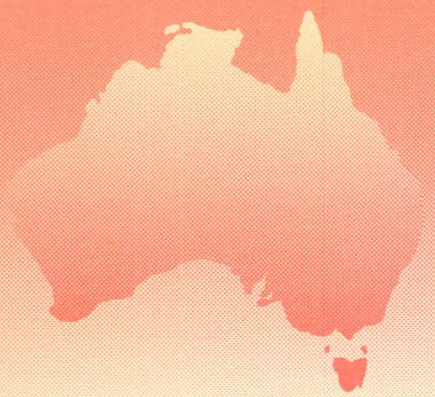

COMMUNICABLE DISEASES INTELLIGENCE

ISSN 0725-3141 VOLUME 16 NUMBER 7 6 April 1992

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

SALMONELLA SURVEILLANCE, AUSTRALIA, FIRST QUARTER 1991 REPORT

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

There were 1860 reports received by the National Salmonella Surveillance Scheme (NSSS) during this quarter (Table 1) compared to 2611 in the previous quarter.

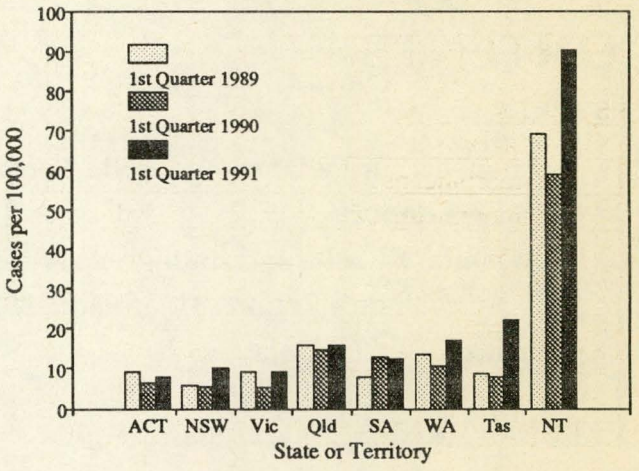
There were 1351 Australian acquired cases of salmonella notified which was only four cases less than the total for the same period last year. The total number of salmonella cases acquired in Australia for the quarter was 1351. There were 158 follow-ups, 8 cases from migrants and refugees and 75 cases acquired overseas.

There were 186 Australian acquired cases of *Shigella* as against 178 for the corresponding period last year.

By comparison to the second quarter of 1990, there was an increase in the Salmonella case rate per 100,000 population in Western Australia (44%), the Northern Territory (26%), Tasmania (9%) and Queensland (4%) (Table 2, Figure 1). A decreased rate of infection was recorded in South Australia (38%), Victoria (15%) and New South Wales (7%). There was a decrease in the case rates in all States and Territories by comparison to those of the first quarter of 1991.

The top ten Salmonella serovars accounted for 59 per cent of all Australian acquired cases reported to the NSSS. The most common serovar was S Typhimurium with 316 cases from 32 phage types of which the two most common were phage types 9 (59 cases) and 135 (54 cases). S Cerro was in the top ten for the first time

Figure 1. Case rates for Salmonella infection, 2nd quarters 1989, 1990 and 1991, by State and Territory



with 16 cases from New South Wales and six cases from Victoria, heralding a further increase in cases in the third quarter.

New and unusual salmonella serovars notified during the quarter include S Banana (M/3 ACT); S Ibadan (M/1 NSW); S Isangi (F/2 Qld); S Matopeni (F/ WA, M/44 WA ex India); S Mikawasima (M/37 Qld); S

Table 1. Total notifications received

	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL
Salmonella	17	319	269	453	119	241	40	134	1592
Shigella	2	26	27	11	20	57	1	69	213
E coli (EPEC)	-	1	1	2	-	-	-	-	4
Vibrio	-	1	1	-	-	-	-	-	2
Yersinia	-	20	7	21	-	-	-	-	48
Plesiomonas	-	-	1	-	-	-	-	-	1
Total	19	367	306	487	139	298	41	203	1860

Table 2. Case rates per 100,000 for Salmonella infection, and total cases, for second quarters 1990 and 1991, and first quarter 1991

	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL
2nd Q '91	4.0	5.3	4.4	15.3	7.4	15.4	8.7	74.3	1351
1st Q '91	8.0	10.0	9.3	16.1	12.4	17.1	22.2	90.4	1998
2nd Q '90	6.4	5.7	5.2	14.7	12.9	10.7	8.0	58.8	1355

Rissen (F/26 NSW ex Hong Kong) and S Treforest (M/1 NT ex India).

Outbreaks

There were ten outbreaks noted during the quarter (Table 3). Three were continuing from the previous quarter and at least one carried on over into July. In terms of the number of cases reported to the NSSS the two biggest outbreaks were both of S Heidelberg, one in Melbourne and the other in the township of Melton on the western outskirts of the city.

The outbreak of S Typhimurium 135, reported as unsolved in the first quarter of 1991, was traced to a batch of gelati sold in a coffee shop in inner suburban Melbourne. During investigation of the gelati S Typhimurium 145 was also isolated.

Typhoid and Paratyphoid Cases

There were 15 cases of S Typhi, 5 cases of S Paratyphi A and 7 cases of S Paratyphi B reported (Table 4).

Table 3. Outbreaks

ORGANISM	PLACE	CASES	DATE	NOTES
S Infantis	Darwin	5	April	no details
Shigella flexneri 2a	Darwin	4	May	no details
S Bovismorbificans 21	Sydney	10	Apr-June	from Q1/'91
S Bovismorbificans 23	Sydney	8	Apr-May	from Q1/'91
S Hvittingfoss	Mt Isa	3	April	hospital - babies
S Typhimurium 9	Tasmania	10	June	no details
S Heidelberg	Melton, Vic	11	Apr-May	from Q1/'91
S Heidelberg	Melbourne	17	Apr-June	from Q1/'91
S Cerro	Victoria	5	June-	also Q3/'91
S Typhi A	Vanuatu	12	June	wedding feast

Table 4. Typhoid and Paratyphoid cases

S Typhi			
VI-PHAGE TYPE	SEX/AGE	STATE	NOTES
36	M/32	NSW	contact with overseas visitors
A	F/58	NSW	no details
A	M/40	NSW	post-operative, cholecystectomy
B1	F/ns	NSW	returned from Philippines
C5	M/25	Vic	travel in India, Nepal and Thailand
D var	F/35	SA	visited China
E1	M/85	WA	no details
E1	F/63	Vic	no history of travel
M1	M/19	Vic	refugee from Pakistan
M2	M/20	Qld	recent immigrant
untypable	F/30	NSW	from Chile
untypable	M/43	NSW	cook on Indonesian ship
untypable	F/24	Vic	recent return from Vietnam
untypable	M/2	NSW	past history of typhoid
untypable	M/55	Qld	visited Papua New Guinea

Table 4. Typhoid and Paratyphoid cases, continued

S Paratyphi A			
PHAGE TYPE	SEX/AGE	STATE	NOTES
1	F/32	Vic	recent travel in India and Thailand
1	M/23	NSW	recent travel in South-east Asia
2	F/43	SA	no details
RDNC	F/38	ACT	no details
RDNC	M/40	Vic	recent visit to Indonesia

S Paratyphi B			
PHAGE TYPE	SEX/AGE	STATE	NOTES
3aI var.1	M/ns	ACT	overseas, but no further details
3aI var.1	F/8	ACT	same family as above
Taunton	F/<1	Vic	family contact
Taunton	F/ns	Vic	mother of F/<1 above
Java RDNC	F/<1	WA	weight loss
Java RDNC	F/29	WA	no details
Java untypable	M/2	WA	no details

ns = not stated

Isolations from Blood, Urine and Unusual Sites

During the quarter, there were 24 reports of bacteraemias excluding enteric fever, 18 reports of isolations from urine, and 8 reports of isolates from unusual sites (Table 5).

Shigella Infections

A total of 213 reports of *Shigella* infections were received for this quarter. Of these, six were follow-up specimens, five were from migrants or refugees and 16 were notified from travellers returning from overseas leaving a total of 186 cases reported as acquired in Australia (Table 6).

