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

MURRAY VALLEY ENCEPHALITIS IN NORTH WEST QUEENSLAND: A CASE REPORT AND EVIDENCE OF FURTHER TRANSMISSION

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Case report

In early April 1994, a 17 year old Caucasian station hand was admitted to Mt Isa Base Hospital with a three to four day history of fever, headaches and photophobia. Other than having a fever (39.6°C) his admission examination was unremarkable; he had a neutrophilia (WBC $24.7 \times 10^9/L$; 87% neutrophils) and a marked monocyte response in the CSF (WBC $806 \times 10^6/L$; 70% monocytes; protein and glucose both marginally elevated; Gram stain and culture both negative).

However over the next three days he became increasingly confused, disorientated and agitated, with a fluctuating level of consciousness. The fever persisted and apart from transient hypertension on day 3 there was no other evidence of raised intracranial pressure. A CAT scan on day 2 showed no specific changes other than an enhancement of the meninges with contrast.

He required intensive care management and was initially treated with broad-spectrum intravenous antibiotics and acyclovir. By day 5 there was an obvious improvement in his neurological state, and on day 6 he was orientated and fully co-operative. He was discharged nine days after admission; five weeks later his mother reported that he was well apart from a very mild memory loss.

Blood samples were taken on admission and 12 days later for serological examination. His flavivirus antibody by haemagglutination inhibition (HI) rose from 1:40 to 1:320 and Murray Valley encephalitis virus (MVE) specific IgM was detected in both sera by indirect immunofluorescence (IFA) and HI assay on serum fractions separated by ultracentrifugation. Specific MVE antibody was confirmed by a blocking enzyme immunoassay (EIA) using monoclonal antibody. The case therefore conforms to the criteria agreed to for a 'confirmed' case of MVE¹.

Follow-up investigation

The patient lived and worked on a cattle station near Burketown, adjacent to the Gulf of Carpentaria. Five weeks after his admission, blood was taken from the 20 other persons who resided at the station, including six children. Two of these had IgM to MVE detected (Table 1), but as IgM can persist for months, it is not possible to determine exactly when they were infected. In both cases flavivirus IgM was detected by a standard EIA and IFA detected IgM to MVE but not Kunjin virus. The antibody in one of the two (Case A) was confirmed as MVE specific by the blocking EIA using monoclonal antibody. In the other person (Case B) the blocking EIA was not able to determine whether this was MVE antibody or not, but the IFA IgM supported MVE infection.

Neither of these two persons, a 34 year old female (Case A) and a 31 year old male (Case B) had had any relevant symptoms. Neither had travelled into known areas of MVE activity (northern Western Australia or the Northern Territory) in the past year. As MVE activity

Table 1. Serological results of sera taken from the two adults considered to have had recent asymptomatic MVE infection

Serological test	Case A	Case B
Flavivirus antibody (HI)	1:80	1:320
Flavivirus IgM (EIA)	Positive	Positive
MVE IgM (IFA)	Positive	Trace
MVE IgM (HI/ultracentrifugation)	Positive	Positive
Kunjin IgM (IFA)	Negative	Negative
Kunjin IgM (HI/ultracentrifugation)	Negative	Negative

Table 2. Monthly rainfall figures at Burketown¹, October to April average and October 1993 to April 1994

	October	November	December	January	February	March	April
Average rainfall (mm)	12	37	107	213	188	154	22
Actual rainfall 1993-94 (mm)	0	110	46	86	207	94	0

1. Bureau of Meteorology, personal communication.

has not been detected in Queensland since 1991, it is very likely that they acquired their MVE infection around about the time of the clinical case. The station was the only common geographical location for the clinical case and the two asymptomatic persons, and it is therefore assumed that all three acquired the infection at that site.

Comment

The three infections occurred at time of low rainfall in the area (Bureau of Meteorology, personal communication; Table 2); indeed at the time the follow-up samples were taken the station owner was already concerned about the amount of surface water available for his cattle. However, sentinel chicken flocks had recently seroconverted to MVE in the Top End of the Northern Territory and at a site in Cape York peninsula².

There have been very few reports of MVE disease occurring in Queensland³, whereas MVE is an endemic problem in the north of Western Australia and to a lesser extent in the Top End of the Northern Territory^{4,5}. This report has implications for the proposed expansion of the mining and cattle export industries in north-west Queensland. For example, any construction of new staff accommodation should include adequate screening against mosquitoes. Consideration could also be given to siting a sentinel chicken flock in Burketown.

