



Communicable Diseases Intelligence

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- Kaposi's sarcoma and Pneumocystis pneumonia among homosexual men - U.S.A.

CERTIFICATION OF ACHIEVED MALARIA ERADICATION - On 31 May 1981, Australia was entered in the WHO Official Register of areas where malaria had been eradicated. The status of malaria eradication in Australia will be published every six months in the WHO "Weekly Epidemiological Record"

VIRUS REPORTING SCHEME - A total of 896 reports were received this period, although figures from one laboratory have not been received due to a delay in the mail. Reports of interest include:

- Two further cases of possible indigenous dengue fever have been reported by the State Health Laboratory, Brisbane.

Dengue type 1 has been confirmed in a 19 year old male from Cairns who had no history of overseas travel. The patient presented with joint pains, rash, depression, fever and meningism. A serum sample taken on 28 April 1981, gave an HI titre of 1/80 with specific IgM to dengue type 1 virus. Dengue type 1 has also been confirmed in a 24 year old female from Townsville. She presented with a two week upper respiratory tract-like infection followed by a five day macular rash, myalgia and paresthaesia. Serum taken on 23 May 1981, gave an HI titre of 1/640 with specific IgM to the virus.

The third dengue report was of a 49 year old male missionary returning from Papua New Guinea.

- Of the 35 reports of influenza A infection, seven isolates were characterised as resembling influenza A/Brazil/11/78 (H₁N₁) by the Institute of Clinical Pathology and Medical Research (5) and the Royal Alexandra Hospital for Children (1), Sydney, and the Royal Children's Hospital (1), Melbourne.
- The increase in Q fever reports (85 reports received compared with 36, 23 and 25 for the previous three periods) include 43 cases from Forbes, NSW, where the abattoir is currently processing feral goats. The Prince of Wales Hospital, Sydney, also reported a serological response to C. burneti in a one year old girl with lower respiratory tract symptoms.
- Parainfluenza type 4 virus was isolated by Fairfield Hospital, Melbourne, from a five month old girl. This is the first report of this serotype since May 1979.

The Bulletin is compiled and distributed by the Environmental Health Branch, Department of Health, P.O. Box 100, Woden, A.C.T. 2606, Australia, and is available on request.

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Figures given may be subject to revision.

SPECTINOMYCIN-RESISTANT PENICILLIN-RESISTANT NON-PENICILLINASE PRODUCING
N. GONORRHOEAE

(Contributed by T.V. Riley, S.M. Carroll and K.T. Karthigasu, Department of Microbiology, The Queen Elizabeth II Medical Centre, Perth).

A 25 year old female presented at the Emergency Department on 12 June 1981 complaining of lower abdominal pain, brownish vaginal discharge and blood-stained urine. She was admitted to hospital for investigation of the haematuria. Her previous gynaecological history was complicated, and included drainage of a pelvic abscess, removal of her right ovary and fallopian tube, and several laparoscopies.

Examination of a mid-stream urine revealed numerous leucocytes and intracellular Gram-negative diplococci. N. gonorrhoeae was cultured from endocervical and urethral swabs. The isolate was resistant to spectinomycin and penicillin, but sensitive to ampicillin, by disc diffusion. The strain had the following minimum inhibitory concentration (MIC) values: penicillin - 2.0 µg/ml; ampicillin - 0.5 µg/ml; spectinomycin - 8.0 µg/ml; cefotoxin - 0.5 µg/ml; gentamicin - 4.0 µg/ml and tetracycline - 2.0 µg/ml.

As the penicillin MIC appears to be too high for the organism to fall into the category of decreased penicillin sensitivity, further investigation is required to elucidate the mechanism of resistance. The spectinomycin MIC of 8.0 µg/ml would suggest that the mechanism of resistance is enzymatic inactivation rather than a ribosomal alteration for which MIC values of >2048 µg/ml have been reported (see CDI 81/11).

