AUSTRALIA

Communicable Diseases Intelligence

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Virus reports this period - Total 1017. This is the second consecutive fortnightly period with over 1000 reports. There were between 760 and 790 for similar periods last year.

. Respiratory syncytial virus - 191 reports. Notwithstanding the under-reporting in periods 79/13 and 79/14 due to the postal difficulties, the recent trend in reports 79/13:52, 79/24:98, 79/15:147, indicate a true increase. During similar periods in 1978 there were approximately 90 isolations per fortnightly period.

. Influenza - 2 isolations of Influenza C were reported from the State Health Laboratory, Brisbane taking the current year's total to 8. During 1978 only 1 isolation was reported. Influenza C is stated to be of low or doubtful pathogenicity for man(1).

A further seven Influenza A (H_1N_1) isolations have been made at the Commonwealth Serum Laboratory in Victoria. All resembled A/Brazil/11/78. The isolates were from young adults who reported to the Student Health Clinic of the University of Melbourne.

. Cytomegalovirus - 43 reports this period. One isolation from the previous reporting period was from a 4 year old girl with Guillain-Barré syndrome. (RAHC - Sydney)

. Several isolations of Norwalk agent and 2 of parvovirus-like particles were obtained from members of an "oyster consuming test panel". The samples were collected in early July. Further details will be given in the next issue of this bulletin. (ICPMR - Sydney)

. Cot-deaths - Viral isolations from cot-death babies included:

CMV - 1 (Qld); RSV - 3 (Qld and RCH Melb);
enterovirus untyped - 3 (RCH Melb);
poliomyelitis, vaccinial strain - 1 (RCH Melb)
and adenovirus type 7 - 1 (RCH Melb)

(Reference:(1) Timbury MC. (1978) "Notes on Medical Virology", 6th ed., Churchill Livingstone, Edinburgh.)

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Cholera

A case of cholera has been diagnosed at the Fairfield Infectious Diseases Hospital, Melbourne. The patient was a 20 year old female who had recently returned from a 35-day holiday in Bali, having become ill on the plane during the journey home on 4/5 August 1979. V. cholerae serotype Inaba was isolated. She and a friend had travelled widely throughout the island and had eaten at many places. She had received 2 doses of cholera vaccine mixed with typhoid vaccine prior to her trip.

Her travelling companion was admitted to the same hospital with fever but no diarrhoea 2 days after arrival back in Australia. Attempts to isolate V. cholerae organisms from her were unsuccessful.

Twelve other persons with gastrointestinal symptoms who had returned from Bali at approximately the same time were admitted to either the Prince Henry Hospital in Sydney or Fairfield Hospital in Melbourne for observation and investigation. V. cholerae was not isolated from any of them.

Isolation of strains of Neisseria meningitidis W 135 in South Australia

(Contributed by Dr R. Hansman, Director, Microbiology Department, Adelaide Children's Hospital)

Since 1971 the Microbiology Department of the Adelaide Children's Hospital has acted as an 'unofficial' meningococcal grouping laboratory in South Australia. Strains have also been sent to it from the Northern Territory and elsewhere in Australia. The value of continued surveillance of meningococcal groups is shown by the recognition of infections caused by Neisseria meningitidis group W 135.

In the eight year period 1971 through 1978, 53 of 70 isolates (75%) were identified as group B. Of the remainder, 7 were group A, six were group C, three were group Y and one was group X. No group W 135 strains were identified during this period.

The first isolate of group W 135 was met with in January 1979. This was isolated from the cerebrospinal fluid (csf) of a nine-month-old boy with meningitis. In June 1979 a meningococcus of the same group was cultured from the blood of an eleven-month-old boy with bacteraemia. Both these infants responded well to chemotherapy.

In June 1979 there were two further isolates of W 135, both from adults. The first was from a man aged 48, who was a heavy drinker and had been found semi-conscious; there was some delay in performing lumbar puncture and the patient died with irreversible shock and renal failure. The fourth isolate was from a 20-year-old man with bacteraemia who had previously undergone splenectomy. He developed disseminated intravascular coagulation as a complication of his meningococcaemia; this was followed by renal failure and pneumonia, and he remains gravely ill.

