AUSTRALIA

Communicable Diseases Intelligence

Bulletin number 80/12
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Contents:

VIRUS REPORTING SCHEME - a total of 701 reports were received this period; however duplicates have not been removed from the attached tables as yet.

- The beginning of the seasonal rise in respiratory syncitial virus infections is indicated - 17 reports received compared with 7,3,4, and 3 for the previous four periods. Eight were from Victoria, five from South Australia and three from Queensland.

Reports of interest include:

- A case of Reye's syndrome in a one year old boy in Western Australia. An untyped enterovirus was isolated from his nasopharynx.
- Adenovirus type 1 was isolated from a three year old boy with haemolytic uraemic syndrome (RCH Melbourne).
- An isolation of Influenza A(H3N2) resembling A/Bangkok 1/79 from a 36 year old woman recently returned from Florida, U.S.A. (Reported by State Health Laboratory, Brisbane).
- Vaccinia virus was isolated at Fairfield Hospital from a 44 year old woman vaccinated because she was going to the U.K. with a stopover in Bangladesh. She had some local necrosis on the arm with redness extending to the chest. A verbal report has also been received of another patient, a sufferer from eczema who was vaccinated twice (both failed) as she was going to Nigeria. None of these countries are amongst the four still requiring smallpox vaccination from travellers.
- The six reports of arbovirus group B from Fairfield Hospital were all sera from Kiribati (formerly the Gilbert Islands), where dengue is endemic. The one case of dengue reported from Queensland was a woman who had recently been in Fiji.
- Less common isolations reported this period include one Norwalk Agent from a month old boy with a maculopapular rash and lymphadenopathy (RCH, Melbourne); four reports of reovirus from IMVS Adelaide, and one calici virus (ICPMR, Sydney).

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.
Contributions are solicited, and do not preclude later publication elsewhere.

Figures given may be subject to revision.

SALMONELLA OUTBREAK IN SOUTH AUSTRALIA

(Contributed by A. Turner, Health Surveyor, S.A. Health Commission and C. Murray, Food Hygiene Laboratory, Institute of Medical and Veterinary Science, Adelaide.)

Early in February 1980, the South Australian Health Commission received reports from Mount Gambier, Renmark and Mildura Local Board health surveyors concerning cases of salmonella infection which appeared to be related to consumption of salami from an Adelaide manufacturer. S. typhimurium was isolated from the faeces of two members of one family with diarrhoea and also from slices of salami taken from the family refrigerator. All these isolates were later shown to be of phage type 170.

At the same time there was a dramatic rise in the isolations of S. typhimurium phage type 170 in South Australia. There were five isolations of type 170 during 1979, all separate, but 36 in six weeks from the end of January 1980. Further investigation of the food histories of sufferers again implicated salami as the likely source of infection.

The salami manufacturer's plant was visited and the hygiene found to be satisfactory, with acceptable handling of the raw and finished products. Swabs taken from manufacturing equipment were negative for salmonella.

The salami is manufactured from minced beef and pork, mixed with spices and nitrite. After the casings are filled, the salami is allowed to ferment at 30°C for 48 hours during which time the desired flavour and aroma develop. After fermentation, the salami is cured for three to four weeks at approximately 15°C.

Due to an unexpected increase in demand for salami early in January 1980 some was sold between one and two weeks after fermentation. Furthermore, some of the patients who acquired S. typhimurium type 170 noted that the salami was 'fresher' than normal.

Evidence indicated that the salami involved in the outbreak was from one batch only, although this could not be proven absolutely.

It is considered that the outbreak was caused by salami manufactured from meat heavily contaminated by salmonella, possibly an infected carcass, and stored for an insufficient time following fermentation.

It is not unusual for salami and related products to have low numbers of salmonella, but due to the nature of the product they do not multiply and, in fact, decrease in numbers with storage. Hence they do not usually cause infection as there are insufficient numbers for an infecting dose. In this case the salami appeared to have relatively high numbers of S. typhimurium phage type 170 as the organism could be isolated readily from very small quantities.

