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Editor *Dr Robert Hall*

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VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTING SCHEME: A total of 1,768 reports were processed during this period.

Four reports of Q fever (3 males aged 34, 38 and 45 years and 1 female aged 11 years) were received during this period. Occupational exposure details were available for a 34-year-old abbatoir worker only.

Adenovirus type 8 associated with conjunctivitis was isolated from eye swabs from twelve patients from Alice Springs. All samples were collected in July this year. Further details are being sought.

Echovirus type 14 was isolated from the cerebrospinal fluid of a one-year-old female with lethargy and vomiting, while coxsackie A virus type 9 was isolated from the cerebrospinal fluid of a 39-year-old male with persistent headache.

A total of 127 reports of influenza were reported in this period;

- 37 influenza A not typed
- 50 influenza A (H_3N_2)
- 40 influenza B.

Two of the influenza A isolates were reported as similar to influenza A/VIC/7/87 (H_3N_2). Respiratory symptoms were associated with 337 other reports received during this period.

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

- Figures given may be subject to revision.

OVERSEAS BRIEF: CHOLERA VACCINATION REQUIREMENTS

The Government of Lesotho no longer requires a cholera vaccination certificate from international travellers.

The only countries/territories which still officially require a cholera vaccination certificate are:

. Pakistan;
. Pitcairn; and
. Sudan.

GONOCOCCAL SURVEILLANCE, AUSTRALIA: 1 JANUARY - 31 MARCH 1989

(Contributed by the Australian Gonococcal Surveillance Programme - AGSP. Co-ordinator Dr J.W. Tapsall, The Prince of Wales Hospital, Sydney, NSW 2031)

In the three month period ending 31 March 1989, the penicillin sensitivity of 527 isolates of *Neisseria gonorrhoeae* was examined in reference laboratories throughout Australia by means of an agreed and standardised technique [1].

Table 1 shows the percentage of strains in each mainland capital which fell into the categories of 'fully sensitive' or 'less sensitive' to penicillin (see table footnotes), or which were penicillinase-producing strains (PPNG). Smaller numbers of isolates, and data recorded in other centres, are not shown in the table.

Table 1: Penicillin sensitivity of isolates of *N. gonorrhoeae* 1 January - 31 March 1989

Centre	Percentage of isolates		
	Sensitive*	Less Sensitive**	PPNG
Brisbane	13.3 (22.8)	56.2 (59.4)	18.1 (5.9)
Sydney	2.6 (8.4)	51.8 (40.8)	41.1 (38.8)
Melbourne	7.6 (4.8)	56.0 (50.0)	16.4 (13.8)
Adelaide	25.5 (18.0)	43.2 (67.5)	4.0 (4.8)
Perth	0.0 (20.6)	53.0 (47.0)	19.0 (9.7)

* Sensitive MIC = 0.004-0.016 mg/L
** Less sensitive MIC = 0.06-0.25 mg/L
Figures in parenthesis represent data for the corresponding period in 1988.

Little change was noted in the percentage of strains less sensitive or fully sensitive to penicillin. Again in this quarter only a low percentage of isolates 'relatively resistant' to penicillin (MIC 1.0 mg/L or greater) was recorded.

The 103 strains of PPNG isolated in this quarter accounted for 19.1% of all isolates examined. However, it can be seen from the table that there were significant regional differences in isolation rates of lactamase producing strains. PPNG accounted for 41.1% of all strains isolated in Sydney, and 16.4% of all Melbourne isolates, but in Adelaide the rate was considerably lower (4.0%). Additionally, where details of content with PPNG are available, it was noted that rates of local acquisition of

these strains also varied between centres. Just over half of the infections with PPNG in Melbourne and three-quarters of the cases in Sydney were acquired by local contact. In the other centres most of the infections with PPNG were acquired overseas.

The total number of isolates examined in the quarter (527) is approximately 5% less than the total number of isolates examined in the corresponding quarter in 1988, but half the number of cases recorded in January-March 1987.

REFERENCE

1. Penicillin sensitivity of gonococci in Australia: development of the Australian Gonococcal Surveillance Programme. Members of the Australian Gonococcal Surveillance Programme. Br J Vener Dis 1984;60:226-30.

HUMAN SALMONELLOSIS SURVEILLANCE, AUSTRALIA - ANNUAL REPORT, 1988

(Contributed by the National Salmonella Surveillance Scheme and the *Salmonella typhi* and Enteric Phage Typing Reference Laboratory, Microbiological Diagnostic Unit (MDU), University of Melbourne)

A total of 10,159 notifications of enteric pathogens were received by the National Salmonella Surveillance Scheme (NSSS) during 1988 (see Table 1). This is an increase of 26% over the number received in 1987, including a 22% increase in salmonella notifications and a 46% increase in campylobacter notifications. The number of shigella, *E. coli* (EPEC) and vibrio notifications was virtually unchanged.

The increased number of campylobacter notifications was due in part to two laboratories which began notifying to the NSSS for the first time. The Alice Springs Hospital and a private pathology laboratory in Sydney made substantial contributions to their states' totals. Notifications of campylobacter infection have not been received yet from Tasmania and very few are received from South Australia.

A detailed list of human isolates tabulated by state and territory of Australia is included at Appendix 1 to this report.

Table 1: Total number of notifications of enteric pathogens, National Salmonella Surveillance Scheme, Australia, 1 January - 31 December 1988

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	TOTAL
Salmonella	60	1260	1077	1888	406	853	126	402	6072
Shigella	4	84	88	112	37	232	6	220	783
Campylobacter	69	1687	733	189	67	435	2	92	3274
E coli (EPEC)	1	4	7	15	1	-	-	-	28
Vibrio	-	1	1	-	-	-	-	-	2
Total	134	3036	1906	2204	511	1520	134	714	10159

Salmonella

Salmonella notifications for 1988 are composed of:

. 5298 cases acquired in Australia;
. 558 follow-up cases;
. 55 cases in migrants and refugees; and
. 161 cases acquired overseas.

There was an increase of 19 per cent of cases of salmonella infections acquired in Australia compared to 1987 (4462 notifications).

Case rates per 100,000 population for salmonella infections acquired in Australia are shown in Table 2.

Victoria had the highest percentage increase in salmonella case rate per 100,000 population (46 per cent) compared to 1987. Case rates in the ACT and Tasmania fell by 22 and 10 per cent respectively.

Table 2: Case rates per 100,000 population for salmonella infections acquired in Australia, National Salmonella Surveillance Scheme, 1985-1988

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	AUSTRALIA
1988	17.6	19.6	18.0	62.6	25.8	53.0	25.4	226.6	32.0
1987	21.4	16.0	12.3	52.4	23.2	50.2	28.2	236.8	27.4
1986	19.2	17.1	12.7	50.4	25.6	52.9	13.3	264.8	27.1
1985	55.3	21.4	12.0	43.1	28.6	59.7	18.5	311.9	30.0

The ten most common salmonella for 1988 comprised 39 per cent of the total cases (5298) and are listed in Table 3. Five of the serovars were associated with outbreaks. *S. virchow* was the most frequently encountered serovar representing 5.5 per cent of all Australian acquired cases; 80 per cent of *S. virchow* cases were notified from Queensland. Eight of the top ten salmonella serovars of 1987 reappeared in 1988.

Table 3: The ten most common salmonella serovars isolated from human sources in 1988, National Salmonella Surveillance Scheme, Australia

	Serovar	No. of cases	Pos'n in 1987	% of top 10	% of total	Origin/No. cases
1	S. Virchow	294	2	14.1	5.5	Qld 235
2	S. heidelberg*	268	-	12.9	5.1	Qld* 243
3	S. typhimurium 9	244	6	11.7	4.6	Vic 128
4	S. typhimurium 135*	229	3	11.0	4.3	NSW 71, Vic*69
5	S. anatum*	201	7	9.7	3.8	WA* 86, Qld 56
6	S. saintpaul	199	1	9.6	3.7	Qld 104
7	S. muenchen	186	5	8.8	3.5	WA 52, NSW 45, Qld 45
8	S. chester	176	4	8.5	3.3	Qld 103, NSW*39
9	S. typhimurium 170*	152	10	7.3	2.9	Qld 103, NSW*39
10	S. potsdam*	133	-	6.4	2.5	Qld* 112
Total		2082		100.0	39.2	

* = outbreak.