Acknowledgment

The Royal Flying Doctor Service (Mt Isa) not only evacuated the ill patient, but also generously assisted with the follow-up investigation.

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REACTION FOLLOWING MENINGOCOCCAL VACCINATION IN PATIENTS WITH A PREVIOUS HISTORY OF DISEASE

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Late last year, investigation of a case of meningococcal disease led to the identification of a family cluster of infection, and subsequent investigation of possible immune deficiency in the family. As part of the investigation, quadrivalent meningococcal vaccine was administered to the family, and the two members who had previously had invasive disease suffered reactions following the vaccination.

The investigation had begun in October 1993, when a 16 year old asplenic female boarder at an agricultural college in Western Australia died from overwhelming septicaemia due to *Neisseria meningitidis* (serogroup W135). Investigation of this episode led to the identification of two other cases of meningococcal disease associated with the same agricultural college over a period of seven years¹.

The first of these cases was a 14 year old school boy who had severe meningococcal septicaemia in August 1986 and who spent a total of three months in hospital, finally losing two digits from his right hand due to peripheral vascular complications of his infection. At the time this boy was attending the high school in the same town as the agricultural college and an elder

brother was attending the agricultural college. The elder brother was a nasopharyngeal carrier of *Neisseria meningitidis* identified by polyvalent antiserum as serogroup X, Y, Z or W135. The second case, a younger brother of the first case, was treated for meningococcal meningitis in 1991. *Neisseria meningitidis* was again identified by polyvalent antiserum as belonging to serogroup X, Y, Z or W135. This boy was 15 years old at the time and was attending the agricultural college in the same town as the previous two cases.

Two brothers from one family were therefore identified as having had disease due to *Neisseria meningitidis* of serogroup X, Y, Z or W135. There are two other brothers in this family, one, the carrier referred to above and the other, the youngest, now attending the agricultural college. The youngest brother was immunised using the quadrivalent meningococcal vaccine against serogroups A, C, Y and W135 (Mencevax, SmithKline Beecham). Previous infection with *Neisseria meningitidis* was confirmed by the manufacturers of the vaccine as not being a contraindication to meningococcal vaccination, so as part of an investigation into possible immune deficiency in the family, all other members of the family were also immunised with the quadrivalent

vaccine, with the intention of estimating meningococcal antibodies after a period of three months. In the event this estimation was not performed but immunoglobulin concentrations, C3 and C4 concentrations and CH50 estimations were normal for all family members, indicating no homozygous deficiency in the complement pathway. Deficiencies in the terminal components of the complement pathway are recognised as predisposing risk factors to infection with *Neisseria meningitidis*, especially serogroups X, Y, Z or W135 in older children².

There were no reactions following the meningococcal vaccination in the mother, father or the two brothers who had had no previous meningococcal disease but in both the brothers who had previously had meningococcal disease there was a flu like illness. In the first case the reaction was relatively mild and lasted three days but in the second case the reaction was more severe, lasting one week, with symptoms of rigors, fever, anorexia and arthralgia. In both cases the local general practitioner elected to treat these episodes with antibiotics, in the former case with oral antibiotics and in the latter case with parenteral antibiotics. Both young men have made a complete recovery.

The adverse reaction following immunisation with the quadrivalent meningococcal vaccine (Mencevax) was discussed with the manufacturers SmithKline Beecham, who contacted their principals in Belgium. They confirmed that the vaccine was not contraindi-

cated in persons with a previous history of meningococcal disease and, moreover, there was no record of any similar presumed vaccine reaction. A company specific drug reaction form was completed and the company indicated it would forward the information to the Adverse Drug Reactions Advisory Committee.

Meningococcal vaccine is recommended for travellers to areas where *Neisseria meningitidis* is endemic, for persons who are anatomically or functionally asplenic and for family members with a properdin or terminal complement pathway component deficiency³. This report is aimed at alerting practitioners to a possible reaction associated with administering a quadrivalent meningococcal vaccine to persons who have a previous history of meningococcal disease.

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RESPIRATORY VIRUSES IN A COHORT OF CONSECUTIVE ADMISSIONS TO A PAEDIATRIC GENERAL WARD DURING JULY 1992

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This report summarises the respiratory viral carriage rate in admissions to a 24 bed general paediatric ward between 1 and 31 July 1992.