BOTULISM OR SNAKEBITE?

(Based on information supplied by A.T.C. Bourke, Commonwealth Department of Health, Brisbane.)

A 40-year old tobacco farmer ate the contents of a can of savoury mince on

8 April 1980. No other family members consumed any of the product. That evening he told his wife not to buy that mince again because it tasted "like dog food".

The patient remained well until the late morning of 10 April. He developed a headache, became nauseated and vomited. Approximately half an hour before onset he had drunk water from an irrigation pipe fed by a small dam on his property. No members of his family developed manifestations of his illness.

He was admitted to the local hospital at midday on the day of onset. By 4.00 p.m. his pupils were fixed and dilated, and he had ptosis, dysphagia and dysarthria. He later became aphonic and completely paralysed, although he remained able to move his toes. He also developed respiratory difficulty. The patient was intubated and transferred to the Cairns Base Hospital on the evening of the same day where he was attached to a respirator.

Shortly afterwards he became anuric and was placed on peritoneal dialysis. Urine passed prior to renal shutdown was port-wine in colour. The patient remained conscious during the whole period. His limb reflexes were intact, and his cardiovascular system continued to function normally, with no fluctuations in blood pressure.

Initially a provisional diagnosis of botulism was made. However, the manifestations of the condition as it developed, coupled with laboratory evidence of tissue destruction and disseminated intravascular coagulation, suggested envenomation. (The patient had been in the habit of walking about his property in bare feet, but he and his wife insisted that he had not been bitten by a snake or spider.) A thorough examination of his lower limbs disclosed a red area with three marks approximately 8mm apart on the medial aspect of his left ankle. No circulating unfixed snake venom was detected in the blood.

Polyvalent snake antivenene was administered on the evening of 10 April. No botulinus antitoxin was given. The patient's condition progressively improved, and he was discharged on 9 May.

Investigations by the Commonwealth Pathology Laboratory in Cairns of the savoury mince from the suspected can, and of unopened cans of savoury mince from the same manufacturer bearing the same batch code, proved negative for botulinus toxin and Clostridium botulinum. This finding was confirmed by the Commonwealth Institute of Health, Sydney. Tests for pesticide and heavy metal intoxication were also negative.

Although the patient emphatically denied having been bitten by a snake, it is reasonable to conclude that he had. Being bare-footed he could have been bitten by a Taipan (Oxyuranus scutellatus) or a Brown Snake (Demansia textilis) 15 minutes to 2 hours before the onset of symptoms. These two snakes do not usually remain attached after striking.

TOXIC SHOCK SYNDROME - UNITED STATES

In view of recent press publicity on this syndrome the following edited

version of an account published in MMWR (1980) 29(20).229 is of interest.

Cases of a newly recognised illness known as toxic-shock syndrome(1) have recently been reported by state health departments and private physicians in 13 American States.

Toxic-shock syndrome typically begins suddenly with high fever, vomiting, and profuse watery diarrhea, sometimes accompanied by sore throat, headache, and myalgias. The disease progresses to hypotensive shock within 48 hours, and the patient develops a diffuse, macular, erythematous rash with non-purulent conjunctivitis. Urine output is often decreased, and patients may be disorientated or combative. The adult respiratory distress syndrome or cardiac dysfunction may also be seen.

Laboratory studies reveal elevated blood urea nitrogen, serum creatinine, bilirubin, and creatine phosphokinase levels, and white blood cell counts with marked left shifts. Platelet counts are low in the first week of illness, but are usually high in the second week.

Patients require large volumes of fluid to maintain perfusion and usually require intensive care. In the recovery phase, there is desquamation of at least the palms, soles, or digits and often of other skin areas as well.

Since October 1, 1979, 55 cases have been reported to CDC, 52 of which (95%) have been in women. The mean age is 24.8 years, with a range of 13-52 years. Seven deaths have occurred, for a case-fatality ratio of 13%.