The assistance of the following is acknowledged: Dr Trevor Steele, Division of Clinical Microbiology, Institute of Medical and Veterinary Science; Mr John Marsh, Repatriation Hospital, Adelaide; Dr John Turnidge, Flinders Medical Centre, Adelaide, for providing the isolates from the adult patients and their clinical details; and Professor H.A. Feldman, Syracuse, New York who serogrouped the strain from the first case.

Editor's comment: There are two laboratories in Australia currently undertaking *N. meningitidis* grouping - the Microbiology Department, Adelaide Children's Hospital, and the Microbiological Diagnostic Unit, University of Melbourne, as reported in CDI 79/3. Isolates may be sent to either.

Special vaccines held by the Commonwealth Serum Laboratories (C.S.L.)

Certain vaccines, which are not available through Health Authority or commercial sources, are held by C.S.L. on behalf of the Department of Health, for use when required. Applications for these products, together with appropriate clinical details should be directed to one of the following: Director, Commonwealth Departments of Health in the appropriate State or Territory capital cities; Director, C.S.L. Melbourne; Environmental Health Branch, Commonwealth Department of Health, Canberra.

The vaccines and their locations are as follows:

Anthrax vaccine	- CSL Melbourne
Botulinum antitoxin (types A,B & E)	- All capital cities except Canberra
Rabies vaccine (Merieux-human diploid cell) - still officially under "investigational status"	- CSL Melbourne, Sydney, Perth, Brisbane, Darwin
Rabies immune globulin-human (Hyperab)	- CSL Melbourne, Sydney, Perth, Brisbane, Darwin
Inactivated poliomyelitis vaccine (Salk) - for use in persons with immunodeficiency conditions in lieu of "Sabin" oral polio vaccine	- CSL Melbourne

The following are NOT available at present, but evaluations are in progress with a view to their being obtained as soon as practicable:

Anthrax anti-serum
Meningococcal A, C & A/C vaccines
Pneumococcal polysaccharide vaccine

The CSL also hold other special products which are not related to human communicable diseases, but are of importance in animal health.

International notes

Scarring following BCG and smallpox vaccination

In what appears to have been a carefully conducted sample survey of primary immunisation coverage in two regions of Algeria, it was found that a proportion of children who had been vaccinated - as confirmed by medical records on health cards or, in approximately 5% of cases, by interview with the mother - had no visible scars at the vaccination site. The proportions were as follows:

Region	No. of children	% of children with immunisation confirmed (a) by medical card (b) by the mother		No. of children examined for scars	% of children with scars	
		BCG	Smallpox		BCG	Smallpox
1.	217	(a) 92% (b) 5%	(a) 79% (b) 4%	208	77%	51%
2.	420	(a) 89% (b) 5%	(a) 77% (b) 6%	413	84%	65%

In a similar survey in the Ivory Coast in West Africa, it was found that of 107 children who held BCG vaccination certificates only 93 (87%) had BCG scars.

It has been suggested that the relatively low scar rates might be due to vaccine quality at the time of administration or the vaccination techniques used. (WER 22 June and 20 July 1979)

Evaluation of transport media for the recovery of Campylobacter fetus subsp. jejuni (from Canada Diseases Weekly Report Vol.5-27, 7 July 1979)

Since delay during the transmission of specimens from source to laboratory often affects the fate of micro-organisms present, the ability of media used in the collection and transport of specimens to maintain viability and prevent overgrowth is of paramount importance. An ideal transport medium should neither suppress nor enhance the growth of any particular organism. The delicate and fastidious nature of the enteric pathogen Campylobacter fetus subsp. jejuni serves to underline the importance of a suitable transport medium for enteric specimens. The present study was undertaken to evaluate several transport media for their ability to maintain the viability of this organism under simulated clinical and transport conditions.

Fresh stools, artificially contaminated with 7 different strains of C. fetus s.s. jejuni isolated from human cases of gastroenteritis were inoculated into several transport media and incubated at room temperature. These specimens were cultured by Skirrow's method[1] using agar media containing antibiotics as modified by Karmali and Fleming[2].

Since Buffered Glycerol Saline is widely used by laboratories as a transport medium for stool specimens, and considering the usual delays in

mailing, the viability of C. fetus s.s. jejuni was assessed in this medium. After an incubation period of 1 day, only fair growth was observed for 6/7 strains. 4/7 strains were recovered after 5 days, and after 7 days only 2/7 strains were viable. Following 10 days' storage in this medium, no strains could be recovered.

