



Communicable Diseases Intelligence

Bulletin number 81/12

Issue date: 19 June 1981

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- . Tuberculin skin testing and commonly used vaccines
- . Terrapins as a source of salmonella infection

VIRUS REPORTING SCHEME - A total of 856 reports were received this period.

Reports of interest include:

Arbovirus infections - A serological diagnosis of Australian encephalitis was made by the State Health Laboratory, Perth, in a 27 year old man who had been working in Goldsworthy. The patient was admitted to the Royal Perth Hospital on 30 April, and discharged two weeks later. Serum specimens showed an HI antibody titre of 1/80, and specific IgM. Eight cases of Australian encephalitis have been recognized in Western Australia this year.

Arbovirus group B, clinically dengue, was also diagnosed by Fairfield Hospital, Melbourne, in a 45 year old woman who had returned to Australia in April after travelling in India and Malaysia. Campylobacter jejuni was also isolated from faecal specimens.

Fifty reports of Ross River virus infection were received from the State Health Laboratory, Brisbane, compared with 85, 55 and 33 for the previous three periods. This suggests a wane in the recent outbreak. The remaining Ross River virus reports were of patients from Carnarvon (1), Newman (1), Geraldton (1) and Gingin (1) in Western Australia, and Alice Springs (1) and unspecified locations (2) in the Northern Territory.

- . Rubella virus was isolated by Fairfield Hospital, Melbourne, from nasal aspirates of four children (aged three, six, eight and ten years) at the Allambie Reception Centre for children. All children presented with rash.
- . Hepatitis A IgM was detected by radioimmune assay by Fairfield Hospital in five inpatient children (four from the same family) aged seven (two) eight, ten and 13 years who had been holidaying together. No adults became ill or were tested.
- . The State Health Laboratory, Perth, diagnosed lymphogranuloma venereum by serology in a 31 year old man from Mount Newman. He presented with swollen inguinal lymph glands.
- . Measles antibody was detected by CF test in a 12 year old girl at the Royal Alexandra Hospital for Children, Sydney, presenting with encephalitis and possible SSPE.

ARBOVIRUS SURVEILLANCE IN THE NORTHERN TERRITORY - 1981

(Contributed by P. Whelan, Northern Territory Department of Health, Darwin)

The arbovirus surveillance program in the Northern Territory (NT) is organised by the Medical Entomology Section of the NT Department of Health in conjunction with the NT Department of Primary Industry and the Queensland Department of Health. The aim of the program is to detect the periods and locations of arbovirus activity in order to assess the potential risk to residents, and to allow time to institute further arbovirus studies and control measures. Surveillance involves regular collection of blood samples from sentinel cattle, and the testing of sera for Murray Valley encephalitis (MVE) HI antibody.

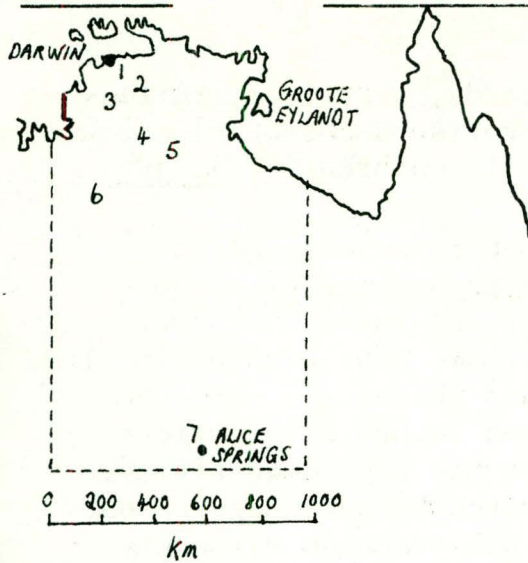
Testing of the two herds located near Darwin and Katherine in 1979 and 1980 indicated that the cattle were being exposed to a group B arbovirus (flavivirus). Antibody titres rose during January-February in Darwin and during February in Katherine. Since the HI titres were low, further tests were done by Dr I. Marshall, Australian National University, Canberra. Neutralisation tests performed on some of the HI positive sera suggested that some of the infections were due to Kunjin virus, while others conformed neither to Kunjin nor MVE infections.

