ISSN 0725-3141

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Communicable Diseases Intelligence

Bulletin number 83/15
Issue date: 29 July 1983

Contents:

VIRUS REPORTING SCHEME - A total of 1614 reports were received this period.

. Influenza A virus, subtype H_1N_1 which reacted equally well with antisera to both A/England/333/80 and A/India/6263/80, was isolated by the WHO Influenza Centre, Commonwealth Serum Laboratory, from an 18 year old male university student whose only symptoms were a sore throat. A strain (H_1N_1) was also isolated by the State Health Laboratory, Brisbane, from a 31 year old female with an upper respiratory tract infection; and an influenza A H_3N_2 strain resembling A/Philippines/2/82 was isolated by the Institute of Clinical Pathology and Medical Research, Sydney, from a two year old boy with respiratory symptoms. In New Zealand, influenza-like illnesses involving both H_1N_1 and H_3N_2 subtypes have been escalating since mid-June.

. Antibodies against the Weil-Felix OX-K strain of Proteus vulgaris, suggestive of Rickettsia tsutsugamushi (scrub-typhus) infection, were reported by the State Health Laboratory, Brisbane, in a 41 year old labourer from Tully with an eschar and a four day history of fever, vomiting and diarrhoea; and in a six year old boy from a caravan park at Trinity Beach, Cairns, with meningitis, vomiting, non-vesicular rash, lymphadenopathy and splenomegaly. Scrub typhus was also diagnosed recently in a nine year old boy residing in a caravan park at Machans Beach, Cairns.

. Specific IgM against rubella was detected by Fairfield Hospital, Melbourne, in two neonates and in a two month old girl, but no malformations have been identified. Rubella infection had been diagnosed in their mothers at 14, 15 and 18 weeks gestation. All who intend to become pregnant and are unsure of their immunity to rubella should seek the advice of their doctors with respect to immunisation.

CDI BULLETIN - Since July 1980, the Editor of CDI has been Dr. Jeffrey Lake. However, due to his and other staff transfers the bulletin will not be published for some time. The delay is regretted, but publication will be resumed as soon as practicable. In the interim period, the participating laboratories should continue to forward the virus reports to this office.

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.

ROSS RIVER VIRUS DIAGNOSTIC SURVEY

(Contributed by J. Aaskov, WHO Collaborating Centre for Arbovirus Reference and Research, Queensland Institute of Medical Research (QIMR), Brisbane).

The results of an earlier alphavirus serology survey indicated that incorporation of internal standard sera would be useful adjuncts to minimise inter-laboratory variation (see CDI (1981) 81/8:6). This trial is an extension of that survey. A panel of six sera were tested by seven laboratories for antibody to Ross River virus.

- Serum 1 - collected approximately five weeks post onset of polyarthritis in a confirmed epidemic polyarthritis patient.
- Sera 2, 3 and 4 - collected from patients with PUO.
- Serum 5 - collected approximately 22 weeks post onset of polyarthritis in a confirmed epidemic polyarthritis patient.
- Serum 6 - a pool of serum from arthritic/PUO patients each of whom was found to have HI antibody to Ross River virus, but with no IgM detectable by HI following sucrose gradient centrifugation or by ELISA using virus-coated plates.

The results are shown in Table 1.

Overall, the results suggested that all the laboratories were able to detect high levels of virus specific antibody, IgG, IgM or total immunoglobulin. However, the variation between laboratories when testing sera with low levels of antiviral antibody did appear to be a cause for concern. In some cases this could be explained on technical grounds e.g. different laboratories used different virus concentrations in HI tests, and the antibody capture ELISA appeared to be infinitely more sensitive than conventional ELISA. Thus, there appears to be a need for a national consensus as to what a low titre IgM value means in the absence of supporting clinical data, and also for laboratories performing sucrose gradient/HI IgM assays to titre the IgM.

