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Communicable Diseases Intelligence

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Contents:

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OVERSEAS BRIEFS

1. CHOLERA IN SOUTH AMERICA

Latest available information on the cholera outbreak in South America is as follows:

Peru: 146877 cases with 54,395 hospitalisations and 1045 fatalities (to 15 April). Newly affected areas include the departments of Huanuco, Pasco and Ucayali.

Ecuador: 1775 cases (466 confirmed) and 47 fatalities (to 8 April). Newly affected areas include the provinces of Chimborazo and Imbabura.

Colombia: 112 cases and no fatalities; mainly from Narino department (to 16 April).

Chile: 12 confirmed cases in Santiago province (to 23 April). The first outbreak of cholera in the country since 1888.

Brazil: 5 probable cases from Tabatinga in Amazonas state (to 17 April).

Venezuela: No officially confirmed cases (to 26 April).

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- Contributions are solicited, and do not preclude later publication elsewhere.

- Figures given may be subject to revision.

INFLUENZA UPDATE

(from the WHO National Influenza Centre - CSL)

Influenza virus activity increased during February with North America and several European countries reporting regional outbreaks and occasionally epidemic levels. Type B influenza has continued to predominate, however, the incidence of Type A H1N1 influenza has become more frequent. With the exception of Japan and Korea it appears that there has been little influenza Type A H3N2 spread to date.

In most cases virus activity appears to have peaked in February with a decline during early March.

Europe

Many western European countries have reported sporadic or limited outbreaks of influenza this season. Most activity appears to have occurred during February and has been predominantly due to influenza Type B. Spain reported regional outbreaks of influenza B during February and the Netherlands reported moderate activity involving both Type B and Type A H1N1 viruses.

By far the most significant activity to date is reported from Scandinavia and Eastern Europe. Following the early outbreak of type A H1N1 influenza in Sweden during December and January, moderate activity has been reported in Denmark and Norway during February involving both Type B and Type A H1N1 viruses.

In eastern Europe, Czechoslovakia reported an 'explosive increase' in influenza-like illness peaking at the end of February and, in the USSR, epidemic levels were reported by 25 of 60 cities during the second half of February. In both cases Type B virus was again predominant but with significant levels of Type A H1N1. Both Yugoslavia and Hungary reported Type A H1N1 activity predominantly in school children.

North America

Influenza activity continued to increase throughout North America during January and February. Canada reported widespread outbreaks of influenza Type B in Manitoba and Ontario. In the USA, regional or widespread activity was reported for 24 States. Influenza Type B was again predominant but Type A H1N1 has also occurred in significant levels.

Asia

The reported outbreak of Type A H3N2 influenza in Korea during December and January has been followed by some Type B and Type A H1N1 virus activity.

Middle East

No significant reported activity.

Central and South America

No significant reported activity.

Oceania

The Tamavua hospital, Suva, reports small numbers of Type B influenza cases diagnosed serologically during February. There have been no other significant reports of influenza activity in the region and no virus isolates have yet been received at the Australian National Influenza Reference Centre.

Influenza Vaccine Composition - WHO Recommendations

The WHO recently announced its recommendation for formulation of influenza vaccines for the coming Northern Winter. Recommended composition is:

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

- an A/Singapore/6/86 (H1N1) - like strain

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

This composition is essentially the same as that currently available for use in Australia (the Australian vaccine contains A/Victoria/36/88 - a slightly updated version of A/Singapore/6/86). B/Panama/45/90 is a slight variant of B/Yamagata/16/88.

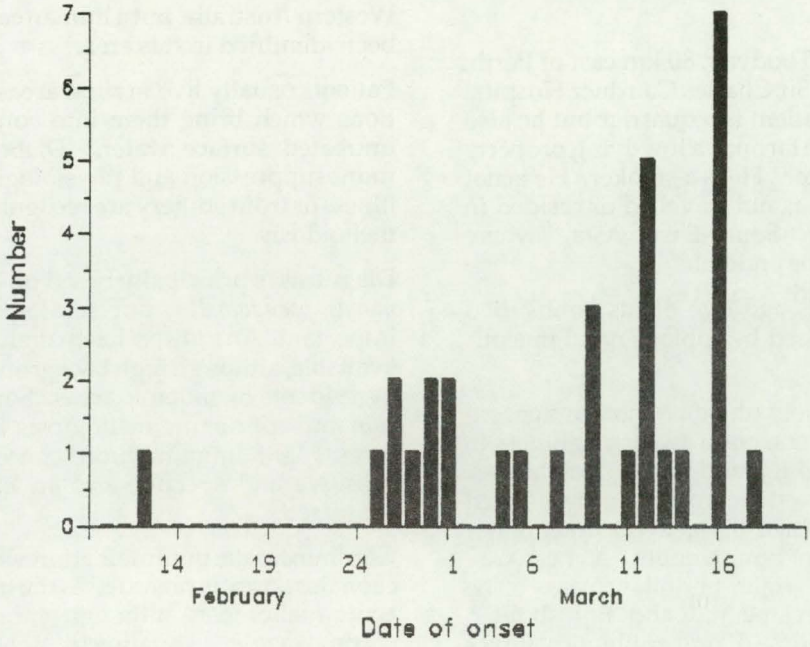
MEASLES OUTBREAK IN COLLIE, WESTERN AUSTRALIA

(Dr J S Gill, A/Director, Disease Control; Dr L Marshall, Public Health Registrar, Health Department of WA; Mrs D Keating, Director of Community Nursing, South West Region)

An outbreak of measles occurred in the south-west mining town of Collie between 12 February and 16 March 1991. The index case was an unvaccinated 7 year old child at one of the three primary schools in the town. A total of 31 cases were detected and 5 were serologically confirmed; 17 were from the same primary school and other cases were mainly in family contacts of cases in the school. One unimmunised 14 year old contact is an apprentice living in Australind, approximately 60 kms away. This case was responsible for 7 cases in a family of 10 unimmunised children. No tertiary spread occurred from this family.

The distribution of cases by dates of onset is shown in Figure 1. Cases peaked on 16 March 1991. The epidemic was first detected as a result of a positive laboratory test noted on 6 March 1991, and the second case reported on 13 March initiated immediate investigations and control measures by local health staff.

Figure 1. Measles in Collie, 1991, by date of onset



The age and sex distribution of cases is shown in Table 1. The majority of cases occurred in the 5-9 year age group, and the age range was 13 months to 14 years of age. There was only one case above 12 years of age. The female:male ratio was 1:2.4.

Table 1. Measles in Collie, 1991,age and sex distribtion of cases

AGE	SEX		TOTAL
	FEMALE	MALE	
0 -	-	-	-
1 - 4	1	9	10
5 - 9	5	11	16
10 - 14	3	2	5
TOTAL	9	22	31

Eight cases (29.0%) developed complications: 4 (12.9%) otitis media, 2 (6.5%) chest infections and 2 (6.5%) sinusitis. Three cases were hospitalised, 2 for vomiting and dehydration and 1 for hyperpyrexia. There was no significant difference in complications arising in immunised or non-immunised children.