The total number of serovars isolated for 1988 was 147, eight more than for 1987. Of these 142 were notified as acquired in Australia (see Table 4).

Table 4: Salmonella infections acquired in Australia, NSSS, 1988

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	TOTAL
Cases	48	1120	766	1716	363	818	114	353	5298
Number of serovars	15	71	56	83	44	34	15	65	142
S. typhimurium:									
Number of phage types	8	39	25	28	29	30	10	6	63
Cases	28	568	435	253	120	134	24	15	1577
% of total cases	58	51	57	15	33	16	21	4	30
S. bovismorbificans:									
Number of phage types	-	10	12	1	9	4	1	2	19
Cases	-	41	40	4	27	26	3	7	148
S arizonae:									
Number of serovars	-	4	2	7	-	1	1	3	11
Cases	-	5	2	22	-	1	1	4	35
Typhoid cases	-	-	5	2	-	2	-	-	9
Paratyphoid cases	1	4	-	4	1	2	-	-	12

New and unusual serovars encountered during the year were *S. amsterdam* var 15+, *S. brisbane* (WA); *S. dan*, *S. lindern* (Qld); *S. denver* (NT); *S. irumu*, *S. molade* (NSW); *S. lagos* (NSW - visitor from PNG); *S. seremban* (TAS); and *S. wangata* (ACT).

Typhoid and paratyphoid cases

There were 39 notifications of *S. typhi* during 1988 of which nine were 'follow-up' cases. Of the remaining 30, three were overseas visotors (from Japan, PNG, and an Indonesian performing at Expo), 22 were new cases and five were carriers. Of the 22 cases in Australian residents, 16 had travelled overseas and three (including a laboratory worker) had contact with known carriers, one was an immigrant and two gave no details.

Five cases (including Vi-phage types 46, A, E2, M1) and 1 carrier were from New South Wales; 13 cases (including phage types 46, A, C1, E1 (3), O) and two carriers were from Victoria; three cases were from Queensland (including phage type D1); and one case and two carriers were from Western Australia.

One of the *S. typhi* E1 cases in Victoria was employed in the laboratory which handled the other phage type E1 cases.

All except one of the *S. typhi* untypable cases, including the j:z66 phase cases, were acquired in Indonesia. One of these was an Indonesian performer at Expo.

There were 16 notifications of *S. paratyphi* A and 13 cases. All but one case were infections acquired overseas, in Asia; the exception was the daughter of a traveller who visited Bangladesh. There were three cases of *S. paratyphi* A1. The remaining ten cases were *S. paratyphi* A RDNC or untypable.

There were 22 notifications of *S. paratyphi* B and 18 cases. Seven of the cases acquired the infection overseas (South America and South-East Asia). One case was a mixed infection with *S. paratyphi* A untypable. The main phage types were 1, 3aI var.1, Battersea, Dundee, Dundee var.1 and var.2, and Taunton.

Details of typhoid and paratypoid notifications are provided in Table 5.

Table 5: Typhoid and paratyphoid isolations, Australia, 1988

Organism	Vi-phage type	Sex/Age	State	Overseas Travel/Notes
S. typhi	46	F/12	NSW	ex India
	46	M/22	VIC	S E Asia
	A	M/29	VIC	India, Nepal, Thailand
	A	F/81*	WA	ex Italy (years ago)
	A	F/21	NSW	India
	C1	F/47	VIC	Philippines
	D2	M/24	NSW	Visitor from PNG
	D1	M/39	QLD	not stated
	D9	M/40	WA	not stated
	E1	M/29	VIC	laboratory infection
	E1	M/74	VIC	Polish immigrant, UTI
	E1	F/13	VIC	recent arrival from Lebanon
	E2	F/60	NSW	Italy, India
	M1	M/30	NSW	Sri Lanka
	O	M/28	VIC	India
	O	F/32*	VIC	acute cholecystitis
	RDNC	M/35*	NSW	of Asian origin
	RDNC	F/23	NSW	Visitor from Japan
	degraded	F/48*	WA	Australian resident who applied for a catering job.
	degraded	F/28	QLD	Mexico
	degraded	M/21	VIC	contact with grandmother F/71 below
	degraded	F/18	VIC	contact with grandmother F/71 below
	degraded	F/71*	VIC	arrived from Poland 6 years ago
	untypable	M/25	VIC	Indonesia (Bali)
	untypable	M/30	VIC	Indonesia
	untypable	M/21	VIC	Indonesia
	untypable	M/22	QLD	Thailand, Nepal
	untypable	M/37	QLD	Expo performer, Indonesia.
	untypable j:z66	M/14	NSW	recent arrival from Indonesia
	untypable z66 phase	F/23	VIC	Indonesia (Bali)

Table 5: cont.

Organism	Vi-phage type	Sex/Age	State	Overseas Travel/Notes
S. paratyphi A	1	M/22	NSW	Indonesia
	1	M/66	NSW	immigrant
	1	M/29	VIC	returned from overseas
	RDNC	M/46	NSW	Bangladesh
	RDNC	F/17	NSW	Daughter of M/46 above.
	RDNC	M/27	QLD	Burma, Thailand
	RDNC	M/27	NSW	India
	untypable	M/35	VIC	Central & South America - mixed infection with S. paratyphi B Taunton (below).
	untypable	M/19	WA	India, Nepal
	untypable	M/23	QLD	S E Asia
	untypable	F/18	NSW	India
	untypable	M/26	NSW	travel in India and Singapore
	untypable	F/32	VIC	Vietnamese refugee, via Bangkok and Singapore
S. paratyphi B	1	F/22	NSW	S E Asia
	3aI var.1	M/22	NSW	no travel
	3aI var.1	F/81	QLD	post-operative (hemicolectomy)
	Battersea	F/1	QLD	no details given
	Dundee	F/26	ACT	no details given
	Dundee	F/24	QLD	S E Asia
	Dundee	M/33	SA	travel in Malaysia and Bali
	Dundee var.1	F/38	QLD	no details given
	Dundee var.1	M/49	SA	no details given
	Dundee var.2	M/2	WA	no details given
	RDNC	M/<1	QLD	no details given
	Taunton	M/35	VIC	Central & South America - mixed infection with S. paratyphi A (above)
	Taunton	F/ns	NSW	Mother of F/<1 reported in 4th quarter 1987
	Taunton	M/ns	NSW	Father of F/<1 reported in 4th quarter 1987
	Taunton	M/28	NSW	Chile - family of case notified in 4th quarter 1987
	Taunton	F/51	NSW	Chile - family of case notified in 4th quarter 1987
	Taunton	F/5	NSW	Chile - family of case notified in 4th quarter 1987
	Taunton	M/23	WA	no details given

* = carrier

Shigella

The total number of shigella notifications for 1988 was 783. Of these 656 were acquired in Australia, 92 were acquired overseas and 35 were follow-up isolations. The case rates are shown in Table 6 together with figures for the two previous years. There has been a marked decrease since 1986 in the case rates for both the Northern Territory and Western Australia.

The three most common serotypes were *Sh. flexneri* 2a (29% of total), *Sh. flexneri* 6 (19%) and *Sh. sonnei* biotype and (43%) and comprised 91% of the total Australian acquired infections.

The Northern Territory, Western Australia and Queensland contributed 525 cases (80% of total); of these 351 (67%) were notified from north of the Tropic of Capricorn.

Table 6: Case rates per 100,000 for Shigella infections acquired in Australia, National Salmonella Surveillance Scheme, 1986-1988

	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	AUSTRALIA
1988	0.4	1.1	0.8	3.8	2.1	14.6	0.9	124.5	4.0
1987	0.0	1.3	0.6	2.2	3.2	19.8	0.4	120.0	4.2
1986	0.4	2.3	0.8	2.0	3.2	32.8	0.5	164.7	6.1

Summary of outbreaks in 1988

There were 27 outbreaks associated with salmonella infections during 1988 and two associated with shigella. There were 11 outbreaks in 1987. Four out of the five biggest outbreaks were from Brisbane. In February-March three outbreaks were concurrent, *S. potsdam* (79 cases), *S. typhimurium 170* (68 cases) and *S. birkenhead* (38 cases). In late October to early November, and possibly associated with Expo, there was an outbreak of *S. heidelberg* (177 cases).

