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VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTING SCHEME:

In this period (30 August to 12 September 1990) there were 1268 reports processed. Dr TB Lynch's pathology laboratory, Rockhampton, has started contributing viral and non-viral pathogen reports from this issue of the CDI. Any other laboratories interested in contributing are welcome to contact the editor, Dr Robert Hall, Department of Community Services and Health, GPO Box 9848, Canberra ACT 2601.

Antibody to HTLV-1 was identified in a diabetic patient with end stage renal insufficiency. A code for HTLV-1 has now been created (see virus tables).

There were 8 reports of Q fever. All were in the 20 to 50 year age group, with exposure details being provided for two patients; a 35-year-old meatworker and a 49-year-old farmworker.

Seasonal increases in rotavirus activity have been observed since June, with 214 reports this period. Of these, 54 were from Toowoomba and 51 from Rockhampton.

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Further clinical details of the human herpesvirus-6 case reported in CDI 90/18 have been received. Dr G Eagles (RAHC) reports that:

The diagnosis of HHV-6 primary infection was made in a 13-month-old boy admitted to hospital with a 4 day history of intermittent high fevers up to 39°C, increasing lethargy, poor oral intake, and one episode of vomiting.

There was no diarrhoea, rhinorrhoea or cough. On examination, pharyngitis was noted and a blood film revealed neutropenia with occasional atypical lymphocytes, suggestive of viral infection.

Next day he improved, and his temperature settled, but he developed a generalised non-itchy rash on the face and body, spreading progressively down the body, suggestive of roseola infantum.

Acute and convalescent sera taken 11 days apart and tested for antibody to HHV-6 by indirect fluorescence revealed a rising IgG titre from <16 to 128, and the specific IgM, which was negative on the acute serum, became positive on the convalescent serum. A follow-up full blood count revealed that the neutropenia had resolved.

NON-VIRAL PATHOGEN REPORTS

A total of 15 positive blood culture reports have been received so far for September (12 from Toowoomba Base Hospital and 3 from Dr Lynch's pathology laboratory at Rockhampton). The following organisms were isolated:

- Bacteroides fragilis and Staphylococcus aureus from a 75-year-old male;
- Enterobacter agglomerans from a 51-year-old male;
- Enterobacter aerogenes from a 69-year-old male;
- Escherichia coli from 2 male patients aged 57 and 83 years;
- Klebsiella oxytoca from an 88-year-old male;
- Pseudomonas putrifaciens from a 79-year-old male who subsequently died;
- Salmonella Group C1 in a 6-month-old female infant with concomitant E. coli urinary tract infection and group A Streptococcus tonsillitis;
- Staphylococcus aureus from 2 male patients aged 66 and 75 years;
- Streptococcus equirimilis from a 81-year-old male;
- Streptococcus mitis from a 75-year-old female and a 76-year-old male;
- Streptococcus pneumoniae from 2 female infants aged 11 months and 1 year.

One case of meningitis was reported from Toowoomba Base Hospital in a 9-year-old male. Neisseria meningitidis was isolated from the CSF.

Yersinia enterocolitica was isolated from the faeces of 2 cases, one was a 39-day-old female infant with per rectum bleeding and vomiting and the other a child (in the 5-14 year age group) with diarrhoea after appendicectomy.

Twenty-one cases of Bordetella pertussis have been reported so far for September (14 from Rockhampton Pathology and 7 from Toowoomba Base Hospital), this included a 1-year-old male, 13 children aged 6-16 years, 6 adults (aged 17-47 years) and one 71-year-old male. This situation will be closely monitored for further outbreaks as an indicator for another epidemic this summer.

OVERSEAS BRIEFS

1. CHOLERA IN JORDAN

The Ministry for Health in Jordan reports that as at 16 September 1990 three (3) cases of cholera had been detected, via random testing, among evacuees in transit camps. No cases were detected among Jordanian nationals.

2. PLAGUE IN KENYA

There has been a recent report of an epidemic of plague in an area of Nairobi. It is now believed to be contained and few fatalities have occurred.

INFLUENZA UPDATE FROM THE WHO INFLUENZA REFERENCE CENTRE CSL - No 5 WEEK COMMENCING 17 SEPTEMBER 1990

Australia

There has been a low level of isolation-confirmed influenza in Melbourne during the first few weeks of September. A total of eight isolates, from three centres, have been examined by CSL; to date all of the isolates appear to be H3N2 viruses.

Small numbers of sporadic isolates have been received from laboratories throughout Australia with Type A viruses from Prince Henry Hospital, Sydney and the State Health Laboratory, Perth, and two recent type B viruses from the State Health Laboratory, Brisbane.

All Australian Type A viruses typed to date appear close to A/Sichuan/2/87 or A/Shanghai/11/87.

New Zealand

Significant influenza activity has been recorded in New Zealand during August. The latest WHO Weekly Epidemiological Record (WER) reports that up to the week ending 24 August, influenza activity was still prevalent in most of the South Island, with the outbreak beginning to wane in the northern part of the North Island. Later reports from other sources indicate that the outbreak in the South Island is also beginning to wane. A total of 24 influenza virus isolates from Christchurch (20 influenza A type H3N2, 1 influenza A type H1N1, 3 influenza type B) and 27 from Dunedin (17 influenza A type H3N2, 10 influenza type B) were received at CSL during August. The Christchurch and Dunedin type A H3N2 viruses studied so far closely resemble A/Sichuan/2/87 or A/Shanghai/11/87 and all of the type B viruses appear to be B/Yamagata/16/88-like.

World-wide

Recent reports from the WHO WER and the Centers for Disease Control, Atlanta indicate:

- Sporadic cases of influenza A(H3N2) and B in Hong Kong during the past three months;
- Influenza Type B occurring in Santiago and the spread of H3N2 to other regions in Chile during July;
- Sporadic cases of type B influenza in Singapore to the end of May, followed by increased isolation of H1N1 and H3N2 viruses, but in the absence of increased acute respiratory disease;
- Isolation of influenza H1N1 in Malaysia during June and July;
- An outbreak of predominantly influenza A H3N2 in Zimbabwe, commencing in the second half of May, which was associated with unusually severe and prolonged clinical manifestations.

AUSTRALIAN HIV SURVEILLANCE REPORT: 13 JULY 1990

The National Centre in HIV Epidemiology and Clinical Research reports that as at 13 July 1990, a total of 1995 cases of AIDS had been reported in Australia.

For the most recent reporting period, 16 June to 13 July (weeks 25-28), 25 new cases of AIDS were reported in Australia.

Table 1: New cases of AIDS and deaths from AIDS for the period 16 June to 13 July (weeks 25 - 28) 1990, by sex and State/Territory in which diagnosis was made.

