Communicable Diseases Intelligence

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Contents:

VIRUS REPORTING SCHEME - A total of 766 reports were received this period. General patterns as suggested by the reports show an overall decrease in respiratory infections, and an increase in the number of measles infections from Prince of Wales Hospital, Sydney; 11 reports received compared with 0, 4 (for the two periods over Christmas) and 1 for the previous four periods.

Reports of interest include:

- The Prince of Wales Hospital, Sydney, reported fatal cases of measles pneumonitis, with some evidence of encephalitis, in a nine month old boy and a two year old girl, both from the same family of five. Two of the patients' older siblings had had recent measles-like illness.

  Serum specimens from the boy gave a CF titre to measles of <8 on 10 January and a titre of 8 on 16 January. A rise in titre to adenovirus of 16 to $\geqslant 512$ was also recorded, together with an adenovirus isolation from faeces. His sister gave a CF titre to measles of 4096 on 15 January and 2048 on 19 January. A CSF specimen gave a titre of 2. In addition, a rise in CF titre to adenovirus from <8 to 8 was noted, and adenovirus was isolated from urine specimens.

  Although over 95% of vaccinees seroconvert when immunised at the age of 15 months, acceptance of the measles vaccine is still low, with only 30-50% of susceptibles being vaccinated. Proof of measles vaccination or immunity has been made a requirement of pre-school and school entry in the U.S.A.

  The Institute of Clinical Pathology and Medical Research (ICPMR), Sydney, also reported a fatal case of measles encephalitis in a 19 year old female. The ratio of measles encephalitis to measles cases is approximately one per 1000 reported cases, but the risk of encephalitis increases in adolescents and adults.

- The ICPMR also reported seven cases of hepatitis A virus infection among the patients of a local hospital for the mentally retarded. Diagnosis was by radioimmune assay.

- The five reports of arbovirus group B infection, all clinically dengue, reported by Fairfield Hospital, Melbourne, were in patients who had recently visited Bali.

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HUMAN SALMONELLOSIS SURVEILLANCE

(Based on reports supplied by C. Beaton and J. Taplin, Microbiological Diagnostic Unit, University of Melbourne.)

This issue contains reports tabulating the identification of salmonellas and shigellas isolated from humans in Australia for the third quarter of 1980 (see CDI 80/17 and 80/20 for tables for the first two quarters). During the quarter, 807 salmonella isolations were reported, comprising 79 serotypes. This number of isolations is half the total of the first (summer) quarter.

The 20 isolations of S. typhi made during the three months include:

- S. typhi phage type E_1 was re-isolated on two occasions from a 66 year old female asymptomatic refugee. The organism was first isolated in December 1979, and re-isolated in April 1980.

  The same phage type was also isolated from blood culture of a 52 year old patient in New South Wales, but no details are available.

- S. typhi phage type F_1 was isolated in July and August from the blood and faeces of a 30 year old male. The patient had returned three weeks earlier from Chile, where he had been in contact with a case of typhoid.

- S. typhi phage type E_7 was isolated from a 30 year old female Vietnamese migrant who arrived in Perth in 1978. S. anatum was cultured from a screening specimen on arrival, but her S. typhi carrier status was recognized when she was screened before starting work in the kitchens of a hospital. (This patient was reported in CDI 80/20.)

- S. typhi phage type 53 was isolated from a 4 year old Vietnamese refugee on arrival.

- S. typhi phage type degraded was isolated from a 42 year old female refugee. S. typhi untypable (Vi negative) was first isolated from this patient in April.

S. typhimurium was the most prevalent salmonella serotype (376 reports involving 46 phage types)

- S. typhimurium phage type 179 was isolated from three patients and two nursing staff in an outbreak at a Victorian country hospital. One of the nursing staff had had transient diarrhoea some weeks before the incident. The second staff member also had diarrhoea some weeks before but had been cleared with three negative faecal cultures. One week after a confinement, the first patient developed diarrhoea and fever. S. typhimurium phage type 179 was isolated from faecal specimens. A patient in the same ward, and a post-operative gynaecological patient in another ward, also developed diarrhoea. These were probably secondary cases, as the index patient had been transferred to the second ward.

  An intensive screening programme to detect the probable source of

infection resulted in S. typhimurium phage type 179 being isolated from an interstate male visitor who presented at outpatients, and S. typhimurium UDNC* being isolated from a member of the catering staff.

