



Communicable Diseases Intelligence

Bulletin number 83/8

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Contents:

- CDI reports - 1982.

VIRUS REPORTING SCHEME - A total of 1065 reports were received this period.

- Dengue was confirmed by the State Health Laboratory, Brisbane, in a 31 year old female who had returned recently from the Solomon Islands. Serotyping indicated IgM reactions against types 3 and 4, but not against 1 and 2. The last indigenous dengue case was reported in September 1982, but the densities of Ae. aegypti in northern Queensland and the freedom of international travel still allow the importation and support of further endemic dengue transmission. Currently, epidemic polyarthritis activity is widespread in the region.
- Measles antibody was detected by the Royal Children's Hospital, Melbourne, in the CSF and sera of a 15 year old female with subacute sclerosing panencephalitis (SSPE). In the USA, the estimated risk of SSPE following natural measles infection averaged 8.5 cases per million measles cases occurring in 1960-74, but cases with onset since 1973 have declined substantially paralleling the decline in reported measles after 1964-66 (MMWR (1982) 31: 585).

Other reports of interest include:

- Strains of penicillinase-producing N. gonorrhoeae (PPNG) referred from the Central Hospital, Honiara, were examined recently by Fairfield Hospital. Their spectinomycin sensitivity was confirmed by the Microbiological Diagnostic Unit, University of Melbourne. These were the first PPNG strains reported from the Solomon Islands. The post-index cases among "friendly" young females were vigorously investigated and treated successfully with spectinomycin. Authorities at HMAS Cerberus were notified of the outbreak just prior to a visit to Iron-Bottom Sound by units of the Royal Australian Navy. Dr P. Cavanagh, Fairfield Hospital, (telephone 03-488 2222) would be grateful for any follow-up information concerning this PPNG outbreak.
- The first Australian case of AIDS has been confirmed in a male homosexual. However, further details are unavailable at present due to copyright restrictions following submission of the case report to the Medical Journal of Australia. The Editor of CDI would be interested in

(continued on page 7)

CDI REPORTS - 1982

A total of 27324 reports were received by CDI for 1982 (up to 30 March 1983) compared with 19535, 18908 and 18540 for 1981, 1980 and 1979 respectively. A percentage separation of the reports together with the corresponding figures for 1981 is given in Figure 1. Reports of the same organism collected on different dates, and of reports pending further virus typing, were deleted whenever identified.

The higher numbers of reports in 1982 was due both to genuine increases in disease incidence (e.g. influenza A and B, Mycoplasma pneumoniae, respiratory syncytial virus, adenoviruses and arboviruses), and to more complete reporting influenced by the availability of diagnostic facilities and concomitant referral of specimens (e.g. herpes simplex and Chlamydia trachomatis). Measles and Coxiella burnetii infections were reported less in 1982. Genital infections (7005 reports) comprised 25.6% of reports, 71.3% of these were due to herpes simplex and 26.4% to C. trachomatis.