The hospital is a 300 bed general and specialist hospital servicing a local community of approximately one million and the wider community of almost 3 million.

Methods

All 104 children admitted to the general paediatric ward for more than 12 hours during July 1992 were eligible for entry into the study and parents gave permission for 94 to participate. Nasopharyngeal aspirates (NPAs) were collected from the children. Ninety-two were sent for viral culture and 85 were suitable for direct fluorescent antibody (DFA) testing against a pool of eight respiratory viruses.

Parents of all children were requested to complete a standard questionnaire on admission and discharge documenting upper or lower respiratory symptoms or

other symptoms of infections. Parents were asked to return an additional questionnaire seven days after discharge reporting the development and timing of infectious symptoms post discharge.

Results

The number of admissions each day varied from zero to eight with a mean of three per day. The male to female ratio of the patients was 5:4 (52 males and 42 females) and the age range was 4 months to 15 years.

The symptoms reported on admission included respiratory symptoms (44 patients, 20 males and 24 females; 46.8%), gastrointestinal symptoms (18 patients, nine males and nine females; 19.2%), fever and/or convulsions or other 'infections' (24 patients, 16 males and eight females; 25.5%) and 'other' (seven males and one female; 8.5%).

The average length of hospital stay for the children was 3.5 days both overall and for males and females separately.

Parents of 51 of the 94 (54%) eligible children returned the post discharge questionnaire. Sixteen reported a possible nosocomial infection on the basis of development of symptoms within a week of discharge.

Thirteen (15.3%) of the 85 NPAs examined by DFA were positive for viruses. Five were positive for respiratory syncytial virus, four for parainfluenza virus, three for influenza A and one for adenovirus.

A total of 60 patients reported symptoms of respiratory tract infection either in hospital or after discharge. Twelve (20%) had a positive DFA test (Table 1). One patient with a positive DFA had no clinical evidence of a respiratory tract infection.

Viruses were isolated from 16 (17.4%) of the 92 NPAs sent for viral culture. Three adenoviruses, three enteroviruses, four influenza A viruses, one rhinovirus and five respiratory syncytial viruses were isolated. No parainfluenza viruses detected by DFA were positive by culture during this period (Table 2).

In summary, 13 of the NPAs tested for viruses by DFA were positive (20% of NPAs for those patients with respiratory symptoms) and an additional five patients had positive viral cultures making a total of 18 (20%) of samples with virus detected. Over half (60/92) of the

admissions enrolled in the study had respiratory symptoms (either on admission or reported by their parents as occurring after discharge) and about one third of these (18) had virus detected by DFA and/or viral cultures. One of three adenovirus isolates and one of the enterovirus isolates (12.5%) were not associated with symptoms.

The majority of positive specimens were from children three years or less and these also made up the majority of admissions to the ward during this pilot survey.

Conclusion

It is increasingly reported that asymptomatic respiratory virus carriage is common particularly in children aged two years or less^{1,2} and that extra-ordinary measures are required¹ to contain these viruses and prevent the development of nosocomial infections.

In our study all but one of the DFA positive tests were associated with upper respiratory symptoms as were all the respiratory viral isolates. This may reflect climatic differences and the mild winters in Queensland resulting in a lower number of circulating viruses in the community compared with the published reports.

Studies such as this provide important local epidemiological information which is essential to enable the introduction of appropriate and cost effective infection control measures.

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Table 1. Relationship between upper respiratory tract symptoms and direct immunofluorescent antibody test results for respiratory viruses

Direct immunofluorescent antibody test result	Upper respiratory tract symptoms		
	Yes	No	Total
Positive	12	1	13
Negative	48	24	72
Total	60	25	85

Table 2. Relationship between results of virus culture and direct fluorescent antibody tests for respiratory viruses

Direct fluorescent antibody test result	Virus cultured					No virus cultured	Total
	Adenovirus	Enterovirus ¹	Influenza A	Rhinovirus	Respiratory syncytial virus		
Positive	1	-	2	0	5	5 ²	13
Negative	0	-	1	1	0	67	72
Not done	2	-	1	0	0	4	7
Total	3	3	4	1	5	72	85

1. Direct fluorescent antibody testing not available.

2. These five samples had positive direct fluorescent antibody test results for parainfluenza virus.

OVERSEAS BRIEFS

In the last two weeks, the following information has been supplied by the World Health Organization.

