	2	0	0	0	0	0	0	0	1	3
0203	INFLUENZA B VIRUS	0	17	0	0	5	0	10	0	3	8	3	46
0206	INFLUENZA A H1N1	0	1	0	0	0	0	0	0	0	0	0	1
0299	INFLUENZA VIRUS - TYPING PENDI	0	0	0	0	0	1	0	0	0	0	0	1
0301	PARAINFLUENZA VIRUS TYPE 1	0	0	0	1	1	0	0	0	0	0	0	2
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	0	0	5	1	0	0	0	0	0	6
0303	PARAINFLUENZA VIRUS TYPE 3	0	1	0	2	5	0	4	0	3	4	2	21
0399	PARAINFLUENZA VIRUS TYPING PEN	0	1	0	0	0	2	0	0	0	0	0	3
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	33	1	49	85	42	6	1	13	0	18	248
0500	RHINOVIRUS (ALL TYPES)	0	8	2	0	6	7	2	0	1	0	0	26
0600	MYCOPLASMA PNEUMONIAE	0	2	4	0	3	1	2	0	0	1	0	13
0700	ORNITHOSIS-PSITTACOSIS	0	2	0	0	0	0	0	0	0	0	0	2
0809	COXSACKIEVIRUS A9	0	1	0	0	0	0	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	0	0	1	0	0	0	0	0	0	0	0	1
0905	COXSACKIEVIRUS B5	0	2	0	0	0	0	0	0	0	0	0	2
1011	ECHOVIRUS TYPE 11	0	0	0	0	0	0	1	0	0	0	0	1
1016	ECHOVIRUS TYPE 16	0	0	1	0	0	0	0	0	0	0	0	1
1017	ECHOVIRUS TYPE 17	0	0	0	0	0	0	0	0	1	0	0	1
1022	ECHOVIRUS TYPE 22	0	0	0	0	0	0	1	0	0	0	0	1
1101	POLIOVIRUS TYPE 1	0	1	0	0	0	0	2	0	0	0	0	3
1103	POLIOVIRUS TYPE 3	0	1	0	0	0	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	1	4	0	0	0	0	0	0	0	0	5
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	1	0	0	0	0	29	0	2	0	13	45
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	2	2	0	20	0	7	0	0	6	1	38
1303	VARICELLA-ZOSTER VIRUS	0	7	7	0	4	0	5	0	0	0	1	24
1306	HERPES SIMPLEX TYPE 1	0	33	25	0	19	3	1	14	0	0	1	96
1307	HERPES SIMPLEX TYPE 2	0	28	54	0	23	0	12	13	0	0	0	130
1399	HERPES VIRUS TYPING PENDING	0	1	0	0	0	2	0	0	0	0	0	3
1401	COXIELLA BURNETII	0	0	0	0	0	0	0	0	0	10	0	10
1502	PICORNA VIRUS - NOT TYPED = EN	0	0	6	0	1	0	0	2	0	0	0	9
1521	MEASLES VIRUS	0	3	0	0	1	1	0	0	0	1	1	7
1522	RUBELLA VIRUS	0	1	0	0	2	0	4	0	0	0	2	9
1532	HEPATITIS B ANTIGEN	0	8	18	0	2	0	16	5	0	0	1	50
1535	HEPATITIS A ANTIBODY	0	7	4	0	4	0	4	0	0	0	1	20
1536	HEPATITIS C VIRUS	0	0	41	0	14	0	0	0	2	0	5	62
1537	HEPATITIS, DELTA	0	0	2	0	0	0	0	0	0	0	0	2
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	183	0	26	0	10	0	12	0	0	52	9	292
1556	CMV - CYTOMEGALOVIRUS	0	42	5	2	5	5	6	0	4	11	0	80
1563	CORONAVIRUS	0	0	0	0	0	0	2	0	0	0	0	2
1564	ROTAVIRUS	0	2	2	2	31	16	62	51	29	0	36	231
1565	CALICI VIRUS	0	0	0	0	0	0	2	0	0	0	0	2
1566	NORWALK AGENT	0	1	0	0	0	0	2	0	0	0	0	3
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	5	0	0	2	0	0	7
1700	PARVOVIRUS	0	3	0	0	0	0	0	0	0	0	0	3
9906	BARMAH FOREST VIRUS	0	0	0	0	0	0	0	0	0	1	0	1
9981	DENGUE TYPE 1	0	0	0	0	0	0	0	0	0	1	0	1
9982	DENGUE TYPE 2	0	0	0	0	0	0	0	0	0	1	0	1
9992	ROSS RIVER VIRUS	0	0	0	0	0	0	0	0	0	9	0	9
9993	ASTROVIRUS	0	0	0	0	0	0	4	0	0	0	0	4
9994	SMALL VIRUS (LIKE) PARTICLE	0	4	0	0	0	0	0	0	5	0	0	9
9997	KUNJIN VIRUS	0	0	0	0	0	0	0	0	0	1	0	1
9998	ARBOVIRUS GROUP B.(UNSPECIFIED	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL		183	228	209	62	255	96	201	91	70	108	96	1599