State/ Territory	CASES			DEATHS		
	Male	Female	Total	Male	Female	Total
ACT	0	0	0	5	0	5
NSW	14	0	14	13	0	13
NT	0	0	0	0	0	0
QLD	0	0	0	0	0	0
SA	1	0	1	0	0	0
TAS	0	0	0	0	0	0
VIC	9	1	10	2	0	2
WA	0	0	0	1	0	1
Total	24	1	25	21	0	21

Table 2: Cumulative cases of AIDS and deaths from AIDS by sex and State/Territory where diagnosis was made, to 13 July 1990

State/ Territory	CASES Male	Female	Total	DEATHS Male	Female	Total
ACT	26	0	26	18	0	18
NSW	1215	34	1249	766	24	790
NT	3	0	3	2	0	2
QLD	133	6	139	86	4	90
SA	62	2	64	35	1	36
TAS	10	1	11	5	1	6
VIC	398	10	408	208	5	213
WA	88	7	95	49	3	52
Total	1935	60	1995	1169	38	1207

Table 3: Number of new diagnoses of HIV infection in the period 16 June to 13 July (weeks 25 - 28), 1990 and cumulative since the introduction of HIV antibody testing to 13 July 1990, by sex and State/Territory of notification.

	1990# Weeks 25 - 28			Cumulative to 13 July 90			
State/ Territory	M	F	TOTAL	M	F	NK	TOTAL
ACT	0	0	0	8	0	97	105
NSW+	-	-	-	5250	293	2766	8309
NT	0	0	0	49	3	0	52
QLD	9	3	12	877	34	0	911
SA*	-	-	-	333	27	0	360
TAS	0	0	0	47	3	0	50
VIC	32	2	34	2323	64	0	2387
WA	6	0	6	508	28	0	536
Total	47	5	52	9395	452	2863	12710

NK Sex not known

\# Dashes indicate that counts were unavailable for the period

\+ Cumulative to 30 June 1989; see 23 March 1990 Report for further details

* Cumulative to 18 May 1990.

NOTIFIABLE DISEASES, AUSTRALIA 1989

Notifiable diseases as recommended by the National Health and Medical Research Council, Eighty-sixth session, October 1978. Cases notified by States and Territories for 1989.

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL
Amoebiasis (a)	6	4	8	29	16	-	-	1	64
Ankylostomiasis (a)	-	-	-	17	77	12	(b)	-	106
Anthrax (a)	-	-	-	-	-	-	-	-	-
Arbovirus infection (a)	389	77	1427	115	677	63	61	-	2809
Brucellosis	-	-	18	1	1	-	-	-	20
Campylobacter infection (a)	1875	57	(b)	1501	497	5	310	34	4279
Chancroid	1	(b)	-	(b)	2	(b)	-	-	3
Cholera	-	-	-	-	-	-	-	-	-
Congenital rubella syndrome	-	-	-	-	-	(b)	-	-	-
Diphtheria (a)	-	1	-	-	-	-	-	-	1
Donovanosis (a)	-	(b)	45	(b)	17	-	37	-	99
Giardiasis (a)	659	11	(b)	972	397	-	-	21	2060
Genital herpes	876	-	1660	(b)	(b)	(b)	4	41	2581
Gonococcal ophthalmia neonatorum	1	(b)	-	-	(b)	(b)	-	(b)	1
Gonorrhoea (a)	603	-	994	200	741	16	584	15	3153
Hepatitis A (infectious)	63	14	127	36	99	6	115	-	460
Hepatitis B (serum) (a)	465	149	1714	48	550	45	27	19	3017
Hepatitis - unspecified	21	6	9	4	(b)	(b)	1	2	43
Hydatid disease (a)	2	-	5	3	1	3	-	1	15
Lassa fever	-	-	-	-	-	-	-	-	-
Legionnaires disease (a)	52	8	18	13	12	1	-	(b)	104
Leprosy	12	5	8	-	4	-	5	-	34
Leptospirosis (a)	58	22	-	5	4	10	-	-	99
Lymphogranuloma venereum (a)	-	(b)	-	(b)	(b)	(b)	(b)	-	-
Malaria (a)	91	65	487	34	60	9	5	19	770
Marburg disease	-	-	-	-	-	-	-	-	-
Measles	76	(b)	51	16	18	(b)	(b)	8	169
Meningococcal infections (a)	58	67	6	27	30	(b)	15	1	204
Non-specific urethritis	1708	(b)	1	(b)	(b)	(b)	30	(b)	1739
Ornithosis (a)	4	1	-	18	2	-	-	-	25
Pertussis (whooping cough)	202	57	(b)	136	204	3	9	3	614
Plague	-	-	-	-	-	-	-	-	-
Poliomyelitis (a)	-	-	-	-	-	-	-	-	-
Q fever (a)	138	6	181	21	5	(b)	2	(b)	353
Rabies	-	-	-	-	-	-	-	-	-
Salmonella infections (a)	1333	218	1223	531	552	167	416	52	4492
Shigella infections (a)	94	29	125	75	284	6	165	1	779
Smallpox	-	-	-	-	-	-	-	-	-
Syphilis (a)	315	-	1061	55	200	-	460	8	2099
Tetanus	-	2	-	-	9	-	-	-	11
Trachoma	-	(b)	1	62	441	-	(b)	-	504
Tuberculosis (all forms) (a)	452	369	163	123	135	13	61	35	1351
Typhoid fever (a)	19	24	5	5	4	-	-	-	57
Typhus (all forms) (a)	-	-	1	-	1	-	-	-	2
Vibrio parahaemolyticus infections (a)	8	(b)	(b)	2	-	-	-	(b)	10
Yellow fever	-	-	-	-	-	-	-	-	-
Yersinia infections (a)	116	-	(b)	125	-	(b)	-	(b)	241

(a) Confirmed by appropriate diagnostic tests.
(b) Not notifiable.

CDI Editorial Comment

Readers should note that data collected under the Notifiable Diseases Returns may differ from that collected by the CDI laboratory scheme. While the latter is a sampling program, the

Notifiable Diseases data are dependent upon reporting by medical practitioners to State and Territory Health Authorities. In addition, care should be taken in making comparisons between States and Territories because:

1. reporting of notifiable diseases is subject to legislation that can vary from State to State, and

2. a number of States/Territories have introduced direct reporting by laboratories which tends significantly to increase reporting rates, without necessarily reflecting a real increase in actual cases.

Nevertheless, there are several important trends amongst the notifications data:

Pertussis: The large number of whooping cough notifications reflect the outbreaks which occurred in most States during the summer of 1989/90. A report on these outbreaks appeared in CDI 90/6.