- Two food poisoning outbreaks occurred in South Australia in July; one involving an adult and two children excreting S. typhimurium phage type 1, and the other due to S. typhimurium phage type 135 which was isolated from three of a group who became ill after eating rabbit.

  A family outbreak involving one adult and two children in Tasmania was due to S. typhimurium phage type 141.

- S. typhimurium phage type 29 was isolated from the faeces of a three month old girl cot death patient in Victoria, and S. typhimurium phage type 26 was cultured from a post-appendectomy wound swab from a nine year old girl in Western Australia.

- Increased isolations of S. typhimurium phage type 5 were reported from Alice Springs and surrounding districts in September. No information is available about the cause of the outbreak, but sixteen of the cases were from children under ten years of age.

Mucoid cultures were isolated from the urine of two paraplegic patients (male aged 53 and female aged 33), both from the same hospital ward. The culture was biochemically a salmonella, but no agglutination tests were possible in spite of various treatments to reduce the mucoid phenotype. A mucoid culture of S. typhimurium phage type 44 isolated from the urine of a female patient at a different hospital in May was converted to a non-mucoid form for agglutination and phage typing.

Reports of outbreaks and isolations involving other salmonella and shigella serotypes include:

- Vibrio cholerae El Tor serotype Ogawa was isolated from the faeces of a 63 year old male who had watery diarrhoea. He had flown the previous day from the U.K. via Karachi and Kuala Lumpur. Examination of the faeces from the 65 passengers on the same flight who had disembarked at Melbourne indicated five were excreting S. mbandaka, three were excreting S. havana, one had both S. havana and S. mbandaka, and there was one isolation of each of the following: S. alachua, S. bere, S. cerro, S. neinstedten and S. senftenberg. The Institute of Medical and Veterinary Science, Adelaide, examined a further series of passengers who disembarked at Sydney and Adelaide and found six were excreting S. mbandaka and one who was excreting S. mbandaka and S. bere. There were no other cases of V. cholerae and no secondary cases. Contaminated water was the suspected source of the salmonellosis outbreak. (This outbreak was reported in CDI 80/14.)

- Contaminated water was implicated in a salmonellosis outbreak involving 12 people at Marble Bar, Western Australia. Salmonella were isolated

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* S. typhimurium UDNC are those cultures which are untypable; they react with the typing phages but do not conform to any known type.
S. typhimurium untypable are those cultures which do not react with the typing phages.

culture organisms from the valve were unsuccessful.

Several other people in the same holiday group had gastrointestinal symptoms at the same time as the patient, including members of her family. However, all made complete recoveries within a few days.

Salmonella endocarditis is a rare but serious disease, and the present case is only the fifth S. enteriditis endocarditis report in the literature. Two cases have been reported in the U.S.A.; one fatal endocarditis infection from an evaluation of 7779 patients with salmonellosis identified at the New York Salmonella Center[1], and a "probable" case in a woman with a mitral valve prosthesis[2]. This patient survived following a valve replacement and high dose parenteral ampicillin. In the U.K., a male with an aortic valve prosthesis developed endocarditis following a bowel infection[3]. S. enteriditis was isolated from the removed valve. In Zambia, a woman with probable rheumatic mitral valve disease, and a past history of splenectomy for haemolytic anaemia developed endocarditis[4]. She responded initially to antibiotics, but relapsed and died two months later. Apart from the first case of endocarditis where no details are available[1], all the cases except the report from Zambia gave a history of bowel infection, and all the cases, except the present, exhibited some pre-existing valvular defect. The patient from Zambia was also immunosuppressed.

Between 1975-1980, two reports of salmonella endocarditis were received by the Communicable Disease Surveillance Centre, U.K. An 89 year old male with S. typhimurium endocarditis (isolated from heart valve at post mortem) in 1976, and a 54 year old male with S. cholerae-suis aortic valvular disease in 1979. A report of a fatal suppurative pericarditis due to S. manhattan in a 79 year old female was also received in the same period.

Antibiotic treatment of this condition has not been entirely satisfactory and there seems to be a pattern of an initial response followed by later relapse and death from either haemodynamic complications of the valve damage or from reactivation of persisting infection of the valve. Chloramphenicol is unsatisfactory because it is a bacteristatic drug and therefore inappropriate for treatment of endocarditis. While waiting for the results of antibiotic sensitivity tests, the best initial combination would appear to be the bactericidal drugs ampicillin and mecillinam followed by valve replacement[3]. However, although mecillinam appears to have a promising future as a potent bactericidal anti-salmonella drug, resistance both to ampicillin and to mecillinam is not uncommon in salmonella strains, and the final choice of antibiotics should be based on the sensitivities of the strain concerned. Co-trimoxazole should also be considered as it has given good results with some salmonella infections.