Of 40 patients in whom a menstrual history was obtained, 38 (95%) had onset of illness within the five-day period following onset of menses. Two others had onset of illness 10 days after onset of menses. Moreover, 13 patients have had recurrence of symptoms with a subsequent menstrual period.

In 33 of 45 (73%) patients cultured, Staphylococcus aureus was isolated from the throat, cervix, vagina, or rectum. Four of 15 patients (27%) tested for Herpesvirus hominis had serologic or cultural evidence of herpes infection.

The editor commented that toxic-shock syndrome is a serious disease of unknown etiology. It affects primarily young women of child-bearing age who have been previously healthy, and it has a case-fatality ratio for reported cases of 10%-15%. This ratio is probably high because severe cases are easier to recognize. The incidence of the disease is not known but is apparently low. The increasing number of reported cases over the past six months is probably due to increasing recognition.

The syndrome resembles Kawasaki disease (mucocutaneous lymph node syndrome) in several respects, namely fever, rash with subsequent desquamation, and cardiac involvement. However, shock, which is prominent in toxic-shock syndrome, is not usually seen in Kawasaki disease. The character of the rash is also different in the two diseases: it is a maculopapular one in Kawasaki disease, but a non-papular, diffuse erythroderma in toxic-shock syndrome. Uraemia and thrombocytopaenia are rarely seen in Kawasaki disease and are common in toxic-shock syndrome. Kawasaki disease classically occurs in children less than five years of age; some recently reported

cases of "adult Kawasaki disease"[2,3] may actually be cases of toxic-shock syndrome.

Toxic-shock syndrome was first recognised in seven children aged 8-17 years, three of whom were boys[1]. In five of the seven, S. aureus was isolated from the nasopharynx, vagina, or localized abscess. At that time it was hypothesized that the syndrome was caused by a toxin elaborated by the staphylococci. Although S. aureus was isolated from vaginal cultures in two-thirds of patients in the current report, no control study has been done to show that this prevalence is unusually high. The isolation of herpesvirus in a small number of cases probably reflects stress-related recurrence of infection and not an etiologic role for the virus. CDC, in cooperation with a number of investigators, is setting up a nationwide case-control study to try to define the epidemiologic features and the cause of this disease.

References

1. Lancet (1978) 2:1116-8
2. JAMA (1979) 242:542-3
3. Arch Dermatol (1979) 115:1435-6.

WHO FOOD VIROLOGY PROGRAMME

(From WER (1979) 50:387)

The WHO Food Virology Programme (FVP) has been organized to deal with the hazard of virus diseases transmitted through foods. Under the coordination of WHO, Collaborating Centres have been established at Brno, Czechoslovakia, and at Madison, Wisconsin, USA, to provide a variety of services. The FVP includes information services, research, and training to serve the need of public health (and particularly food control) authorities, laboratory research workers, and planners of research programmes.

A principal basis of the information services is the Food Virology Data Collection. This is a collection, on edge-punch cards for mechanical data retrieval, of information on:

(a) animal species and organs that viruses can infect;
(b) geographical distribution of viruses;
(c) route of infection of viruses;
(d) methods of extracting viruses from foods in the laboratory;
(e) laboratory host range for detection of viruses;
(f) methods for identification of viruses;
(g) instances of virus occurrence in foods, as evidenced by laboratory detection of the virus or by an outbreak of human disease;
(h) other evidence of virus occurrence in foods;
(i) stability or inactivation of viruses;
(j) effects of various processing techniques on the persistence or destruction of viruses in food.

Specific information on these aspects can be obtained on request, using forms that are provided for the purpose. Other information services include a list of food virologists, a bibliography on viruses in foods, and an alert service which tells at least annually of new reports in the

field of food virology. A more complete description of the programme, including the forms entitled "Request for Specific Information", may be obtained from: Food Hygienist, Veterinary Public Health, Division of Communicable Diseases, World Health Organization, Geneva, Switzerland.

