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COMMUNICABLE DISEASES NETWORK-AUSTRALIA
A National Network for Communicable Diseases Surveillance

COMMONWEALTH DEPARTMENT OF HUMAN SERVICES AND HEALTH

THE CURRENT GLOBAL SITUATION OF THE HIV/AIDS PANDEMIC

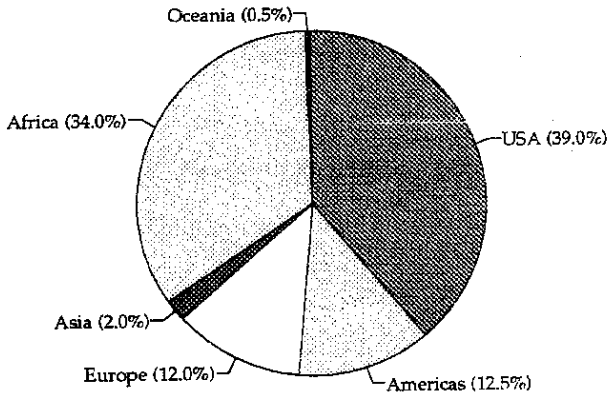
Reproduced from Weekly Epidemiological Record 1995; 70: 353-355

As of 15 December 1995, 1,291,810 cumulative AIDS cases in adults and children have been reported to the World Health Organization (WHO) from 193 countries and areas (Figure 1). This represents a 26% increase from the 1,025,073 cases reported on 3 January 1995.[1]

The accompanying Table provides the number of reported AIDS cases to date, by continent.

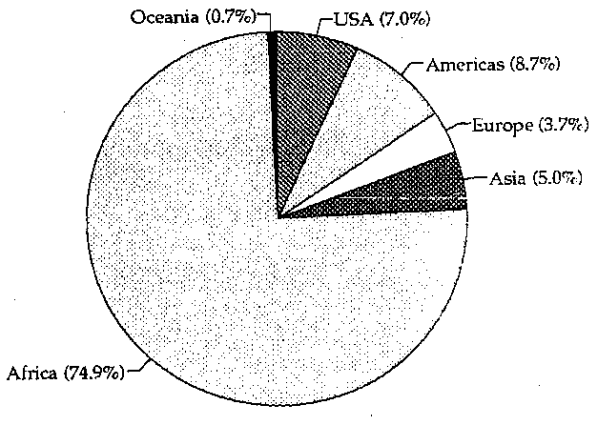
In January 1995, WHO estimated that there were 13 to 15 million HIV-infected adults alive as of late 1994.[1] In 1995, following a country-by-country review of HIV/AIDS data, WHO revised its estimate of 1994 adult HIV prevalence to 17 million (see page 59). Based on these revised prevalence estimates, and allowing for under-diagnosis, incomplete reporting, and reporting delay, WHO provisionally estimates that 6 million adult and paediatric cumulative AIDS cases have occurred as of late 1995 (Figure 2). As new data have been incorporated, and a more detailed estimation has been made, this estimate should not be compared with previously published estimates of cumulative AIDS cases.

Figure 1. Reported cases of AIDS, cumulative to late 1995, by region (n=1,291,810)[1]



1. The USA is not included with the Americas

Figure 2. Estimated cases of AIDS, cumulative to late 1995, by region (n=6,000,000)[1]



1. The USA is not included with the Americas

Reference

1. *Wkly Epidemiol Rec 1995; 70: 5-8.*

Table. Reported AIDS cases, by country, cumulative to 1995

Country / Area	Number of cases	Date of report
AFRICA		
Algeria	217	31.12.94
Angola	895	31.03.95
Benin	1066	10.07.95
Botswana	3110	05.06.95
Burkina Faso	3722	31.12.93
Burundi	7024	31.12.94
Cameroon	5375	31.12.94
Cape Verde	92	31.12.94
Central African Republic	4463	10.11.95
Chad	3457	31.05.95
Comoros	7	15.11.95
Congo	7773	22.04.95
Cote d'Ivoire	25236	31.05.95
Djibouti	768	30.10.95
Egypt	120	01.08.95
Equatorial Guinea	157	09.11.95
Eritrea	1664	31.07.95
Ethiopia	19433	30.07.95
Gabon	990	27.10.95
Gambia	369	30.09.95
Ghana	15890	30.06.95
Guinea	1681	31.03.95
Guinea-Bissau	707	31.12.94
Kenya	56573	25.04.95
Lesotho	515	31.12.94

Table . Reported AIDS cases, by country, cumulative to 1995, continued

Country/Area	Number of cases	Date of report
AFRICA - continued		
Liberia	191	31.03.94
Libyan Arab Jamahiriya	15	10.04.94
Madagascar	22	14.11.95
Malawi	39989	06.11.95
Mali	2594	10.01.95
Mauritania	130	22.08.95
Mauritius	27	31.12.94
Morocco	280	27.08.95
Mozambique	1815	31.05.95
Namibia	5101	31.12.93
Niger	1729	13.10.95
Nigeria	1591	31.05.95
Reunion	65	20.03.92
Rwanda	10706	30.06.93
Sao Tome and Principe	18	28.08.95
Senegal	1573	27.06.95
Seychelles	6	12.09.94
Sierra Leone	162	31.10.95
Somalia	13	06.07.95
South Africa	8405	03.08.95
Sudan	1258	30.10.95
Swaziland	590	26.10.95
Togo	5609	30.06.95
Tunisia	255	11.08.95
Uganda	46120	31.12.94
United Republic of Tanzania	53247	18.05.95
Zaire	26131	06.07.94
Zambia	32491	02.06.95
Zimbabwe	41298	19.10.95
Total	442735	
AMERICAS		
Anguilla	5	31.03.95
Antigua and Barbuda	41	31.03.95
Argentina	6835	31.09.95
Bahamas	1876	30.06.95
Barbados	586	30.06.95
Belize	100	30.06.94
Bermuda	291	30.06.95
Bolivia	105	30.06.95
Brazil	71111	02.09.95
British Virgin Islands	10	30.06.95
Canada	12119	30.09.95
Cayman Islands	18	30.06.95
Chile	1290	30.09.95
Colombia	5763	30.06.95
Costa Rica	851	30.09.95
Cuba	379	08.07.95

Country/Area	Number of cases	Date of report
AMERICAS - continued		
Dominica	31	30.06.94
Dominican Republic	2948	30.09.95
Ecuador	491	31.03.95
El Salvador	1248	30.09.95
French Guana	489	30.09.95
Grenada	63	31.12.94
Guadeloupe	623	30.09.95
Guatemala	594	31.12.94
Guyana	698	30.06.95
Haiti	4967	31.12.92
Honduras	4424	30.06.95
Jamaica	1314	30.09.95
Martinque	344	30.09.95
Mexico	26660	30.09.95
Montserrat	7	30.06.95
Netherlands Antilles and Aruba	177	30.09.95
Nicaragua	117	30.09.95
Panama	947	30.09.95
Paraguay	176	30.06.95
Peru	2709	30.06.95
Saint Kitts and Nevis	47	30.06.95
Saint Lucia	73	30.09.95
Saint Vincent and the Grenadines	67	30.06.95
Suriname	209	30.06.95
Trinidad and Tobago	1892	30.06.95
Turks and Caicos Islands	39	30.09.93
United States of America	501310	31.10.95
Uruguay	658	30.09.95
Venezuala	4960	30.09.95
Total	659662	
ASIA		
Afghanistan	-	15.02.92
Armenia	2	30.04.93
Azerbaijan	2	30.09.95
Bahrain	28	21.11.95
Bangladesh	7	22.11.95
Bhutan	-	22.11.95
Brunei Darussalam	6	30.04.95
Cambodia	86	15.10.95
China	77	30.06.95
Cyprus	47	29.10.95
Democratic People's Republic of Korea	-	22.11.95

Table . Reported AIDS cases, by country, cumulative to 1995, continued

Country/Area	Number of cases	Date of report
ASIA - continued		
Georgia	2	30.04.93
Hong Kong	148	30.06.95
India	2095	22.11.95
Indonesia	82	22.11.95
Iran (Islamic Republic of)	118	29.11.95
Iraq	42	02.11.95
Israel	340	30.09.95
Japan	1062	31.10.95
Jordan	39	28.10.95
Kazakhstan	5	30.09.95
Kuwait	18	05.11.95
Kyrgyzstan	-	30.04.93
Lao People's Democratic Republic	13	30.08.95
Lebanon	91	02.11.95
Macao	8	30.06.95
Malaysia	259	31.07.95
Maldives	2	22.11.95
Mongolia	-	01.10.95
Myanmar	570	22.11.95
Nepal	48	22.11.95
Oman	55	13.11.95
Pakistan	52	05.11.95
Philippines	220	31.08.95
Qatar	80	11.11.95
Republic of Korea	32	31.05.95
Saudi Arabia	137	15.11.95
Singapore	145	30.06.95
Sri Lanka	52	22.11.95
Syrian Arab Republic	30	08.07.95
Tajikistan	-	30.09.95
Thailand	22135	22.11.95
Turkey	172	30.09.95
Turkmenistan	1	30.04.93
United Arab Emirates	8	12.02.93
Uzbekistan	2	30.09.95
Viet Nam	292	20.09.95
Yemen	20	18.10.95
Total[a]	28630	
EUROPE		
Albania	5	30.09.95
Austria	1442	30.09.95
Belarus	14	30.09.95
Belgium	1930	30.09.95
Bulgaria	35	30.09.95
Croatia	89	30.09.95
Czech Republic	69	30.09.95

Country/Area	Number of cases	Date of report
EUROPE - continued		
Denmark	1781	30.09.95
Estonia	6	30.09.95
Finland	216	30.09.95
France	38372	30.09.95
Germany	13665	30.09.95
Greece	1236	30.09.95
Hungary	195	30.09.95
Iceland	37	30.09.95
Ireland	491	30.09.95
Italy	30447	30.09.95
Latvia	9	30.09.95
Lithuania	6	30.09.95
Luxembourg	100	30.09.95
Malta	35	30.09.95
Monaco	37	30.09.95
Netherlands	3734	30.09.95
Norway	482	30.09.95
Poland	346	30.09.95
Portugal	2726	30.09.95
Republic of Moldova	6	30.09.95
Romania	3601	30.09.95
Russian Federation	191	30.09.95
San Marino	1	30.09.95
Slovak Republic	12	30.09.95
Slovenia	47	30.09.95
Spain	34618	30.09.95
Sweden	1276	30.09.95
Switzerland	4795	30.09.95
Ukraine	48	30.09.95
United Kingdom	11494	30.09.95
Yugoslavia[b]	509	30.09.95
Total	154103	
OCEANIA		
America Samoa	-	30.03.95
Australia	5883	31.03.95
Cook Islands	-	31.12.94
Fiji	7	20.03.95
French Polynesia	45	31.12.94
Guan	31	31.08.95
Kiribati	-	27.09.95
Mariana Islands	6	01.10.95
Marshall Islands	2	30.09.95
Micronesia (Federated States of)	2	11.10.95
Nauru	-	08.06.95
New Caledonia and Dependencies	43	08.06.95
New Zealand	511	30.09.95

Table . Reported AIDS cases, by country, cumulative to 1995, continued

Country/Area	Number of cases	Date of report
OCEANIA - continued		
Niue	-	26.04.95
Palua	1	20.10.95
Papua New Guinea	141	28.09.95
Samoa	2	31.07.95
Solomon Islands	-	29.09.95
Tokelau	-	19.09.95
Tonga	5	02.11.94
Tuvalu	-	31.12.94
Vanuatu	-	10.04.95
Wallis and Futuna Islands	1	28.09.95
Total	6680	
WORLD TOTAL	1291810	

a. Does not include 8 cases reported for United Nations Relief and Works Agency for Palestine Refugees in the Near East.
b. Refers to states/areas of the former Socialist Federal Republic of Yugoslavia not otherwise listed separately.

