ISSN 0725 - 3141

Communicable Diseases Intelligence

Bulletin number Vol 15/No. 7
Issue date: 8 April 1991

Contents:

OVERSEAS BRIEFS

1. PERU CHOLERA EPIDEMIC

Latest figures on the Peru cholera epidemic (to 29 March) from the Ministry of Health are a total of 97,115 cases which include 31,205 hospitalisations and 609 fatalities. Newly infected areas include Ayachucho and San Martin departments. The northern department of Cajamarca has recorded the highest number of deaths (172).

2. CHOLERA IN ECUADOR

As of 25 March 1991 the Ministry of Health reported that 707 cases of cholera (100 laboratory confirmed), with 10 fatalities had been recorded in Ecuador.

3. CHOLERA IN COLOMBIA

Six cases of cholera have now been reported up to 26 March, all in Narino department.

- The Bulletin is compiled and distributed by the Communicable Diseases Section, Communicable Diseases and Social Health Branch, Telephone: (062) 89 1555, Department of Community Services and Health.
- Contributions are solicited, and do not preclude later publication elsewhere.

- Figures given may be subject to revision.

MALARIA IN VISITING PAPUA NEW GUINEAN STUDENTS IN THE NORTHERN TERRITORY

(Bart Currie, Peter Whelan, Mary Dyer, Jan Beeby, Chris Noonan and Mahomed Patel. NT Department of Health and Community Services and the Menzies School of Health Research, Darwin.)

Seventeen secondary school students from Papua New Guinea arrived for schooling in Darwin in late January 1991. The students, aged 16 to 19 years old, were part of a large group being sponsored in Australia by the Australian International Development Assistance Bureau. During the first week of February four of the students were admitted to Royal Darwin Hospital with acute malaria. On blood smear three had *Plasmodium falciparum* and one had *Plasmodium malariae*. The other thirteen students were then screened for malaria parasites and one was positive (asymptomatic infection) for *P. falciparum*. All five cases responded to standard therapy[1]. After confirming normal glucose 6 phosphate dehdrogenase (G6PD) activity all seventeen students were given primaquine 22.5mg daily for 14 days to eradicate possible latent *P. vivax* malaria (higher dose primaquine for the Chesson strain of *P. vivax*).

Australia, north of the 19 degree parallel, ie, north of a line from south of Broome through Tennant Creek to (but not including) Townsville, is considered receptive for the reintroduction of malaria. The NT has a history of malaria outbreaks dating back to Fort Dundas on Melville Island in 1827 (see article below). Malaria was considered endemic in the NT until 1962 when Australia's last reported indigenous* case of malaria occurred at Roper River.

Since 1962 there have been no introduced* cases (local transmission) in the NT but imported* cases continue to occur, making a rigid malaria surveillance and control program essential. The program includes active case detection and eradication therapy in selected groups such as Indochinese refugees and certain co-travellers of cases acquired in high risk areas. If G6PD activity is normal then radical therapy with primaquine is also planned for all malaria cases including *P. falciparum*. This covers concomitant latent *P. vivax* infection; in recent years there have been two cases of delayed *P. vivax* malaria following acute *P. falciparum* malaria treated without a completed primaquine course. The current cessation of primaquine supply to Australia is ominous for malaria control in the receptive areas. Other aspects of the NT control program include entomological surveillance, with adult mosquito control (fogging) where indicated, and longer term physical control methods (prevention of vector mosquito breeding sites) around urban areas to reduce receptivity. The main potential vector in the NT is *Anopheles farauri*, with *An. annulipes*, *An. hilli* and *An. bancroftii* also present (see article below).

The Papua New Guinean students will be travelling home for vacations, and personal protective measures and chemoprophylaxis will be recommended[1]. Other centres where the students are attending should be alert to the possibility of acute malaria. If in a receptive area for malaria transmission, the public health implications of latent infection also need consideration.

* for a definition of these terms see CDI 90/17:8.

REFERENCE

1.National Health and Medical Research Council. *Malaria Guidelines for Medical Practitioners* (1989). Australian Government Publishing Service, Canberra.

HISTORY OF MALARIA IN THE NORTHERN TERRITORY

(Peter Whelan, NT Department of Health and Community Services)

Although at present there is no malaria transmission in the Northern Territory, the NT has a long history of malaria. The first probable record of malaria is from Fort Dundas on Melville Island (see Figure 1.) in 1827, when a number of people died from an unknown fever. This was most likely malaria, and would have been introduced by the sailors of resupply boats arriving from the Dutch East Indes.

In 1843, an outbreak occurred in the settlement of Victoria in Port Essington (Cobourg peninsula), which resulted in half the garrison dying or being invalided home. The disease had a large influence on forcing the abandonment of the settlement a few years later.

Another outbreak occurred on the Pine Creek goldfields from 1879-83; the cases were attributable to miners arriving from Papua and the influx of Chinese migrants attracted to the goldfields. These people introduced the parasites to the area and as the conditions on the goldfields were primitive and mosquitoes would have been plentiful, malaria transmission proceeded readily. Before 1900, 10% of the hospital admissions to the Darwin Hospital were due to malaria.

In 1908-10 there was an outbreak at the Umbrawarra tinfields (near Pine Creek). During these 3 years, 52 deaths from malaria were reported and 94 cases were treated in Darwin Hospital. In the period 1916-21 there were epidemics that ranged from Mataranka, Borroloola, Victoria River Downs (VRD), Wave Hill, Maranboy (50km SE of Katherine), Goulburn Island, and camps between Pine Creek and Katherine which were associated with the building of the railway.

Epidemics also occurred in 1929-33 in the Katherine/Mataranka district. In 1931 there were 279 cases in the Northern Territory with a high mortality. Other minor outbreaks in the following years occurred at VRD, Wave Hill, Oenpelli, Melville Island, Roper River and Yirrkala. After the 1929-34 outbreak, *Plasmodium vivax* became the more dominant species of

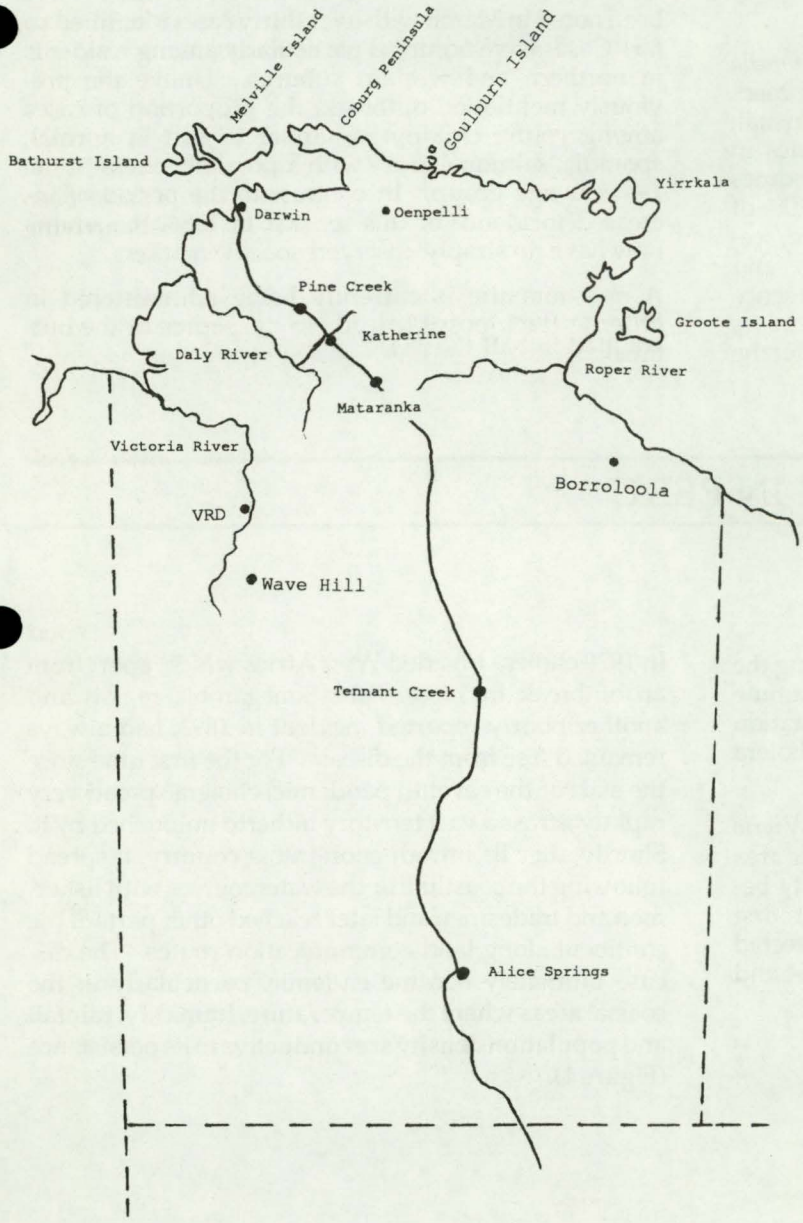
malaria, replacing *Plasmodium falciparum*, with the result that there were proportionally fewer deaths.

Malaria cases after 1957 showed a decline, due largely to a series of wet seasons of below average rainfall, but also due to specific anti-malaria measures of mosquito control and drug administration. The last indigenous case of malaria in the NT was in 1962 at Roper River.

Past epidemics have generally occurred where there were concentrations of people and inadequate housing for protection against mosquito attacks. These malaria outbreaks were usually associated with above average and extended wet seasons.

From this history, the Northern Territory is regarded as receptive to malaria above the 19°S parallel; ie a line running just north of Tennant Creek.

Figure 1. Northern Territory



MALARIA VECTORS IN THE NORTHERN TERRITORY

(Peter Whelan, NT Department of Health and Community Services)

There are at least nine Anopheles species found in the Northern Territory, of which five have been listed as species which may be naturally involved as malaria vectors.

The most likely vector in the Top End of the NT is *Anopheles farauti* s l,. This species is a known vector in the Australasian region, and was a major vector in a previous epidemic in Cairns in 1942. It is known that this species includes at least three sibling species in the NT. Two of these sibling species are relatively common in the coastal areas of the Top End. The seasonal peak abundance of this species covers the late wet season to the middle of the dry season. This species is relatively long-lived compared with other Anopheles species. *Anopheles farauti* species No. 1 is predominantly a brackish-water breeding species and is most common within a few kilometres of the coast or tidally affected rivers. *Anopheles farauti* species No. 3 is a fresh-water breeding species and has been found at the coast and up to 200 kilometres inland from the coast. It is not known if there is a difference in the capacity of each of these species to act as a vector of malaria, although *Anopheles farauti* No. 1 is known to be a vector in New Guinea and was probably a vector in past epidemics at coastal settlements in the NT such as those that occurred at Fort Dundas on Melville Island and Victoria Settlement at Port Essington.

