ISSN 0725-3141

Communicable Diseases Intelligence

Bulletin number 83/5
Issue date: 11 March 1983

Contents:

VIRUS REPORTING SCHEME - A total of 1147 reports were received this period. Sporadic cases of influenza have been reported throughout the summer months (7 and 1 reports of influenza A infections and influenza B infections respectively reported this period compared with 9, 5; 5, 5 and 16, 5 for the previous three periods). Influenza B virus resembling B/Singapore/222/79 was isolated by the WHO Influenza Centre, Commonwealth Serum Laboratories, Melbourne, from a 21 year old University student with respiratory symptoms. The laboratory also reported an increased number of adenovirus isolations from referred specimens from patients with sore throats.

- The Institute of Medical and Veterinary Science, Adelaide, reported the administration of varicella-zoster immune globulin (VZIG) to the neonate of a woman who developed varicella late in pregnancy. The baby remained healthy with no signs of infection. VZIG is intended for passive immunisation of susceptible immunodeficient children after exposure to chickenpox or herpes zoster, and in the newborn infants of women who develop a chickenpox rash from five days before until two days after delivery. The greatest protection is to be expected when VZIG is administered within 96 hours after exposure. The effectiveness of VZIG administration in protecting the foetus has not been established, but it has been suggested that it should be given to susceptible (determined serologically) pregnant women exposed to varicella or herpes zoster, although the risk of foetal death, stillbirths, prematurity or major congenital abnormalities appears to be low except in life-threatening complications like chickenpox pneumonia.

- Specific IgM titres of 1/160 by CF test against chlamydial group antigen were detected by the State Health Laboratory Services, Perth, in a 21 year old male who had a three day history of fever, vomiting and hepatomegaly following his return from Bangkok, and in a 40 year old male who had been in contact with a patient with psittacosis.

- Adenovirus type 11 was isolated by Fairfield Hospital, Melbourne, from urine of a 29 year old renal transplant recipient. Similar isolations of adenovirus type 35 were reported in October 1981, and March and September 1982 (see CDI 82/18: 1).

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.

PERTUSSIS SURVEILLANCE - WESTERN AUSTRALIA

(Contributed by P.L. Masters, Microbiology Department, Princess Margaret Hospital for Children, Perth).

Pertussis is not a notifiable disease in Western Australia, but the admission rate at the Princess Margaret Hospital for Children (PMHC), Perth, is one indication of its prevalence in the State. Table 1 details the annual admissions during 1977-82.

TABLE 1 Annual pertussis admission - PMHC, 1977-82

1977	1978	1979	1980	1981	1982
8	13	27	10	14	75

Admissions were of children with clinical whooping cough who yielded Bordetella pertussis on culture or with significant lymphocytosis in peripheral blood. The monthly admissions during the pertussis outbreak in 1982 indicated that the disease peaked in January followed by an admission rate considerably higher than that for previous years (Table 2).

TABLE 2 Pertussis cases admitted monthly - PMHC, 1982

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	(Jan 1983)
19	9	8	2	3	1	0	2	9	3	7	3	(11)

Although increased medical awareness led to a considerable rise in B. pertussis isolations during 1982, the admission rates to PMHC was a good marker of the overall incidence of the disease. The disease severity (assessed by intensive care requirements), vaccination status and whether the patient had young siblings, were also determined for the 75 admissions reported in 1982 (Table 3).

TABLE 2 Pertussis admissions by selected age groups, disease severity, vaccination status and absence of siblings in family unit - PMHC, 1982

Age Group	Vaccination status by number of doses						Intensive care requirements	Absence of siblings
	0	1	2	3	unknown	TOTAL		
0-3 mo	27	6	-	-	1	34	8	5
4-6 mo	5	6(1)	3(2)	-	1	15(3)	3	2
7-12 mo	7	1	1	2(1)	1	12(1)	-	2
1-2 yrs	1	1	-	3	2	7	-	1
3-4 yrs	1	(1)	(1)	3(3)	(1)	4(6)	-	1
5-8 yrs	(2)	(1)	(1)	1(6)	1	2(10)	-	4
< 8 yrs	-	-	-	1(3)	-	1(3)	-	1
TOTAL	41(2)	14(3)	4(4)	10(13)	6(1)	75(23)	11	16

The data is parentheses refer to cases that presented to PMHC but were not admitted.