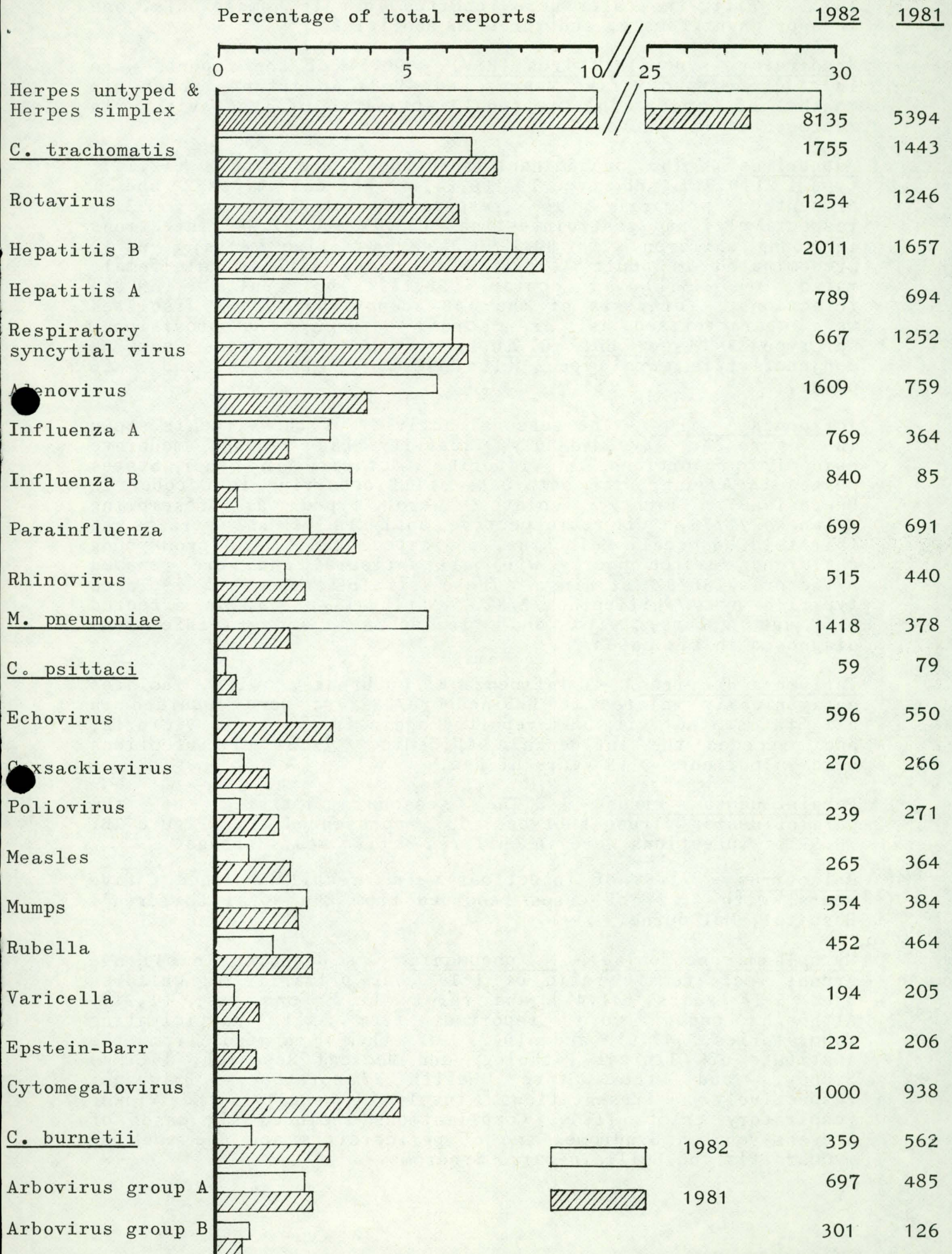
Herpes simplex virus - The 8135 herpes virus reports received comprised 10.4% herpes virus untyped, 5.8% herpes virus type pending, 16.4% herpes simplex virus (HSV) untyped, 19.3% HSV type 1 (HSV-1) and 48.1% HSV type 2 (HSV-2). Of the HSV-1 infections, 728 (46.4%) skin/mucous membrane, 517 (32.9%) genital, 124 (7.9%) respiratory with three classified as pneumonia, 73 (4.7%) conjunctival and 18 (1.1%) encephalitic presentations were reported. Similarly, the HSV-2 presentations constituted 233 (5.9%) skin/mucous membrane, 3618 (92.4%) genital, 10 (0.3%) respiratory, 2 (>0.1%) conjunctivitis and 4 (0.1%) encephalitis. Only 0.4% of HSV-2 infections occurred in patients up to 15 years of age compared with 24.3% for HSV-1 infections. Forty-six HSV infections were diagnosed in renal transplant recipients (31 of HSV-1; 4 of HSV-2) and five in bone-marrow recipients. Forty-seven genital infections (7 of HSV-1; 33 of HSV-2) were recorded in pregnant females ranging from 10-38 weeks gestation, and three disseminated infections were reported in neonates (1 of HSV-1; 2 of HSV-2).

Chlamydia - C. trachomatis accounted for 96.7% of the reports (66.9% from the State Health Laboratory Services, Perth), with a male:female ratio of 1.2:1. 72.5% of the isolations were identified in McCoy cells. Thirty-five patients presented with conjunctivitis and three with respiratory infections. Apart from three lymphogranuloma venereum reports, the remaining infections were C. psittaci.

Rotavirus - Rotavirus infections were diagnosed (48.9% by ELISA, 55.0% by electronmicroscopy) in patients of all age groups, although 90% were in children less than five years and 24.6% in infants less than six months. As in previous years, peak virus activity occurred in June and July (Figure 2E).