The other *Anopheles* species, including *Anopheles bancroftii* and *Anopheles annulipes*, *Anopheles amictus* and *Anopheles hilli* must be considered as possible vectors in certain locations and under certain environmental and seasonal conditions. *Anopheles amictus* is relatively rare in the Top End during the potential malaria transmission period. *Anopheles annulipes* is often the predominant *Anopheles* mosquito in the north west of Western Australia and thus was most likely to have been a vector in this area during past epidemics. *Anopheles amictus* and *An annulipes* can be numerous during the latter part of the wet season and early dry season in the drier inland areas of the NT. Either could have been a vector in these areas. *Anopheles annulipes* is not particulary numerous in the wetter coastal areas, including the area around Darwin.

Of the other two species, *Anopheles bancroftii* can become very numerous in the post wet season over large areas of the Top End and is very strongly attracted to people. It is relatively longer lived than *Anopheles hilli* although not as long lived as *Anopheles*

farauti. Although *Anopheles bancroftii* is a suspected vector over much of the Top End it has not been considered a primary vector for endemic malaria. *Anopheles hilli* is only locally numerous near to the coast or tidally-affected areas and there is evidence to suggest that it is relatively short lived. However, it was found infected during the Cairns epidemic in 1942 and must be considered a potential secondary vector in certain localities in the Northern Territory.

The other *Anopheles* species present in the NT are *Anopheles novaguinensis, Anopheles meraukensis* and *Anopheles powelli. Anopheles powelli* is relatively rare and only present in any number in a few habitats for limited periods. *Anopheles novaguinensis* is usually present in only relatively small numbers and for a limited period in certain habitats. Of these three species only *Anopheles meraukensis* is present in relatively large numbers, mostly during the wet season or soon after.

SALMONELLAS IN MELBOURNE - PRELIMINARY REPORT (21 MARCH 1991)

(John Carnie, Rosemary Lester, Lyn McLennan, Rory Wilby (HDV), Diane Lightfoot, Agnes Tan, Joc Forsyth (MDU) Ba-Hiep Truong (NSSS))

Two separate outbreaks of salmonellosis have been detected in Melbourne in recent months. In each, cases have occurred over a number of weeks - without any obvious common source.

In one, the causative organism was *Salmonella* Typhimurium PT 135. The age distribution of cases showed fewer patients were young children than usual. Cases were resident in many different postcodes in metropolitan Melbourne but close, and sometimes repeated, questioning revealed that more than 60% of over fifty cases had eaten at an inner suburban cafe/ice-cream parlour. Inspection of the premises and examination of specimens taken revealed the presence of *Salmonella* Typhimurium in products. The premises underwent a supervised clean-up and remain under the supervision of city environmental health officers.

An unusual number of cases due to *Salmonella* Heidelberg was noticed in December and January but no new cases occurred in February. However, new cases have been noted in March with over thirty cases identified so far. Cases have occurred particularly among residents in northern and western suburbs. Unlike the previously mentioned outbreak, the proportion of cases among young children is similar to that in normal, sporadic, salmonellosis - with a possible excess in the 1-4 year age group. In contrast to the period of increased incidence of this serovar in 1986, the strains now have no simply observed specific markers.

A questionnaire is currently being administered in order to track possible leads to the source of the outbreak.

CHOLERA - THE EPIDEMIC IN PERU

(Based on WER 1991;9:61-3 and 10:65-70)

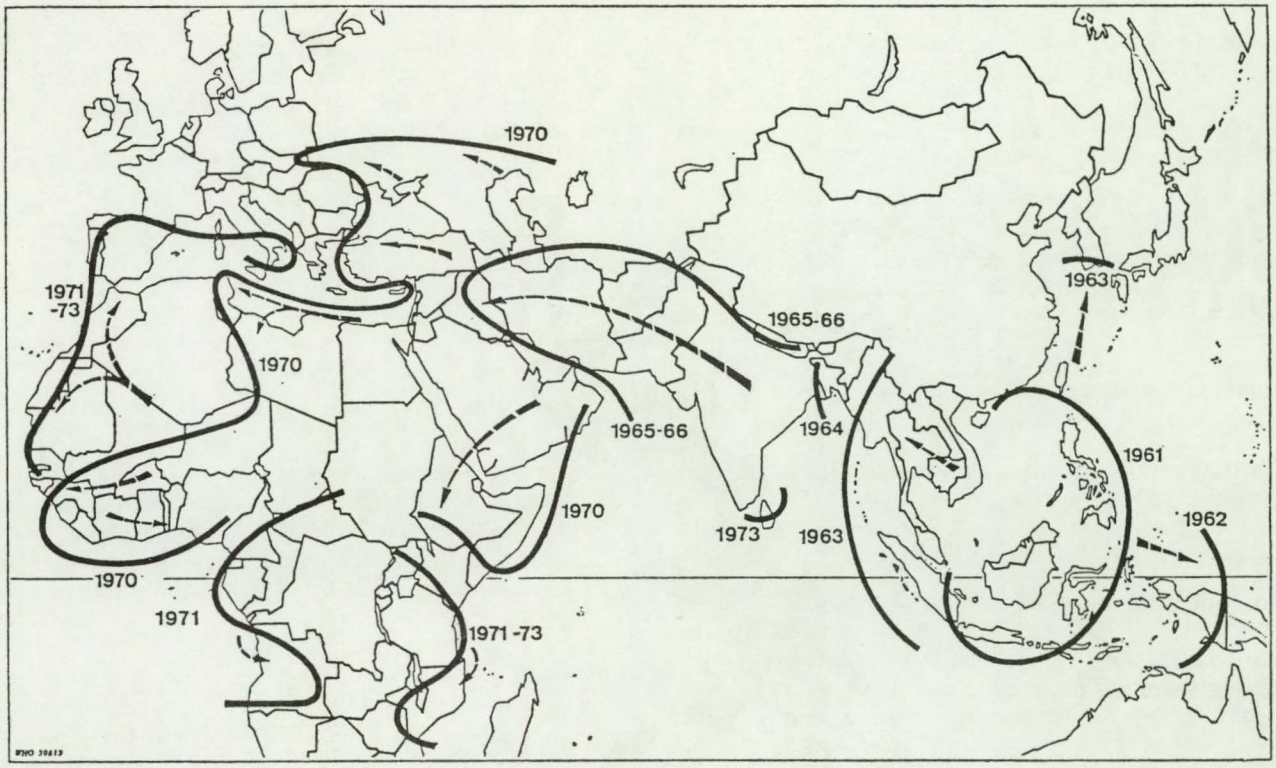
BRIEF HISTORICAL REVIEW

Cholera is one of mankind's oldest diseases. During the nineteenth century it reached Europe for the first time and caused 6 major pandemics, earning its reputation as a killer disease. After the sixth pandemic, cholera returned to Asia, its region of origin.

The seventh pandemic began in 1961 when *Vibrio cholerae,* biotype El Tor, spread outside its endemic area in the Celebes (Sulawesi), in Indonesia, probably because of increased population movements. It first reached other countries in eastern Asia, and affected Bangladesh towards the end of 1963, India in 1964 and the USSR, Iran and Iraq in 1965-1966.

In 1970 cholera invaded West Africa which, apart from an outbreak in 1868 in the Senegambia region and another poorly reported incident in 1893, had always remained free from the disease. For the first time since the start of the seventh pandemic, cholera spread very rapidly across a vast territory hitherto untouched by it. Shortly after its introduction into a country, it spread following the coastline or the watercourses with fishermen and tradesmen and later reached other parts of the continent along land communication routes. The disease ultimately became endemic, particularly in the coastal areas where the temperature, humidity, rainfall and population density are conductive to its persistence (Figure 1).

Figure 1 Global spread of cholera, 1961 - 1973



The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Cholera also made many raids into the industrialised countries during the 1970's, but effective health services and surveillance activities always prevented its effective installation in these countries.

During the 1980's the number of cases reported each year fell back to the level that obtained prior to 1970, but on the other hand, the number of countries reporting cases increased three-fold by comparison with the previous period (Table 1 and Figure 2).

THE CURRENT EPIDEMIC IN PERU

Only one region of the world, South America, had been spared by cholera during this pandemic. Indigenous cases have occurred in only one country of the Americas, the United States of America (and possibly Mexico), where sporadic cases were detected for the first time in 1973 (1 case) and during the summer of 1978.

The cholera epidemic in Peru is therefore the first manifestation of this pandemic in the Americas.

Table 1 Number of cases of cholera notified in the world, 1961-1990

1961	1962	1965	1970	1973	1982	1986	1987	1988	1989	1990
49951	41575	58816	68828	112241	54856	46473	48507	44083	53970	29319 provisional

1. The latest official report from Peru dated 21 February 1991 informed the Pan American Health Organization (PAHO) that 32 585 cases of cholera had occurred with 6 501 hospitalisations and 139 deaths (**CDI Editorial Comment**: see Overseas Briefs this issue for more up-to-date figures).

