

HUMAN SALMONELLOSIS IN AUSTRALIA

In this issue, data is included on the cases of human salmonellosis occurring around Australia in April and May 1978, which have been reported under the Communicable Diseases Intelligence surveillance program.

The system which has been introduced requests clinical and public health laboratories to report on isolates of salmonella serotypes from humans, to one of the four typing laboratories in either Sydney, Melbourne, Adelaide or Perth. The typing laboratory then forwards the report form with the serotype included to Canberra. At present, the information is being manually collated, but it is the intention to computerize this as soon as possible.

While the data is being manually collated, certain limitations will need to be placed on what can be reported. Although laboratories will continue to advise this office of the phage types for organisms such as Salmonella typhi and S. typhimurium, these will not be included in the tables. It will also be impossible to detect duplicate samples from a patient.

A total of 781 isolates of various salmonella serotypes were reported for April and May. Of these, 351 (45%) occurred in infants up to the age of 5 years. However, it should be considered that there is a greater likelihood of medical aid being sought for infants with an infection, since the condition is more serious in the young. There is therefore an inherent bias in the data.

For April, 54 different serotypes were reported compared to 56 in May. As expected, the most common serotype was S. typhimurium which accounted for 31% of all isolates (244 reports). This was followed by S. saint-paul (42 isolates), but this largely reflects a survey of Vietnamese refugees in Western Australia.

The following is a selection of some interesting case histories from the reports:

S. anatum: includes cases mentioned in Bulletin 78/9; S. bareilly isolated from faeces of both mother and 3 d. infant; S. havana found in 3 infants in the same maternity hospital, ages 9 d, 7 m and 11 m; S. java from a gallbladder abscess of a man aged 68; S. muenchen from 6 m infant exclusively breast fed; S. singapore from 56 y. female who consumed reheated sausages.

S. singapore: of 11 family members who consumed reheated chicken, 3 were admitted to hospital and 4 others were symptomatic. Remainder asymptomatic; S. typhi isolates include cases mentioned in 78/10 plus 1 case imported from Phillipines, 1 from Chile and 1 in a male known to be a carrier since 1955; S. tennessee: now 13 cases in Alice Springs this year. No reason yet identified.

S. typhimurium: male 8 y. consumed boiled water taken downstream from a city sewer outlet; 18 m. infant with intermittent diarrhoea for 9 m.; 21 y. female with intermittent diarrhoea for 2 yrs; 21 y. male with salmonella osteomyelitis; outbreak in pupils at a Sydney boys' college; 6 m. white infant with concomitant Giardia lamblia and E.E.C.; 18 y. female from chicken left unrefrigerated in a caravan; 17 y. male who

had stomach pains after eating bacon burgers on Saturday but who purchased more take-away food from the place on Sunday - admitted to hospital on the Wednesday. S. waycross: 8 m. infant, possibly from a tinned egg custard.

MYCOPLASMA PNEUMONIAE (contributed by L. Irving, Fairfield Hospital, Melbourne)

The increased incidence of Mycoplasma pneumoniae infections noted during the last two months of 1977 (Bulletin 78/2) is continuing.

Sera, submitted to Fairfield Hospital from patients within Victoria, have shown either a significant rise in titre or a high complement fixation titre against Mycoplasma pneumoniae in 81 cases. This diagnostic of recent infections with this organism.

ENTEROPATHOGENIC ESCHERICHIA COLI FOOD POISONING IN AN ADULT (contributed by the staff of the Fairfield Hospital and the School of Agriculture, La Trobe University, Melbourne)

A 56 year old male ate oysters at lunchtime at his football club in Melbourne; he developed serious diarrhoea 3 days later which persisted until, on following, his admission to Fairfield Hospital 10 days after the lunch. On admission he was dehydrated. Salmonellas and Shigellas were not recovered; the predominant organism in the faecal flora was a strain of E. coli which was subsequently shown to produce both heat-stable and heat-labile enterotoxins. None of the patient's companions had consumed the oysters and they remained free of symptoms.

CASE OF TYPHOID IN NEW SOUTH WALES: FOLLOW-UP REPORT (contributed by the Bacteriology Department, Institute of Clinical Pathology and Medical Research, Westmead, New South Wales)

This case was presented as a preliminary report in a previous issue of this bulletin (No.78/10). It was mentioned that the carriers of typhoid bacilli were found to be two elderly ladies. Cultures isolated from the carriers and the typhoid case have been phage-typed by the Microbiological Diagnostic Unit, University of Melbourne, and were found to be identical - all belonging to phage type E₁.