The data denoted the serious nature of the infection in infants less than six months of age. The 52 infants in this age group could not have completed their Triple Antigen (diphtheria, tetanus, pertussis) schedule. Protection of this age group depends on high vaccination rates in sibling contacts, thus reducing disease transmission. Adults may also transmit infection, particularly among the present generation of young parents whose immunity to pertussis is largely the result of vaccination rather than natural infection[1]. Such contact may have been pertinent among the seven infants aged less than six months who had no siblings in their family unit. The 23 children with confirmed pertussis who had received a full course of Triple Antigen restated the well-known fact that the vaccine does not confer either complete or permanent immunity.

It has been shown recently that the detection of IgA antibodies to B. pertussis in nasopharyngeal aspirates is a useful adjunct to culture in the diagnosis of pertussis after the first week of illness[2]. This technique is being developed further at PMHC, as well as a latex-particle agglutination technique for the detection of pertussis antigen. The latter method has the promise of providing a rapid diagnostic technique for pertussis in young infants. Bacteriological confirmation increases public awareness of the fact that pertussis is still a relatively common infection, although antimicrobial therapy is ineffective unless given prophylactically or early in the course of infection.

In the 1970's, controversy over whether the benefits of pertussis vaccination outweighed the risk of vaccine-associated encephalopathy resulted in a decrease in the vaccine acceptance rate (77% in 1974 to approximately 30% in 1978 in the UK). Following this period of low vaccine coverage, a major pertussis epidemic occurred in the UK during 1977-79 and an even larger one in 1981-82, with 60,040 cases reported in the period January-November 1982[3,4].

Editorial Comment

Although a history of hospitalisation may not indicate the same degree of disease severity for different age groups, such data are useful for estimating the risks of disease and the benefits of vaccine usage. Pertussis is a severe disease, particularly for children less than one year of age, and may be associated with seizures, encepholopathy and death. The epidemiology of pertussis and the effect, value and risks of the vaccine were reviewed in 1981 by the Joint Committee on Vaccination and Immunisation of the Department of Health and Social Security in the UK[5]. The Committee concluded that risk from immunisation was slight and outweighed by its advantages, and that with due attention to vaccine contraindications, pertussis vaccine should continue to be recommended as part of the basic course of childhood immunisation. More than 80% of children exposed to pertussis who have received at least three doses of Triple Antigen vaccine are protected[6].

However, high vaccination rates are needed to bring pertussis under control, and there is little room for complacency. Complete protection is not invariable, and severe attacks can occur in vaccinated children. Also mild attacks in vaccinated children may contribute to the spread of the disease, so that the degree of protection for home contacts is lower than from most vaccines in current use. More effective vaccines based on identifiable protective antigens are being developed. Unlike

the classical whole-cell vaccine, the new products are partially purified and detoxified acellular or extract vaccines, and preliminary evidence indicated that the vaccines have much lower incidences of both local and serious reations[7]. Pertussis pathogenesis has been hypothesised to be a two stage process; an initial adhesion and proliferation of bacilli fixed to cilia of the respiratory epithelium, followed by the elaboration of a separate toxic factor (described variously as "pertussigen", histamine-sensitising, lymphocyte promoting, islets activating (HSF/LPF/IAP)) which is responsible for harmful effects to the host[8]. Protection against the first stage (infection) may be afforded by a secretory IgA antibody which inhibits adhesion of bacilli to cilia and is short-lived. Protection against the second stage (disease) is associated with long-lived or rapidly recalled antibodies homologous to the HSF/LPF/IAP toxin factor. This rational may explain the less effective protection against infection than against clinical whooping cough with pertussis vaccines.