Measles: In spite of the 'National Campaign Against Measles' which began in 1986, significant activity of this vaccine-preventable disease continues.

Rubella: Although no reports were reported under the Notifiable Diseases Returns an increased number of cases, including a significant number associated with pregnancy, were reported under the CDI laboratory scheme. This increase has continued through the first half of 1990. This rise is of concern and points to a need for increasing efforts to pursue the NHMRC antenatal screening and vaccination recommendations. A report on rubella vaccination in pregnancy appeared in CDI 90/1.

Diphtheria: The single notification contrasts with the 61 reports received for the previous year. The 1988 figure included 60 notifications of cutaneous diphtheria from the Northern Territory.

Legionnaires' disease: The relatively high number of reports is due primarily to the large outbreaks in NSW. A report on Legionella in South Australia was published in CDI 89/13.

Arbovirus disease: This group of mosquito-borne illnesses is dominated by epidemic polyarthritis (caused by infection with Ross River virus, an alphavirus). The high number of cases reflects the significant outbreaks which occurred in NSW and QLD (both during April, May and June) and WA (January to May). Improved diagnostic methods have recently led to the addition of Barmah Forest virus to this group.

Malaria: Numbers of malaria cases imported into Australia during 1989 were the highest for the previous five years. While Australia continues to be certified malaria-free by the WHO, this status is constantly threatened by particular aspects of Australia's vulnerability and receptivity. Recent changes in resistance patterns to the various antimalarial drugs have the potential to exacerbate the situation.

Cholera: Despite outbreaks in various overseas countries there were no cases imported into Australia.

Meningococcal meningitis: Notifications increased markedly in 1989, with WA, NSW, VIC and the NT reporting the greatest rises. This increase reflects a recent world-wide trend.

Tuberculosis (all forms): Continues to be a problem, with an apparent increase over the last 3 years. The data do not distinguish whether the cases are 'atypical' or not.

No reports were received for the following important exotic diseases:

1. Yellow fever
2. Rabies
3. Marburg haemorrhagic fever
4. Lassa haemorrhagic fever
5. Crimean-Congo haemorrhagic fever
6. Ebola haemorrhagic fever

TUBERCULOSIS AND ATYPICAL MYCOBACTERIAL DISEASE IN THE AUSTRALIAN CAPITAL TERRITORY 1962 - 1988

A.J. Proust, J.M. Crotty, D.C. Tyson and E.C. Collett; Royal Canberra Hospital, Woden Valley Hospital, ACT Department of Community Services and Health, Canberra, ACT.
Australian Tuberculosis Newsletter No. 12.

A review was undertaken of all notifications of tuberculosis (TB) and atypical mycobacterial disease (AMD) made by the Royal Canberra Hospital Chest Clinic for the period 1962-1988 and of all isolates of mycobacteria in the Microbiology laboratory over the same period.

The objectives were:

(1) to calculate the incidence of TB and AMD in the ACT population,

(2) to assess the influence of the migrant and refugee intake from countries of high tuberculosis incidence on the incidence of TB in the ACT and

(3) to measure drug resistance in the isolates of *M. tuberculosis*.

Subjects and Methods

All notifications of TB and AMD made by the Chest Clinic and the records of all isolates of mycobacteria made by the Department of Microbiology have been examined.

A total of 552 notifications were made, 460 in residents of the ACT and 92 in residents of the adjoining south-eastern region of New South Wales (NSW).

Of the 552 notifications, 37 (6.7%) had been withdrawn when following further investigation the diagnosis of active TB was revoked. The final diagnoses in the 36 pulmonary cases were lung cancer 16, inactive TB 13, other inflammatory disease 5 (pneumonia

2, actinomycosis 2, melioidosis 1) and other pulmonary lesions 2 (pneumoconiosis, sequestrated lung segment, one each). In one case of non-pulmonary disease the final diagnosis was *Aspergillus fumigatus* infection of the vertebral column.

Three cases were withdrawn because the available clinical and bacteriological data were incomplete. These withdrawals left 512 notifications available for assessment. These comprised 339 cases of pulmonary tuberculosis (278 in ACT residents, 61 NSW residents), 122 cases of non-pulmonary tuberculosis (104 ACT, 18 NSW) and 51 cases of atypical mycobacterial disease (39 ACT, 12 NSW).

The criteria for notification of pulmonary TB were clinical, radiographic and bacteriological or histological evidence consistent with active TB, sufficient to warrant anti-TB chemotherapy.

Every effort was made to confirm the diagnosis bacteriologically, using fasting gastric washings if sputum specimens were unsatisfactory or unavailable. All refugees arriving on chemotherapy were reviewed and notified unless the evidence or recent activity was unconvincing.

The criteria for the diagnosis of non-pulmonary tuberculosis varied according to the site of the disease. A single culture of *M. tuberculosis* from biopsy tissue or a body fluid was the usual criterion; in some cases the diagnosis was based upon histological evidence and in others radiographically or in rare instances clinical grounds alone. The tuberculin test was found to be a useful adjunct to diagnosis.

The criteria for the diagnosis of pulmonary AMD were the isolation and identification of a potentially pathogenic mycobacteria other than *M. tuberculosis* or *M. bovis* in the sputum on 3 or more occasions in a person with clinical and radiographic evidence consistent with pulmonary TB. In non-pulmonary AMD the usual criteria were a single culture of potentially pathogenic atypical mycobacteria from a biopsy specimen (in this series usually a cervical lymph node) in which histological changes consistent with TB were also present.

The country of birth of all notified patients was noted and classified as follows:

1. Born in Australia (BIA): No aborigine resident in the ACT was notified although 3 residents in NSW were notified to the State public health authority. Six notified cases born in New Zealand and long-term residents in Australia were included in this category.

2. Born in Europe (BIE): The category included the United Kingdom and Western Europe (with a TB incidence similar to that of Australia) and Central, Eastern and Southern Europe where some countries (for example Poland and Yugoslavia) have a significantly higher TB incidence that Australia.

3. Born in High Incidence Countries (BHIC): This category included all countries other than Europe and North America and specifically included Africa, the Middle East, Asia, the

Philippines, Papua New Guinea, Oceania and Central and Southern America. The incidence of TB varies in these countries but is probably between 10 and 50 times that of Australia.

The period 1962 to 1988 was subdivided at the end of 1975 when significantly larger numbers of migrants and refugees from high incidence countries were admitted to Australia. In 1985, 86 (52%) of permanent settlers from overseas in the ACT were from high incidence countries. The ACT has had since 1961 a higher proportion of its population born overseas than any State or Territory except Western Australia.

During the period 1961-1971, the overseas-born component of the ACT population averaged 26.2% compared with 18.5% in the Australian population. The 1961 census revealed about 2.1 per cent of the ACT population was born in high incidence countries and this rose to 4 per cent in 1981.

