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Communicable Diseases Intelligence

Bulletin number 82/8
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Contents:

VIRUS REPORTING SCHEME - A total of 817 reports were received this period.

- Arbovirus infections - All six dengue cases reported by the State Health Laboratory, Brisbane, were from Cairns. Eight of the 16 Ross River virus infections reported by the State Health Laboratory Services, Perth, were from metropolitan suburbs. Suburban epidemic polyarthritis cases now total 16 for 1982 (seven cases from the Kingsley - Craigie area).

Other reports of interest include:

- S. typhi was isolated by the Commonwealth Pathology Laboratory, Cairns, from blood cultures and faeces from a white Australian fisherman living on Prince of Wales Island, Torres Straits. The patient suffered spiking fevers and diarrhoea. He had not been outside Australia, but had recently been in contact with a friend from Papua New Guinea.

- An 18 month old Vietnamese boy, who had been resident in Australia for six months, was admitted to the Royal Children's Hospital, Melbourne, on 2 April with focal convulsions and fever. The CSF cell count showed 12 lymphocytes, eight polymorphonuclear leucocytes and 1400 erythrocytes/cmm. The following day the child developed a hemiparesis and was diagnosed as "atypical encephalitis". CSF and faeces were negative for virus isolation. Since there was no clinical improvement, adenine arabinoside treatment was commenced on 8 April. Herpes simplex virus (HSV) antigen was detected by immunofluorescence in a squash preparation of a brain biopsy taken on 9 April. No frozen sections were prepared. HSV was isolated from the biopsy in one of eight human diploid fibroblast cultures indicating that little infectious virus was present, possibly due to the antiviral treatment. Alternatively, since histology showed late stage necrosis there may have been little live virus present in the area of biopsy.

- Clonorchis sinensis was detected by the State Health Laboratory Services, Perth, in a patient who also had a brain cyst infected with Taenia solium.

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PUO OUTBREAK ON NORFOLK ISLAND (1981-1982)

(Contributed by A. King, Government Medical Officer, and A. Buffett, Health Inspector, Norfolk Island; A. McKenzie and A. Murphy, Institute of Clinical Pathology and Medical Research, Sydney; N. Stallman, State Health Laboratory, Brisbane; M.S. O'Donnell, Commonwealth Institute of Health, Sydney, and N. Rajapaksa, Commonwealth Department of Health, Canberra.)

Norfolk Island, approximately 8 km long and 5km wide and situated 1676 km from Sydney and 1063 km from Auckland, has a resident population of about 1700. The climate is equable, and the major economic activity of the island is tourism, with 20,000 visitors annually.

Over the six weeks 30 November 1981 to 19 January 1982, 40 cases of a febrile illness were seen at the Norfolk Island Hospital. All the patients were island residents, with the disease primarily affecting young to middle-aged adults. A further 30 cases were estimated to have occurred among residents who did not attend the hospital. Twenty-three had a similar clinical picture; - acute onset of high fever (39°C), rigors, sweats, severe headache and retro-orbital pain, malaise, generalised muscle aches and pains and prostration. These symptoms persisted for two or three days, followed by a phase of remission for approximately 48 hours (in many cases accompanied by a morbilliform rash), and then an exacerbation of all symptoms and high fever lasting a further two to three days. There were no upper respiratory tract and usually no gastro-intestinal symptoms. Neck-stiffness was not evident in any of the cases. The ESR's were variable, and the white cell counts ranged from mild elevation to mild neutropenia. Liver function tests were normal. All patients, except one, were treated on an outpatient basis with symptomatic treatment (aspirin and bed rest). No complications occurred, and all patients were fully recovered within a week to ten days of first symptoms. The remaining 17 cases, including several babies and young children, presented with a less severe flu-like illness with variable fever and morbilliform rash.

Although the diagnosis of a PUO infection requires the isolation of the aetiological agent and/or immunological evidence of infection, the clinical presentations suggested an arbovirus infection. Consequently the island administration, aware of the re-introduction of dengue in north Queensland and the island traffic with Fiji, decided to initiate a vector control program. Federal authorities were consulted, and two entomologists and an RAAF hygiene officer plus ULV fogging equipment were flown to the island by RAAF Hercules on 11 January 1982.