The most common *Shigella* was *Sh flexneri* 2a with 80 cases followed by *Sh sonnei* biotype a with 48 cases. An outbreak of the latter in Darwin, continuing from the previous quarter, accounted for the 23 cases from the Northern Territory. Of the total number of shigellas acquired in Australia, 84% were of *Sh flexneri* 2a, *Sh flexneri* 6 and *Sh sonnei* biotype a.

Shigella infections acquired overseas include *Sh boydii* 8 (Mexico), *Sh dysenterieae* 4 (Nepal), *Sh flexneri* 1b (South America), *Sh flexneri* 3a (Egypt), *Sh flexneri* 5a (Bali), *Sh sonnei* biotype a (Indonesia, India), *Sh sonnei* biotype g (Africa, India, Thailand, Fiji). A further case of *Sh boydii* 8 is included in Table 6 only because no details of overseas travel were provided.

Table 5. Isolations from blood, urine and unusual sites

Bacteraemias excluding enteric fever					
TYPE	SEX/AGE	STATE	TYPE	SEX/AGE	STATE
S Aberdeen	M/<1	Qld	S Heidelberg 1	M/12	NSW
S Bovismorbificans 7	F/78	NSW	S Newport	M/ns	NSW
S Cerro	F/<1	NSW	S Stanley	M/1	Qld
S Chester	M/31	Qld	S Typhimurium 125	M/56	NSW
S Dublin	F/69	NSW	S Typhimurium 179	M/75	Tas
S Dublin	M/<1	NSW	S Typhimurium 9	F/71	Qld
S Enteritidis	M/91	NSW	S Typhimurium 9	F/83	NSW
S Give	M/72	Qld	S Typhimurium RDNC	M/69	Vic
S Heidelberg	M/2	Vic	S Typhimurium untypable	M/55*	NSW
S Heidelberg	F/81	Qld	S Virchow	F/1	Qld
S Heidelberg	M/<1	Qld	S Virchow	M/20	Qld
S Heidelberg 1	M/11	Vic			

* acquired overseas (Thailand)

Table 5. Isolations from blood, urine and unusual sites, continued

Urines					
TYPE	SEX/AGE	STATE	TYPE	SEX/AGE	STATE
S Anatum	F/53	SA	S Infantis	F/54	Vic
S Anatum	F/20	NSW	S Mississippi	M/78	Tas
S Birkenhead	F/<1	Qld	S Panama	F/21	NT
S Dublin	M/68	Vic	S Potsdam	M/70	Qld
S Eastbourne	F/78	Qld	S Stanley	F/85	Qld
S Enteritidis 4	F/57	SA	S Typhimurium 9	M/ns	Vic
S Havana	F/35	Vic	S Virchow	F/78	NSW
S Heidelberg	F/23	NSW	S Virchow	F/76	Qld
S Heidelberg	F/49	Vic	*Shigella sonnei* biotype g	F/52	Vic

Unusual Sites			
TYPE	SEX/AGE	STATE	SITE
S Aberdeen	M/<1	Qld	CSF
S Bovismorbificans 23	F/64	NSW	pleural aspirate
S Give	F/20	Tas	vagina
S Heidelberg 4	M/<1	Qld	CSF and cerebral abscess
S Oranienburg	M/1	NT	foot wound
S Typhimurium 135	F/99	Vic	peritoneal dialysis fluid
S Typhimurium 179	F/82	NSW	peritoneal fluid
S Typhimurium 55	M/86	NSW	pus

ns = not specified

Table 6. Cases of *Shigella* acquired in Australia

ORGANISM	ACT	NSW	Vic	Qld	SA	WA	Tas	NT	TOTAL
Sh boydii 8	-	1	-	-	-	-	-	-	1
Sh flexneri 1a	-	1	-	-	-	1	-	1	3
Sh flexneri 1b	-	4	3	-	-	-	-	-	7
Sh flexneri 2a	-	2	6	2	12	35	-	23	80
Sh flexneri 3a	-	3	-	-	-	-	-	-	3
Sh flexneri 3c	-	1	-	-	-	-	-	-	1
Sh flexneri 4a man. neg	-	-	-	-	-	-	-	1	1
Sh flexneri 6	-	1	-	-	3	6	-	18	28
Sh flexneri var X	-	-	-	-	-	1	-	-	1
Sh flexneri var Y	-	-	-	-	-	-	-	2	2
Sh sonnei	-	1	-	-	-	6	-	-	7
Sh sonnei biotype a	2	7	4	6	4	1	1	23	48
Sh sonnei biotype g	-	2	1	-	1	-	-	-	4
Total	2	23	14	8	20	50	1	68	186

Mixed Infections

There were 27 notifications of mixed infections involving salmonellas, shigellas, campylobacters, yersinias and others (Table 7).

Table 7. Mixed infections

ORGANISMS ISOLATED	SEX/AGE	STATE
S Blockley, S Typhimurium RDNC	M/14	WA
S Eastbourne, S Wandsworth	F/<1	WA
S Hvittingfoss, S Reading	M/<1	Qld
S Potsdam, S Zanzibar var 15+	F/68	Qld
S Adelaide, *Yersinia enterocolitica* O:3 Bio 4	M/2	NSW
S Bovismorbificans untypable, *Campylobacter*	F/1	SA
S Braenderup, *C jejuni*, *Giardia* sp.	M/37*	NSW
S Bredeney, *C jejuni*	M/<1	Qld
S Cubana, *C coli*	M/1	NT
S Give, *E coli*, *Clostridium perfringens*	M/72	Qld
S Havana, varicella, *Giardia* sp.	M/<1	Vic
S Java RDNC, *Plesiomonas* sp.	F/2	Qld
S Johannesburg, *Sh sonnei* biotype a	F/40	Vic
S Newport, *C jejuni*, *Plesiomonas* sp.	M/68*	NSW
S Oranienburg, *Entamoeba coli*	M/2	NT
S Orion, *C jejuni*, *C coli*	M/<1	Qld
S Potsdam, rotavirus	M/1	Qld
S Sofia subsp. 2, *C jejuni*	M/33	Tas
S Virchow, *Cryptosporidium* sp.	M/1	Qld
S Welikade, *Trichuris trichiura*	M/2	NT
Sh flexneri 1a, *Sh flexneri* 1b	M/31	NSW
Sh flexneri 6, *C coli*, rotavirus	F/<1	NT
Sh flexneri 6, *Giardia* sp.	F/1	SA
Sh sonnei biotype a, *Campylobacter* sp., *Cryptosporidium* sp.	F/1	NT
Sh flexneri 2a, *C jejuni*	F/34	NT
Y enterocolitica O:3 Bio 4, *C jejuni*	M/17	Vic
Y enterocolitica, *Entamoeba coli*	M/45	Vic

* overseas visitors from Singapore (M/37) and Canada ex Sri Lanka (M/68)

Infections Acquired Overseas

These Salmonella infections (which exclude enteric fever) and the 21 *Shigella* infections acquired overseas include infections in migrants and refugees.

ASIA

Unspecified: S Bovismorbificans 21, S Hadar, S Senftenberg, S Virchow, *Sh sonnei* biotype g.
Indonesia: S Berta, S Hadar, S Johannesburg, S Typhimurium 12a and untypable, S Virchow, *Sh sonnei* biotype a;
Bali: S Agona (2), S Anatum, S Blockley (2), S Bovismorbificans 2, S Emek, S Kentucky, S Saintpaul, S Stanley, S Typhimurium 141 (2) and RDNC (2), S Weltevreden, *Sh flexneri* 5a (2).
Thailand: S Anatum, S Krefeld, S Typhimurium 9 and untypable, S Virchow, *Sh sonnei* biotype g.
Myanmar: S Blockley.
Malaysia: S Agona, S Haardt.
Singapore: S Braenderup, S Typhimurium 170.
Vietnam: S Anatum, S Heidelberg, S Java Dundee, S Java RDNC, S Typhimurium 12a, *Sh flexneri* 1b and 4a, *Sh sonnei* biotype a and *Sh sonnei*.
Hong Kong: S Rissen.
India: S Cerro, S Hadar, S Matopeni, S Treforest, *Sh flexneri* 4a, *Sh sonnei* biotypes a and g (2).
Nepal: S Java Dundee var 2, *Sh dysenterieae* 4.
Sri Lanka: S Newport.