Cholera update

Cholera has been reported from the **Philippines** for the first time recently. A total of 1564 cases and 76 deaths was reported for June and July this year. Areas declared infected are the National Capital Region; Aurora, Cavite, Mindoro Oriental, Palawan and Rizal Provinces in Region 4; Albay, Camarines Norte, Camarines Sur, Catanduanes, Masbate and Sorsogon Provinces in Region 5; Iloilo Province in Region 6; Cebu Province in Region 7; Leyte North, Leyte South and Samar Western Province in Region 8; Zamboanga City and Zamboanga Norte Province in Region 9.

Twenty-two cases of cholera had been reported from **Hong Kong** for this year as at 20 July. Three cases were imported and 19, including one fatal case, were locally acquired. The fatal case was a 52 year old male who did not seek early treatment and who had other underlying medical conditions. Twelve local cases were clustered in the Southern District in June-July. They were caused by *Vibrio cholerae* El Tor Inaba. The source of the organisms was traced to polluted sea water. Appropriate control measures were undertaken and there was no secondary spread. Four of the other seven locally acquired cases were also caused by *V. cholerae* El Tor Inaba and three by *V. cholerae* El Tor Ogawa. These were sporadic cases similar to those seen in the summer months each year and were unrelated to the cases in the Southern District. Control measures have been intensified.

The first official reports of cholera have been received from the refugee camps on the **Rwanda-Zaire** border. A total of 49,271 cases and 3636 deaths has been reported.

Afghanistan has reported 19,859 suspect cases of cholera and 106 deaths, reported during the period

June/July. However, the figures probably include all diarrhoeal disease.

The autonomous **Republic of Dagestan** in the Russian Federation has reported an outbreak with 208 cases and 10 deaths to 7 July. The area has been declared infected.

Cases have been reported for May, June and July from Afghanistan, Bolivia, Brazil, Burundi, Costa Rica, Cote d'Ivoire, Dagestan, El Salvador, Ghana, Guatemala, Guinea, Honduras, Hong Kong, India, Kenya, Laos, Malawi, Mexico, Mozambique, Nepal, Nicaragua, Peru, Philippines, Rwanda-Zaire, Somalia, Singapore and Uganda.

Yellow fever in Ghana

The yellow fever outbreak in Ghana is subsiding. From October 1993 to March 1994 there were 103 cases and 26 deaths reported from the Upper West Region. A mass immunisation campaign was begun in all affected villages and this appears to have brought the outbreak under control.

Plague in Peru

The current plague outbreak in Peru started in Cajamarca Department in 1992 and has spread to the Departments of Piura, Lambayeque and La Libertad. Between October 1992 and May 1994, a total of 1151 cases and 54 deaths were reported (case fatality rate 4.7%). A number of control measures are being undertaken in the affected areas.

Influenza update

Chile has reported cases of influenza A, diagnosed in children hospitalised with pneumonia in Santiago in June.

Thailand has reported both influenza A and influenza B this season. Influenza B has predominated, with increasing reports in June.

COMMUNICABLE DISEASES SURVEILLANCE

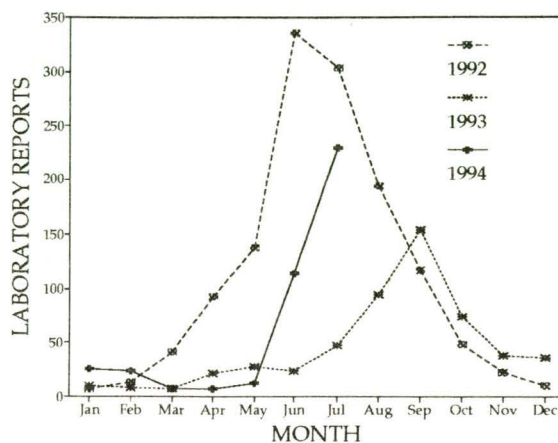
Virology and Serology Reporting Scheme

There were 1961 reports received in the *CDI* Virology and Serology Reporting Scheme this fortnight (Tables 9, 10 and 11).

- Thirteen reports of **measles** were received this period, 8 males and 5 females, 7 under the age of 14 years. The number of reports continued to decline through the month of July.
- **Mumps** virus was reported for 4 patients this fortnight, one male and 3 females all in the age range 5 to 44 years.
- **Rubella** was reported for 8 patients this fortnight, 5 females (3 in the 15 to 44 year age group), 2 males and one patient of unrecorded sex. The number of reports has remained low in recent months.
- Eleven reports of **hepatitis A** were received, 5 males and 6 females, age range one to 44 years.