A mosquito survey was conducted on 11-17 January. In many urban areas, Culex quinquefasciatus was breeding in rain-water tanks, septic tanks, discarded tyres, empty cans, old car bodies etc. This domestic species usually breeds in polluted water, but on Norfolk Island it appeared to occupy the niche that would be used elsewhere by container-breeding Aedes species. The salt-water mosquito Ae. australis was breeding in rock pools in all but one of the coastal areas surveyed. Although the dengue vector Ae aegypti was not found, the possibility that the fever cases were due to epidemic polyarthritis with an Ae. australis vector could not be rejected. The island had a very large rat population which could be acting as reservoirs. The rodents occupied numerous island habitats including the mutton bird burrows on cliff

TABLE 1. Summary of serological tests on Norfolk Island patients.

Patient	Date of onset	Collection date	Neutralising antibody titres						HAI titres							CF titres		Diagnosis
			Echovirus 17	Coxsackievirus B1	B2	B3	B4	B5	RRV	Sindbis	MVE	Dengue 1	2	3	4	Measles	Adenovirus	
1	21/12/81	21/12/81	<8	<8	8	128	32	<8	<20	<20	<20	<20	<20	<20	<20	<4	<4	Echovirus 17
		12/01/82	128	<8	8	128	32	<8	<20	<20	<20	<20	<20	<20	<20	<4	<4	
2	?	12/12/81	<8	<8	<8	<8	<8	<8	<20	<20	<20	<20	<20	<20	<20	<4	4	Echovirus 17
		22/12/81	128	<8	<8	<8	<8	<8	<20	<20	<20	<20	<20	<20	<20	<4	4	
3	31/12/81	04/01/82	<8	← not tested →					<20	<20	<20	<20	<20	<20	<20	<4	8	Echovirus 17
		27/01/82	64	← not tested →					<20	<20	<20	<20	<20	<20	<20	<4	8	
4	29/12/81	04/01/82	8	<8	8	<8	16	<8	<20	<20	<20	<20	<20	<20	<20	8	4	Echovirus 17
		12/01/82	≥256	<8	8	<8	16	<8	<20	<20	<20	<20	<20	<20	<20	8	4	
5*	?	20/01/82	<8	← not tested →					← not tested →							8	8	Echovirus 17
		03/02/82	64	← not tested →					<20	<20	<20	<20	<20	<20	<20	8	8	
6	?	08/01/82	32	← not tested →					<20	<20	<20	<20	<20	<20	<20	16	<4	Echovirus 17
		14/01/82	≥256	← not tested →					<20	<20	<20	<20	<20	<20	<20	16	<4	
7	19/12/81	19/01/82	64	← not tested →					<20	<20	<20	<20	<20	<20	<20	16	8	Probable
		22/02/82	64	← not tested →					<20	<20	<20	<20	<20	<20	<20	16	8	echovirus 17
8	24/12/81	09/01/82	32	← not tested →					<20	<20	<20	<20	<20	<20	<20	8	4	Probable
		21/01/82	32	← not tested →					<20	<20	<20	<20	<20	<20	<20	8	4	echovirus 17
		22/02/82	32	← not tested →					← not tested →							8	4	
9	13/12/81	20/12/81	16	<8	<8	16	16	<8	<20	<20	<20	<20	<20	<20	<20	<4	<4	Probable echovirus 17
10	2/12/81	27/01/82	32	← not tested →					<20	<20	<20	<20	<20	<20	<20	<4	16	Probable echovirus 17
11	8/12/81	21/01/82	64	← not tested →					<20	<20	<20	<20	<20	<20	<20	<4	16	Probable echovirus 17
12	10/01/82	27/01/82	≥256	← not tested →					<20	<20	<20	<20	<20	<20	<20	<4	16	Probable echovirus 17
13	?	25/01/82	≥256	← not tested →					<20	<20	40	20	<20	<20	<20	<4	16	Probable echovirus 17
14	?	19/01/82	256	← not tested →					80	<20	40	<20	<20	<20	<20	<4	16	Probable echovirus 17
15	?	19/01/82	128	← not tested →					20	<20	320	40	<20	<20	40	<4	<4	Probable echovirus 17
16	?	30/01/82	128	← not tested →					<20	<20	<20	<20	<20	<20	<20	8	16	Probable echovirus 17

* Echovirus type 17 also isolated from faecal specimen collected on 15/01/82

RRV = Ross River virus; MVE = Murray Valley encephalitis virus.

sides. Consequently from 9-16 January, larvicide was applied to all stored water tanks and all populated areas were fogged with malathion. Mosquito densities fell rapidly.