RAPID LABORATORY DIAGNOSIS

A selection of rapid laboratory techniques which can be used everywhere, but particularly in developing countries, are presented in the new WHO Offset Publication No.47 "Manual for Rapid Laboratory Viral Diagnosis" which appeared at the end of 1979. The manual deals with four main aspects: electronmicroscopy, immunofluorescence, enzyme techniques and radioimmunoassay. It describes specimen collection and handling, deals with the problem of reagents and indicates some applications such as diagnosis of respiratory infections, rabies, rotavirus and hepatitis A with step by step explanations of the procedures involved.

The techniques described provide rapid and accurate viral diagnosis at low cost without the need for sophisticated equipment or specialized trainin Such techniques are applicable in less well equipped laboratories and should facilitate epidemiological studies and a better appreciation of the role of viruses in public health in rural areas and developing countries.

This WHO publication is available in English, and eventually in French, through WHO sales agents. A special quotation for bulk orders is obtainable from the Distribution and Sales Service of WHO, 1211 Geneva 27, Switzerland.

β-LACTAMASE PRODUCING N. GONORRHOEAE

Four further isolations have been reported for the month of May:

Male, 28; from Queensland, probable source - Penang
Male, 47; from Queensland, probable source - Manila
Male, 39; from South Australia, probable source - S.E. Asia
Female, 23; from South Australia, probable source - post infective contact of male 39 above

This brings the total number of reported cases diagnosed in 1980 to 32.

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CORRIGENDUM CDI 80/11

Page 5 - "Erythema Infectiosum" (Fifth disease). In the first paragraph it was stated that "CDI is unaware of any such reports in Australia".

The Editor of the Medical Journal of Australia has drawn our attention to an article on this disease by J. Keipert (MJA (1978) 1:454-455) in which three cases were reported.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 29/5/80 - 11/6/80 BULLETIN NUMBER - 1

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	8		3		4		2		17
0101 ADENOVIRUS TYPE 1				1	4	6			11
0102 ADENOVIRUS TYPE 2			1	3	2	8			14
0103 ADENOVIRUS TYPE 3	1								1
0105 ADENOVIRUS TYPE 5	1			2	2				5
0106 ADENOVIRUS TYPE 6			1						1
0107 ADENOVIRUS TYPE 7						1		1	2
0108 ADENOVIRUS TYPE 8								1	1
0111 ADENOVIRUS TYPE 11								1	1
0119 ADENOVIRUS TYPE 19								2	2
0131 ADENOVIRUS TYPE 31						2			2
0199 ADENOVIRUS TYPING PENDING			1		3	3			7
0201 INFLUENZA A VIRUS			2					1	3
0202 INFLUENZA A VIRUS SUBTYPE H3N2							1		1
0203 INFLUENZA B VIRUS						1			1
0301 PARAINFLUENZA VIRUS TYPE 1								4	4
0302 PARAINFLUENZA VIRUS TYPE 2				1	4	1	1	1	8
0303 PARAINFLUENZA VIRUS TYPE 3	1	3			1	2	1	2	10
0399 PARAINFLUENZA VIRUS TYPING PENDING						3			3
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		1			8	5	3		17
0500 RHINOVIRUS (ALL TYPES)	1	2			6	1	4		14
0600 MYCOPLASMA PNEUMONIAE	3		2			1		3	9
0700 ORNITHOSIS-PSITTACOSIS	3			4				1	8
0809 COXSACKIEVIRUS A9				2	1				3
0816 COXSACKIEVIRUS A16								1	1
0902 COXSACKIEVIRUS B2		1							1
0903 COXSACKIEVIRUS B3					1				1
0904 COXSACKIEVIRUS B4						2			2
1007 ECHOVIRUS TYPE 7								1	1
1011 ECHOVIRUS TYPE 11			1	1	1				3
1015 ECHOVIRUS TYPE 15				1					1
1022 ECHOVIRUS TYPE 22			3						3