- Positive **hepatitis B** serology was reported for 68 patients this fortnight, 34 males and 28 females (6 sex not stated). Forty patients were in the 25 to 44 year age group, and 16 in the 15 to 24 year age group. Included were 4 pregnant females and a 29 year old male, the index case for a needlestick injury.
- Positive **hepatitis C** serology was reported for 254 patients this fortnight, 154 males and 90 females (10 sex not stated). One hundred and eighty-three reports were for the 25 to 44 year age group, and 29 for the 15 to 24 year age group. Included were 36 injecting drug users, and 2 newborn infants of hepatitis C positive mothers. This virus was also reported for a 17 year old male with thalassemia and a 47 year old diabetic male with liver disease.
- **Ross river virus** was reported for a 26 year old male from New South Wales. Diagnosis was presumptive (IgM detected) with a specimen collection date in late July. Only 6 reports were received for the month of July, following a peak in the number of reports in March.
- Fifty-three reports of **adenovirus** were received this fortnight, 34 virus isolations, 16 antigen detections and 3 serological diagnoses. A total of 27 patients reported respiratory symptoms including **adenovirus type 1** isolated from the nasopharynx of a 9 month old male with pneumonia. **Untyped adenovirus** was isolated from an anal biopsy from a 34 year old male with gastroenteritis and from the urine of a 29 year old male. This virus was also reported for a 13 year old female bone marrow recipient.
- **Herpes simplex virus type 1** was reported for 160 patients this fortnight, 155 isolations and 5 antigen detections. Included was virus isolated from the eye of a 30 year old female.
- Seventeen reports of **untyped herpes simplex virus** were received this period including virus isolation from an oesophageal biopsy from an AIDS patient.
- There were 77 reports of **cytomegalovirus (CMV)** infection this fortnight, 63 virus isolations, 5 antigen detections, 8 IgM detections, and one single high titre. Included was virus isolation from the nasopharynx of a 10 month old male with pneumonitis. CMV specific IgM was detected in the sera of 2 pregnant females, a 24 year old at 12 weeks' gestation and a 33 year old at 10 weeks' gestation. This virus was also diagnosed for 5 transplant recipients and 2 other immunocompromised patients.
- **Varicella-zoster virus** was reported for 33 patients this fortnight, 18 virus isolations, 7 antigen detections, 7 IgM detections and one fourfold rise in titre. Included were 2 patients from Victoria with clinical chickenpox, a 30 year old female and a male (age not stated).
- **Parvovirus** was diagnosed by IgM detection for a 12 year old female with a rash and a 47 year old female who reported arthralgia and reticuloendothelial disease.
- **Coxsackievirus type B4** was isolated from the nasopharynx of an 11 year old female with pneumonia and a 4 month old male, both from Victoria.
- **Echovirus type 11** was isolated from the CSF of an 18 year old New South Wales female with meningitis.
- A report was received of **echovirus type 14** isolation from the urine of a one month old New South Wales male.
- Seventy-eight untyped **enterovirus** reports were received this period. Included was virus isolated from the CSF of 2 males, a 2 month old from Queensland with CNS disease and a 2 week old from New South Wales. This virus was also isolated from the faeces of an 11 month old male bone marrow transplant recipient.
- **Rhinovirus** was reported for 47 patients this fortnight, 16 of whom were under the age of 4 years. Forty-one reported respiratory symptoms.
- **Influenza A** was reported for 161 patients this fortnight including 16 H₃N₂ strains. Forty-seven diagnoses were by antigen detection, 81 by virus isolation, 11 by fourfold rise in titre, and 22 by single high titre. Included were 82 males and 79 females, 10 in the over 65 year age group. Reports were received for Victoria (41), Western Australia (25), Queensland (22), New South Wales (17) and South Australia (56). Included was virus isolation from the nasopharynx of a 2 month old female and a 4 month old male. Also included was a fourfold rise in titre reported for a 55 year old male with fever who had recently returned from Vanuatu, and diagnosis by single high titre for a 35 year old pregnant female at 24 weeks' gestation. The number of reports is high for the time of year but remains below the number received in 1992 (Figure 1).