AFRICA

Unspecified: *Sh sonnei* biotype g.
Egypt: *Sh flexneri* 3a.

PACIFIC

Fiji: S Birkenhead, *Sh sonnei* biotype g (2).
New Caledonia: S Mississippi.

AMERICAS

Guatemala: S Heidelberg.
South America: *Sh flexneri* 1b.
Mexico: *Sh boydii* 8.

UNSPECIFIED COUNTRIES

S Agona (2), S Berta, S Enteritidis 14, S Hadar, S Johannesburg, S Senftenberg, S Stanley.

Table 8. Top ten Salmonella serovars

SEROVAR	POSITION IN Q1/'91	NUMBER OF CASES	% OF TOTAL	ORIGIN/NUMBER OF CASES
S Typhimurium*	1	316	23.4	NSW 109, Vic 72, WA 45
S Heidelberg*	3	75	5.6	Vic 32,Qld 25, NSW 17
S Chester	6	72	5.3	Qld 36,WA 14
S Saintpaul	4	71	5.3	Qld 40, WA 11
S Bovismorbificans*	2	68	5.0	NSW 36, WA 13
S Virchow	5	52	3.8	Qld 46
S Infantis*	9	46	3.4	NSW 10, Vic 8, SA 8
S Anatum	8	34	2.5	Qld 10, SA 9
S Cerro*	-	32	2.4	NSW 16, Vic 9
S Muenchen	10	30	2.2	WA 11, NT 7, Qld 6
Total		796	58.9	

In: S Cerro
Out: S Birkenhead
* associated with outbreaks

Table 9. Top five Phage Types of S Typhimurium

SEROVAR	POSITION IN Q1/'91	NUMBER OF CASES	% OF TOTAL	ORIGIN/NUMBER OF CASES
9*	2	59	18.6	NSW 24, Vic 15, Tas 10
135*	1	54	17.1	NSW 21, Vic 13, WA 8
12a	3	18	5.7	WA 6, NSW 4, Qld 3
170	4	16	5.1	Vic 8, NSW 5
179	-	13	4.1	NSW 5,Vic 3
Total		160	50.6	

In: phage type 179
Out: phage type 101
* associated with outbreaks

Top Ten Salmonella Serovars

Of the 1351 Australian acquired cases of salmonella infection, 796 (59%) were isolates from the top ten salmonella serovars (Table 8).

S Typhimurium, with 316 cases from 32 phage types, was the most common salmonella serovar and accounted for 23% of the total Australian acquired cases. Phage types 9 and 135 were the most common phage types with 59 and 54 cases respectively, of which 40% were from New South Wales and Victoria (Table 9). The top five phage types accounted for 51 % of Australian acquired cases of S Typhimurium.

CONGENITAL RUBELLA AND IMMIGRANT WOMEN

(Margaret A Burgess, Physician in Preventive Medicine (Communicable Disease), The Children's Hospital, Camperdown, New South Wales)

Last year, the National Congenital Rubella Surveillance Program (NCRSP) in the United Kingdom reported 60 cases of congenital rubella notified in the 3 years from January 1987 to December 1989. Ten (16%) of the mothers of these children were Asian; this proportion was high in relation to the number of Asian births in Britain (7.3%)[1]. Previously Miller *et al* had reported that the incidence of congenital rubella was 2.3 times higher in Asian births than non-Asian births in England and Wales[2].

Recently, Beardow has shown that 17% of Asian women under the age of 25 who had not been at high school in the UK were not immune to rubella compared with 5% of Asian women of the same age who had been at school at the time rubella vaccination was offered[3]. Less than 2% of non Asian women of the same age in UK are non immune. Since then, promotion of selective immunisation of Asian women in Britain has been partly successful in increasing immunity[4].

Rubella epidemiology varies greatly between and within countries and continents[5]. In 1986, Black studied 15 populations selected from South America, India, Africa, the Middle East, Taiwan and USA and showed that the lowest levels of seropositivity (immunity) in women aged 15-30 years were in Brazil (82%) and Taipei (87%)[6]. Other studies in Nigeria, Ghana and Togo showed that 25-50% of women were non immune[7] and that in India 80% were immune in the north compared with only 57% in the east[8]. A study in Panama in 1989 showed that there was a risk of rubella when women from rural areas where the chance of infection was low, moved to cities where the chances of contact with the infection was much higher; 71% of women in one rural community were susceptible compared with only 27% in a town[9].

The incidence of congenital rubella in developing countries is difficult to estimate. Children with severe defects probably die without the diagnosis being made, and those who are recognised are unlikely to be reported[5]. Serological studies show that seroconversions occur in pregnancy and therefore affected children are undoubtedly born[5]. Passive notification may identify some cases but the true incidence requires specific surveys. This was well demonstrated in Japan where it was thought that the low incidence of congenital rubella reflected the presence of a less virulent strain of rubella virus. However a systematic search for children in special schools identified 365 cases compared with the 88 previously reported[10]. The total would have been higher if all schools had been surveyed as many children with congenital rubella deafness were integrated in normal schools.

There is no information available on the ethnicity of children with congenital rubella in Australia. Some information exists in the files of the National Acoustics Laboratories. Some serological data is available for Asian refugees from Dr Jocelyn Forsyth, Department of Microbiology, University of Melbourne[11]. Dr Forsyth's group looked at the status of Asian refugees to Australia in the early 1980s and found that up to 25% were non immune in the age group 15-24. Less than 5% of Australian women of the same age would be non immune.

Attention has been drawn recently to the problem of rubella immunity among immigrants to Australia, particularly those from countries where rubella vaccination is not routinely practised[12]. These include Malaysia, Vietnam, Laos, Cambodia and many more. It has been emphasised that those caring for women from these countries should pay particular attention to their rubella vaccination status. In Australia, approximately 20,000 of our 250,000 annual births occur to women of Asian derivation. Asian women are less likely to know about the significance of rubella exposure or illness during pregnancy or even to notice a rubella rash or report it to their doctor[2]. They are, therefore, especially benefited by vaccination.

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CDI Editorial Comment

CDI Laboratory reporting schemes have collected some data on rubella seroconversions in pregnancy and on congenitally affected foetuses and infants. When these data were last reported[1], there had been a total of over 1100 cases in women of child bearing age, 105 seroconversions in pregnancy, and 63 serological diagnosis and 29 cases of viral isolation in infants and products of conception reported since 1982.

Since then (September 1991), there have been reports of rubella virus isolation from amniotic fluid of a 26 year old pregnant woman, and from nasopharyngeal and urine specimens from a congenitally infected infant aged less than one month. In addition, there has been rubella IgM detected in a one month old infant, and in a 2 day old infant and his 31 year old mother, and in 42 other women of child bearing age.

Unfortunately, these data not include information on country of origin. They are also incomplete, as they are from a sampling scheme to which the provision of

information is voluntary. However, these reports, and the 154 notifications of rubella in women aged 15 to 44 years received through the National Notifiable Diseases Scheme for 1991, are sufficient to indicate that the level of rubella immunity in women of child bearing age in Australia is not high enough to prevent the occurrence of congenital rubella syndrome. Indeed, in 1989-90, it was estimated that 93% of women aged 15 to 24 years were immune, but that only 89% of women aged 25 to 34 years and only 70% of women aged 35 to 44 were immune[2].

Continued testing of rubella immunity in women prior to pregnancy, as recommended by the National Health and Medical Research Council[3], is warranted as long as reports of seroconversions in women of child bearing age are received.