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 2

REPORTING PERIOD - 29/5/80 - 11/6/80 BULLETIN NUMBER - 80/12

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
1025 ECHOVIRUS TYPE 25							2		2
1030 ECHOVIRUS TYPE 30				4					4
1099 ECHOVIRUS TYPING PENDING		2							2
1101 POLIOVIRUS TYPE 1						1			1
1102 POLIOVIRUS TYPE 2								1	1
1103 POLIOVIRUS TYPE 3								1	1
1104 POLIOVIRUS-VACCINAL STRAIN			1		4				5
1200 MUMPS VIRUS	2	2		1		2			7
1300 HERPES VIRUS GROUP-NOT TYPED				3		8			11
1301 HERPES SIMPLEX VIRUS-NOT TYPED	7	1	6	3	2		22	24	65
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	1							1	2
1303 VARICELLA-ZOSTER VIRUS	2	1	2	1		2		1	9
1306 HERPES SIMPLEX TYPE 1			2	9		16			27
1307 HERPES SIMPLEX TYPE 2	1		7	22		20			50
1399 HERPES VIRUS TYPING PENDING			1	1		6			8
1401 COXIELLA BURNETI	10			8		9	10		37
1502 PICORNA VIRUS-NOT TYPED								4	4
1512 VACCINIA VIRUS				1					1
1521 MEASLES VIRUS	3		2				4		9
1522 ROBELLA VIRUS	2					8		1	11
1530 HEPATITIS A VIRUS								24	24
1532 HEPATITIS B ANTIGEN	6		9	27	2	5	5	3	57
1533 HEPATITIS B ANTIBODY							2		2
1535 HEPATITIS A ANTIBODY						6			6
1541 CHLAMYDIA A - TRIC TYPE	22		3			1	4	20	50
1556 CMV - CYTOMEGALOVIRUS	8		3	15	4	2	3	3	38
1562 REOVIRUS (ALL TYPES)						4			4
1564 ROTAVIRUS	10		1		1	19			31
1565 CALICI VIRUS	1								1
1566 NORWALK AGENT					1				1
1599 ENTEROVIRUS TYPING PENDING					10	3	7		20
ROSS RIVER VIRUS						2	38	2	42

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE 3

REPORTING PERIOD - 29/5/80 - 11/6/80 BULLETIN NUMBER - 80/12

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
ASTROVIRUS	1								1
SMALL VIRUS (LIKE) PARTICLE					2				2
DENGUE							1		1
ARBO. GROUP B.				6					6
Total.....	94	13	51	116	63	150	110	104	701

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 29/5/80 to 11/6/80 ... 80/12 4
Viral Identifications by Clinical Information Table 2.
Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
G8 -Fever/malaise; 09 -Other; A1 -SIDS ...

VIRUS OR VIRAL ANTIGEN	Eye	Genital	Endo/sal gland	RES	Muscle/joint	Congenital	PUO	Fever/malaise	Other	SIDS
0100 ADENOVIRUS NOT TYPED.....			1							
0101 ADENOVIRUS TYPE 1.....	1								1	
0103 ADENOVIRUS TYPE 3.....							1			
0105 ADENOVIRUS TYPE 5.....										1
0107 ADENOVIRUS TYPE 7.....	1									
0108 ADENOVIRUS TYPE 8.....	1									
0201 INFLUENZA A VIRUS.....								1		
0301 PARAINFLUENZA VIRUS TYPE 1....								1		
0303 PARAINFLUENZA VIRUS TYPE 3....							1			
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....								1		
0700 ORNITHOSIS-PSITTACOSIS.....			1				1	2		
0809 COXSACKIEVIRUS A9.....								1		
0902 COXSACKIEVIRUS B2.....									1	
1007 ECHOVIRUS TYPE 7.....								1		
1102 POLIOVIRUS TYPE 2.....										1
1104 POLIOVIRUS-VACCINAL STRAIN....										1
1200 MUMPS VIRUS.....			3				1		2	
1301 HERPES SIMPLEX VIRUS-NOT TYPED		20							2	
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			1				1			
1306 HERPES SIMPLEX TYPE 1.....	1	4						3		
1307 HERPES SIMPLEX TYPE 2.....		45								
1399 HERPES VIRUS TYPING PENDING...		1								
1401 COXIELLA BURNETI.....							8	20		
1541 CHLAMYDIA A - TRIC TYPE.....	3	27								
1556 CMV - CYTOMEGALOVIRUS.....				1		3	6	1	7	1
ROSS RIVER VIRUS					40					
AEBO. GROUP B.					6			6		
Total.....	7	97	6	1	46	3	19	37	13	4