In Perth there was an outbreak of *S. anatum* (61 cases) in February and *Sh. flexneri* 6 made its presence felt in the Great Australian Bicentennial Camel Race as it passed through Boulia in Western Queensland in May. A total of 178 cases of dysentery were associated with this outbreak and screening of Army personnel assisting with the event detected three cases of *S. give*.

Details of salmonella and shigella outbreaks detected through the National Salmonella Surveillance Scheme are presented in Table 7.

Table 7: Outbreaks of salmonella and shigella, NSSS, 1988.

Organism	Locality	Date	Cases	Notes
S. anatum	Perth, WA	Feb	61	Source not determined
S. birkenhead	Lismore, NSW	Feb-Mar	11	Source not determined
S. birkenhead	Brisbane, QLD	Feb-Mar	38	Source not determined
S. birkenhead	Sale, VIC	Nov-Dec	11	Food poisoning/hospital
S. bovismorbificans 4	Hamilton, VIC	Feb	6	Source not determined
S. give	Adelaide, SA	Mar-Apr	14	Source not determined
S. give	Townsville, QLD	Jun	3	Great Australian Camel Race - detected when screening for Sh. flexneri 6.
S. heidelberg	Brisbane, (Expo)	Oct-Nov	177	Source not determined
S. litchfield	Mount Isa, Qld	Sep	4	Source not determined
S. mississippi	Devonport. TAS	Dec	3	Source not determined
S. muenchen	Hobart, TAS	Dec	3	Source not determined
S. oslo	Footscray, VIC	Mar-Apr	9	Babies in hospital

Table 7: cont.

Organism	Locality	Date	Cases	Notes
S. poona	Charters Towers, QLD	Apr	3	Babies in hospital
S. potsdam	Brisbane, QLD	Feb-Mar	79	Source not determined
S. potsdam	Nambour, QLD	Dec	7	Source not determined
S. singapore	Melbourne, VIC	Jan-Feb	11	Food poisoning/wedding
S. typhimurium 116a	Melbourne, VIC	May-Jun	18	Source not determined
S. typhimurium 135	Melbourne, VIC	Mar	9	Hospital
S. typhimurium 135	Melbourne, VIC	May	12	Food poisoning/wedding
S. typhimurium 135	Frankston, VIC	May	11	Nursing home
S. typhimurium 170	Brisbane, QLD	Feb-Mar	68	Source not determined
S. typhimurium 179	Katoomba, NSW	Mar	3	Nursing home
S. typhimurium 201a	Melbourne, VIC	Dec	31	Food poisoning
S. typhimurium 202	Victoria	Feb-Mar	8	Source not determined
S. typhimurium 4	Coffs Harbour, NSW	Jan-Feb	17	Source not determined
S. typhimurium 44	Mentone, VIC	Nov-Dec	5	Play group
S. welikade	Jabiru, NT	Apr	5	Source not determined
Sh. flexneri 6	Boulia, QLD	May	17	Great Australian Camel Race
Sh. sonnei biotype a	Bondi, NSW	Mar	6	School

Source of isolates

A summary of bacteraemias (excluding enteric fever) and isolations from urine is presented in Table 8. (Details of sex, age and state for these patients are published in the NSSS Quarterly Reports. Please contact the NSSS on (03) 344 5713 should you require further detail.) Details for isolates obtained from unusual sites are presented in Table 9.

Table 8: Summary of bacteriemias (excluding enteric fever) and isolations from urine, NSSS, 1988.

Organism	Bacteremias	Isolation from urine
C. jejuni	2	-
C species	1	-
S. aberdeen	3	-
S. amsterdam	-	1
S. anatum	-	2
S. arizonae 61:1v:1,5,7:/z57/	-	1
S. birkenhead	1	3 (incl 1 carrier)
S. bovismorbificans 13	1	-
S. bovismorbificans 18	-	1
S. bovismorbificans 21	-	1
S. bovismorbificans 7	1	-
S. bredeney	1	-
S. bukavu	1	-
S. chester	3	1
S. dublin	2	2
S. enteritidis	3*	-
S. give	-	2
S. hadar	1*	-
S. havana	1	1
S. heidelberg	5	1
S. infantis	1	-
S. java	1	-

Table 8: cont.

Organism	Bacteremias	Isolation from urine
S. kimberley	-	1
S. litchfield	-	1
S. mgulani	1	-
S. mississippi	-	1
S. muenchen	1	2
S. ohio var 14+	1	-
S. oranienburg	1	-
S. oslo	-	1
S. potsdam	1	1
S. saintpaul	3	2
S. saintpaul 2	1	1
S. singapore	1	4
S. typhimurium	1*	-
S. typhimurium 12a	2	1
S. typhimurium 135	6	1
S. typhimurium 141	1	-
S. typhimurium 169	-	1
S. typhimurium 170	1	1
S. typhimurium 179	2	1
S. typhimurium 185	-	1
S. typhimurium 202	1	2
S. typhimurium 29	1	-
S. typhimurium 4	1	2
S. typhimurium 41	-	1
S. typhimurium 44	1	1
S. typhimurium 6	1	-
S. typhimurium 9	4	2
S. typhimurium untypable	-	1
S. RDNC and untypable	2	-
S. untypable rough:-:-	-	1
S. untypable rough:6:1,5	-	1
S. virchow	9 (incl 2*)	6
S. wangata	1	-
S. zanzibar	1	-
Sh. flexneri 2a	1	-
Sh. flexneri 6	1	-
Sh. sonnei biotype a	-	1
Total	75	26

* acquired overseas

Table 9: Unusual sites of isolation of enteric pathogens, NSSS, 1988

Organism	Sex/Age	State	Notes
C. jejuni	M/99	VIC	Peritoneal dialysis fluid
S. bovismorbificans 13	M/41	NSW	thumb wound
S. bovismorbificans 7	M/22	VIC	pus from appendectomy
S. choleraesuis	M/21	NSW	Knee aspirate - haemophiliac
S. choleraesuis v kunzendorf	M/27	VIC	wound - 10-year-old dog-bite
S. dublin	M/56	QLD	pleural fluid
S. dublin	F/56	VIC	pleural effusion
S. enteritidis	M/10	NSW	septic arthritis - pus
S. enteritidis	F/9	VIC	appendectomy wound
S. give	M/57	NSW	femoral artery bypass site
S. havana	F/33	SA	bile or gall bladder wound

Table 9: cont.

Organism	Sex/Age	State	Notes
S. infantis	M/17	VIC	thigh abscess
S. mgulani	F/2	QLD	tissue passed/post rectal
S. mississippi	M/1	TAS	cerebrospinal fluid
S. newport	F/25	QLD	ovarian cyst fluid
S. orion	M/ns	NT	pus, foot ulcer
S. potsdam	F/22	QLD	graft wound
S. rubislaw	M/25	NSW	chest skin abscess
S. typhimurium 116a	M/59	VIC	finger wound (meat worker)
S. typhimurium 135	F/86	VIC	colostomy swab
S. typhimurium 4	M/68	VIC	mediastinal abscess
S. typhimurium 41	M/74	NSW	psoriasis abscess
S. typhimurium 55	M/46	NSW	perianal abscess
S. typhimurium 9	M/56	VIC	femoral artery wound
S. virchow	M/14	VIC	pus from tibia (osteomyelitis)
S. virchow	M/80	QLD	sputum
Sh flexneri 2a	M/34	NT	ischiorectal abscess

Infections acquired overseas

Africa:	S. stanleyville; Sh. sonnei biotype g.
Asia:	S. panama.
Burma:	S. paratyphi A RDNC.
Germany:	Sh. flexneri 6.
Ethiopia:	S. kentucky.
Fiji:	S. untypable 3,10:r:-.
Hong Kong:	S. infantis.
Indonesia:	S. hadar; S. krefeld; S. senftenberg; S. typhimurium 29; Sh. boydii 2; Sh. sonnei biotype a.
India:	S. paratyphi A untypable; S. saintpaul; S. typhi 46; S. typhi A; S. typhi E2; S. typhimurium 64; Sh. dysenteriae 2; Sh. flexneri; Sh. sonnei biotype a.
Malaysia:	S. blockley.
Nepal:	Campylobacter spp; Sh. boydii 4; Sh. dysenteriae 1; Sh. flexneri 2a; Sh. flexneri 6; Sh. sonnei biotype g.
Papua New Guinea:	S. lagos.
South America:	Sh. sonnei biotype a.
South-East Asia:	S. bareilly; S. paratyphi A untypable; S. paratyphi B 1; S. paratyphi B Dundee; S. typhi 46; Sh. sonnei biotype a.
Thailand:	S. alachua; Sh. sonnei biotype g.
Vietnam:	S. anatum; S. derby.
Not Stated:	C. coli; C. jejuni; Campylobacter spp; S. anatum; S. bareilly; S. chester; S. enteritidis; S. heidelberg; S. oranienburg; S. stanley; S. untypable 47:z4,z23:-; S. virchow; S. weltevreden; Sh. flexneri 1b; Sh. sonnei biotype a & g.