In 1981, the surveillance program was expanded to include monthly collection of blood samples (from January to May) from seven sentinel cattle herds (see Figure 1). Sera were forwarded to N. Stallman, State Health Laboratories, Brisbane, for MVE HI antibody testing. Heparinized blood samples were also taken weekly from four herds (Berrimah Experimental Farm, Coastal Plains Research Station, Upper Adelaide River Research Station and Victoria River Research Station), and stored at -80°C . Samples from animals which developed HI antibody were then inoculated into Vero cell tissue culture for possible virus isolation; this work is being done by Dr J. Gard, NT Department of Primary Production. In addition, mosquitoes were collected from various locations, and are being tested for virus carriage by Prof. N. Stanley, University of Western Australia, Perth.

Cattle in all seven sentinel herds exhibited flavivirus seroconversion, indicating widespread arbovirus activity. Positive sera were collected from four herds in January (Victoria River Research Station, Upper Adelaide River Experimental Station, Berrimah Experimental Farm and Katherine Experimental Station), and from all other herds, except one near Darwin, in March and early April. In the herd located at Katherine Experimental Farm, there were two seroconversions (of 18 cattle) in early March with a further 11 by the end of the month. HI titres ranged from 1/20 to 1/80.

This evidence of widespread flavivirus activity in the NT in March corresponded with outbreaks of Australian encephalitis in the Pilbara and Kimberley districts of Western Australia, and the single cases at Groote Eylandt in the NT and Mount Isa in Queensland (see CDI 81/9 and 81/10). Since it appears that flavivirus activity is a regular seasonal event at the "top end" of Australia, increased awareness may lead to detection of clinical and subclinical encephalitis infections.

FIGURE 1

Sentinel cattle herds in the NT - 1981

1. - Berrimah Experimental Farm.
2. - Coastal Plains Research Station.
3. - Upper Adelaide River Research Station.
4. - Douglas Daly Research Station.
5. - Katherine Experimental Station.
6. - Victoria River Research Station.
7. - Arid Zone Research Station.

TUBERCULIN SKIN TESTING AND COMMONLY USED VACCINES

(Based on California Morbidity Weekly Report (1981) No. 9)

The issue of possible suppression of the tuberculin skin test response by immunisation has been considered recently by a number of US expert committees. These committees noted:

- There is no convincing evidence that rubella, mumps, influenza (killed vaccine) and oral polio vaccine suppress tuberculin reactivity, despite the insertion of package statements to the contrary by some manufacturers of purified protein derivative-Tuberculin.
- Although the supposition that measles disease can activate dormant tuberculosis infection is widely accepted, it has been challenged as being based on inadequate and uncontrolled studies⁽¹⁾. Measles vaccine has never been observed to activate tuberculosis⁽²⁾, but the vaccine can temporarily (up to four weeks) suppress tuberculin skin test reactivity⁽³⁾, leading to false negative readings.

The American Academy of Pediatrics Committee of Infectious Diseases stated that short-term suppression of the tuberculin skin test sometimes follows the use of measles, rubella and mumps vaccines, and recommended that tuberculin skin testing should be done at the time of measles vaccine administration, or beforehand⁽⁴⁾. This viewpoint was also adopted by the United States Public Health Services Immunisation Practices Advisory Committee in its recommendations on measles vaccine⁽⁵⁾, which stated that the tuberculin test can be administered on the day of measles immunisation and be read 48-72 hours later with no problem of suppression by the vaccine. The Infectious Diseases Section, California qualified this recommendation further by advising that if a day or more has elapsed since measles immunisation, it is probably prudent to wait 4-6 weeks before administering a tuberculin skin test to avoid possible suppression of reactivity.