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES BY STATE OF CONTRIBUTING LABORATORY

PERIOD 11/09/91 TO 24/09/91

NSW: ICPMR; PHH/POW; RACH; ST GEORGE HOSP, KOGARAH; ROYAL NEWCASTLE HOSP; TAMWRTH LAB.
VIC: FAIRFIELD; RCH; MDU, UNI MELB.
QLD: STATE LAB, BRIS; TOOWOOMBA PATH LAB; ROYAL BRIS HOSP; DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON.
WA: STATE LAB, PERTH; PMH.
SA: IMVS.
TAS: ROYAL HOBART HOSP; DIAGNOSTIC SERVICES, LAUNCESTON; LAUNCESTON GEN HOSP; DIAGNOSTIC SERVICES, HOBART; HOBART PATH; MERSEY GEN HOSP, LATROBE.
ACT: WVH.

		NSW	VIC	QLD	WA	SA	ACT	TOTAL
0100	ADENOVIRUS NOT TYPED	7	9	1	8	9	1	35
0101	ADENOVIRUS TYPE 1	1	2	0	0	0	0	3
0102	ADENOVIRUS TYPE 2	2	2	0	0	0	0	4
0103	ADENOVIRUS TYPE 3	1	5	0	0	0	0	6
0104	ADENOVIRUS TYPE 4	0	1	0	0	0	0	1
0108	ADENOVIRUS TYPE 8	0	2	0	0	0	0	2
0109	ADENOVIRUS TYPE 9	2	0	0	0	0	0	2
0126	ADENOVIRUS TYPE 26	0	1	0	0	0	0	1
0137	ADENOVIRUS TYPE 37	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	2	1	0	0	0	0	3
0201	INFLUENZA A VIRUS	0	0	0	2	0	1	3
0203	INFLUENZA B VIRUS	13	17	8	0	5	3	46
0206	INFLUENZA A H1N1	0	1	0	0	0	0	1
0299	INFLUENZA VIRUS - TYPING PENDI	0	1	0	0	0	0	1
0301	PARAINFLUENZA VIRUS TYPE 1	0	0	0	1	1	0	2
0302	PARAINFLUENZA VIRUS TYPE 2	0	1	0	0	5	0	6
0303	PARAINFLUENZA VIRUS TYPE 3	7	1	4	2	5	2	21
0399	PARAINFLUENZA VIRUS TYPING PEN	0	3	0	0	0	0	3
0400	RESPIRATORY SYNCYTIAL VIRUS (R	20	75	0	50	85	18	248
0500	RHINOVIRUS (ALL TYPES)	3	15	0	2	6	0	26
0600	MYCOPLASMA PNEUMONIAE	2	3	1	4	3	0	13
0700	ORNITHOSIS-PSITTACOSIS	0	2	0	0	0	0	2
0809	COXSACKIEVIRUS A9	0	1	0	0	0	0	1
0904	COXSACKIEVIRUS B4	0	0	0	1	0	0	1
0905	COXSACKIEVIRUS B5	0	2	0	0	0	0	2
1011	ECHOVIRUS TYPE 11	1	0	0	0	0	0	1
1016	ECHOVIRUS TYPE 16	0	0	0	1	0	0	1
1017	ECHOVIRUS TYPE 17	1	0	0	0	0	0	1
1022	ECHOVIRUS TYPE 22	1	0	0	0	0	0	1
1101	POLIOVIRUS TYPE 1	2	1	0	0	0	0	3
1103	POLIOVIRUS TYPE 3	0	1	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	1	0	4	0	0	5
1301	HERPES SIMPLEX VIRUS - NOT TYP	31	1	0	0	0	13	45
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	7	2	6	2	20	1	38
1303	VARICELLA-ZOSTER VIRUS	5	7	0	7	4	1	24
1306	HERPES SIMPLEX TYPE 1	15	36	0	25	19	1	96
1307	HERPES SIMPLEX TYPE 2	25	28	0	54	23	0	130
1399	HERPES VIRUS TYPING PENDING	0	3	0	0	0	0	3
1401	COXIELLA BURNETII	0	0	10	0	0	0	10
1502	PICORNA VIRUS - NOT TYPED = EN	2	0	0	6	1	0	9
1521	MEASLES VIRUS	0	4	1	0	1	1	7
1522	RUBELLA VIRUS	4	1	0	0	2	2	9
1532	HEPATITIS B ANTIGEN	21	8	0	18	2	1	50
1535	HEPATITIS A ANTIBODY	4	7	0	4	4	1	20
1536	HEPATITIS C VIRUS	2	0	0	41	14	5	62
1537	HEPATITIS, DELTA	0	0	0	2	0	0	2
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	12	183	52	26	10	9	292
1556	CMV - CYTOMEGALOVIRUS	10	47	11	7	5	0	80
1563	CORONAVIRUS	2	0	0	0	0	0	2
1564	ROTAVIRUS	142	18	0	4	31	36	231
1565	CALICI VIRUS	2	0	0	0	0	0	2
1566	NORWALK AGENT	2	1	0	0	0	0	3
1599	ENTEROVIRUS TYPING PENDING	2	5	0	0	0	0	7
1700	PARVOVIRUS	0	3	0	0	0	0	3
9906	BARMAH FOREST VIRUS	0	0	1	0	0	0	1
9981	DENGUE TYPE 1	0	0	1	0	0	0	1
9982	DENGUE TYPE 2	0	0	1	0	0	0	1
9992	ROSS RIVER VIRUS	0	0	9	0	0	0	9
9993	ASTROVIRUS	4	0	0	0	0	0	4
9994	SMALL VIRUS (LIKE) PARTICLE	5	4	0	0	0	0	9
9997	KUNJIN VIRUS	0	0	1	0	0	0	1
9998	ARBOVIRUS GROUP B.(UNSPECIFIED	0	0	1	0	0	0	1
TOTAL		362	507	108	271	255	96	1599