References

1. Am. J. Dis. Child (1978) 132:371
2. J. Clin. Microbiol (1981) 13:286
3. MMWR (1982) 31:629
4. CDR (1982) 82/47:1
5. BMJ (1981) 282:1595
6. BMJ (1982) 285:357
7. JAMA (1982) 248:22
8. Rev. Inf. Dis. (1979) 1:401

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) IN SOUTH AUSTRALIAN HOSPITALS (MAY-DECEMBER 1982)

(Contributed by the Communicable Disease Control Unit, South Australian Health Commission).

In May 1982, the South Australian Health Commission introduced a system of recording the numbers of MRSA infected patients in the State's hospitals. The surveillance was developed to evaluate the MRSA load in the major hospitals, and to review trends in the number of infected patients. Major teaching hospitals, and some private hospitals with established infection control organisations, were asked to co-operate. The survey form was designed to match standard hospital methods of data collection for infection control, thereby avoiding the need for extra work by hospital staff.

Data was sought on the number of admissions of infected patients each month. Although the data would include some double counting, it was a guide to the load of infected cases handled by that hospital. Totals were divided into two categories; colonised patients referred to those with superficial infections that did not warrant antibiotic therapy (e.g. ulcers, stitch abscesses); invasive infections referred to patients with deep MRSA infections requiring specific antibiotic therapy. The two categories were further sub-divided into old patients (infected prior to the present admission) and new patients (infected during the current admission). Table 1 gives the numbers of specified MRSA infected cases admitted to all the reporting hospitals each month.

TABLE 1 Monthly incidence of admissions of MRSA infected cases (May-December 1982)

Month	Colonised		Invasive		TOTAL
	Old	New	Old	New	
May(1)	9	12	1	3	25
June	26	21	1	6	54
July(2)	16	16	5	7	44
August	10	33	4	5	52
September	28	45	4	7	84
October	23	21	2	7	53
November	34	29	4	8	75
December	16	43	0	9	68
TOTAL	162	220	21	52	455

(1) - No record for hospital B
(2) - No record for hospital A

The monthly incidence of admissions of infected cases suggested a stable situation, and gave an indication of the workload that may have been engendered by the presence of MRSA. An average of 49 colonised patients were admitted to hospital each month, of which 44% were known to be infected prior to admission. Similarly, an average of 9.4 patients with deep infections were admitted each month, of which 29% of cases were known to be infected prior to admission.

A point prevalence survey of all inpatients known to be infected with MRSA on a specified day of the month was also done for each hospital. These figures were related to the total bed occupancy at the time of recording (e.g. midnight that day). Table 2 details the average number of cases per month and the percentage rate of total beds occupied by MRSA patients for each hospital (coded A-K in decreasing size) for the six month period May - October 1982.

TABLE 2 Mean monthly number and percentage rate of total beds occupied by MRSA patients (May - October, 1982)

Hospital	Mean no. MRSA patients/month	% Rate of MRSA bed occupancy
A	11.0	1.7
B	8.8	1.5
C	5.0	1.1
D	0	0
E	5.0	2.3
F	2.7	1.5
G	0	0
H	0.2	0.1
I	0.3	0.2
J	0	0
K	0	0

The point prevalence surveys showed a remarkable consistency between hospitals of the same size and type. However, there was a marked variation in the number of cases within specific hospitals over time. Table 3 records the mean number and percentage rate of bed occupancy of MRSA patients for the five hospitals with significant number of cases (hospitals A, B, C, E and F) each month.

TABLE 3 Mean number of MRSA patients and percentage rate of total beds occupied for five major hospitals per month (May - December 1982).

Month	Mean no. of patients	% Rate of MRSA bed occupancy
May(1)	5.0	1.2
June	4.6	1.0
July(2)	5.0	1.35
August	7.4	1.7
September	10.0	2.3
October	5.6	1.3
November	7.8	1.8
December	6.4	2.3

(1) - No records for hospital B
(2) - No records for hospital A

A peak in the cumulated data was noted in September. There was no ready explanation for this increase, but it did not appear to denote a worsening trend, and the records for the succeeding months did not vary significantly from the initial cumulated rates.