WORLD HEALTH ORGANIZATION PROVISIONAL WORKING ESTIMATES OF ADULT HIV PREVALENCE

Reproduced from Weekly Epidemiological Record 1995; 70: 355-357.

Following a country-by-country review of HIV/AIDS data, the World Health Organization (WHO) estimates that globally approximately 17 million adults were living with HIV infection at the end of 1994. The majority (66%) of these infections were in sub-Saharan Africa (11.2 million) followed by South and South-East Asia (3 million), with Australasia having the fewest infections (12,000). In 50 countries the estimated HIV prevalence rate was less than 5 per 10,000 sexually active adults and in 15 countries (all in sub-Saharan Africa) the prevalence rate was over 500 per 10,000. The lowest prevalence rates were seen in Central and East Asia and the highest in Central and Southern Africa. The estimated numbers of persons living with HIV infection are shown in the Table.

WHO uses several methods and a variety of data sources to make estimates of the current and future extent of the HIV/AIDS pandemic. Official country estimates of HIV prevalence made by national experts or national AIDS programmes are used when available. When not available, WHO makes estimates based upon a review of HIV sero-prevalence studies, reported AIDS cases, estimates of under-reporting, population size and structure (including the age/sex distribution and urban/rural differentials in HIV spread), and the predominant modes of transmission.

HIV sero-prevalence rates for populations at increased risk of HIV infection are used to set an upper limit for the national estimate. Sero-prevalence data from studies of groups thought to be more representative of the general population are used as the basis of the national estimate. When appropriate, HIV prevalence is estimated for sub-populations of a country and then aggregated for a national estimate.

Estimates of HIV prevalence are intended to give an indication of the magnitude of the HIV pandemic but should be considered provisional due to the difficulties in accurately assessing levels of HIV infection in national populations.

Table. Estimated number of persons living with HIV infection, by country, at the end of 1994[a]

Country/Area	Estimated number of infections
AFRICA	
Algeria	10000
Angola	48000
Benin	27000
Botswana	125000
Burkina Faso	300000
Burundi	75000
Cameroon	175000
Central African Republic	85000
Chad	75000
Comoros	250
Congo	80000
Cote d'Ivoire	390000
Djibouti	8000
Egypt	7500
Equatorial Guinea	2000
Eritrea	50000
Ethiopia	588000

Table. Estimated number of persons living with HIV infection, by country, at the end of 1994[a], continued

Country/Area	Estimated number of infections
AFRICA - continued	
Gabon	13000
Gambia	11000
Ghana	172000
Guinea	17000
Guinea-Bissau	15000
Kenya	1000000
Lesotho	28000
Liberia	17000
Libyan Arab Jamahiriya	1300
Madagascar	2500
Malawi	650000
Mali	58000
Mauritania	7000
Mauritius	500
Morocco	5000
Mozambique	400000
Namibia	45000
Niger	40000
Nigeria	1050000
Reunion	150
Rwanda	250000
Senegal	50000
Sierra Leone	60000
Somalia	10000
South Africa	650000
Sudan	125000
Swaziland	15000
Togo	150000
Tunisia	2000
Uganda	1300000
United Republic of Tanzania	840000
Zaire	680000
Zambia	700000
Zimbabwe	900000
Total	11310200
AMERICAS	
Argentina	60000
Bahamas	6000
Barbados	4000
Belize	2000
Bolivia	2000
Brazil	550000
Canada	30000
Chile	10000
Colombia	40000
Cost Rica	9000
Cuba	1300

Country/Area	Estimated number of infections
AMERICAS - continued	
Dominican Republic	40000
Ecuador	16000
El Salvador	15000
Guatemala	20000
Guyana	6000
Haiti	150000
Honduras	40000
Jamaica	12000
Mexico	200000
Nicaragua	1500
Panama	8000
Paraguay	2600
Peru	30000
Suriname	2500
Trinidad and Tobago	6000
United States of America	700000
Uruguay	5000
Venezuela	35000
Total	2003900
ASIA	
Afghanistan	50
Armenia	20
Azerbaijan	50
Bahrain	500
Bangladesh[b]	15000
Bhutan	75
Brunei Darussalam	300
Cambodia	90000
China	10000
Cyprus	1000
Democratic People's Republic of Korea[c]	100
Georgia	500
Hong Kong	3000
India	1750000
Indonesia	50000
Iran (Islamic Republic of)	1000
Iraq	250
Israel	2000
Japan	6200
Jordan	600
Kazakhstan	50
Kuwait	100
Kyrgyzstan	25
Lao People's Democratic Republic	550
Lebanon	1350

Table . Estimated number of persons living with HIV infection, by country, at the end of 1994[a], continued

Country/Area	Estimated number of infections
ASIA - continued	
Malaysia	30000
Maldives	60
Mongolia	150
Myanmar	350000
Nepal	5000
Oman	1000
Pakistan	40000
Philippines	18000
Qatar	290
Republic of Korea	2000
Saudi Arabia	1000
Singapore	1200
Sri Lanka	5000
Syrian Arab Republic	700
Tajikistan	25
Thailand	700000
Turkey	500
Turkmenistan	25
United Arab Emirates	2000
Uzbekistan	100
Viet Nam	25000
Yemen	750
Total	3116420
EUROPE	
Albania	100
Austria	8000
Belarus	200
Belgium	10000
Bosnia and Herzegovina	750
Bulgaria	300
Croatia	300
Czech Republic	2000
Denmark	4000
Estonia	40
Finland	500
France	90000

Country/Area	Estimated number of infections
EUROPE - continued	
Germany	43000
Greece	5000
Hungary	3000
Iceland	200
Ireland	1700
Italy	90000
Latvia	100
Lithuania	200
Luxembourg	300
Malta	200
Netherlands	3000
Norway	1250
Poland	10000
Portugal	8000
Republic of Moldova	40
Romania	500
Russian Federation	3000
Slovak Republic	250
Slovenia	150
Spain	120000
Sweden	3000
Switzerland	12000
The Former Yugoslav Republic of Macedonia	500
Ukraine	1500
United Kingdom	25000
Yugoslavia[d]	5000
Total	453080
OCEANIA	
Australia	11000
Fiji	150
New Zealand	1200
Papua New Guinea	4000
Total	16350
WORLD TOTAL	16899950

a. Countries with adult populations of over 100,000.
b. The Government of Bangladesh has officially reported 44 HIV-infected adults. The estimate of 15,000 is speculative but represents what WHO believes to be a conservative estimate of the actual number of HIV-infected adults in Bangladesh.
c. Despite extensive testing, no confirmed cases of HIV have been detected in the Democratic People's Republic of Korea. WHO believes HIV to be present in the country but at a very low level.
d. Refers to states/areas of the former Socialist Federal Republic of Yugoslavia not otherwise listed separately.

EDITORIAL: GLOBAL HIV/AIDS - A CHANGING PICTURE

John Kaldor, National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Sydney, NSW, 2010

The World Health Organization (WHO), has recently released new country-by-country estimates of the number of people living with HIV infection (page 59). These estimates, which accompanied the regular global summary of reported AIDS cases, represent the most comprehensive attempt so far to measure the spread of HIV infection around the world.

For some countries, including Australia, the estimated number of people living with HIV infection was provided by a national expert group, or through other specific AIDS program initiatives. For most countries, and in particular the developing world, WHO constructed estimates based on the best available information.

The preferred approach to estimating the number of people with HIV infection in a country is the method of back-projection, which uses counts of diagnosed AIDS cases as a means of inferring the number of HIV infections that must have occurred in the past to give rise to these cases. This method relies on accurate AIDS case-counting, which is consistent over time, as well as sophisticated statistical techniques, and has been primarily used for Western developed countries. In developing countries, serological surveys for HIV antibody in population groups have been the basis for estimating the number of people with HIV infection. As the extent and quality of such surveys are highly variable across countries, there are limitations in the comparability of national data sets. WHO has nevertheless attempted to standardise the estimates as much as possible.

Comparing the reported AIDS cases with the estimated number of HIV infections, it is striking to note the implicit under-reporting from Africa where the AIDS epidemic probably began: while 67% of the world's people with HIV are estimated to live in Africa, only 34% of reported AIDS cases come from this continent. The contrast in the two proportions is even more dramatic for Asia (18% versus 2.2%). In this case, the explanation is also the recency of most HIV infections and the fact only a limited proportion have progressed to AIDS as yet.

Within Africa, the new estimates of HIV infection confirm the huge impact of the epidemic in the Central and East African countries of Kenya, Uganda, Tanzania, Zaire, Zambia and Zimbabwe. They also reveal the presence of over a million HIV infections in Nigeria, the most populous African country, which had only reported 1,591 AIDS cases by mid-1995. Kenya and Uganda, also with a million or more people estimated to be living with HIV infection, had reported 56,000 and 46,000 AIDS cases respectively. Another emerging epidemic is taking place in South Africa, with 8,400 AIDS cases reported, and an estimated 650,000 people living with HIV infection. The WHO report appears to make no distinction between HIV-1, the subtype prevalent in most parts of the world, and HIV-2, which has primarily been associated with West Africa.