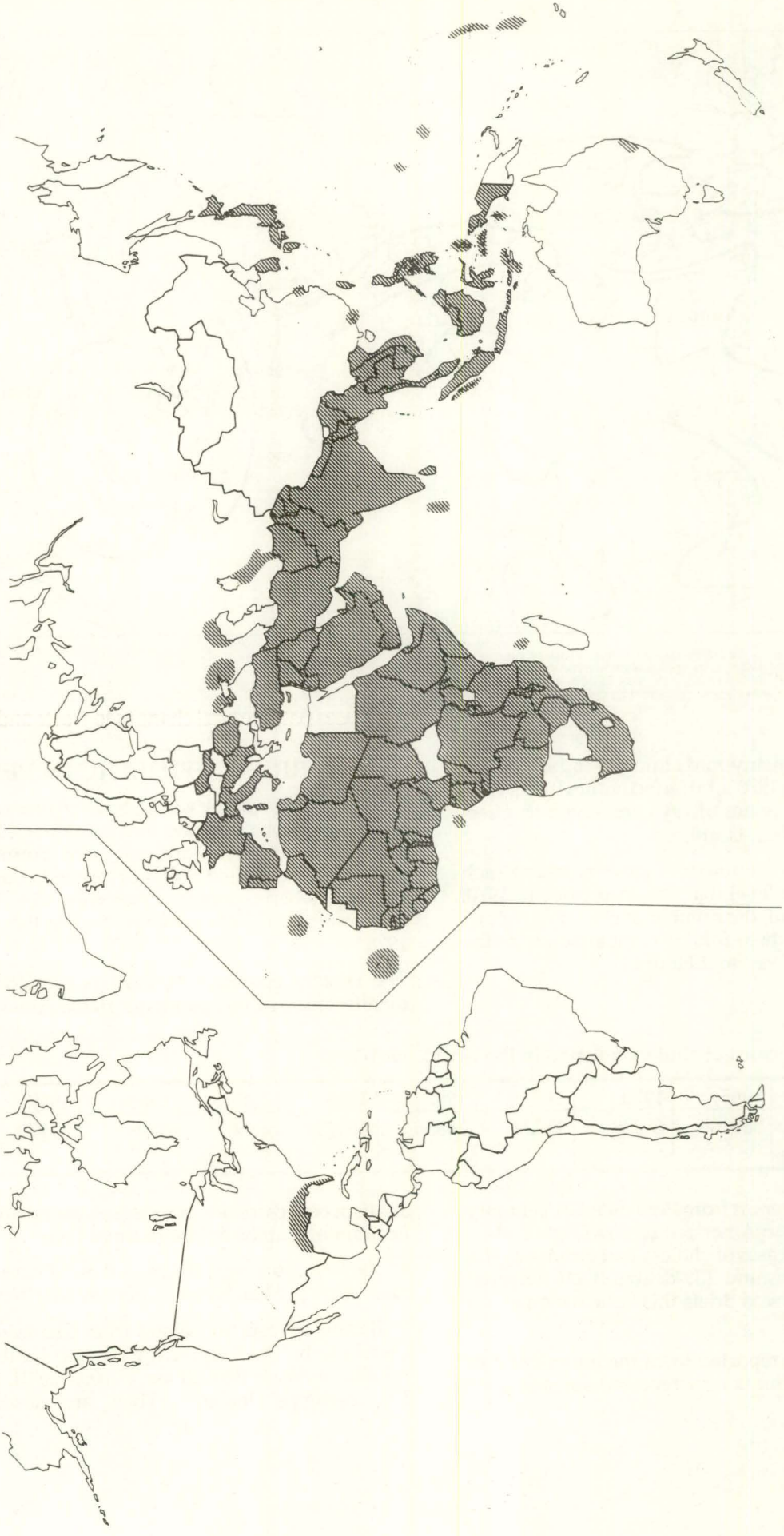
2. Cases have been reported from the entire coast of Peru, and the epidemic is now reported spreading inland.

3. Suspected cases are reported on the north coast near Ecuador and at the southern tip of Peru.

4. The first cases were diagnosed on 31 January. Initial cases were in Huacho and Chancay (north of Lima).

5. Results of tests on isolates from Chancay and from Chimbote by the Centers for Disease Control (CDC), Atlanta, indicate that all are *V. cholerae* 01, biotype El Tor, serotype Inaba. They are susceptible to

Figure 2 Countries, or areas within countries, reporting cholera, 1961 - 1990



WHO 91012

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

tetracycline, sulfonamides, chloramphenicol and trimethoprim.

The proportion of persons hospitalised is 20%, the overall case fatality rate is 0.4% and the mortality ratio among hospitalised patients is 2.1%.

CHOLERA CONTROL

Following 3 decades of research it can be stated that:

- treatment of cholera in appropriately equipped establishments can reduce the case-fatality rate to less than 1%;
- vaccination and mass chemoprophylaxis are ineffective for the prevention and control of epidemics;
- when cholera is endemic it accounts for fewer than 5% of all cases of acute diarrhoea;
- over 90% of cholera cases are mild, and difficult to distinguish clinically from other types of acute diarrhoea.

The best-known sources of infection are:

- Drinking-water that has been contaminated at its source or during storage.
- Fish, and particularly shellfish taken from contaminated water and eaten raw or insufficiently cooked.
- Contaminated foods (e.g., milk, cooked foods such as rice, lentils, potatoes, kidney beans, eggs, chicken, etc.).Vegetables that have been fertilised with 'night-soil' or 'freshened' with contaminated water.

Vaccination

The vaccines currently available do not help in controlling cholera for a number of reasons:

- they are only about 50% effective;
- the immunity they produce lasts for only 3 to 6 months;
- vaccination does not reduce the rate of asymptomatic infections.

Most importantly, vaccination gives a false sense of security to those vaccinated who may then neglect more effective measures.

As a consequence of these limitations, the twenty-sixth World Health Assembly in 1973 abolished the requirement in the International Health Regulations of a certificate of vaccination against cholera. Only Pitcairn still officially requires a cholera vaccination certificate from travellers arriving from endemic areas.

Chemoprophylaxis

Mass treatment of a community with antibiotics, often referred to as mass chemoprophylaxis, has never succeeded in limiting the spread of cholera, and should not be considered.

Food safety

Since food can be an important vehicle for cholera transmission, health education of prospective overseas travellers should stress the following:

- cook food thoroughly and eat it while still hot;
- prevent contamination of cooked food by contact with raw food, contaminated surfaces, or flies;
- avoid any potentially contaminated uncooked food of vegetable origin unless it is thick skinned and has been personally peeled by the traveller;
- wash hands thoroughly with soap after defecation or having contact with human faecal matter.

CDI Editorial Comment

Cholera is an acute gastrointestinal disturbance characterised by profuse painless watery stools (often characterised by 'rice-water' stools), rapid dehydration, acidosis, circulatory collapse and occasionally vomiting. It is caused by *Vibrio cholerae* serogroup 01. This serogroup secretes a toxin which activates adenylate cyclase to form high levels of cyclic-AMP, which in turn produces pathological changes to water and electrolyte transport processes between gut mucosal cells and the lumen. Water, Na^+ and Cl^- ions are secreted into the lumen, while reabsorption is blocked, which results in diarrhoea and rapid dehydration.

Cholera should be considered in any patient with diarrhoea who has returned from a cholera endemic or epidemic area within the last six days. Administration of oral rehydration solution to correct dehydration, acidosis and hypokalaemia may be adequate therapy in mild cases (those in whom fluid loss does not exceed 5% of body weight). In more severe cases, or where the patient is in shock, rapid intravenous rehydration is indicated, together with electrolytes and appropriate anions (eg bicarbonate, lactate or acetate) to correct acidosis. Antibiotics such as tetracyclines and trimethoprim sulphamethoxazole may be considered in addition, to reduce the duration of diarrhoea and volume of fluid loss.

Stool specimens should be cultured and the serogroup determined. In cases where antibiotics are being administered, sensitivity tests should also be performed as tetracycline-resistant strains have been isolated in Bangladesh and parts of east Africa.

Cholera is both a notifiable and quarantinable disease in all states and territories of Australia. The Commonwealth Department of Community Services and Health also notifies cases of cholera to the World Health Organisation.

AIDS AND HIV IN THE WHO WESTERN PACIFIC REGION

Dr Georg Patersen WHO Regional Adviser in Communicable Disease, WHO Regional Office, Manila. From the Australian HIV Surveillance Report Vol 7 Supplement 1, January 1991 produced by the National Centre in HIV Epidemiology and Clinical Research.

The countries of the WHO Western Pacific Region report statistics on HIV and AIDS on a regular basis to the WHO Regional Office in Manila. The Region includes countries which cover an enormous population range, from China with over one billion people to some of the Pacific states, the populations of which number in the thousands. There is also a wide range in political systems, socio-economic levels and public health structures, and a consequent variation in the manner in which health statistics are obtained. The Regional Office requests a specific set of tabulations on HIV and AIDS from each country and maintains the information in a computer database.

For each country in the region, Table 1 shows the cumulative numbers of cases of AIDS and HIV infection reported, the cumulative totals of AIDS cases for males, females and children less than 15 years, and the rate of AIDS cases per 100,000 total population. In addition the Table gives the ratio of cumulative diagnoses of HIV to AIDS. The dates to which the figures are cumulative vary across countries. They range from 10 September 1990 (Laos) to 31 December 1990 (Australia), but most fall in November 1990.

Australia has the highest number of reported AIDS cases in the Region (2381), followed by Japan (294) and New Zealand (229). The remaining countries have reported a total of 206 cases of AIDS. Australia also has the highest cumulative rate of AIDS (14.8 per 100,00 total population), and is followed by New Caledonia (8.75), French Polynesia (8.47), New Zealand (7.02) and Guam (6.45). Over 90% of AIDS cases reported in the Region have occurred among men. Percentages are higher in Australia (97%) New Zealand (97%) and Japan (96%), but lower in Papua New Guinea (54%), Korea (71%) and the Philippines (80%). The ratio between reports of HIV diagnoses and AIDS cases is a measure of the recency of the HIV epidemic in a country, with a high ratio indicating a preponderance of cases of HIV infection which have not progressed to AIDS. The reported ratios are particularly high for China (89) and Malaysia (44).