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AUSTRALIAN HIV SURVEILLANCE REPORT, VOLUME 8 NUMBER 1, 31 JANUARY 1992

The National Centre in HIV Epidemiology and Clinical Research reports that as of 31 December 1991, a total 15,679 diagnoses of HIV infection and 3,096 cases of AIDS had been reported in Australia. For the 1 December to 31 December 1991, 10 new cases of AIDS and 59 new diagnoses of HIV infection were reported.

The following tables provide more detailed information on a State/Territory basis (Tables 1 and 2).

The cumulative figures are subject to retrospective revision, so there may be 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 during the period 1 December to 31 December 1991 and cumulative to 31 December 1991 by sex and State/Territory in which diagnosis was made*

State/ Territory	December 1991		Cumulative to 31 December 1991					
			Cases			Deaths		
	Total Cases[1]	Total Deaths[1]	Male[2]	Female	Total	Male	Female	Total
ACT	1	0	37	2	39	25	1	26
NSW	8	11	1823	56	1879	1164	36	1200
NT	0	0	10	0	10	3	0	3
Qld	0	0	234	9	243	152	7	159
SA[3]	1	1	118	6	124	60	1	61
Tas	0	0	15	1	16	10	1	11
Vic	0	0	630	13	643	402	6	408
WA	0	0	134	8	142	81	3	84
Total	10	12	3001	95	3096	1897	55	1952

1. All males unless otherwise specified.
2. Three persons whose sex was reported as transsexual are grouped with the males.
3. The new case for South Australia was a female.

Table 2. Number of new diagnoses of HIV infection in the period 1 December to 30 December 1991 and cumulative diagnoses since the introduction of HIV antibody testing to 31 December 1991, by sex[1] and State/Territory

State/ Territory	December 1991	Cumulative to 31 December 1991			
	Total[2]	Male	Female	Sex not reported	Total
ACT	0	123	5	0	128
NSW[3]	20	8054	412	2008	10474
NT	0	58	6	0	64
Qld[4]	13	1165	52	0	1217
SA[5]	1	356	27	0	383
Tas	1	53	3	0	56
Vic[6]	19	2529	96	70	2695
WA[7]	5	631	31	0	662
Total	59	12969	632	2078	15679

1. Fourteen persons (4 NSW, 3 Qld, 6 Vic, 1 WA) whose sex was reported as transsexual are grouped with the males.
2. All males, unless otherwise specified.
3. Total for NSW for December includes 4 persons whose sex was not reported, and 1 female.
4. The new cases for Queensland include 2 females.
5. Cumulative total for SA does not include new diagnoses detected during the period 1 January to 9 September 1991.
6. Total for Victoria for December includes 2 persons whose sex was not reported.
7. One new case for Western Australia was a female.

HEPATITIS C - *CDI* DATA

(Jenny Hargreaves, Communicable Diseases Section, Department of Health, Housing and Community Services)

The hepatitis C genome was identified in 1989 and an ELISA to assay antibody to the virus was an early consequence. Australian blood banks began screening donations for anti-hepatitis C antibody in February 1990, and diagnostic laboratories began testing at about the same time.

Laboratories in the *CDI* laboratory reporting schemes began to report diagnoses in early 1990, and now, although not all laboratories which make diagnoses report them, reports are received at a rate of over 100 each month. In 1990, there were 115 diagnoses reported; in 1991, there were 1208, and there have been 381 reported with 1992 specimen collection dates.

Hepatitis C was included in the National Notifiable Diseases Scheme from 1991. It is only officially notifiable, separately from other forms of viral hepatitis, in New South Wales, Queensland, Victoria and Tasmania, but cases are also notified in the ACT and the Northern Territory. There was a total of 4045 notifications in 1991 (Table 1), and there have been 1224 so far this year.

Because of the nature of the available hepatitis C tests, a positive test result does not necessarily indicate that a patient has a current acute or chronic infection; it may just indicate that the patient has had exposure to the virus at some time in the past[1]. Thus these notifications and laboratory reports cannot provide any information on the incidence of the disease. The increasing number of laboratory reports only indicates that infection or past infection with hepatitis C virus has been diagnosed more frequently recently.

Table 1. Hepatitis C notifications, 1991, by State and Territory

State/Territory	Notifications
ACT	59 (NN)
NSW	588
NT	8 (NN)
Qld	1690
SA	NN
Tas	32
Vic	1668
WA	NN
Total	4045

NN Not Notifiable

The clinical information provided with the laboratory reports also indicates that many of the diagnoses are for patients with other than new infections. Only 209 (13%) of the patients have had hepatitic symptoms reported, indicating a possible acute infection (or chronic hepatitis). In contrast, for 34 (2%) of the reports, the patient was described as healthy or asymptomatic, and for 1357 reports (84%), 'unknown' or 'other' was the reported symptom. This is a much higher proportion of patients with no relevant clinical information than for any of the other viruses reported in the laboratory reporting schemes.

In both the laboratory reports (Figure 1) and the notifications (Figure 2), more of the diagnoses have been in

Figure 1. Hepatitis C laboratory reports, 1990-92, by age group and sex

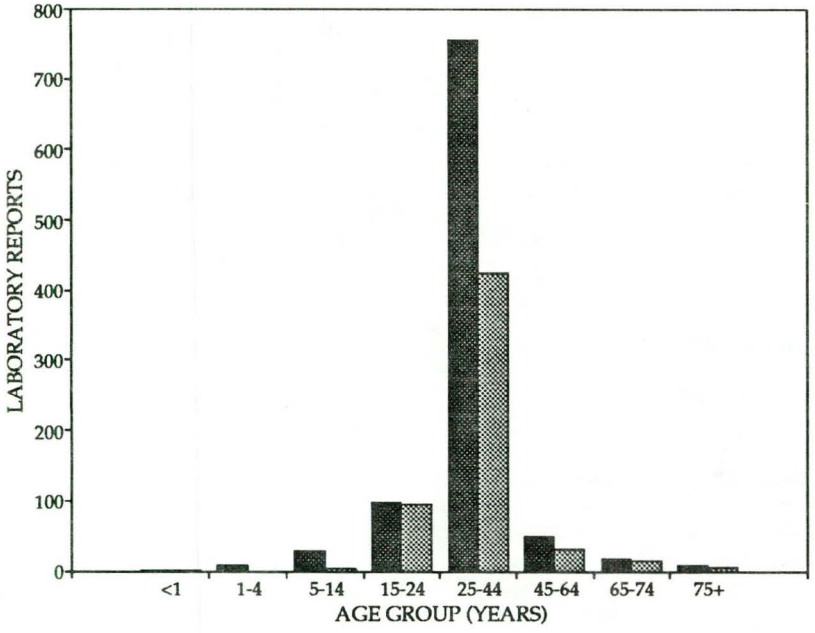
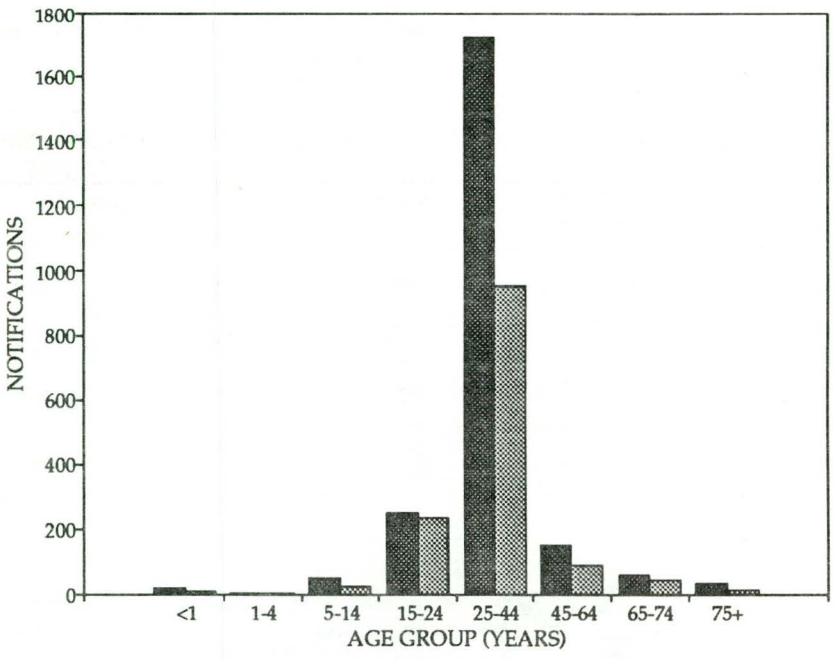


Figure 2. Hepatitis C notifications, 1990-92, by age group and sex



males than in females. The male to female ratio in the laboratory reports was 1.71:1.00 and in the notifications, it was 1.69:1.00. This sex difference is very similar to the 1.82:1.00 male to female ratio for hepatitis B diagnoses reported in the *CDI* laboratory reporting schemes (Figure 3).