Hepatitis B virus - Of the 2011 hepatitis B surface antigen (HBsAg) reports received, 36.8% were in patients aged 15-24 years and 38% aged 24-59 years, with an overall male:female ratio of 2:1. Carrier status was identified in 101 patients and chronic or chronic active hepatitis in 12 cases. Twenty-four cases were reported in male homosexuals, 84 in abusers of intravenous (IV) drugs and ten in pregnant females. Where race was indicated, 188 were noted as Indochinese (78 Vietnamese) and 36 as Aboriginal.

FIGURE 1 Frequency distribution of 27324 isolations and identifications reported to CDI - 1982.



Hepatitis A virus - Clinical infections predominated in adults (69.2% in cases > 15 years of age) with a male:female ratio of 1.7:1. Fifty-two cases were reported in male homosexuals, one in a pregnant female, and three in Aborigines.

Respiratory syncytial virus (RSV) - 90.3% of the reports were in children aged < five years, and 49.8% in infants under six months of age. The seasonal activity of the virus is represented in Figure 2C.

Adenovirus - The predominant serotypes were type 2 (12.7%), type 1 (10.2%) and type 19 (9.2%). Whereas types 2 and 1 presented primarily as respiratory (54.2% and 52.8% respectively) and gastrointestinal (33.7% and 27.5%) infections in young children with 89.1-90.3% aged < five years, type 19 predominated in adults (76.8% > 15 years with a male:female ratio of 2.3:1) as ocular (58.1%) and genital (39.8%) infections. Forty-six of the 148 adenovirus type 19 isolates were characterised as, or a cross between, the provisional serotype 37 (see CDI 81/16:1). Other serotypes causing conjunctivitis were type 3 (18 cases), 8 (8 cases) and 7 (6 cases).

Influenza A virus - The seasonal activity of the virus is shown in Figure 2A. By mid-July, activity had reached moderate epidemic proportions in Victoria. Activity in other States peaked in August, with outbreaks still occurring in October in Queensland. Twenty isolates were typed as resembling A/Bangkok/1/79, but retrospective analysis of 112 strains at Fairfield Hospital, Melbourne, indicated that 17 (13 from young children) reacted poorly with all antisera, and were renamed A/Victoria/186/82 strains. These strains resembled isolates typified by A/Philippines/2/82. Nationally, strains affected all age groups, with dual influenza A and B infections diagnosed in six cases.