Figure 1 Exposure category of AIDS cases for selected countries in the WHO Western Pacific Region: percentages within countries

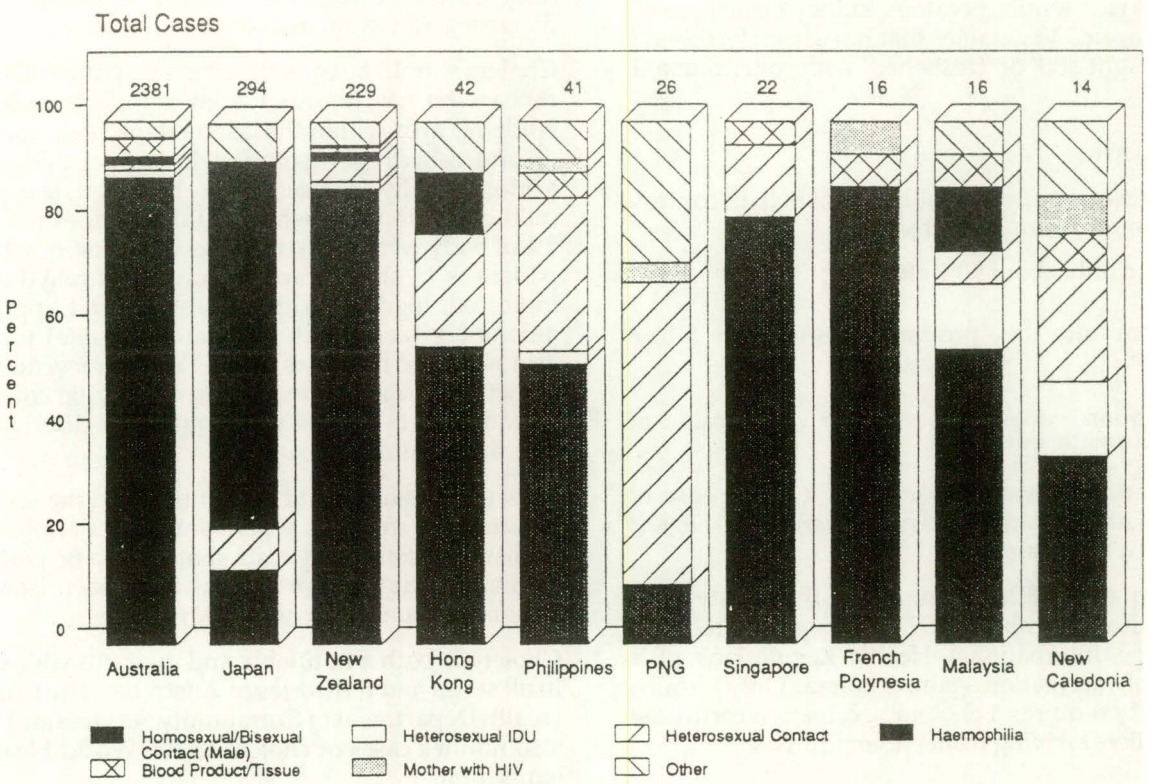


Table 1. AIDS and HIV in the Western Pacific Region by country[1]

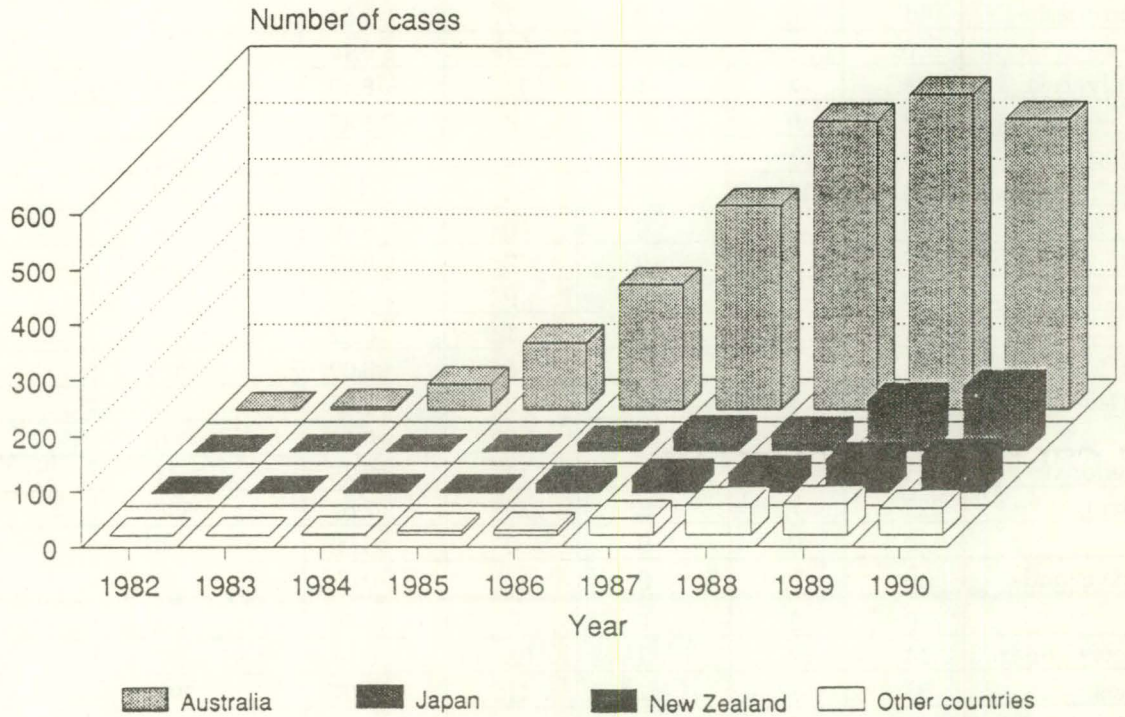
COUNTRY/AREA	CUMULATIVE AIDS CASES				AIDS Rate[2]	Cumulative HIV diagnoses	Ratio HIV/AIDS
	Male	Female	Children <15 years	TOTAL			
American Samoa	0	0	0	0	0.00	0	-
Australia	2309	72	21	2381	14.8	13569	5.7
Brunei	1	0	0	1	0.41	3	3.0
Cambodia[3]	-	-	-	-	-	-	-
China	5	0	0	5	0.00	446	89.2
Cook Islands	0	0	0	0	0.00	0	-
Fed.S.Micronesia	1	0	0	1	1.04	5	5.0
Fiji	0	1	0	1	0.14	7	7.0
French Polynesia	14	2	1	16	8.47	84	5.3
Guam	8	0	0	8	6.45	19	2.4
Hong Kong	41	1	2	42	0.74	192	4.6
Japan[3]	283	11	-	294	0.24	1420	4.8
Kiribati	0	0	0	0	0.00	0	-
Korea	5	2	0	7	0.02	78	11.1
Laos	0	0	0	0	0.00	1	-
Macao	1	0	0	1	0.22	3	3.0
Malaysia	14	2	0	16	0.09	703	43.9
Marshall Islands	1	1	0	2	4.65	6	3.0
Nauru	0	0	0	0	0.00	0	-
New Caledonia	13	1	1	14	8.75	44	3.1
New Zealand	222	7	3	229	7.02	596	2.6
Niue	0	0	0	0	0.00	0	-
N.Mariana Islands	0	0	0	0	0.00	0	-
Palau	0	0	0	0	0.00	0	-
Papua New Guinea	14	12	1	26	0.71	57	2.2
Philippines	33	8	2	41	0.07	199	4.9
Samoa	1	0	0	1	0.62	1	1.0
Singapore	22	0	0	22	0.81	57	2.6
Solomon Islands	0	0	0	0	0.00	0	-
Tokelau	0	0	0	0	0.00	0	0.0
Tonga	2	0	0	2	2.11	3	1.5
Tuvalu	0	0	0	0	0.00	0	-
Vanuatu	0	0	0	0	0.00	0	-
Vietnam	0	0	0	0	0.00	0	-
Wallis and Futuna	0	0	0	0	0.00	0	-
TOTAL	2990	120	30	3110	-	17493	-

1. See text for details of reporting periods
2. AIDS cases per 100,000 population
3. Dashes indicate that counts were unavailable

Figure 1. displays the distribution of exposure categories for AIDS cases in the ten countries of the Region with the highest numbers of reported cases. In Australia, New Zealand and French Polynesia, 85-90% of cases have been attributed to male homosexual contact. Very different patterns are seen in Japan, where 70% of cases have occurred in people with haemophilia, and Papua New Guinea, where 58% of cases are attributed to heterosexual contact. The percentage of AIDS cases in these two countries attributed to homosexual contact is 14% and 11%, repectively. Heterosexual contact is the reported path of HIV exposure in 29% of AIDS cases in the Philippines and 21% of cases in New Caledonia.

In Figure 2. the annual evolution of AIDS diagnoses is plotted for Australia, New Zealand, Japan and the remaining countries of the Region combined. Compared to the earlier years of the epidemic, the number of new diagnoses of AIDS is now relatively stable in the countries selected for the Figure. Because of small numbers, it is difficult to interpret trends in other individual countries.

Figure 2 Incidence of AIDS for selected countries in the WHO Western Pacific Region 1982 - 1990.



CDI NOTICES TO READERS

1. ANCA BULLETIN NO.8

CDI has been informed that the Australian National Council on AIDS Bulletin No. 8 ("Routine screening of pregnant women for HIV") has been withdrawn and will be replaced by a revised version. CDI will publish the revised Bulletin once it becomes available.

2. CONTRIBUTIONS

Significant reports, general articles and notices related to the public health aspects of communicable diseases (surveillance, prevention, control etc) are sought for publication in the Communicable Diseases Intelligence.

These items may include:

1) complete or preliminary results of studies and surveys,

2) significant occurrences of communicable diseases,

3) details of interesting cases of public health importance,

As it is a fortnightly publication articles and notices of topical interest can usually be published at short notice.

Articles printed in CDI are not usually precluded from later publication elsewhere.

Contributions can be submitted either in hardcopy or on computer disk (3½", 5¼"). Articles in ASCII or produced under the following word processing programs are acceptable:

1) Wordperfect 4.2, 5.0, 5.1

2) Wordstar 3.3

3) Word 4.0

4) Navy DIF

5) Multimate advantage II

6) DCA/RFT, DCA/FFT

7) DEC/DX

For graphical material the following formats are acceptable:

1) GEM

2) CGM

3) DXF

4) HPGL

5) Lotus 123 (PIC)

6) Macintosh PICT

7) Macintosh Paint

8) PC Paintbrush (PCX)

9) PostScript

10) TIFF

11) Video show

12) Windows

Please address contributions and other correspondence to:

The Editor, CDI

Communicable Diseases Section

Department of Community Services and Health

GPO Box 9848

CANBERRA ACT 2601

or Facsimile: (06) 289 7802

CDI REPORTING SCHEME

VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTS

There were 1007 reports processed for the latest period (13 March to 26 March 1991).

The NSW Department of Health has reported that the **measles** outbreak in central Sydney is now about 1 month old and approximately 42 cases, representing at least 4 generations of the disease, have been recorded. The majority of cases have been associated with 4 schools and an immunisation program directed at institutions where cases have occurred and the general community is now in progress.