Figure 1. Influenza A laboratory reports, 1992 to 1994, by year and month of specimen collection



- Two reports of **influenza B virus** were received this period. Included was an 84 year old Victorian male with pneumonia (fourfold rise in titre) and a 33 year old female from New South Wales (single high titre). The number of reports received for influenza B is the lowest since 1990.
- **Parainfluenza virus type 1** was reported for 39 patients this period, 32 of whom were under the age of 4 years. Included was virus isolation from the nasopharynx of a 63 year old male. A total of 31 diagnoses were by virus isolation and 8 by antigen detection. The number of reports received remains high (Figure 2).
- Twenty-one reports of **parainfluenza virus type 3** were received this fortnight, all for patients under the age of 4 years. Diagnosis was by virus isolation (15) and antigen detection (6).
- Three hundred and sixty-five reports of **respiratory syncytial virus (RSV)** were received this fortnight, 248 for patients under one year of age and a total of 347 under the age of 4 years. Diagnosis was by virus isolation (141), antigen detection (222) and serological diagnosis (2). RSV was detected in the nasopharynx of a 2 month old male for whom parainfluenzavirus type 1 was also diagnosed and it was reported for an 8 month old male who also had influenza A. The number of reports received was average for the time of year throughout the month of July (Figure 3).
- **Rotavirus** was reported for 144 patients this period, 76 males and 46 females. One hundred and thirty-two patients were less than 4 years of age, 53 being in the under one year age group. The number of reports continued to increase through the month of July.
- Ninety reports of *Chlamydia trachomatis* were received this fortnight. Eighty-eight patients were in the 15 to 44 year age group. Diagnosis was by culture (34) and antigen detection (56). Included was a 31 year old female with pelvic inflammatory disease.
- *Chlamydia psittaci* was reported for 6 patients this period. Included were 2 males from Victoria, an 86 year old with pneumonia and a 69 year old with respiratory failure.
- Nineteen reports of *Mycoplasma pneumoniae* were received, 11 females and 8 males, 6 under the age of 14 years. Eleven patients reported respiratory disease. The number of reports remained low for the time of year through the month of July (Figure 4).
- **Q fever** was reported for 5 patients this period, 4 males and one female. Diagnosis was by fourfold rise in titre (3) and IgM detection (2).
- Fourteen reports of *Bordetella* species were received this reporting period, 11 *Bordetella pertussis* and 3 *Bordetella* species. Six patients

Figure 2. Parainfluenzavirus type 1 laboratory reports, 1992 to 1994, by month of

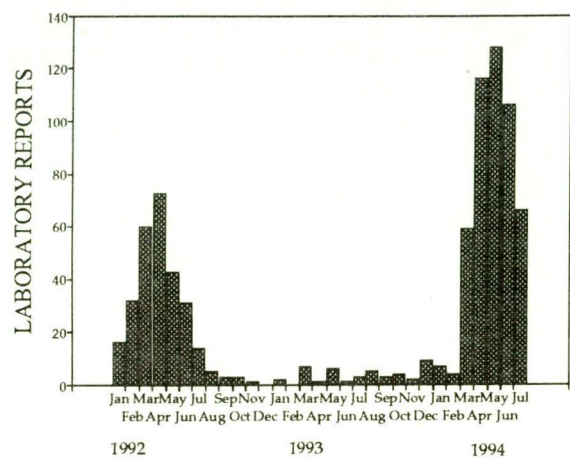


Figure 3. RSV laboratory reports, 1989-93 average and 1994, by month of specimen collection