References

1. Am. Rev. Respir. Dis. (1976) 114 : 257
2. Alabama Communicable Disease Report December 1980
3. Am. Rev. Respir. Dis. (1964) 90 : 607
4. AAP Committee on Infectious Disease Report, 18th ed, (1977) pp 3, 288
5. MMWR (1978) 27 : 427

TERRAPINS AS A SOURCE OF SALMONELLA INFECTION

(Based on CDR (1981) 81/20 : 3)

Salmonella are commonly isolated from snakes, lizards, tortoises, turtles etc., so that reptiles kept as pets by children provide a potential source of infection. This is highlighted by a recent small outbreak of S. java in Jersey, Channel Islands.

S. java was identified from a stool specimen from a three year old girl with moderate diarrhoea, malaise and pyrexia. In the course of follow-up investigations by the Public Health Department, it was found that two terrapins had been purchased from a local retailer two days previously. In addition to the index case, 19 persons - adults and children - submitted stool specimens for investigation, and of the seven recorded isolations two had symptoms. Nevertheless, the organism probably has high infectivity, since three of the seven cases were probably acquired by secondary spread. Three of the cases detected were still excreting the organism six weeks later.

Water from the domestic terrapin tank was sampled and was found to contain S. java. So did water from the retailer's display tanks, even though this was constantly changed. The retailer had been aware of the risk of infection from terrapins, and said he had warned his customers accordingly. However, he implied that infection only occurred when terrapins were kept in dirty conditions, and stated that at least on one occasion he supplemented the water with an ocular preparation of chloramphenicol. Addition of antibiotics to terrapin water is not recommended because of the risk of the development of resistant strains of salmonella.

S. java was also isolated from the tank water of terrapin aquaria sold by another retailer on the island, although these animals had been obtained from a different source in the United Kingdom.

Since 1973, 60 incidents have been reported to the Communicable Disease Surveillance Centre of salmonellas associated with terrapins (48), tortoises (11) and turtles (1). Both human cases and asymptomatic excretors were associated with the infected reptiles. Salmonellas were isolated from the pet in 15 incidents and from tank water in the remainder. In seven incidents, two salmonellas were isolated. S. java was isolated from all terrapins (19), and of the other 24 serotypes, S. arizonae (6), S. newport (4) and S. pomana (4) were the most common.

Editorial Comment

The first report of possible salmonella infection with a reptilian source may be in the diaries of Burke and Wills. The adventurers suffered severe gastrointestinal infection following the consumption of a large python during their epic trek from the Gulf of Carpentaria in 1861. More recently in 1980, the Salmonella Reference Laboratory, Adelaide serotyped 19,717 salmonella isolates, of which 43 were from reptilian sources. S. houten (9), S. muenchen (5) and S. dublin (5) were the most common serotypes. A further 88 S. arizonae spp. were isolated, of which 21 were from reptiles.

Active amateur herpetological societies now handle many native reptiles, and schools frequently maintain vivariums for reptiles of biological interest. Although the importation of terrapins into Australia is illegal, red-eared slider terrapins have been smuggled into the country, and are available as pets through some retailers. As reptiles are well recognized sources of salmonella infection, a fact which is not generally appreciated by the public, there may be a need for a short code of practice for the safe management of such creatures.

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AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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REPORTING PERIOD - 28-5-81 - 10-6-81 BULLETIN NUMBER