Eighty-three persons who were recent contacts of the two enteric carriers were screened for Salmonella typhi. All specimens were negative on repeated culture. However, one specimen submitted from a 67 year old female was positive for Salmonella orion, a relatively uncommon human serotype.

This episode has been an interesting one, particularly with regard to the history of the chronic carriers. They may well have been harbouring and excreting typhoid bacilli intermittently over several decades without infecting other persons until recently. It is known that the number of typhoid bacilli excreted in the faeces of chronic enteric carriers is exceedingly high - in the vicinity of 10⁶ organisms and frequently as high as 10⁹ organisms per gram of faeces. Most of the faecal specimens submitted from the two carriers yielded virtually pure cultures of typhoid bacilli on primary media. Information received from the regional health office indicated that the present carrier state of Mrs Z is associated with a typhoid outbreak which occurred in Derby, Tasmania some 60 years ago. Her mother had died of the disease, and her father became a known carrier. Mrs Z who nursed her parents also became infected but recovered from her illness.

YERSINIA ENTEROCOLITICA

The name Yersinia enterocolitica was applied by Frederiksen in 1964 to the bacterium which had previously been described as Pasteurella pseudotuberculosis, Pasteurella X and Bacterium enterocolitica. Since then, investigations have established that the organism, classified as a member of the family Enterobacteriaceae, is widely distributed in the environment, and strains have been isolated from a wide range of animal species, foods (such as milk, oysters and mussels) and water. It is generally accepted that the organism is of faecal origin.

The role of Yersinia enterocolitica in the pathogenesis of human disease is not completely understood, although there is little doubt that certain strains are human pathogens. In infants, the organism has been most commonly associated with diarrhoea and fever; in older children with mesenteric lymphadenitis and ileitis (which can mimic symptoms of acute appendicitis); in adults with abdominal pains, acute enteritis, arthritis and erythema nodosum. In addition, cases of septicaemia have been recorded in the aged and immunosuppressed, and the organism has been recovered from abscesses and eye infections. Experiments to define the pathogenicity of Y. enterocolitica have suggested that this is dependent on a number of factors including the site of inoculation and the age and physical state of the patient. Whereas non-pathogenic strains were shown to be rapidly excreted from the gut without penetration, pathogenic strains easily penetrated the epithelial linings of the intestinal mucous membrane.

Epidemiological investigations have established that the animal kingdom serves as a major reservoir of Y. enterocolitica, although only certain animals seem to harbour those serotypes that infect humans. The strains most commonly associated with disease in humans are serotypes 3, 8 and 9. The pig in particular is a well recognized reservoir of serotype 3 and to a lesser extent serotype 9, the latter also being found in dogs and cats. Transmission between humans has been shown to occur, and important sources of infection have included milk and water. These represent a problem if contaminated, because of the ability of the organism to multiply at low temperatures.

The geographical distribution of the serotypes is unresolved. Serotypes 3 and 9 have been found in humans extensively throughout Japan, Europe, South Africa and Canada, but are notably absent in the United States. In contrast, serotype 8 has been found in humans in the United States but quite infrequently in the other countries. It has been suggested that in Europe, the number of infections caused by Y. enterocolitica is probably about 20% of the number of Salmonella infections.

Bacteriology

Y. enterocolitica is a gram negative rod with a tendency towards pleomorphism which is influenced by both age and media composition. When viewed microscopically after 18 hrs on a blood plate at 37°C, it is a small Pasteurella-like coccobacillus with rounded ends. Capsules have not been demonstrated in smears prepared from growth on artificial media, but they have been observed in smears of peritoneal exudate from experimentally infected white mice.

It is not possible here to review the various methods of culturing Yersinia. To ensure successful recovery of the organism however, particularly from faecal specimens, which contain a multiplicity of microbial species, the following must be borne in mind: (a) utilization of one of several enteric media (e.g. Serotypes 3, 8 and 9 usually grow on MacConkey, desoxycholate, EMB, Salmonella-Shigella, and XLD agars) (b) Yersinia colonies on these media are usually non-lactose fermenters with colonies up to 0.05 mm diameter after incubation for 24 hrs.

at 37°C. (c) Y. enterocolitica is one of the few human bacterial pathogens that will grow at temperatures between 0°C and 5°C, and this is of value in its isolation. (d) the marked similarity of biochemical reactions to other members of the family Enterobacteriaceae.