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 29/5/80 to 11/6/80 .... 80/12 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
0100 ADENOVIRUS NOT TYPED.....	3	4							1		5
0101 ADENOVIRUS TYPE 1.....	1	2				1	5				
0102 ADENOVIRUS TYPE 2.....		5		1			8				
0105 ADENOVIRUS TYPE 5.....						1	3		1		
0106 ADENOVIRUS TYPE 6.....							1				
0107 ADENOVIRUS TYPE 7.....							1				
0111 ADENOVIRUS TYPE 11.....											1
0119 ADENOVIRUS TYPE 19.....	2										
0131 ADENOVIRUS TYPE 31.....							2				
0201 INFLUENZA A VIRUS.....		2									
0202 INFLUENZA A VIRUS SUBTYPE H3N2		1									
0203 INFLUENZA B VIRUS.....		1									
0301 PARAINFLUENZA VIRUS TYPE 1....		3									
0302 PARAINFLUENZA VIRUS TYPE 2....		8									
0303 PARAINFLUENZA VIRUS TYPE 3....		8					2				1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....		16									
0500 RHINOVIRUS (ALL TYPES).....	1	9									
0600 MYCOPLASMA PNEUMONIAE.....	2	6							1		
0700 ORNITHOSIS-PSITTACOSIS.....	1	5									
0809 COXSACKIEVIRUS A9.....						1	1				
0816 COXSACKIEVIRUS A16.....											1
0903 COXSACKIEVIRUS B3.....							1				
0904 COXSACKIEVIRUS B4.....	1						1				
1011 ECHOVIRUS TYPE 11.....	1			1			1				
1015 ECHOVIRUS TYPE 15.....				1							
1022 ECHOVIRUS TYPE 22.....							3				
1025 ECHOVIRUS TYPE 25.....	1			1							

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 29/5/80 to 11/6/80 .... 80/12 6

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
1030 ECHOVIRUS TYPE 30		2		2							
1101 POLIOVIRUS TYPE 1				1							
1103 POLIOVIRUS TYPE 3				1							
1104 POLIOVIRUS-VACCINAL STRAIN		2					2				
1200 MUMPS VIRUS		2									
1300 HERPES VIRUS GROUP-NOT TYPED											4
1301 HERPES SIMPLEX VIRUS-NOT TYPED	10	5	1	1		1		1			23
1303 VARICELLA-ZOSTER VIRUS	2		1								6
1306 HERPES SIMPLEX TYPE 1	1										18
1307 HERPES SIMPLEX TYPE 2											5
1401 COXIELLA BURNETI	8			1				1		1	
1502 PICORNA VIRUS-NOT TYPED	1	1		1		1					
1512 VACCINIA VIRUS											1
1521 MEASLES VIRUS			2	2		1					4
1522 RUBELLA VIRUS											11
1530 HEPATITIS A VIRUS	7							17			
1532 HEPATITIS B ANTIGEN	16							41			
1533 HEPATITIS B ANTIBODY	2										
1535 HEPATITIS A ANTIBODY								6			
1541 CHLAMYDIA A - TRIC TYPE	20										
1556 CMV - CYTOMEGALOVIRUS	12	5						1	1	3	
1562 REOVIRUS (ALL TYPES)							4				
1564 ROTAVIRUS							21				10
1565 CALICI VIRUS							1				
1566 NORWALK AGENT											1
ROSS RIVER VIRUS	2										3
ASTROVIRUS											1
SMALL VIRUS (LIKE) PARTICLE							2				
DENGUE (TYPE 3)	1										
Total	95	87	4	13		6	59	67	4	4	95