The last PUO case was detected on 19 January, adding further weight to the hypothesis of an arbovirus aetiology. However, extensive serological testing of single and paired, acute and convalescent sera were consistently negative for HI antibody against both alpha and flaviviruses (see Table 1). Following the isolation of echovirus type 17 from faeces of one patient, sera from 26 patients were tested for neutralising antibody. Six patients exhibited seroconversion (patients 1-6), ten had single or consistently high titres in presumably convalescent sera (patients 7-16), two had no antibody in the several sera collected (not shown) and eight were regarded as acute sera (not shown). Echovirus type 17 is a relatively uncommon virus, so that the presence of these antibodies is significant, although the diagnosis cannot be extrapolated to explain all cases.

Editorial Comment

Determination of the cause of an illness is difficult in the absence of virus isolation or in patients who do not experience an antibody rise. The paradox of this outbreak included an illness that affected a small percentage of a local population normally outnumbered by tourists, an unusual presentation for the echovirus diagnosed in sixteen patients, and an abrupt cessation of the outbreak following an intensive mosquito control program.

Echovirus type 17 is a relatively rare virus. The CDI received only six, one and 42 reports for 1979, 1980 and 1981 respectively. Of the 42 reports in 1981, 64.4% were in children aged less than five years. Presentations comprised 26.2% respiratory, 21.4% fever/malaise, 21.4% meningitis/encephalitis, 14.3% gastro-intestinal and 4.8% skin/mucous membrane symptoms. A small outbreak of echovirus type 17 infection also occurred in most regions of the UK in 1981.[1] Infections appeared common in all age groups except in adults over 45 years of age. 57.5% of patients were investigated for meningitis. Meningitis/meningism occurred in all patients in the 15-24 years age group. Other recorded symptoms included 12.3% lymphadenopathy and PUO, 8.2% respiratory infection, 4.1% rash and 4.1% diarrhoea and vomiting. The Editor of CDR commented that the last recorded outbreak occurred in 1970 when 71 isolates were reported. In most years since then, fewer than 20 isolates have been notified.

The prominence of a rash, but absence of overt meningitis and upper respiratory tract infection is unusual, and the possibility of a concurrent illness on Norfolk Island cannot be disregarded. Enterovirus transmission is primarily by the person-to-person route, and may indeed be oral-oral as well as faecal-oral. However, viruses in large volumes of drinking or recreational water may produce low-level transmission resulting in a large proportion of asymptomatic infections and varied symptoms in those individuals experiencing frank disease. This parameter together with the restriction of illness to residents may be a reflection of the lack of a reticulated water supply on the island. Rain water is used for most domestic purposes, but in dry weather is supplemented with bore water collected from various sites, and sold to resident householders and some of the smaller accommodation houses. The major hotels/motels

usually have their own bore. Sewage and waste water is disposed of by small sewage package plants. After limited chlorination, the effluent is absorbed into surrounding soil. There are 18 water bores on the island and six effluent discharge points.

In an attempt to identify the aetiological agent(s) and epidemiology of the high rate of infectious diarrhoea on the island, faecal specimens and water samples were forwarded to the Institute of Clinical Pathology and Medical Research, Sydney, in 1980.(2) Rotaviruses and small round viruses were seen by electronmicroscopy in two drinking water samples, and poliovirus type 1 (vaccine strain) was isolated in cell culture from one septic tank effluent sample. Septic tanks usually serve small populations so that influent and effluent virus concentrations fluctuate dramatically, and with retention times of three days or less enterovirus reductions of < 50% are usually encountered. Little is known about virus survival in groundwater, although one study reported a 90% reduction of enteroviruses in groundwater over 11-14 days.(3) A tentative association was reported between the pollution of groundwater by septic tank effluent and an outbreak of disease associated with echovirus type 22/23 complex at a migrant labour camp in Florida(4).

If a water-related disease epidemiology is considered, the cessation of the outbreak following the mosquito control program coincided with virus inactivation in the polluted bore well(s). Although the exercise could be argued to have been superfluous in hindsight, mosquito control operations should always be augmented when there are sound reasons for anticipating an outbreak. Indeed, because of the arbovirus activity in the Western Pacific Region, it would be prudent to maintain an ongoing vector surveillance and control program.