Endocarditis must never be overlooked as a possible complication of any systemic infection in a patient with heart valve disease, and numerous species of micro-organisms have been described as causing it. Endocarditis should also be considered as a possibility in any case where infections of normally short duration run a prolonged or relapsing course.

Editorial Comment

Mecillinam (Selexid) is marketed by Boehringer Ingelheim Pty Ltd. Authority

to obtain the drug for use in individual patients can be granted by the Department of Health where the criteria for this use are satisfied.

References

1. NEJM (1957) 256:1128
2. Surgery (1974) 76:678
3. BMJ (1977) 1:612
4. British Heart Journal (1979) 42:353

FOLLOW-UP ON TOXIC SHOCK SYNDROME (TSS)

TOXIC SHOCK SYNDROME - TASMANIA (Contributed by I. Alexander, G.I. Vidor, B. Clark, and B.B. Singh, Launceston General Hospital, Tasmania.)

Three days after commencing menstruation a 20 year old previously healthy woman became acutely ill with nausea, vomiting, fever, profuse watery diarrhoea and non-specific lower abdominal pain. She had used vaginal tampons, changing them every 4-5 hours during the day, until the night s become ill when she was too sick to change them, so that one was in situ for at least 18 hours. Her family physician noted a temperature of 38.4°C with pulse rate of 120, and diagnosed gastroenteritis. She was treated with oral fluids and Lomotil. Over the next 36 hours her condition gradually deteriorated and she was admitted to the Intensive Care Unit of Launceston General Hospital on 22 January 1981.

On admission she was confused and delirious with mental obtundation. She was hypotensive (45/0 mm Hg) with marked peripheral vasoconstriction and cyanosis. There was a diffuse macular erythroderma. The patient was mildly icteric with marked conjunctival injection and facial oedema. All mucosae were hyperaemic and the buccal mucosa was ulcerated. Rectal temperature ranged from 39-39.5°C, pulse rate was 150/min, and respiratory rate was 50-60/min. The patient's husband had removed a tampon in the Casualty Department soon after her arrival. Subsequent vaginal examinatio revealed a watery greenish-yellow discharge and marked hyperaemic mucosa with bruising on the anterior and posterior lips of the cervix, passing into the anterior and posterior fornices.

Initial investigation revealed leucocytosis with leukaemoid reaction, significant proteinuria, and serum creatinine three times normal (560 µmol/l, normal range 70-120 µmol/l). Liver function tests indicated total bilirubin twice normal, with normal aspartate transaminase. Gram stain of the vaginal swab showed Gram positive cocci, and the vaginal and cervical swabs subsequently grew Staphylococcus aureus. Cultures of blood, throat and urine were negative. She was resuscitated with IV fluids, broad spectrum antibiotics (gentamicin, metronidazole, cloxacillin, penicillin) until sensitivities were available, and parenteral hydrocortisone.

She remained hypotensive for five hours, but metabolic acidosis persisted in spite of repeated adequate correction, with significant lactic acidosis persisting for five days (serum lactate levels decreasing from 7 to 3.3 mmol/l, normal range 0.3-0.8 mmol/l). Normal blood pressure was achieved on the second admission day, mental obtundation remained for four days and the confused state for a further three days. A red punctate

rash appeared over the finger and toe tips on the sixth admission day, along with desquamation of the skin of the face, trunk, scalp and extremities. This was followed by a thick leathery appearance of the palms and soles. Large bulbous-like lesions on the palms appeared on the twelth day progressing to sloughing. A low grade fever persisted for 14 days. Oral flucloxacillin was substituted once the sensitivities were available.

Subsequent vaginal swabs were negative, and no cultures of S. aureus were made from the tampon. The patient was discharged on the fourteenth hospital day.

Editorial Comment

The tampon used was Johnson and Johnson Carefree Super, manufactured in New Zealand. The same brand was associated with the case reported in CDI 81/2. It has now been recalled from the Australian market.

Our note in CDI 81/2 that the Melbourne case "appears to be the first case of toxic shock syndrome in which pericarditis has been reported" was wrong. We have since seen an article by Shands et al. (NEJM, 1980, 303, 1436) which lists it among a number of other features that have been reported.