The age distribution of the hepatitis C diagnoses is remarkable, as 76.7% of the laboratory reports have been in the age group 25 to 44 years, as have 73.3% of the notifications. In comparison, the age distribution of hepatitis B laboratory reports is more even, with only 51.3% of cases in the age group 25 to 44 years. This difference, especially in the 15 to 24 year age group, could possibly reflect the smaller role that sexual and household transmission is thought to play in the transmission of hepatitis C[1,2,3].

The age-sex distributions of the laboratory reports and the notifications are very similar, and much more similar than similar distributions for other diseases, for example measles[4]. This is a reflection of the fact that few, if any, hepatitis C cases would be notified without first being laboratory confirmed, whereas diseases such as measles are much more likely to be notified without being laboratory confirmed, and are confirmed in patients of different ages to different extents[4].

Some of the laboratory reports have been accompanied by comments on risk factors for the patients (Table 2). The largest group amongst these was persons with a history of injecting drug use. The second largest group was those with a history of receipt of blood or blood products (blood tranfusion recipients and patients with haemophilia, thalassaemia or Von Willebrand's disease). These reports are therefore consistent with studies on the modes of transmission of this virus[1,3]. They are also consistent with other Australian studies which have shown high rates of hepatitis C antibody in injecting drug users, haemophiliacs, and patients with thalassaemia[5,6,7,8].

The two reports of husbands of hepatitis C positive patients reflect the possible minor role of sexual transmission of this virus. There were two reports indicating perinatal transmission, the other route that is possibly involved in the transmission of hepatitis C[3,9].

Figure 3. Hepatitis B laboratory reports, 1990-92, by age group and sex

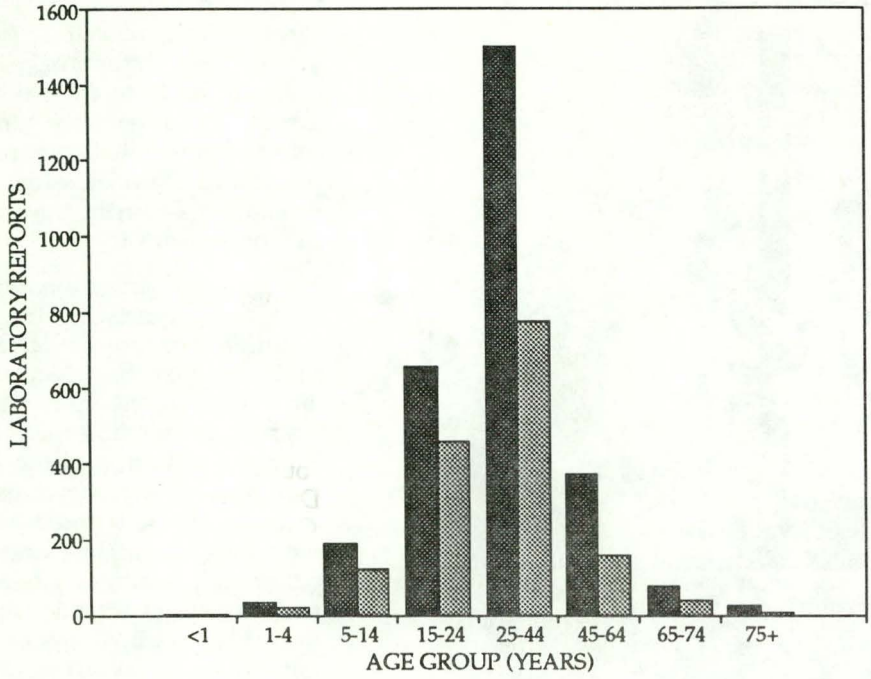


Table 2. Selected[1] hepatitis C laboratory reports, 1990-1992, by sex and comment

Comment	Males	Females	Total
Injecting drug use history	34	19	53
Alcohol abuse history	4	2	6
Haemophilia	23	1	24
Thalassaemia	3	3	6
Von Willebrand's Disease	1	2	3
Blood transfusion history	1	1	2
Needlestick injury	1	0	1
Spouse of HCV positive	2	0	2
Mother of positive neonate	-	1	1
Cord blood	1	0	1
Pregnant	-	2	2
Total	70	31	101

1. Only reports with comments relating to risk factors and/or mode of transmission have been included.

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OVERSEAS BRIEFS

In the last two weeks, the following information has been supplied by the World Health Organization, the Institut Pasteur, Paris and the Department of Health and Human Services of the United States.

Cholera Update

In **Bolivia,** cases have been reported for March and the following Departments have recently been declared infected: Chuquisaca, Cochabamba, Oruro, Potosi, Santa Cruz and Tarija.

Brazil has also reported cases for March, and the following States have been added to the list of infected areas: Maranhao State, Paraiba State, Pernambuco State and Rio Grande de Norte State.

Formosa Province of **Argentina**, Peten Department of **Guatemala**, and Guanajuato and Tanaulipas States of **Mexico** have also recently been declared infected.

Cases have been reported for March from **Chile**, **Panama** and **El Salvador**.

In **Mozambique**, districts within the Provinces of Maputo, Cabo Delgado, Gaza and Zambezia have recently been declared infected and districts within Nampula, Niassa and Tete Provinces have been removed from the list of infected areas.

Angola has reported cases for January and February.

Influenza in the Northern Hemisphere Update

In both Europe and the United States, influenza activity is now very low, and all indicators are near or under the epidemic thresholds.

The recommendations for the influenza virus vaccine for the 1992-93 northern winter have been issued by the World Health Organization. The three components remain unchanged from the last northern season:

A/Beijing/353/89 (H3N2)-like strain

A/Singapore/6/86 (H1N1)-like strain, and

B/Yamagata/16/88 or B/Panama/45/90-like strain.

The A(H3N2)-like strain and the B strain are also those recommended for the Australian 1992 winter vaccine. The H1N1 strain recommended for this year's Australian vaccine is A/Victoria/36/88 which is a slightly updated version of A/Singapore/6/88.

Meningococcal Disease in Canada

Increased numbers of group C meningococcal infections were reported in December and January from several areas of eastern Canada, and at the time, the United States' Public Health Service recommended that vaccination should be considered for some persons travelling to the affected areas. The Public Health Service has now advised that there is no longer evidence of increased risk of meningococcal disease in those areas, and has withdrawn the recommendation for consideration of vaccination.

Typhoid in Papua New Guinea

An outbreak of typhoid has been reported from the highlands of Papua New Guinea. The number of cases in the Western Highlands Province has increased from 24 in 1986 to 864 in 1990 and 957 in the last 12 months. Further information is being sought on this outbreak.

In 1990, the Enga, Chimbu and East Highlands areas reported large numbers of cases and there was a total of 4076 reported for the whole country.

COMMUNICABLE DISEASES SURVEILLANCE

Laboratory Reporting Schemes

There were 1145 reports received in the *CDI* laboratory reporting scheme this fortnight (Tables 5, 6 and 7).