In the short term, the WHO Arbovirus Reference Centre at QIMR, Herston, Brisbane, is prepared to provide small quantities of serum 1 and serum 5 to laboratories wishing to use them as internal standards. In future years, laboratories performing these tests should endeavour to obtain 50ml serum samples from one or two polyarthritis patients as soon as possible after diagnosis. If these samples are then sent to QIMR, trials similar to the above can be arranged and suitable serum "standards" sent to any laboratory wishing to use them. This would provide both inter- and intra- laboratory quality control and add extra reliability to the diagnosis.

TOXIC SHOCK SYNDROME (TSS) UPDATE

Since the emergence of staphylococcal Toxic Shock Syndrome (TSS) in 1980 in the USA, epidemiological and clinical information of Australian cases has been collated by the Department of Health by questionnaire or from published accounts. Cases are classified as "confirmed" only if they satisfy the established case definitions, and as "probable" if they lack one of the major criteria.[2] In contrast to the USA, TSS has been uncommon in Australia, and this report summarises the results to date (Table 1) together with accounts of three recent cases.

TABLE 1 Inter-laboratory comparison of Ross River virus diagnostic serology

Serum	Laboratories													
	1	2			3		4	5		6		7		
	IgM ELISA#	Ig HI	IgM Sucrose gradient HI	IgM ELISA#	Ig ELISA+	IgM ELISA+	IgM Sucrose gradient HI	Ig HI	IgM Sucrose gradient HI	Ig HI	IgM Sucrose gradient HI	Ig Neutra-lisation*	Ig ELISA	IgM ELISA
1	+ (128)	320	+	160	160	256×10^3	±	160	128	1280	+	3.1	320	>10000
2	- (<30)	<20	-	-	-	-	-	<20	-	<10	ND	0.25	<10	<10
3	- (<30)	20	-	-	-	-	-	<20	-	80	-	0	<10	<10
4	- (<30)	<20	-	-	-	-	ND	<20	-	<10	ND	0	<10	<10
5	- (<30)	160	-	10	320	2×10^3	-	80	8	320	+	2.25	160	<10
6	- (<30)	80	-	-	80	8×10^3	+	40	4	80	+	2.2	80	>10000

ELISA# - virus coated plates
ELISA+ - antibody capture ELISA
Neutra-lisation* - log neutralisation index in vero cells using serum diluted 1 in 40
\+ - positive reaction
\- - negative reaction
ND - not tested.

Laboratories participating in the survey were;- State Health Laboratory, Perth; Institute of Medical and Veterinary Science, Adelaide; Fairfield Hospital, Melbourne; Prince Henry Hospital, Sydney; State Health Laboratory, Brisbane; Dr T.B. Lynch, Pathology Services, Rockhampton; Virus Research Institute, Dunedin, New Zealand. The laboratory numbers used in the table do not correspond with the above laboratory list.

TSS - VICTORIA
(Contributed by A. Yung, Fairfield Hospital, Melbourne)

On 14 May 1982, an eight year old boy was transferred from casulty, Royal Children's Hospital, to Fairfield Hospital with severe croup. He had a 24 hour history of sore throat, cough and fever during the night. On admission his temperature was 39.4°C, pulse rate 120/min and respiration 40/min. Blood pressure was not taken, but a reading of 90/60mm Hg was recorded later. He also had a rash under both axilla. Since his condition worsened, a tracheostomy was performed the following day, and ampicillin prescribed. The child developed a "strawberry" tongue, and the petechial rash spread to his arms and legs, and later desquamated around the fingers. A diagnosis of staphylococcol toxaemia was made following the culture of S. aureus phage type 81 from copious, purulent material aspirated from his trachea. Therapy was changed to cloxacillin, whereafter improvement was rapid and the boy was discharged on 26 May.

TSS - VICTORIA
(Contributed by D. Rankin, Public Health Division, Health Commission of Victoria)

On 6 June 1983, a 16 year old girl was admitted to Fairfield Hospital, Melbourne, with a provisional diagnosis, subsequently confirmed, of TSS. The disease had a sudden onset and was characterised by fever, maculopapular rash, headache, vomiting, diarrhoea, hypotension, oropharyngitis, conjunctivitis and lymphadenitis. At the time of onset the patient was in the fifth day of menstruation. She used Tampax Super tampons during this period, and claimed that they were changed every 90 minutes during the day and once at night.