The patient was treated with oral amoxycillin 3 gm stat. and probenecid 500 mg q.i.d. for seven days. The strain was not isolated from subsequent specimens.

The patient had sexual contact with a traveller from South-East Asia two months previously. Five weeks after the initial contact she experienced discomfort and noticed blood-stained urine. The haematuria gradually worsened until the eighth week when she sought medical attention. During those two months she had several sexual contacts with a regular consort. However, he remained asymptomatic, with no culture from two urethral swabs taken six days apart.

Editorial Comment

(Based on MMWR (1981) 30 : 221)

Following the recognition of one case of spectinomycin-resistant, penicillinase-producing N. gonorrhoeae in a US serviceman returning from the Philippines, the Centers for Disease Control made the following chemotherapy recommendations:

"Patients who have uncomplicated anogenital infections caused by spectinomycin-resistant PPNG should be treated with cefotoxin, 2.0 g in a single intramuscular injection, and with probenecid, 1.0 g orally. Another regimen which can be used is sulfamethoxazole/trimethoprim (SMX/TMP), nine tablets (400 mg SMX and 80 mg TMP/tablet) taken orally in single daily doses for three days (total: 27 tablets). This latter regimen can be used for five days to treat pharyngeal infections. SMX/TMP should not be prescribed for pregnant women or those with nursing infants".

β-LACTAMASE PRODUCING N. GONORRHOEAE (PPNG)

Eighty isolations have been reported for the first six months of 1981, compared with 84 (of which 23 were locally acquired) for the same period

last year. Table 1 is an analysis of the suspected source of each PPNG isolated on a State basis.

Table 1

Reports of PPNG cases by probable source of infection
Australia - 1981 Jan-June

<u>Probable source</u>	<u>ACT</u>	<u>NSW</u>	<u>VIC</u>	<u>QLD</u>	<u>SA</u>	<u>WA</u>	<u>NT</u>	<u>TAS</u>	<u>TOTAL</u>
Philippines		8	3		5	7			23
Thailand		3	3		3	6			15
Malaysia						2			2
Singapore		1	2			2			5
Indonesia		1				3			4
Borneo		1							1
S.E. Asia		1			1	2			4
Japan			2						2
Europe		2							2
Australia			9			5			14
Unknown		6	2						8
TOTAL	-	23	21	-	9	27	-	-	80

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL STATEMENTS

At its meeting in June 1981, the Council made several statements pertaining to communicable diseases. This issue contains a synopsis of the recommendations relating to sexually transmitted disease (STD). The remaining statements will be summarized in a later issue.

Statement on sexually transmitted diseases

The Council expressed concern over these infections, since little progress has been made toward implementing the recommendations proposed in 1978. Emphasis should be ascribed to the development of STD community health services; steps to improve co-operation between medical and other health personnel engaged in infection prevention and control; uniform legislation for notifiable disease reporting; increased postgraduate and other training and research into STD infections; and more health education of the public and other health workers.

Protection against sexually transmitted diseases

The Council recommended the removal of restrictions regarding the sale of condoms in public places and encouraged their routine use, since the items do afford some protection from STD infection, and may assist in the prevention of cervical endothelial dysplasia which has been recently linked to early sexual activity and multiple sexual partners.

Notification of genital herpes

Because of ambiguity that might arise in the notification of recurrent episodes of genital herpes infections in any one patient, the Council recommended that "genital herpes" be replaced by "genital herpes - first diagnosis" in the list of notifiable diseases.

Treatment of gonorrhoea

Council reiterated its previous recommendations that penicillin should continue to be the drug of choice for the initial treatment of all cases of gonorrhoea, except with contacts of cases of proven penicillinase-producing N. gonorrhoeae (PPNG). Patients so treated should be instructed to return after 48 hours for evaluation and proof of cure. Clinical evaluation alone is not sufficient. Council further recommended that all gonorrhoea specimens be tested routinely for penicillin sensitivity.