The age groups of the ACT population differ from that of Australia. In 1987 the ACT population aged 65 years and over comprised 5.2 per cent compared with 10.8 per cent of the Australian population.

The average ACT population in the years 1962-1975 was 124,500 and in 1976-1988 the average population was 236,800.

Results

Pulmonary tuberculosis

Of the 339 notified cases, 222 (65.5 per cent) were proven, 207 bacteriologically and 15 histologically. The male to female ratio was 1.66 to 1. The average age at diagnosis was 50.6 years in males and 48.1 years in females.

Non-pulmonary tuberculosis

Of the 122 notified cases 84 (68.8 per cent) were proven bacteriologically and 14 (11.5 per cent) histologically. Five of the 122 patients suffered major active lesions at two sites. The sites of the 127 lesions were:

Site	Number
Lymph nodes	38 (30%)
Serous membranes	25 (20%)
Renal tract	23 (18%)
Skeletal	15 (12%)
Genital tract	12 (9%)
Disseminated	9 (7%)
Other	5 (4%)

The male to female ratio was about equal, 1.03:1. The average age at diagnosis was lower in patients born in high incidence (BHIC) countries (36 years, N=35) compared with those BIA (49 years, N=41) or BIE (49 years, N=46). The sites of TB also varied between the groups; the common sites in the BIA group were pleural (12), renal (7) and skeletal (6). In the BIE group the common sites were renal (13), lymph nodes (9) and pleural (8). In the BHIC group 23 of the 35 cases were in the lymph nodes.

Of the 461 notified cases of TB, 339 (73.5%) were pulmonary but this varied according to country of birth; in the BIA group, 80.9% were pulmonary, 71.4% in the BIE group and 60.6% in the BHIC group.

Atypical Mycobacterial Disease

The casual organisms of the 51 cases of AMD were the MAIS complex (*M. avium-intracellulare-scrofulaceum*) in 50 cases and *M. kansasii* in one. The sites of disease were pulmonary in 25, the cervical lymph nodes in 24 and in 2 cases the disease was disseminated.

Of the 25 pulmonary cases, 17 occurred in males (average age 62.5 years) 13 of whom had other pre-existing pulmonary disease, usually chronic obstructive lung disease or long standing pulmonary fibrosis. Eleven of the males were born in Australia, 5 in Europe and one in a high incidence country. A primary type of pulmonary AMD occurred in a male infant, aged 2 years and otherwise healthy.

Eight cases of pulmonary AMD occurred in females, average age 68 years. Four had other chronic lung disease.

AMD of the cervical lymph nodes was diagnosed by biopsy and culture of the MAIS complex in 24 children, 14 males and 10 females. The average age was 5-7 years (range 2 to 15 years) with about half in the 2 to 4 year age group. All except one were Australian born; the exception was born in the USA and was brought to Australia in early infancy and lived in Western Queensland for three years.

Two women aged 34 to 39 years respectively suffered acute life-threatening illnesses, consistent with miliary tuberculosis. One had a past history of cervical lymph node tuberculosis at age 19. The other had no previous significant illness. In both cases the MAIS complex of organisms were isolated. Neither showed evidence of immune deficiency. The 34-year-old woman died, the 39-year-old recovered completely.

The Incidence of Tuberculosis

The unadjusted incidence of all forms of TB in the ACT population was 12.9 cases per 100,000 population each year for the period 1962-1975; for the period 1976-1988, the incidence was 5.1 per 100,000 annually.

The incidence of all forms of tuberculosis in the BIA segment of the ACT population was 8.4 cases per 100,000 (1962-75) and 2.25 per 100,000 (1976-88).

In the BIE population of the ACT, the incidence was 21.4 cases per 100,000 (1962-75) and 8.5 per 100,000 (1976-88).

In the BHIC group, the incidence of all forms of TB was 53.6 per 100,000 (1962-75) and 40 per 100,000 (1976-88).

A comparison of the rates in Table 1 above shows that the whole ACT population rate has fallen by 60 per cent during the last 15 to 25 years, due mainly to the decline in rates in the BIA and BIE segments but due also to a significant decline in the rate in the BHIC segment. In 1986, in the Australian population, only 378 notifications of TB, which included an estimated 130 notifications

Table 1: Incidence of TB in the ACT Population

	Per 100,000 population		
	1962-75	1976-88	AUSTRALIA 1985-86*
Whole ACT population	12.9	5.1	5.7
BIA	8.4	2.25	2.8
BIE	21.4	8.5	7.9
BHIC	53.6	40.0	74.3

* From data supplied by Dr E Lo, Department of Community Services and Health, Canberra. His data on high incidence countries was confined to Asia and the Middle East; it included the countries of highest incidence with large populations in Australia, viz Vietnam, the Philippines and China. It excluded Central and South American countries, Papua New Guinea and Africa. "Other" countries in Lo's data, some of which would be in the ACT list as BHIC, had an incidence rate of TB of 11.8 per 100,000. This may explain the discrepancy in the BHIC rates of 40.0 per 100,000 (ACT 1976-88) and 74.3 per 100,000 (Australia 1985-86).

Of AMD, were made in the Australian-born population including aborigines. The true incidence of tuberculosis in the Australian-born population in 1986 in Australia was 1.95 per 100,000; in the European population, after deducting an estimated 30 notifications of AMD, was 6.3 per 100,000 and the incidence in the population born in high incidence countries would remain virtually unchanged at about 73 per 100,000.

Table 2: Tuberculosis Notifications in Various Population Groups in the ACT

Population Group	1962-75	1976-88
BIA	106 (47%)	52 (33%)
BIE	90 (40%)	50 (32%)
BHIC	30 (13%)	54 (35%)

The decrease in the incidence of TB in the BIA and BIE segments of the ACT population has resulted in a change in the forms and distribution of non-pulmonary tuberculosis.

Bacteriology

During the period 1962-88, 28,807 specimens were cultured for mycobacteria in the Department of Microbiology, Health Laboratory. Positive cultures were obtained from 1526 (5.3%) specimens collected from 520 individuals. Of the 1526 isolates, 296 (19.4%)

were identified as *M. tuberculosis*, confirmed and tested for drug sensitivity at the Reference Laboratory at Westmead Hospital. Of the 296 isolates of *M.tuberculosis*, 56 (18.9%) were from non-pulmonary sources. The most common non-pulmonary source since 1982 has been the lymph nodes and a source common in the 1960s - the renal tract - has provided no positive culture since 1982.