81/12

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMR	RAHC	PHH/	FAIR-			STATE	STATE	Total
	(NSW)/ WVH (ACT)	(NSW)	POW (NSW)	FIELD (VIC)	RCH (VIC)	IMVS (SA)	LAB (QLD)	LAB (WA)	
0100 ADENOVIRUS NOT TYPED.....	13	1	2	4	1	3	5	2	31
0101 ADENOVIRUS TYPE 1.....		1	1	1		4			7
0102 ADENOVIRUS TYPE 2.....				1	1	2		1	5
0103 ADENOVIRUS TYPE 3.....								1	1
0104 ADENOVIRUS TYPE 4.....						1			1
0105 ADENOVIRUS TYPE 5.....						3			3
0106 ADENOVIRUS TYPE 6.....			1	1					2
0107 ADENOVIRUS TYPE 7.....			1		1				2
0108 ADENOVIRUS TYPE 8.....								1	1
0119 ADENOVIRUS TYPE 19.....						1		4	5
0199 ADENOVIRUS TYPING PENDING.....		1	3		3	1			8
0201 INFLUENZA A VIRUS.....	1		1			2			4
0203 INFLUENZA B VIRUS.....	1								1
0301 PARAINFLUENZA VIRUS TYPE 1.....	1	4		1	1	6			13
0302 PARAINFLUENZA VIRUS TYPE 2.....						2	2		4
0303 PARAINFLUENZA VIRUS TYPE 3.....						3		2	5
0399 PARAINFLUENZA VIRUS TYPING PENDING.....						6			6
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)....	15	22	1	5	45		11		99
0500 RHINOVIRUS (ALL TYPES).....	1			2	10		1		14
0600 MYCOPLASMA PNEUMONIAE.....			3				2	1	6
0700 ORNITHOSIS-PSITTACOSIS.....			1	1					2
0809 COXSACKIEVIRUS A9.....						1			1
0904 COXSACKIEVIRUS B4.....		3						1	4
1002 ECHOVIRUS TYPE 2.....	3						1		4
1006 ECHOVIRUS TYPE 6.....	2								2
1009 ECHOVIRUS TYPE 9.....			2					4	6
1014 ECHOVIRUS TYPE 14.....							1		1
1022 ECHOVIRUS TYPE 22.....						4	1		5
1030 ECHOVIRUS TYPE 30.....				2					2
1099 ECHOVIRUS TYPING PENDING.....							4		4
1101 POLIOVIRUS TYPE 1.....	1	1					1		3
1102 POLIOVIRUS TYPE 2.....		1					2		3

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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REPORTING PERIOD - 28-5-81 - 10-6-81 BULLETIN NUMBER

81/12

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-CONTINUED

VIRUS OR VIRAL ANTIGEN	ICPMR (NSW)/ MVH (ACT)	RAHC (NSW)	PHH/ POW (NSW)	FAIR- FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
1103 POLIOVIRUS TYPE 3.....	1								1
1104 POLIOVIRUS-VACCINAL STRAIN.....					4				4
1200 MUMPS VIRUS.....	1	3		5	1		2	2	14
1300 HERPES VIRUS GROUP-NOT TYPED.....	22		8				1		31
1301 HERPES SIMPLEX VIRUS NOT-TYPED.....	1	3		2			9	35	50
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	11							2	13
1303 VARICELLA-ZOSTER VIRUS.....	2						2		4
1306 HERPES SIMPLEX TYPE 1.....	2			16		1			19
1307 HERPES SIMPLEX TYPE 2.....	32			32		2			66
1399 HERPES VIRUS TYPING PENDING.....			16		6	1			23
1401 COXIELLA BURNETI.....	5		3	1		5	11		25
1521 MEASLES VIRUS.....	1	2	1	1	1				6
1522 RUBELLA VIRUS.....				5					5
1532 HEPATITIS B ANTIGEN.....	14	2	8	31	1	9	5	8	78
1535 HEPATITIS A ANTIBODY.....	1		4	7		9	3	3	27
1541 CHLAMYDIA A - TRIC TYPE.....	12	1	2					43	58
1543 CHLAMYDIA A - LGV TYPE.....								1	1
1556 CMV - CYTOMEGALOVIRUS.....	5	2	12	7	1	5	6		38
1563 CORONAVIRUS.....	1			1					2
1564 ROTAVIRUS.....	1	11	2	6	14	28			62
1565 CALICI VIRUS.....	1								1
1599 ENTEROVIRUS TYPING PENDING.....			2		4			3	9
AUSTRALIAN ENCEPHALITIS.....								1	1
ROSS RIVER VIRUS.....						1	50	6	57
ASTROVIRUS.....	2								2
SMALL VIRUS (LIKE) PARTICLE.....	1			2					3
ARBO. GROUP B.				1					1
Total.....	154	58	74	135	100	96	118	121	856