Penicillinase-producing gonococcal infections

Council expressed concern at the increasing prevalence of PPNG infections both in Australia and overseas, and specified that prevention and control of infection involves accurate diagnosis, effective treatment and vigorous contact tracing. Further emphasis was given to the importance of contact tracing, with a recommendation that a standard, confidential contact tracing form to facilitate interstate and international liaison be introduced. In addition, medical practitioners are urged to stress the importance of contact tracing to their patients, and that follow-up assistance and counselling be given by health workers.

Treponemal serology testing

To improve co-ordination and quality control of these tests, Council recommended that treponemal serology be removed from the Medical Benefits Schedule, and that the testing be performed only in accredited public health or other laboratories specialising in such procedures.

A revised statement on STD infections is being circulated to all State and Territory health authorities and various medical bodies, although individual copies are available from the Editor.

NEONATAL DEATH CAUSED BY CAMPYLOBACTER JEJUNI

(Contributed by R.W. Guard, Commonwealth Pathology Laboratory, Cairns).

A 21 year old female at 30 weeks gestation was admitted to Cairns Base Hospital with malaise, fever and backache, but without vomiting or diarrhoea. Her antenatal record was normal up to this time. Following admission, labour commenced and she delivered a live male infant, although her temperature was 39°C shortly after delivery.

The child had a low Apgar score, and required ventilation following symptoms of respiratory distress syndrome, pneumonia and pulmonary haemorrhages. An early hydrocephalus developed, possibly due to meningitis. Blood specimens and swabs from the child's ears and groin were taken. Cultures of both the ear swab and blood gave a pure growth of C. jejuni. No culture could be made from the CSF, possibly due to interference from the antibiotics administered. The organism was also isolated from the mother's faeces taken after delivery. Antibiotic therapy was initially kanamycin and penicillin, but was changed to erythromycin (30 mg/kg/24 hrs) following laboratory diagnosis. The child died on his 30th day.

Campylobacter infection has been reported previously as a cause of premature labour and neonatal infection⁽¹⁾. However, in the case referenced, the mother presented with severe diarrhoea at 34 weeks gestation, and

probably exposed the baby to infection during delivery. The baby remained well following parenteral gentamicin and later oral erythromycin administration, although the organism was isolated from faecal specimens on the fifth postnatal day.

Editorial Comment

Two major human pathogenic species of campylobacter are recognized. C. fetus subspecies fetus (formerly known as C. fetus subspecies intestinalis) is an infrequent cause of human infection, but can result in systemic illness affecting debilitated persons with chronic hepatic, renal or neoplastic disease, or individuals with compromised immune function⁽²⁾. Between January 1979 and March 1980, ten patients undergoing "nutritional therapy" for systemic lupus erythematosus, or malignancies in Mexico and California became systemically infected⁽³⁾. The suspected source of infection was raw calf liver, which was a component of the therapy.

In contrast, C. jejuni is a common cause of diarrheal illness in previously healthy persons, and is often associated with the consumption of unpasteurized milk. The organism is rarely isolated from blood cultures, particularly in the absence of diarrhoea. However, pregnancy may be a predisposing factor in the occurrence of systemic C. jejuni infection, and its epidemiology has been compared with that of Listeria monocytogenes in perinatal infection⁽⁴⁾. A placental infection of C. jejuni was recently diagnosed in a 23 year old woman who suffered a mid-trimester missed abortion during an acute febrile illness⁽⁵⁾. Home-made ricotta cheese, made from unpasteurized goat's milk, was the suspected source of infection.

Many spontaneous abortions and still-births remain unexplained, although it is likely some of them are due to infection which may be non-specific or sub-clinical in the mother. Routine cultures of products of conception might not detect many of the micro-organisms which have been implicated, including group B streptococci, Listeria monocytogenes, Treponema pallidum Campylobacter species, Mycoplasma hominis, Toxoplasma gondii and a number of viruses.