In the Americas, Brazil is fast approaching the United States as the country with the largest number of people living with HIV infection, despite having reported less than one seventh as many AIDS cases. Nearly 40% of the world's AIDS case reports have come from the United States (compared to barely 4% of the estimated number of people with HIV infection). The cumulative AIDS case count in the United States has just passed the half-million mark, while the total number currently living with HIV is estimated at 700,000. The relatively low ratio of these two figures indicates the advanced stage of the epidemic in the United States compared to most other countries.

In Asia, the new global focus of HIV infection, the pattern of the epidemic remains very uneven. India is now estimated to be the country in the world with the greatest number of HIV infections, representing 10% of the global total and more than half the cases in Asia. This is still a smaller proportion than the 16% that India's citizens represent of the world population. Thailand and Myanmar (formerly Burma) make up a further 30% of the cases estimated for Asia. China, with fully 21% of the world population, is still estimated to have been barely affected by the HIV epidemic, having an estimated 10,000 cases. Indonesia, with the third largest population in Asia (and the fourth largest in the world), is estimated to have 50,000 people living with HIV infection. On a *per capita* basis, Cambodia has emerged as one of the countries most affected by the HIV epidemic in Asia, with an estimated 90,000 persons (1% of the population) living with HIV infection.

In Europe, Italy, France and Spain together account for two-thirds of the people with HIV infection. On a *per capita* basis, Spain now has the highest prevalence of HIV infection among all of the developed countries, a position long held by the United States.

At first glance, the estimated 11,000 people living with HIV infection in Australia seems low, given the routinely published counts of 19,000 reported HIV infections and around 4,000 deaths following AIDS. The difference is attributable to the substantial over-reporting of HIV diagnoses, particularly in the early period of the HIV epidemic when less attention was given to surveillance procedures, resulting in a substantial amount of double counting. Also notable in the small part of the world referred to by WHO as Oceania, is the estimated number of people with HIV infection in Papua New Guinea. On a *per capita* basis, the Papua New Guinea prevalence of HIV infection has now passed that of Australia.

In addition to reviewing the case counts provided by these reports it is essential that HIV epidemiology is continually reviewed on a national and regional basis to assess the needs of prevention programs and their effectiveness.

MELIOIDOSIS AND THE MONSOON IN TROPICAL AUSTRALIA

Bart Currie, Royal Darwin Hospital and Menzies School of Health Research
Adapted from the NT Communicable Diseases Bulletin 1995;2(8): 7-8

A number of cases of melioidosis can be expected in the tropical north of the Northern Territory, Western Australia and Queensland with the onset of the wet season.

Between December 1 1995 and January 18 1996, 12 cases of melioidosis were admitted to the Royal Darwin Hospital, two being relapses in previously diagnosed patients. There have been no deaths from melioidosis so far this wet season.

In the Northern Territory in previous wet seasons (November to April) the numbers of cases reported were: 21 in 1994-5 (with 3 deaths), 28 in 1993-4 (6 deaths) and 33 cases in 1990-91 (12 deaths).

Key facts about melioidosis

1. Melioidosis is caused by *Burkholderia* (formerly *Pseudomonas*) *pseudomallei*. It is the commonest cause of fatal community-acquired bacteraemic pneumonia at Royal Darwin Hospital (and possibly also Katherine and Gove Hospitals).
2. Other presentations of melioidosis include skin abscesses or ulcers, abscesses in internal organs such as prostate, spleen and liver, fulminant septicaemia with multi-organ abscesses and an unusual neurological illness (such as brainstem encephalitis). Persons without symptoms or a known history of disease have also been found to be serologically positive.
3. An ongoing prospective study has documented over 100 cases of melioidosis at Royal Darwin Hospital. Of these, around 40% are diabetic and 50% heavy alcohol consumers. Virtually all fatalities have been in patients with these or other risk factors such as renal disease.
4. Occasional cases occur in children.
5. The likelihood of diagnosis is increased by using selective culture media (modified Ashdown's broth), frequent sampling (sputum, throat, rectal and ulcer swabs) and collection of blood cultures. Clinicians should liaise with laboratory staff to ensure selective media are available.
6. Mortality is decreased by early diagnosis and appropriate antibiotic therapy.
7. Follow up of cases and ensuring compliance with eradication therapy (usually three months of antibiotics after discharge) is critical to prevent relapse, which can be fatal.
8. The Top End empirical treatment protocol for adult community-acquired pneumonia is devised to cover both melioidosis in patients with risk factors, as well as other important pathogens (Table).
9. Once melioidosis is confirmed the treatment recommended is[1]:

   Initial intensive therapy for seven to 14 days of

   – intravenous high dose ceftazidime

   plus either

   – high dose cotrimoxazole

   or

   – high dose doxycycline.

   This is followed by

   Eradication therapy for at least three months of

   – oral monotherapy with either high dose cotrimoxazole or doxycycline.
10. Each monsoon, cases of melioidosis occur in travellers returning from tropical Australia to southern states or overseas countries.

Reference

1. Victorian Drug Usage Advisory Committee. *Antibiotic guidelines, 9th edition*. Melbourne: Victorian Medical Postgraduate Foundation Inc, 1996-7.

Table. Initial therapy of adult community-acquired pneumonia in the Top End[1]

	Mild pneumonia	Moderate pneumonia	Severe pneumonia
No risk factors[2] present	Penicillin	Penicillin	Ceftriaxone
Risk factors[2] present	Penicillin	Ceftriaxone plus gentamicin	Ceftriaxone or ceftazidime plus gentamicin

1. For 'atypical pneumonia' consider erythromycin.
2. Risk factors include: alcohol, diabetes, chronic lung disease, chronic renal failure and steroid therapy.

DIPHTHERIA: MAY BE NOT!

Jennifer M B Robson[1], *Michael Harrison*[1], *Lindsay W Wing*[2] *and Roscoe Taylor*[3]

We report a case of *Arcanobacterium haemolyticum* infection in which diphtheria was clinically suspected requiring appropriate medical and public health management until bacteriological results became available.

Diphtheria, an acute illness caused by toxigenic strains of *Corynebacterium diphtheriae*, primarily affects the upper respiratory tract. It is characterized by an inflammatory exudate which forms a greyish membrane and can cause acute obstruction. A toxin produced by the organism can result in neuropathy, cardiomyopathy and death. The introduction of diphtheria antitoxin in the 1890's reduced the death rate to about 10%, but the mortality has not been reduced further by the use of antibiotics and other modern treatments. Symptoms similar to diphtheria may occasionally be caused by microorganisms other than *C. diphtheriae*.

Case Report

A 33 year old man from central Queensland was reviewed by an ear, nose and throat surgeon following acute onset of an extremely sore throat with fever and systemic symptoms. He experienced difficulty swallowing even liquids. Examination revealed a greyish membrane involving the right tonsil but also extending up over the soft palate. His white cell count was elevated at 20.2×10^3/uL with a left shift (89.9% neutrophils). Heterophile antibody was negative. His ESR was 13 mm/hr. Urgent gram strain of a throat swab showed moderate numbers of leucocytes and gram positive cocci and small numbers of gram positive bacilli. Although not considered characteristic of *C. diphtheriae* this diagnosis could not be excluded. Liver function was mildly abnormal with an aspartate transaminase of 51 U/L and an alanine transaminase of 77 U/L.

The patient reported receiving routine childhood immunisations but no recent boosters for either diphtheria or tetanus. His wife subsequently also developed a sore throat, although 2 and 5 year old sons, both of whom had been vaccinated, remained well. He had not ingested unpasteurized milk, nor had prolonged direct contact with animals. Neither he nor any family members had travelled overseas. Both the patient and his wife had attended a trade exhibition involving many overseas delegates, in the week prior to onset.

The throat swab was inoculated onto tellurite agar, Loeffler's slope (and subcultured after 1 day to tellurite agar) as well as blood agar containing a mupirocin disc at the junction of the primary and secondary streaks. All plates were incubated at 35-37°C aerobically.

In view of the clinical suspicion of diphtheria, diphtheria antitoxin was administered prior to bacteriological results becoming available and following consultation with an infectious diseases physician at Fairfield Hospital in Melbourne. Diphtheria antitoxin, which is derived from horse serum can contain foreign protein and may provoke acute allergic reactions or serum sickness. Therefore the patient was transferred to an intensive care unit for administration of the antitoxin. A test dose and subsequently the full recommended dose was administered without adverse effect. Following this and the administration of high doses of intravenous penicillin and a cephalosporin followed by erythromycin the patient made a full recovery.

Screening and prophylactic treatment of close contacts was coordinated by the Central Queensland Public Health Unit and carried out by several general practioners in Bundaberg. Nasopharyngeal swabs and throat swabs were collected from nine contacts and prophylactic erythromycin was prescribed prior to culture results becoming available. Subsequently throat swabs from the patient grew *A. haemolyticum* in heavy growth. His wife was found to have a Group A beta haemolytic *Streptococcus*. No screening cultures grew *C. diphtheriae*. Diphtheria toxoid IgG (EIA) performed at the time of onset of his illness demonstrated a low positive result, consistent with past vaccination.

Discussion

This case has been reported to heighten awareness of the potential for a resurgence of diphtheria, a disease with which many practitioners may have become unfamiliar. Diphtheria has become rare in Australia, unlike other vaccine preventable diseases such as rubella, pertussis and measles that have occurred at epidemic levels recently. Following the introduction of immunisation in the 1940s the number of cases has dropped dramatically. A single case of diphtheria was notified in 1993, 14 cases in 1992 and 8 cases were notified in 1991[1]. It is uncertain if these notified cases represent clinical cases of diphtheria. Patel *et al* report the isolation of 63 (24 toxigenic and 39 nontoxigenic) isolates of *C. diphtheriae* from predominantly Aborigi-

1. Drs JJ Sullivan, NJ Nicolaides & Partners, 165 Whitmore Street, Taringa Qld
2. Ear Nose & Throat Surgeon, Bundaberg, Qld
3. Central Queensland Public Health Unit, Rockhampton, Qld

nal patients over a 10 year period[2]. Only two had signs of faucal diphtheria.