- There were 10 reports of **influenza A** received. Two were further identified as H3N2, A/Beijing/353/89-like (as is the H3N2 component of the current Australian influenza vaccine). Meningitis was the reported symptom for two female patients from whom the virus was isolated: a 17 year old who also had myalgia, lower back pain and fever, and a 34 year old.
- There were 29 reports of **parainfluenza type 1**, with 17 from Victoria. This virus has been active in alternate years recently: there were 44 reports in 1989, 414 reports in 1990, 47 in 1991 and 68 so far this year.
- There were 5 reports of **Barmah Forest virus** reported from a Western Australian laboratory. These were all associated with the recent outbreak of Barmah Forest virus infection in the Northern Territory (reported in the last issue of *CDI*).
- A further 6 cases of **echovirus type 9** infection have been reported. Meningitis was reported for four of the patients: females aged 49 years and 25 years, and males aged 8 years and 3 months. The virus was isolated from CSF for 5 of the patients and from postmortem respiratory tract tissue for another 3 month old male. Two cases were from the Sydney area, there was one each from the Central coast and

Dubbo areas of New South Wales, and there were 2 from the ACT.

- Two of the cases of **untyped enterovirus** infection reported were cases of Hand, Foot and Mouth Disease. One was a sporadic case from Sydney. The patient was a 1 year old male who had CNS symptoms as well as the skin manifestations. The other patient was a 1 year old female who was part of an outbreak at a child-minding centre in Sydney. This disease usually has its greatest incidence in summer and early Autumn, and mainly affects children under the age of 10 years.
- There were 8 reports of **measles** this fortnight. The six that were reported by the IMVS in Adelaide were from a recent outbreak in Tennant Creeek in the Northern Territory. The patients were 3 teenage males, and females aged 1 year, 11 years and 15 years.
- There were 7 laboratory reports of **rubella** this fortnight. One was in a female of reproductive age (24 years).
- A total of 27 reports of **varicella-zoster virus** infection were received this fortnight. Meningitis was the reported syndrome for a 71 year old male patient. A 19 year old pregnant female was another of the patients reported.
- **Cytomegalovirus** infection was reported for 62 patients. Included were two congenitally infected infants and a 1 year old female with severe hearing loss.
- Untyped **herpes simplex** infections were reported for 29 patients this fortnight. Included were two cases of meningitis and two cases of encephalitis, one in a 7 month old female. Also included was a 1 year old female who had the virus isolated from infected burns.
- **Hepatitis C** was reported for 86 patients. Included were a female in the 25 to 44 year age group with a history of injecting drug use, and a 7 year old female with β-Thalassaemia major.
- There were two reports of serologically diagnosed ***Brucella*** infection reported from a Queensland laboratory. Both patients were males. One was a farm worker and the other was described as a pig killer.
- One case of ***Haemophilus influenzae*** **type B** infection was reported. The patient was a 2 year old female with epiglottitis. The organism was isolated from blood and an epiglottal swab.
- A case of ***Listeria monocytogenes*** infection was reported in a 44 year old male. The organism was isolated from blood and the reported syndrome was encephalitis.

Typhoid Case in Cairns

A case of typhoid fever, imported from the Highlands of Papua New Guinea, has recently been reported from Cairns. The isolate was reportedly sensitive to amoxycillin and cotrimoxazole. Unfortunately, the chloramphenicol sensitivity was not determined.

(Jeffrey Hanna, Tropical Centre for Disease Control, Cairns)

Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network collected data from 7359 patient encounters in Week 12 and 5643 patient encounters in Week 13 (Table 1). As expected, the rate of reporting of influenza continues to be at a higher level than over the summer months, in agreement with recent laboratory reports.

Table 1. Australian Sentinel Practice Research Network, Weeks 12 and 13, 1992

Condition	Week 12, to 22 March 1992		Week 13 to 29 March,1992	
	Reports	Rate per 1000 encounters	Reports	Rate per 1000 encounters
Influenza	29	3.94	27	4.78
Measles	0	0	0	0
Mumps	0	0	1	0.18
Rubella	6	0.82	1	0.18
Pertussis	0	0	0	0
Genital herpes	5	0.68	1	0.18
Gastroenteritis	0	0	0	0

Australian Encephalitis: Sentinel Chicken Surveillance Programme Serological Results for February 1992

Sentinel chicken serology results from chickens tested in Western Australia, Victoria and New South Wales during February 1992 showed no evidence of flavivirus activity.

Information on the location of sentinel chicken flocks was presented in *CDI* **16**:55-57.

(J Aldred, Victorian Institute of Animal Science; L Hueston, Virology Department, Westmead Hospital, NSW; AK Broom and JS Mackenzie, Department of Microbiology, The University of Western Australia)

Ross River Virus Infections, 1991-92 Season

There were 69 laboratory reports of **Ross River virus** infection this fortnight. Only 14 were from Queensland, but there have been delays in receiving reports from laboratories from this State.

Locations recorded this fortnight were Rockhampton (12), Byfield and Yeppoon in Queensland; Bridgetown, Broome, Denmark, Kununnurra, Maida Vale, Mandurah (4), Metropolitan (8), Morawa, Pemberton, River Vale, Woodanilling and Wyndham in Western Australia; Nhulunbuy (11), Tennant Creek, Darwin and unspecified (4) in the Northern Territory; Markwell, South Lismore and Warnes Bay in New South Wales; Murray Bridge and unspecified in South Australia.

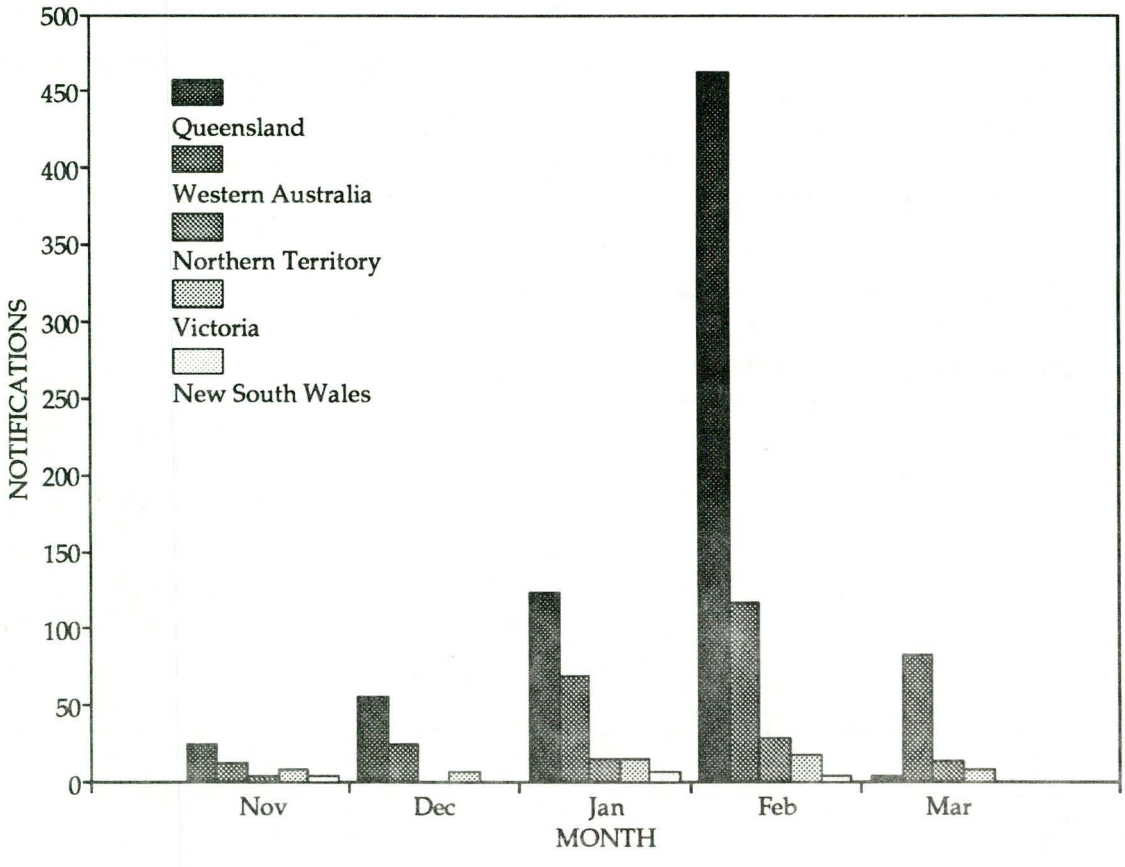
Because of the delays, there has been a total of only 205 laboratory reports of Ross River virus received since November last year, with very few from Queensland. In contrast, there has been a total of 1113 cases notified in the National Notifiable Diseases scheme in the same period. There have been 673 cases notified from Queensland, 305 from Western Australia, 64 from the Northern Territory, 56 from Victoria and 15 from New South Wales (Figure 1). There have been no notifications from the ACT, South Australia or Tasmania.