Fifteen of the cases had a history of immunisation and 15 had never been vaccinated. There was one case where the vaccination status could not be ascertained. Of the cases within the school involved in the outbreak, 8 cases had been vaccinated and 9 had never been vaccinated. The vaccination coverage in the school of 212 children was 80.2%.The attack rate (8/170 = 4.7%) in the vaccinated group was within the accepted limits of vaccine failure rate.

Two other primary schools in the town remain free of measles. The estimated measles immunisation rates in those schools are 99.7% and 89.9%.

Action Taken:

All children identified as unvaccinated in the school were vaccinated. An immunisation clinic was also set up on three separate days in the town to vaccinate children 1 year to 12 years of age, who had not previously been vaccinated or who had no documented evidence of immunisation. A total of 148 vaccinations were done. A policy of vaccination of all possible contacts, irrespective of previous vaccination status, was not instituted.

It is interesting to note that the 14 year old who was the index case in Australind did not cause any transmission except within her own family, as her siblings were excluded from school as soon as the headmaster became aware of the case.

This is the first measles outbreak identified in Western Australia this year.

A CASE OF MELIOIDOSIS IN THE SOUTH-WEST OF WESTERN AUSTRALIA

(Dr Rob Condon, Epidemiology Registrar, WA Health Department; with acknowledgement to Dr Clay Golledge, clinical microbiologist, and Dr Tony Tribe, consultant physician, at the Queen Elizabeth II Medical Centre for their kind assistance in preparing the Case Report).

Case Report

A 47 year old man from Toodyay, 80 km east of Perth, has been admitted to the Sir Charles Gairdner Hospital with melioidosis. The patient is a quarrier but he also farms sheep on his 12 acre farmlet, a low-lying property with areas of surface water. He is a smoker. He is not a Vietnam veteran and has not travelled or resided in northern Australia or South-East Asia, where melioidosis is known to be endemic.

Approximately 9 months ago two of his lambs died after an illness characterised by copious nasal mucous discharge.

The patient became vaguely unwell 6 months ago, experiencing low grade fevers, night sweats, tightness in the chest, a productive cough and 4-5 Kg weight loss. Two months ago he developed a right-sided supraclavicular mass, which his general practitioner thought was a collection of lymph nodes. A chest Xray at this stage showed a right perihilar mass. The supraclavicular mass became red and hot about 6 weeks ago and, after a course of oral antibiotics, it was surgically drained. An *Enterobacter* species was cultured from the pus.

The patient was referred for further assessment. A CT scan of the thorax showed enlarged mediastinal lymph nodes and a mass in the periphery of the right lung. He underwent bronchoscopy and a fine needle aspirate and biopsy of the lung mass and *Pseudomonas pseudomallei* was cultured from the aspirate in enrichment broth. The indirect haemagglutination (IHA) test for melioidosis was negative.

The patient is being treated with a 2 week course of intravenous ceftazidime and oral cotrimoxazole. His symptoms have improved within 5 days of commencing therapy. He will subsequently remain on oral doxycycline for at least 6 months.

Comment

Most cases of melioidosis occur between 20°N and 20°S latitude, mainly in South-East Asia. In Australia, human cases are seen in northern Queensland (from the Torres Strait to the Burnett River basin) and in the Top End of the Northern Territory, where an outbreak is currently being experienced. A small enzootic focus has been described in sheep in the south-west of Western Australia, but a human case has not previously been identified in this area.

Patients usually live in rural areas, engaged in occupations which bring them into contact with the soil or untreated surface water. Diabetes, alcoholism, immunosuppression and physiological stress from other illness or from surgery are recognised associations with melioidosis.

Diagnosis is principally based on the culture of *Pseudomonas pseudomallei*, but serology is becoming more important. An indirect haemagglutination test (IHA) is available, although high background titres may be seen in residents of endemic areas. Some patients with fulminant septicaemic melioidosis have spuriously low titres. IgM immunofluorescence (IFA-IgM) is more sensitive and specific, and an EIA for IgM is being evaluated.

Cotrimoxazole, in combination with a third generation cephalosporin, is regarded as the treatment of choice for acute melioidosis, although various combinations of cotrimoxazole, kanamycin, chloramphenicol and tetracycline have been used. Either doxycycline or cotrimoxazole may be prescribed for the chronic or subacute pulmonary forms of the disease.

This case reminds doctors working in the areas where melioidosis is enzootic or where *Pseudomonas pseudomallei* is present in the soil that they may see human melioidosis.

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SALMONELLA SURVEILLANCE, AUSTRALIA, THIRD QUARTER REPORT 1990

(National Salmonella Surveillance Scheme, editor J Powling, Microbiological Diagnostic Unit, University of Melbourne)

Human Isolates - Third Quarter 1990

There were 792 Australian acquired cases of salmonellosis notified during this quarter which was only four cases less than the total for the same period last year (796). There were 97 follow-ups, 13 cases from migrants/refugees and 96 cases acquired overseas. There were 156 Australian acquired cases of shigellosis as against 170 for the corresponding period, a decrease of 8 percent.

By comparison to the same period last year, the salmonellosis case rate per 100,000 decreased in all states/territories except Tasmania, New South Wales and South Australia (Table 2). The case rate in all states/territories was lower than that for the previous quarter (Q2/'90) and this has been the pattern for the third quarter of each year since the inception of the NSSS. In this report the top ten salmonella serovars are listed as well as the top five phage types of **S Typhimurium**. **S Typhimurium** isolates, from 32 phage types, accounted for 31 percent of the total Australian acquired cases of salmonellosis. **S Typhimurium 135** was the most common phage type with 40 cases, 70 percent of which were from New South Wales and Victoria. The second most common serovar was **S Cerro** with 36 cases notified, 61 percent of which were from Western Australia and New South Wales.

The number of cases of **S Typhimurium 9** has decreased considerably and it was the second most common phage type of **S Typhimurium** after being the most common salmonella for the past 18 months. **S Enteritidis** entered the top ten salmonella list for the first time with 18 cases, 8 of which were from Queensland.

Only one outbreak was recorded during this quarter and that was of **S Muenchen** from Alice Springs (in the first week of August). Five cases were notified, all of which were young children.

There were 83 serovars of *Salmonella* isolated from the 792 cases (99 serovars, Q2/'90). Of these, 78 were from subgenus I (11 phage types of **S Bovismorbificans** and 32 of **S Typhimurium**), 3 from subgenus II and 2 from subgenus III (**S Arizonae**).

New and unusual *Salmonella* serovars notified during the quarter included **S Bardo** (M/<1, SA); **S Brisbane** (F/<1, NT); **S Brunei** (M/27, NSW); **S Butantan** (F/21, Vic); **S Duesseldorf** (F/20, Tas); **S Handen** (M/41, Qld); **S London var 15+** (F/<1*, Vic; F/21*, NSW); **S Virginia** (M/29, Qld) and *Sh sonnei* biotype d (F/5,SA).

S Brunei was isolated from scallops imported from south-east Asia in July, **S Handen** was isolated from a python at the Melbourne Zoo in May and **S Virginia** was isolated from Queensland macadamia nuts (reported by SRL in October 1990).

Uncommon phage types of **S Typhimurium** were **140,17** and **36** (all from NSW).