References

1. CDR (1981) 81/37:4
2. CDI (1980) 80/25:4
3. Yeager, J.G. and O'Brien, R.T. (1977). Enteroviruses and bacteriophage inactivation in groundwater and translocation in soil. Abstract N57. Abstracts of the Annual Meeting of the American Society for Microbiology.
4. Wellings, F.M., Mountain, C.W. and Lewis, A.L. (1976). Virus in groundwater. In Second National Conference on Individual On-site Wastewater Systems. pp61-65. Ann Arbor, Michigan: National Sanitiation Foundation.

RELATIVE SPECTINOMYCIN RESISTANT PENICILLINASE-PRODUCING N. GONORRHOEAE (PPNG) - SYDNEY.

(Contributed by R. Jones, Sexually Transmitted Diseases Clinic, Sydney.)

On 1 March 1982, one week after contact with a female prostitute in Sydney, a male was seen at the Sydney STD clinic with a purulent urethral discharge. The urethral smear was positive for N. gonorrhoeae, and the patient was given oral 3 g amoxycillin with 1 g probenicid stat. The urethral culture confirmed gonorrhoea with a PPNG strain. The patient returned on 4 March with a persisting urethral discharge. Smear and culture were still positive for the organism which had a penicillin minimum inhibitory concentration (MIC) value of > 2 µg/ml. The patient was given 2 g spectinomycin intramuscularly stat. Further sensitivity testing of the isolate indicated MIC values of 40 µg/ml spectinomycin and 0.25 µg/ml tetracycline. Consequently when the patient was

still smear and culture positive on 8 March, 500 mg tetracycline q.i.d. was prescribed for six days. By 22 March, the patient had no urethral discharge and culture was negative. However, since debris was noted in the first glass of a two glass urine test, 500 mg erythromycin b.d. was prescribed for a further 12 days.

The patient stated he had no sexual contacts after 1 March. The isolate appeared clinically sensitive to tetracycline, and infection would possibly have responded to a double dose (i.e. 4 g) of spectinomycin.

COXSACKIEVIRUS B5 INFECTIONS: ROYAL CHILDREN'S HOSPITAL, 1981-1982

(Contributed by I. Jack, Royal Children's Hospital, Melbourne)

In November 1981, a patient with meningitis due to coxsackievirus B5 infection was seen at the Royal Children's Hospital, Melbourne. This was the first case since the outbreak in 1976. A further ten infections have been confirmed since. Eight of the 11 virus isolates were from meningitis cases, and three from patients with croup, gastro-enteritis and Sudden Infant Death Syndrome.

The eight meningitis cases were investigated within two days of onset of symptoms. The virus was isolated from the CSF in six cases, and from the faeces and throat in the other two. CSF cell counts exceeded 90 cells/cmm, with three patients exhibiting > 1000 cells/cmm. The cell counts of two of the three exhibited an excess of polymorphonuclear leucocytes(P) over lymphocytes (L) (P1140:L410 and P2480:L118). The third case had 1000 lymphocytes/cmm. Overall, three cases showed P>L, three showed L>P and two P=L. The early examination of the CSF may explain the unexpected excess of polymorphonuclear cells in some of the patients. For clinical reasons, follow-up CSF cell counts were not done, so that the ratios in the latter stages of illness could not be determined.

One interesting aspect of this outbreak is that only three cases have presented with symptoms other than CNS illness. This may reflect a more virulent strain of coxsackievirus than was encountered in past epidemics. The pattern of illness seen at the hospital over the last ten years is shown in Table 1.

TABLE 1 Coxsackievirus B infections at the Royal Children's Hospital, 1972-1982

Year	Coxsackievirus	CNS involvement : Others
1972	B5	3:9
1973	B3, B4	3:7
1974	B2	4:18
1975	B4	2:11
1976	B5	4:12
1977/78	B2	3:7
1978	B1	2:11
1979	B4	1:19
1980	B2	3:10
1981	B4	3:10
TOTAL		28:114
1981/82	B5	8:3

Prior to the current episode, the ratios of CNS involvement to non-CNS illness in coxsackievirus B infections were very much in favour of the "iceberg effect", where most isolates were from the background of patients admitted with respiratory and enteric illness.