References

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2. Am. J. Med. (1978) 65 : 584
3. MMWR (1981) 30 : 294
4. J. Paed. (1979) 94 : 855
5. MJA (1981) 1 : 585

KAPOSI'S SARCOMA AND PNEUMOCYSTIS PNEUMONIA AMONG HOMOSEXUAL MEN - USA

(Based on MMWR (1981) 30 ; 250 and 306)

During the past 30 months, Kaposi's sarcoma (KS), an uncommonly reported malignancy in the United States, has been diagnosed in 26 homosexual men (20 in New York City and six in California). Diagnoses were based on histopathological examination of skin lesions, lymph nodes or tumour in other organs. From available data, 12 patients also had serological evidence of past or present cytomegalovirus (CMV) infection, and four had biopsy confirmed Pneumocystis carinii pneumonia. Eight of the patients died.

KS is a malignant neoplasm manifested primarily by multiple vascular nodules in the skin and other organs. The disease is multifocal, with a course ranging from indolent, with only skin manifestations, to fulminant with extensive visceral involvement. Accurate incidence and mortality

rates for KS are not available for the US, but the annual incidence has been estimated to be 0.02-0.06 per 100,000 population, primarily infecting elderly males^(1,2). The disease in elderly males is usually manifested by skin lesions and a chronic clinical course. However, there are two exceptions to this epidemiology; one in an endemic belt across equatorial Africa where KS commonly affects children and young adults and accounts for up to 9% of all cancers⁽²⁾, and the other as a higher incidence in renal transplant recipients⁽³⁾ and immunosuppressed patients⁽⁴⁾. The occurrence of this number of KS cases in 2½ years among young homosexual males is considered highly unusual. No previous association between KS and sexual preference has been reported. In addition, the fulminant clinical course reported in many of these patients differs from that classically described for elderly persons.

Pneumocystis carinii pneumonia is almost exclusively limited to severely immunosuppressed patients in the US⁽⁵⁾. However, since September 1979, 15 Pneumocystis cases have been recognized in homosexual men in California. In a study of five of these cases from Los Angeles, all had laboratory confirmed previous or current CMV infection and candidal mucosal infection. Severe, progressive, perianal herpes simplex infection has also been reported in four homosexual men with evidence of cellular immunodeficiencies in New York City. Three died, one with systemic CMV infection.

A high prevalence of CMV infections among homosexual males has been recorded in one survey, with 94% CMV seropositivity in males reported to be exclusively homosexual, and 54% seropositivity in exclusively heterosexual controls. In another study, 6.3% of homosexual males had positive tests for CMV in semen (although none had CMV recovered from urine), suggesting that seminal fluid may be an important vehicle of CMV transmission⁽⁷⁾. CMV infection has been shown to induce transient abnormalities of in vitro cellular immune function in otherwise healthy human hosts^(8,9). Although the possibility that cellular immune dysfunction predisposes individuals to opportunistic infections such as pneumocystosis and candidiasis, the role of CMV infections has yet to be clarified. A specific serological association with CMV infection has been demonstrated among American and European patients with KS^(10,11), and herpes-type virus particles have been demonstrated in tissue culture cell lines from African cases of KS⁽¹²⁾. It has also been hypothesized that activation of oncogenic virus during periods of immunosuppression may result in the development of KS⁽¹³⁾. Although immunosuppression often results in CMV infection, it is unknown whether CMV infection precedes or follows the above mentioned disorders.

Medical practitioners should be aware that Kaposi's sarcoma, Pneumocystis pneumonia and other opportunistic infections may be associated with immunosuppression in homosexual men.

References

1. Acta Un. Int. Cancer (1962) 18 : 326
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3. Transplantation (1979) 27 : 8
4. Arch. Dermatol (1980) 116 : 1280
5. Ann. Intern Med (1974) 80 : 83
6. J. Inf. Dis. (1981) 143 : 188
7. J. Inf. Dis. (1975) 132 : 472
8. J. Int. Dis (1977) 136 : 667
9. J. Int. Dis (1980) 141 : 488
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11. Int. J. Cancer (1978) 22 : 126
12. J. Natl. Cancer Inst (1972) 49:1509
13. Southern Med. J. (1977) 70 : 1011

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

1.