NOTE: DIRECT COMPARISION BETWEEN STATES IS NOT POSSIBLE SINCE:
- SOME STATES HAVE MORE THAN ONE CONTRIBUTING LABORATORY; AND
- INTERSTATE REFERRRALS OCCUR REGULARLY.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1

PERIOD 11/09/91 TO 24/09/91

1. CODE 00, 99 ..... - NO ILL OR DATA
2. CODE 01, 02, 11, 12 - RESPIRATORY
3. CODE E3 ..... - ENCEPHALITIS
4. CODE M3 ..... - MENINGITIS
5. CODE 04 ..... - PARALYSIS
6. CODE 05, 13 ..... - CNS OTHER UNSPEC
7. CODE 07, 49 - GASTRO INTESTINAL
8. CODE 17, 47 - HEPATIC
9. CODE 19 ... - CVS
10. CODE 89 ... - URINARY TRACCT
11. CODE 06 ... - SKIN MUCOUS

		1	2	3	4	5	6	7	8	9	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	0	13	0	0	0	0	19	0	0	0	1	33
0101	ADENOVIRUS TYPE 1	1	1	0	0	0	0	0	0	0	0	0	2
0102	ADENOVIRUS TYPE 2	1	3	0	0	0	0	0	0	0	0	0	4
0103	ADENOVIRUS TYPE 3	1	1	0	0	0	0	0	0	0	0	0	2
0109	ADENOVIRUS TYPE 9	0	0	0	0	0	0	2	0	0	0	0	2
0126	ADENOVIRUS TYPE 26	0	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	1	0	0	0	0	2	0	0	0	0	3
0201	INFLUENZA A VIRUS	0	3	0	0	0	0	0	0	0	0	0	3
0203	INFLUENZA B VIRUS	3	23	0	0	0	0	0	0	1	0	0	27
0299	INFLUENZA VIRUS - TYPING PENDI	0	1	0	0	0	0	0	0	0	0	0	1
0301	PARAINFLUENZA VIRUS TYPE 1	0	2	0	0	0	0	0	0	0	0	0	2
0302	PARAINFLUENZA VIRUS TYPE 2	0	5	0	0	0	0	0	0	0	0	0	5
0303	PARAINFLUENZA VIRUS TYPE 3	2	18	0	0	0	0	0	0	0	0	0	20
0399	PARAINFLUENZA VIRUS TYPING PEN	0	2	0	0	0	1	0	0	0	0	0	3
0400	RESPIRATORY SYNCYTIAL VIRUS (R	3	239	0	0	0	0	0	0	0	0	0	242
0500	RHINOVIRUS (ALL TYPES)	0	24	0	0	0	0	0	0	0	0	0	24
0600	MYCOPLASMA PNEUMONIAE	2	9	0	0	0	0	0	0	0	0	0	11
0700	ORNITHOSIS-PSITTACOSIS	0	2	0	0	0	0	0	0	0	0	0	2
0809	COXSACKIEVIRUS A9	0	0	0	1	0	0	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	1	0	0	0	0	0	0	0	0	0	0	1
0905	COXSACKIEVIRUS B5	1	0	0	1	0	0	0	0	0	0	0	2
1011	ECHOVIRUS TYPE 11	0	0	0	0	0	0	1	0	0	0	0	1
