



# Communicable Diseases Intelligence

Bulletin number 80/11

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VIRUS REPORTING SCHEME - A total of 577 new reports this period, although figures from one laboratory have not been received due to delay in the mail. There were increases compared with recent weeks in the number of reports of adenovirus type 3, echovirus type 23 and rotavirus.

- . Adenovirus - There were seven reports of adenovirus type 3. Five were from Western Australia and included a 27 year old female with polyarthrititis and upper respiratory tract symptoms.
- . Influenza - One case of influenza A(H<sub>3</sub>N<sub>2</sub>) resembling A/Bangkok/1/79 was reported from Sydney in a 57 year-old male.
- . Echovirus - Five reports of echovirus 23 were received all with gastro-intestinal symptoms and all emanating from the Prince Henry and Prince of Wales Hospitals in Sydney. Previously this year there had been only five reports of this organism altogether.  
Of five reports of echovirus 30, four were from Fairfield Hospital, and were reported as having meningitic symptoms.
- . Rotavirus - 36 cases, 22 of which were from South Australia. This is the highest number for any reporting period this year.  
The cases are believed to be sporadic admissions to the Children's Hospital and not associated with any particular outbreak.
- . Dengue - One case reported this period, classified as arbovirus group B. The patient was a 36 year old woman from New South Wales, reported by Prince Henry Hospital, Sydney. She became ill in Noumea 17 days after her arrival there. Her serum exhibited a titre of >1:5120 to group B arbovirus antigen at the State Health Laboratory, Brisbane. Although the specimen was unsuitable for IgM determinations, her clinical picture and history support the diagnosis of dengue.

Confirmation has been received that the second of the two cases of dengue reported last period (CDI 80/10) was also from New South Wales. Both patients are presumed to have caught their infection whilst staying at the 'Club Mediterranee' in Tahiti.

The WHO regional office in Suva has reported confirmation of two cases of dengue in Kiribati (formerly the Gilbert Islands).

In view of the widespread prevalence of dengue in the Pacific Islands, it is reiterated that travellers to these islands, other than New Zealand and Hawaii, should be advised to take precautionary measures against mosquito bites.

LEGIONNAIRES' DISEASE - SWEDEN AND AUSTRALIA

Sweden - (Based on MMWR 1980 29(18):206 and WER 1980 55(20):149)

An outbreak, the largest yet documented outside the United States, occurred in Västerås, near Lake Mälaren in central Sweden between 28 August and 21 September 1979.

During that period, 66 residents and one visitor to Västerås (population 100 000) were diagnosed as having pneumonia. A retrospective survey indicated that seven patients had been hospitalised with the same syndrome during the previous two months. Most patients suffered from headaches, abdominal symptoms and mental disturbances. Many were severely ill and were monitored in intensive care units. One patient died of acute renal failure. The ages ranged from 26 to 91 years. Initially benzylpenicillin alone or combined with chloramphenicol was used, but as soon as Legionnaires' disease was suspected, the treatment was changed to erythromycin.

All patients had antibodies against L. pneumophila (serotype 1) by indirect immunofluorescence. In 51 patients there was a four-fold or greater rise to at least 1:128. L. pneumophila was isolated from lung biopsy specimens from three patients. Identification was confirmed by gas-liquid chromatography and direct immunofluorescence.

The mode of spread and source of L. pneumophila in this outbreak have not been defined although the organism was isolated from water condensate on the roof of an indoor shopping centre in the middle of the city. Most of the patients had visited the particular centre and two were, in fact, employees there, but a few had neither entered it nor been in the vicinity. As the centre is popular and no control group of well residents had been questioned about the frequency of their visits, the possibility that Legionnaires' disease was acquired at the shopping centre remains untested.

In an editorial note, MMWR points out that a positive environmental culture for L. pneumophila does not necessarily indicate the source or mode of spread in this or other outbreaks, because L. pneumophila is frequently isolated from bodies of water unrelated to outbreaks.

Australia

The following are summaries of recent cases in three Australian States:

Western Australia - (contributed by M. Bucens and G. Harnett, State Health Laboratory, Perth)

A diagnosis of Legionnaires' disease was established by serological testing in a 55 year old man admitted to hospital on 17 April with

bilateral bronchopneumonia. The patient had been suffering from a 'flu-like' illness for one week prior to admission.

Sera taken on 19 and 28 April were tested for the presence of antibodies to L. pneumophila by the ELISA method, using the Philadelphia strain (serotype 1) as the test antigen. The acute serum had an antibody titre of 1:10, but this had risen to 1:1280 by 28 April. Complement fixing antibodies against M. pneumoniae and chlamydia group antigen were not detected in either serum specimen.