1

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 1/4/82 - 14/4/82 BULLETIN NUMBER - 82/8

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	14	1	2			8	9	1	35
0101 ADENOVIRUS TYPE 1	1			1		1			3
0102 ADENOVIRUS TYPE 2			1			4			5
0103 ADENOVIRUS TYPE 3				1					1
0105 ADENOVIRUS TYPE 5						1			1
0110 ADENOVIRUS TYPE 10						1			1
0119 ADENOVIRUS TYPE 19	3			3					6
0121 ADENOVIRUS TYPE 21								1	1
0199 ADENOVIRUS TYPING PENDING					1				1
0201 INFLUENZA A VIRUS			1						1
0203 INFLUENZA B VIRUS			1						1
0301 PARAINFLUENZA VIRUS TYPE 1				1	1				2
0302 PARAINFLUENZA VIRUS TYPE 2		2		1	10	4			17
0303 PARAINFLUENZA VIRUS TYPE 3	1	1						2	4
0399 PARAINFLUENZA VIRUS TYPING PENDING						2			2
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)	11	10	2		4		19	1	47
0500 RHINOVIRUS (ALL TYPES)	5			1	7		1		14
0600 MYCOPLASMA PNEUMONIAE	15	2	5				3	3	28
0700 ORNITHOSIS-PSITTACOSIS			2	1					3
0809 COXSACKIEVIRUS A9			1	1					2
0902 COXSACKIEVIRUS B2							1		1
0903 COXSACKIEVIRUS B3							1		1
0904 COXSACKIEVIRUS B4				1	1		1		3
0905 COXSACKIEVIRUS B5	3	2	2	3					10
1000 ECHOVIRUS NOT TYPED							1		1
1002 ECHOVIRUS TYPE 2			1						1
1005 ECHOVIRUS TYPE 5		1							1
1006 ECHOVIRUS TYPE 6	1								1
1009 ECHOVIRUS TYPE 9						1			1
1022 ECHOVIRUS TYPE 22			4						4
1023 ECHOVIRUS TYPE 23								1	1
1099 ECHOVIRUS TYPING PENDING						1			1

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 2

REPORTING PERIOD - 1/4/82 - 14/4/82 BULLETIN NUMBER - 82/8

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
1101 POLIOVIRUS TYPE 1							1		1
1102 POLIOVIRUS TYPE 2	1						1		2
1103 POLIOVIRUS TYPE 3			1			1	1		3
1104 POLIOVIRUS-VACCINAL STRAIN					2	1			3
1200 MUMPS VIRUS	9			8	2				19
1300 HERPES VIRUS GROUP-NOT TYPED	24			2		6	2		34
1301 HERPES SIMPLEX VIRUS NOT-TYPED		1		5				49	55
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	2							1	3
1303 VARICELLA-ZOSTER VIRUS	2			1		1			4
1306 HERPES SIMPLEX TYPE 1	12			19		5	8		44
1307 HERPES SIMPLEX TYPE 2	49			39		6	16		110
1399 HERPES VIRUS TYPING PENDING			13		4	6			23
1401 COXIELLA BURNETI	3								3
1502 PICORNA VIRUS-NOT TYPED								1	1
1514 MOLLUSCUM CONTAGIOSUM								1	1
1521 MEASLES VIRUS	2	1	1	2		4	1		11
1522 RUBELLA VIRUS	2	1		7	1	1	1	1	14
1532 HEPATITIS B ANTIGEN	9		3	28		15	8	8	71
1533 HEPATITIS B ANTIBODY		1							1
1535 HEPATITIS A ANTIBODY	6	1	3	11		6	8	1	36
1541 CHLAMYDIA A - C TRACHOMATIS	20		5					41	66
1556 CMV - CYTOMEGALOVIRUS	7		1	30	8	2	3	5	56
1564 ROTAVIRUS		1	1		7	1		2	12
1599 ENTEROVIRUS TYPING PENDING		2	2		3	1			8
ROSS RIVER VIRUS							5	16	21
ASTROVIRUS	1								1
SMALL VIRUS (LIKE) PARTICLE	2								2
DENGUE							6		6
PARAMYXOVIRUS						5			5
Total	205	27	52	166	51	64	97	135	817