Table 1: Total Number of Notifications Received

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	TOTAL
Salmonella	10	286	171	231	92	119	17	72	998
Shigella	-	30	25	21	9	60	1	45	191
Vibrio	-	-	-	1	-	-	-	-	1
Total	10	316	196	253	101	179	18	117	1190

Table 2: Case Rates per 100,000 for Salmonella Infections

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	TOTAL
3rd Quarter '90	2.8	4.1	2.9	7.7	5.3	6.7	3.7	41.3	792
2nd Quarter '90	6.4	5.7	5.2	14.8	12.0	10.7	8.0	58.8	1356
3rd Quarter '89	5.6	3.2	4.0	7.5	4.2	7.5	2.1	51.7	796

NSSS UPDATE

An outbreak of **S Havana** was reported from the Repatriation Hospital at Concord, New South Wales in late November. Notifications have been received to date for 21 cases, three of whom were hospital staff. Also in mid-December, 15 cases of **S Bovismorbificans 21** were notified, mostly from Sydney suburbs. In early to mid-November there was an incident of food poisoning in Rockhampton involving **S Heidelberg** phage type 2. The same serotype was isolated from the stuffing of a chicken implicated in the index case.

A food poisoning incident involving **S hadar** was reported from Tasmania in early December. A 60 year old man presented with **S hadar** which was subsequently isolated from a sample of the barbecued chicken implicated in the incident. Several notifications of **S Hadar** from chickens have been received from Tasmania in recent months.

MDU NEWS -Update of *Salmonella* nomenclature (Diane Lightfoot)

Since January 1990 *Salmonella* have been reported from the MDU using a different format, that is **Salmonella Typhimurium**, compared to that perviously used, *Salmonella typhimurium*. Reasons for this change are outlined in Le Minor and Popoff (Int J Syst Bacteriol 1987;37:465-68). DNA relatedness studies demonstrated that all *Salmonella* serovars formed a single DNA hybridisation group with seven subgroups or subspecies (I, II, IIa, IIIb, IV, V, VI). The level of DNA relatedness among the DNA subspecies was generally consistent with that of one single *Salmonella* species. The names of the subspecies are as follows:

Subspecies I:	Salmonella enterica	subsp	enterica
Subspecies II:	Salmonella enterica	subsp	salamae
Subspecies IIIa:	Salmonella enterica	subsp	arizonae
Subspecies IIIb:	Salmonella enterica	subsp	diarizonae
Subspecies IV:	Salmonella enterica	subsp	houtenae
Subspecies V:	Salmonella enterica	subsp	bongori
Subspecies VI:	Salmonella enterica	subsp	indica

Thus, for example, the previosly designated *Salmonella typhimurium* becomes *Salmonella* subspecies enterica ser Typhimurium or *Salmonella* enterica subsp I ser Typhimurium. Obviously this is far too cumbersome for day-to-day use so it is acceptable to use **Salmonella Typhimurium.**

Know your serovars

Introducing *S* 1,3,23:b:1,5 commonly known as **Salmonella Mississippi.**

The editorial team of the NSSS Newsletter has decided that in addition to the presentation of summaries of the periodic fluctuations in *Salmonella* numbers in the community it would be of general interest to regularly introduce one of the more interesting serovars which commonly occur in the Australian population.

S Mississippi has been chosen as the first subject of this occasional series because, of all the many serovars encountered in Australia (more than 280 at the last count in the NSSS data base alone), it is the only one which has not crossed its state boundary. Admittedly its boundary, being Bass Strait, is more difficult than most to cross but it is perhaps surprising that this *Salmonella* has not yet made the distance while there is no barrier to either the passage of food items or people to the mainland states.

Of the 351 notifications of **S Mississippi** from humans in the eleven years since the inception of the NSSS only 18 have originated from states other than Tasmania. Enquiries were made of all of these patients and, of those who replied, all had visited Tasmania (with the exception of four persons returning from overseas).

Andrew Ball (the "Mississippi Kid") of the Public Health Laboratory in Hobart reported an incident in which two children living at opposite ends of the state were infected with **S Mississippi**. Investigations revealed that the families of both children grew their own vegetables and were in the habit of making liquid manure. When sampled, this "brew" was found to contain **S Mississippi** in both cases.

In 1989, following a request from the NSSS, Christopher Ashurst-Smith of Bartimaeus Pathology Services, Penrith, investigated further a case of **S Mississippi** in a two year old girl who became ill six days after returning to Sydney from a visit to relatives in Deloraine, Tasmania. The significant event during the girl's holiday was a visit to a nearby wildlife park where she consumed a sausage sandwich. It was the very same wildlife park at which **S Mississippi** had been isolated from several Bennett's wallabies and wombats earlier in the year.

Another case, also in 1989, involved an adult male who believed he and his family had become ill after eating a suspect seafood meal on a flight from Vanuatu to Sydney on an internal airline. No checks were made of the source of the seafood, unfortunately. **S Mississippi** is widespread in the environment throughout Tasmania and has been isolated from drinking waters, streams, estuaries, sewage and abattoir effluent and the environment of a dairy factory. It has been found in locally grown oysters and is carried by all types of animals including reptiles and birds. Native animals, such as the Eastern Quoll, Native or Tiger Cat, Tasmanian Devil, various Possums, wombats, wallabies and bandicoots have been extensively sampled as have feral and farm animals, several different snakes and also domestic pets.

During the outbreaks of **S Mississippi** in 1987 and 1988, the pet dogs of two affected families were sampled and found to be carrying **S Mississippi.**

The human cases of **S Mississippi** from Tasmania for the period 1980 to 1990 are presented in Table 3, together with the total salmonellosis cases. Collection of non-human data commenced in 1984.

Investigations continue and, to this end, animals killed in road accidents are given the opportunity to contribute to science if spotted by the ever-diligent Andrew Ball as he travels the state, placing Moore's swabs in waterways and sewage outfalls.

Any information about the origins of **S Mississippi** and its occurrence overseas would be welcomed by the NSSS and published in a future Newsletter.

Table 3. S Mississippi in Tasmania 1980-1990(30 Sept)

	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90
Human											
- S Mississippi	10	11	28	37	19	23	11	29	65	50	42
- Total Salmonella	71	52	61	156	94	77	56	133	115	163	102
Non-Human											
- S Mississippi					28	54	21	15	4	26	18

Typhoid and Paratyphtyphoid Cases:

S Typhi: 14 cases

Vi-phage type	Sex/ Age	State	Notes
51	F/19	Vic	family member is carrier
51	M/<1	Vic	infant son of F/19 above
A	M/38	Vic	returned from India, Thailand
B1	F/24	NSW	returned from Bali
D2	F/7	NT	recently returned from Java
E1	M/42	Vic	acquired in equatorial Africa
E1	F/59	NSW	no details
E1	M/40	NSW	no details
E2	M/18	NSW	no details
E2	M/16	WA	visitor from Indonesia
degraded	F/21	NSW	Israeli tourist ex India and Thailand
degraded	M/9	NSW	from Lebanon
untypable	M/42	NSW	no details
untypable	M/60	Vic	returned from Indonesia