Since 1990, however, there has been a major resurgence of diphtheria in Europe, centred mostly in Russia and Ukraine[3]. The outbreak in the Russian Federation is the largest outbreak in the developed world in recent years and has been the focus of global concern. Increasing international travel, migration from Eastern Europe and the emergence of epidemic clones means that accurate epidemiologic surveillance, reliable laboratory screening and clinical awareness are necessary. Although the reasons for the diphtheria epidemic are not fully understood, the presence of large numbers of susceptible children and adults has enabled the introduction or re-emergence of toxigenic strains of *C. diphtheriae*. Spread of the organism may have been facilitated by crowding and population migration resulting from the dissolution of the Soviet Union. In addition, adequate control measures were not implemented during the early phase of the epidemic.

Since many of the cases in Russia have been in young adults, waning vaccine induced immunity without the opportunity for natural boosting from exposure to the disease may have contributed to the resurgence. This highlights the importance of decennial booster vaccinations (in conjunction with tetanus) throughout adulthood for maintenance of immunity to diphtheria. A high primary vaccination rate must also be maintained. Routine cultures on throat swabs are unlikely to detect the presence of *C. diphtheriae* and if suspected, the laboratory should be alerted so that appropriate culture techniques can be performed[4].

This case is also reported to increase awareness of *A. haemolyticum* as a potential cause of bacterial pharyngitis in the community. Its commonest presentation is with a patchy follicular exudative pharyngitis often with a scarlatiniform rash (33-64%). Adolescents and young adults are more likely to be infected. Less commonly, it may cause a diphtheria like illness with the formation of a pseudo diphtheric membrane, a septicaemic illness or peritonsillar abscess[5-7]. It is likely to be more common than previously realised. Over a one year period one laboratory isolated the organism from 0.8% of throat swabs cultured[8]. In the 15-25 years age group, the isolation rate was 2.5%, which was just under half as frequent as Group A *Streptococcus* in this age group. One investigator has estimated that *A. haemolyticum* is almost as likely as Group A *Streptococcus* to cause pharyngitis, if a rash is present, in the 11-20 years age group[9].

Previously known as *Corynebacterium haemolyticum*, this organism may be misidentified as either a diphtheroid organism of *Corynebacterium* spp or dismissed as a contaminant or 'normal flora'. Characteristic haemolysis around the bacterial colonies does not develop until 48 hours or more after incubation when plates may have been discarded. This may contribute to the low rate of reported isolation. The current antibiotic treatment recommendation is erythromycin. Although the organism is sensitive to penicillin, antimicrobial tolerance with clinical relapses has been described[10].

References

1. Longbottom H, Evans D, Myint Htoo, Hargreaves J. Annual Report of the National Notifiable Diseases Surveillance System, 1993. *Comm Dis Intell* 1994: 18; 518-548.

2. Patel M, Morey F, Butcher A, *et al.* The frequent isolation of toxigenic *C. diphtheriae* at Alice Springs Hospital. *Comm Dis Intell* 1994; 18: 310-311.

National Health and Medical Research Council recommendations on diphtheria immunisation[1]

- Diphtheria vaccine in the form of diphtheria tetanus pertussis vaccine (DTP) should be given to all infants and children according to the Standard Childhood Vaccination Schedule at the ages of 2 months, 4 months, 6 months, 18 months and prior to school entry (4-5 years).
- Older individuals who have not received diphtheria vaccination should receive a primary course. These individuals are also likely to have missed vaccination against tetanus and, in the case of children, pertussis.

  Prior to the 8th birthday a primary course is three doses of DTP at intervals of two months.

  After the 8th birthday primary vaccination is 3 doses of adsorbed diphtheria tetanus vaccine (ADT) at intervals of 2 months.
- Protective antibody levels wane with age and booster doses should be given in the form of ADT at 10 year intervals.
- Diphtheria can be a significant risk for travellers in some countries so international travellers should ensure that their diphtheria vaccination is current.

Based on: National Health and Medical Research Council. *The Australian immunisation procedures handbook, fifth edition*. Canberra: Australian Government Publishing Service, 1995.

3. Diphtheria epidemic - New Independent States of the former Soviet Union, 1990-1994. *MMWR Morb Mort Wkly Rep* 1995; 44: 177-181.

4. Farizo KM, Strebel PM, Chen RT *et al*. Fatal respiratory disease due to *Corynebacterium diphtheria*: case report and review of guidelines for management, investigation and control. *Clin Infect Dis* 1993;16:59-68.

5. Green SL, LaPeter KS. Pseudo diphtheritic membranous pharyngitis caused by *Corynebacterium haemolyticum*. *JAMA* 1981; 245: 2330-2331.

6. Jobanputra RS, Swain CP. Septicaemia due to *Corynebacterium haemoltyicum*. *J Clin Path* 1975;28: 798-800.

7. Kovatch AL, Schuit KE, Michaels RH. *Corynebacterium haemolyticum* peritonsillar abscess mimicking diphtheria. *JAMA* 1983; 249: 1757-1758.

8. Jackson WR, Harrison MW, Robson JMB. *Arcanobacterium haemolyticum* and pharyngeal infection. [Abstract]. *Aust Microbiologist* 1992; 13: 37.

9. Waagner DC. *Arcanobacterium haemoltyticum*: biology of the organism and diseases in man. *Pediatr Infect Dis J* 1991; 10: 933-939.

10. Nyman M, Banck G, Thore M. Penicillin tolerance in *Arcanobacterium haemolyticum*. *J Infect Dis* 1990; 161: 261-265.

CORRESPONDENCE

TOXOPLASMOSIS AND KANGAROO MEAT

Dr Rod Davison and Dr Ossama El-Saadi; Brisbane North/Sunshine Coast Zonal Population Health Unit, Queensland

We refer to the recent article in *Communicable Diseases Intelligence* entitled *A probable food-borne outbreak of toxoplasmosis* by Robson *et al*[1]. We note also associated articles in the *Women's Weekly*, the daily press and electronic media which concentrated on a possible association with raw kangaroo meat. We recognise the value of bringing toxoplasmosis, and particularly congenital toxoplasmosis to the attention of the general community and the medical community and also the need to focus on possible modes of transmission. It is also important to note however that no evidence has been presented which warrants the conclusion that raw kangaroo meat was the source of toxoplasmosis.

As Dr Robson *et al* stated "no statistically significant association could be demonstrated between the acquisition of toxoplasmosis and any of the foods ingested". In fact any one or all of the foods or even the salads (which were not investigated) could have been the source of infection.

It is interesting to note that as many as 25% of lamb and 25% of pork samples have been shown to contain tissue cysts[2]. Tissue cysts have rarely been isolated from beef[3]. No evidence has been presented that kangaroo meat contains tissue cysts. The only evidence presented was serological evidence - not evidence of tissue cysts, and the serological prevalence of toxoplasmosis was much higher in sheep (16.9% - 61.7%) and pigs (7.2% - 23.3%) than in macropods including kangaroos (4% - 8.5%)[1].

The advice on cooking all meats for 4 minutes at 61°C is important. However until tissue cysts have been demonstrated in kangaroo meat, and specifically kangaroo meat prepared for restaurants, there is no scientific basis for implicating kangaroo meat as a cause of this 'outbreak'.

1. Robson JMP, Wood RN. A probable food-borne outbreak of toxoplasmosis. *Comm Dis Intell* 1995;19:517-52.2
2. Dubey JP A review of toxoplasmosis in pigs. *Vet Parasitol* 1986; 19: 181-223.
3. Mandell GL, Bennett JE, Dolin R. *Principles & Practice of Infectious Diseases* 4th Ed. New York: Reply from the principal author. Churchill Livingstone, 1995.

Reply from the principal author

Dr Jenny Robson, Drs JJ Sulivan, NJ Nicolaides and Partners, Taringa, Queensland

I wish to take issue with a number of points raised in the correspondence from Drs Davison and El-Saadi.

I did state that there was no statistically significant association between toxoplasmosis and any food ingested. Perusal of the menu and a description of the cooked nature of the food served at the function still leads me to conclude that the undercooked kangaroo meat was the most likely source, on scientific grounds.

It is not relevant to quote the higher prevalence of tissue cysts in pork when pork was not on the menu. What is important is that kangaroo meat is a potential source of infection, and on this occasion, would appear to be the most likely source. Undercooked red kangaroo meat was noted by the majority of attendees. There were less people uncertain whether or not they ate this item as compared to any other item on the menu. The questionnaire was completed by the majority of respondents before any association with kangaroo meat was widely known or considered. Other possible meat sources appeared well cooked. There was almost no salad (garnish only) served with the cocktails and it is therefore difficult to believe that 12 people could have become infected via this source particularly when hygienic measures at the restaurant appeared appropriate.

I think it is incorrect to say that there is no evidence that kangaroo meat can contain tissue cysts. There is a wealth of veterinary evidence that kangaroos are highly susceptible to toxoplasmosis and that the natural biology of the disease in all intermediate hosts means tissue cysts will occur in those kangaroos that are infected[1-2].

From my literature research there are very few good descriptions of outbreaks of toxoplasmosis relating to ingestion of food[1-3]. Each of these papers was merely a description of a small outbreak. The quality of the scientific data in my recent publication surpasses these in terms of establishing an association with toxoplasmosis and food ingestion. Rare kangaroo meat was the most likely source on scientific grounds and had the closest association statistically (if not significantly). It goes some way towards clarifying the relative importance of various modes of transmission of this infection in the Australian community. Therefore a failure to publish the data would be irresponsible on my part.

I have no problems with the comments and criticisms of the study. It was carried out some time after the event and has a number of flaws. However if we insist on statistical significance for these matters then findings of public health significance might never be published.

CDI took the editorial decision to publish this paper knowing the statistical nature of the data. I believe that this was the correct decision in the interests of public health.

1. Canfield PJ, Hartley WJ, Dubey JP. Lesions of toxoplasmosis in Australian marsupials. *J Comp Path* 1990; 103: 159-167.
2. Readacliff GL, Hartley WJ, Dubey JP, Cooper DW. Pathology of experimentally induced, acute toxoplasmosis in macropods. *Aust Vet J* 1993; 70: 4-6.
3. De Silva LM, Mulcahy DL, Kamath KR. A family outbreak of toxoplasmosis serendipitous finding. *J Inf* 1984; 8: 163-167.
4. Masur H, Jones TC, Lempert JA, Cherubini TD. Outbreak of toxoplasmosis in a family and documentation of acquired retinochoroiditis. *Am J Med* 1978; 64: 396-402.
5. Kean BH, Kimball AC, Christenson WN. An epidemic of acute toxoplasmosis. *JAMA* 1969; 208: 1002-1004.