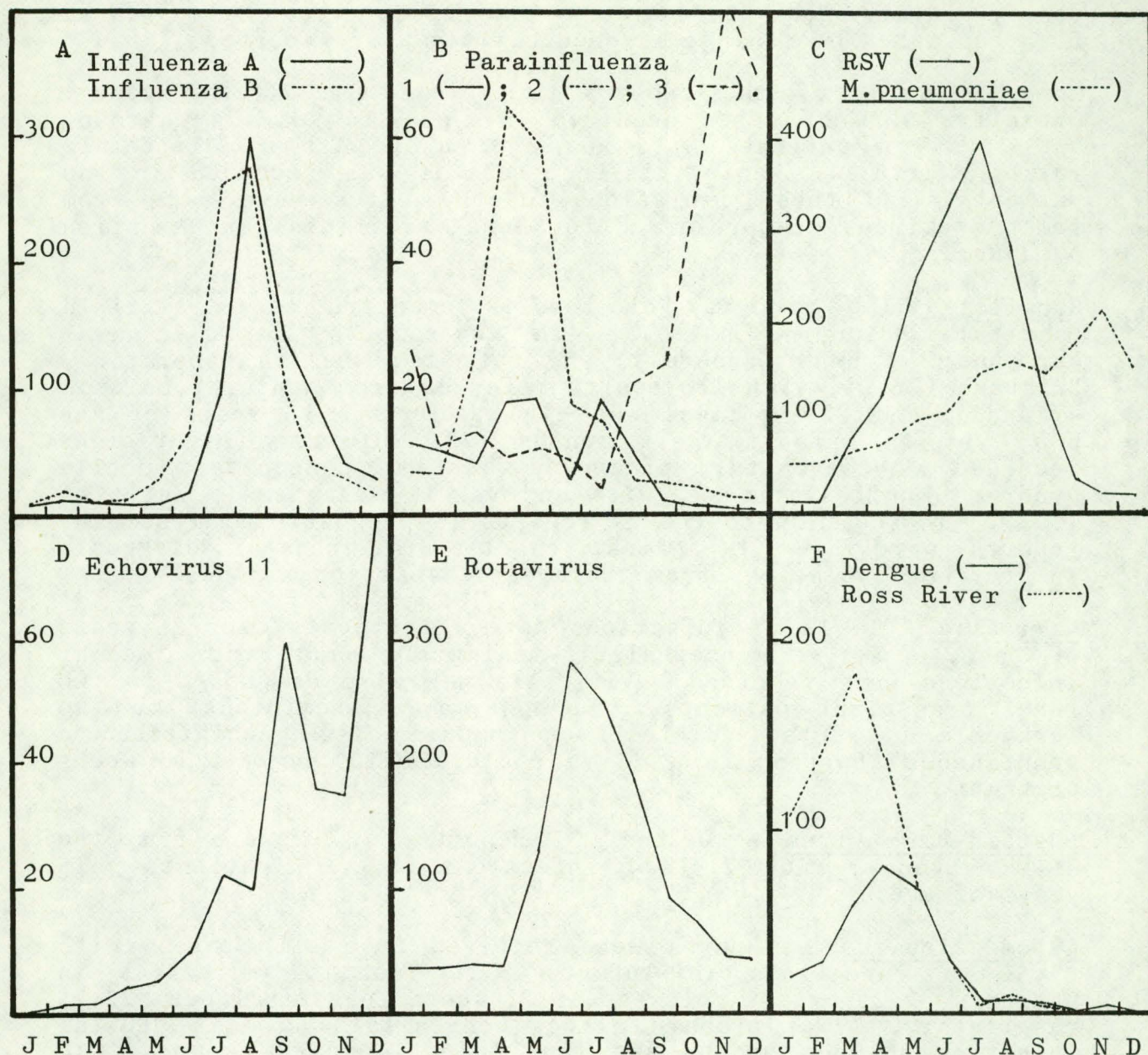
Influenza B virus - Influenza B outbreaks, with isolates antigenically related to B/Singapore/222/79, were recorded in all States. Activity was reported again initially in Victoria, and preceded the influenza A epidemic. 75.6% of infections were in patients > 15 years of age.

Parainfluenza virus - The seasonal activity of the parainfluenza virus subtypes is represented in Figure 2B. 70.5% of infections were in children < five years of age.

Rhinovirus - 71.5% of infections were in children aged < five years, with 41.2% of cases reported from the Royal Children's Hospital, Melbourne.

Mycoplasma pneumoniae - M. pneumoniae was detected in all age groups (male:female ratio of 1:1), but primarily in children aged 5-14 years (41.4%) and rarely below one year (1.2%). Although cases were reported from all participating laboratories, 47.9% and 19.2% of them emanated from the Institute of Clinical Pathology and Medical Research, (ICPMR) Sydney, and the State Health Laboratory, Brisbane, respectively. Presentations involved usually the lower respiratory tract (71%). Complications included six cases of Stevens-Johnson Syndrome, two of pericarditis and one each of myocarditis and Guillain-Barré Syndrome.

FIGURE 2. Seasonal activity of selected viruses (1 January - 31 December, 1982).



Echovirus - The prevalent echovirus serotypes were 47.8% type 11 (62.1% from the State Health Laboratory Services, Perth), 12.2% type 22 and 8.4% type 17. The epidemic of echovirus type 11 was recognized initially in Perth in June (Figure 2D), but activity has since spread to the eastern States. 36.1% of infections occurred below six months of age, and one nosocomial outbreak in a neonatal nursery was reported. Overall, presentations for the serotype included meningitis (50.5%), fever/malaise (13.7%) and respiratory (8.8%) symptoms.

Coxsackievirus - Coxsackievirus type B5 (47.0%, male:female ratio 1.7:1), type B3 (13.0%), type B4 (10.7%) and type A9 (9.6%) were the prevalent serotypes, predominantly affecting young children in summer.

Poliovirus - 81.0% of the 239 isolations were recovered from infants below one year.

Measles - Only six (2.3%) of the 265 measles cases were reported by the State Health Laboratory Services, Perth. Nationally, 32.4% of infections were in patients aged 5-14 years, 15.0% aged 15-24 years and 13.9% aged > 25 years. Eighteen cases of meningitis/encephalitis were reported.