The South Australian incidence of nosocomial MRSA appears to be less than that reported in Eastern States where there is an established (stable) pattern of infection. It was evident that many patients colonised with MRSA were admitted from nursing homes. However, hospitals need to maintain surveillance and isolation procedures in order to contain spread.

BOTULISM - NEW SOUTH WALES

Four cases of botulism in two separate incidents have been reported following the consumption of contaminated tinned mushrooms imported from Taiwan. The index case was diagnosed on 3 March 1983 in a two year old boy who had been referred to the Royal Alexandra Hospital for Children, Sydney. Investigation revealed that botulism was also suspected in his mother who had been admitted to the Royal Prince Alfred Hospital, Sydney, and in his grandfather who had been hospitalised at the Griffith Base Hospital on 1 March. Food histories incriminated a 365 gm can of "Admiral" brand tinned mushrooms imported from Taiwan. Since several distributors market mushrooms processed in Taiwan, the Health Department of New South Wales issued public warnings against the consumption of all brands of Taiwanese imported mushrooms. On 9 March, the fourth case of botulism was diagnosed in a patient from the western suburbs of Sydney. A 365 gm can of Taiwanese mushrooms, but not the "Admiral" brand, was again implicated. Since pressure testing have shown defects among these cans, all canned and processed mushrooms and champignons imported from Taiwan have been ordered to be withdrawn from sale.

CHOLERA SURVEILLANCE - QUEENSLAND

Vibrio cholerae 0-group 1, biotype El Tor, serotype Inaba, has been isolated from a three year old boy with severe gastro-enteritis following admission to the Beaudesert Hospital. Investigation revealed that he had been bathing in the Logan River near the Il Bogan bridge. *Vibrio* species have been isolated on several occasions from this river system.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 17/2/83 - 2/3/83 BULLETIN NUMBER . 83/5

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	1		1		4	1	8	3	18
0101 ADENOVIRUS TYPE 1				1	4				5
0102 ADENOVIRUS TYPE 2				2	2	7		1	12
0103 ADENOVIRUS TYPE 3			1		2				3
0104 ADENOVIRUS TYPE 4						1			1
0105 ADENOVIRUS TYPE 5	1		1			4			6
0107 ADENOVIRUS TYPE 7	1				1				2
0108 ADENOVIRUS TYPE 8								1	1
0111 ADENOVIRUS TYPE 11				1					1
0118 ADENOVIRUS TYPE 18								1	1
0119 ADENOVIRUS TYPE 19			2	1				4	7
0199 ADENOVIRUS TYPING PENDING			4						4
0201 INFLUENZA A VIRUS	2		1	3			1		7
0203 INFLUENZA B VIRUS								1	1
0301 PARAINFLUENZA VIRUS TYPE 1					1		1		2
0302 PARAINFLUENZA VIRUS TYPE 2						1			1
0303 PARAINFLUENZA VIRUS TYPE 3					3	1			4
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)			1	1		1	1	1	5
0500 RHINOVIRUS (ALL TYPES)	3			3	5	3	2		16
0600 MYCOPLASMA PNEUMONIAE	57		7	8		5	6	5	88
0700 ORNITHOSIS-PSITTACOSIS								1	1
0899 COXSACKIEVIRUS GROUP A TYPING PENDING							2		2
0902 COXSACKIEVIRUS B2								1	1
0903 COXSACKIEVIRUS B3	2	1	2	2			1		8
1002 ECHOVIRUS TYPE 2	1								1
1003 ECHOVIRUS TYPE 3								1	1
1007 ECHOVIRUS TYPE 7								1	1
1009 ECHOVIRUS TYPE 9						1			1
1011 ECHOVIRUS TYPE 11	15		4	2	2	2	7	2	34
1015 ECHOVIRUS TYPE 15	1								1
1017 ECHOVIRUS TYPE 17				1		1			2
1018 ECHOVIRUS TYPE 18				1					1
1022 ECHOVIRUS TYPE 22	2						3	1	6
1024 ECHOVIRUS TYPE 24								1	1
1025 ECHOVIRUS TYPE 25	2								2
1030 ECHOVIRUS TYPE 30		1			2				3
1101 POLIOVIRUS TYPE 1				1					1
1102 POLIOVIRUS TYPE 2						1	1		2
1104 POLIOVIRUS-VACCINAL STRAIN			1			1			2
1200 MUMPS VIRUS	3			4			1	2	10
1300 HERPES VIRUS GROUP-NOT TYPED	25			3		7		1	36
1301 HERPES SIMPLEX VIRUS NOT-TYPED						1		49	50
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	10		1					4	15
1303 VARICELLA-ZOSTER VIRUS	4	1		1	1	2	2	1	12
1306 HERPES SIMPLEX TYPE 1	14		18	29		20	25		106
1307 HERPES SIMPLEX TYPE 2	87		22	53		29	41		232
1399 HERPES VIRUS TYPING PENDING			9		2				11
1401 COXIELLA BURNETI	3		1				2		6
1502 PICORNA VIRUS-NOT TYPED	9		16					3	28
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS)						1			1
1521 MEASLES VIRUS	2		1	4			1		8
1522 RUBELLA VIRUS	4	1		9		2	2	3	21
1532 HEPATITIS B ANTIGEN	28	1	9	27		20	10	6	101
1533 HEPATITIS B ANTIBODY								2	2
1535 HEPATITIS A ANTIBODY	4			4		4	2	10	24
1541 CHLAMYDIA A - C TRACHOMATIS	23		8			7		81	119
1543 CHLAMYDIA A - LGV TYPE								2	2
1556 CMV - CYTOMEGALOVIRUS	12		6	13	9	4	1	1	46
1563 CORONAVIRUS				1					1
1564 ROTAVIRUS		4	2			1			7
1571 ENTEROVIRUS TYPE 71 (BRCR)				1					1
1599 ENTEROVIRUS TYPING PENDING			2		6	1	3		12
ROSS RIVER VIRUS							33	5	38
SMALL VIRUS (LIKE) PARTICLE		1				1			2
Total	316	10	120	176	44	130	156	195	1,147