S Paratyphi A: 6 cases

Phage Type	Sex/ Age	State	Notes
1	F/35	NSW	family visited India
5	M/45	NSW	returned from Indonesia
6	F/63	WA	Vietnamese immigrant
9	M/5	NSW	recent travel through India
untypable	F/31	Tas	no details
untypable	F/12	NSW	daughter of F/35 above

S Paratyphi B: 2 cases

Phage Type	Sex/ Age	State	Notes
3aI	M/7	SA	no details supplied
RDNC	F/80	Qld	no details

Isolations from Blood, Urine and Unusual Sites:

Bacteraemias excluding enteric fever: 8 cases

Organism name	Sex/ Age	State	Organism name	Sex/ Age	State
S Bovismorbificans 13	M/39	Tas	S Oslo	M/53	NT
S Dublin	F/77	Vic	S Virchow	F/12	NSW
S Dublin	M/74	Qld	S untypable	M/ns	NSW
S Enteritidis	M/69*	Vic	S 11:i:-	M/<1	Qld

* S Enteritidis - see below, sputum also

Urines: 19 cases

Organism name	Sex/ Age	State	Organism name	Sex/ Age	State
S Anatum	F/4	Qld	S Infantis	M/73	Vic
S Anatum	F/49	NSW	S Muenchen	F/52	NSW
S Anatum	F/73	NSW	S Poona	F/60	Qld
S Cerro	F/<1	Qld	S Typhimurium 135	F/50	NSW
S Cerro	F/4	ACT	S Virchow	F/49	Vic
S Chester	F/18	Vic	S untypable	M/81	Qld
S Havana	M/90	Vic	S 16:1,v:-	F/72	Vic
S Havana	F/37	NT	S 6,8:r:-	F/72	Vic
S Heidelberg	F/64	NSW	*Sh sonnei* biotype a	F/9	NSW
S Infantis	F/55	Vic			

Unusual Sites: 8 cases

Organism name	Sex/ Age	State	Site
S Enteritidis	M/69	Vic	sputum (acute renal failure)
S Havana	M/4	SA	tracheal aspirate
S Heidelberg	M/<1	NSW	umbilical swab
S Ohio	M/<1	NSW	left eye
S Stanley	F/4	Vic	lymph node (ex Bali)
S Typhimurium 179	M/17	Vic	Wound swab, post appendectomy
S Virchow	M/73	Qld	bile (cholecystectomy)
V cholerae NON 01	F/9	Qld	appendiceal abscess

ns = not specified

Shigella Infections

191 notifications of *Shigella* infections were received for this quarter. Of these, six were follow-up specimens, 8 were from migrants or refugees and 21 were notified from travellers returning from overseas, leaving a total of 156 cases assumed to have been acquired in Australia.

However, the cases of *Sh boydii* 1 and *Sh sonnei* biotypes d and f are of doubtful origin as details of overseas travel did not accompany the notifications.

Sh flexneri 2a, *Sh flexneri* 6 and *Sh sonnei* biotype a accounted for 88% of the total cases of shigellosis acquired in Australia. The most common serotype was *Sh flexneri* 2a with 71 cases, 37 of which were from Western Australia.

Shigella infections acquired overseas include *Sh boydii* 14 (Nepal), *Sh flexneri* 2a (India, Pakistan, Laos), *Sh flexneri* 3a (Vietnam, Thailand), *Sh flexneri* 4a (Vietnam), *Sh flexneri* 6 (Kampuchea), *Sh sonnei* biotype a (India, Indonesia, Vietnam, Africa, Fiji), *Sh sonnei* biotype g (India, Thailand, Indonesia, Mexico).

Table 4: *Shigella* infections acquired in Australia

Organism	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	TOTAL
Sh boydii 1	-	-	1	-	-	-	-	-	1
Sh flexneri	-	-	-	1	-	-	-	-	1
Sh flexneri 1b	-	-	2	-	-	-	-	-	2
Sh flexneri 2a	-	5	4	2	3	37	-	20	71
Sh flexneri 2b	-	2	-	2	-	-	-	-	4
Sh flexneri 3a	-	-	1	-	-	-	-	-	1
Sh flexneri 6	-	1	-	-	-	4	-	10	15
Sh flexneri var y	-	-	-	-	-	2	-	1	3
Sh sonnei biotype a	-	13	2	12	1	10	-	13	51
Sh sonnei biotype d	-	-	-	-	1	-	-	-	1
Sh sonnei biotype f	-	-	-	-	2	-	-	-	2
Sh sonnei biotype g	-	2	1	1	-	-	-	-	4
TOTAL	-	23	11	18	7	53	-	44	156

Infections Acquired Overseas (including migrants and refugees):

ASIA:- unspecified: S Blockley, S Enteritidis (2).

Indonesia: S 6,7:z:-, S Agona, S Berta (2), S Hadar (2), S Kentucky, S Livingston, *Sh sonnei* biotype g.

Bali: S Berta (5), S Emek, S Hadar (5), S Heidelberg, S Kentucky (2), S Stanley (2), S Typhimurium RDNC, *Sh sonnei* biotype a (2).

Java: S Java untypable.

India: S Agona, S Arizonae, S Butanton, S Infantis, S Typhimurium untypable, *Sh flexneri* 2a, *Sh sonnei* biotype a (2), *Sh sonnei* biotype g (4).

Pakistan: S Senftenberg, *Sh flexneri* 2a.

Nepal: S Hadar, *Sh boydii* 14.

Sri Lanka: S Newport, S Typhimurium untypable.

Malaysia: S Bareilly, S Enteritidis, S Haardt, S London, S Sofia ssp 2.

Singapore: S Derby (2).

Philippines: S Enteritidis, S Senftenberg, S Typhimurium untypable.

Thailand: S Anatum, S Berta, S Blockley, S Krefeld, S London, S Panama, S Virchow (2), *Sh flexneri* 3a, *Sh sonnei* biotype g.

Vietnam: S Amsterdam, S Cholerae-suis, S Emek, S Hadar, S Lexington, S London, S London var 15+, S Newport, S Potsdam, S Senftenberg, S Stanley*, *Sh flexneri* 2a, *Sh flexneri* 3a, *Sh flexneri* 4a (2), *Sh sonnei* biotype a (3).

Laos: *Sh flexneri* 2a.

Kampuchea: *Sh flexneri* 6.

Hong Kong: S Typhimurium 135.

Taiwan: S Agona.

AFRICA:- S 6,8:e,h:-. **Egypt:** S Enteritidis.

Zimbabwe: S Java RDNC, *Sh sonnei* biotype a.

EUROPE:- Great Britain: S Enteritidis.

Spain: S Blockley.

PACIFIC:- Fiji: *Sh sonnei* biotype a (2).

New Caledonia: S Welikade.

AMERICAS:- Mexico: *Sh sonnei* biotype g.

Plus from unspecified countries: S Berta, S Braenderup, S Enteritidis, S Hadar (2), S Kentucky, S Krefeld, S Newport, S London var 15+, S Typhimurium RDNC, S Virginia, *Sh sonnei* biotype g.