TOXIC SHOCK SYNDROME - A STUDY OF THE GROWTH OF STAPHYLOCOCCUS AUREUS IN TAMPONS (Contributed by M. Peel, C.P. Beaton and S.A. Hogben, Microbiological Diagnostic Unit, Melbourne.)

Reports on the association of TSS and tampon use in menstruating women led to a survey on the growth of S. aureus in tampons marketed in Victoria. The study was conducted at the Microbiological Diagnostic Unit, Melbourne, for the Health Commission of Victoria.

Tests were carried out on the following brands and types of tampons:

Carefree	-	Mini; Regular; Super; Super plus
Fems	-	Regular; Super
Meds	-	Regular
Tampax	-	Regular; Super; Super plus

At the time of initial studies (November-December 1980), an isolate of S. aureus from a case of TSS was not available to us, so investigations were conducted with two different strains of coagulase positive staphylococcus. Since then, the strain of S. aureus from the first Australian case to be reported (CDI 81/2) has been investigated in parallel with one of the original test strains, and the two showed no significant difference in their growth behaviour.

For the experiments, each tampon was allowed to soak up 5 ml of freshly-drawn human blood, before being placed in 100 ml of non-nutrient phosphate buffered saline solution (PBS) (OXOID-code BR 14a) to which an inoculum of S. aureus was then added. Viable counts were preformed by the pour plate method at time 0 and at 1,2,3,5,7 and 24 hours after the addition of bacteria.

All brands and types of tampons acted similarly on their ability to support

the growth of S. aureus under these conditions. No significant increase in counts occurred up to 3 hours after introduction of the inoculum; thereafter, rapid multiplication occurred up to 7 hours with little or no further increase at 24 hours. This pattern of growth may be illustrated by the results obtained with a low dose inoculum of the TSS-association strain of S. aureus and a Carefree Super blood-soaked tampon in PBS. At time zero the count was 7.2×10^2/ml; the 3 hour count was 8.5×10^2/ml and the 7 hour count was 6.8×10^5/ml. No significant increase in count was observed for the controls of S. aureus and blood in PBS or S. aureus alone in PBS. The findings indicate that a blood-soaked tampon in a non-nutrient medium is an adequate milieu for the multiplication of S. aureus to high levels.

It may be argued that some nutrient is available in the in vivo menstrual situation. Therefore, experiments were conducted in which Ringer's solution containing 0.1% peptone was substituted for the PBS. Of course, under these conditions, control counts of S. aureus in the medium alone also reached high levels at 7 hours, but the most relevant finding was that the lag period for the growth curve of S. aureus in the presence of a blood-soaked tampon was still 3 hours. On the other hand, S. aureus growing alone in a highly nutrient medium such as nutrient broth has a lag period of only about 1 hour.

The results of epidemiological surveys conducted in the USA indicate that, although more cases than controls used tampons continuously during their menstrual period, no difference was found in the number of tampons used per day[1]. It has also been reported that most women change their tampons every 4-6 hours[2]. However, this interval falls within the period of rapid in vitro multiplication of S. aureus in our studies, so that no reduction in the risk between cases and controls would be apparent. Moreover, the use of tampons overnight would also tend to mask any reduction in risk resulting from frequent changing of tampons by day.

Our in vitro experimental results support the earlier NH and MRC recommendations that tampons be changed about every 3 hours and not used overnight. Further studies on the growth of S. aureus in tampons are being undertaken.

References

1. NEJM (1980) 303:1436
2. MMWR (1980) 29:495

TOXIC SHOCK SYNDROME - U.S.A. (1980) (Based on MMWR (1981) 30:25)

To date, 941 confirmed cases of TSS have been reported to the Centers for Disease Control, U.S.A. Of these, 928 were in women, of whom 905 had onset during a menstrual period. Eleven cases occurred in the postpartum period. The age range for female patients was 6-61 years, with a mean of 23 years. One third of all cases occurred in women 15-19 years old. The age range for male patients was 6-58 years with a mean of 23 years. Seven cases occurred in Negroes, three in Asians, three in Hispanics and two in American Indians. There were 73 deaths.