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 17/2/83 to 2/3/83 .... 83/5

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
0101 ADENOVIRUS TYPE 1.....		2					1				
0102 ADENOVIRUS TYPE 2.....		6		1			3				
0103 ADENOVIRUS TYPE 3.....		1		1			1				
0105 ADENOVIRUS TYPE 5.....	2	3					2				
0107 ADENOVIRUS TYPE 7.....		1									
0111 ADENOVIRUS TYPE 11.....										1	
0201 INFLUENZA A VIRUS.....		5	1								
0203 INFLUENZA B VIRUS.....		1									
0301 PARAINFLUENZA VIRUS TYPE 1....		2									
0302 PARAINFLUENZA VIRUS TYPE 2....		1									
0303 PARAINFLUENZA VIRUS TYPE 3....		4									
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....		5									
0500 RHINOVIRUS (ALL TYPES).....		14					1				
0600 MYCOPLASMA PNEUMONIAE.....	18	57	1	2							1
0700 ORNITHOSIS-PSITTACOSIS.....		1									
0902 COXSACKIEVIRUS B2.....									1		
0903 COXSACKIEVIRUS B3.....		2		2			3				
1003 ECHOVIRUS TYPE 3.....						1					
1009 ECHOVIRUS TYPE 9.....							1				
1011 ECHOVIRUS TYPE 11.....	5	4		15			3		1	1	
1015 ECHOVIRUS TYPE 15.....				1							
1017 ECHOVIRUS TYPE 17.....											1
1018 ECHOVIRUS TYPE 18.....											1
1022 ECHOVIRUS TYPE 22.....		1		1			3				1
1024 ECHOVIRUS TYPE 24.....		1									
1025 ECHOVIRUS TYPE 25.....				2							
1030 ECHOVIRUS TYPE 30.....		1		1			1				
1102 POLIOVIRUS TYPE 2.....		1					1				
1104 POLIOVIRUS-VACCINAL STRAIN....							2				
1200 MUMPS VIRUS.....	3	1		1							1
1300 HERPES VIRUS GROUP-NOT TYPED..	1										
1301 HERPES SIMPLEX VIRUS NOT-TYPED	1					2					34
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	5							2			
1303 VARICELLA-ZOSTER VIRUS.....	1										11
1306 HERPES SIMPLEX TYPE 1.....	2	4	1		1				1	4	42
1307 HERPES SIMPLEX TYPE 2.....	9				1					1	14
1401 COXIELLA BURNETI.....		1									
1502 PICORNA VIRUS-NOT TYPED.....	1		3	2		2			1		
1515 CONTAGIOUS PUSTULAR DERMATITIS (ORF VIRUS).....											1
1521 MEASLES VIRUS.....			1			1					6
1522 RUBELLA VIRUS.....	9										9
1532 HEPATITIS B ANTIGEN.....	38							54	1		
1533 HEPATITIS B ANTIBODY.....	1							1			
1535 HEPATITIS A ANTIBODY.....	3						1	18			
1543 CHLAMYDIA A - LGV TYPE.....		1									
1556 CMV - CYTOMEGALOVIRUS.....	8	8		2	1		1	4	1	7	1
1563 CORONAVIRUS.....							1				
1564 ROTAVIRUS.....							7				
1571 ENTEROVIRUS TYPE 71 (BRCR)....		1									1
1599 ENTEROVIRUS TYPING PENDING....		1									
9992 ROSS RIVER VIRUS.....	4	1									13
9994 SMALL VIRUS (LIKE) PARTICLE...							2				
Total.....	111	131	7	31	3	6	34	79	6	14	137