Mixed Infections

There were 12 notifications of mixed infections involving either *Salmonellas* or *Shigellas*. One interesting notification was that of a fully sensitive strain of **S Heidelberg** phage type 5 (M/1, Qld) mixed with a strain with multiple resistance.

Organisms isolated	Sex/Age	State
S Blockley, *Campylobacter* sp.	M/40	Qld
S Bovismorbificans 23, *Campylobacter* sp.	F/8	NSW
S Cerro, S Waycross	M/1	Qld
S Derby, S Java RDNC	F/23	WA
S Eastbourne, *Sh sonnei* biotype a	F/1	NT
S Havana, S 8:i:-	M/<1	Qld
S Senftenberg, *Campylobacter* sp.	F/31*	NSW
S Stanley, *Sh flexneri* 4a	F/34*	WA
S Wandsworth, S Virchow	F/<1	Qld
Sh flexneri 3a, *Entamoeba histolytica*	M/23	Qld
Sh flexneri 1b, *Sh flexneri* 2b, *C jejuni*	F/22	Vic
Sh sonnei biotype a, *Cryptosporidium* sp.	M/<1	Qld

* acquired overseas (F/31 Pakistan and Thailand, F/34 Vietnam)

Top Ten Salmonella Serovars

From now on the total number of **S Typhimurium** isolates will be counted as one serovar and reported as such. In addition, the top five phage types of **S Typhimurium** will be reported separately to present a more complete picture of the prevalance of *Salmonella* in Australia.

Of the 792 Australian acquired cases of *Salmonella* infection, 478 (60%) were isolates from the top ten *Salmonella* serovars listed in Table 5 below. Their position in the previous quarter (Q2/'90) is also given where applicable.

In this quarter only one of the top ten *Salmonellas* was associated with an outbreak and that was **S Muenchen** from Alice Springs in the first week of August.

S Typhimurium with 242 cases from 32 phage types, was the most common *Salmonella* serovar and accounted for 31 percent of the total Australian acquired cases of salmonellosis. **S Typhimurium 135** was the most common phage type with 40 cases. The top five phage types accounted for 46% of the Australian acquired cases of **S Typhimurium** and are presented in Table 6.

Table 5: Top Ten *Salmonella* Serovars

	Pos'n Q2/'90	No. of cases	% of top ten(478)	Origin/No.of cases
S Typhimurium	1/3	242	51.0	NSW 18, Vic 10
S Cerro	-	36	7.5	WA 12, NSW 10
S Virchow	2	33	6.9	Qld 24
S Muenchen	10	31	6.5	NSW 8, WA 7, NT 7
S Anatum	6	29	6.0	Qld 10, NT 8
S Infantis	5	25	5.2	NSW 9, SA 5
S Saintpaul	4	25	5.2	Qld 10, NT 9
S Chester	7	23	4.8	Qld 10
S Enteritidis	-	18	3.7	Qld 8, Vic 5
S Havana	-	16	3.3	SA 7, NT 3, Qld 3

In: S Cerro, S Enteritidis, S Havana, Out: S Birkenhead, S Typhimurium 170

Table 6: Top Five Phage Types of S Typhimurium

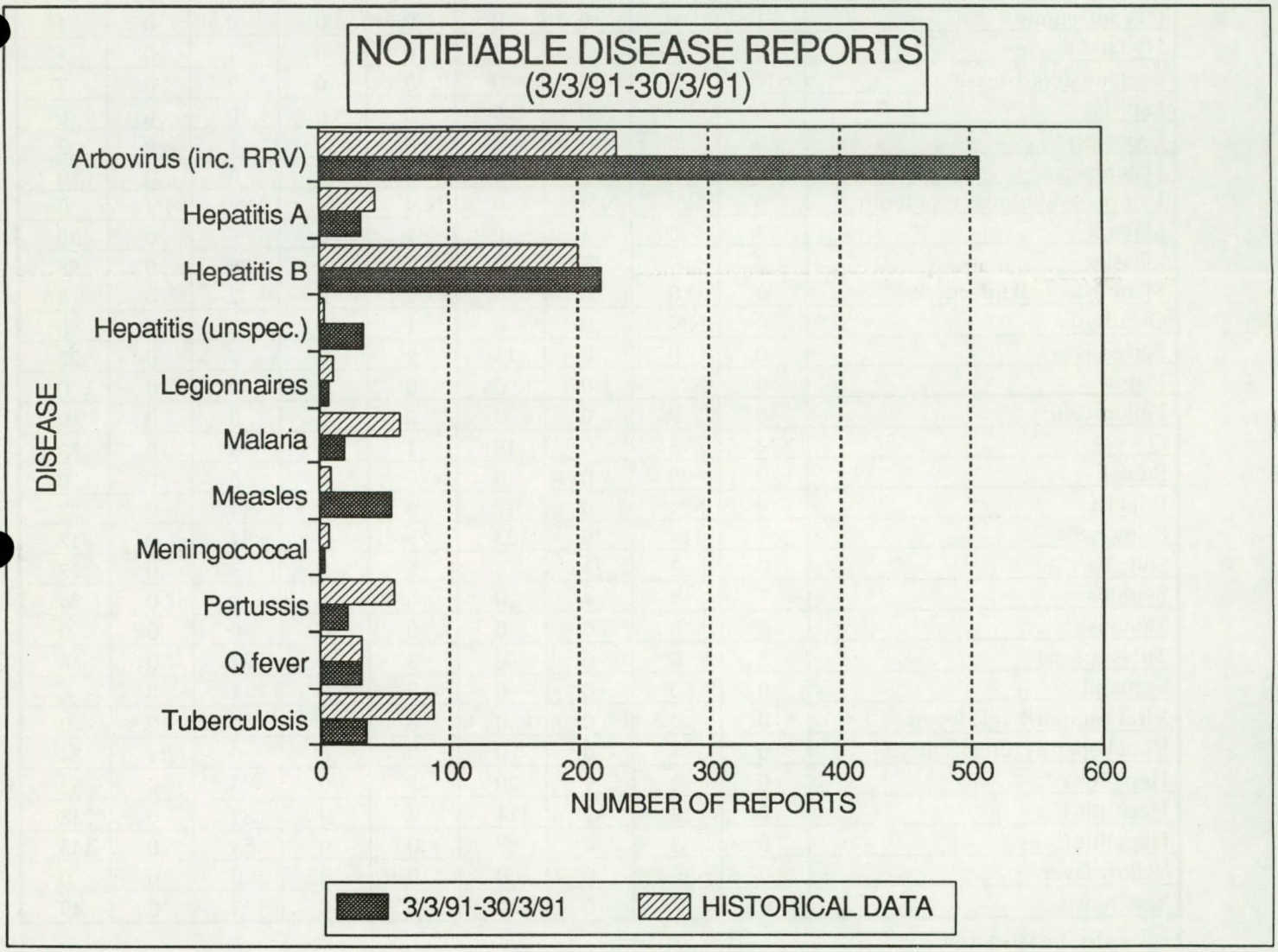
Phage Type	No. of cases	% of top five (112)	Origin/No. of cases
135	40	36	NSW 18, Vic 10
9	34	30	NSW 17, Vic 10
12a	15	13	NSW 7, Qld 3
141	14	13	NSW 7, Vic 5
179	9	8	NSW 5, Vic 4

CDI REPORTING SCHEME

VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTS

Q fever was reported on 20 occasions during the period, the majority from New South Wales (9) and Queensland (8). Ages ranged from 17 to 73 years and exposure details were supplied for 3; 2 meatworkers and a dairy farmer.