APPENDIX 1: HUMAN ISOLATES OF CAMPYLOBACTER, E. COLI, SALMONELLA, SHIGELLA, AND VIBRIO, NSSS, 1988

This list includes infections acquired in Australia, including those from migrants and refugees and infections acquired overseas.

Duplicate notifications have been excluded from these figures, ie notifications of isolates from the same patient on the same date, and the same patient on different dates (follow-up specimen).

These totals therefore represent cases and not total number of notifications received and are smaller than those in Table 1 and larger than those in Table 4.

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
C. coli	6	14	36	7	-	30	1	3	97
C. fetus	-	-	-	-	-	-	-	4	4
C. jejuni	53	796	614	171	17	403	1	53	2108
C. laridis	-	-	1	-	-	-	-	-	1
C species	10	865	74	6	49	-	-	27	1031
Total (Campylobacter)	69	1675	725	184	66	433	2	87	3241
E. coli O111 K58 B4	-	-	-	3	-	-	-	-	3
E. coli O112 K66 B11	-	-	-	2	-	-	-	-	2
E. coli O119 K69 B14	-	-	-	2	-	-	-	-	2
E. coli O125 K70 B15	-	1	-	-	-	-	-	-	1
E. coli O126 K71 B16	1	1	-	2	-	-	-	-	4
E. coli O127 K63 B8	-	2	1	2	-	-	-	-	5
E. coli O128 K67 B12	-	-	1	4	-	-	-	-	5
E. coli O26 K60 B6	-	-	1	-	-	-	-	-	1
E. coli O44 K74 L	-	-	1	-	-	-	-	-	1
E. coli O55 K59 B5	-	-	-	-	1	-	-	-	1
Total (E. coli (EPEC))	1	4	4	15	1	-	-	-	25
S. 4,12:d:-	-	1	2	1	-	-	-	-	4
S. aberdeen	-	-	-	36	-	-	-	1	37
S. abony	-	1	-	4	-	4	-	1	10
S. adelaide	-	20	1	13	6	24	-	6	70
S. agona	-	11	5	6	7	7	1	4	41
S. alachua	2	1	-	-	1	-	-	-	4
S. albany	-	-	2	1	1	-	-	-	4
S. amsterdam	-	4	1	-	-	-	-	1	6
S. amsterdam var 15+	-	-	-	-	-	1	-	-	1
S. anatum	1	27	16	56	3	89	-	20	212
S. anatum var 15+	-	1	-	10	-	-	-	1	12
S. arizonae	-	1	-	-	-	-	-	-	1
S. arizonae 38:z10:z53	-	-	1	-	-	-	-	-	1
S. arizonae 50:k:z35	-	1	-	6	-	-	-	1	8
S. arizonae 60:r:z	-	-	-	2	-	-	-	-	2
S. arizonae 61:-:-	-	-	-	-	-	-	1	-	1
S. arizonae 61:i:z	-	1	1	-	-	-	-	-	2
S. arizonae 61:i:z35	-	-	-	1	-	-	-	-	1

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
S. arizonae 61:1v:1,5,7:/z57/	-	1	-	-	-	-	-	-	1
S. arizonae 61:1v:z35	-	-	-	7	-	-	-	1	8
S. arizonae 61:r:z53	-	-	-	1	-	-	-	-	1
S. arizonae 61:z52:z53	-	1	-	2	-	1	-	2	6
S. bahrenfeld	-	-	-	1	-	4	-	2	7
S. ball	-	-	-	-	-	-	-	7	7
S. bareilly	-	3	1	1	1	-	-	-	6
S. berta	-	1	-	-	-	3	-	-	4
S. birkenhead	-	28	18	79	7	-	5	-	137
S. bleadon	-	-	-	-	1	-	-	-	1
S. blockley	-	12	5	3	3	8	1	2	34
S. bonn	-	2	-	-	-	-	-	-	2
S. bovismorbificans	-	3	3	-	1	3	-	-	10
S. bovismorbificans 10	-	-	1	-	1	-	-	-	2
S. bovismorbificans 108	-	-	1	-	-	-	-	-	1
S. bovismorbificans 11	-	2	1	-	-	-	-	-	3
S. bovismorbificans 12	-	1	2	-	2	-	-	-	5
S. bovismorbificans 13	-	14	5	-	4	4	2	4	33
S. bovismorbificans 14	-	3	-	-	-	-	-	-	3
S. bovismorbificans 16	-	3	3	-	-	-	-	-	6
S. bovismorbificans 18	-	2	1	-	-	-	-	-	3
S. bovismorbificans 19	-	-	-	-	1	-	-	-	1
S. bovismorbificans 2	-	-	1	1	-	-	-	-	2
S. bovismorbificans 21	-	1	5	-	-	-	-	-	6
S. bovismorbificans 23	-	-	-	-	2	15	-	-	17
S. bovismorbificans 24	-	-	-	-	1	-	-	-	1
S. bovismorbificans 26	-	-	-	-	1	-	-	-	1
S. bovismorbificans 3	-	-	2	-	-	1	-	-	3
S. bovismorbificans 4	-	-	12	-	-	2	-	-	14
S. bovismorbificans 6	-	3	-	-	-	-	-	-	3
S. bovismorbificans 7	-	4	4	-	12	-	-	3	23
S. bovismorbificans 8	-	1	-	-	1	-	-	-	2
S. bovismorbificans RDNC	-	3	-	3	1	-	-	-	7
S. bovismorbificans untypable	-	-	-	-	-	-	1	1	2
S. braenderup	-	4	1	-	-	-	-	-	5
S. brandenburg	-	-	1	3	-	1	-	-	5
S. bredeney	-	4	5	3	-	2	-	-	14
S. breukelen	-	1	-	2	-	-	-	-	3
S. brisbane	-	-	-	-	-	1	-	-	1
S. bukavu	-	1	-	-	-	-	-	1	2
S. cerro	1	13	5	10	4	9	-	-	42
S. champaign	-	-	-	-	-	1	-	-	1
S. charity	-	-	-	-	-	4	-	-	4
S. chester	1	11	13	59	11	55	-	27	177
S. choleraesuis	-	1	-	-	-	-	-	-	1
S. choleraesuis v kunzendorf	-	-	1	-	-	6	-	1	8
S. cubana	-	-	-	-	-	1	-	3	4
S. dan	-	-	-	1	-	-	-	-	1
S. decatur	-	-	-	-	-	4	-	-	4
S. denver	-	-	-	-	-	-	-	1	1
S. derby	2	7	19	5	2	6	-	-	41
S. dublin	-	2	6	1	-	4	-	1	14
S. eastbourne	-	1	-	18	-	7	-	5	31
S. emek	-	1	2	1	2	1	-	-	7