Staphylococcus aureus, group 1, phage type 52/79/80 (weak reaction to 83A), S. aureus, group 1, phage type 52/80 (weak reaction to 79) and a group G β-haemolytic streptococcus were isolated from a vaginal swab. No staphylococci were isolated from the tampons or applicators in an opened box. The patient recovered after treatment and was discharged on 13 June.

TSS - QUEENSLAND
(Contributed by A.B. Chater, Theodore, and J.R. Lowry, Rockhampton Base Hospital, Rockhampton).

On 7 November 1982, two days after commencing a normal menstrual period using Carefree tampons, a 42 year old female was admitted to her local hospital with fever, rash, headache, drowsiness, syncope, vomiting and diarrhoea. Her temperature was 40.8°C, pulse rate 140/min, respirations 32/min and blood pressure 80/50 mm Hg. The patient also complained of sore eyes and a sore throat.

She was transferred to Rockhampton base hospital on 8 November with a possible diagnosis of TSS or thrombotic thrombocytopenic purpura. She developed severe hypotension, renal failure and disseminated intravascular coagulation which failed to respond to volume expansion and high dose diuretic, and eventually necessitated continuous peritoneal dialysis. Her renal function and electrolytes returned gradually to normal with dialysis, although peripheral oedema and chemosis remained prominent. The rash, which originally was very marked, faded and desquamated particularly in the intertriginous areas. On 15 November she went into respiratory failure and had to be

TABLE 1 Reported cases of TSS - Australia (cf. CDI 82/2)

	Location	Date	Sex	Age	Menstrual	Tampon brand
1981						
1	Melbourne	Jan	F	30	Yes	Carefree Super (NZ)
2	Launceston	Jan	F	20	Yes	Carefree Super (NZ)
3	Perth	Mar	F	30	Yes	Meds
	recurrence	Aug	F		Yes	No
4	Sydney	Mar	F	15	Yes	Carefree Regular
5	Collie (WA)	Mar	F	12	Yes	Meds
6	Sydney	May	F	28	No (after caesarean section)	
7	Adelaide	May	F	31	No (after deep abscess; bacteraemia)	
8	Geelong	Jul	F	34	Yes	Tampax
9	Melbourne	Dec	F	14	Yes	Carefree
10	Sydney	Aug	F	26	Yes	Meds
11	Newcastle	N.A.	F	21	No (after cholecystectomy)	
1982						
1	Melbourne	Feb	F	14	Yes	Tampax Regular
2	Melbourne	May	M	8	(tracheo-bronchitis)	
3	Sydney	Mar	F	22	Yes	Tampax
4	Brisbane	May	F	37	Yes	N.A.
5	Melbourne	Mar	F	21	Yes	Carefree Super Plus
6	Melbourne	Jul	F	26	No	
7	Rockhampton	Nov	F	43	Yes	Carefree (fatal case)
1983						
1	Melbourne	Jun	F	16	Yes	Tampax Super
Probable retrospective cases reported in 1981						
R1	Adelaide	1974	F	15	Yes	Meds
R2	Sydney	1980	M	19	(after biopsy wound)	
R3	Brisbane	1975	F	15	Yes	N.A.
R4	Canberra	1979	F	32	Yes	Tampax (diagnosed as severe measles, no vaginal swabs)

S. aureus found in all cases where swabbings were taken except case 4, 1982.
N.A. - no information available.

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intubated. Her chest X-ray was normal, but there was gross disturbance of her blood gases associated with the disseminated intravascular coagulation. This continued to her death with readings of fibrinogen degradation products 16 times normal values. She was treated with amoxycillin, flucloxacillin, gentamicin and heparin without effect. Two days later, when a second attempt was made to wean her off the respirator, she maintained normal respiration for one hour, but then suffered a cardiorespiratory arrest and could not be resuscitated.