HUMAN SALMONELLOSIS CASES

Period July - September 1980

Serotype	Total	NSW & ACT	VIC	QLD	SA	WA	TAS	NT
S. aberdeen	2		2					
S. abony	1							1
S. adelaide	8		1	1		5		1
S. agona	17	2	14			1		
S. alachua	2		1	1				
S. albany	1			1				
S. anatum	25	1	3	13	1	7		
S. arizonae	1						1	
S. bahrenfeld	1					1		
S. ball	3					1		2
S. bere	2	1	1					
S. birkenhead	2	1		1				
S. blockley	2	1	1					
S. bovis-morbificans	27	6	5	1	11	3		1
S. bredeney	10	3	3	1	3			
S. bukavu	3					2		1
S. cerro	3		3					
S. champaign	1					1		
S. charity	1					1		
S. chester	15	2		5		5		3
S. cubana	1	1						
S. derby	18	2	6		8	2		
S. dublin	1	1						
S. eastbourne	5					4		1
S. emmastad	1					1		
S. enteritidis	16	3	4	6		1	2	
S. fremantle	1					1		
S. give	7	2	1		2	1		1
S. haifa	1		1					
S. havana	19		5	2	1	6		5
S. hvittingfoss	1					1		
S. indiana	2	1				1		
S. infantis	12	5	3	1	1	1		1
S. isangi	1	1						
S. jangwani	1					1		
S. java	7	1		2		3		1
S. java battersea	3			1		2		
S. java dundee	1			1				
S. java UDNC	2					1		1
S. java untypable	2		1			1		
S. javiana	4	1	2	1				
S. kentucky	1		1					
S. krefeld	4		4					
S. lansing	2		1			1		

HUMAN SALMONELLOSIS CASES

Period July - September 1980

Serotype	Total	NSW & ACT	VIC	QLD	SA	WA	TAS	NT
S. lexington	2		2					
S. litchfield	6			3		2		1
S. meleagridis	3		3					
S. mississippi	1						1	
S. montevideo	1		1					
S. muenchen	22		2	7	1	8		4
S. newington	1			1				
S. newport	5			4			1	
S. nienstedten	1		1					
S. ohlstedt	1							1
S. ondersterpoort	1							1
S. oranienburg	7	1		1	3	2		
S. orion	1					1		
S. panama	1	1						
S. paratyphi B	1	1						
S. paratyphi B tau V1	1						1	
S. paratyphi B taunt O	1		1					
S. paratyphi B 3A1 V4	2	1	1					
S. potsdam	2			2				
S. richmond	1	1						
S. rubislaw	3					3		
S. saint-paul	25		5	6	8	3	1	2
S. schwarzengrund	2	1	1					
S. senftenberg	21	6	3			10		2
S. singapore	8	3	1	1	1			2
S. sofia	1	1						
S. tennessee	2					1		1
S. thompson	3			2		1		
S. typhimurium*	376	82	93	33	78	44	9	37
S. untypable	5	1		2		1		1
S. untypable mucoid	3		3					
S. untypable 6,8 :-	1		1					
S. urbana	1					1		
S. virchow	16		4	10	2			
S. wandsbek	3			1		2		
S. wandsworth	8			3		3		2
S. waycross	1			1				
S. weltevreden	4			1				3
S. worthington	1							1
S. 4,12 : D-2	2	1	1					
TOTAL	787	135	185	116	120	138	16	77

HUMAN SALMONELLOSIS CASES

Period July - September 1980

Serotype	Total	NSW & ACT	VIC	QLD	SA	WA	TAS	NT
S. TYPHIMURIUM*								
S. typhimurium	11	7		1	2	1		
S. typhimurium UDNC	31	15	7		8	1		
S. typhimurium untyped	20	4	10	2		1	2	1
phage type 1	8		1		7			
" " 4	1				1			
" " 5	41	6		1	6			28
" " 6	11	1	7		2			1
" " 8	1						1	
" " 9	11		3		4	4		
" " 12	4	4						
" " 12A	24	9			15			
" " 21	1					1		
" " 22	10	1		6		2		1
" " 23	5		3		1	1		
" " 24	1		1					
" " 26	15	2				11		2
" " 27	2			1	1			
" " 29	5	4	1					
" " 30	1				1			
" " 39	1				1			
" " 41	1	1						
" " 42	1				1			
" " 44	5	1	2		1		1	
" " 55	1			1				
" " 64	3				2	1		
" " 68	1				1			
" " 69	2				2			
" " 72	1		1					
" " 88	2	2						
" " 90	1		1					
" " 101	8		3	2	2	1		
" " 108	1	1						
" " 120	1				1			
" " 121	2	2						
" " 123	1		1					
" " 124	1	1						
" " 126	3	1		2				
" " 135	24	5	9	3	5	1	1	
" " 141	11		2	1	1	3	4	
" " 143	1	1						
" " 145	3	1			2			
" " 154	2				2			
" " 156	3				3			
" " 170	5	3	1		1			