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PERIOD : 28/5/81 to 10/6/81

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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
1301 HERPES SIMPLEX VIRUS NOT-TYPED		2	1			1			1		27
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	1										
1303 VARICELLA-ZOSTER VIRUS	2										2
1306 HERPES SIMPLEX TYPE 1		1								1	10
1307 HERPES SIMPLEX TYPE 2		1									2
1401 COXIELLA BURNETI	2	4									
1521 MEASLES VIRUS		2	1								5
1522 RUBELLA VIRUS											5
1532 HEPATITIS B ANTIGEN	34							42			
1535 HEPATITIS A ANTIBODY	2							25			
1556 CMV - CYTOMEGALOVIRUS	7	7	1					1	1	5	
1563 CORONAVIRUS							2				
1564 ROTAVIRUS	9	1					51				
1565 CALICI VIRUS							1				
AUSTRALIAN ENCEPHALITIS			1								
ROSS RIVER VIRUS	2										5
ASTROVIRUS							2				
SMALL VIRUS (LIKE) PARTICLE							2				
Total	76	165	5	11		1	70	68	4	6	63

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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PERIOD : 28/5/81 to 10/6/81 ...
 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	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/malaise	Other	SIDS
0101 ADENOVIRUS TYPE 1.....	1							1		
0102 ADENOVIRUS TYPE 2.....							1		1	
0104 ADENOVIRUS TYPE 4.....	1									
0108 ADENOVIRUS TYPE 8.....	1									
0119 ADENOVIRUS TYPE 19.....	4	1								
0201 INFLUENZA A VIRUS.....							2			
0301 PARAINFLUENZA VIRUS TYPE 1.....										1
0302 PARAINFLUENZA VIRUS TYPE 2.....										1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....							1			
0500 RHINOVIRUS (ALL TYPES).....									1	2
0600 MYCOPLASMA PNEUMONIAE.....								2		
0700 ORNITHOSIS-PSITTACOSIS.....								1		
1002 ECHOVIRUS TYPE 2.....							1			
1006 ECHOVIRUS TYPE 6.....							1	1		
1009 ECHOVIRUS TYPE 9.....			1				1	1		
1022 ECHOVIRUS TYPE 22.....										1
1101 POLIOVIRUS TYPE 1.....										2
1102 POLIOVIRUS TYPE 2.....										1
1103 POLIOVIRUS TYPE 3.....								1		
1104 POLIOVIRUS-VACCINAL STRAIN.....									1	1
1200 MUMPS VIRUS.....			8					1	1	
1301 HERPES SIMPLEX VIRUS NOT-TYPED		22								
1302 EPSTEIN-BARR VIRUS (EB VIRUS) ..		1	7				2	2		
1303 VARICELLA-ZOSTER VIRUS.....								1		
1306 HERPES SIMPLEX TYPE 1.....	2	5								
1307 HERPES SIMPLEX TYPE 2.....		64								
1401 COXIELLA BURNETI.....					1		7	14		

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

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PERIOD : 28 / 5 / 81 to 10 / 6 / 81 ...

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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 ...

-CONTINUED

VIRUS OR VIRAL ANTIGEN	Eye	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/malaise	Other	SIDS
1532 HEPATITIS B ANTIGEN.....				1					2	
1541 CHLAMYDIA A - TRIC TYPE.....	1	57								
1543 CHLAMYDIA A - LGV TYPE.....			1							
1556 CMV - CYTOMEGALOVIRUS.....		2	2	1		2	1	8	2	1
1564 ROTAVIRUS.....							1			
ROSS RIVER VIRUS					54		1	14		
ARBO. GROUP B.								1		
Total.....	10	152	19	2	55	2	19	48	8	10

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

...4th 4 Weekly Period for..1981..