On admission, blood, urine and vaginal cultures were negative, but Klebsiella pneumoniae was grown from the used tampon. Subsequent swabs grew profuse cultures of K. pneumoniae and S. aureus from the endotracheal tube on day 3, and a pure light culture of K. pneumoniae from the vagina and cervix on day 5. Her urine was also positive for K. pneumoniae on day 3 but negative on day 10.

It was later ascertained that she had a history of illness associated with menstruation. In 1978 she was admitted with abdominal pain, vomiting and backache, but recovered spontaneously after treatment with tetracycline. Similarly in

1979 she experienced vomiting and bad taste which again resolved spontaneously after tetracycline treatment. She had two subsequent admissions with vomiting, and gastroscopy revealed peptic ulceration.

Editorial Comment

The variety of clinical settings and sites of infection known to be associated with TSS and the absence of a diagnostic test still places the onus of diagnosis on the clinician. When TSS is suspected a thorough search for a possible site of infection should be made, and cultures obtained from a variety of sites including any cutaneous or subcutaneous lesions, no matter how benign they appear. The bacteriological data obtained from nonmenstrual cases represent the strongest evidence that infection with S. aureus alone is sufficient to cause TSS, although a role for Gram-negative and/or anaerobic organisms in the pathogenesis of menstrual TSS cases has not been totally excluded.

The Department of Health would like to continue to collect as much information as possible on TSS in Australia, and is interested in hearing of further suspected cases.

References

1. MJA (1981) 1 : 251

2. CDI (1982) 82/18 : 3

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 7/7/83 —. 20/7/83 BULLETIN NUMBER . 83/15
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	6	4	1			3	7	1	22
0101 ADENOVIRUS TYPE 1		3	1	1		1		5	11
0102 ADENOVIRUS TYPE 2				1		3			4
0104 ADENOVIRUS TYPE 4						1		1	2
0105 ADENOVIRUS TYPE 5	1		1			2		2	6
0106 ADENOVIRUS TYPE 6	1					1			2
0108 ADENOVIRUS TYPE 8								1	1
0110 ADENOVIRUS TYPE 10								2	2
0117 ADENOVIRUS TYPE 17								1	1
0119 ADENOVIRUS TYPE 19								3	3
0125 ADENOVIRUS TYPE 25						1			1
0199 ADENOVIRUS TYPING PENDING	1		6		8	5			20
0201 INFLUENZA A VIRUS	8	3	2			6	3	3	25
0202 INFLUENZA A VIRUS SUBTYPE H3N2	1			1			1		3
0203 INFLUENZA B VIRUS	1			1				4	6
0206 INFLUENZA A VIRUS SUBTYPE H1N1							1		1
0301 PARAINFLUENZA VIRUS TYPE 1				2	2	22	1	1	28
0302 PARAINFLUENZA VIRUS TYPE 2				1	2		2	1	6
0303 PARAINFLUENZA VIRUS TYPE 3						4		2	6
0304 PARAINFLUENZA VIRUS TYPE 4								1	1
0399 PARAINFLUENZA VIRUS TYPING PENDING						5			5
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)	35	28	8	24	73	70	26	2	266
0500 RHINOVIRUS (ALL TYPES)	1		1	1	14	2	2	2	23
0600 MYCOPLASMA PNEUMONIAE	28		8	7	4	8	10	2	67
0700 ORNITHOSIS-PSITTACOSIS	1			2		2			5
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED							1		1
0809 COXSACKIEVIRUS A9			1						1
0902 COXSACKIEVIRUS B2				1					1
0903 COXSACKIEVIRUS B3				1		1		1	3
0905 COXSACKIEVIRUS B5						1			1
1003 ECHOVIRUS TYPE 3								1	1
1009 ECHOVIRUS TYPE 9	1								1
1011 ECHOVIRUS TYPE 11	3	2		4		1			10
1014 ECHOVIRUS TYPE 14		2	1						3
1015 ECHOVIRUS TYPE 15			1						1
1101 POLIOVIRUS TYPE 1				1		2			3
1102 POLIOVIRUS TYPE 2				1		1		2	4
1103 POLIOVIRUS TYPE 3						2			2
1200 MUMPS VIRUS	8	3	1	1	1	1			15
1300 HERPES VIRUS GROUP-NOT TYPED	18			2		9		2	31
1301 HERPES SIMPLEX VIRUS NOT-TYPED		3		4				1	8
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	7							10	17
1303 VARICELLA-ZOSTER VIRUS	1			1			2	1	5
1306 HERPES SIMPLEX TYPE 1	9		15	23		19	18	16	100
1307 HERPES SIMPLEX TYPE 2	71		29	72		26	55	34	287
1399 HERPES VIRUS TYPING PENDING			5		4	1			10
1401 COXIELLA BURNETI	6			3		1	8	1	19
1402 OTHER RICKETTSIAE							2		2
1502 PICORNA VIRUS-NOT TYPED	5		1	1				4	11
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS)	1								1
1521 MEASLES VIRUS	3	1		1	1	1		1	8
1522 RUBELLA VIRUS	7			10	1		2	1	21
1532 HEPATITIS B ANTIGEN	58		11	45		27	10	13	164
1535 HEPATITIS A ANTIBODY	11		1	3		12	4	14	45
1541 CHLAMYDIA A - C TRACHOMATIS	17		3			1	18	58	97
1556 CMV - CYTOMEGALOVIRUS	5		5	38	8	2	3	10	71
1563 CORONAVIRUS				1					1
1564 ROTAVIRUS	19	10	13	4		35	1	6	88
1599 ENTEROVIRUS TYPING PENDING		1	8		12	3		4	28
ROSS RIVER VIRUS		1				1	26	1	29
ASTROVIRUS							3		3
SMALL VIRUS (LIKE) PARTICLE		2		1					3
PARAMYXOVIRUS						1			1
Total	334	63	123	259	130	284	206	215	1,614