HUMAN SALMONELLOSIS CASES

Period July - September 1980

Serotype	Total	NSW & ACT	VIC	QLD	SA	WA	TAS	NT
S. TYPHIMURIUM* cont'd								
phage type 176	2		1			1		
" " 178	4				4			
" " 179	78	8	39	11	1	15		4
" " 182	2	1		1				
" " 183	2	1		1				
TOTAL	376	82	93	33	78	44	9	37
S. TYPHI								
S. typhi	1					1		
S. typhi A	2		2					
S. typhi B_2	1			1				
S. typhi degraded	1		1					
S. typhi E_1	5	1	2		1		1	
S. typhi E_7	1					1		
S. typhi F_1	4	4				1		
S. typhi untypable	4	4						
S. typhi 53	1					1		
TOTAL	20	9	5	1	1	3	1	
Sh. boydii	1				1			
Sh. boydii 4	3		3					
Sh. dysenteriae 2	1		1					
Sh. flexneri	2	1						1
Sh. flexneri 1B	1		1					
Sh. flexneri 2A	8		4		1			3
Sh. flexneri 2B	1	1						
Sh. flexneri 3A	2		1	1				
Sh. flexneri 6	7			1				6
Sh. sonnei	24	2	7		6			9
Sh. sonnei BIOA	9				2			7
TOTAL	59	4	17	2	10			26

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

1

REPORTING PERIOD - 22 - 1 - 81 - 4 - 2 - 81 BULLETIN NUMBER - 81/3

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			3		1	1	5		10
0101 ADENOVIRUS TYPE 1					1			1	2
0102 ADENOVIRUS TYPE 2	1			1	1	2		2	7
0103 ADENOVIRUS TYPE 3				1		3		1	5
0105 ADENOVIRUS TYPE 5						1			1
0106 ADENOVIRUS TYPE 6						1			1
0107 ADENOVIRUS TYPE 7	1	1			2				4
0119 ADENOVIRUS TYPE 19				1				2	3
0199 ADENOVIRUS TYPING PENDING			3		2				5
0201 INFLUENZA A VIRUS						1			1
0203 INFLUENZA B VIRUS	1								1
0301 PARAINFLUENZA VIRUS TYPE 1						1			1
0302 PARAINFLUENZA VIRUS TYPE 2						1			1
0303 PARAINFLUENZA VIRUS TYPE 3	3		1		1	1	2	1	9
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)	3	1	1		1	1	1		8
0500 RHINOVIRUS (ALL TYPES)	4				7		1	1	13
0600 MYCOPLASMA PNEUMONIAE			10	2		5		4	21
0700 ORNITHOSIS-PSITTACOSIS	1		3	2		1			7
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED								1	1
0809 COXSACKIEVIRUS A9								1	1
0816 COXSACKIEVIRUS A16							3		3
0902 COXSACKIEVIRUS B2	1	3		1	1	2			8
0903 COXSACKIEVIRUS B3	1								1
0904 COXSACKIEVIRUS B4		1							1
1003 ECHOVIRUS TYPE 3	2								2
1009 ECHOVIRUS TYPE 9	1				1		2		4
1011 ECHOVIRUS TYPE 11								3	3
1014 ECHOVIRUS TYPE 14							2		2
1022 ECHOVIRUS TYPE 22					5			1	6
1025 ECHOVIRUS TYPE 25								1	1
1030 ECHOVIRUS TYPE 30	1			6					7

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 2.