During the period under review, final identification of mycobacteria other than *M.tuberculosis* has been carried out at the NSW State Reference Laboratory in Sydney. Nomenclature of the non-tuberculous mycobacteria has changed over the past 20 years but the most common organism in this group has been the MAIS complex (*M.avium-intracellulare-scrofulaceum*) previously labelled *M.avium* complex, *M.scrofulaceum*, Runyon Group III or the Battey avium complex. This complex of organisms has been isolated from 120 patients during the years 1962 to 1988. The incidence of MAIS complex isolates has increased significantly since 1980 as also have other atypical mycobacteria, peaking in 1982-83. A total of 57 other non-tuberculous mycobacteria have been identified as follows: *M.terrae* complex 18, *M.fortuitum* 10, *M.chelonei* 7, *M.gordonae* 5, *M.flavescens* 4, and two each of *M.kansasii, M.gastri, M.marinum*, and *M.xenopei*. Five were classified either as Runyon Group IV or as "rapid growers".

As the laboratory receives specimens from other hospital laboratories in southern NSW, not all of these isolates of mycobacteria relate to the series of notified tuberculosis and atypical mycobacterial disease reviewed in this paper.

Prior to 1970, isolates of *M. tuberculosis* outnumbered those of atypical mycobacteria 5:1. Since 1979, atypical mycobacteria have outnumbered *M. tuberculosis*.

	M.tuberculosis	Atypical mycobacteria
1962-69	95	17
1970-78	106	32
1979-88	80	128

This increase in isolates of atypical mycobacteria is not so far related to cases of AIDS.

Drug Resistant Tuberculosis

Two hundred and ninety of the 296 isolates of tuberculosis were tested for sensitivity to anti-tuberculosis drugs; 31 (10.7%) were shown to exhibit significant resistance.

Resistance to a single first-line drug was identified in 22 patients (streptomycin in 14 cases, isoniazid 5, ethambutol 2, rifampicin 1). Two-drug resistance was identified in 7 patients (isoniazid and streptomycin in 5, isoniazid and PAS in 1, streptomycin and ethambutol in 1) and three-drug resistance (isoniazid, streptomycin and PAS) in two patients.

Single drug resistance has not proved a problem in treatment as the possibility of single or two drug resistance has usually been anticipated by initial chemotherapy comprising three or even four

drugs. Of the two patients with resistance to three drugs, one died in 1964 as a 'chronic positive' dating back to 1950, the second, a refugee from south-east Asia, was admitted with active pulmonary tuberculosis and has remained smear negative and culture positive in early 1989 after supervised thrice weekly chemotherapy.

Results of Treatment

Of the 460 patients notified with active tuberculosis, 14 (3.5%) died with the disease still active; 12 were still on chemotherapy, one died before chemotherapy could be instituted and one was diagnosed only at autopsy. This case fatality rate of 3.5 per cent over the period 1962-88 compares well with Enarson's(1) rate of 3.1 per cent in British Columbia in 1980-84; however Enarson's rate comprised 1.6 per cent dying while on chemotherapy and an additional 1.5 per cent diagnosed only after death.

Only 5 of the 14 deaths were in patients aged less than 60 years; a 22-year-old female died of advanced pulmonary tuberculosis and heart failure due to congenital heart disease. A 35-year-old male died of advanced disseminated tuberculosis and diabetic ketosis. Two died (aged 57 and 58 years) with advanced pulmonary tuberculosis complicated by alcohol-induced liver damage and one aged 56 years died from rifampicin-induced thrombocytopenia. Of the remaining 9, most died with, rather than from, active pulmonary tuberculosis.

Of the remaining 446 patients, two were "chronic positives" as described above; the remaining 444 converted to negative although 3 later developed pulmonary atypical mycobacterial disease.

Fifty-two patients gave a history of previous episodes of active tuberculosis which were confirmed from State Tuberculosis Authorities in 15 cases and from the files of the Canberra Chest Clinic. There were 6 reactivations among the 307 treated by one of the authors (AJP) from 1967-1985.

Conclusions

The incidence of tuberculosis in Australia and the ACT has undergone a number of important changes in recent decades. While overall incidence has substantially declined, this should not mask the continuing problem of high incidence in some immigrant groups, chiefly those from South East Asia. Thus, while it may appear that the problem of endemic tuberculosis has been largely overcome in the ACT and Australia, it is essential that screening and treatment programmes in respect of immigrants be continued.

A failure to maintain tuberculosis screening and treatment programmes at adequate levels may jeopardise both the maintenance of professional skills at acceptable levels, and the capacity of Australia to respond to rapidly changing tuberculosis incidence patterns. A capacity to respond to changing needs is certainly warranted since Australia has made a commitment to acceptance of refugees, many of whom originate in high incidence countries.

Reference:

1. Enarson D.A. Correspondence. Am Rev Resp Dis 1988;137:2.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE
VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 30/08/90 TO 12/09/90

CODE 018 - MICROBIOL DIAG UNIT, UNI MELB (VIC)
CODE 065 - STATE HEALTH LAB (WA)
CODE 110 - INST OF MED & VET SCIENCE (SA)
CODE 112 - INST CLINICAL PATH & MED RES (NSW)
CODE 114 - ROYAL ALEXAND RA CHILDRENS HOSP (NSW)
CODE 116 - WODEN VALLEY HOSP (ACT)
CODE RHH - ROYAL HOBART HOSP (TAS)
CODE 400 - DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON
CODE 019 - FAIRFIELD HOSP (VIC)
CODE 066 - PRINCESS MARGARET HOSP (WA)
CODE 111 - ROYAL CHILDRENS HOSP (VIC)
CODE 113 - PRINCE HENRY/PRINCE OF WALES HOSP (NSW)
CODE 115 - STATE HEALTH LAB (QLD)
CODE LDS - LAUNCESTON DIAGNOSTIC SERVICES (TAS)
CODE TPL - TOOWOOMBA PATHOLOGY LAB (QLD)