1017	ECHOVIRUS TYPE 17	0	0	1	0	0	0	0	0	0	0	0	1
1101	POLIOVIRUS TYPE 1	1	1	0	0	0	0	0	0	0	0	0	2
1103	POLIOVIRUS TYPE 3	0	1	0	0	0	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	0	0	0	0	0	1	3	4
1301	HERPES SIMPLEX VIRUS - NOT TYP	8	2	0	0	0	0	0	0	0	0	14	24
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	9	1	0	1	0	0	0	1	0	0	1	13
1303	VARICELLA-ZOSTER VIRUS	3	0	0	0	0	0	0	0	0	0	20	23
1306	HERPES SIMPLEX TYPE 1	0	10	0	0	0	0	0	0	0	0	54	64
1307	HERPES SIMPLEX TYPE 2	0	0	0	0	0	0	0	0	0	0	68	68
1399	HERPES VIRUS TYPING PENDING	0	2	0	0	0	0	0	0	0	0	1	3
1401	COXIELLA BURNETII	2	1	0	0	0	0	0	0	0	0	0	3
1502	PICORNA VIRUS - NOT TYPED = EN	0	2	0	1	0	1	2	0	0	0	1	7
1521	MEASLES VIRUS	1	1	0	0	0	0	0	0	0	0	3	5
1522	RUBELLA VIRUS	0	0	0	0	0	0	0	0	0	0	5	5
1532	HEPATITIS B ANTIGEN	41	0	0	0	0	0	0	7	0	0	0	48
1535	HEPATITIS A ANTIBODY	7	0	0	0	0	0	0	10	0	0	0	17
1536	HEPATITIS C VIRUS	40	0	0	0	0	0	0	7	0	0	0	47
1537	HEPATITIS, DELTA	2	0	0	0	0	0	0	0	0	0	0	2
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	25	0	0	0	0	0	0	0	0	0	0	25
1556	CMV - CYTOMEGALOVIRUS	6	15	0	0	0	1	0	3	1	1	0	27
1563	CORONAVIRUS	0	0	0	0	0	0	2	0	0	0	0	2
1564	ROTAVIRUS	0	2	0	0	0	0	228	0	0	0	0	230
1565	CALICI VIRUS	0	0	0	0	0	0	2	0	0	0	0	2
1566	NORWALK AGENT	0	0	0	0	0	0	3	0	0	0	0	3
1599	ENTEROVIRUS TYPING PENDING	0	2	0	0	0	1	1	0	0	0	1	5
1700	PARVOVIRUS	0	0	0	0	0	0	0	0	0	0	2	2
9701	HIV-1	3	0	0	0	0	0	0	0	0	0	0	3
9906	BARMAH FOREST VIRUS	1	0	0	0	0	0	0	0	0	0	0	1
9981	DENGUE TYPE 1	1	0	0	0	0	0	0	0	0	0	0	1
9982	DENGUE TYPE 2	1	0	0	0	0	0	0	0	0	0	0	1
9992	ROSS RIVER VIRUS	3	0	1	0	1	0	0	0	0	0	0	5
9993	ASTROVIRUS	0	0	0	0	0	0	4	0	0	0	0	4
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	0	9	0	0	0	0	9
9997	KUNJIN VIRUS	1	0	0	0	0	0	0	0	0	0	0	1
9998	ARBOVIRUS GROUP B.(UNSPECIFIED	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL		171	387	2	4	1	4	276	28	2	2	174	1051