REPORTING PERIOD - 22-1-81 - 4-2-81 BULLETIN NUMBER - 81/3

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

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
1031 ECHOVIRUS TYPE 31								1	1
1101 POLIOVIRUS TYPE 1				1					1
1102 POLIOVIRUS TYPE 2	7			1			1	1	10
1103 POLIOVIRUS TYPE 3							1		1
1104 POLIOVIRUS-VACCINAL STRAIN					1				1
1200 MUMPS VIRUS	3	1	2	3		2	1	2	14
1300 HERPES VIRUS GROUP-NOT TYPED	12		3	4	2	7		1	29
1301 HERPES SIMPLEX VIRUS NOT-TYPED	14	1	2	1			1	32	51
1302 EPSTEIN-BARR VIRUS (EB VIRUS)						1			1
1303 VARICELLA-ZOSTER VIROS			9				2		11
1306 HERPES SIMPLEX TYPE 1			8	21		12	7		48
1307 HERPES SIMPLEX TYPE 2	36		12	18		15	17		98
1399 HERPES VIRUS TYPING PENDING			2			2			4
1401 COXIELLA BURNETI	3		1			5	10		19
1521 MEASLES VIRUS	3		11	1		1	1		17
1522 RUBELLA VIRUS	6		4			1	1	3	15
1532 HEPATITIS B ANTIGEN	3		6	24		8	7	12	60
1535 HEPATITIS A ANTIBODY	12		3	8		9	4	7	43
1541 CHLAMYDIA A - TRIC TYPE	25		10					72	107
1556 CMV - CYTOMEGALOVIRUS	6		10	2	3		1	5	27
1562 REOVIRUS (ALL TYPES)								1	1
1563 CORONAVIRUS				1					1
1564 ROTAVIRUS	5	3		5	7	8		4	32
1565 CALICI VIRUS	1								1
1599 ENTEROVIRUS TYPING PENDING			5		12	1	1		19
ROSS RIVER VIRUS								3	3
ASTROVIRUS	1								1
SMALL VIRUS (LIKE) PARTICLE	4								4
DENGUE							1		1
ARBO. GROUP B.				5					5
Total	161	11	109	109	48	93	72	163	766

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 3

PERIOD : 22/1/81 to 4/2/81 .... 81/3

Viral Identifications by Clinical Information Table 1.
Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Encephalitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CNS other unspec.; 07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.

VIRUS OR VIRAL ANTIGEN	No-ill or data	Respiratory	Encephalitis	Meningitis	Paralysis	CNS other unspec	GI	Hepatic	CVS	Urinary	Skin/mucs memb
0100 ADENOVIRUS NOT TYPED.....		8					2				1
0101 ADENOVIRUS TYPE 1.....		1									1
0102 ADENOVIRUS TYPE 2.....		1				1	3				
0103 ADENOVIRUS TYPE 3.....		1					1				
0105 ADENOVIRUS TYPE 5.....							1				
0106 ADENOVIRUS TYPE 6.....							1				
0107 ADENOVIRUS TYPE 7.....		2					2				
0119 ADENOVIRUS TYPE 19.....	2										
0201 INFLUENZA A VIRUS.....		1									
0203 INFLUENZA B VIRUS.....									1		
0301 PARAINFLUENZA VIRUS TYPE 1....		1									
0302 PARAINFLUENZA VIRUS TYPE 2....		1									
0303 PARAINFLUENZA VIRUS TYPE 3....		8									1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....	1	7									
0500 RHINOVIRUS (ALL TYPES).....	1	10									
0600 MYCOPLASMA PNEUMONIAE.....	2	16									1
0700 ORNITHOSIS-PSITTACOSIS.....	1	3									
0809 COXSACKIEVIRUS A9.....							1				
0816 COXSACKIEVIRUS A16.....	1										2
0902 COXSACKIEVIRUS B2.....		1		4			1				1
0903 COXSACKIEVIRUS B3.....		1									
0904 COXSACKIEVIRUS B4.....				1							
1003 ECHOVIRUS TYPE 3.....				1							
1009 ECHOVIRUS TYPE 9.....				3			1				
1011 ECHOVIRUS TYPE 11.....							1	1	1		
1014 ECHOVIRUS TYPE 14.....	2										
1022 ECHOVIRUS TYPE 22.....	5						1				

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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PERIOD : 22/11/81 to 4/2/81 ....