	018	019	065	110	111	112	113	114	115	400	LDS	RHH	TPL	TOTAL
0100 ADENOVIRUS NOT TYPED	0	0	3	4	0	5	0	0	10	0	0	0	0	22
0101 ADENOVIRUS TYPE 1	0	0	0	2	0	1	0	0	0	0	0	1	0	4
0102 ADENOVIRUS TYPE 2	0	1	0	0	0	2	0	1	0	0	0	1	0	5
0103 ADENOVIRUS TYPE 3	0	1	0	0	0	4	0	1	0	0	0	0	0	6
0104 ADENOVIRUS TYPE 4	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0105 ADENOVIRUS TYPE 5	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0109 ADENOVIRUS TYPE 9	0	1	0	0	0	1	0	0	0	0	0	0	0	2
0110 ADENOVIRUS TYPE 10	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0111 ADENOVIRUS TYPE 11	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0116 ADENOVIRUS TYPE 16	0	0	0	1	0	0	0	0	0	0	0	0	0	1
0128 ADENOVIRUS TYPE 28	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0199 ADENOVIRUS TYPING PENDING	0	1	0	0	3	0	2	0	0	0	0	0	0	6
0201 INFLUENZA A VIRUS	0	0	2	0	0	0	0	0	0	0	0	0	0	2
0202 INFLUENZA A VIRUS SUBTYPE H3N2	0	0	0	0	1	0	0	0	8	0	0	0	0	9
0301 PARAINFLUENZA VIRUS TYPE 1	0	2	0	0	1	0	0	0	3	0	0	0	0	6
0302 PARAINFLUENZA VIRUS TYPE 2	0	0	0	0	1	0	0	0	1	0	0	0	0	2
0303 PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	10	0	0	0	0	0	0	0	10
0399 PARAINFLUENZA VIRUS TYPING PEN	0	0	0	0	2	0	0	0	0	0	0	0	0	2
0400 RESPIRATORY SYNCYTIAL VIRUS (R	0	16	2	53	31	5	3	6	13	0	0	31	6	166
0500 RHINOVIRUS (ALL TYPES)	0	1	1	0	15	1	0	0	1	0	0	0	0	19
0600 MYCOPLASMA PNEUMONIAE	0	1	8	1	0	6	1	0	0	2	0	0	0	19
0700 ORNITHOSIS-PSITTACOSIS	0	0	0	0	0	0	1	0	0	0	0	0	0	1
0816 COXSACKIEVIRUS A16	0	0	0	0	0	2	0	0	0	0	0	0	0	2
0902 COXSACKIEVIRUS B2	0	0	0	0	0	1	0	1	0	0	0	0	0	2
0903 COXSACKIEVIRUS B3	0	0	0	0	0	1	0	0	0	0	0	1	0	2
0904 COXSACKIEVIRUS B4	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1025 ECHOVIRUS TYPE 25	0	0	0	0	0	2	0	0	0	0	0	0	0	2
1100 POLIOVIRUS NOT TYPED	0	0	0	0	0	0	1	0	0	0	0	0	0	1
1101 POLIOVIRUS TYPE 1	0	0	0	0	0	2	0	0	0	0	0	0	0	2
1102 POLIOVIRUS TYPE 2	0	1	0	0	0	2	0	0	0	0	0	0	0	3
1103 POLIOVIRUS TYPE 3	0	1	0	0	0	1	0	0	0	0	0	0	0	2
1200 MUMPS VIRUS	0	0	0	0	0	0	2	0	0	0	0	0	0	2
1300 HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	0	0	1	0	0	1	0	0	0	2
1301 HERPES SIMPLEX VIRUS - NOT TYP	0	0	1	1	0	20	0	0	0	0	7	0	0	29
1302 EPSTEIN-BARR VIRUS (EB VIRUS)	0	3	7	14	2	0	3	0	0	22	0	0	0	51
1303 VARICELLA-ZOSTER VIRUS	0	1	3	2	0	4	2	1	0	0	0	0	0	13
1306 HERPES SIMPLEX TYPE 1	0	24	29	18	0	1	20	3	28	0	0	2	0	125
1307 HERPES SIMPLEX TYPE 2	0	19	38	14	0	15	14	0	28	0	1	4	1	134
1399 HERPES VIRUS TYPING PENDING	0	1	6	0	4	0	0	0	0	0	0	0	0	11
1401 COXIELLA BURNETII	0	2	0	0	0	5	0	0	0	1	0	0	0	8
1502 PICORNIA VIRUS - NOT TYPED = E	0	0	3	0	0	0	2	0	20	0	0	0	0	25
1521 MEASLES VIRUS	0	5	0	1	1	0	2	0	0	0	0	0	0	9
1522 RUBELLA VIRUS	0	1	0	0	0	0	2	0	0	5	0	0	0	8
1532 HEPATITIS B ANTIGEN	0	12	17	9	0	48	8	0	24	2	0	0	0	120
1535 HEPATITIS A ANTIBODY	0	0	4	5	0	0	0	0	0	0	0	0	0	9
1536 HEPATITIS C VIRUS	0	0	0	0	0	0	0	0	0	4	0	0	0	4
1541 CHLAMYDIA A - C. TRACHOMATIS	12	0	35	1	1	17	1	1	16	0	13	2	13	112
1543 CHLAMYDIA A - LGV TYPE	0	0	1	0	0	0	0	0	0	1	0	0	0	2
1556 CMV - CYTOMEGALOVIRUS	0	9	4	2	3	9	1	0	9	6	1	0	0	44
1564 ROTAVIRUS	0	8	0	35	0	23	18	6	0	51	5	14	54	214
1565 CALICI VIRUS	0	0	0	0	0	3	0	0	0	0	0	0	0	3
1571 ENTEROVIRUS TYPE 71 (BCR)	0	0	0	0	0	1	0	0	0	0	0	0	0	1
1599 ENTEROVIRUS TYPING PENDING	0	0	0	0	5	0	9	0	0	0	0	0	0	14
9721 HTLV-1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9903 NON-A, NON-B HEPATITIS	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9992 ROSS RIVER VIRUS	0	0	1	0	0	0	0	0	0	11	0	0	0	12
9993 ASTROVIRUS	0	0	0	0	0	1	0	0	0	0	0	0	0	1
9994 SMALL VIRUS (LIKE) PARTICLE	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9995 DENGUE	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9998 ARBOVIRUS GROUP B.(UNSPECIFIED	0	3	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL	12	119	168	163	70	196	93	20	161	107	27	56	74	1266

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES BY STATE OF CONTRIBUTING LABORATORY

PERIOD 30/08/90 TO 12/09/90

NSW: ICPMR; PHH POW; RACH; ST GEORGE HOSP, KOGARAH; ROYAL NEWCASTLE HOSP.
VIC: FAIRFIELD; RCH; MDU, UNI MELB.
QLD: STATE LAB, BRIS; TOOWOOMBA PATH LAB; ROYAL BRIS HOSP; DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON.
WA: STATE LAB, PERTH; PMH.
SA: IMVS.
TAS: ROYAL HOBART HOSP; DIAGNOSTIC SERVICES, LAUNCESTON; LAUNCESTON GEN HOSP; DIAGNOSTIC SERVICES, HOBART; HOBART PATH; MERSEY GEN HOSP, LATROBE.
ACT: WVH.