Little information is available on either the distribution of the various Y. enterocolitica serotypes in Australia, or on the incidence of disease associated with this organism. There is therefore a need for clinical, veterinary and public health laboratories to be aware of this organism when investigating gram negative bacterial isolates, and for epidemiological information to be accumulated.

YERSINIA ENTEROCOLITICA ISOLATIONS IN MELBOURNE (contributed by A. Hewstone, Royal Children's Hospital, Melbourne)

Between 1971 and 1977, Yersinia enterocolitica was isolated from 4 children at the Royal Children's Hospital. The case histories are as follows:

- Case 1. July 1971. 9 year old with septicaemia and arthritis with underlying thalasaemic blood culture produced Y. enterocolitica type 03/1. Titre 1/320.
- Case 2. August 1975. 4 year old. Asymptomatic carriage of Y. enterocolitica type 08 m gut probably resulted from drinking stream water while on camping holiday. Titre 1/20.
- Case 3. July 1976. 2 year old with gastroenteritis due to Y. enterocolitica type 03/1. Recent visit to wildlife sanctuary. Titre 1/256.
- Case 4. December 1977. 1½ year old with gastroenteritis due to Y. enterocolitica type 09. Titre 1/40. Effective enrichment provided by holding a 5% suspension of faeces in buffered saline pH 7.3 at 4°C for 4 days.

References

- Bottone E.J. "Yersinia enterocolitica: A panoramic view of a charismatic micro-organism" in CRC Critical Reviews in Microbiology January 1977 pp 211-241
- Morris G.K.
& Feeley J.C. Yersinia enterocolitica: A review of its role in food hygiene. Bull World Health Organ. Vol 54 1976. P.3489
- Schiemann D.A.
& Thomas S. Isolation of Yersinia enterocolitica from raw milk. Applied and Environmental Microbiology. Vol 35 No.1 Jan 1978.

Codes used in virus tables

FA = faeces
 Bl = blood/serum
 NA = nasopharyngeal swab
 CS = cerebrospinal fluid
 SK = skin
 EY = eye
 UR = urinary tract
 BR = bronchial aspirate
 GE = genital
 OT = other

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE					CUMULA TOTAL
									<1	1-5	6-15	16-60	>60	
S. adelaide	11	-	-	-	-	11	-	-	-	4	-	1		6
S. agona	1			1					1					
S. anatum	13	2	5	2	-	3	-	1	2	1	-	5	4	1
S. alsterdorf	1			1						1				
S. ball	1			1								1		
S. bareilly	3	2				1			1			1	1	
S. bahrenfeld	5			1		4			1					4
S. birkenhead	2			1		1			1			1		
S. bovis-morbificans	17	2	4	3	6	2			5	4	2	3	2	1
S. bredeney	9			1	2	6			3	3				3
S. breukelen	2		1	1					1	1				
S. brisbane	1					1								1
S. champaign	1							1	1					
S. chester	12			2	3	7			3	2	1	3		3
S. derby	10		3	3		4				2	1	5	2	
S. emek	1	1										1		
S. edmonton	1			1					1					
S. eimsbeuttel	2				2					1		1		
S. enteriditis	5		2	3						2	2	1		
S. give	3	1				1		1	1	2				
S. havana	10			3	1	6			2	1		1	2	4
S. hvittingfoss	4				1	3				2	1		1	
S. infantis	7	1	2		2	2			1	1		3		2
S. jangwani	2					2			1			1		
S. kimberley	2					2			1					1

PERIOD APRIL 1978

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE						CUMULATIV TOTAL
									<1	1-5	6-15	16-60	>60	NOT STATED	
lansing	3			3						2			1		
lexington	1		1										1		
litchfield	6			2		4			1	2					3
meleagridis	1		1							1					
muenchen	12			11	1				3	3					6
newington	2					2			1						1
newport	11	5	2	1	2	1			1	5	2	1	2		
ohlstedt	2				2							2			
ohio	1		1										1		
oranienberg	7				1	6			4	1			2		
orientalis	4			3	1				3	1					
orion	2					2			2						
oslo	1					1									1
paratyphi B	4	1	1		1	1						2			2
poona	4			2				2	1	1		1	1		
rubislaw	13			13						3	7	3			
saint-paul	28		3	3	1	20		1	6	9	4	6			3
sandiego	1			1					1						
senftenberg	6		1			5			2		2				2
singapore	7		4	1		2			1	1		3	1		1
tennessee	2					2						1			2
typhi	6	1	3	1	1						2	3	1		
typhimurium	136	27	33	3	32	29	9	3	20	43	24	29	10	10	