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Viral Identifications by Clinical Information Table 1.
Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Enceph-
alitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CNS other unspec.;
07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.-CONTINUED

VIRUS OR VIRAL ANTIGEN	No-ill or data	Respir atory	Enceph alitis	Mening -itis	Para- lysis	CNS other unspec	GI	Hepa -tic	CVS	Urin -ary	Skin/ mucs memb
1025 ECHOVIRUS TYPE 25.....	1										
1030 ECHOVIRUS TYPE 30.....		1		5							1
1031 ECHOVIRUS TYPE 31.....				1							1
1101 POLIOVIRUS TYPE 1.....							1				
1102 POLIOVIRUS TYPE 2.....		1					9				
1103 POLIOVIRUS TYPE 3.....	1										
1200 MUMPS VIRUS.....	1			4							1
1300 HERPES VIRUS GROUP-NOT TYPED..	1	1	2								13
1301 HERPES SIMPLEX VIRUS NOT-TYPED	13										38
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	1										
1303 VARICELLA-ZOSTER VIRUS.....						1			1		5
1306 HERPES SIMPLEX TYPE 1.....		3				1					23
1307 HERPES SIMPLEX TYPE 2.....									1	1	5
1401 COXIELLA BURNETI.....	5	1					1				
1521 MEASLES VIRUS.....	2	1	1	1	1	1					4
1522 RUBELLA VIRUS.....	5					1					10
1532 HEPATITIS B ANTIGEN.....	23						1	35		1	
1535 HEPATITIS A ANTIBODY.....	1							41			
1541 CHLAMYDIA A - TRIC TYPE.....	68										1
1556 CMV - CYTOMEGALOVIRUS.....	5	4						1		2	
1563 CORONAVIRUS.....							1				
1564 ROTAVIRUS.....	7						25				
1565 CALICI VIRUS.....							1				
ROSS RIVER VIRUS											2
ASTROVIRUS							1				
SMALL VIRUS (LIKE) PARTICLE							4				
DENGUE (TYPE 3)											1
ARBO. GROUP B.				1			1				
Total.....	149	74	3	21	1	5	60	78	4	4	112

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PERIOD : 22/1/81 to 4/2/81 ...
Viral Identifications by Clinical Information Table 2.
Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
G8 -Fever/malaise; 09 -Other; A1 -SIDS ...

VIRUS OR VIRAL ANTIGEN	Eye	Genital	Endo/sal gland	RES	Muscle/joint	Congenital	PUO	Fever/malaise	Other	SIDS
0100 ADENOVIRUS NOT TYPED.....								1		
0101 ADENOVIRUS TYPE 1.....								1		
0102 ADENOVIRUS TYPE 2.....								2	1	
0103 ADENOVIRUS TYPE 3.....	3									
0119 ADENOVIRUS TYPE 19.....	1									
0303 PARAINFLUENZA VIRUS TYPE 3....								1		
0500 RHINOVIRUS (ALL TYPES).....							1			1
0600 MYCOPLASMA PNEUMONIAE.....				1	1				1	
0700 ORNITHOSIS-PSITTACOSIS.....		1					1	1		
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED.....								1		
0902 COXSACKIEVIRUS B2.....							1			
0903 COXSACKIEVIRUS B3.....							1			
1003 ECHOVIRUS TYPE 3.....									1	
1011 ECHOVIRUS TYPE 11.....					1					
1030 ECHOVIRUS TYPE 30.....								1		
1104 POLIOVIRUS-VACCINAL STRAIN....										1
1200 MUMPS VIRUS.....			8		1		1		1	
1300 HERPES VIRUS GROUP-NOT TYPED..	1	9					1		1	
1303 VARICELLA-ZOSTER VIRUS.....								3	1	
1306 HERPES SIMPLEX TYPE 1.....	5	12					3	2		
1307 HERPES SIMPLEX TYPE 2.....		91						1		
1401 COXIELLA BURNETI.....			1				3	8		
1521 MEASLES VIRUS.....							3	3		
1522 RUBELLA VIRUS.....			1							
1532 HEPATITIS B ANTIGEN.....								1		
1535 HEPATITIS A ANTIBODY.....									1	
1541 CHLAMYDIA A - TRIC TYPE.....	3	33						1	1	

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PERIOD : 22/1/81 to 4/2/81 ... 81/3

Viral Identifications by Clinical Information Table 2.
Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
G8 -Fever/malaise; 09 -Other; A1 -SIDS ... **-CONTINUED**

VIRUS OR VIRAL ANTIGEN	Eye	Genital	Endo/sal gland	RES	Muscle/joint	Congenital	PUO	Fever/malaise	Other	SIDS
1556 CMV - CYTOMEGALOVIRUS.....				1		4	2	6	2	
1562 REOVIRUS (ALL TYPES).....								1		
1564 ROTAVIRUS.....										1
ROSS RIVER VIRUS					3					
DENGUE (TYPE 3)								1		
ARBO. GROUP B.								5		
Total.....	13	146	10	2	6	4	17	40	10	3