OVERSEAS BRIEFS

In the past fortnight the following information has been provided by the World Health Organization and the Public Health Laboratory Service, United Kingdom.

Meningococcal disease in England

Between 8 December 1995 and 12 January 1996 eight cases of meningococcal disease were reported in adjoining areas of Rotherham and Nottinghamshire health districts. Cases were all aged 1 to 17 years, one of whom died. Seven cases were due to serogroup C, five of which were identified as strain 2b. The eighth case was a household contact of a case with strain 2b. Six cases were children of school age some of whom attended the same school. Four cases (who attended different schools) became ill during the first week of January and could not have acquired their infection during the school term. These observations indicate that this is a local community outbreak.

Typhoid fever in Algeria

During January an outbreak of typhoid fever was reported in Ain Taya

(population 45,000), 20 km east of Algiers. A total of 910 suspected cases had been reported by 10 January of which more than 80% were confirmed. One suspected case died at home.

The epidemic has declined since early January and is now under control. The outbreak was caused by sewage contamination of water reservoirs following damage to a sewage pipe during construction work.

Cholera in Burundi

Since the end of August 1995 a total of 2,300 cases of cholera has been detected. These have been reported from the Provinces of Bubanza, Bururi and Cibitoke. Recently cases have also been reported from Gatumba and Maramvya rural health centres. Whilst the epidemic appears to be under control in these areas the continued threat of new outbreaks continues elsewhere in the country.

COMMUNICABLE DISEASES SURVEILLANCE

National Notifiable Diseases Surveillance System, 7 to 20 January 1996

There were 2243 notifications received for this two week period (Tables 1, 2 and 3, and Figure 3).

- There were 73 notifications of **Ross River virus infection**; 42 cases were male, and 31 were female. The ages of cases ranged from 5 to 79 years, 77% being between 30 and 54 years. Over the past 5 years notifications have peaked between January and May (Figure 1), although the total number of cases has declined each year. The age groups predominantly affected have consistently been those between 25 and 54 years (Figure 2).

Figure 1. Ross river virus infection notifications, 1991 to 1995, by month of onset

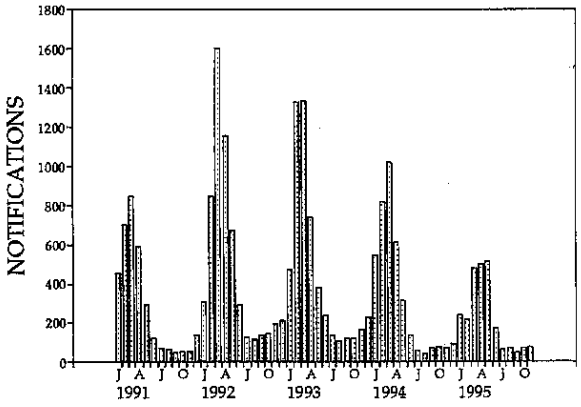
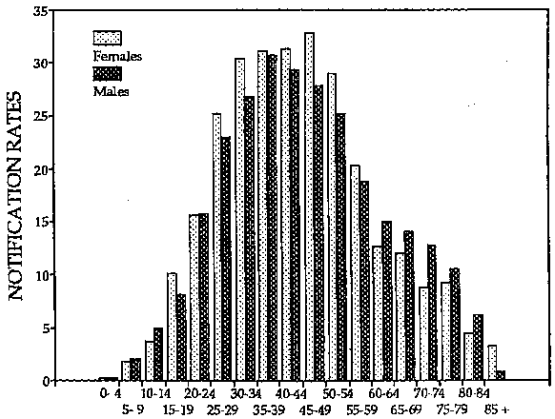


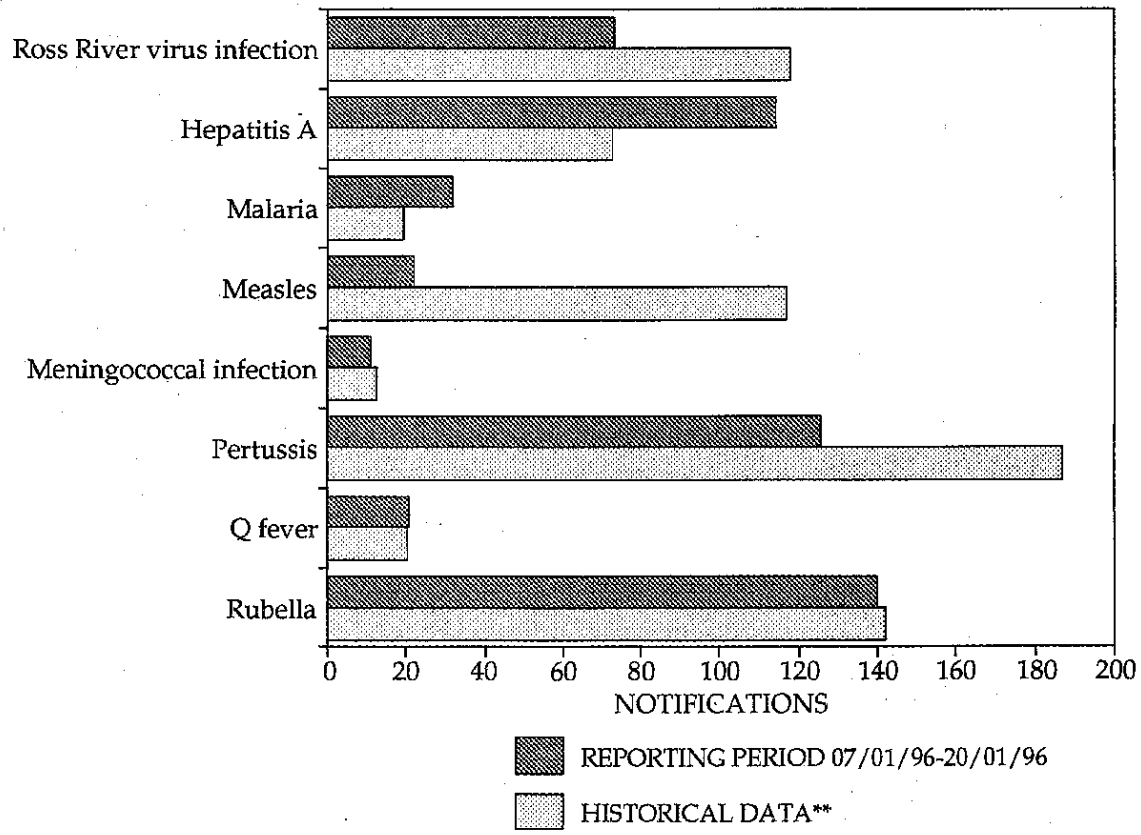
Figure 2. Ross river virus infection notification rates per 100,000 per annum, by age group and sex



- Two cases of **brucellosis** were reported from Queensland; both case were male, one from the age group 15-19 years and the other from the age group 20-24 years.
- There was one report of **dengue** from New South Wales, for a female in the age group 45-49 years.
- There were 486 notifications of **campylobacteriosis**; 253 cases were male, 226 cases were female, and the sex of 7 cases was not reported. Cases were reported from all age groups, with 26% being aged less than 5 years.
- There were 110 notifications of **gonococcal infection** received; 73 cases were male and 37 cases were female; 85% were aged between 15 and 29 years.
- Two cases of ***Haemophilus influenzae* type b infection** were reported during the period, both in women aged between 55 and 69 years, from rural areas of the Northern Territory and Queensland.
- There were 114 cases of **hepatitis A** reported, including 85 in males and 28 in females; the sex of the remaining case was not reported. The cases were from all age groups up to 59 years, with 2 cases occurring in older persons. Most cases were reported from the metropolitan statististical divisions of Sydney, Brisbane and Melbourne.
- Fourteen cases of **hepatitis B (incident)** were reported; 11 were males and 3 were females; all age groups from 5-9 years to 30-34 years were represented, with 2 cases occurring in older persons.
- Two cases of **hydatid disease** were notified, both for elderly females; one from the Hunter statistical division of New South Wales, and one from metropolitan Brisbane.
- Eight cases of **legionellosis** were reported, one case being in a young woman, and all of the others being in middle-aged or elderly males, from metropolitan and rural statistical divisions in 4 different states.
- Nineteen cases of **leptospirosis** were reported, from 14 statistical divisions in 4 states, all but one being males; the ages of cases ranged from 20 to 77 years.
- Seven cases of **listeriosis** were reported; one case was in a female infant under one year old; all of the cases were reported from the metropolitan statististical divisions of Sydney, Brisbane and Melbourne.
- Thirty-two notifications of **malaria** were received; 18 were males and 14 were females; 3 cases were reported in children between 1 and 4 years of age; most of the remainder were in their 20s and 30s. The cases were reported from 10 separate statistical divisions in 6 states and territories.

- Twenty-two cases of **measles** were reported; 13 cases were male and 9 cases were female. Their ages ranged from 0 to 36 years.
- There were 11 cases of **meningococcal infection** reported from 7 statistical divisions in Queensland and Victoria; they included a female less than one year of age and two aged 2 years. The ages of the other cases were in age groups from 10-14 years to 54-59 years.
- There were 126 notifications of **pertussis**; 58 cases were male and 68 cases were female. All age groups from 0-4 years to 75-79 years were represented. Seven cases were aged less than one year.
- Twenty-one notifications of **Q fever** were received, all from country regions of New South Wales and Queensland; 16 cases were male and 5 were female. All but one of the age groups from 10-14 years to 65-69 years were represented.
- There were 140 cases of **rubella** reported; 100 cases were male, 38 cases were female, and the sex of 2 cases was not reported. Recorded ages of cases were from all age groups between 0-4 and 45-49 years; 49% of the cases (68) were reported in males 10-29 years of age, and 15% (21cases) in women of child-bearing age (15 to 44 years).
- There were 280 cases of **salmonellosis** reported; 150 cases were male and 126 cases were female; the sex of the remaining 4 cases was not reported; 49% of the cases were aged less than 5 years.
- Forty-one cases of **syphilis** were reported; 21 were male and 19 were female; the sex of the remaining case was not reported. All age groups from 15-19 years to 70-74 years were represented.
- There were 28 cases of **tuberculosis** reported; 13 were male and 15 were female. All age groups between 30-34 years and 85-89 years were represented. There were 3 cases in females 15-19 years old.
- Two cases of **typhoid** were reported; a female infant under one year from Brisbane, and a woman in the 25-29 years age group from the Hunter statistical division of New South Wales.
- Thirteen cases of **yersiniosis** were reported; 9 cases were male, and 4 were female.