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
S. emmastad	-	-	-	1	-	1	-	1	3
S. enteritidis	1	20	6	14	1	4	-	1	47
S. enteritidis var danysz	-	1	-	-	-	-	-	-	1
S. fremantle subgenus II	-	-	-	-	1	2	-	1	4
S. gaminara	-	-	-	1	-	-	-	1	2
S. give	1	26	1	6	15	5	2	9	65
S. give var 15+	-	-	4	-	1	-	-	-	5
S. haardt	-	4	-	-	-	5	-	-	9
S. hadar	1	6	4	1	1	4	-	1	18
S. haifa	-	-	1	-	-	2	-	-	3
S. havana	-	5	12	22	13	30	-	17	99
S. heidelberg	1	16	3	243	4	2	-	1	270
S. hessarek	-	-	1	-	-	-	-	-	1
S. hessarek var 27	-	-	1	-	2	-	-	-	3
S. hvittingfoss	-	1	1	5	-	7	-	3	17
S. indiana	-	1	-	2	-	-	-	-	3
S. infantis	3	21	24	25	21	20	1	20	135
S. irumu	-	-	1	-	-	-	-	-	1
S. jangwani	-	-	-	-	-	1	-	2	3
S. java	-	11	-	1	-	1	-	-	13
S. java 3aI var.1	1	-	-	-	-	-	-	-	1
S. java Battersea	1	-	1	3	2	1	-	1	9
S. java Dundee	-	-	1	-	-	1	-	-	2
S. java RDNC	-	-	1	3	-	2	-	-	6
S. java Taunton	-	-	-	-	-	-	-	1	1
S. java untypable	-	-	1	6	-	8	-	9	24
S. javiana	-	2	2	3	-	3	-	-	10
S. johannesburg	-	5	4	2	-	-	-	1	12
S. kentucky	-	-	1	1	-	4	-	-	6
S. kimberley	-	-	-	-	-	1	-	1	2
S. kinondoni	-	-	-	2	-	-	-	-	2
S. kottbus	-	10	4	6	3	-	-	-	23
S. krefeld	-	-	1	1	1	2	-	-	5
S. lagos	-	-	1	-	-	-	-	-	1
S. lansing	-	2	1	16	1	3	-	1	24
S. lexington	-	-	1	-	-	-	-	-	1
S. lexington var 15+	-	-	-	-	-	1	-	-	1
S. lille	-	-	-	1	-	-	-	-	1
S. lindern	-	-	-	1	-	-	-	-	1
S. litchfield	-	1	4	26	4	5	-	11	51
S. livingstone	-	1	-	3	1	3	-	-	8
S. lohbruegge subgenus IV	-	-	-	-	-	-	-	1	1
S. london	-	-	3	-	-	1	-	-	4
S. london var 15+	-	-	1	-	-	-	-	-	1
S. manhattan	1	-	-	-	-	-	1	-	2
S. mbandaka	-	-	3	-	1	8	-	-	12
S. meleagridis	-	1	-	-	-	1	-	-	2
S. meleagridis var 15+	-	-	-	-	-	1	-	-	1
S. mgulani	-	-	-	11	-	-	-	-	11
S. mikawasima	-	-	-	1	1	-	-	-	2
S. mississippi	-	-	1	-	1	-	64	1	67
S. molade	-	-	1	-	-	-	-	-	1
S. montevideo	-	2	6	4	-	1	-	-	13

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
S. muenchen	-	45	17	44	6	51	4	17	184
S. newport	-	7	6	4	2	2	-	-	21
S. ohio	-	1	3	5	1	-	-	2	12
S. ohio var 14+	-	-	-	-	-	-	-	1	1
S. ohlstedt	-	-	-	4	-	1	-	1	6
S. onderstepoort	-	1	-	1	-	1	-	4	7
S. oranienburg	2	12	1	15	11	14	1	10	66
S. orientalis	-	-	-	6	1	-	-	-	7
S. orion	-	-	-	2	-	6	-	19	27
S. orion var 15+	-	-	-	-	-	-	-	1	1
S. oslo	-	1	8	2	1	-	-	1	13
S. panama	-	1	2	1	1	3	-	-	8
S. paratyphi A1	-	2	1	-	-	-	-	-	3
S. paratyphi A RDNC	-	3	-	1	-	-	-	-	4
S. paratyphi A untypable	-	2	2	1	-	1	-	-	6
S. paratyphi B1	-	1	-	-	-	-	-	-	1
S. paratyphi B 3aI var.1	-	1	-	1	-	-	-	-	2
S. paratyphi B Battersea	-	-	-	1	-	-	-	-	1
S. paratyphi B Dundee	1	-	-	1	1	-	-	-	3
S. paratyphi B Dundee var 1	-	-	-	1	1	-	-	-	2
S. paratyphi B Dundee var 2	-	-	-	-	-	1	-	-	1
S. paratyphi B RDNC	-	-	-	1	-	-	-	-	1
S. paratyphi B Taunton	-	5	1	-	-	1	-	-	7
S. poona	-	-	-	5	-	2	-	3	10
S. potsdam	-	8	1	113	2	5	2	3	134
S. ramatgen	-	-	-	-	-	2	-	-	2
S. reading	1	-	-	2	-	-	-	-	3
S. rubislaw	-	2	-	4	-	8	-	6	20
S. sachsenwald subgenus IV	-	-	-	2	-	-	-	-	2
S. saintpaul	-	20	17	104	12	32	-	18	203
S. saintpaul 2	-	-	-	12	-	-	-	6	18
S. schwarzengrund	-	9	7	1	-	-	-	-	17
S. senftenberg	-	2	1	3	-	20	-	12	38
S. seremban	-	-	-	-	-	-	1	-	1
S. singapore	1	45	32	17	7	7	-	1	110
S. sofia subgenus II	-	8	3	1	1	2	-	1	16
S. sofia var 27 subgenus II	-	-	1	-	-	-	-	-	1
S. stanley	-	3	12	-	2	3	-	-	20
S. stanleyville	-	2	-	-	-	-	-	-	2
S. tennessee	-	4	-	3	-	14	1	7	29
S. thompson	-	1	6	10	-	-	-	-	17
S. treforest	-	-	-	2	-	1	-	2	5
S. typhi 46	-	1	1	-	-	-	-	-	2
S. typhi A	-	1	1	-	-	1	-	-	3
S. typhi C1	-	-	1	-	-	-	-	-	1
S. typhi D1	-	-	-	1	-	-	-	-	1
S. typhi D2	-	1	-	-	-	-	-	-	1
S. typhi D9	-	-	-	-	-	1	-	-	1
S. typhi E1	-	-	3	-	-	-	-	-	3
S. typhi E2	-	1	-	-	-	-	-	-	1
S. typhi M1	-	1	-	-	-	-	-	-	1