A case of **Australian encephalitis** has been reported from the Northern Territory. The 74 year old female tourist from NZ arrived in Darwin in early January 1991 and had experienced high levels of mosquito biting in the Berry Springs area (about 35km south of Darwin). Onset of disease was 5 April and preliminary serology indicates the presence of specific IgM against Murray Valley Encephaliitis virus.



National Notifiable Disease Reports

DISEASES	ACT	NSW*	NT	QLD	SA	TAS	VIC	WA	TOTAL
Arbovirus Infections (unspecified)	0	7	0	1	4	0	0	0	12
Ross River Virus	0	27	61	384	0	0	24	0	496
Dengue fever	0	NN	0	1	0	0	0	0	1
Brucellosis	0	1	0	2	0	0	0	0	3
Campylobacter	3	47	25	204	96	0	93	0	468
Chancroid	0	NN	0	0	NN	NN	NN	0	0
Chlamydia	7	30	8	187	94***	0	NN	0	232
Cholera	0	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0	0
Donovanosis	0	NN	0	1	NN	NN	NN	0	1
Gonoccocal diseases	0	29	16	28	9***	NN	0	0	73
Haemophilus influenza b	0	4	0	7	0	0	15	0	26
HIV infections	1	0	0	0	0	0	0	0	1
Hydatid disease	0	0	0	0	0	0	1	0	1
Legionnaires disease	NN	2	0	0	3	0	2	0	7
Leprosy	0	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	1	0	0	1	0	2
Listeriosis	0	NN	0	0	0	0	0	0	0
Lymphogranuloma venereum	0	NN	NN	0	NN	NN	NN	NN	0
Malaria	3	0	1	10	1	0	5	0	20
Measles	0	9	15	2	2	0	28	0	56
Meningococcal infections	0	0	0	0	2	0	2	0	4
Ornithosis	0	NN	0	0	1	0	5	0	6
Pertussis	0	0	0	13	2	0	7	0	22
Plague	0	NN	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0	0	0
Q fever	NN	8	0	18	1	0	6	0	33
Rabies	0	0	0	0	0	0	0	0	0
Rubella	0	NN	0	17	0	0	11	0	28
Salmonella	1	117	19	123	73	0	84	0	417
Shigella	0	2	11	5	6	0	3	0	27
Syphilis	1	9	4	20	6***	0	0	0	34
Tetanus	0	0	0	0	0	0	0	0	0
Tuberculosis	3	6**	0	0	3	0	22	0	36
Typhoid	0	0	0	0	0	0	4	0	4
Viral haemorrhagic fever	0	0	0	0	0	0	0	0	0
Viral hepatitis (unspecified)	0	34	0	0	0	0	0	NN	34
Hepatitis A	0	2	1	20	7	0	3	0	33
Hepatitis B	0	16	2	114	2	0	84	0	218
Hepatitis C	0	3	0	87	0	0	53	0	143
Yellow fever	0	0	0	0	0	0	0	0	0
Yersiniosis	0	7	0	22	17	0	3	0	49

* data for March 1991

** mycobacterial diseases

*** data to March 20 1991

NN not notifiable

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 10/04/91 TO 23/04/91

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)
CODE 400 - DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON (QLD)
CODE TPL - TOOWOOMBA PATHOLOGY LABORATORY (QLD)

		065	066	110	111	112	113	114	115	116	400	TPL	TOTAL
0100	ADENOVIRUS NOT TYPED	0	5	1	3	5	1	0	7	0	0	0	22
0101	ADENOVIRUS TYPE 1	0	0	1	0	0	0	0	0	0	0	0	1
0102	ADENOVIRUS TYPE 2	0	0	0	0	5	0	1	0	0	0	0	6
0103	ADENOVIRUS TYPE 3	0	0	1	0	0	0	0	0	0	0	0	1
0104	ADENOVIRUS TYPE 4	0	0	0	0	0	0	0	0	1	0	0	1
0105	ADENOVIRUS TYPE 5	0	0	1	0	0	0	0	0	0	0	0	1
0107	ADENOVIRUS TYPE 7	0	0	1	0	0	0	1	0	0	0	0	2
0140	ADENOVIRUS TYPE 40	0	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	1	0	0	4	0	0	0	0	5
0201	INFLUENZA A VIRUS	0	0	1	0	0	0	0	0	0	0	0	1
0301	PARAINFLUENZA VIRUS TYPE 1	0	6	0	0	0	0	0	0	0	0	0	6
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	8	0	0	0	0	0	0	0	0	8
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	2	5	2	0	2	0	0	0	0	11
0399	PARAINFLUENZA VIRUS TYPING PEN	0	0	0	4	0	0	0	0	0	0	0	4
0400	RESPIRATORY SYNCYTIAL VIRUS (R	2	0	0	0	1	3	2	7	0	0	0	15
0500	RHINOVIRUS (ALL TYPES)	2	0	0	10	0	0	0	2	0	0	0	14
0600	MYCOPLASMA PNEUMONIAE	0	0	0	6	2	2	0	1	0	0	0	11
0700	ORNITHOSIS-PSITTACOSIS	0	0	1	0	1	4	0	0	1	0	0	7
0901	COXSACKIEVIRUS B1	0	0	0	0	0	0	2	0	0	0	0	2
0902	COXSACKIEVIRUS B2	0	0	2	0	0	0	1	0	0	0	0	3
0903	COXSACKIEVIRUS B3	0	0	0	0	1	0	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	0	0	1	0	1	0	1	0	0	0	0	3
0905	COXSACKIEVIRUS B5	0	0	1	0	1	0	0	0	0	0	0	2
1009	ECHOVIRUS TYPE 9	0	0	0	0	1	0	0	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	2	0	0	0	0	0	2
1101	POLIOVIRUS TYPE 1	0	0	0	0	1	0	0	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	1	0	0	0	0	0	0	0	0	1
1103	POLIOVIRUS TYPE 3	0	0	1	0	0	0	0	0	0	0	0	1
1200	MUMPS VIRUS	0	0	0	0	1	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	0	1	0	0	0	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	2	0	0	9	0	3	0	5	0	0	19
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	8	0	17	1	6	2	1	0	0	30	0	65
1303	VARICELLA-ZOSTER VIRUS	6	0	2	0	3	3	0	2	0	0	0	16
1306	HERPES SIMPLEX TYPE 1	26	0	18	3	4	8	0	19	0	1	0	79
1307	HERPES SIMPLEX TYPE 2	43	0	24	0	15	14	0	41	0	0	0	137
1399	HERPES VIRUS TYPING PENDING	0	0	0	1	0	0	0	0	0	0	0	1
1401	COXIELLA BURNETII	0	0	3	0	9	0	0	8	0	0	0	20
1502	PICORNIA VIRUS - NOT TYPED = E	13	0	0	0	2	12	0	8	0	0	0	35
1514	MOLLUSCUM CONTAGIOSUM	0	0	0	0	0	0	0	0	0	4	0	4
1521	MEASLES VIRUS	1	0	0	6	0	0	0	2	0	0	0	9
1522	RUBELLA VIRUS	0	0	0	0	0	2	0	1	0	5	0	8
1532	HEPATITIS B ANTIGEN	15	0	5	0	44	3	0	46	0	1	0	114
1535	HEPATITIS A ANTIBODY	6	0	1	0	10	0	0	3	0	1	0	21
1536	HEPATITIS C VIRUS	7	0	0	0	0	0	2	0	0	0	0	9
1540	CHLAMYDIA - TYPING PENDING	0	0	0	0	1	0	0	0	0	0	0	1
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	28	0	8	1	11	2	1	54	4	0	4	113
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	0	0	0	0	0	0	0	0	0	4	0	4
1556	CMV - CYTOMEGALOVIRUS	6	4	0	4	3	4	4	11	0	3	0	39
1562	REOVIRUS (ALL TYPES)	0	0	0	0	3	0	0	0	0	0	0	3
1563	CORONAVIRUS	0	0	0	0	1	0	0	0	0	0	0	1
1564	ROTAVIRUS	0	21	11	12	3	0	4	0	0	12	0	63
1565	CALICI VIRUS	0	0	0	0	1	0	0	0	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	3	0	12	3	0	0	0	0	18
9721	HTLV-1	1	0	0	0	0	0	0	0	0	0	0	1
9906	BARMAH FOREST VIRUS	0	0	0	0	0	0	0	2	0	0	0	2
9981	DENGUE TYPE 1	0	0	0	0	0	0	0	4	0	0	0	4
9982	DENGUE TYPE 2	0	0	0	0	0	0	0	1	0	0	0	1
9990	AUSTRALIAN ENCEPHALITIS	0	0	0	0	0	0	0	1	0	0	0	1
9992	ROSS RIVER VIRUS	12	0	0	0	1	10	0	78	0	49	0	150
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	0	3	0	0	0	0	3
9995	DENGUE NOT TYPED	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL		177	38	112	60	148	85	36	298	11	110	4	1079