Figure 3. Selected National Notifiable Diseases Surveillance System reports, and historical data[1]



1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods: the corresponding periods of the last 3 years and the periods immediately preceding and following those.

Table 1. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 7 to 20 January 1996

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA[1]			
									This period 1996	This period 1995	Year to date 1996	Year to date 1995
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae b infection	0	0	1	1	0	0	0	0	2	5	5	7
Measles	1	14	0	3	0	0	3	1	22	149	36	219
Mumps	1	3	1	NN	0	0	0	0	5	7	5	12
Pertussis	0	44	0	63	4	0	9	6	126	258	162	357
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	9	24	0	38	4	6	52	7	140	148	244	226
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0

1. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision, so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

NN Not Notifiable.

Table 2. Notifications of other diseases[1] received by State and Territory health authorities in the period 7 to 20 January 1996

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA[2]			
									This period 1996	This period 1995	Year to date 1996	Year to date 1995
Arbovirus infection												
Ross River virus infection	0	4	6	31	0	-	0	32	73	96	82	119
Dengue	0	1	0	0	0	-	0	0	1	1	1	1
NEC[3]	0	1	2	20	0	0	0	1	24	3	5	3
Campylobacteriosis[4]	6	-	15	201	98	22	60	84	486	480	602	703
Chlamydial infection (NEC)[5]	0	NN	11	191	9	8	35	31	285	247	329	339
Donovanosis	0	NN	1	0	NN	0	0	0	1	2	1	4
Gonococcal infection[6]	0	18	8	55	3	0	17	9	110	110	134	156
Hepatitis A	1	39	0	44	0	0	26	4	114	89	140	128
Hepatitis B	0	3	0	4	0	3	2	2	14	20	20	25
Hepatitis C incident	0	2	0	0	0	0	0	0	2	1	4	2
Hepatitis C unspecified	4	0	1	168	0	6	74	27	280	315	394	427
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	1	0	1
Legionellosis	0	2	0	2	0	0	1	3	8	9	8	10
Leptospirosis	0	1	0	3	0	2	13	0	19	8	20	11
Listeriosis	0	1	0	2	0	0	4	0	7	2	7	5
Malaria	1	9	1	13	0	0	6	2	32	24	35	39
Meningococcal infection	0	0	0	6	0	0	5	0	11	16	14	21
Ornithosis	0	NN	0	0	0	0	0	0	0	11	6	14
Q fever	0	3	0	18	0	0	0	0	21	27	27	35
Salmonellosis (NEC)	2	38	18	148	21	8	15	30	280	265	354	365
Shigellosis[4]	0	-	7	21	2	0	2	2	34	36	40	48
Syphilis	2	12	2	22	0	1	0	2	41	91	46	116
Tuberculosis	0	9	0	10	0	0	8	1	28	60	36	75
Typhoid[7]	0	1	0	1	0	0	0	0	2	0	3	1
Yersiniosis (NEC)[4]	0	-	0	13	0	0	0	0	13	30	15	38

1. For HIV and AIDS, see Tables 4 and 5. For rarely notified diseases, see Table .
2. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.
3. Tas: includes Ross River virus and dengue.
4. NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.
5. WA: genital only.
6. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.
7. NSW, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

\- Elsewhere Classified.

Table 3. Notifications of rare[1] diseases received by State and Territory health authorities in the period 7 to 20 January 1996

DISEASES	Total this period	Reporting States or Territories	Year to date 1996
Botulism	0		0
Brucellosis	2	Qld	2
Chancroid	0		0
Cholera	0		0
Hydatid infection	2	NSW 1, Qld 1	2
Leprosy	0		0
Lymphogranuloma venereum	0		0
Plague	0		0
Rabies	0		0
Yellow fever	0		0
Other viral haemorrhagic fevers	0		0

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1994.

Australian Encephalitis: Sentinel Chicken Surveillance Programme serological results, September and October 1995

AK Broom[1], J Azuolas[2], JS Mackenzie[3], L Melville[4], DW Smith[5] and PI Whelan[6]

Sentinel chicken serology was carried out for 15 of the 22 flocks in Western Australia in November and December 1995. There were no seroconversions during this period.

Eight flocks of sentinel chickens from the Northern Territory were tested in November and December. There was one new seroconversion to Kunjin virus from Howard Springs in Darwin in December.

The Sentinel chicken surveillance programme started again in Victoria in November and there were no seroconversions during November and December 1995. The programme in New South Wales is not being carried out in 1996.

1. Department of Microbiology, The University of Western Australia.
2. Veterinary Research Insitute, Victoria.
3. Department of Microbiology, The University of Queensland.
4. Berrimah Agricultural Research Centre, Darwin, Northern Territory.
5. PathCentre, Perth.
6. Medical Entomology Branch, Department of Health and Community Services, Darwin, Northern Territory.

HIV and AIDS Surveillance

Methodological note

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (ACT, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (North-

Table 4 New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 July to 31 July 1995 and reported by 31 October 1995, by sex and State or Territory of diagnosis

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA			
										This period 1995	This period 1994	Year to date 1995	Year to date 1994
HIV diagnoses	Female	0	2	0	1	0	0	0	2	5	6	58	51
	Male	1	27	0	8	3	0	12	10	61	61	459	499
	Sex not reported	0	1	0	0	0	0	0	0	1	0	8	8
	Total[1]	1	30	0	9	3	0	12	12	67	67	527	558
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	2	14	18
	Male	0	8	0	4	0	0	3	1	16	51	247	439
	Total[1]	0	8	0	4	0	0	3	1	16	54	262	461
AIDS deaths	Female	0	1	0	0	0	0	2	0	3	3	23	21
	Male	1	26	0	3	1	0	11	1	43	65	335	412
	Total[1]	1	27	0	3	1	0	13	1	46	69	359	436

1. Persons whose sex was reported as transsexual are included in the totals.

Table 5 Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 31 July 1995 and reported by 31 October 1995, by sex and State or Trerritory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	AUSTRALIA
HIV diagnoses	Female	15	539	3	94	44	4	160	70	929
	Male	158	9754	79	1509	550	70	3261	729	16110
	Sex not reported	0	2049	0	0	0	0	43	0	2092
	Total[1]	173	12349	82	1608	594	74	3472	801	19153
AIDS diagnoses	Female	4	122	0	25	17	2	43	14	227
	Male	67	3385	25	566	249	32	1238	248	5810
	Total[1]	71	3517	25	593	266	34	1288	263	6057
AIDS deaths	Female	2	90	0	19	13	2	27	8	161
	Male	49	2485	18	399	164	21	965	182	4283
	Total[1]	51	2581	18	420	177	23	998	191	4459

1. Persons whose sex was reported as transsexual are included in the totals.

ern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly *Australian HIV Surveillance Report*, available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Telephone: (02) 332 4648 Facsimile: (02) 332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for July 1995, as reported to 31 October 1995, are included in this issue of *CDI* (Tables 4 and 5).

Surveillance of Serious Adverse Events Following Vaccination

The Serious Adverse Events Following Vaccination Surveillance Scheme is a national surveillance scheme which monitors the serious adverse events which occur rarely following vaccination. More details on the Scheme were published in *CDI* 1995:19;273-274.

Acceptance of a report does not imply a causal relationship between the administration of the vaccine and the medical outcome, or that the report has been verified as to the accuracy of its contents.

It is estimated that 250,000 doses of vaccines are administered to Australian children under the age of 6 years every month.

Results for the reporting period 24 December 1995 to 20 January 1996

There were 5 reports of serious adverse events following vaccination for the reporting period. Reports were received from South Australia (4) and Queensland (1).

Of the 5 reports, 2 were cases of a fever of 40.5°C or more, one was a hypotonic/hyporesponsive episode, one was of convulsions and one was lethargy, pallor and fever a day after vaccination (Table 6).

Events associated with DTP vaccine in combination with other vaccines were associated with the first (2), second (one), third (one) and fourth (one) doses. Three children were hospitalised. All children had recovered at the time the report was sent in.

Table 6. Adverse events following vaccination for the following period 24 December 1995 to 20 January 1996

Event	Vaccines		Reporting States or Territories	Total reports for this period
	DTP/Hib	DTP/OPV/Hib		
Hypotonic/hyporesponsive episode		1	SA	1
Temperature of 40.5°C or more	1	1	SA	2
Convulsions		1	SA	1
Other		1	Qld	1
Total	1	4		5

Sterile Sites Surveillance (LabDOSS)

Data for this four week period have been provided by 13 laboratories

There were 576 reports of significant sepsis.

New South Wales: Prince of Wales, Sydney 60; Royal North Shore Hospital 88, South Western Area Pathology 117
Tasmania: Royal Hobart Hospital 39; Northern Tasmania Pathology Service 7.
Queensland: Nambour General Hospital 13; Sullivan and Nicholaides Partners 116, Ipswich General Hospital 16; Central Queensland Pathology 4, Towoomba Pathology Laboratory 43.
Australian Capital Territory: Woden Valley Hospital 43.
Northern Territory: Alice Springs Hospital 21.
Western Australia: Princess Margaret Hospital For Children 9.

Organisms reported 5 or more times from blood are detailed in Table 7. Other blood isolates not included in Table 7 were:

Gram positive: 4 *Bacillus* species, 2 *Enterococcus faecium*, 4 *Enterococcus* species, 1 *Streptococcus* Group C, 1 *Streptococcus* Group F, 1 *Streptococcus* 'milleri', 2 *Streptococcus sanguis* and 4 *Streptococcus viridans*.

Gram negative: 4 *Aeromonas hydrophilia*, 3 *Brucella suis*, 4 *Campylobacter jejuni*, 2 *Campylobacter* species, 2 *Citrobacter freundii*, 2 *Enterobacter* species, 4 *Haemophilus influenzae*, 1 *Haemophilus parainfluenzae* 3 *Klebsiella* species, 3 *Morganella morganii*, 1 *Ochrobactrum anthropi*, 2 *Proteus vulgaris*, 1 *Pseudomonas flourescens*, 1 *Pseudomonas* species, 1 *Salmonella* species, 1 *Salmonella typhi*, and 4 *Serratia marcescens*.