The largest number of notifications for Queensland, Western Australia, Victoria and the Northen Territory had February as the month of onset of symptoms, however, no notifications reported later than 7 March are available for Queensland, and none reported later than 29 February are available for New South Wales.

Almost all of the cases reported this year have been in adults, with only 24 cases in children aged less than 15 years. Overall, more females have been affected than males; the male:female ratio was 1.00:1.28. This sex difference has been particularly marked in Queensland (M:F 1.00:1.50) and Victoria (M:F 1.00:1.34).

The large number of cases in Queensland appear to have come from all areas of the State.

Figure 1. Ross River virus infection notifications by month of onset, November 1991 to March 1992, by State or Territory

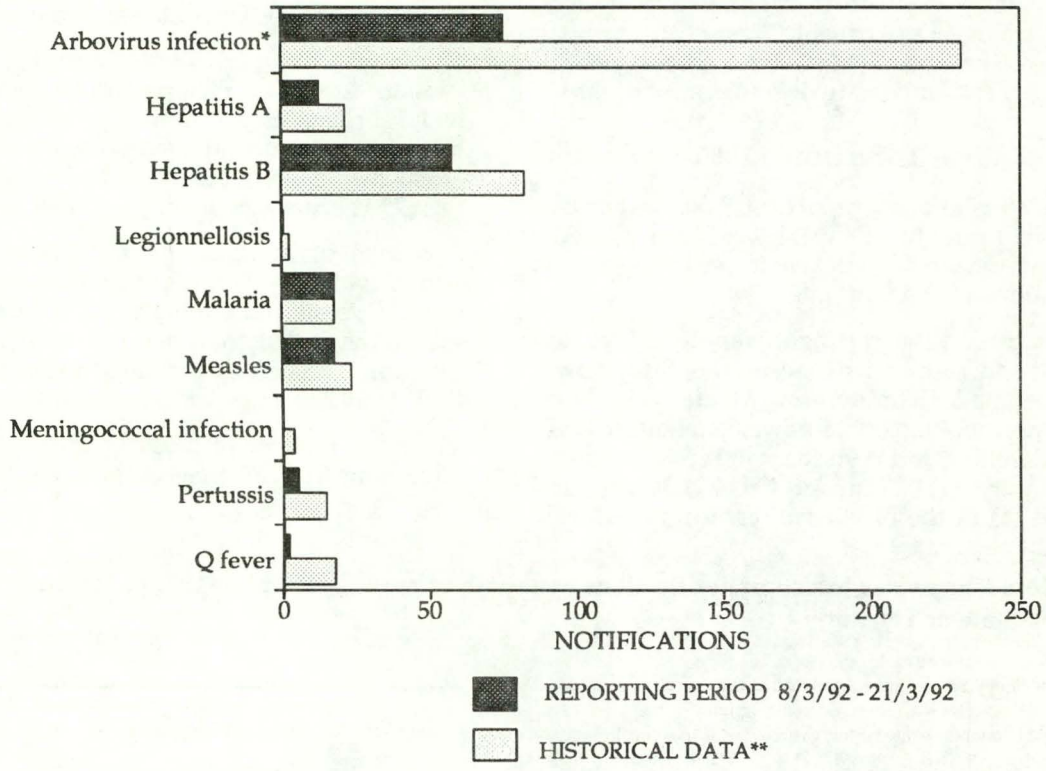


National Notifiable Diseases Reports 8 to 21 March 1992

A total of 663 notifications were reported this fortnight (Figure 2, Tables 2, 3 and 4). Notifications from New South Wales, Queensland and Tasmania were not available at the time of publication.

- There were 18 **measles** notifications, but as with measles laboratory reports, these are being received at a lower rate than at this time last year.
- There has been a total of 53 **rubella** notifications reported this year. Five of these have been in females of child-bearing age.

Figure 2. Selected National Notifiable Diseases Reports, 8 to 21 March 1992 and historical data**



*Includes Ross River virus and Dengue

**The Historical data are the averages of the number of notifications in 6 previous 4-week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 2. Diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation for the reporting period 8 to 21 March 1992

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA			
									This Period 1992	This Period 1991	Year to Date 1992[1]	Year to Date 1991
Diphtheria	0		0		0		0	0	0	1	2	3
Measles	2		4		1		11	0	18	61	116	230
Mumps	NN		NN	NN	NN	NN	0	NN	0	NN	0	NN
Pertussis	NN		0		2		2	1	5	26	57	112
Poliomyelitis	0		0		0		0	0	0	0	0	0
Rubella[2]	0		0		3		5	0	8	14	53	74
Tetanus	0		0		0		0	0	0	1	3	3

1. 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.

2. NT, Tas, WA: CRS only; ACT, NSW, Qld: rubella only; SA, Vic: rubella and CRS

NN Not Notifiable.

Table 3. Other Notifiable Diseases[1], for the reporting period 8 to 21 March 1992

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA			
									This Period 1992	This Period 1991	Year to Date 1992[2]	Year to Date 1991
Arbovirus infection (NEC)[3]	0		1		1		3	0	5	33	10	140
Ross River virus infection	NN	-	13		0	NN	9	49	71	375	426	1280
Dengue	NN	-	0		-	NN	0	NN	0	1	2	32
Campylobacteriosis[4]	NN	-	8		43		44	10	105	301	979	1397
Chlamydial infection (NEC)[5]	0	NN	6		0		43	0	49	135	402	787
Donovanosis	0	NN	0		NN	NN	0	1	1	1	7	9
Gonococcal infection[6]	0		9		0		2	87	98	126	314	478
Haemophilus influenzae type b[7]	NN		NN		0		6	NN	6	23	52	55
Hepatitis A	0		2		1		9	1	13	38	162	203
Hepatitis B	2		2		1		50	3	58	158	520	701
Hepatitis C	1		NN		NN		33	NN	34	129	298	411
Hepatitis (NEC)	NN		0		0		0	NN	0	8	1	20
HIV infection[8]	1		0		0		0	2	3	0	23	7
Legionellosis	NN		0		0		1	0	1	3	12	20
Leptospirosis	0		1		0		3	0	4	7	33	31
Listeriosis	NN		NN		NN		0	0	0	0	4	7
Malaria	0		0		1		17	0	18	36	90	170
Meningococcal infection	0		0		0		0	0	0	9	22	46
Ornithosis	0	NN	0		0		0	0	0	4	27	10
Q fever	0		0		0		2	0	2	64	11	182
Salmonellosis (NEC)	0		18		24		37	24	103	318	570	1366
Shigellosis[4]	0	-	5		2		1	1	9	52	107	225
Syphilis	0		7		0		0	32	39	87	193	461
Tuberculosis	0		1		2		0	0	3	13	51	83
Typhoid[9]	0		0		0		0	0	0	6	6	17
Yersiniosis[4]	NN	-	1		9		0	0	10	22	49	109

1. For rarely notified diseases, see Table 4.
2. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of notifications and the increment in the cumulative figure from the previous period.
3. NSW and SA: includes Ross River virus and dengue.
4. NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.
5. ACT: trachoma only.
6. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.
7. SA: only as 'bacterial meningitis'; meningococcal infection is separately notified; Tas: only as 'non-meningococcal meningitis'; Vic: eppiglottitis and meningitis only.
8. More complete data on new diagnoses of HIV infections are presented in the monthly *Australian HIV Surveillance Report*. ACT: AIDS only.
9. NSW and Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

- Elsewhere Classified.