CDI Editorial Comment

In its publication 'Immunisation Procedures' (4th edition, in press) the NHMRC makes the following recommendation regarding the management of outbreaks of measles and the use of normal immunoglobulin:

'The spread of measles can be contained by the vaccination, within 72 hours, of susceptible children who have been in contact with an infected case. If there is doubt about a child's measles immunity, the vaccine should be given, since there are no ill-effects from vaccinating those already seropositive. Normal immunoglobulin (human) is available for individuals for whom the live vaccine is contraindicated. Children under the age of one year, immunocompromised persons and non-immune pregnant women should receive immunoglobulin preferably within six days of exposure using a dosage of 0.2 mL/kg for normal children and 0.5 mL/kg for immunocompromised (maximum dose 15 mL).'

Nineteen reports of **Q fever** were received for the period, 11 from New South Wales and the remainder from Queensland (8). Ages ranged from 16 to 68 years and occupational exposure details were provided for 1; a laboratory worker.

Ross River virus infection was reported on 60 occassions. Most cases were from Queensland (23) and Western Australia (18).

Woden Valley Hospital reported five cases of ***Chlamydia psittaci*** from the members of one family. Initial diagnosis was made in a 19 year old boy who was hospitalised with fever and headache (serological titres <8 converted to 128). The family keep numerous birds within the house (cockatiel, parrot, two canaries, two budgerigars). Eleven members of the family had cough and flu-like illness. The whole family was tested for *Chlamydia psittaci* antibodies. Positive titres were detected in four symptomatic siblings:

17 year old boy	titre 128
16 year old girl	titre 64
9 year old boy	titre 128
4 year old girl	titre 64

The pet birds were healthy and there had not been any recent changes in their handling practices.

NON-VIRAL PATHOGEN REPORTS

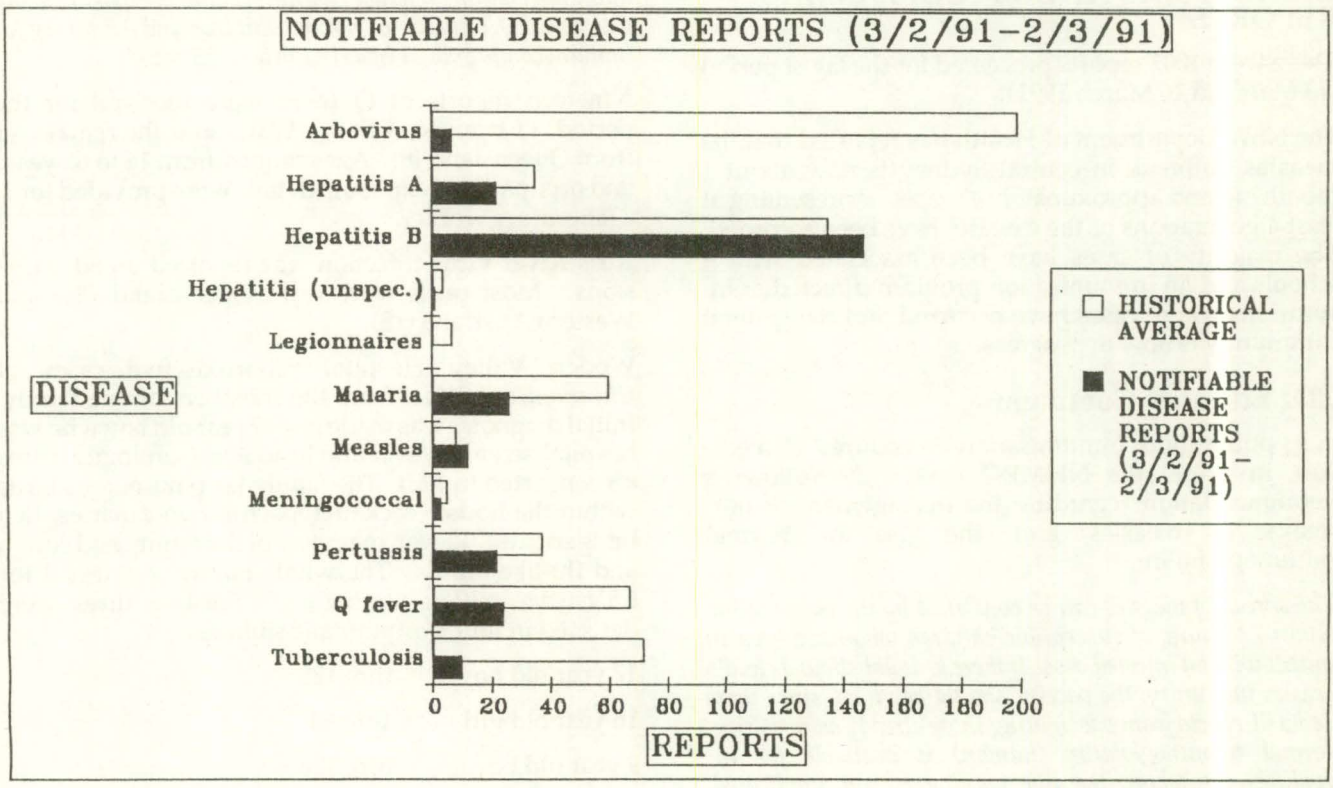
Cat-scratch disease was diagnosed by light microscopy of haemmatoxylin-eosin stained lymph node tissue from a 12 year old male (reported by Dr Lynch, Rockhampton).

Three cases of *Legionella pneumophila* were reported by Westmead Hospital. All cases were diagnosed serologically (diagnostic rise in titre) by immunofluorescence:

- Serogroup 1 was identified in a 41 year old male from Seven Hills in December 1990 (diagnosis was also culture confirmed).
- Serogroup 2 was identified in a 76 year old male from the Mount Druitt area who was admitted to hospital in late December 1990 with bronchopneumonia. The patient died in early January 1991.
- Serogroup 1 was identified in a 69 year old female from Newcastle.

Other interesting isolates were:

- *Neisseria meningitidis* from blood from a 42 year old woman being treated with trimethoprim for a urinary tract infection. The isolate was resistant to trimethoprim. Details of the serogroup are not available yet.
- *Streptococcus pneumonia* from the cerebrospinal fluid of a 79 year old female. The patient died 7 days after admission (reported by Nambour General Hospital).
- Group G streptococci from knee joint fluid and blood samples from a 62 year old male with septic arthritis (reported by Dr Lynch, Rockhampton).
- Group B streptococci from blood from a 4 year old male with cerebral palsy (Nambour General Hospital).
- *Haemophilus influenzae* from blood and cerebrospinal fluid of 3 infants - an 8 month old male, an 8 month old female and a 3 month old male (Toowoomba Pathology Laboratory).



National Notifiable Disease Reports (3/2/91 - 2/3/91)

DISEASE	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	TOTAL
Arbovirus Infections (unspecified)	0	0	0	1	6	0	0	0	7
Ross River Virus	0	0	134	241	0	0	0	0	375
Dengue fever	0	NN	0	0	0	0	0	0	0
Brucellosis	0	0	0	3	0	0	0	0	3
Camplobacter	5	48	56	177	112	0	0	0	398
Chancroid	0	0	0	0	NN	NN	NN	0	0
Chlamydia	1	3	8	209	61***	0	NN	0	282
Cholera	0	0	0	0	0	0	0	0	0
Diptheria	0	0	1	0	0	0	0	0	1
Donovanosis	0	0	0	2	NN	0	NN	0	2
Gonoccocal diseases	0	1	28	35	7***	0	0	0	71
Haemophilus influenza b	0	NN	0	7	0	0	0	0	7
HIV infections	3	0	0	0	1	0	0	0	4
Hydatid disease	0	0	0	1	0	0	0	0	1
Legionnaires disease	NN	0	0	0	0	0	0	0	0
Leprosy	0	0	0	0	0	0	0	0	0
Leptospirosis	0	0	0	1	0	0	0	0	1
Listeriosis	0	NN	0	1	0	0	0	0	1
Lymphogranuloma venereum	0	0	NN	0	NN	NN	NN	NN	0
Malaria	3	0	2	15	6	0	0	0	26
Measles	0	4	3	5	0	0	0	0	12
Meningococcal infections	0	0	3	0	0	NN	0	0	3
Ornithosis	0	0	1	0	0	0	0	0	1
Pertussis	0	0	0	19	3	0	0	0	22
Plague	0	0	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0	0	0
Q fever	NN	1	0	23	0	NN	0	0	24
Rabies	0	0	0	0	0	0	0	0	0
Rubella	0	0	1	17	1	0	0	0	19
Salmonella	3	55	18	181	77	0	0	0	334
Shigella	0	3	23	10	8	0	0	0	44
Syphilis	0	4	17	39	0	0	0	0	60
Tetanus	0	0	0	0	0	0	0	0	0
Tuberculosis	1	0	0	3	6	0	0	0	10
Typhoid	0	3**	0	0	0	0	0	0	3
Viral haemorrhagic fever	0	0	0	0	0	0	0	0	0
Viral hepatitis (unspecified)	0	0	0	1	0	NN	0	NN	1
Hepatitis A	2	1	4	12	3	0	0	0	22
Hepatitis B	2	15	0	130	0	0	0	0	147
Hepatitis C	0	0	2	52	0	0	0	0	54
Yellow fever	0	0	0	0	0	0	0	0	0
Yersiniosis	0	5	0	24	23	0	0	0	52

* data for Febuary 1991
** Typhoid & Paratyphoid
*** data for 11/2/91 - 19//2/91
NN not notifiable

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 13/02/91 TO 26/03/91

CODE 065 - STATE HEALTH LABORATORY SERVICES, PERTH (WA)
CODE 066 - PRINCESS MARGARET HOSPITAL, PERTH (WA)
CODE 110 - INSTITUTE OF MEDICAL & VETERINARY SCIENCE, ADELAIDE (SA)
CODE 111 - ROYAL CHIDLDRENS HOSPITAL, MELBOURNE (VIC)
CODE 112 - INSTITUTE OF CLINICAL PATHOLOGY & MEDICAL RESEARCH, WESTMEAD (NSW)
CODE 114 - ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, CAMPERDOWN (NSW)
CODE 115 - STATE HEALTH LABORATORY, BRISBANE (QLD)
CODE 116 - WODEN VALLEY HOSPITAL, GARRAN (ACT)
CODE 400 - DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON (QLD)
CODE TPL - TOOWOOMBA PATHOLOGY LABORATORY (QLD)