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
S. typhi O	-	-	2	-	-	-	-	-	2
S. typhi RDNC	-	1	-	-	-	-	-	-	1
S. typhi degraded	-	-	3	1	-	1	-	-	5
S. typhi untypable	-	-	3	2	-	-	-	-	5
S. typhi untypable z66 phase	-	1	1	-	-	-	-	-	2
S. typhimurium	-	2	-	1	-	12	1	-	16
S. typhimurium 1	-	1	-	2	1	1	-	-	5
S. typhimurium 101	1	13	1	8	-	2	-	-	25
S. typhimurium 102	-	7	1	4	-	-	-	-	12
S. typhimurium 104	-	3	1	-	-	2	-	-	6
S. typhimurium 108	-	6	3	9	-	1	-	-	19
S. typhimurium 113	-	-	-	-	-	1	-	-	1
S. typhimurium 114	-	-	-	-	1	-	-	-	1
S. typhimurium 116	-	-	2	-	-	-	-	-	2
S. typhimurium 116a	-	3	18	-	-	-	-	-	21
S. typhimurium 12	-	2	1	1	-	-	-	-	4
S. typhimurium 120	-	-	-	1	-	1	-	-	2
S. typhimurium 122	-	-	-	1	-	-	-	-	1
S. typhimurium 124	-	7	-	-	-	1	-	-	8
S. typhimurium 126	-	1	-	1	-	-	-	-	2
S. typhimurium 12a	1	23	10	4	21	9	2	-	70
S. typhimurium 13	-	1	-	-	1	1	-	-	3
S. typhimurium 135	-	71	69	16	34	23	9	7	229
S. typhimurium 14	-	-	-	-	1	-	1	-	2
S. typhimurium 141	-	26	10	1	-	23	2	-	62
S. typhimurium 145	-	3	-	-	-	-	-	-	3
S. typhimurium 154	-	1	-	-	-	-	-	2	3
S. typhimurium 155	-	-	-	-	-	-	1	-	1
S. typhimurium 156	-	1	1	-	-	-	-	-	2
S. typhimurium 16	-	1	1	-	1	1	1	-	5
S. typhimurium 164	-	-	-	-	1	-	-	-	1
S. typhimurium 169	-	-	-	1	-	-	-	-	1
S. typhimurium 170	-	39	4	103	4	1	1	-	152
S. typhimurium 178	-	-	-	-	1	-	-	-	1
S. typhimurium 179	10	27	32	3	3	-	1	-	76
S. typhimurium 185	-	1	-	-	2	-	-	-	3
S. typhimurium 199	-	2	-	-	-	-	-	-	2
S. typhimurium 2	-	-	-	-	-	2	-	-	2
S. typhimurium 20	-	-	-	-	-	9	-	-	9
S. typhimurium 201a	-	-	31	-	-	-	-	-	31
S. typhimurium 202	-	11	23	5	5	2	-	1	47
S. typhimurium 21	-	-	-	-	-	14	-	-	14
S. typhimurium 22	-	-	4	7	-	33	-	-	44
S. typhimurium 22+	-	-	-	-	-	1	-	-	1
S. typhimurium 25	-	4	-	3	2	-	-	-	9
S. typhimurium 26	1	33	15	9	4	8	-	1	71
S. typhimurium 27	-	8	-	1	3	4	-	-	16
S. typhimurium 29	-	6	1	3	6	-	-	-	16
S. typhimurium 3	-	-	-	-	1	-	-	-	1
S. typhimurium 30	-	-	-	-	-	1	-	-	1
S. typhimurium 31	-	-	-	-	1	-	-	-	1
S. typhimurium 4	-	62	28	5	1	1	-	1	98
S. typhimurium 41	-	-	1	-	-	-	-	-	1
S. typhimurium 42	-	1	-	-	-	-	-	-	1
S. typhimurium 44	3	12	25	8	1	2	-	1	52
S. typhimurium 4a	-	-	-	-	1	-	-	-	1

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
S. typhimurium 5	2	19	1	6	5	1	-	-	34
S. typhimurium 55	-	3	-	-	-	2	-	-	5
S. typhimurium 58	-	-	-	-	-	4	-	-	4
S. typhimurium 6	-	2	5	2	2	-	1	-	12
S. typhimurium 64	1	13	7	2	13	6	-	-	42
S. typhimurium 66	-	3	-	-	-	-	-	-	3
S. typhimurium 68	-	-	-	1	3	-	-	-	4
S. typhimurium 69	-	-	1	-	-	-	-	-	1
S. typhimurium 8	-	4	-	-	1	3	-	-	8
S. typhimurium 83	-	-	-	-	1	-	-	-	1
S. typhimurium 9	8	54	128	14	25	10	5	-	244
S. typhimurium 90	-	2	-	2	-	-	-	-	4
S. typhimurium 91	-	1	-	-	-	-	-	-	1
S. typhimurium 99	-	2	-	-	1	-	-	-	3
S. typhimurium RDNC	-	30	10	14	14	19	-	-	87
S. typhimurium RDNC+	-	1	-	-	-	3	-	-	4
S. typhimurium rough	-	1	-	-	-	-	-	-	1
S. typhimurium untypable	1	58	27	15	4	20	-	2	127
S. untypable	-	-	1	-	-	-		-	1
S. untypable -:-:-	-	-	1	-	-	-	-	-	1
S. untypable -:y:enx	-	-	-	1	-	-	-	-	1
S. untypable 1,9,12:1z28:-	-	-	-	-	-	1	-	-	1
S. untypable 11:i:-	-	-	-	1	-	-	-	-	1
S. untypable 13,23:gs:-	-	1	-	-	-	-	-	-	1
S. untypable 16:1v:-	-	-	-	12	-	-	-	1	13
S. untypable 17:a:-	-	-	-	-	-	-	-	2	2
S. untypable 3,10:r:-	-	1	-	1	-	-	-	-	2
S. untypable 3,15:y:-	-	-	-	-	-	-	-	1	1
S. untypable 38:-:1,6	-	-	-	-	-	-	-	1	1
S. untypable 4,12:-:-	1	-	-	-	-	-	-	-	1
S. untypable 4,5,12:-:-	-	-	-	-	-	-	-	1	1
S. untypable 4,5,12:-:1,2	1	5	-	-	-	-	-	-	6
S. untypable 4,5:-:-	-	-	-	-	-	1	-	-	1
S. untypable 4,5:-:1,2	-	1	-	-	-	-	-	-	1
S. untypable 4,5:-:1,5	-	1	-	-	-	-	-	-	1
S. untypable 42:-:-	-	1	-	-	-	-	-	-	1
S. untypable 47:z4,z23:-	-	1	-	-	-	-	-	-	1
S. untypable 4:ch:-	-	-	-	-		-	-	1	1
S. untypable 6,7:-:-	-	-	-	-	-	2	-	-	2
S. untypable 6,7:b:-	-	-	-	1	-	-	-	-	1
S. untypable 6,7:k:-	-	1	-	-	-	-	-	-	1
S. untypable 6,8:-:1,2	-	-	-	-	-	1	-	-	1
S. untypable 61:1v:-	-	-	-	1	-	-	-	-	1
S. untypable 61:z10:-	-	-	-	1	-	-	-	-	1
S. untypable rough :-:-	-	-	-	-	-	1	-	-	1
S. untypable rough :6:1,5	-	-	-	-	-	-	1	-	1
S. untypable rough :eh:1,5	-	-	-	-	-	1	-	-	1
S. untypable rough :k:enx	-	-	1	-	-	-	-	-	1
S. untypable rough :1v:1,7	-	1	-	-	-	-	-	-	1
S. untypable rough :r:1,2	-	-	-	-	1	-	-	-	1
S. urbana	-	-	-	1	-	3	-	3	7
S. victoria	-	-	1	-	-	-	1	-	2
S. virchow	1	25	22	237	11	9	-	3	308
S. wandsbek subgenus II	-	1	-	-	-	3	-	2	6
S. wandsworth	-	-	-	2	-	6	-	5	13
S. wangata	-	1	-	-	-	-	-	-	1

Serotype	ACT	NSW	VIC	QLD	SA	WA	TAS	NT	Total
S. waycross	-	9	1	37	-	-	2	-	49
S. welikade	-	1	-	12	-	4	-	9	26
S. weltevreden	-	7	4	2	1	3	-	15	32
S. worthington	-	-	-	-	-	1	-	-	1
S. yarrabah	-	-	-	1	-	-	-	-	1
S. zanzibar	-	3	2	4	-	-	-	-	9
S. zanzibar var 15+	-	-	-	1	-	-	-	-	1
S. zehlendorf	-	-	-	-	-	1	-	-	1
TOTAL (Salmonella)	53	1163	874	1690	377	839	117	354	5467
Sh. boydii	-	1	-	2	-	-	-	-	3
Sh. boydii 1	-	-	-	-	1	-	-	-	1
Sh. boydii 13	-	-	-	-	-	-	1	-	1
Sh. boydii 2	-	1	2	-	-	-	1	-	4
Sh. boydii 4	-	3	-	-	-	-	-	-	3
Sh. boydii 5	-	-	-	-	-	1	-	-	1
Sh. boydii 9	-	-	-	-	-	1	-	-	1
Sh. dysenteriae 1	-	1	2	-	-	-	-	-	3
Sh. dysenteriae 2	-	-	2	-	-	-	-	-	2
Sh. dysenteriae 4	-	-	1	-	-	-	-	-	1
Sh. dysenteriae 6	-	1	-	-	-	-	-	-	1
Sh. flexneri	-	2	-	-	-	1	-	-	3
Sh. flexneri 1a	-	1	-	-	-	5	-	-	6
Sh. flexneri 1b	1	2	5	-	-	1	-	-	9
Sh. flexneri 2a	-	8	13	5	6	71	1	102	206
Sh. flexneri 2b	-	1	-	-	-	-	1	-	2
Sh. flexneri 3a	-	6	1	1	-	1	-	1	10
Sh. flexneri 3b	-	-	-	1	-	-	-	-	1
Sh. flexneri 4a	-	3	2	-	-	3	-	4	12
Sh. flexneri 4a (E1037)	-	-	-	-	-	-	-	1	1
Sh. flexneri 4a mannitol neg	-	1	-	-	1	-	-	1	3
Sh. flexneri 5a	-	-	-	-	1	-	-	-	1
Sh. flexneri 5b	-	-	1	-	-	-	-	-	1
Sh. flexneri 6	-	5	2	22	7	54	-	37	127
Sh. flexneri var X	-	-	-	-	-	2	-	1	3
Sh. flexneri var Y	-	2	-	-	-	-	-	1	3
Sh. sonnei biotype a	3	43	34	75	18	92	1	46	312
Sh. sonnei biotype g	-	2	21	-	-	-	1	3	27
TOTAL (Shigella)	4	83	86	106	34	232	6	197	748
V. parahaemolyticus	-	1	1	-	-	-	-	-	2
TOTAL (Vibrio)	-	1	1	-	-	-	-	-	2
TOTAL (All Isolates)	127	2926	1690	1995	478	1504	125	638	9483