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

3

PERIOD : 1/4/82 to 14/4/82 .... — 82/8

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	Respir atory	Enceph alitis	Mening -itis	Para- lysis	CNS other unspec	GI	Hepa -tic	CVS	Urin -ary	Skin/ mucs memb
0101 ADENOVIRUS TYPE 1.....	1	1					1				
0102 ADENOVIRUS TYPE 2.....		2					3				
0105 ADENOVIRUS TYPE 5.....							1				
0119 ADENOVIRUS TYPE 19.....	2										
0201 INFLUENZA A VIRUS.....	1										
0301 PARAINFLUENZA VIRUS TYPE 1....		1	1								
0302 PARAINFLUENZA VIRUS TYPE 2....		17									
0303 PARAINFLUENZA VIRUS TYPE 3....		3				1					1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....		46									
0500 RHINOVIRUS (ALL TYPES).....	1	9									
0600 MYCOPLASMA PNEUMONIAE.....	7	16							2		
0700 ORNITHOSIS-PSITTACOSIS.....		2									
0809 COXSACKIEVIRUS A9.....				1			1				
0902 COXSACKIEVIRUS B2.....				1							
0903 COXSACKIEVIRUS B3.....	1										
0904 COXSACKIEVIRUS B4.....		1		1			1				
0905 COXSACKIEVIRUS B5.....	1	1		6			1				
1002 ECHOVIRUS TYPE 2.....							1				
1005 ECHOVIRUS TYPE 5.....				1							
1006 ECHOVIRUS TYPE 6.....		1									
1009 ECHOVIRUS TYPE 9.....				1							
1022 ECHOVIRUS TYPE 22.....							4				
1023 ECHOVIRUS TYPE 23.....							1				
1101 POLIOVIRUS TYPE 1.....		1									
1102 POLIOVIRUS TYPE 2.....		2					1				
1103 POLIOVIRUS TYPE 3.....		1					2				
1104 POLIOVIRUS-VACCINAL STRAIN....							3				

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 4

PERIOD : 1/4/82 to 14/4/82 .... — 82/8

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.-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
1200 MUMPS VIRUS.....	1		1	4			1				
1300 HERPES VIRUS GROUP-NOT TYPED..		1									
1301 HERPES SIMPLEX VIRUS NOT-TYPED		1									29
1303 VARICELLA-ZOSTER VIRUS.....				1							2
1306 HERPES SIMPLEX TYPE 1.....	1	4								5	23
1307 HERPES SIMPLEX TYPE 2.....		1								4	12
1514 MOLLUSCUM CONTAGIOSUM.....											1
1521 MEASLES VIRUS.....		2				1					6
1522 RUBELLA VIRUS.....	1		1							1	11
1532 HEPATITIS B ANTIGEN.....	38							31			
1535 HEPATITIS A ANTIBODY.....	1							33			
1541 CHLAMYDIA A - C TRACHOMATIS...	1	1						1			
1556 CMV - CYTOMEGALOVIRUS.....	7	8	1			3				14	2
1564 ROTAVIRUS.....	1						11				1
ROSS RIVER VIRUS	2						1				9
ASTROVIRUS							1				
SMALL VIRUS (LIKE) PARTICLE							2				
DENGUE											4
PARAMYXOVIRUS		5									
Total.....	67	127	4	16		5	36	65	2	24	101

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

5

PERIOD : 1/4/82 to 14/4/82 ... — 82/8

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
0103 ADENOVIRUS TYPE 3.....	1							1		
0110 ADENOVIRUS TYPE 10.....	1									
0119 ADENOVIRUS TYPE 19.....	4									
0121 ADENOVIRUS TYPE 21.....		1								
0203 INFLUENZA B VIRUS.....								1		
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....			1	1				1		
0500 RHINOVIRUS (ALL TYPES).....				1			1			3
0600 MYCOPLASMA PNEUMONIAE.....				1			1	1		
0700 ORNITHOSIS-PSITTACOSIS.....									1	
0905 COXSACKIEVIRUS B5.....							1			
1104 POLIOVIRUS-VACCINAL STRAIN....							1			
1200 MUMPS VIRUS.....			14					1		
1301 HERPES SIMPLEX VIRUS NOT-TYPED	1	27					1	2		
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			2	1						
1306 HERPES SIMPLEX TYPE 1.....	3	6		1				5	1	
1307 HERPES SIMPLEX TYPE 2.....		95					1	1		
1401 COXIELLA BURNETI.....							3			
1521 MEASLES VIRUS.....								1	1	
1522 RUBELLA VIRUS.....						1				
1532 HEPATITIS B ANTIGEN.....									1	
1533 HEPATITIS B ANTIBODY.....									1	
1535 HEPATITIS A ANTIBODY.....									2	
1541 CHLAMYDIA A - C TRACHOMATIS...		63								
1556 CMV - CITOMEGALOVIRUS.....		1	1	2		6	4	6	6	1
ROSS RIVER VIRUS					18			1		
DENGUE					3			2		
Total.....	10	193	18	6	21	7	13	23	13	4