New South Wales - (contributed by J.L. Harkness and L.M. Brady, St. Vincent's Hospital, Sydney).

Since the first case of Legionnaires' disease diagnosed in New South Wales in May 1978, a further 14 patients have been found to have positive serology for the condition. Four patients had four-fold or greater seroconversions, indicating acute infection, and 10 patients had stationary titres of 1:256, indicating infection at an undetermined time.

All patients with acute Legionnaires' disease required hospitalisation, were treated with erythromycin and recovered fully. The organism was not cultured from any of them. Furthermore, none have been as critically ill as the first patient (described in CDI 78/18). No connection has been found between the various patients and the cases have been regarded as sporadic.

Victoria - (contributed by P. Cavanagh, Fairfield Hospital, Melbourne).

Since October 1978, nine patients, two of whom succumbed to the disease, have been diagnosed as suffering from pneumonia caused by L. pneumophila. One case was imported in a traveller returning from Bloomington, Indiana, and five cases occurred among residents of one rural city with a population of 69,000 people. In eight of these patients the clinical diagnosis was confirmed by a four-fold or greater rise in the titre of indirect immunofluorescent antibodies to the Philadelphia antigen. In the case of the ninth patient the diagnosis was made posthumously by direct immunofluorescence performed at CDC, Atlanta.

The deceased patients, 31 and 54 year old males, worked in a large telephone exchange. A survey of sera from employees in this and two other exchanges revealed an unremarkable distribution of titres to the Philadelphia antigen when compared with two other unrelated groups (see Table 1, page 4).

The serological results appear to indicate a low level of endemicity in the Australian populations investigated, with the majority of infections being subclinical in nature.

Table 2. shows the temporal distribution of cases reported from St. Vincent's Hospital (Sydney), Fairfield Hospital (Melbourne) and The Institute of Medical and Veterinary Science (Adelaide). These highlight the sporadic incidence of the disease notwithstanding the focal relationship of five of the Victorian cases (see Table 2, page 4).

Table 1Distribution of Antibodies to the (Philadelphia) LDB Antigen

Reciprocal of titre	< 64		64		128		≥ 256	
	No.	%	No.	%	No.	%	No.	%
Exchange employees (1005)	638	<u>63.5</u>	236	<u>23.5</u>	104	<u>10.4</u>	27	<u>2.6</u>
Patients with LRT1 (Fairfield Hospital) (154)	115	<u>74.7</u>	19	<u>12.3</u>	8	<u>5.2</u>	12	<u>7.8</u>
VD Lab sera (Fairfield) (250)	202	<u>80.5</u>	36	<u>14.4</u>	12	<u>4.8</u>	-	-

Table 2Temporal Distribution of Cases of Legionnaires' Disease - Australia

Date	Reporting Laboratory		
	St. Vincents	Fairfield	I.M.V.S.
1978			
(May)	1		
(Oct)		1	
1979			
(Jan)	1	2	
(Feb)		2	1
(Mar)	1		
(Aug)			1
(Sep)			1
(Oct)		2	2
(Nov)		1	1
1980			
(Jan)	1	1	
(Feb)	1		

## ERYTHEMA INFECTIONOSUM (FIFTH DISEASE)

There have been several recent overseas reports of erythema infectiosum (1,2) (Fifth disease) but C.D.I. is unaware of any such reports in Australia.

Erythema infectiosum is a disease of presumed viral aetiology, although the agent has yet to be identified<sup>3</sup>. The name (Fifth disease) is derived from a classificatory scheme of exanthematous infections of the late 19th century e.g. (i) measles (ii) scarlet fever.... (v) erythema infectiosum.

It is a disease of world-wide distribution, diagnosis of which is made on clinical grounds. It most commonly affects children 5-14 years, is unusual in adults and occurs most frequently in winter and spring; both sexes are affected equally. The disease appears to be mildly contagious and apparent epidemics have been reported<sup>4</sup>. It is probably spread by droplet and the incubation period appears to be 5-10 days<sup>3</sup>. The disease is extremely mild and no fatalities are reported.

Clinically it is milder in children than adults. There may be a brief prodrome of low grade fever before the eruption of the rash. The rash evolves in three stages:

1. Erythema of the cheeks ('slapped cheek') which are hot, but not painful.
2. A rash on the extremities 1-4 days after the cheek rash, although some observers believe them to be co-existent. This rash is variable and may be morbilliform, confluent, circinate or annular and often has a lace-like appearance. The palms and soles are not involved and the trunk only rarely; mild pruritus may be present.
3. The rash has a striking tendency to disappear and then recur, particularly after chilling, bathing, exercise or emotional stress. In most it disappears entirely in a week, but occasionally recurs for several weeks.