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES BY STATE OF CONTRIBUTING LABORATORY

PERIOD 10/04/91 TO 23/04/91

NSW: ICPMR; PHH/POW; RACH; ST GEORGE HOSP, KOGARAH; ROYAL NEWCASTLE HOSP.
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	6	3	7	5	1	0	22
0101	ADENOVIRUS TYPE 1	0	0	0	0	1	0	1
0102	ADENOVIRUS TYPE 2	6	0	0	0	0	0	6
0103	ADENOVIRUS TYPE 3	0	0	0	0	1	0	1
0104	ADENOVIRUS TYPE 4	0	0	0	0	0	1	1
0105	ADENOVIRUS TYPE 5	0	0	0	0	1	0	1
0107	ADENOVIRUS TYPE 7	1	0	0	0	1	0	2
0140	ADENOVIRUS TYPE 40	1	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	4	1	0	0	0	0	5
0201	INFLUENZA A VIRUS	0	0	0	0	1	0	1
0301	PARAINFLUENZA VIRUS TYPE 1	0	0	0	6	0	0	6
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	0	0	8	0	8
0303	PARAINFLUENZA VIRUS TYPE 3	4	5	0	0	2	0	11
0399	PARAINFLUENZA VIRUS TYPING PEN	0	4	0	0	0	0	4
0400	RESPIRATORY SYNCYTIAL VIRUS (R	6	0	7	2	0	0	15
0500	RHINOVIRUS (ALL TYPES)	0	10	2	2	0	0	14
0600	MYCOPLASMA PNEUMONIAE	4	6	1	0	0	0	11
0700	ORNITHOSIS-PSITTACOSIS	5	0	0	0	1	1	7
0901	COXSACKIEVIRUS B1	2	0	0	0	0	0	2
0902	COXSACKIEVIRUS B2	1	0	0	0	2	0	3
0903	COXSACKIEVIRUS B3	1	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	2	0	0	0	1	0	3
0905	COXSACKIEVIRUS B5	1	0	0	0	1	0	2
1009	ECHOVIRUS TYPE 9	1	0	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	2	0	0	0	0	0	2
1101	POLIOVIRUS TYPE 1	1	0	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	0	0	1	0	1
1103	POLIOVIRUS TYPE 3	0	0	0	0	1	0	1
1200	MUMPS VIRUS	1	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	1	0	0	0	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	12	0	0	2	0	5	19
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	9	1	30	8	17	0	65
1303	VARICELLA-ZOSTER VIRUS	6	0	2	6	2	0	16
1306	HERPES SIMPLEX TYPE 1	12	3	20	26	18	0	79
1307	HERPES SIMPLEX TYPE 2	29	0	41	43	24	0	137
1399	HERPES VIRUS TYPING PENDING	0	1	0	0	0	0	1
1401	COXIELLA BURNETII	9	0	8	0	3	0	20
1502	PICORNIA VIRUS - NOT TYPED = E	14	0	8	13	0	0	35
1514	MOLLUSCUM CONTAGIOSUM	0	0	4	0	0	0	4
1521	MEASLES VIRUS	0	6	2	1	0	0	9
1522	RUBELLA VIRUS	2	0	6	0	0	0	8
1532	HEPATITIS B ANTIGEN	47	0	47	15	5	0	114
1535	HEPATITIS A ANTIBODY	10	0	4	6	1	0	21
1536	HEPATITIS C VIRUS	2	0	0	7	0	0	9
1540	CHLAMYDIA - TYPING PENDING	1	0	0	0	0	0	1
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	14	1	58	28	8	4	113
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	0	0	4	0	0	0	4
1556	CMV - CYTOMEGALOVIRUS	11	4	14	10	0	0	39
1562	REOVIRUS (ALL TYPES)	3	0	0	0	0	0	3
1563	CORONAVIRUS	1	0	0	0	0	0	1
1564	ROTAVIRUS	7	12	12	21	11	0	63
1565	CALICI VIRUS	1	0	0	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	15	3	0	0	0	0	18
9721	HTLV-1	0	0	0	1	0	0	1
9906	BARMAH FOREST VIRUS	0	0	2	0	0	0	2
9981	DENGUE TYPE 1	0	0	4	0	0	0	4
9982	DENGUE TYPE 2	0	0	1	0	0	0	1
9990	AUSTRALIAN ENCEPHALITIS	0	0	1	0	0	0	1
9992	ROSS RIVER VIRUS	11	0	127	12	0	0	150
9994	SMALL VIRUS (LIKE) PARTICLE	3	0	0	0	0	0	3
9995	DENGUE NOT TYPED	0	0	0	1	0	0	1
TOTAL		269	60	412	215	112	11	1079