HUMAN SALMONELLOSIS CASES

PERIOD APRIL 1978

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE					CUMULATIV TOTAL	
									< 1	1-5	6-15	15-60	> 60		NOT STATED
S. urbana	5					5									5
S. virchow	12			12					4	4		3	1		
S. welikade	3			2				1	1	2					
S. weltevreden	2	1		1						1		1			
S. wordsworth	4				4			1		1		2			
S. worthington	1	1								1					
TOTAL	413	45	67	83	59	140	9	10	78	107	48	85	32	63	

HUMAN SALMONELLOSIS CASES

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PERIOD MAY 1978

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE					CUMULATIV TOTAL	
									< 1	1-5	6-15	16-60	> 60		NOT STATED
S. adelaide	6		1		1	4			1	2		1		2	17
S. angona	3		1	2					1	1	1				4
S. anatum	14		9	1		2		2	2		3	7		2	27
S. bahrenfeld	6					6						1		5	11
S. birkenhead	1				1				1						3
S. bovis morbif- icans	16	4	4		7		1		8	3		2	1	2	33
S. bredeney	7				1	6			4	1				2	●
S. brunei	1		1						1						1
S. chester	7				2	4		1	1	2		2		2	19
S. coleypark	1		1									1			1
S. derby	20	2	16		2				3	2	5	9	1		30
S. eastbourne	6			1	1	4			1	2		1		2	6
S. eimsbeuttel	1				1				1						3
S. emmastad	1							1				1			1
S. enteritidis	5	1		4						1		3	1		●
S. give	2		1	1					2						5
S. havana	15		1	4		8		2	5	5	1	1		3	25
S. hvittingfoss	4				1	3			2		1		1		8
S. jangwani	5					5			1			1		3	7
S. java	1		1										1		1
S. krefeld	1		1							1					1
S. lansing	1			1						1					4
S. lexington	1			1						1					2
S. litchfield	1							1				1			7

HUMAN SALMONELLOSIS CASES

PERIOD MAY 1978

SEROTYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE					CUMULATIV TOTAL	
									< 1	1-5	6-15	16-60	> 60		NOT STATED
S. london	2		2								1	1			1
S. meleagridis	1		1										1		2
S. mississippi	3		1		1		1		2					1	3
S. montevideo	3		1			2			1		1			1	3
S. muenchen	9	1		1	2	4		1	5	2			2		21
S. muenster	3				3							1	2		3
S. port	7	2	2	2	1				2	5					18
S. ohio	5		1	2		2			2	1		1	1		6
S. ohlstedt	1				1							1			1
S. oranienberg	1						1						1		8
S. orientalis	1						1		1						5
S. orion	1			1			1		2						3
S. panama	1		1										1		1
S. paratyphi A	2		2										2		2
S. paratyphi B	3	1	1		1								2	1	7
S. potsdam	1							1		1					5
S. rubislaw	2				1		1		1	1					15
S. saint-paul	14			3	1	9		1	4	1	2	2	1	4	42
S. san-diego	1			1					1						2
S. senftenberg	4		1			3			1	1		1		1	10
S. singapore	15		14					1	1	1	3	5	3	2	22
S. stanley	1					1			1						1
S. tennessee	4		1			3			1	2		1			6

HUMAN SALMONELLOSIS CASES

PERIOD MAY 1978

SERO TYPE	TOTAL	NSW & ACT	VIC	QLD	SA	WA	TAS	NT	AGE					NOT STATED	CUMULATIV TOTAL
									<1	1-5	6-15	16-60	>60		
typhi	14	10	3			1			1	1		4	8		20
typhimurium	108	22	23	10	27	20	3	3	19	39	18	19	3	10	244
urbana	1							1	1						1
victoria	1						1		1						1
virchow	9			9					1	1		4	3		21
wandsbek	2			1			1		1					1	2
waycross	1			1					1						1
weltevreden	4	1						3				3		1	4
wordsworth	16					16			4			10		2	20
TOTAL	368	45	91	47	54	107	6	18	89	77	38	89	28	47	781