		065	066	110	111	112	114	115	116	400	TPL	TOTAL
0100	ADENOVIRUS NOT TYPED	1	11	0	4	4	0	11	0	0	0	31
0103	ADENOVIRUS TYPE 3	0	0	1	0	0	0	0	0	0	0	1
0111	ADENOVIRUS TYPE 11	0	0	0	0	2	0	0	0	0	0	2
0119	ADENOVIRUS TYPE 19	0	0	1	0	0	0	0	0	0	0	1
0137	ADENOVIRUS TYPE 37	0	0	1	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	2	1	4	0	0	0	0	7
0201	INFLUENZA A VIRUS	0	0	1	0	0	0	0	0	0	0	1
0203	INFLUENZA B VIRUS	0	0	1	0	6	0	0	0	0	0	7
0301	PARAINFLUENZA VIRUS TYPE 1	0	2	0	0	0	0	1	0	0	0	3
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	2	0	0	0	0	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	0	3	4	7	1	0	5	0	0	0	20
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	0	0	0	2	1	5	0	0	0	8
0500	RHINOVIRUS (ALL TYPES)	0	0	0	1	1	1	5	0	0	0	8
0600	MYCOPLASMA PNEUMONIAE	1	0	0	1	2	0	3	0	1	0	8
0700	ORNITHOSIS-PSITTACOSIS	0	0	0	0	1	0	0	6	0	0	7
0809	COXSACKIEVIRUS A9	0	0	0	0	1	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	0	0	0	0	1	0	0	0	0	0	1
0905	COXSACKIEVIRUS B5	0	0	1	0	0	0	0	0	0	0	1
1014	ECHOVIRUS TYPE 14	0	0	1	0	2	0	0	0	0	0	3
1017	ECHOVIRUS TYPE 17	0	0	1	0	0	0	0	0	0	0	1
1022	ECHOVIRUS TYPE 22	0	0	0	0	1	0	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	1	0	2	0	0	0	0	0	3
1200	MUMPS VIRUS	0	0	0	2	2	0	0	0	0	0	4
1300	HERPES VIRUS GROUP - NOT TYPED	1	0	0	0	0	0	0	0	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	5	0	0	19	2	14	10	0	0	50
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	7	0	16	2	16	1	6	0	39	0	87
1303	VARICELLA-ZOSTER VIRUS	6	0	0	0	2	0	3	0	1	0	12
1306	HERPES SIMPLEX TYPE 1	23	2	52	1	3	0	34	0	0	0	115
1307	HERPES SIMPLEX TYPE 2	60	0	31	0	8	0	23	0	0	0	122
1399	HERPES VIRUS TYPING PENDING	0	0	0	0	0	0	0	0	1	0	1
1401	COXIELLA BURNETII	0	0	0	0	11	0	8	0	0	0	19
1502	PICORNIA VIRUS - NOT TYPED = E	4	0	0	0	0	0	16	0	0	0	20
1513	COWPOX VIRUS	0	0	0	0	0	0	0	0	1	0	1
1514	MOLLUSCUM CONTAGIOSUM	0	0	0	0	0	0	0	0	1	0	1
1515	CONTAGIOUS PUSTULAR DERMATITIS	1	0	0	0	0	0	0	0	0	0	1
1521	MEASLES VIRUS	2	0	0	1	0	0	1	0	0	0	4
1522	RUBELLA VIRUS	1	0	0	0	1	0	2	0	2	0	6
1532	HEPATITIS B ANTIGEN	15	0	1	1	46	1	13	0	4	0	81
1535	HEPATITIS A ANTIBODY	18	0	0	0	1	0	0	0	0	0	19
1536	HEPATITIS C VIRUS	22	0	0	0	0	0	0	0	0	0	22
1537	HEPATITIS, DELTA	1	0	0	0	0	0	0	0	1	0	2
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	57	0	37	0	12	0	41	4	0	6	157
1542	CHLAMYDIA TRACHOMATIS - A-K	0	0	0	0	0	0	0	0	2	0	2
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	0	0	0	0	0	0	0	0	12	0	12
1556	CMV - CYTOMEGALOVIRUS	1	13	2	1	5	5	16	0	5	0	48
1563	CORONAVIRUS	0	0	0	0	1	0	0	0	0	0	1
1564	ROTAVIRUS	0	5	7	8	0	0	0	0	10	0	30
1565	CALICI VIRUS	0	0	0	0	2	0	0	0	0	0	2
1599	ENTEROVIRUS TYPING PENDING	0	0	0	1	0	6	0	0	0	0	7
9992	ROSS RIVER VIRUS	29	0	0	0	2	0	19	0	10	0	60
9993	ASTROVIRUS	0	0	0	0	1	0	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	1	0	0	0	0	1
TOTAL		250	41	161	32	159	22	226	20	90	6	1007

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES BY STATE OF CONTRIBUTING LABORATORY

PERIOD 13/02/91 TO 26/03/91

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	ACT	TOTAL
0100	ADENOVIRUS NOT TYPED	4	4	11	12	0	0	31
0103	ADENOVIRUS TYPE 3	0	0	0	0	1	0	1
0111	ADENOVIRUS TYPE 11	2	0	0	0	0	0	2
0119	ADENOVIRUS TYPE 19	0	0	0	0	1	0	1
0137	ADENOVIRUS TYPE 37	0	0	0	0	1	0	1
0199	ADENOVIRUS TYPING PENDING	5	2	0	0	0	0	7
0201	INFLUENZA A VIRUS	0	0	0	0	1	0	1
0203	INFLUENZA B VIRUS	6	0	0	0	1	0	7
0301	PARAINFLUENZA VIRUS TYPE 1	0	0	1	2	0	0	3
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	0	0	2	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	1	7	5	3	4	0	20
0400	RESPIRATORY SYNCYTIAL VIRUS (R	3	0	5	0	0	0	8
0500	RHINOVIRUS (ALL TYPES)	2	1	5	0	0	0	8
0600	MYCOPLASMA PNEUMONIAE	2	1	4	1	0	0	8
0700	ORNITHOSIS-PSITTACOSIS	1	0	0	0	0	6	7
0809	COXSACKIEVIRUS A9	1	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	1	0	0	0	0	0	1
0905	COXSACKIEVIRUS B5	0	0	0	0	1	0	1
1014	ECHOVIRUS TYPE 14	2	0	0	0	1	0	3
1017	ECHOVIRUS TYPE 17	0	0	0	0	1	0	1
1022	ECHOVIRUS TYPE 22	1	0	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	2	0	0	0	1	0	3
1200	MUMPS VIRUS	2	2	0	0	0	0	4
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	1	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	21	0	14	5	0	10	50
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	17	2	45	7	16	0	87
1303	VARICELLA-ZOSTER VIRUS	2	0	4	6	0	0	12
1306	HERPES SIMPLEX TYPE 1	3	1	34	25	52	0	115
1307	HERPES SIMPLEX TYPE 2	8	0	23	60	31	0	122
1399	HERPES VIRUS TYPING PENDING	0	0	1	0	0	0	1
1401	COXIELLA BURNETII	11	0	8	0	0	0	19
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	16	4	0	0	20
1513	COWPOX VIRUS	0	0	1	0	0	0	1
1514	MOLLUSCUM CONTAGIOSUM	0	0	1	0	0	0	1
1515	CONTAGIOUS PUSTULAR DERMATITIS	0	0	0	1	0	0	1
1521	MEASLES VIRUS	0	1	1	2	0	0	4
1522	RUBELLA VIRUS	1	0	4	1	0	0	6
1532	HEPATITIS B ANTIGEN	47	1	17	15	1	0	81
1535	HEPATITIS A ANTIBODY	1	0	0	18	0	0	19
1536	HEPATITIS C VIRUS	0	0	0	22	0	0	22
1537	HEPATITIS, DELTA	0	0	1	1	0	0	2
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	12	0	47	57	37	4	157
1542	CHLAMYDIA TRACHOMATIS - A-K	0	0	2	0	0	0	2
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	0	0	12	0	0	0	12
1556	CMV - CYTOMEGALOVIRUS	10	1	21	14	2	0	48
1563	CORONAVIRUS	1	0	0	0	0	0	1
1564	ROTAVIRUS	0	8	10	5	7	0	30
1565	CALICI VIRUS	2	0	0	0	0	0	2
1599	ENTEROVIRUS TYPING PENDING	6	1	0	0	0	0	7
9992	ROSS RIVER VIRUS	2	0	29	29	0	0	60
9993	ASTROVIRUS	1	0	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	1	0	0	0	0	0	1
TOTAL		181	32	322	291	161	20	1007