REPORTING PERIOD - 9-7 -81 - 22-7-81 BULLETIN NUMBER - 81/15.
VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR	RAHC	PHH/	FAIR-	RCH	IMVS	STATE	STATE	Total
	(NSW) / WVH (ACT)		(NSW)	(VIC)			(VIC)	(SA)	
0100 ADENOVIRUS NOT TYPED.....	14		3		1		8		26
0101 ADENOVIRUS TYPE 1.....		1		2	2			2	7
0102 ADENOVIRUS TYPE 2.....		1			1			2	4
0103 ADENOVIRUS TYPE 3.....				2	1				3
0105 ADENOVIRUS TYPE 5.....				2					2
0107 ADENOVIRUS TYPE 7.....		2		1	1				4
0119 ADENOVIRUS TYPE 19.....	3		1	2					6
0199 ADENOVIRUS TYPING PENDING.....			1		5			1	7
0201 INFLUENZA A VIRUS.....	11	1	3	15	3			2	35
0203 INFLUENZA B VIRUS.....	1								1
0301 PARAINFLUENZA VIRUS TYPE 1.....	2			7	5		4	11	29
0302 PARAINFLUENZA VIRUS TYPE 2.....				1					1
0303 PARAINFLUENZA VIRUS TYPE 3.....	1						2		3
0304 PARAINFLUENZA VIRUS TYPE 4.....				1					1
0399 PARAINFLUENZA VIRUS TYPING PENDING.....			1						1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)...	2	9		23	4		10	2	87
0500 RHINOVIRUS (ALL TYPES).....	2	1		10	4			3	20
0600 MYCOPLASMA PNEUMONIAE.....	8		3	2			7		20
0700 ORNITHOSIS-PSITTACOSIS.....	3		2						5
0809 COXSACKIEVIRUS A9.....	1								1
0816 COXSACKIEVIRUS A16.....					3				3
1002 ECHOVIRUS TYPE 2.....	1								1
1006 ECHOVIRUS TYPE 6.....	2								2
1009 ECHOVIRUS TYPE 9.....							1	3	4
1017 ECHOVIRUS TYPE 17.....	1						2		3
1022 ECHOVIRUS TYPE 22.....					3		1	2	6
1030 ECHOVIRUS TYPE 30.....				5	2				7
1101 POLIOVIRUS TYPE 1.....	2	3						1	6
1102 POLIOVIRUS TYPE 2.....	1								1
1103 POLIOVIRUS TYPE 3.....	1						1		2
1104 POLIOVIRUS-VACCINAL STRAIN.....					8				8
1200 MUMPS VIRUS.....	11	1		3			1	1	17

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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REPORTING PERIOD - 9-7-81 - 22-7-81 BULLETIN NUMBER - 81/15
 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
1300 HERPES VIRUS GROUP-NOT TYPED.....	23								23
1301 HERPES SIMPLEX VIRUS NOT-TYPED.....		1		2				45	48
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	9								9
1303 VARICELLA-ZOSTER VIRUS.....	5	2			1		1		9
1306 HERPES SIMPLEX TYPE 1.....			5	15			17		37
1307 HERPES SIMPLEX TYPE 2.....	65		10	18			21		114
1399 HERPES VIRUS TYPING PENDING.....			6		6				12
1401 COXIELLA BURNETI.....	65		3	1			16		85
1521 MEASLES VIRUS.....	3		2	2	3				10
1522 RUBELLA VIRUS.....	2		1	1			3		7
1532 HEPATITIS B ANTIGEN.....	5	1	2	28	1		3	6	46
1535 HEPATITIS A ANTIBODY.....	3		1				11	2	17
1541 CHLAMYDIA A - TRIC TYPE.....	17		2						19
1556 CMV - CYTOMEGALOVIRUS.....	6		5	26	6		3	8	54
1564 ROTAVIRUS.....	9	10	4		15			4	42
1599 ENTEROVIRUS TYPING PENDING.....			6		6		1		13
ROSS RIVER VIRUS							17		17
ASTROVIRUS	8								8
DENGUE							3		3
Total.....	287	33	61	169	118		133	95	896