Anaerobes: 1 *Bacteroides* species, 4 *Clostridium perfringens*, 2 *Clostridium* species, 1 *Eubacterium* species, 1 *Fusobacterium* species, 1 *Propionibacterium* species, and 1 *Veillonella parvula*.

Fungi: 1 *Cryptococcus neoformans*.

There were 139 (46% of total) blood isolates reported for patients over the age of 65 years (Figure 4).

Hospital acquired blood isolates

A total of 66 isolates were reported as being hospital acquired. The most commonly reported organisms were *Staphylococcus aureus* (24, including 8 MRSA), *Staphylococcus epidermidis* (7) and *Pseudomonas aeruginosa* (5).

Table 7. LabDOSS reports of blood isolates, by organism and clinical information

Organism	Clinical information						Risk factors				Total[1]
	Bone/Joint	Lower respiratory	Endocarditis	Gastrointestinal	Urinary tract	Skin	Surgery	Immunosuppressed	IV line	Neonatal	
Enterococcus faecalis						3	1	1			9
Listeria monocytogenes								3			6
Staphylococcus aureus	8	2	1		3	24	13	13	8	3	99
Staphylococcus epidermidis						6	4	6	2	2	19
Staphylococcus coagulase negative	1	2	4			1	3	3	1		38
Streptococcus Group A	1			1		1		2			6
Streptococcus Group B	1					1				1	9
Streptococcus Group G				1		1		2			5
Streptococcus pneumoniae		13						3			26
Streptococcus species		1	1					5			9
Escherichia coli		2		12	36	2	4	6			100
Acinetobacter species					1	2	1			1	10
Enterobacter aerogenes				1			1	1			5
Enterobacter cloacae					1			1	2		6
Klebsiella pneumoniae				4	3	1	1	3	3	1	20
Klebsiella oxytoca				3	1	1	3	2			9
Proteus mirabilis			1		3	1		1			13
Pseudomonas aeruginosa		2		1	3	1	3	3	1		25
Candida albicans								2	1		5
Candida species						1		2	1	1	5
Bacteroides fragilis			1			1	1	1			6

1. Only organisms with 5 or more reports are included in this table.
2. MRSA 11

Table 8. LabDOSS reports of meningitis and/or CSF isolates, by organism and age group

	< 1 month	1-11 months	1-4 years	5-14 years	15-24 years	25-34 years	45-54 years	75+ years	Total
Staphylococcus epidermidis				1					1
Streptococcus Group B	1								1
Streptococcus pneumoniae		2							2
Acinetobacter species					1				1
Enterobacter species		1							1
Haemophilus influenzae			3						3
Neisseria meningitidis				1	3			1	5
Cryptococcus neoformans						1	1		2

Meningitis and/or CSF isolate reports

There were 16 reports of meningitis and/or CSF isolates of which 7 were for children under the age of 5 years (Table 8). Included were 4 *Neisseria meningitidis*, 3 *Haemophilus influenzae* and 2 *Streptococcus pneumoniae*.

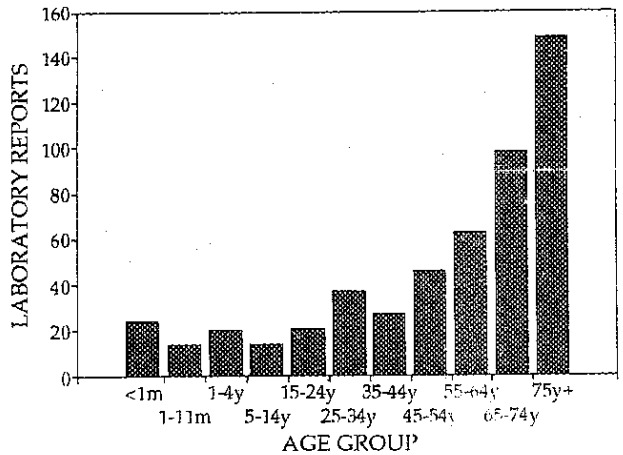
Isolates from sites other than blood or CSF

Joint fluid: Thirteen reports were received this period including 8 *Staphylococcus aureus*, 1 *Salmonella* species, 1 *Staphylococcus epidermidis*, 1 *Staphylococcus* coagulase negative, 1 *Streptococcus* Group A and 1 *Streptococcus* Group B.

Peritoneal dialysate: A total of 9 reports was received. Included were 4 *Staphylococcus epidermidis*, 1 *Bacteroides fragilis*, 1 *Candida* species, 1 *Escherichia coli*, 1 *Klebsiella pneumoniae* and 1 *Pseudomonas* species.

Pleural fluid: Seven reports of organisms isolated from pleural fluid were received this period including 2 *Staphylococcus aureus* (1 MRSA), 1 *Escherichia coli*, 1 *Haemophilus parainfluenzae*, 1 *Staphylococcus* coagulase negative, 1 *Streptococcus* Group F, and 1 *Streptococcus* 'milleri'.

Figure 4. LabDOSS reports of blood isolates, by age group



Other: 1 *Candida* species, 1 *Enterococcus* species, 3 *Escherichia coli*, 2 *Klebsiella oxytoca*, 1 *Klebsiella* species, 1 *Staphylococcus aureus* (MRSA), 3 *Staphylococcus* coagulase negative, 1 *Staphyococcus epidermidis*, 1 *Streptococcus* Group C, 1 *Streptococcus* 'milleri', 1 *Streptococcus viridans*, and 1 *Streptococcus mitis*.

Virology and Serology Reporting Scheme

There were 608 reports received in the *CDI* Virology and Serology Reporting Scheme this period (Tables 9, 10 and 11).

- One report of **measles** was received this period. A total of 151 reports was received for 1995, the lowest number since 1989.
- **Rubella** was reported for 8 patients this period diagnosed by IgM detection. Seven patients were males between the ages of 13 and 26.
- **Hepatitis A** was reported for 11 patients this period including 10 males and one female. Nine of the patients were between the ages of 25 and 44 years.
- Positive **hepatitis B** serology was reported for 10 patients this fortnight including 5 males and 5 females.
- Nineteen reports for **hepatitis C** were received this period. Included were 11 males and 7 females (one sex not stated). Fourteen reports were for the 25 to 44 years age range.
- Three cases for **Ross River** virus were reported this period, all presumptive diagnosis (IgM detected). The reports were from Western Australia with the patients aged between 40 and 47 years.
- Two reports of **Flavivirus (unspecified)** were reported from Victoria this period. Both were diagnosed by single high titre.
- Forty two reports of **adenovirus** were received this reporting period diagnosed by virus isolation (27) and antigen detection (15). Reports of **untyped adenovirus** were received for 31 patients.

Figure 5. Varicella-zoster virus laboratory reports, 1994 to 1995, by month of specimen collection

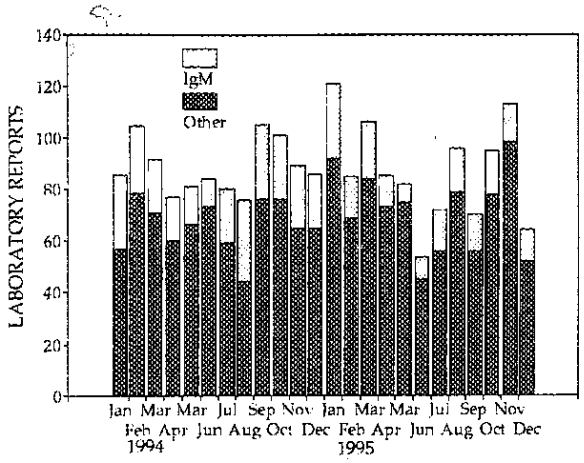
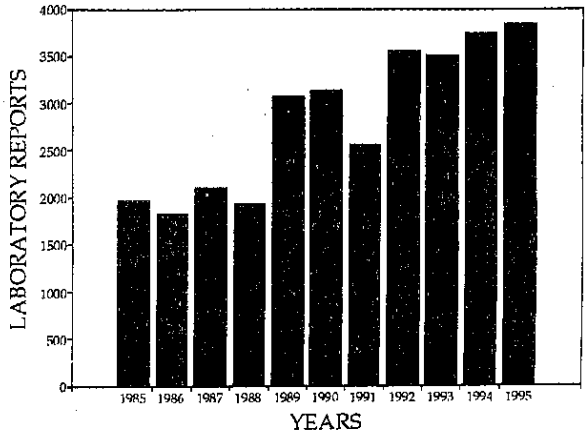


Figure 6. Respiratory syncytial virus laboratory reports, 1985 to 1995, by year of specimen collection



- **Herpes simplex virus type 1** was reported for 95 patients this reporting period. Diagnosis was by virus isolation (88) and antigen detection (7).
- One hundred and three reports of **herpes simplex virus type 2** were received this period. Diagnosis was by virus isolation (101) and antigen detection (2).
- Thirty one reports of **cytomegalovirus** were received this period. Diagnosis was by virus isolation (24) and IgM detection (7). Included was an HIV/AIDS patient (retinitis) and a lung transplant recipient..
- **Varicella-zoster virus** was reported for 33 patients this period. Included was a pregnant female (36/40 weeks gestation) and a 29 year old pregnant female (8 weeks gestation) was diagnosis with clinical chickenpox. Diagnosis was by virus isolation (5), antigen detection (23), IgM detection (4) and a fourfold change in antibody titre (one). During 1994 and 1995 a total of 2105 reports were received of which 457 were diagnosed by IgM detection and 1648 by other methods (Figure 5).
- Seventeen reports of **Epstein-Barr virus** were received this reporting period. Diagnosis was by IgM detection in all cases.
- **Parvovirus** was reported for one patient this period. Diagnosis was by IgM detection.
- Two cases of **Coxsackievirus** were reported this period, both diagnosed by virus isolation. Included was isolation of **Coxsackie type 10** from an 8 month old female with stomatitis.
- Five reports of **echovirus** were received this period. Reports were received from the Australian Capital Territory (4) and Victoria (one). **Echovirus type 9** was isolated from 2 males both of which had a diagnosis of meningitis. **Echovirus type 10** was isolated from a 7 week old male with meningitis.
- Ten reports of untyped **enterovirus** were received this period all diagnosed by virus isolation.
- **Rhinovirus** was reported for 11 patients this period. Reports were received from Victoria (10) and New South Wales (one). Included was a 46 year old lung transplant recipient.
- **Influenza A** was reported for 12 patients this period. Diagnosis was by virus isolation (9), single high titre (2) and fourfold change in titre (one).
- **Parainfluenza virus type 1** was reported for four patients, all of whom were in the one to 4 years age group. Diagnosis was by antigen detection. One report of **Parainfluenza virus type 2** was received this period, diagnosed by virus isolation.
- **Parainfluenza virus type 3** was reported for 12 patients this reporting period. Diagnosis was by virus isolation (5) and antigen detection (7). Ten of these reports included children between the ages of one and 4 years.
- Fourteen reports of **respiratory syncytial virus (RSV)** were received this reporting period. Methods of diagnosis included virus isolation (one) and antigen detection (13). More reports were received in 1995 than for any year of this scheme (Figure 6).
- **Rotavirus** was reported for 25 patients this period. Twenty four reports were for patients under 4 years of age. Rotavirus reporting has continued to decline since its seasonal peak in August.
- *Chlamydia trachomatis* was reported for 62 patients this period. Diagnosis was by isolation (19), antigen detection (31), nucleic acid detection (12). Included were 39 females and 23 males.
- *Chlamydia psittaci* was reported for 3 patients this reporting period. Diagnosis was by a four fold rise in titre (2) and IgM detection (one). During 1995 a total of 176 reports were received of which 160

(91%) were for Victoria. The number of reports peaked in the month of November (Figure 7).