		NSW	VIC	QLD	WA	SA	TAS	TOTAL
0100	ADENOVIRUS NOT TYPED	5	0	10	3	4	0	22
0101	ADENOVIRUS TYPE 1	1	0	0	0	2	1	4
0102	ADENOVIRUS TYPE 2	3	1	0	0	0	1	5
0103	ADENOVIRUS TYPE 3	5	1	0	0	0	0	6
0104	ADENOVIRUS TYPE 4	0	2	0	0	0	0	2
0105	ADENOVIRUS TYPE 5	0	1	0	0	0	0	1
0109	ADENOVIRUS TYPE 9	1	1	0	0	0	0	2
0110	ADENOVIRUS TYPE 10	1	0	0	0	0	0	1
0111	ADENOVIRUS TYPE 11	1	0	0	0	0	0	1
0116	ADENOVIRUS TYPE 16	0	0	0	0	1	0	1
0128	ADENOVIRUS TYPE 28	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	2	4	0	0	0	0	6
0201	INFLUENZA A VIRUS	0	0	0	2	0	0	2
0202	INFLUENZA A VIRUS SUBTYPE H3N2	0	1	8	0	0	0	9
0301	PARAINFLUENZA VIRUS TYPE 1	0	3	3	0	0	0	6
0302	PARAINFLUENZA VIRUS TYPE 2	0	1	1	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	10	0	0	0	0	0	10
0399	PARAINFLUENZA VIRUS TYPING PEN	0	2	0	0	0	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	14	47	19	2	53	31	166
0500	RHINOVIRUS (ALL TYPES)	1	16	1	1	0	0	19
0600	MYCOPLASMA PNEUMONIAE	7	1	2	8	1	0	19
0700	ORNITHOSIS-PSITTACOSIS	1	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	2	0	0	0	0	0	2
0902	COXSACKIEVIRUS B2	2	0	0	0	0	0	2
0903	COXSACKIEVIRUS B3	1	0	0	0	0	1	2
0904	COXSACKIEVIRUS B4	0	1	0	0	0	0	1
1025	ECHOVIRUS TYPE 25	2	0	0	0	0	0	2
1100	POLIOVIRUS NOT TYPED	1	0	0	0	0	0	1
1101	POLIOVIRUS TYPE 1	2	0	0	0	0	0	2
1102	POLIOVIRUS TYPE 2	2	1	0	0	0	0	3
1103	POLIOVIRUS TYPE 3	1	1	0	0	0	0	2
1200	MUMPS VIRUS	2	0	0	0	0	0	2
1300	HERPES VIRUS GROUP - NOT TYPED	1	0	1	0	0	0	2
1301	HERPES SIMPLEX VIRUS - NOT TYP	20	0	0	1	1	7	29
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	3	5	22	7	14	0	51
1303	VARICELLA-ZOSTER VIRUS	7	1	0	3	2	0	13
1306	HERPES SIMPLEX TYPE 1	24	24	28	29	18	2	125
1307	HERPES SIMPLEX TYPE 2	29	19	29	38	14	5	134
1399	HERPES VIRUS TYPING PENDING	0	5	0	6	0	0	11
1401	COXIELLA BURNETII	5	2	1	0	0	0	8
1502	PICORNIA VIRUS - NOT TYPED = E	2	0	20	3	0	0	25
1521	MEASLES VIRUS	2	6	0	0	1	0	9
1522	RUBELLA VIRUS	2	1	5	0	0	0	8
1532	HEPATITIS B ANTIGEN	56	12	26	17	9	0	120
1535	HEPATITIS A ANTIBODY	0	0	0	4	5	0	9
1536	HEPATITIS C VIRUS	0	0	4	0	0	0	4
1541	CHLAMYDIA A - C. TRACHOMATIS	19	13	29	35	1	15	112
1543	CHLAMYDIA A - LGV TYPE	0	0	1	1	0	0	2
1556	CMV - CYTOMEGALOVIRUS	10	12	15	4	2	1	44
1564	ROTAVIRUS	47	8	105	0	35	19	214
1565	CALICI VIRUS	3	0	0	0	0	0	3
1571	ENTEROVIRUS TYPE 71 (BCR)	1	0	0	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	9	5	0	0	0	0	14
9721	HTLV-1	0	0	0	1	0	0	1
9903	NON-A, NON-B HEPATITIS	0	0	1	0	0	0	1
9992	ROSS RIVER VIRUS	0	0	11	1	0	0	12
9993	ASTROVIRUS	1	0	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	1	0	0	1	0	0	2
9995	DENGUE	0	0	0	1	0	0	1
9998	ARBOVIRUS GROUP B.(UNSPECIFIED	0	3	0	0	0	0	3
TOTAL		309	201	342	168	163	83	1266

NOTE: DIRECT COMPARISION BETWEEN STATES IS NOT POSSIBLE SINCE:
- SOME STATES HAVE MORE THAN ONE CONTRIBUTING LABORATORY; AND
- INTERSTATE REFERRRALS OCCUR REGULARLY.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1

PERIOD 30/08/90 TO 12/09/90

1. CODE 00, 99 .... - NO ILL OR DATA
2. CODE 01, 02, 11, 12 - RESPIRATORY
3. CODE E3 .... - ENCEPHALITIS
4. CODE M3 .... - MENINGITIS
5. CODE 04 .... - PARALYSIS
6. CODE 05, 13 .... - CNS OTHER UNSPEC
7. CODE 07, 49 - GASTRO INTESTINAL
8. CODE 17, 47 - HEPATIC
9. CODE 19 ... - CVS
10. CODE 89 ... - URINARY TRACCT
11. CODE 06 ... - SKIN MUCOUS