A comparison of various transport media - Cary-Blair, Cary-Blair with agar, Stuart transport medium with charcoal and Amies' modification of Stuart transport medium with charcoal - was then carried out with the aim of improving the isolation rate of C. fetus s.s. jejuni from stool specimens. All test strains were recovered after 14 days' incubation in Cary-Blair medium. In contrast, all 7 strains were recovered after 7 days' incubation in Stuart medium with charcoal and Cary-Blair with agar, whereas only 4 strains survived 14 days of storage in these media. In Amies' modification of Stuart medium, viability for all strains were observed for up to 5 days but none were recovered after 14 days.

These data prove Cary-Blair to be superior to all the other media investigated. Cary-Blair medium, first described in 1964[3], has been found by several investigators to provide excellent recovery of Salmonellae, Shigellae, E. coli and Vibrio cholerae[4]. It can be easily prepared as follows:

Sodium thioglycollate	1.5g
Disodium hydrogen phosphate	1.1g
Sodium chloride	5.0g

These ingredients are added to 991 ml. of demineralized distilled water in the order given. Then 9 ml of a freshly prepared 1% solution of $CaCl_2$ are added. The pH is adjusted to 8.4 and the medium is steamed for 15 minutes.

The National Enteric Reference Centre is currently evaluating the use of Mueller-Hinton agar for the growth of C. fetus s.s. jejuni. Initial results indicate that luxurious growth is obtained with this medium.

References:

1. Br.Med.J., 2:9, 1977.
2. J.Pediatr., 94:527, 1979.
3. J.Bacteriol., 88:96, 1964.
4. Public Health Laboratory, 29:8, 1971.

Editor's comment

The National Health and Medical Research Council (NH & MRC) added "Campylobacter infections" to its recommended list of "notifiable diseases" in October 1978.

Poliomyelitis in contact of vaccine recipient in the U.K. (CDR 79/27)

A 24-year-old man was admitted to hospital in mid-June with difficulty in swallowing, nasal regurgitation, weakness of the right arm and left facial muscles. Poliovirus type 3 was isolated from his stools. His 3-month-old daughter had been given her first dose of oral vaccine about 3 weeks before the onset of his illness; poliovirus type 3 was isolated from her stool also. There has been some improvement in the patient's clinical condition. A clear history of previous vaccination was not obtainable.

Editor's comment

The U.S. Public Health Services Advisory Committee on Immunisation Practices (PHSACIP) has reported (MMWR Vol 26/40 of 7 October 1977) that in rare instances oral polio vaccine has been associated with paralytic disease in vaccine recipients or their close contacts. The frequency of paralytic disease in recipients appears to have been of the order of 1 case per 19 million doses administered, with adults probably having a slightly greater risk than children. During the period 1969-1976, 34 cases were reported in the United States of paralytic disease in healthy contacts of vaccine recipients, and an additional 11 paralytic incidents in persons with immune deficiency conditions. As these conditions appear to predispose to atypical response to trivalent oral polio vaccine (TOPV) the Communicable Diseases Committee of the NH & MRC has suggested that persons with immune deficiency conditions be given inactivated polio vaccine (IPV, or Salk vaccine) in lieu of TOPV. A supply of IVP has been obtained for this purpose.

Administrative notes

Virus tables

Comments have been received to the effect that the virus figures in the tables attributed to a certain laboratory may on occasions exceed the actual number of isolations by that laboratory during that period.

This is due to the fact that all reports of virus isolations received from the 9 collaborating laboratories for a fortnightly period are incorporated into the virus tables for that period. These frequently include updating information on previously reported 'untyped' isolations and some 'follow-up' isolations from previously reported patients. These duplicate entries are corrected or erased only in the quarterly totals. It is also intended to produce corrected half-yearly and annual totals.

Salmonella reporting

All laboratories forwarding reports of salmonella isolates to reference laboratories for phage-typing or sero-typing are particularly requested to ensure that only the new "computer" cards are used, following their receipt. Stocks of the sheets on which reports used to be submitted should be discarded.