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 1-6-78 . 14-6-78 BULLETIN NUMBER - 78/12
 VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW)/ WVH (ACT)	RAHC (NSW)	PHH/ POW (NSW)	FAIR- FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
0100 ADENOVIRUS NOT TYPED.....	-	-	-	2	-	3	-	1	6
0101 ADENOVIRUS TYPE 1.....	-	-	-	-	-	2	-	-	2
0102 ADENOVIRUS TYPE 2.....	-	-	-	-	-	2	-	1	3
0105 ADENOVIRUS TYPE 5.....	1	-	-	-	-	2	-	1	4
0107 ADENOVIRUS TYPE 7.....	-	-	-	-	-	1	-	-	1
0119 ADENOVIRUS TYPE 19.....	-	-	-	-	-	-	-	1	1
0199 ADENOVIRUS TYPING PENDING.....	-	-	-	-	3	5	-	-	8
0201 INFLUENZA A VIRUS.....	1	-	-	-	-	-	1	2	4
0301 PARAINFLUENZA VIRUS TYPE 1.....	-	-	-	-	-	-	-	2	2
0302 PARAINFLUENZA VIRUS TYPE 2.....	1	-	1	-	1	-	-	2	5
0303 PARAINFLUENZA VIRUS TYPE 3.....	-	1	-	-	5	-	2	2	10
0400 RESPIRATORY SYNCYTIAL VIRUS (RS) ...	-	3	-	4	10	3	9	-	29
0500 RHINOVIRUS (ALL TYPES).....	1	2	-	5	6	3	3	1	21
0600 MYCOPLASMA PNEUMONIAE.....	20	-	-	15	-	1	3	3	42
0700 ORNITHOSIS-PSITTACOSIS.....	1	-	-	6	-	1	-	-	8
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED.....	-	-	-	-	-	-	-	2	2
0801 COXSACKIEVIRUS A1.....	-	-	-	-	-	1	-	-	1
0809 COXSACKIEVIRUS A9.....	-	-	-	-	1	1	-	-	2
0901 COXSACKIEVIRUS B1.....	-	-	-	-	-	-	2	3	5
0902 COXSACKIEVIRUS B2.....	-	-	-	-	1	-	-	-	1
0903 COXSACKIEVIRUS B3.....	-	-	-	-	-	1	2	-	3
0905 COXSACKIEVIRUS B5.....	-	1	-	-	-	-	-	-	1
1000 ECHOVIRUS NOT TYPED.....	-	-	-	-	-	-	1	-	1
1002 ECHOVIRUS TYPE 2.....	-	-	-	-	-	1	-	-	1
1004 ECHOVIRUS TYPE 4.....	-	-	1	-	-	-	-	-	1
1005 ECHOVIRUS TYPE 5.....	-	-	-	2	-	-	-	-	2
1006 ECHOVIRUS TYPE 6.....	-	-	-	-	-	1	-	-	1
1007 ECHOVIRUS TYPE 7.....	-	-	1	4	5	-	-	-	10
1011 ECHOVIRUS TYPE 11.....	-	-	-	-	-	-	-	2	2
1012 ECHOVIRUS TYPE 12.....	-	-	1	-	-	-	-	-	1
1014 ECHOVIRUS TYPE 14.....	-	-	-	-	1	-	1	-	2