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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PERIOD : 9/7/81 to 22/7/81

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Viral Identifications by Clinical Information Table 1.

Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -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.....		4									
0102 ADENOVIRUS TYPE 2.....	1						2	1			
0103 ADENOVIRUS TYPE 3.....	1	1									
0105 ADENOVIRUS TYPE 5.....		1					2				
0107 ADENOVIRUS TYPE 7.....		3									
0201 INFLUENZA A VIRUS.....	2	28		2					1		1
0203 INFLUENZA B VIRUS.....		1									
0301 PARAINFLUENZA VIRUS TYPE 1....	1	29									
0302 PARAINFLUENZA VIRUS TYPE 2....		1									
0303 PARAINFLUENZA VIRUS TYPE 3....		4									
0304 PARAINFLUENZA VIRUS TYPE 4....		1									
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....	1	83									2
0500 RHINOVIRUS (ALL TYPES).....		19					1				
0600 MYCOPLASMA PNEUMONIAE.....	4	14									
0700 ORNITHOSIS-PSITTACOSIS.....	2										
0809 COXSACKIEVIRUS A9.....	1										
0816 COXSACKIEVIRUS A16.....											3
1002 ECHOVIRUS TYPE 2.....						1					
1006 ECHOVIRUS TYPE 6.....							2				
1009 ECHOVIRUS TYPE 9.....		1		1							
1017 ECHOVIRUS TYPE 17.....	2	1									
1022 ECHOVIRUS TYPE 22.....	3	1					1				
1030 ECHOVIRUS TYPE 30.....		1	1	3							
1101 POLIOVIRUS TYPE 1.....		2					1				
1103 POLIOVIRUS TYPE 3.....	1										
1104 POLIOVIRUS-VACCINAL STRAIN....		1				1	2				
1200 MUMPS VIRUS.....		1		3			1				

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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PERIOD : 9/7/81 to 22/7/81

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
1301 HERPES SIMPLEX VIRUS NOT-TYPED	1		3								33
1302 EPSTEIN-BARR VIRUS (EB VIRUS).		2					1				
1303 VARICELLA-ZOSTER VIRUS.....	2	1		1							4
1306 HERPES SIMPLEX TYPE 1.....	1	6		1							14
1307 HERPES SIMPLEX TYPE 2.....		1	1								9
1401 COXIELLA BURNETI.....	54	3									1
1521 MEASLES VIRUS.....		2	1								7
1522 RUBELLA VIRUS.....				1							3
1532 HEPATITIS B ANTIGEN.....	17							29			
1535 HEPATITIS A ANTIBODY.....								17			
1556 CMV - CYTOMEGALOVIRUS.....	15	9					1	1	1	7	1
1564 ROTAVIRUS.....	3						37				
ROSS RIVER VIRUS	5										3
ASTROVIRUS							6				
DENGUE (TYPE 3)											2
Total.....	117	221	6	12	1	1	57	48	2	7	83

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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PERIOD : 9 / 7 / 81 to 22 / 7 / 81 ...

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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	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/malaise	Other	SIDS
1556 CMV - CYTOMEGALOVIRUS.....		6	1			4	5	2	1	2
1564 ROTAVIRUS.....									1	1
ROSS RIVER VIRUS					10			4		
ASTROVIRUS									1	1
DENGUE (TYPE 3)					2			1		
Total.....	13	156	22	2	14	6	22	40	7	19