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 13/02/91 TO 26/03/91

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	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	0	11	0	0	0	12	0	1	0	24
0103	ADENOVIRUS TYPE 3	0	1	0	0	0	0	0	0	0	1
0111	ADENOVIRUS TYPE 11	0	0	0	0	0	2	0	0	0	2
0199	ADENOVIRUS TYPING PENDING	0	2	0	0	0	4	0	0	0	6
0201	INFLUENZA A VIRUS	0	1	0	0	0	0	0	0	0	1
0203	INFLUENZA B VIRUS	0	5	0	0	0	0	0	0	0	5
0301	PARAINFLUENZA VIRUS TYPE 1	0	2	0	0	0	1	0	0	0	3
0302	PARAINFLUENZA VIRUS TYPE 2	0	2	0	0	0	0	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	0	19	0	0	0	0	0	0	0	19
0400	RESPIRATORY SYNCYTIAL VIRUS (R	1	7	0	0	0	0	0	0	0	8
0500	RHINOVIRUS (ALL TYPES)	0	6	0	0	0	0	0	0	0	6
0600	MYCOPLASMA PNEUMONIAE	1	5	0	0	0	0	0	0	0	6
0700	ORNITHOSIS-PSITTACOSIS	4	2	0	0	0	0	0	0	0	6
0809	COXSACKIEVIRUS A9	1	0	0	0	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	0	0	0	0	0	0	0	0	1	1
0905	COXSACKIEVIRUS B5	0	1	0	0	0	0	0	0	0	1
1014	ECHOVIRUS TYPE 14	0	0	0	0	1	1	0	0	0	2
1017	ECHOVIRUS TYPE 17	0	1	0	0	0	0	0	0	0	1
1022	ECHOVIRUS TYPE 22	0	0	0	0	0	1	0	0	0	1
1102	POLIOVIRUS TYPE 2	1	1	0	0	0	1	0	0	0	3
1301	HERPES SIMPLEX VIRUS - NOT TYP	4	2	0	0	0	0	0	0	26	32
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	28	7	0	2	0	0	2	0	3	42
1303	VARICELLA-ZOSTER VIRUS	0	1	0	0	0	0	0	0	10	11
1306	HERPES SIMPLEX TYPE 1	1	5	0	1	0	0	0	0	84	91
1307	HERPES SIMPLEX TYPE 2	0	1	0	0	0	0	0	0	70	71
1399	HERPES VIRUS TYPING PENDING	1	0	0	0	0	0	0	0	0	1
1401	COXIELLA BURNETII	10	0	0	0	0	1	1	0	0	12
1502	PICORNIA VIRUS - NOT TYPED = E	1	7	0	0	0	7	0	1	3	19
1515	CONTAGIOUS PUSTULAR DERMATITIS	0	0	0	0	0	0	0	0	1	1
1521	MEASLES VIRUS	2	0	0	1	0	0	0	0	1	4
1522	RUBELLA VIRUS	2	0	1	0	0	0	0	0	0	3
1532	HEPATITIS B ANTIGEN	50	0	0	0	0	0	26	0	0	76
1535	HEPATITIS A ANTIBODY	8	0	0	0	0	0	11	0	0	19
1536	HEPATITIS C VIRUS	13	0	0	0	0	0	6	0	0	19
1537	HEPATITIS, DELTA	2	0	0	0	0	0	0	0	0	2
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	15	1	0	0	0	0	0	0	0	16
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	1	0	0	0	0	0	0	0	0	1
1556	CMV - CYTOMEGALOVIRUS	2	19	0	0	0	1	3	3	0	28
1563	CORONAVIRUS	0	0	0	0	0	1	0	0	0	1
1564	ROTAVIRUS	2	0	0	0	0	25	0	0	0	27
1565	CALICI VIRUS	0	0	0	0	0	2	0	0	0	2
1599	ENTEROVIRUS TYPING PENDING	0	2	0	1	1	0	0	0	0	4
9992	ROSS RIVER VIRUS	22	0	0	0	0	1	0	0	7	30
9993	ASTROVIRUS	0	0	0	0	0	1	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	1	0	0	0	1
TOTAL		172	111	1	5	2	62	49	5	206	613

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 13/02/91 TO 26/03/91

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	TOTAL
0100	ADENOVIRUS NOT TYPED	4	0	0	0	0	0	3	0	0	7
0119	ADENOVIRUS TYPE 19	1	0	0	0	0	0	0	0	0	1
0137	ADENOVIRUS TYPE 37	1	0	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	1	0	0	0	0	0	0	0	0	1
0203	INFLUENZA B VIRUS	0	0	0	0	0	0	2	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	0	1	0	0	1
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	0	0	2	2
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	0	0	2	0	2
0700	ORNITHOSIS-PSITTACOSIS	0	0	0	0	0	0	0	1	0	1
1014	ECHOVIRUS TYPE 14	0	0	0	0	0	0	0	0	1	1
1200	MUMPS VIRUS	0	0	2	0	0	0	1	0	1	4
1300	HERPES VIRUS GROUP - NOT TYPED	1	0	0	0	0	0	0	0	0	1
1301	HERPES SIMPLEX VIRUS - NOT TYP	2	14	0	0	0	0	1	0	1	18
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	19	5	1	0	2	11	6	44
1303	VARICELLA-ZOSTER VIRUS	1	0	0	0	0	0	0	0	0	1
1306	HERPES SIMPLEX TYPE 1	4	19	0	0	0	0	0	0	1	24
1307	HERPES SIMPLEX TYPE 2	0	51	0	0	0	0	0	0	0	51
1401	COXIELLA BURNETII	0	0	0	0	1	0	2	3	1	7
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	0	0	0	0	0	1	1
1513	COWPOX VIRUS	0	0	0	0	0	0	0	0	1	1
1514	MOLLUSCUM CONTAGIOSUM	0	0	0	0	0	0	0	0	1	1
1522	RUBELLA VIRUS	0	0	0	0	1	0	0	1	1	3
1532	HEPATITIS B ANTIGEN	0	1	0	0	0	0	0	0	4	5
1536	HEPATITIS C VIRUS	0	0	0	0	0	0	0	0	3	3
1541	CHLAMYDIA TRACHOMATIS - UNSPEC	4	134	0	0	0	0	0	0	1	139
1542	CHLAMYDIA TRACHOMATIS - A-K	2	0	0	0	0	0	0	0	0	2
1543	CHLAMYDIA L1-L3 - (LGV TYPE)	0	11	0	0	0	0	0	0	0	11
1556	CMV - CYTOMEGALOVIRUS	0	2	0	2	0	5	3	1	7	20
1564	ROTAVIRUS	0	0	0	0	0	0	1	2	0	3
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	0	0	3	3
9992	ROSS RIVER VIRUS	0	0	0	0	27	0	1	1	1	30
TOTAL		21	232	21	7	30	5	17	22	36	391

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

NON-VIRAL PATHOGEN IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

SAMPLE COLLECTION DATE: OCTOBER - DECEMBER 1990

CODE 019 - FAIRFIELD HOSPITAL, MELBOURNE (VIC)
CODE 112 - INSTITUTE OF CLINICAL PATHOLOGY & MEDICAL RESEARCH, WESTMEAD (NSW)
CODE 115 - STATE HEALTH LABORATORY, BRISBANE (QLD)
CODE 400 - DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON (QLD)
CODE 420 - NAMBOUR GENERAL HOSPITAL (QLD)
CODE DSH - DIAGNOSTIC SERVICES LTD, HOBART (TAS)
CODE RHH - ROYAL HOBART HOSPITAL (TAS)
CODE TPL - TOOWOOMBA PATHOLOGY LABORATORY (QLD)

		019	112	115	400	420	DSH	RHH	TPL	TOTAL
AE00	AEROMONAS SPECIES	0	0	0	24	0	0	0	0	24
AS00	ASPERGILLUS SPECIES	0	0	0	0	0	2	0	0	2
BO01	BORDETELLA PERTUSSIS	0	0	0	33	0	0	0	9	42
BR00	BRUCELLA SPECIES	0	0	0	2	0	0	0	1	3
BR01	BRUCELLA ABORTUS	0	0	5	0	0	0	0	0	5
BT00	BACTEROIDES SPECIES	0	0	0	0	0	0	0	1	1
CA00	CANDIDA SPECIES	0	0	116	0	0	7	0	1	124
CL00	CLOSTRIDIUM SPECIES	0	0	0	1	0	0	0	0	1
CL02	CLOSTRIDIUM PERFRINGENS	0	0	0	1	0	0	0	0	1
CL03	CLOSTRIDIUM DIFFICILE	0	0	0	1	0	0	0	0	1
CM00	CAMPYLOBACTER SPECIES	0	0	0	31	0	42	0	0	73
CM01	CAMPYLOBACTER JEJUNI	0	0	0	0	0	0	0	22	22
CR00	CRYPTOCOCCUS SPECIES	0	1	5	0	0	0	0	0	6
CT00	CRYPTOSPORIDIUM SPECIES	0	0	0	1	0	0	0	20	21
EA01	ENTAMOEBA HISTOLYTICA	0	0	2	1	0	0	1	0	4
EC01	ECHINOCOCCUS GRANULOSUS	0	0	6	0	0	0	0	0	6
EN00	ENTEROBACTER SPECIES	0	0	0	0	0	0	0	1	1
EP00	EPIDERMIDOPHYTON SPECIES	0	0	0	4	0	1	0	2	7
ES01	ESCHERICHIA COLI	0	0	0	21	3	0	0	10	34
ET01	ENTEROBIUS VERMICULARIS	0	0	0	2	0	0	0	0	2
GI01	GIARDIA LAMBLIA	0	0	0	18	0	6	0	9	33
HE01	HELICOBACTER PYLORI	0	0	0	7	0	0	0	0	7
HM02	HAEMOPHILUS INFLUENZAE	0	0	0	3	1	0	0	2	6
KL00	KLEBSIELLA SPECIES	0	0	0	0	0	1	0	0	1
LE00	LEGIONELLA SPECIES	0	0	1	0	0	0	0	0	1
LE01	LEGIONELLA PNEUMOPHILA	0	1	3	0	0	0	0	0	4
LS00	LEPTOSPIRA SPECIES	0	0	3	0	0	0	0	0	3
LS03	LEPTOSPIRA ICTEROHAEMORRHAGIAE	0	0	1	0	0	0	0	0	1
LS04	LEPTOSPIRA POMONA	0	5	7	0	0	0	0	0	12
LS07	LEPTOSPIRA HARDJO	0	4	1	0	0	0	0	0	5
MI00	MICROSPORUM SPECIES	0	0	0	10	0	2	0	0	12
MY00	MYCOBACTERIUM SPECIES	0	0	0	1	0	0	0	0	1
NE01	NEISSERIA GONORRHOEAE	0	0	0	1	0	2	0	3	6
NE02	NEISSERIA MENINGITIDIS	0	0	0	1	0	0	0	2	3
NOTL	NOT LISTED	0	0	0	33	0	0	0	0	33
PA00	PASTEURELLA SPECIES	0	0	0	0	0	5	0	0	5
PA01	PASTEURELLA MULTOCIDA	0	0	0	2	0	0	0	0	2
PL01	PLASMODIUM FALCIPARUM	0	0	24	1	0	0	0	0	25
PL02	PLASMODIUM VIVAX	0	0	38	0	0	0	0	0	38
PR00	PROTEUS SPECIES	0	0	0	2	1	0	0	1	4
PS00	PSEUDOMONAS SPECIES	0	0	0	0	1	0	0	0	1
SA00	STAPHYLOCOCCUS SPECIES	0	0	0	1	0	2	0	6	9
SA01	STAPHYLOCOCCUS AUREUS	0	0	0	3	0	0	0	2	5
SE00	STREPTOCOCCUS SPECIES	0	0	0	0	1	0	0	2	3
SE01	STREPTOCOCCUS PNEUMONIAE	0	0	0	0	3	0	0	3	6
SH04	SHIGELLA SONNEI (A	0	0	0	0	0	0	0	3	3
SL00	SALMONELLA SPECIES	0	0	0	33	0	2	0	21	56
SL01	SALMONELLA TYPHI	0	0	1	0	0	0	0	0	1
SL04	SALMONELLA TYPHIMURIUM	0	0	0	1	0	0	0	0	1
TC01	TRICHOMONAS VAGINALE	0	0	6	6	0	8	0	1	21
TI00	TRICHOPHYTON SPECIES	0	0	17	41	1	14	0	5	78
TP01	TOXOPLASMA GONDI	3	8	12	8	0	0	0	0	31