		1	2	3	4	6	7	8	9	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	0	12	0	0	1	9	0	0	0	0	22
0101	ADENOVIRUS TYPE 1	0	3	0	0	1	0	0	0	0	0	4
0102	ADENOVIRUS TYPE 2	0	2	0	0	0	3	0	0	0	0	5
0103	ADENOVIRUS TYPE 3	2	2	0	0	0	2	0	0	0	0	6
0104	ADENOVIRUS TYPE 4	0	1	0	0	0	1	0	0	0	0	2
0105	ADENOVIRUS TYPE 5	0	1	0	0	0	0	0	0	0	0	1
0109	ADENOVIRUS TYPE 9	0	0	0	0	0	2	0	0	0	0	2
0110	ADENOVIRUS TYPE 10	0	0	0	0	0	1	0	0	0	0	1
0128	ADENOVIRUS TYPE 28	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	3	0	0	0	0	0	0	0	0	3
0201	INFLUENZA A VIRUS	0	2	0	0	0	0	0	0	0	0	2
0202	INFLUENZA A VIRUS SUBTYPE H3N2	0	9	0	0	0	0	0	0	0	0	9
0301	PARAINFLUENZA VIRUS TYPE 1	0	6	0	0	0	0	0	0	0	0	6
0302	PARAINFLUENZA VIRUS TYPE 2	0	2	0	0	0	0	0	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	1	7	0	0	0	0	0	0	0	0	8
0399	PARAINFLUENZA VIRUS TYPING PEN	0	2	0	0	0	0	0	0	0	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	7	154	0	0	0	0	0	1	0	1	163
0500	RHINOVIRUS (ALL TYPES)	1	18	0	0	0	0	0	0	0	0	19
0600	MYCOPLASMA PNEUMONIAE	5	13	0	0	0	0	0	0	0	0	18
0700	ORNITHOSIS-PSITTACOSIS	1	0	0	0	0	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	0	0	0	0	0	0	0	0	0	1	1
0903	COXSACKIEVIRUS B3	0	2	0	0	0	0	0	0	0	0	2
0904	COXSACKIEVIRUS B4	0	0	0	1	0	0	0	0	0	0	1
1025	ECHOVIRUS TYPE 25	2	0	0	0	0	0	0	0	0	0	2
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	1	0	0	0	0	1
1101	POLIOVIRUS TYPE 1	0	0	0	0	0	2	0	0	0	0	2
1102	POLIOVIRUS TYPE 2	0	2	0	0	0	1	0	0	0	0	3
1103	POLIOVIRUS TYPE 3	0	0	0	0	0	1	0	0	0	1	2
1200	MUMPS VIRUS	1	0	1	0	0	0	0	0	0	0	2
1300	HERPES VIRUS GROUP - NOT TYPED	0	1	0	0	0	0	0	0	0	1	2
1301	HERPES SIMPLEX VIRUS - NOT TYP	3	2	1	0	1	0	0	0	0	7	14
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	24	5	0	0	0	0	2	0	0	1	32
1303	VARICELLA-ZOSTER VIRUS	4	1	0	0	0	0	0	0	0	7	12
1306	HERPES SIMPLEX TYPE 1	2	6	0	0	0	0	0	1	0	75	84
1307	HERPES SIMPLEX TYPE 2	0	0	0	0	0	0	0	0	0	52	52
1399	HERPES VIRUS TYPING PENDING	0	1	1	0	0	0	0	0	0	9	11
1401	COXIELLA BURNETII	5	1	0	0	0	0	0	0	0	0	6
1502	PICORNIA VIRUS - NOT TYPED = E	2	7	0	0	0	13	0	0	0	2	24
1521	MEASLES VIRUS	3	0	0	0	0	0	0	0	0	6	9
1522	RUBELLA VIRUS	1	1	0	0	0	0	0	0	0	1	3
1532	HEPATITIS B ANTIGEN	64	0	0	0	0	0	52	0	0	0	116
1535	HEPATITIS A ANTIBODY	4	0	0	0	0	2	3	0	0	0	9
1536	HEPATITIS C VIRUS	2	0	0	0	0	0	2	0	0	0	4
1541	CHLAMYDIA A - C. TRACHOMATIS	12	0	0	0	0	0	0	0	0	0	12
1556	CMV - CYTOMEGALOVIRUS	2	15	0	0	0	0	3	0	5	0	25
1564	ROTAVIRUS	21	4	0	0	0	184	0	1	0	0	210
1565	CALICI VIRUS	0	0	0	0	0	3	0	0	0	0	3
1571	ENTEROVIRUS TYPE 71 (BCR)	0	0	0	0	0	0	0	0	0	1	1
1599	ENTEROVIRUS TYPING PENDING	0	4	1	0	0	8	0	0	0	0	13
9903	NON-A, NON-B HEPATITIS	0	0	0	0	0	0	1	0	0	0	1
9992	ROSS RIVER VIRUS	4	0	0	0	0	0	0	0	0	0	4
9993	ASTROVIRUS	0	0	0	0	0	1	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	2	0	0	0	0	2
9995	DENGUE	1	0	0	0	0	0	0	0	0	0	1
9998	ARBOVIRUS GROUP B.(UNSPECIFIED	2	0	0	0	0	0	0	0	0	0	2
TOTAL		176	289	4	1	3	237	63	3	5	165	946

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 30/08/90 TO 12/09/90

12. CODE 10 - EYE
13. CODE 59 - GENITAL
14. CODE 39 - ENDOCRINE/SALIVARY GL.
15. CODE 38 - RETICULO-ENDOTHELIAL
16. CODE 29 - MUSCLE/JOINT
17. CODE 69 - CONGENTIAL
18. CODE P8 - PUO
19. CODE G8 - FEVER/MALAISE
20. CODE 09 - OTHER
21. CODE A1 - SIDS

		12	13	14	15	16	17	18	19	20	21	TOTAL
0111	ADENOVIRUS TYPE 11	0	0	0	0	0	0	0	0	1	0	1
0116	ADENOVIRUS TYPE 16	0	0	0	0	0	0	0	0	1	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	0	0	0	0	2	1	0	3
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	0	1	0	0	1	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	0	0	0	0	0	0	2	1	0	3
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	0	0	0	1	0	1
0816	COXSACKIEVIRUS A16	0	0	0	0	0	0	0	0	1	0	1
0902	COXSACKIEVIRUS B2	0	0	0	0	0	0	0	0	2	0	2
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	14	0	0	0	0	0	0	1	0	15
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	12	2	0	0	2	1	1	0	18
1303	VARICELLA-ZOSTER VIRUS	0	0	0	0	0	0	0	0	1	0	1
1306	HERPES SIMPLEX TYPE 1	3	34	0	0	0	0	0	1	3	0	41
1307	HERPES SIMPLEX TYPE 2	0	82	0	0	0	0	0	0	0	0	82
1401	COXIELLA BURNETII	0	0	0	0	0	0	0	2	0	0	2
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	0	0	0	0	1	0	0	1
1522	RUBELLA VIRUS	0	0	0	0	3	2	0	0	0	0	5
1532	HEPATITIS B ANTIGEN	0	0	0	0	0	0	0	0	4	0	4
1541	CHLAMYDIA A - C. TRACHOMATIS	3	92	1	0	1	1	0	0	1	0	99
1543	CHLAMYDIA A - LGV TYPE	0	2	0	0	0	0	0	0	0	0	2
1556	CMV - CYTOMEGALOVIRUS	0	2	0	1	0	0	2	4	10	0	19
1564	ROTAVIRUS	0	0	0	0	0	0	0	1	1	0	2
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	0	1	0	0	1
9721	HTLV-1	0	0	0	0	0	0	0	0	1	0	1
9992	ROSS RIVER VIRUS	0	0	0	0	5	0	0	2	1	0	8
9998	ARBOVIRUS GROUP B.(UNSPECIFIED	0	0	0	0	0	0	0	1	0	0	1
TOTAL		6	226	13	3	9	3	5	18	32	1	316