About 25% of cases report other symptoms of headache, fever, anorexia, sore throat and gastro-intestinal complaints. Rarely, adenopathy and arthralgia/arthritis may be present suggesting rubella<sup>3</sup>.

The disease is more severe in adults who commonly complain of fever, adenopathy and arthritis which is usually mild and involves wrists and knees. Adults also frequently complain of fatigue and depression for several weeks afterwards. Complications are very rare.

There is no specific diagnostic test and blood count is usually normal. It is necessary to differentiate erythema infectiosum from other exanthematous diseases such as rubella, scarlet fever, measles, infectious mononucleosis, roseola and enteroviral infections having a rash. Diagnosis may involve exclusion of these diseases. No treatment is necessary.

### References:

1. Canada Dis. Week. Rep. 1979 5(22) : 90, 1980 6(5) : 21
2. Comm. Dis Rep. (U.K.) 1980 8 : 1, 9 : 1, 10 : 1, 18 : 1
3. Mandell et al (1979) Principles and practice of infectious diseases, Wiley. p1453-1456.
4. Amer. J. Dis. Child. (1964) 107 : 30.

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## BRUCellosis IN WESTERN AUSTRALIA

(Contributed by N. Hodgen, Senior Technologist, Serology Section, Division of Microbiology, State Health Laboratory Services).

Since the beginning of 1980 six workers at a meat processing factory were found to have high titres of brucellosis antibody. All sera had a tube agglutination titre of 1:1280 or greater. Three of the sera produced a result of 1:10240 (Wellcome antigen). The complement fixation test (CSL antigen) was positive at a titre of 1:64 (two specimens), 1:128 (two specimens), and 1:256 (two specimens). The prozone phenomenon was noted in the tube agglutination test with all six sera.

The presence of six cases is a sharp rise compared with the 1979 incidence of three cases during the whole year.

## INTESTINAL PARASITES IN TRAVELLERS

In view of the number of Australians now travelling through Asia and India the following summary of some recent cases of intestinal parasitism at Fairfield Hospital, Melbourne, is of interest.

Giardia lamblia cysts, Taenia saginata proglottids and eggs, strongyloid larvae, hookworm and Trichuris trichiura eggs were detected on microscopy of faeces from a 23 year old girl who arrived in Australia in November 1979 from India and Nepal. Giardia lamblia cysts were also detected in faeces of four other patients. One a 27 year old student who had travelled in Asia, the second a 23 year old nursing aide, a 24 year old Australian girl who had lived in India for seven months, and a retarded girl from Melbourne.

## B-LACTAMASE PRODUCING N. GONORRHOEAE

A further two isolations have been reported, both for the month of April:

Male, 28; from South Australia, probable source -  
Philippines

Male, 28: from Queensland, probable source - Sydney (NSW).

With the exception of one case from the Northern Territory in January, all reports received this year have been from either South Australia or Queensland. It would be appreciated if all States could ensure that any isolations are reported to the Department or to the editor, in order that national data can be correlated.

## SMALLPOX VACCINATION

Based on available information as at 23 May 1980 only the following four countries are now requesting international certificates of smallpox vaccination from any traveller (WER 23 May 1980):  
Chad, Djibouti, Democratic Kampuchea, Madagascar.

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AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD -15/5/80 -28/5/80