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 1-6-78 . 14-6-78 BULLETIN NUMBER . 78/12
 VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW) / WVH (ACT)	RANC (NSW)	PBH/ POW (NSW)	FAIR- FIELD (VIC)	RCH (VIC)	IBVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
1015 ECHOVIRUS TYPE 15.....	-	-	-	-	-	-	-	2	2
1016 ECHOVIRUS TYPE 16.....	-	-	-	-	-	1	-	-	1
1017 ECHOVIRUS TYPE 17.....	-	-	1	-	-	-	1	-	2
1018 ECHOVIRUS TYPE 18.....	3	-	-	-	-	-	-	-	3
1019 ECHOVIRUS TYPE 19.....	-	-	1	-	-	1	-	-	2
1020 ECHOVIRUS TYPE 20.....	-	-	1	-	-	-	-	-	1
1022 ECHOVIRUS TYPE 22.....	-	-	1	-	-	1	1	-	3
1025 ECHOVIRUS TYPE 25.....	-	-	-	-	-	-	-	1	1
1027 ECHOVIRUS TYPE 27.....	2	-	-	-	-	-	-	-	2
1030 ECHOVIRUS TYPE 30.....	-	-	-	5	-	2	1	1	9
1031 ECHOVIRUS TYPE 31.....	-	-	3	-	-	-	-	-	3
1101 POLIOVIRUS TYPE 1.....	-	-	-	-	-	2	-	-	2
1102 POLIOVIRUS TYPE 2.....	-	-	-	1	-	-	-	-	1
1103 POLIOVIRUS TYPE 3.....	-	-	-	2	-	-	-	-	2
1200 MUMPS VIRUS.....	2	-	-	6	3	-	3	1	15
1300 HERPES VIRUS GROUP-NOT TYPED.....	4	-	-	-	-	1	-	1	6
1301 HERPES SIMPLEX VIRUS-NOT TYPED.....	6	-	11	1	-	-	16	-	34
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	-	-	-	-	-	3	-	-	3
1303 VARICELLA-ZOSTER VIRUS.....	-	-	-	-	-	1	-	-	1
1306 HERPES SIMPLEX TYPE 1.....	6	-	-	5	-	4	-	14	29
1307 HERPES SIMPLEX TYPE 2.....	19	-	-	8	-	10	-	32	69
1401 COXIELLA BURNETI.....	8	-	-	2	-	2	15	-	27
1512 VACCINIA VIRUS.....	-	-	-	-	-	-	1	-	1
1521 MEASLES VIRUS.....	-	-	-	-	-	-	-	2	2
1522 RUBELLA VIRUS.....	-	-	-	2	-	1	-	1	4
1532 HEPATITIS B ANTIGEN.....	1	1	10	26	-	5	5	10	58
1533 HEPATITIS B ANTIBODY.....	-	-	-	-	-	27	-	12	39
1541 CHLAMYDIA A - TRIC TYPE.....	-	-	-	-	-	-	-	8	8
1556 CMV - CYTOMEGALOVIRUS.....	4	1	1	3	3	2	6	2	22
1562 REOVIRUS (ALL TYPES).....	-	-	-	-	-	-	-	1	1
1562 CORONAVIRUS.....	-	-	-	1	-	-	-	-	1
1564 ROTAVIRUS.....	-	-	-	9	30	13	-	32	84
1599 ENTEROVIRUS TYPING PENDING.....	-	1	-	-	7	-	-	-	8
Total.....	80	10	33	109	76	104	73	143	620

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 1-6-78 - 14-6-78 BULLETIN NUMBER - 78/12
 VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS-CONTINUED

VIRUS OR VIRAL ANTIGEN	FA	HL	NA	CS	SK	EY	DR	BR	GE	OT	Total
1016 ECHOVIRUS TYPE 16.....	1										1
1017 ECHOVIRUS TYPE 17.....	1			1							2
1018 ECHOVIRUS TYPE 18.....			1	1			1				3
1019 ECHOVIRUS TYPE 19.....			1	1							2
1020 ECHOVIRUS TYPE 20.....	1										1
1022 ECHOVIRUS TYPE 22.....	3										3
1025 ECHOVIRUS TYPE 25.....			1								1
1027 ECHOVIRUS TYPE 27.....				1							1
1030 ECHOVIRUS TYPE 30.....	1		4	5							10
1031 ECHOVIRUS TYPE 31.....	2		1								3
1101 POLIOVIRUS TYPE 1.....	2										2
1102 POLIOVIRUS TYPE 2.....			1								1
1103 POLIOVIRUS TYPE 3.....			1				1				2
1200 MUMPS VIRUS.....		3	9	4			2				18
1300 HERPES VIRUS GROUP-NOT TYPED.....				1	4		1				6
1301 HERPES SIMPLEX VIRUS-NOT TYPED.....	1	2	8		4	1			16	1	33
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....		3									3
1303 VARICELLA-ZOSTER VIRUS.....		1			1						2
1306 HERPES SIMPLEX TYPE 1.....			6	2	15	1			6		30
1307 HERPES SIMPLEX TYPE 2.....	1		1	1	22	1			43		69
1401 COXIELLA BURNETI.....		27									27
1512 VACCINIA VIRUS.....					1						1
1521 MEASLES VIRUS.....		2									2
1522 RUBELLA VIRUS.....		4									4
1532 HEPATITIS B ANTIGEN.....		57									57
1533 HEPATITIS B ANTIBODY.....		39									39
1541 CHLAMYDIA A - TRIC TYPE.....									8		8
1556 CMV - CYTOMEGALOVIRUS.....		7	8				4			2	21
1562 REOVIRUS (ALL TYPES).....	1										1
1562 CORONAVIRUS.....			1								1
1564 ROTAVIRUS.....	84										84
1599 ENTEROVIRUS TYPING PENDING.....	7		3	1							11
Total.....	132	203	128	24	47	6	12		73	8	633