- Four reports of ***Mycoplasma pneumoniae*** were received this period for 3 females and one male. Methods of diagnosis included single high titre (one), IgM detection (2) and total antibody (one).
- Two cases of ***Yersinia enterocolitica*** were reported this period. Diagnosis included IgA detection. Both reports were received from Victoria.
- ***Bordetella pertussis*** was reported for 17 patients this reporting period. Diagnosis was by antigen detection (4) and IgA detection (13). All reports were received from Victoria. During 1995 a total of 596 reports were received of which 287 (48%) were for Western Australia and 265 (44%) were for Victoria.
- One report of ***Legionella longbeachae*** was reported this period from Victoria. The 69 year old male was diagnosed by fourfold change in antibody titre.
- ***Cryptococcus*** species was reported for a 22 year old HIV/AIDS patient. Diagnosis was by antigen detection.
- Sixteen cases of ***Schistosoma*** species were reported this period. Included were two brothers who had recently returned from Africa. Diagnosis was by single high titre (15) and IgM detection (one).
- ***Strongyloides stercoralis*** was reported for 4 patients. All were detected by single high titre and all were from Victoria.

Figure 7. *Chlamydia psittaci* laboratory reports, 1995, by month of specimen collection

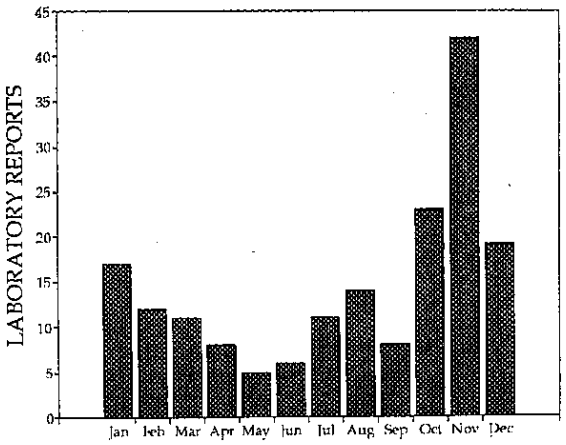


Table 9. Virology and serology laboratory reports by State or Territory[1] for the reporting period 11 to 24 January 1996, historical data[2], and total reports for the year

	State or Territory[1]								Total this fortnight	Historical data[2]	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
MEASLES, MUMPS, RUBELLA											
Measles virus							1		1	73.8	5
Rubella virus	1				2		3	2	8	58.2	105
HEPATITIS VIRUSES											
Hepatitis A virus							8	3	11	19.3	51
Hepatitis B virus	1	1					8		10	92.8	207
Hepatitis C virus	2		2		1		4	10	19	215.7	445
ARBOVIRUSES											
Ross River virus								3	3	189.5	28
Flavivirus (unspecified)							2		2	1.8	6
ADENOVIRUSES											
Adenovirus type 3					4		2		6	3.8	33
Adenovirus type 37							1		1	.0	1
Adenovirus not typed/pending		7			2		14	12	35	62.8	241
HERPES VIRUSES											
Herpes simplex virus type 1	1	28			16		38	12	95	217.8	720
Herpes simplex virus type 2		44		1	14		30	14	103	224.7	739
Herpes simplex not typed/pending	10	3				1		5	19	26.8	63
Cytomegalovirus	1		2				8	20	31	67.0	191
Varicella-zoster virus		1			6		22	4	33	49.5	162
Epstein-Barr virus	1						12	4	17	85.2	255
Herpes virus group - not typed		1					1		2	1.0	10

Table 9. Virology and serology laboratory reports by State or Territory[1] for the reporting period 11 to 24 January 1996, historical data[2], and total reports for the year, continued

	State or Territory[1]								Total this fortnight	Historical data[2]	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
OTHER DNA VIRUSES											
Poxvirus group not typed							1		1	.5	1
Parvovirus					1				1	6.3	16
PICORNA VIRUS FAMILY											
Coxsackievirus A10							1		1	.0	1
Coxsackievirus A untyped/pending	1								1	.0	1
Echovirus type 6							1		1	2.3	1
Echovirus type 9	2								2	.5	13
Echovirus type 14		2							2	.2	8
Poliovirus type 2 (uncharacterised)							1		1	1.0	5
Rhinovirus (all types)		1					10		11	40.7	115
Enterovirus not typed/pending		5					5		10	57.0	132
ORTHO/PARAMYXOVIRUSES											
Influenza A virus							10	2	12	21.7	31
Influenza B virus					1				1	5.8	18
Parainfluenza virus type 1								4	4	3.0	5
Parainfluenza virus type 2								1	1	.8	5
Parainfluenza virus type 3		4					5	3	12	24.0	155
Parainfluenza virus typing pending							1		1	1.3	3
Respiratory syncytial virus		3	1				3	7	14	24.7	160
OTHER RNA VIRUSES											
Rotavirus					2		3	20	25	39.7	187
Small virus (like) particle							1		1	.3	4
OTHER											
Chlamydia trachomatis not typed	5	28	4	14	7			4	62	100.5	319
Chlamydia psittaci							3		3	7.8	37
Mycoplasma pneumoniae					2		1	1	4	40.3	50
Yersinia enterocolitica							2		2	1.0	3
Bordetella pertussis							17		17	32.0	57
Legionella longbeachae							1		1	.3	2
Cryptococcus species	1								1	1.5	2
Schistosoma species		1					15		16	.3	49
Strongyloides stercoralis			3				1		4	.2	5
TOTAL	26	129	12	15	58	1	236	131	608	1,803.7	4,647

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. The historical data are the averages of the numbers of reports in 6 previous 2 week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 10. Virology and serology laboratory reports by clinical information for the reporting period 11 to 24 January 1996

	Encephalitis	Meningitis	Other CNS	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Genital	Other/unknown	Total
MEASLES, MUMPS, RUBELLA											
Measles virus				1							1
Rubella virus							2			6	8
HEPATITIS VIRUSES											
Hepatitis A virus						11					11
Hepatitis B virus						5				5	10
Hepatitis C virus						18				1	19
ARBOVIRUSES											
Ross River virus										3	3
Flavivirus (unspecified)										2	2
ADENOVIRUSES											
Adenovirus type 3				2				4			6
Adenovirus type 37								1			1
Adenovirus not typed/pending				17	10			5		3	35
HERPES VIRUSES											
Herpes simplex virus type 1				3			40	7	23	20	95
Herpes simplex virus type 2							33		53	17	103
Herpes simplex not typed/pending							6	1	5	7	19
Cytomegalovirus		1		18				1		11	31
Varicella-zoster virus							30			3	33
Epstein-Barr virus				5						12	17
Herpes virus group - not typed	1						1				2
OTHER DNA VIRUSES											
Poxvirus group not typed							1				1
Parvovirus										1	1
PICORNA VIRUS FAMILY											
Coxsackievirus A10							1				1
Coxsackievirus A untyped/pending		1									1
Echovirus type 6				1							1
Echovirus type 9		2									2
Echovirus type 14		1								1	2
Poliovirus type 2 (uncharacterised)		1									1
Rhinovirus (all types)				11							11
Enterovirus not typed/pending			1	3	1		4			1	10
ORTHO/PARAMYXOVIRUSES											
Influenza A virus				5			1			6	12
Influenza B virus										1	1
Parainfluenza virus type 1				4							4
Parainfluenza virus type 2				1							1
Parainfluenza virus type 3				7			4			1	12
Parainfluenza virus typing pending				1							1
Respiratory syncytial virus				10			3			1	14

Table 10. Virology and serology laboratory reports by clinical information for the reporting period 11 to 24 January 1996, continued

	Encephalitis	Meningitis	Other CNS	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Genital	Other/unknown	Total
OTHER RNA VIRUSES											
Rotavirus				1					24		25
Small virus (like) particle					1						1
OTHER											
Chlamydia trachomatis not typed								1	55	6	62
Chlamydia psittaci				2						1	3
Mycoplasma pneumoniae				4							4
Yersinia enterocolitica					1					1	2
Bordetella pertussis				17							17
Legionella longbeachae				1							1
Cryptococcus species										1	1
Schistosoma species										16	16
Strongyloides stercoralis										4	4
TOTAL	1	6	1	114	37	34	126	20	136	133	608

Table 11. Virology and serology laboratory reports by contributing laboratories for the reporting period 11 to 24 January 1996

STATE OR TERRITORY	LABORATORY	REPORTS
Australian Capital Territory	Woden Valley Hospital, Canberra	32
New South Wales	Prince Henry/Prince of Wales Hospitals, Sydney	122
Queensland	State Health Laboratory, Brisbane	15
South Australia	Institute of Medical and Veterinary Science, Adelaide	57
Victoria	Monash Medical Centre, Melbourne	28
	Royal Children's Hospital, Melbourne	65
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	148
Western Australia	Princess Margaret Hospital, Perth	87
	Western Diagnostic Pathology	54
TOTAL		608

Contributions covering any aspects of communicable disease are invited. Instructions to authors can be found in *CDI* 1995;20:13.

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