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 7/7/83 to 20/7/83 .... 83/15

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
0100 ADENOVIRUS NOT TYPED.....		1									
0101 ADENOVIRUS TYPE 1.....	1	7				2					1
0102 ADENOVIRUS TYPE 2.....	1	2									
0104 ADENOVIRUS TYPE 4.....		1									
0105 ADENOVIRUS TYPE 5.....		2					2				1
0106 ADENOVIRUS TYPE 6.....							1				
0201 INFLUENZA A VIRUS.....	4	17									1
0202 INFLUENZA A VIRUS SUBTYPE H3N2		3									
0203 INFLUENZA B VIRUS.....		3									
0206 INFLUENZA A VIRUS SUBTYPE H1N1		1									
0301 PARAINFLUENZA VIRUS TYPE 1....	2	25									1
0302 PARAINFLUENZA VIRUS TYPE 2....	1	4									
0303 PARAINFLUENZA VIRUS TYPE 3....		6					1				
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....	2	255					1				2
0500 RHINOVIRUS (ALL TYPES).....		17					1				
0600 MYCOPLASMA PNEUMONIAE.....	11	49					1				
0700 ORNITHOSIS-PSITTACOSIS.....		5									
0809 COXSACKIEVIRUS A9.....				1							
0902 COXSACKIEVIRUS B2.....		1									
0903 COXSACKIEVIRUS B3.....		1		1							
0905 COXSACKIEVIRUS B5.....				1							
1011 ECHOVIRUS TYPE 11.....	1	3		5							
1014 ECHOVIRUS TYPE 14.....			1	1			1				
1015 ECHOVIRUS TYPE 15.....											
1101 POLIOVIRUS TYPE 1.....		3									
1102 POLIOVIRUS TYPE 2.....		2									
1103 POLIOVIRUS TYPE 3.....					1						
1200 MUMPS VIRUS.....	4		2	1							
1301 HERPES SIMPLEX VIRUS NOT-TYPED	1										4
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	5							2			
1303 VARICELLA-ZOSTER VIRUS.....	1										3
1306 HERPES SIMPLEX TYPE 1.....	1	3								4	44
1307 HERPES SIMPLEX TYPE 2.....	4		1			1				1	38
1401 COXIELLA BURNETI.....	7	1									
1402 OTHER RICKETTSIAE.....											2
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS).....											1
1521 MEASLES VIRUS.....			2								3
1522 RUBELLA VIRUS.....	6										9
1532 HEPATITIS B ANTIGEN.....	78							82			
1535 HEPATITIS A ANTIBODY.....	10							34			
1541 CHLAMYDIA A - C.TRACHOMATIS...	1										
1556 CMV - CYTOMEGALOVIRUS.....	8	11		2				3		9	2
1563 CORONAVIRUS.....							1				
1564 ROTAVIRUS.....				1			85				
9992 ROSS RIVER VIRUS.....	5	1					1				11
9994 SMALL VIRUS (LIKE) PARTICLE...							3				
9996 PARAMYXOVIRUS.....		1									
Total.....	154	425	6	13	1	3	99	121		14	123