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 10/04/91 TO 23/04/91

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	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	1	9	0	0	0	0	11	0	0	0	21
0102	ADENOVIRUS TYPE 2	1	2	0	0	0	0	3	0	0	0	6
0103	ADENOVIRUS TYPE 3	0	1	0	0	0	0	0	0	0	0	1
0104	ADENOVIRUS TYPE 4	0	1	0	0	0	0	0	0	0	0	1
0105	ADENOVIRUS TYPE 5	0	1	0	0	0	0	0	0	0	0	1
0107	ADENOVIRUS TYPE 7	0	2	0	0	0	0	0	0	0	0	2
0140	ADENOVIRUS TYPE 40	0	0	0	0	0	0	1	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	1	1	0	0	0	0	3	0	0	0	5
0201	INFLUENZA A VIRUS	0	1	0	0	0	0	0	0	0	0	1
0301	PARAINFLUENZA VIRUS TYPE 1	0	6	0	0	0	0	0	0	0	0	6
0302	PARAINFLUENZA VIRUS TYPE 2	0	8	0	0	0	0	0	0	0	0	8
0303	PARAINFLUENZA VIRUS TYPE 3	0	9	0	0	0	0	0	0	0	0	9
0399	PARAINFLUENZA VIRUS TYPING PEN	0	4	0	0	0	0	0	0	0	0	4
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	15	0	0	0	0	0	0	0	0	15
0500	RHINOVIRUS (ALL TYPES)	0	11	0	0	1	0	0	0	0	1	13
0600	MYCOPLASMA PNEUMONIAE	1	7	0	0	0	0	0	0	0	0	8
0700	ORNITHOSIS-PSITTACOSIS	1	3	0	0	0	0	0	0	0	0	4
0901	COXSACKIEVIRUS B1	0	1	0	0	0	0	0	0	0	0	1
0902	COXSACKIEVIRUS B2	0	0	0	1	0	0	1	0	0	0	2
0903	COXSACKIEVIRUS B3	1	0	0	0	0	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	1	1	0	0	0	1	0	0	0	0	3
0905	COXSACKIEVIRUS B5	0	1	0	1	0	0	0	0	0	0	2
1009	ECHOVIRUS TYPE 9	0	0	0	0	0	0	1	0	0	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	0	2	0	0	0	2
1101	POLIOVIRUS TYPE 1	0	0	0	0	0	0	1	0	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	0	0	0	0	1	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	0	1	0	0	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	2	1	0	0	0	0	0	0	0	10	13
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	15	9	0	0	0	0	0	1	0	2	27
1303	VARICELLA-ZOSTER VIRUS	3	0	0	0	1	1	0	0	0	11	16
1306	HERPES SIMPLEX TYPE 1	1	3	0	0	0	0	0	0	0	56	60
1307	HERPES SIMPLEX TYPE 2	0	1	0	1	0	0	0	0	0	56	58
1399	HERPES VIRUS TYPING PENDING	0	0	0	0	0	0	0	0	0	1	1
1401	COXIELLA BURNETII	9	2	0	0	0	0	0	0	0	0	11
1502	PICORNIA VIRUS - NOT TYPED = E	3	2	0	2	0	0	18	0	0	3	28
1514	MOLLUSCUM CONTAGIOSUM	3	0	0	0	0	0	0	0	0	1	4
1521	MEASLES VIRUS	1	0	1	0	0	0	0	0	0	6	8
1522	RUBELLA VIRUS	4	0	0	0	0	0	0	0	0	0	4
1532	HEPATITIS B ANTIGEN	44	0	0	0	0	0	0	65	0	0	109
1535	HEPATITIS A ANTIBODY	2	0	0	0	0	0	0	19	0	0	21
1536	HEPATITIS C VIRUS	0	0	0	0	0	0	0	5	0	0	5
1540	CHLAMYDIA - TYPING PENDING	1	0	0	0	0	0	0	0	0	0	1
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	19	0	0	0	0	0	0	0	0	0	19
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	1	0	0	0	0	0	0	0	1	0	2
1556	CMV - CYTOMEGALOVIRUS	11	11	0	0	0	1	2	0	2	3	30
1562	REOVIRUS (ALL TYPES)	1	0	0	0	0	0	2	0	0	0	3
1563	CORONAVIRUS	0	0	0	0	0	0	1	0	0	0	1
1564	ROTAVIRUS	4	2	0	0	0	0	56	0	0	0	62
1565	CALICI VIRUS	0	0	0	0	0	0	1	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	3	0	0	13	0	0	0	16
9721	HTLV-1	1	0	0	0	0	0	0	0	0	0	1
9906	BARMAH FOREST VIRUS	1	0	0	0	0	0	0	0	0	0	1
9981	DENGUE TYPE 1	1	0	0	0	0	0	0	0	0	0	1
9982	DENGUE TYPE 2	1	0	0	0	0	0	0	0	0	0	1
9990	AUSTRALIAN ENCEPHALITIS	1	0	0	0	0	0	0	0	0	0	1
9992	ROSS RIVER VIRUS	47	0	0	0	0	0	0	0	0	7	54
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	0	3	0	0	0	3
TOTAL		183	115	1	8	2	4	120	90	3	157	683

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 10/04/91 TO 23/04/91

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	TOTAL
0100	ADENOVIRUS NOT TYPED	0	1	0	0	0	0	0	0	0	1
0101	ADENOVIRUS TYPE 1	0	0	0	0	0	0	0	0	1	1
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	1	1	0	0	2
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	0	1	0	1
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	0	2	1	0	3
0700	ORNITHOSIS-PSITTACOSIS	1	0	0	0	0	0	1	1	0	3
0901	COXSACKIEVIRUS B1	0	0	0	0	0	0	0	0	1	1
0902	COXSACKIEVIRUS B2	0	0	0	0	0	0	0	0	1	1
1103	POLIOVIRUS TYPE 3	0	0	0	0	0	0	0	1	0	1
1200	MUMPS VIRUS	0	0	1	0	0	0	0	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	6	0	0	0	0	0	0	0	6
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	19	3	0	0	2	11	3	38
1306	HERPES SIMPLEX TYPE 1	4	15	0	0	0	0	0	0	0	19
1307	HERPES SIMPLEX TYPE 2	1	78	0	0	0	0	0	0	0	79
1401	COXIELLA BURNETII	0	0	0	0	1	0	1	5	2	9
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	1	0	0	1	3	1	6
1521	MEASLES VIRUS	0	0	1	0	0	0	0	0	0	1
1522	RUBELLA VIRUS	0	0	0	0	2	0	0	2	0	4
1532	HEPATITIS B ANTIGEN	0	1	0	0	0	0	0	0	4	5
1536	HEPATITIS C VIRUS	0	0	0	0	0	0	0	0	4	4
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	16	76	0	0	0	0	0	0	2	94
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	0	1	0	0	0	0	0	0	0	1
1556	CMV - CYTOMEGALOVIRUS	0	2	0	0	0	1	1	1	3	8
1564	ROTAVIRUS	0	0	0	0	0	0	1	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	1	1	0	2
9906	BARMAH FOREST VIRUS	0	0	0	0	1	0	0	0	0	1
9981	DENGUE TYPE 1	0	0	0	0	0	0	0	1	2	3
9992	ROSS RIVER VIRUS	0	0	0	0	83	0	2	9	2	96
9995	DENGUE NOT TYPED	0	0	0	0	0	0	0	1	0	1
TOTAL		22	180	21	4	87	2	13	38	26	393