BULLETIN NUMBER 80/11 /

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR	RAHC (NSW)	PHH/ POW	PAIR- FIELD	RCH (VIC)	IMVS (SA)	STATE	STATE	Total
	(NSW) / WVH (ACT)		(NSW)	(VIC)			LAB (QLD)	LAB (WA)	
0100 ADENOVIRUS NOT TYPED.....	2	1	7		4	2			16
0101 ADENOVIRUS TYPE 1.....				1		1		1	3
0102 ADENOVIRUS TYPE 2.....	1		1			2		2	6
0103 ADENOVIRUS TYPE 3.....	1					1		5	7
0105 ADENOVIRUS TYPE 5.....	1		1	1	1				4
0106 ADENOVIRUS TYPE 6.....	2								2
0107 ADENOVIRUS TYPE 7.....	1		2		1				4
0119 ADENOVIRUS TYPE 19.....						1			1
0131 ADENOVIRUS TYPE 31.....						1			1
0199 ADENOVIRUS TYPING PENDING.....			1		6	5			12
0201 INFLUENZA A VIRUS.....			4						4
0202 INFLUENZA A VIRUS SUBTYPE H3N2.....			1						1
0301 PARAINFLUENZA VIRUS TYPE 1.....			1					1	2
0302 PARAINFLUENZA VIRUS TYPE 2.....		1	1	1	4				7
0303 PARAINFLUENZA VIRUS TYPE 3.....	1	2			2	2		2	9
0400 RESPIRATORY SYNCYTIAL VIRUS (RS) ...		1			4				5
0500 RHINOVIRUS (ALL TYPES).....	4				6	2		1	13
0600 MYCOPLASMA PNEUMONIAE.....	6		3						9
0700 ORNITHOSIS-PSITTACOSIS.....	2			6					8
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED.....								1	1
0809 COXSACKIEVIRUS A9.....	1								1
0816 COXSACKIEVIRUS A16.....	1								1
0901 COXSACKIEVIRUS B1.....			1						1
0902 COXSACKIEVIRUS B2.....					1	1			2
0904 COXSACKIEVIRUS B4.....		1				1			2
0906 COXSACKIEVIRUS B6.....						1			1
1011 ECHOVIRUS TYPE 11.....			1						1
1021 ECHOVIRUS TYPE 21.....	1								1
1022 ECHOVIRUS TYPE 22.....			2						2
1023 ECHOVIRUS TYPE 23.....			5						5
1030 ECHOVIRUS TYPE 30.....				4	1				5

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

REPORTING PERIOD - 15/5/80 - 28/5/80

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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)	INVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
1101 POLIOVIRUS TYPE 1.....						2			2
1102 POLIOVIRUS TYPE 2.....								1	1
1104 POLIOVIRUS-VACCINAL STRAIN.....			2		5				7
1200 MUMPS VIRUS.....	3	1	2	3		2		1	12
1300 HERPES VIRUS GROUP-NOT TYPED.....				2		2			4
1301 HERPES SIMPLEX VIRUS-NOT TYPED.....	12				4			26	42
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	3								3
1303 VARICELLA-ZOSTER VIRUS.....			3					1	4
1306 HERPES SIMPLEX TYPE 1.....	5		4	9		3			21
1307 HERPES SIMPLEX TYPE 2.....	60		11	18		1			90
1399 HERPES VIRUS TYPING PENDING.....			7						7
1401 COXIELLA BURNETI.....	4			2		1			7
1514 MOLLUSCUM CONTAGIOSUM.....						2			2
1521 MEASLES VIRUS.....	1		2						3
1522 RUBELLA VIRUS.....			2	6					8
1532 HEPATITIS B ANTIGEN.....	16		8	33		19		7	83
1535 HEPATITIS A ANTIBODY.....						3		4	7
1541 CHLAMYDIA A - TRIC TYPE.....	11					1		41	53
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART).....	1								1
1556 CMV - CYTOMEGALOVIRUS.....	5	1	6	11	1	1		4	29
1564 ROTAVIRUS.....			6	4	1	22		3	36
1599 ENTEROVIRUS TYPING PENDING.....			4		12	1			17
ARBO. GROUP B. ...			1						1
Total.....	145	8	89	101	53	80		101	577

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 15/5/80 to 28/5/80 .... BULLETIN NUMBER 80/11 3  
 Viral identifications by Clinical Information Table 1.  
 Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Enceph-  
 alitis; 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/ muc memb
0100 ADENOVIRUS NOT TYPED.....			5				3		1		
0101 ADENOVIRUS TYPE 1.....							1				
0102 ADENOVIRUS TYPE 2.....	1	1					4				
0103 ADENOVIRUS TYPE 3.....	1	3					1				
0105 ADENOVIRUS TYPE 5.....	1	1					2				
0106 ADENOVIRUS TYPE 6.....	2										
0107 ADENOVIRUS TYPE 7.....		2					2				
0131 ADENOVIRUS TYPE 31.....							1				
0201 INFLUENZA A VIRUS.....			3								
0202 INFLUENZA A VIRUS SUBTYPE H3N2			1								
0301 PARAINFLUENZA VIRUS TYPE 1....			2								
0302 PARAINFLUENZA VIRUS TYPE 2....			6			1					
0303 PARAINFLUENZA VIRUS TYPE 3....			8								
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....			5								
0500 RHINOVIRUS (ALL TYPES).....	2		6								
0600 MYCOPLASMA PNEUMONIAE.....			8						1		
0700 ORNITHOSIS-PSITTACOSIS.....	1		6								
0800 COXSACKIEVIRUSES GROUP A - NOT TYPED.....			1								
0809 COXSACKIEVIRUS A9.....					1						1
0816 COXSACKIEVIRUS A16.....											1
0901 COXSACKIEVIRUS B1.....									1		
0902 COXSACKIEVIRUS B2.....					1						
0904 COXSACKIEVIRUS B4.....		1					1				
1011 ECHOVIRUS TYPE 11.....							1				
1022 ECHOVIRUS TYPE 22.....							2				
1023 ECHOVIRUS TYPE 23.....							5				