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 7/7/83 to 20/7/83 ... 83/15

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
0101 ADENOVIRUS TYPE 1.....				1						
0102 ADENOVIRUS TYPE 2.....								1		
0104 ADENOVIRUS TYPE 4.....	1									
0105 ADENOVIRUS TYPE 5.....								1		1
0106 ADENOVIRUS TYPE 6.....	1									
0108 ADENOVIRUS TYPE 8.....	1									
0110 ADENOVIRUS TYPE 10.....	1	1								
0117 ADENOVIRUS TYPE 17.....		1								
0119 ADENOVIRUS TYPE 19.....	1	2								
0125 ADENOVIRUS TYPE 25.....	1									
0201 INFLUENZA A VIRUS.....					1		3	1		
0203 INFLUENZA B VIRUS.....					1		1	1	1	
0301 PARAINFLUENZA VIRUS TYPE 1....	1							1		
0302 PARAINFLUENZA VIRUS TYPE 2....					1					
0304 PARAINFLUENZA VIRUS TYPE 4....				1						
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....							5	2	1	2
0500 RHINOVIRUS (ALL TYPES).....									1	3
0600 MYCOPLASMA PNEUMONIAE.....			1		1			14	2	
0903 COXSACKIEVIRUS B3.....										1
1003 ECHOVIRUS TYPE 3.....								1		
1009 ECHOVIRUS TYPE 9.....							1			
1011 ECHOVIRUS TYPE 11.....								1		
1102 POLIOVIRUS TYPE 2.....							1	1		
1103 POLIOVIRUS TYPE 3.....							1			
1200 MUMPS VIRUS.....			7						1	
1301 HERPES SIMPLEX VIRUS NOT-TYPED	1	1						1		
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			7	4					2	
1303 VARICELLA-ZOSTER VIRUS.....								1		
1306 HERPES SIMPLEX TYPE 1.....	7	34	2					8		
1307 HERPES SIMPLEX TYPE 2.....		246								
1401 COXIELLA BURNETI.....							1	10	1	
1402 OTHER RICKETTSIAE.....								2		
1521 MEASLES VIRUS.....				1				2		
1522 RUBELLA VIRUS.....					3	1		2	3	
1532 HEPATITIS B ANTIGEN.....				1		1			5	
1535 HEPATITIS A ANTIBODY.....								1	2	
1541 CHLAMYDIA A - C.TRACHOMATIS...	3	93								
1556 CMV - CYTOMEGALOVIRUS.....		6	3	2	1	8	1	7	17	1
1564 ROTAVIRUS.....		2							1	
9992 ROSS RIVER VIRUS.....					19			3		
9993 ASTROVIRUS.....					2			1		
Total.....	18	386	20	10	29	10	14	62	37	8