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 11/09/91 TO 24/09/91

12. CODE 10 - EYE
13. CODE 59 - GENITAL
14. CODE 39 - ENDOCRINE/SALIVARY GL.
15. CODE 38 - RETICULO-ENDOTHELIAL
16. CODE 29 - MUSCLE/JOINT
17. CODE 69 - CONGENTIAL
18. CODE P8 - PUO
19. CODE G8 - FEVER/MALAISE
20. CODE 09 - OTHER
21. CODE A1 - SIDS

		12	13	14	15	16	17	18	19	20	21	TOTAL
0100	ADENOVIRUS NOT TYPED	0	0	0	0	0	0	0	1	0	1	2
0101	ADENOVIRUS TYPE 1	0	0	0	0	0	0	0	0	1	0	1
0103	ADENOVIRUS TYPE 3	4	0	0	0	0	0	0	0	0	0	4
0104	ADENOVIRUS TYPE 4	1	0	0	0	0	0	0	0	0	0	1
0108	ADENOVIRUS TYPE 8	2	0	0	0	0	0	0	0	0	0	2
0137	ADENOVIRUS TYPE 37	1	0	0	0	0	0	0	0	0	0	1
0203	INFLUENZA B VIRUS	0	0	0	1	0	0	0	13	5	0	19
0206	INFLUENZA A H1N1	0	0	0	0	0	0	0	1	0	0	1
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	0	0	0	0	1	0	0	0	1
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	0	0	1	0	0	1
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	0	1	0	0	0	3	2	0	0	6
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	1	1	0	0	2
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	0	1	0	1	0	2
1016	ECHOVIRUS TYPE 16	0	0	0	0	0	0	1	0	0	0	1
1022	ECHOVIRUS TYPE 22	0	0	0	0	0	0	0	0	0	1	1
1101	POLIOVIRUS TYPE 1	0	0	0	0	0	0	0	0	0	1	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	0	0	0	1	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	1	20	0	0	0	0	0	0	0	0	21
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	19	1	0	0	2	1	2	0	25
1303	VARICELLA-ZOSTER VIRUS	1	0	0	0	0	0	0	0	0	0	1
1306	HERPES SIMPLEX TYPE 1	6	17	0	0	0	0	1	0	8	0	32
1307	HERPES SIMPLEX TYPE 2	0	62	0	0	0	0	0	0	0	0	62
1401	COXIELLA BURNETII	0	0	0	0	0	0	0	4	3	0	7
1502	PICORNA VIRUS - NOT TYPED = EN	0	0	0	0	0	0	0	0	0	2	2
1521	MEASLES VIRUS	0	0	0	0	0	0	0	1	1	0	2
1522	RUBELLA VIRUS	0	0	2	0	0	1	0	0	1	0	4
1532	HEPATITIS B ANTIGEN	0	0	0	0	0	0	1	0	1	0	2
1535	HEPATITIS A ANTIBODY	0	0	0	0	0	0	0	0	3	0	3
1536	HEPATITIS C VIRUS	0	0	0	0	0	0	0	0	15	0	15
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	15	247	0	0	0	0	0	0	5	0	267
1556	CMV - CYTOMEGALOVIRUS	1	1	1	1	0	2	1	5	41	0	53
1564	ROTAVIRUS	0	0	0	0	0	0	1	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	1	0	1	0	2
1700	PARVOVIRUS	0	0	0	0	0	0	0	0	1	0	1
9992	ROSS RIVER VIRUS	0	0	0	0	3	0	0	1	0	0	4
TOTAL		32	347	23	3	3	3	14	32	89	5	551