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 15 / 5 / 80 to 28 / 5 / 80 .... BULLETIN NUMBER 80/11

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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.-CONTINUED

VIRUS OR VIRAL ANTIGEN	No-ill or data	Respiratory	Encephalitis	Meningitis	Paralysis	CNS other unspec	GI	Hepatic	CVS	Urinary	Skin/mucous memb
1030 ECHOVIRUS TYPE 30.....		1			4						
1101 POLIOVIRUS TYPE 1.....		1					1				
1102 POLIOVIRUS TYPE 2.....	1										
1104 POLIOVIRUS-VACCINAL STRAIN....							7				
1200 MUMPS VIRUS.....		1			3	1					1
1300 HERPES VIRUS GROUP-NOT TYPED..											4
1301 HERPES SIMPLEX VIRUS-NOT TYPED	10			4							25
1302 EPSTEIN-BARR VIRUS (EB VIRUS) .	3										
1303 VARICELLA-ZOSTER VIRUS.....					1						2
1306 HERPES SIMPLEX TYPE 1.....	1	2			1		1				11
1307 HERPES SIMPLEX TYPE 2.....											1
1401 COXIELLA BURNETI.....	3										
1514 MOLLUSCUM CONTAGIOSUM.....											1
1521 MEASLES VIRUS.....	1	1									1
1522 RUBELLA VIRUS.....	3										2
1532 HEPATITIS B ANTIGEN.....	30						1	52			
1535 HEPATITIS A ANTIBODY.....								7			
1541 CHLAMYDIA A - TRIC TYPE.....	41										
1555 PAPOVAVIRUS GROUP (PAPILLOMA-HUMAN WART).....											1
1550 CMV - CYTOMEGALOVIRUS.....	5	3								4	
1564 ROTAVIRUS.....							36				
Total.....	106	68	4	11		2	69	59	3	4	51

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 15/5/80 to 28/5/80 ... BULLETIN NUMBER 80/11

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;

68 -Fever/malaise; 09 -Other; A1 -SIDS ...

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VIRUS OR VIRAL ANTIGEN	Eye	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/mal-aise	Other	SIDS
0100 ADENOVIRUS NOT TYPED.....	1		1					2		
0101 ADENOVIRUS TYPE 1.....							1	1		
0102 ADENOVIRUS TYPE 2.....								1		
0103 ADENOVIRUS TYPE 3.....	1						2			
0105 ADENOVIRUS TYPE 5.....										1
0107 ADENOVIRUS TYPE 7.....								1		
0119 ADENOVIRUS TYPE 19.....	1									
0201 INFLUENZA A VIRUS.....								1		
0302 PARAINFLUENZA VIRUS TYPE 2....										1
0303 PARAINFLUENZA VIRUS TYPE 3....							1			
0500 RHINOVIRUS (ALL TYPES).....										1
0700 ORNITHOSIS-PSITTACOSIS.....								1		
0902 COXSACKIEVIRUS B2.....							1			
0906 COXSACKIEVIRUS B6.....									1	
1021 ECHOVIRUS TYPE 21.....								1		
1200 MUMPS VIRUS.....			6					1	1	
1301 HERPES SIMPLEX VIRUS-NOT TYPED		3					1			
1303 VARICELLA-ZOSTER VIRUS.....				1						
1306 HERPES SIMPLEX TYPE 1.....	1	3						2		
1307 HERPES SIMPLEX TYPE 2.....		88					1			
1401 COXIELLA BURNETI.....							2	2		
1514 MOLLUSCUM CONTAGIOSUM.....		1								
1522 RUBELLA VIRUS.....				1					2	
1541 CHLAMYDIA A - TRIC TYPE.....	1	11								
1556 CMV - CYTOMEGALOVIRUS.....				2		3	5	3	5	
ARBO. GROUP B. ...								1		
Total.....	5	106	7	4		3	14	17	9	3