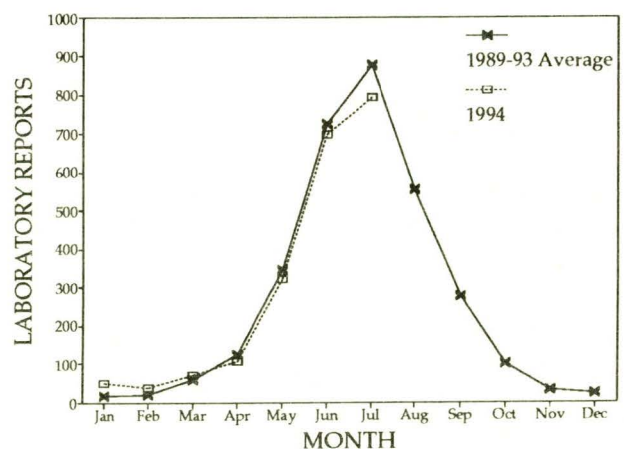
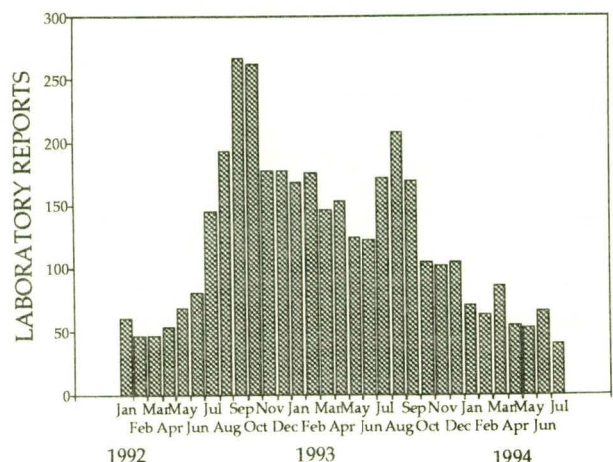


Figure 4. Mycoplasma pneumoniae laboratory reports, 1992 to 1994, by month of specimen collection



were male and 8 female, age range one month to 71 years.

- Positive syphilis serology was reported for 22 patients this period, 11 males and 9 females (2 sex not stated). One patient was under the age of 14 years and 11 were in the 15 to 44 year age group.
- *Toxoplasma gondii* was reported for 6 patients this period, 3 females and 2 males (one sex not stated), all in the 15 to 44 year age group.

Australian Sentinel Practice Research Network

Data for week 30 are included in this issue of *CDI* (Table 1). There were 9040 consultations reported. The rate of influenza reporting has plateaued recently at about 28 cases per 1000 consultations. Most States are reporting influenza at similar levels to the national average but rates reported from Victoria and Tasmania are slightly higher. Most reports (151 of 253) were in persons in the 15 to 44 years age group. There have been no measles cases reported since the week ending 3 July. Gastroenteritis was reported for 101 patients, 23 under the age of 3 years and 48 in the 15 to 44 years age group.

Table 1. Australian Sentinel Practice Research Network, week 30, 1994

Condition	Week 30, to 31 July 1994	
	Reports	Rate per 1000 encounters
Influenza	253	28.0
Measles	0	0
Chickenpox	13	1.4
Pertussis	0	0
Gastroenteritis	101	11.2

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 (Northern 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 AIDS deaths reported for March 1994 and cumulative to 31 March 1994, as reported to 30 June 1994, are included in this issue of *CDI* (Tables 2 and 3).

Table 2. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS, occurring in the period 1 to 31 March 1994, by sex and State or Territory of diagnosis

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA			
										This period 1994	This period 1993	Year to date 1994	Year to date 1993
HIV diagnoses	Female	0	5	0	1	0	0	1	3	10	3	21	18
	Male	1	44	0	14	3	0	13	6	81	98	245	257
	Sex not reported	0	0	0	0	0	0	0	0	0	3	0	4
	Total ¹	1	49	0	15	3	0	14	9	91	106	269	281
AIDS diagnoses	Female	0	1	0	0	0	0	0	0	1	0	2	3
	Male	1	17	0	4	2	0	9	0	33	37	124	120
	Total ¹	1	18	0	4	2	0	9	0	34	37	126	123
AIDS deaths	Female	0	0	0	0	0	0	1	0	1	1	6	5
	Male	0	21	0	2	1	0	11	0	35	52	119	117
	Total ¹	0	21	0	2	1	0	12	0	36	53	125	122

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

Table 3. Cumulative diagnoses of HIV infection, AIDS and deaths from AIDS since the introduction of HIV antibody testing to 31 March 1994, by sex and State or Territory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	AUSTRALIA
HIV diagnoses	Female	10	502	4	76	39	3	142	47	823
	Male	140	9318	71	1346	503	68	3018	666	15130
	Sex not reported	0	2038	0	1	0	0	44	0	2083
	Total ¹	150	11866	75	1427	542	71	3211	714	18056
AIDS diagnoses	Female	2	98	0	21	12	2	30	10	175
	Male	56	2781	20	437	202	25	1014	208	4743
	Total ¹	58	2884	20	460	214	27	1049	218	4930
AIDS deaths	Female	2	59	0	13	9	1	15	3	102
	Male	38	1887	14	307	123	19	755	136	3279
	Total ¹	40	1951	14	321	132	20	773	139	3390