(22.3.81 to 18.4.81 inclusive)

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Disease	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	Total	CUMULATIVE TOTAL TO DATE FOR YEAR
leishmaniasis	N.N.		7	3	1			1	12	24
leishmaniasis	N.N.			N.N.				1	1	11
leishmaniasis					1				1	1
leishmaniasis		1	1	N.N.					2	10
leishmaniasis	2		1						3	10
leishmaniasis	N.N.	N.N.	N.N.	39	N.N.	N.N.	N.N.	N.N.	39	112
leishmaniasis				N.N.		N.N.	N.N.		—	6
leishmaniasis									—	2
leishmaniasis	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	—	—
leishmaniasis									—	1 + 1 CARRIER
leishmaniasis		N.N.	1	N.N.		N.N.	1		2	24
leishmaniasis	N.N.	N.N.	N.N.	81	N.N.	N.N.	N.N.	N.N.	81	242
leishmaniasis	N.N.	N.N.	N.N.	5	N.N.	N.N.	N.N.	N.N.	5	102
leishmaniasis		N.N.		N.N.	N.N.	N.N.	N.N.	N.N.	—	—
leishmaniasis	313	130	56	75	127	11	81	8	801	3360
leishmaniasis	76	31	9	7	4	2	17	3	149	531
leishmaniasis	21	2	2	11	1		2		39	128
leishmaniasis	N.N.	N.N.		1		N.N.	N.N.		1	25
leishmaniasis	3								3	12
leishmaniasis	N.N.		N.N.	N.N.		N.N.	N.N.	N.N.	—	—
leishmaniasis	N.N.		N.N.	1	N.N.	N.N.	N.N.	N.N.	1	6
leishmaniasis			1		1				2	15
leishmaniasis	2	1		1	1				5	25
leishmaniasis		N.N.	N.N.	N.N.	N.N.	N.N.			—	—
leishmaniasis	9	8	21	2	2	1	1		44	143
leishmaniasis	N.N.		N.N.	N.N.		N.N.	N.N.	N.N.	—	—
leishmaniasis	N.N.		9			N.N.			9	23
leishmaniasis	N.N.	N.N.	124	N.N.	N.N.	N.N.	N.N.	N.N.	124	520
leishmaniasis									—	7
leishmaniasis	N.N.	6	5	N.N.	N.N.	N.N.	N.N.	N.N.	11	63
leishmaniasis									—	—
leishmaniasis									—	—
leishmaniasis	5	1	13		N.N.		N.N.		19	126
leishmaniasis	N.N.	N.N.	N.N.	N.N.		N.N.	N.N.	N.N.	—	—

DISEASE	N.S.W.	Q.	VIC.	W.A.	T.A.S.	N.T.	S.A.	ACT.	TOTAL	TOTAL TO DATE FOR YEAR
Salmonella infections	49	17	23	39	22	4	24	1	179	777
Shigella infections	N.N.	3	10		11		24		48	181
Smallpox									-	-
Syphilis	93	17	24	7	21		41		203	778
Tetanus					1				1	9
Trachoma	N.N.	N.N.		1	N.N.	N.N.			1	1
Tuberculosis (all forms)	37	20	11	5	14		1	2	90	* 414
Typhoid fever									-	4
Typhus (all forms)									-	-
Vibrio parahaemolyticus infections	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	-	-
Yellow Fever									-	-
Yersinia enterocolitica infections	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	N.N.	-	-

(Note: Data collected under the Notifiable Diseases Returns may bear little or no correlation to that collected under the CDI laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.)

N.N. Not Notifiable

* Corrections made to the Cumulative Total since last Report

Tuberculosis - 1 case for N.S.W.