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 17/8/89 TO 30/8/89

1. CODE 019 - FAIRFIELD(VIC)
2. CODE 065 - STATE LAB(WA) PMH(WA)
3. CODE 110 - IMVS(SA)
4. CODE 111 - RCH(VIC)
5. CODE 112 - ICPMR(NSW) WVH(ACT)
6. CODE 113 - PHH POW(NSW)
7. CODE 114 - RAHC(NSW)
8. CODE 115 - STATE LAB(QLD)

		019	065	110	111	112	113	114	115	TOTAL
0100	ADENOVIRUS NOT TYPED	0	0	1	5	13	4	0	11	34
0101	ADENOVIRUS TYPE 1	0	0	0	0	6	0	0	0	6
0102	ADENOVIRUS TYPE 2	1	0	1	0	2	0	0	0	4
0103	ADENOVIRUS TYPE 3	4	1	0	0	10	0	0	0	15
0104	ADENOVIRUS TYPE 4	7	0	0	0	0	0	0	0	7
0105	ADENOVIRUS TYPE 5	1	0	1	0	3	0	0	0	5
0106	ADENOVIRUS TYPE 6	0	0	0	0	2	0	0	0	2
0108	ADENOVIRUS TYPE 8	0	0	12	0	1	0	0	0	13
0112	ADENOVIRUS TYPE 12	0	0	0	0	1	0	0	0	1
0114	ADENOVIRUS TYPE 14	0	0	0	0	0	1	0	0	1
0115	ADENOVIRUS TYPE 15	0	0	0	0	1	0	0	0	1
0130	ADENOVIRUS TYPE 30	0	0	0	0	1	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	9	0	1	1	0	11
0201	INFLUENZA A VIRUS	1	2	9	18	4	1	2	0	37
0202	INFLUENZA A VIRUS SUBTYPE H3N2	2	0	42	0	6	0	0	0	50
0203	INFLUENZA B VIRUS	2	14	15	0	8	0	0	1	40
0301	PARAINFLUENZA VIRUS TYPE 1	1	0	0	0	0	0	0	0	1
0302	PARAINFLUENZA VIRUS TYPE 2	2	0	1	0	0	1	0	0	4
0303	PARAINFLUENZA VIRUS TYPE 3	1	6	23	2	2	0	0	0	34
0400	RESPIRATORY SYNCYTIAL VIRUS (R	61	32	32	36	2	6	12	11	192
0500	RHINOVIRUS (ALL TYPES)	2	1	5	9	5	1	0	1	24
0600	MYCOPLASMA PNEUMONIAE	4	0	4	12	3	0	1	0	24
0700	ORNITHOSIS-PSITTACOSIS	1	0	1	0	0	0	0	0	2
0809	COXSACKIEVIRUS A9	0	0	0	0	1	0	0	0	1
0821	COXSACKIEVIRUS A21	1	0	0	0	0	0	0	0	1
0903	COXSACKIEVIRUS B3	1	0	0	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	0	0	1	0	1	0	0	0	2
1003	ECHOVIRUS TYPE 3	0	0	0	0	1	0	0	0	1
1006	ECHOVIRUS TYPE 6	1	0	0	0	0	0	0	0	1
1009	ECHOVIRUS TYPE 9	2	0	0	0	3	1	0	0	6
1011	ECHOVIRUS TYPE 11	0	0	0	0	2	0	0	0	2
1014	ECHOVIRUS TYPE 14	0	0	0	0	4	0	0	0	4
1022	ECHOVIRUS TYPE 22	1	0	0	0	0	0	0	0	1
1028	ECHOVIRUS TYPE 28 = RHINO VIRU	0	0	0	0	0	0	1	0	1
1030	ECHOVIRUS TYPE 30	4	2	0	0	3	0	0	0	9
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	2	0	0	2
1101	POLIOVIRUS TYPE 1	3	0	4	0	0	0	0	0	7
1102	POLIOVIRUS TYPE 2	0	0	0	0	4	0	1	0	5
1103	POLIOVIRUS TYPE 3	0	0	1	0	0	0	0	0	1
1104	POLIOVIRUS - MIXED VACCINAL ST	0	2	0	0	0	0	0	0	2
1200	MUMPS VIRUS	0	2	0	0	0	0	0	0	2
1300	HERPES VIRUS GROUP - NOT TYPED	0	7	0	0	0	0	0	1	8
1301	HERPES SIMPLEX VIRUS - NOT TYP	8	7	0	0	144	0	1	35	195
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	1	3	7	1	38	2	0	0	52
1303	VARICELLA-ZOSTER VIRUS	2	5	4	0	0	3	0	1	15
1306	HERPES SIMPLEX TYPE 1	36	27	18	0	5	7	0	0	93
1307	HERPES SIMPLEX TYPE 2	59	49	21	0	40	13	0	5	187
1399	HERPES VIRUS TYPING PENDING	3	0	0	0	0	0	0	0	3
1401	COXIELLA BURNETII	2	2	0	0	0	0	0	0	4
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	0	2	2	0	2	6
1521	MEASLES VIRUS	0	0	0	0	0	1	0	0	1
1522	RUBELLA VIRUS	5	0	7	1	3	0	0	0	16
1532	HEPATITIS B ANTIGEN	19	30	23	0	76	6	1	28	183
1535	HEPATITIS A ANTIBODY	0	2	2	0	1	1	0	0	6
1541	CHLAMYDIA A - C. TRACHOMATIS	8	40	22	0	33	4	0	22	129
1556	CMV - CYTOMEGALOVIRUS	24	4	1	6	28	2	1	16	82
1562	REOVIRUS (ALL TYPES)	0	0	0	0	1	0	0	0	1
1564	ROTAVIRUS	16	16	29	27	45	15	3	0	151
1565	CALICI VIRUS	0	2	0	0	2	0	0	0	4
1599	ENTEROVIRUS TYPING PENDING	0	0	0	2	0	4	2	0	8
9992	ROSS RIVER VIRUS	1	9	4	0	48	0	0	0	62
9994	SMALL VIRUS (LIKE) PARTICLE	0	3	0	0	1	0	0	0	4
TOTAL		287	268	291	128	556	78	26	134	1768