Mumps - 50.3% of the reports came from the ICPMR, Sydney. Overall, 40.7% of cases occurred in the 5-14 years age group, and 35.4% in patients > 15 years of age, with a male:female ratio of 1.8:1. Meningitis/encephalitis was recorded in 140 patients, and three isolations of the virus were made from semen specimens cryopreserved for human artificial insemination by donor.

Rubella - The majority of reports emanated from Fairfield Hospital, Melbourne (32.0%, with 40 reports in male naval personnel at HMAS Cerberus), and the State Health Laboratory, Brisbane (16.9%, with 11 reports referred from Honiara, Solomon Islands). 58.8% of cases were in patients > 15 years of age and 7.9% in infants < six months (23 clinical presentations recorded as congenital, of which four had congenital rubella syndrome manifestations), with an overall male:female ratio of 1:1.7. In addition to the 29 reports in pregnant females, nine reports were of IgM against rubella in prenatal diagnosis in utero or isolations from therapeutic abortion tissues.

Varicella - 54.1% of infections were in patients over 25 years of age. Twelve encephalitis/meningitis and four ocular infections were recorded. Varicella was also diagnosed in two renal transplant patients, one bone-marrow recipient and two leukaemia patients. Varicella pneumonia also precipitated a spontaneous abortion in a 23 year old female who was 13 weeks pregnant.

Epstein-Barr virus - Of the 232 reports, 70.3% were from the ICPMR, Sydney; and 67.9% of infections were in patients > 15 years of age.

Cytomegalovirus - Reports were received from all States, with 21.5% of infections in infants < six months and 25.4% in patients > 25 years of age. Presentations included 22.7% respiratory, 12.4% urinary, 11.4% congenital and 6.2% genital infections. One hundred and four infections were recorded in renal transplant recipients, 19 in bone-marrow recipients, and 11 in patients who had received multiple blood transfusions. Twenty-five isolations were from chronic/excretors, eight from pregnant females, and seven from neonates with micro- or hydrocephalus. Four isolations were made from seminal fluid. Thirteen patients had polyneuritis and one had Guillain-Barré Syndrome.

Coxiella burnetii - Infections were limited to the eastern States; 46.5% New South Wales, 40.5% Queensland, 8.7% South Australia and 2.1% Victoria. Only one case was reported from Western Australia. 88.6% of infections were in patients > 15 years with a male:female ratio of 7.3:1. One case of Q fever endocarditis was diagnosed in a 42 year old female.

Arbovirus group A - Epidemic polyarthrititis was widespread during 1982, with 21 cases emanating from Tasmania. Virus activity peaked in March (Figure 2F) with 72% of infections in patients > 25 years of age. One Sindbis virus infection was diagnosed by the State Health Laboratory, Brisbane.

Arbovirus group B - Of the 278 confirmed and 11 clinical dengue cases notified, 13 were acquired overseas (8 Solomon Islands, 2 Papua New Guinea, and one each from India, Sri Lanka and Bali). Indigenous cases of dengue emanated from Cairns (144 cases), Townsville (47), Thursday Island (34), Mareeba (10), Atherton (4), Mossman (2), Weipa (2), Cooktown (2) and Charter's Towers (2). Thirteen Kunjin virus infections were reported; 12 cases from Queensland (one each from Roma, Texas, Charleville, Mitchell, Murgon and Brisbane) and one from South Australia. Japanese B encephalitis was diagnosed in a 20 year old female who had returned recently from Bali.

Poxvirus - Molluscum contagiosum comprised eight of the 18 poxvirus reports. Vaccinia virus was isolated from a lip lesion on a 17 year old serviceman who had been revaccinated against smallpox.

Others - This group incorporated numerous virus reports, each forming less than 1% of the total; small virus-like particles (76 reports), astrovirus (34), paramyxovirus (22), coronavirus (16), reovirus (4), enterovirus type 71 (4) and calicivirus (2).

Copies of the 1982 tables are available from the Editor on request. These are computer printouts of the type and number of reports received from each laboratory, the patient's age and clinical presentation, the specimen tissue and month of collection, and the method of diagnosis.