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REPORTING PERIOD - 26-7-79 . 8-8-79 BULLETIN NUMBER .16

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	7	1		1	2	1	16	1	29
0101 ADENOVIRUS TYPE 1				2	1	1			4
0102 ADENOVIRUS TYPE 2				3	5	1			9
0103 ADENOVIRUS TYPE 3	1				2	2			5
0104 ADENOVIRUS TYPE 4					1				1
0105 ADENOVIRUS TYPE 5					1	1		1	3
0106 ADENOVIRUS TYPE 6			1						1
0107 ADENOVIRUS TYPE 7				1	8	1			10
0114 ADENOVIRUS TYPE 14			1						1
0115 ADENOVIRUS TYPE 15	1								1
0119 ADENOVIRUS TYPE 19				1				6	7
0130 ADENOVIRUS TYPE 30						1			1
0199 ADENOVIRUS TYPING PENDING					8	1			9
0201 INFLUENZA A VIRUS	22	1			2	5	10	2	42
0203 INFLUENZA B VIRUS								7	7
0204 INFLUENZA C VIRUS							2		2
0301 PARAINFLUENZA VIRUS TYPE 1			1		1	3	3		8
0302 PARAINFLUENZA VIRUS TYPE 2						1			1
0303 PARAINFLUENZA VIRUS TYPE 3					1	4	3		8
0399 PARAINFLUENZA VIRUS TYPING PENDING						1			1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)	8	10		17	70	21	51	14	191
0500 RHINOVIRUS (ALL TYPES)	3			1	3	3	5	2	17
0600 MYCOPLASMA PNEUMONIAE	15	1				3	17	1	37
0700 ORNITHOSIS-PSITTACOSIS	1								1
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED								1	1
0809 COXSACKIEVIRUS A9	1			1					2
0902 COXSACKIEVIRUS B2							1	1	2
0903 COXSACKIEVIRUS B3		1			2	1			4
0904 COXSACKIEVIRUS B4				1	3	2	1	6	13
0905 COXSACKIEVIRUS B5						1			1
1000 ECHOVIRUS NOT TYPED							2		2

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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
1011 ECHOVIRUS TYPE 11	2	1		4	1	1			9
1014 ECHOVIRUS TYPE 14		1					1		2
1030 ECHOVIRUS TYPE 30				1			1		2
1031 ECHOVIRUS TYPE 31							1		1
1033 ECHOVIRUS TYPE 33						1			1
1101 POLIOVIRUS TYPE 1						1	1	1	3
1102 POLIOVIRUS TYPE 2		1					2	1	4
1103 POLIOVIRUS TYPE 3		1		1		2	1		5
1104 POLIOVIRUS-VACCINAL STRAIN			2		4	2			8
1200 MUMPS VIRUS	1		1	1		1	6	2	12
1300 HERPES VIRUS GROUP-NOT TYPED				2		4			6
1301 HERPES SIMPLEX VIRUS-NOT TYPED	4	1	7		2		20	28	62
1302 EPSTEIN-BARR VIRUS (EB VIRUS)				1		1			2
1303 VARICELLA-ZOSTER VIRUS						1			1
1306 HERPES SIMPLEX TYPE 1	10	1		12		12			35
1307 HERPES SIMPLEX TYPE 2	27			21		8			56
1399 HERPES VIRUS TYPING PENDING				1		6		1	8
1401 COXIELLA BURNETI	6			64		2	9		81
1514 MOLLUSCUM CONTAGIOSUM				1				1	2
1521 MEASLES VIRUS				1		1			2
1522 RUBELLA VIRUS	1					2			3
1530 HEPATITIS A VIRUS								3	3
1532 HEPATITIS B ANTIGEN			7	23		4	5	7	46
1535 HEPATITIS A ANTIBODY						5			5
1541 CHLAMYDIA A - TRIC TYPE								35	35
1556 CMV - CYTOMEGALOVIRUS	4	1	2	22	6	2	5	1	43
1562 CORONAVIRUS	2								2
1564 ROTAVIRUS	13	10	14	5	4	52		1	99
1566 NORWALK AGENT	6			1		4			11
1571 ENTEROVIRUS TYPE 71 (BRCH)				2					2
1599 ENTEROVIRUS TYPING PENDING		1	5		8	14			28
ROSS RIVER VIRUS							6		6

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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
PARVOVIRUS(LIKE)	11								11
Total.....	146	32	41	191	135	180	169	123	1,017