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1

PERIOD 17/8/89 TO 30/8/89

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	6	7	8	9	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	0	8	0	0	0	22	1	0	0	0	31
0101	ADENOVIRUS TYPE 1	4	0	0	0	0	1	0	0	0	0	5
0102	ADENOVIRUS TYPE 2	1	2	0	0	0	0	0	0	0	0	3
0103	ADENOVIRUS TYPE 3	4	2	0	0	0	4	0	0	0	0	10
0104	ADENOVIRUS TYPE 4	0	1	0	0	0	0	0	0	0	0	1
0105	ADENOVIRUS TYPE 5	1	2	0	0	0	1	0	0	0	0	4
0106	ADENOVIRUS TYPE 6	2	0	0	0	0	0	0	0	0	0	2
0108	ADENOVIRUS TYPE 8	1	0	0	0	0	0	0	0	0	0	1
0112	ADENOVIRUS TYPE 12	1	0	0	0	0	0	0	0	0	0	1
0115	ADENOVIRUS TYPE 15	0	0	0	0	0	1	0	0	0	0	1
0130	ADENOVIRUS TYPE 30	1	0	0	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	8	0	0	0	0	0	0	0	0	8
0201	INFLUENZA A VIRUS	4	27	0	1	0	0	0	0	0	1	33
0202	INFLUENZA A VIRUS SUBTYPE H3N2	1	49	0	0	0	0	0	0	0	0	50
0203	INFLUENZA B VIRUS	3	36	0	0	0	0	0	1	0	0	40
0301	PARAINFLUENZA VIRUS TYPE 1	0	1	0	0	0	0	0	0	0	0	1
0302	PARAINFLUENZA VIRUS TYPE 2	0	4	0	0	0	0	0	0	0	0	4
0303	PARAINFLUENZA VIRUS TYPE 3	2	30	0	0	0	0	0	0	0	1	33
0400	RESPIRATORY SYNCYTIAL VIRUS (R	4	180	0	0	0	0	0	0	1	0	185
0500	RHINOVIRUS (ALL TYPES)	0	21	0	0	0	0	0	0	0	0	21
0600	MYCOPLASMA PNEUMONIAE	1	20	0	0	0	0	0	0	0	0	21
0700	ORNITHOSIS-PSITTACOSIS	1	1	0	0	0	0	0	0	0	0	2
0809	COXSACKIEVIRUS A9	0	0	0	0	1	0	0	0	0	0	1
0821	COXSACKIEVIRUS A21	0	1	0	0	0	0	0	0	0	0	1
0903	COXSACKIEVIRUS B3	0	0	0	0	0	0	0	0	0	1	1
0904	COXSACKIEVIRUS B4	1	1	0	0	0	0	0	0	0	0	2
1003	ECHOVIRUS TYPE 3	1	0	0	0	0	0	0	0	0	0	1
1006	ECHOVIRUS TYPE 6	0	1	0	0	0	0	0	0	0	0	1
1009	ECHOVIRUS TYPE 9	1	0	0	5	0	0	0	0	0	0	6
1011	ECHOVIRUS TYPE 11	1	0	0	0	0	1	0	0	0	0	2
1014	ECHOVIRUS TYPE 14	1	0	0	1	1	1	0	0	0	0	4
1022	ECHOVIRUS TYPE 22	0	1	0	0	0	0	0	0	0	0	1
1028	ECHOVIRUS TYPE 28 = RHINO VIRU	0	1	0	0	0	0	0	0	0	0	1
1030	ECHOVIRUS TYPE 30	3	0	0	6	0	0	0	0	0	0	9
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	2	0	0	0	0	2
1101	POLIOVIRUS TYPE 1	0	5	0	0	0	0	0	0	0	0	5
1102	POLIOVIRUS TYPE 2	2	1	0	0	0	0	0	0	0	0	3
1103	POLIOVIRUS TYPE 3	0	1	0	0	0	0	0	0	0	0	1
1104	POLIOVIRUS - MIXED VACCINAL ST	0	1	0	0	0	1	0	0	0	0	2
1200	MUMPS VIRUS	1	0	0	0	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	0	0	0	0	0	6	6
1301	HERPES SIMPLEX VIRUS - NOT TYP	48	4	1	0	0	0	0	0	0	53	106
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	9	4	0	0	0	0	4	0	0	2	19
1303	VARICELLA-ZOSTER VIRUS	4	0	0	0	0	0	0	0	0	9	13
1306	HERPES SIMPLEX TYPE 1	0	9	0	0	0	0	0	0	0	48	57
1307	HERPES SIMPLEX TYPE 2	2	0	0	0	0	0	0	0	0	57	59
1399	HERPES VIRUS TYPING PENDING	0	0	0	0	0	0	0	1	0	0	1
1401	COXIELLA BURNETII	1	0	0	0	0	0	0	0	0	0	1
1502	PICORNIA VIRUS - NOT TYPED = E	0	3	0	0	0	3	0	0	0	0	6
1521	MEASLES VIRUS	0	0	1	0	0	0	0	0	0	0	1
1522	RUBELLA VIRUS	0	0	0	0	0	0	0	0	0	8	8
1532	HEPATITIS B ANTIGEN	82	0	0	0	0	0	85	0	0	0	167
1535	HEPATITIS A ANTIBODY	1	0	0	0	0	0	5	0	0	0	6
1541	CHLAMYDIA A - C. TRACHOMATIS	24	1	0	0	0	0	0	0	0	0	25
1556	CMV - CYTOMEGALOVIRUS	10	21	0	0	0	3	2	2	8	1	47
1562	REOVIRUS (ALL TYPES)	0	0	0	0	0	1	0	0	0	0	1
1564	ROTAVIRUS	6	0	0	0	0	145	0	0	0	0	151
1565	CALICI VIRUS	1	0	0	0	0	3	0	0	0	0	4
1599	ENTEROVIRUS TYPING PENDING	0	2	0	0	0	4	0	0	0	0	6
9992	ROSS RIVER VIRUS	3	0	0	0	0	0	0	0	2	2	7
9994	SMALL VIRUS (LIKE) PARTICLE	1	0	0	0	0	3	0	0	0	0	4
TOTAL		234	449	2	13	2	196	97	4	11	189	1197

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 17/8/89 TO 30/8/89

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	16	17	18	19	20	21	TOTAL
0100	ADENOVIRUS NOT TYPED	1	0	0	0	0	2	0	0	0	3
0101	ADENOVIRUS TYPE 1	0	0	0	0	0	1	0	0	0	1
0102	ADENOVIRUS TYPE 2	0	0	0	0	0	0	1	0	0	1
0103	ADENOVIRUS TYPE 3	3	0	0	0	0	0	1	1	0	5
0104	ADENOVIRUS TYPE 4	6	0	0	0	0	0	0	0	0	6
0105	ADENOVIRUS TYPE 5	0	0	0	0	0	0	1	0	0	1
0108	ADENOVIRUS TYPE 8	12	0	0	0	0	0	0	0	0	12
0114	ADENOVIRUS TYPE 14	0	0	0	0	0	0	1	0	0	1
0199	ADENOVIRUS TYPING PENDING	1	0	0	0	0	0	1	1	0	3
0201	INFLUENZA A VIRUS	0	0	0	0	0	2	2	0	0	4
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	0	0	1	0	1
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	0	0	1	0	0	3	3	0	7
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	2	1	0	3
0600	MYCOPLASMA PNEUMONIAE	0	0	1	1	0	0	0	1	0	3
1101	POLIOVIRUS TYPE 1	0	0	0	0	1	0	0	0	1	2
1102	POLIOVIRUS TYPE 2	0	0	0	0	0	0	0	1	1	2
1200	MUMPS VIRUS	0	0	1	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	1	0	0	0	0	0	1	0	2
1301	HERPES SIMPLEX VIRUS - NOT TYP	2	83	0	0	0	0	1	3	0	89
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	18	0	0	3	2	10	0	33
1303	VARICELLA-ZOSTER VIRUS	0	0	0	0	0	0	1	1	0	2
1306	HERPES SIMPLEX TYPE 1	2	31	0	0	0	0	1	2	0	36
1307	HERPES SIMPLEX TYPE 2	0	123	0	0	0	0	0	5	0	128
1399	HERPES VIRUS TYPING PENDING	0	1	0	0	0	0	1	0	0	2
1401	COXIELLA BURNETII	0	0	0	0	0	1	2	0	0	3
1522	RUBELLA VIRUS	0	0	1	1	1	0	0	5	0	8
1532	HEPATITIS B ANTIGEN	0	0	0	0	0	0	0	16	0	16
1541	CHLAMYDIA A - C. TRACHOMATIS	1	103	0	0	0	0	0	0	0	104
1556	CMV - CYTOMEGALOVIRUS	0	2	1	0	1	2	3	26	0	35
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	1	0	1	2
9992	ROSS RIVER VIRUS	0	0	0	50	0	1	0	4	0	55
TOTAL		28	344	22	53	3	12	24	82	3	571