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receiving information on any other Australian cases of opportunistic infections or Kaposi's sarcoma among persons who do not have underlying disease and are not on immunosuppressive therapy.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE
 REPORTING PERIOD - 31/3/83 - 13/4/83 BULLETIN NUMBER 83/8
 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	5		2		2	2		12
0101 ADENOVIRUS TYPE 1.....						1			1
0102 ADENOVIRUS TYPE 2.....				2		1			3
0103 ADENOVIRUS TYPE 3.....						1			1
0106 ADENOVIRUS TYPE 6.....						1			1
0119 ADENOVIRUS TYPE 19.....								4	4
0199 ADENOVIRUS TYPING PENDING.....			4		4	3			11
0201 INFLUENZA A VIRUS.....	2	1						1	4
0301 PARAINFLUENZA VIRUS TYPE 1.....					4				4
0302 PARAINFLUENZA VIRUS TYPE 2.....							3		3
0303 PARAINFLUENZA VIRUS TYPE 3.....		2			1	1		1	5
0399 PARAINFLUENZA VIRUS TYPING PENDING.....						2			2
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)...					2	2	13		17
0500 RHINOVIRUS (ALL TYPES).....	2			4	7	1	3		17
0600 MYCOPLASMA PNEUMONIAE.....	11		3	4	4	3	9		34
0700 ORNITHOSIS-PSITTACOSIS.....	2			2		1			5
0809 COXSACKIEVIRUS A9.....	1			1					2
0816 COXSACKIEVIRUS A16.....				1					1
0899 COXSACKIEVIRUS GROUP A TYPING PENDING.....							1		1
0902 COXSACKIEVIRUS B2.....				1		1			2
0903 COXSACKIEVIRUS B3.....	1		1	2	1				5
1000 ECHOVIRUS NOT TYPED.....							3		3
1003 ECHOVIRUS TYPE 3.....			1						1
1009 ECHOVIRUS TYPE 9.....				1					1
1011 ECHOVIRUS TYPE 11.....	24	1	2	10	8	2	15		62
1014 ECHOVIRUS TYPE 14.....							3		3
1017 ECHOVIRUS TYPE 17.....							1		1
1102 POLIOVIRUS TYPE 2.....	2								2
1103 POLIOVIRUS TYPE 3.....	1								1
1104 POLIOVIRUS-VACCINAL STRAIN.....			2		1				3
1199 POLIOVIRUS TYPING PENDING.....							1		1
1200 MUMPS VIRUS.....	1	1		1				2	5
1300 HERPES VIRUS GROUP-NOT TYPED.....	25		3	3		3	1		35
1301 HERPES SIMPLEX VIRUS NOT-TYPED.....				8				48	56
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	5		4					3	12
1303 VARICELLA-ZOSTER VIRUS.....	6		1			4		1	12
1306 HERPES SIMPLEX TYPE 1.....	11		14	31		18	14		88
1307 HERPES SIMPLEX TYPE 2.....	95		19	53		19	50		236
1399 HERPES VIRUS TYPING PENDING.....			9		3	7			19
1401 COXIELLA BURNETI.....	5						1		6
1502 PICORNA VIRUS-NOT TYPED.....	3		6						9
1521 MEASLES VIRUS.....	1				1				2
1522 RUBELLA VIRUS.....				5		1	5	1	12
1532 HEPATITIS B ANTIGEN.....	50		3	34		9	7	11	114
1535 HEPATITIS A ANTIBODY.....	6	1	1	8		4	1	15	36
1541 CHLAMYDIA A - C TRACHOMATIS.....	23	2	3				22	42	92
1556 CMV - CYTOMEGALOVIRUS.....	7	1	7	19	6	3	3	5	51
1563 CORONAVIRUS.....				2					2
1564 ROTAVIRUS.....			1	1				2	4
1571 ENTEROVIRUS TYPE 71 (BRCR).....				2					2
1599 ENTEROVIRUS TYPING PENDING.....		2	6		14	2	4		28
ROSS RIVER VIRUS.....							27	1	28
SMALL VIRUS (LIKE) PARTICLE.....				2					2
DENGUE.....							1		1
Total.....	285	16	90	199	56	92	190	137	1,065