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VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	EY	UR	BR	GE	OT	TOTAL
0100 ADENOVIRUS NOT TYPED	13	7	9								29
0101 ADENOVIRUS TYPE 1			3			1					4
0102 ADENOVIRUS TYPE 2	3		6								9
0103 ADENOVIRUS TYPE 3	3			1		1					5
0104 ADENOVIRUS TYPE 4			1								1
0105 ADENOVIRUS TYPE 5	2		1								3
0106 ADENOVIRUS TYPE 6	1										1
0107 ADENOVIRUS TYPE 7	4		5							1	10
0114 ADENOVIRUS TYPE 14										1	1
0115 ADENOVIRUS TYPE 15			1								1
0119 ADENOVIRUS TYPE 19						2			5		7
0130 ADENOVIRUS TYPE 30						1					1
0199 ADENOVIRUS TYPING PENDING	5		4								9
0201 INFLUENZA A VIRUS		31	8								39
0203 INFLUENZA B VIRUS		6	1								7
0204 INFLUENZA C VIRUS		2									2
0301 PARAINFLUENZA VIRUS TYPE 1		1	7								8
0302 PARAINFLUENZA VIRUS TYPE 2			1								1
0303 PARAINFLUENZA VIRUS TYPE 3		1	7								8
0399 PARAINFLUENZA VIRUS TYPING PENDING			1								1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)		11	177					2		1	191
0500 RHINOVIRUS (ALL TYPES)			16		1						17
0600 MYCOPLASMA PNEUMONIAE		36		1							37
0700 ORNITHOSIS-PSITTACOSIS		1									1
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED	1										1
0809 COXSACKIEVIRUS A9					1						1
0902 COXSACKIEVIRUS B2		1	1								2
0903 COXSACKIEVIRUS B3	2		3								5
0904 COXSACKIEVIRUS B4	6	2	5								13
0905 COXSACKIEVIRUS B5	1										1
1000 ECHOVIRUS NOT TYPED	1		1								2
1011 ECHOVIRUS TYPE 11	3		3	4							10

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VIRAL IDENTIFICATIONS CATEGORISED INTO SOURCE SPECIMENS-CONTINUED

VIRUS OR VIRAL ANTIGEN	FA	BL	NA	CS	SK	EY	UR	BR	GE	OT	TOTAL
1014 ECHOVIRUS TYPE 14	1									1	2
1030 ECHOVIRUS TYPE 30	2		1	1							4
1031 ECHOVIRUS TYPE 31	1										1
1033 ECHOVIRUS TYPE 33	1										1
1101 POLIOVIRUS TYPE 1	2		1								3
1102 POLIOVIRUS TYPE 2	2		2							1	5
1103 POLIOVIRUS TYPE 3	3		1		1						5
1104 POLIOVIRUS-VACCINAL STRAIN	6		3								9
1200 MUMPS VIRUS		9	2	1							12
1300 HERPES VIRUS GROUP-NOT TYPED					6						6
1301 HERPES SIMPLEX VIRUS-NOT TYPED		1	17		17	1			28		64
1302 EPSTEIN-BARR VIRUS (EB VIRUS)		2									2
1303 VARICELLA-ZOSTER VIRUS		1									1
1306 HERPES SIMPLEX TYPE 1			10		18	3		2		2	35
1307 HERPES SIMPLEX TYPE 2					3				53		56
1399 HERPES VIRUS TYPING PENDING					5		1		1	1	8
1401 COXIELLA BURNETI		81									81
1514 MOLLUSCUM CONTAGIOSUM					1					1	2
1521 MEASLES VIRUS			2								2
1522 RUBELLA VIRUS		3									3
1530 HEPATITIS A VIRUS		3									3
1532 HEPATITIS B ANTIGEN		46									46
1535 HEPATITIS A ANTIBODY		5									5
1541 CHLAMYDIA A - TRIC TYPE						1			34		35
1556 CMV - CYTOMEGALOVIRUS		6	17				22		1	3	49
1562 CORONAVIRUS	2										2
1564 ROTAVIRUS	99										99
1566 NORWALK AGENT	11										11
1571 ENTEROVIRUS TYPE 71 (BRCR)	1		1								2
1599 ENTEROVIRUS TYPING PENDING	16		11	4			1				32
ROSS RIVER VIRUS		6									6
PARVOVIRUS	11										11
Total	203	262	329	12	53	10	24	4	122	12	1,031