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 17/2/83 to 2/3/83 ... 83/5
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		1	1	
0102 ADENOVIRUS TYPE 2.....							1	1		
0104 ADENOVIRUS TYPE 4.....							1			
0105 ADENOVIRUS TYPE 5.....									1	
0107 ADENOVIRUS TYPE 7.....	1						1			
0108 ADENOVIRUS TYPE 8.....		1								
0118 ADENOVIRUS TYPE 18.....		1								
0119 ADENOVIRUS TYPE 19.....	3	4								
0201 INFLUENZA A VIRUS.....								3		
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....							1			
0500 RHINOVIRUS (ALL TYPES).....										1
0600 MYCOPLASMA PNEUMONIAE.....					2		3	11	3	
0903 COXSACKIEVIRUS B3.....								3		
1002 ECHOVIRUS TYPE 2.....										1
1007 ECHOVIRUS TYPE 7.....								1		
1011 ECHOVIRUS TYPE 11.....	2	1					1			1
1017 ECHOVIRUS TYPE 17.....							1	1		
1022 ECHOVIRUS TYPE 22.....								2		
1101 POLIOVIRUS TYPE 1.....									1	
1200 MUMPS VIRUS.....			3		1				1	
1301 HERPES SIMPLEX VIRUS NOT-TYPED		18								
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			6		1		1	3	1	
1303 VARICELLA-ZOSTER VIRUS.....					1			1		
1306 HERPES SIMPLEX TYPE 1.....	4	42			1			7	2	
1307 HERPES SIMPLEX TYPE 2.....		206								
1401 COXIELLA BURNETI.....					2			5		
1502 PICORNA VIRUS-NOT TYPED.....							3	2	3	
1521 MEASLES VIRUS.....								1	1	
1522 RUBELLA VIRUS.....					1	1		3	1	
1532 HEPATITIS B ANTIGEN.....								1	7	
1535 HEPATITIS A ANTIBODY.....								1	1	
1541 CHLAMYDIA A - C.TRACHOMATIS...	4	115								
1543 CHLAMYDIA A - LGV TYPE.....								1		
1556 CMV - CYTOMEGALOVIRUS.....		3	2	2		2	1	3	2	2
9992 ROSS RIVER VIRUS.....					29			19		
Total.....	14	391	11	2	38	4	14	70	25	5