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 31/3/83 to 13/4/83

83/8

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/ mucous memb
0100 ADENOVIRUS NOT TYPED.....											1
0101 ADENOVIRUS TYPE 1.....	1										
0102 ADENOVIRUS TYPE 2.....	2	1									
0103 ADENOVIRUS TYPE 3.....							1				
0106 ADENOVIRUS TYPE 6.....							1				
0201 INFLUENZA A VIRUS.....		2						1			1
0301 PARAINFLUENZA VIRUS TYPE 1....		4									
0302 PARAINFLUENZA VIRUS TYPE 2....		2	1								
0303 PARAINFLUENZA VIRUS TYPE 3....	1	4									
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....		22									
0500 RHINOVIRUS (ALL TYPES).....		15			1				1		
0600 MYCOPLASMA PNEUMONIAE.....	6	24									
0700 ORNITHOSIS-PSITTACOSIS.....	1	2									
0809 COXSACKIEVIRUS A9.....					2						
0816 COXSACKIEVIRUS A16.....											1
0902 COXSACKIEVIRUS B2.....		1					1				
0903 COXSACKIEVIRUS B3.....		1			2		2				
1003 ECHOVIRUS TYPE 3.....					1						
1011 ECHOVIRUS TYPE 11.....	11	4			30		3	1			4
1014 ECHOVIRUS TYPE 14.....					3		1				
1017 ECHOVIRUS TYPE 17.....	1										
1102 POLIOVIRUS TYPE 2.....							1				
1103 POLIOVIRUS TYPE 3.....							1				
1104 POLIOVIRUS-VACCINAL STRAIN....							1				
1200 MUMPS VIRUS.....	1	1			2						
1301 HERPES SIMPLEX VIRUS NOT-TYPED	6	1									32
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	2							2			
1303 VARICELLA-ZOSTER VIRUS.....	4										8
1306 HERPES SIMPLEX TYPE 1.....		3						1		6	33
1307 HERPES SIMPLEX TYPE 2.....	2										20
1401 COXIELLA BURNETI.....	3										
1521 MEASLES VIRUS.....						1					1
1522 RUBELLA VIRUS.....	2										8
1532 HEPATITIS B ANTIGEN.....	47							51			
1533 HEPATITIS B ANTIBODY.....	2							2			
1535 HEPATITIS A ANTIBODY.....	4							26			
1541 CHLAMYDIA A - C.TRACHOMATIS...		1									
1556 CMV - CYTOMEGALOVIRUS.....	9	6			3	1		3	1	5	
1563 CORONAVIRUS.....							2				
1564 ROTAVIRUS.....							4				
1571 ENTEROVIRUS TYPE 71 (BRCR)....											1
9992 ROSS RIVER VIRUS.....	2					1					10
9994 SMALL VIRUS (LIKE) PARTICLE...							2				
9995 DENGUE.....											1
Total.....	107	94	1	44		3	20	86	3	11	121

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

PERIOD : 31/3/83 to 13/4/83 ...

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;

66 -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					1			
0119 ADENOVIRUS TYPE 19.....		4								
0201 INFLUENZA A VIRUS.....							1			
0303 PARAINFLUENZA VIRUS TYPE 3....										1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....								1		
0600 MYCOPLASMA PNEUMONIAE.....				1				7	1	
0700 ORNITHOSIS-PSITTACOSIS.....		1						2		
0902 COXSACKIEVIRUS B2.....								1		
1011 ECHOVIRUS TYPE 11.....							1	9	2	
1102 POLIOVIRUS TYPE 2.....										1
1104 POLIOVIRUS-VACCINAL STRAIN....		1								
1200 MUMPS VIRUS.....			2							
1301 HERPES SIMPLEX VIRUS NOT-TYPED		17		1					1	
1302 EPSTEIN-BARR VIRUS (EB VIRUS).			5					1	3	
1306 HERPES SIMPLEX TYPE 1.....	3	39						3	1	
1307 HERPES SIMPLEX TYPE 2.....		215								
1401 COXIELLA BURNETI.....								2	1	
1522 RUBELLA VIRUS.....			1		1			3	1	
1532 HEPATITIS B ANTIGEN.....		1							10	
1535 HEPATITIS A ANTIBODY.....				1				1	4	
1541 CHLAMYDIA A - C.TRACHOMATIS...	1	90								
1556 CMV - CYTOMEGALOVIRUS.....		3		2		5	3	1	10	1
1571 ENTEROVIRUS TYPE 71 (BRCR)....			1							
9992 ROSS RIVER VIRUS.....					23			9		
9995 DENGUE.....					1					
Total.....	5	372	9	5	25	5	6	40	35	2