		019	112	115	400	420	DSH	RHH	TPL	TOTAL
TR01	TREPONEMA PALLIDUM	0	0	121	6	0	0	0	0	127
YE01	YERSINIA ENTEROCOLITICA	0	0	0	7	0	0	0	0	7
TOTAL		3	19	369	307	11	94	1	127	931

NB: NUMBERS MAY CHANGE AT A LATER DATE AS A RESULT OF LATE REPORTING

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

NON-VIRAL PATHOGEN IDENTIFICATIONS CATEGORISED BY SOURCE SPECIMENS - PART 1

SAMPLE COLLECTION DATE: OCTOBER - DECEMBER 1990

BL - WHOLE BLOOD; BR - BRONCHIAL WASHINGS OR ASPIRATE; CS - CEREBROSPINAL FLUID;
EY - EYE; FA - FAECES/RECTUM; GE - GENITAL SWAB; LE - LEUCOCYTES;
NA - NASOPHARYNGEAL SWAB; PD - PERITONEAL DIALYSIS FLUID; PF - PERICARDIAL,
PLEURAL OR JOINT FLUID; PU - PUS; SA - SALIVA; SK - SKIN; SM - SERUM;
SP - SPUTUM; SS - SKIN SCRAPINGS; TH - THROAT; UR - URINE;

POSTMORTEM OR BIOPSY SPECIMENS: MB - BLOOD, BONE MARROW; MD - DIGESTIVE TRACT;
MH - HEART; MK - KIDNEY; ML - LIVER; MN - BRAIN, SPINAL CORD; MP - LUNGS;
MR - RESPIRATORY TRACT; MS - SPLEEN, LYMPH NODES; MO - OTHER POSTMORTEM/BIOPSY
SPECIMEN

		BL	CS	FA	GE	NA	PD	PF	PU	SK	SM	TOTAL
AE00	AEROMONAS SPECIES	0	0	17	0	0	0	0	4	1	0	22
AS00	ASPERGILLUS SPECIES	0	0	0	0	0	0	0	0	1	0	1
BO01	BORDETELLA PERTUSSIS	0	0	0	0	0	0	0	0	0	42	42
BR00	BRUCELLA SPECIES	1	0	0	0	0	0	0	0	0	2	3
BR01	BRUCELLA ABORTUS	0	0	0	0	0	0	0	0	0	5	5
BT00	BACTEROIDES SPECIES	1	0	0	0	0	0	0	0	0	0	1
CA00	CANDIDA SPECIES	1	0	4	98	0	0	0	0	11	0	114
CL00	CLOSTRIDIUM SPECIES	0	0	0	0	0	0	0	1	0	0	1
CL02	CLOSTRIDIUM PERFRINGENS	0	0	0	0	0	0	0	1	0	0	1
CL03	CLOSTRIDIUM DIFFICILE	0	0	1	0	0	0	0	0	0	0	1
CM00	CAMPYLOBACTER SPECIES	0	0	73	0	0	0	0	0	0	0	73
CM01	CAMPYLOBACTER JEJUNI	0	0	22	0	0	0	0	0	0	0	22
CR00	CRYPTOCOCCUS SPECIES	0	2	0	0	0	0	0	0	0	4	6
CT00	CRYPTOSPORIDIUM SPECIES	0	0	21	0	0	0	0	0	0	0	21
EA01	ENTAMOEBA HISTOLYTICA	0	0	2	0	0	0	0	0	0	2	4
EC01	ECHINOCOCCUS GRANULOSUS	0	0	0	0	0	0	0	0	0	6	6
EN00	ENTEROBACTER SPECIES	1	0	0	0	0	0	0	0	0	0	1
EP00	EPIDERMIDOPHYTON SPECIES	0	0	0	0	0	0	0	0	1	0	1
ES01	ESCHERICHIA COLI	14	0	19	0	0	1	0	0	0	0	34
GI01	GIARDIA LAMBLIA	0	0	33	0	0	0	0	0	0	0	33
HM02	HAEMOPHILUS INFLUENZAE	2	2	0	0	0	0	1	0	0	0	5
KL00	KLEBSIELLA SPECIES	1	0	0	0	0	0	0	0	0	0	1
LE00	LEGIONELLA SPECIES	0	0	0	0	0	0	0	0	0	1	1
LE01	LEGIONELLA PNEUMOPHILA	0	0	0	0	0	0	0	0	0	4	4
LS00	LEPTOSPIRA SPECIES	0	0	0	0	0	0	0	0	0	3	3
LS03	LEPTOSPIRA ICTEROHAEMORRHAGIAE	0	0	0	0	0	0	0	0	0	1	1
LS04	LEPTOSPIRA POMONA	0	0	0	0	0	0	0	0	0	12	12
LS07	LEPTOSPIRA HARDJO	0	0	0	0	0	0	0	0	0	5	5
MI00	MICROSPORUM SPECIES	0	0	0	0	0	0	0	0	2	0	2
MY00	MYCOBACTERIUM SPECIES	0	0	0	0	0	0	0	1	0	0	1
NE01	NEISSERIA GONORRHOEAE	0	0	0	6	0	0	0	0	0	0	6
NE02	NEISSERIA MENINGITIDIS	3	0	0	0	0	0	0	0	0	0	3
NOTL	NOT LISTED	2	0	1	0	4	0	0	2	2	0	11
PA00	PASTEURELLA SPECIES	0	0	0	0	0	0	0	5	0	0	5
PA01	PASTEURELLA MULTOCIDA	0	0	0	0	0	0	0	2	0	0	2
PL01	PLASMODIUM FALCIPARUM	25	0	0	0	0	0	0	0	0	0	25
PL02	PLASMODIUM VIVAX	38	0	0	0	0	0	0	0	0	0	38
PR00	PROTEUS SPECIES	2	0	0	0	0	0	0	0	0	2	4
PS00	PSEUDOMONAS SPECIES	1	0	0	0	0	0	0	0	0	0	1
SA00	STAPHYLOCOCCUS SPECIES	8	0	1	0	0	0	0	0	0	0	9
SA01	STAPHYLOCOCCUS AUREUS	5	0	0	0	0	0	0	0	0	0	5
SE00	STREPTOCOCCUS SPECIES	3	0	0	0	0	0	0	0	0	0	3
SE01	STREPTOCOCCUS PNEUMONIAE	6	0	0	0	0	0	0	0	0	0	6
SH04	SHIGELLA SONNEI (A	0	0	3	0	0	0	0	0	0	0	3
SL00	SALMONELLA SPECIES	1	0	52	0	0	0	0	0	0	0	53
SL01	SALMONELLA TYPHI	0	0	0	0	0	0	0	0	0	1	1
SL04	SALMONELLA TYPHIMURIUM	0	0	1	0	0	0	0	0	0	0	1
TC01	TRICHOMONAS VAGINALE	0	0	0	18	0	0	0	0	0	0	18
TI00	TRICHOPHYTON SPECIES	0	0	0	0	0	0	0	1	31	0	32
TP01	TOXOPLASMA GONDI	0	0	0	0	0	0	0	0	0	29	29
TR01	TREPONEMA PALLIDUM	0	0	0	4	0	0	0	0	0	123	127
YE01	YERSINIA ENTEROCOLITICA	0	0	7	0	0	0	0	0	0	0	7
TOTAL		115	4	257	126	4	1	1	17	49	242	816

NB: NUMBERS MAY CHANGE AT A LATER DATE AS A RESULT OF LATE REPORTING

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

NON-VIRAL PATHOGEN IDENTIFICATIONS CATEGORISED BY SOURCE SPECIMENS - PART 2

SAMPLE COLLECTION DATE: OCTOBER - DECEMBER 1990

BL - WHOLE BLOOD; BR - BRONCHIAL WASHINGS OR ASPIRATE; CS - CEREBROSPINAL FLUID;
EY - EYE; FA - FAECES/RECTUM; GE - GENITAL SWAB; LE - LEUCOCYTES;
NA - NASOPHARYNGEAL SWAB; PD - PERITONEAL DIALYSIS FLUID; PF - PERICARDIAL,
PLEURAL OR JOINT FLUID; PU - PUS; SA - SALIVA; SK - SKIN; SM - SERUM;
SP - SPUTUM; SS - SKIN SCRAPINGS; TH - THROAT; UR - URINE;

POSTMORTEM OR BIOPSY SPECIMENS: MB - BLOOD, BONE MARROW; MD - DIGESTIVE TRACT;
MH - HEART; MK - KIDNEY; ML - LIVER; MN - BRAIN, SPINAL CORD; MP - LUNGS;
MR - RESPIRATORY TRACT; MS - SPLEEN, LYMPH NODES; MO - OTHER POSTMORTEM/BIOPSY
SPECIMEN

		SP	SS	TH	UR	OT	MD	MN	MO	MI	TOTAL
AE00	AEROMONAS SPECIES	0	0	0	0	2	0	0	0	0	2
AS00	ASPERGILLUS SPECIES	1	0	0	0	0	0	0	0	0	1
CA00	CANDIDA SPECIES	5	0	3	1	1	0	0	0	0	10
EP00	EPIDERMIDOPHYTON SPECIES	0	6	0	0	0	0	0	0	0	6
ET01	ENTEROBIUS VERMICULARIS	0	0	0	0	0	0	0	0	2	2
HE01	HELICOBACTER PYLORI	0	0	0	0	0	6	0	0	1	7
HM02	HAEMOPHILUS INFLUENZAE	1	0	0	0	0	0	0	0	0	1
MI00	MICROSPORUM SPECIES	0	10	0	0	0	0	0	0	0	10
NOTL	NOT LISTED	0	4	11	0	2	0	0	5	0	22
SL00	SALMONELLA SPECIES	0	0	0	2	1	0	0	0	0	3
TC01	TRICHOMONAS VAGINALE	0	0	0	1	0	0	0	2	0	3
TI00	TRICHOPHYTON SPECIES	0	46	0	0	0	0	0	0	0	46
TP01	TOXOPLASMA GONDI	0	0	0	0	1	0	1	0	0	2
TOTAL		7	66	14	4	7	6	1	7	3	115

NB: NUMBERS MAY CHANGE AT A LATER DATE AS A RESULT OF LATE REPORTING