Table 4. Rarely Notified Diseases[1]

DISEASES	Total this period	Reporting States or Territories	Total for 1992 to Date
Botulism			0
Brucellosis			2
Cholera			0
Chancroid	1	WA	1
Hydatid infection			0
Leprosy			3
Lymphogranuloma venereum			1
Plague			0
Rabies			0
Yellow fever			0
Other viral haemorrhagic fevers			0

1. Fewer than 50 cases of each of these diseases were notified each year during the period 1986 to 1991.

Table 5. Laboratory reports by State or Territory of reporting laboratory for the reporting period 11 to 24 March 1992, historical data[1], and total reports for the year

	STATE OR TERRITORY OF REPORTING LABORATORY						Total this fortnight	Historical data[1]	Total reported this year
	ACT	NSW	Qld	SA	Vic	WA			
MEASLES, MUMPS, RUBELLA									
Measles virus				6	1	1	8	5.8	60
Mumps virus		2					2	2.0	19
Rubella virus			1	1	1	4	7	22.0	63
HEPATITIS VIRUSES									
Hepatitis A virus		4	2	2	2	2	12	14.7	106
Hepatitis B virus	6	25	12	2	10		55	104.2	590
Hepatitis C virus	12	1	3	44		26	86	6.3	544
Hepatitis D virus			2				2	.3	6
ARBOVIRUSES									
Ross River virus		3	14	3	1	48	69	82.7	204
Barmah Forest virus						5	5	2.3	11
Dengue not typed						1	1	5.2	5
ADENOVIRUSES									
Adenovirus type 1					1		1	2.5	34
Adenovirus type 2		1			2		3	1.3	31
Adenovirus type 3		1					1	5.3	13
Adenovirus type 8					4		4	.2	10
Adenovirus type 9		1					1	.2	4
Adenovirus not typed/pending		3	1	8	14	11	37	34.0	264
HERPES VIRUSES									
Herpes simplex virus type 1	3	4	12	22	51	38	130	113.0	1,050
Herpes simplex virus type 2	2	10	21	23	28	81	165	148.0	1,222
Herpes simplex not typed/pending	3	19		1	3	3	29	48.0	226
Cytomegalovirus		6	11	3	33	9	62	72.0	555
Varicella-zoster virus		2	2	2	8	13	27	16.5	195
Epstein-Barr virus		18	30	2	6	7	63	59.0	461
OTHER DNA VIRUSES									
Molluscum contagiosum			1				1	.3	5
Contagious pustular dermatitis (Orf)		1					1	.2	2
Parvovirus					3		3	.0	39
PICORNA VIRUS FAMILY									
Echovirus type 8	1						1	.0	1
Echovirus type 9		6					6	.0	12
Echovirus type 17		1					1	.3	16
Echovirus type 25		1					1	.2	1
Enterovirus type 71 (BCR)		1					1	.8	4
Enterovirus not typed/pending		11	16		16	12	55	34.8	254
Poliovirus type 1 (uncharacterised)		1					1	.8	12
Poliovirus type 3 (uncharacterised)		1					1	1.0	6
Rhinovirus (all types)		3	2		27	2	34	18.0	191
ORTHO/PARAMYXOVIRUSES									
Influenza A virus H3N2					2		2	.0	2
Influenza A virus				6	2		8	4.0	33
Parainfluenza virus type 1		3			17	9	29	9.5	72
Parainfluenza virus type 2					4		4	3.3	23
Parainfluenza virus type 3		1	4	1	13	2	21	17.5	130

Table 5. Laboratory reports by State or Territory of reporting laboratory for the reporting period 11 to 24 March 1992, historical data[1], and total reports for the year, continued

	STATE OR TERRITORY OF REPORTING LABORATORY						Total this fortnight	Historical data[1]	Total reported this year
	ACT	NSW	Qld	SA	Vic	WA			
Parainfluenza virus typing pending					9		9	1.8	23
Respiratory syncytial virus		11	3	1	9	3	27	13.2	153
OTHER RNA VIRUSES									
Rotavirus			20		12	1	33	19.5	299
Astrovirus						1	1	.2	3
Small virus (like) particle					1		1	1.2	11
OTHER									
Chlamydia trachomatis not typed	5	12	55	13	2	24	111	109.5	812
Chlamydia psittaci					4		4	6.2	42
Mycoplasma pneumoniae		3		1	3	9	16	14.3	180
Coxiella burnetti (Q fever)		2				1	3	16.8	58
TOTAL	32	158	212	141	289	313	1,145	1,019.0	8,057

1. 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 6. Laboratory reports by clinical information for the reporting period 11 to 24 March 1992

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other	Total
MEASLES, MUMPS, RUBELLA													
Measles virus								8					8
Mumps virus												2	2
Rubella virus								3		1		3	7
HEPATITIS VIRUSES													
Hepatitis A virus							7					5	12
Hepatitis B virus							18					37	55
Hepatitis C virus							9					77	86
Hepatitis D virus							2						2
ARBOVIRUSES													
Ross River virus							1	15		37	1	15	69
Barmah Forest virus								5					5
Dengue not typed												1	1
ADENOVIRUSES													
Adenovirus type 1					1								1
Adenovirus type 2					2	1							3
Adenovirus type 3						1							1
Adenovirus type 8									4				4
Adenovirus type 9						1							1
Adenovirus not typed/pending	1				11	16		2	3			4	37
HERPES VIRUSES													
Herpes simplex virus type 1					6			97	1		20	6	130
Herpes simplex virus type 2					1			96			68		165
Herpes simplex not typed/pending	2	2						19			1	5	29
Cytomegalovirus			1	2	13	2	1	4	4	1	1	33	62

Table 6. Laboratory reports by clinical information for the reporting period 11 to 24 March 1992, continued

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other	Total
Varicella-zoster virus		1			1			24				1	27
Epstein-Barr virus					11	1	3	1			1	46	63
OTHER DNA VIRUSES													
Molluscum contagiosum											1		1
Contagious pustular dermatitis (Orf)								1					1
Parvovirus								2		1			3
PICORNA VIRUS FAMILY													
Echovirus type 8		1											1
Echovirus type 9		4	1									1	6
Echovirus type 17						1							1
Echovirus type 25												1	1
Enterovirus type 71 (BCR)					1								1
Enterovirus not typed/pending	1	10			10	10		3			1	20	55
Poliovirus type 1 (uncharacterised)						1							1
Poliovirus type 3 (uncharacterised)						1							1
Rhinovirus (all types)		1			31			1				1	34
ORTHO/PARAMYXOVIRUSES													
Influenza A virus H3N2					2								2
Influenza A virus		2			6								8
Parainfluenza virus type 1			1		24							4	29
Parainfluenza virus type 2					4								4
Parainfluenza virus type 3			1		19	1							21
Parainfluenza virus typing pending					8			1					9
Respiratory syncytial virus					26	1							27
OTHER RNA VIRUSES													
Rotavirus	1					21		1				10	33
Astrovirus												1	1
Small virus (like) particle						1							1
OTHER													
Chlamydia trachomatis not typed					1			1	4		93	12	111
Chlamydia psittaci					4								4
Mycoplasma pneumoniae		1			12							3	16
Coxiella burnetti (Q fever)												3	3
TOTAL	5	22	4	2	194	59	41	284	16	40	187	291	1,145

Table 7. Laboratory reports by contributing laboratories for the reporting period 11 to 24 March 1992

STATE	LABORATORY	REPORTS
Australian Capital Territory	Woden Valley Hospital, Garran	32
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	130
	Royal Alexandra Hospital for Children, Camperdown	28
Queensland	Dr TB Lynch, Pathologist, Rockhampton	83
	State Health Laboratory, Brisbane	118
	Toowoomba Pathology Laboratory	11
South Australia	Institute of Medical & Veterinary Science, Adelaide	141
Victoria	Fairfield Hospital, Melbourne	150
	Royal Childrens Hospital, Melbourne	139
Western Australia	Princess Margaret Hospital, Perth	26
	State Health Laboratory Services, Perth	287
TOTAL		1145