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

National Influenza Surveillance 1994

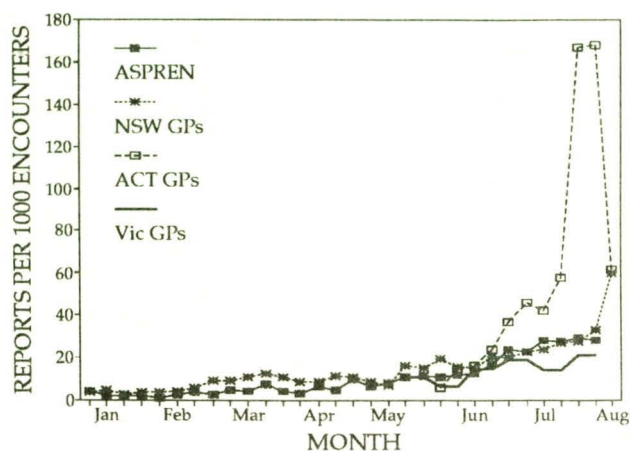
Australian Capital Territory Department of Health; Australian Defence Force; Australian Sentinel Practice Research Network; Communicable Diseases Intelligence Virology and Serology Reporting Scheme Contributing Laboratories; New South Wales Department of Health; Telecom Australia; Victorian Department of Health and Community Services; World Health Organization (WHO) Collaborating Centre for Influenza Reference and Research, Melbourne

Overall this fortnight, laboratory reports of influenza A has been received from all parts of the country; the numbers seem to be plateauing. The rate of influenza reporting from sentinel general practitioner surveillance has continued to increase for most schemes whilst the reported rate of absenteeism has remained static. No data is available this fortnight for the Victorian Sentinel Practitioner Scheme, Victorian total deaths surveillance or Victorian hospital admissions.

Sentinel general practitioner surveillance (Figure 5)

- The Australian Sentinel Practice Research Network reported 253 influenza cases for 9040 consultations for Week 30, ending 31 July. The rate of influenza reporting has plateaued recently at

Figure 5. Sentinel general practitioner influenza cases per 1000 encounters, by week and scheme



about 28 cases per 1000 consultations. Most States are reporting influenza at similar levels to the national average but rates reported from Victoria and Tasmania are slightly higher. Most reports (151) were in persons in the 15 to 44 years age group.

- The Australian Capital Territory Sentinel General Practitioner Scheme reported 58 influenza consultations for the week ending 6 August (62 per 1000 consultations) and 29 for the week ending 13 August (32 per 1000 consultations). Retrospective reports were received for July from an after hours practice which reported a high rate of influenza consultation.
- New South Wales sentinel general practitioners reported influenza at rates of 32.8 per 1000 consultations in the week ending 31 July and 59.8 in the week ending 7 August. The rates have increased in the last two weeks.

Absenteeism surveillance (Figure 6)

- Telecom Australia Absenteeism Surveillance reported absenteeism rates of 1.0% on 3 August and 0.4% on 10 August. Recent absenteeism rates reported by this Scheme are lower than those reported earlier in the year.

Figure 6. Absenteeism rates per 100 employees or students, by week and scheme

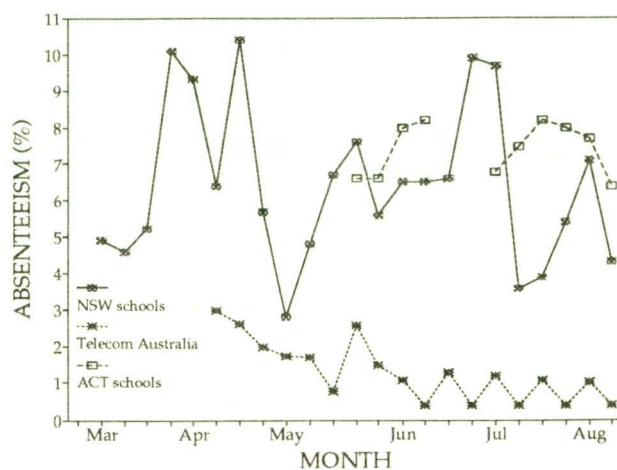


Figure 7. Influenza A laboratory reports, 1994, by method of diagnosis and week of specimen collection

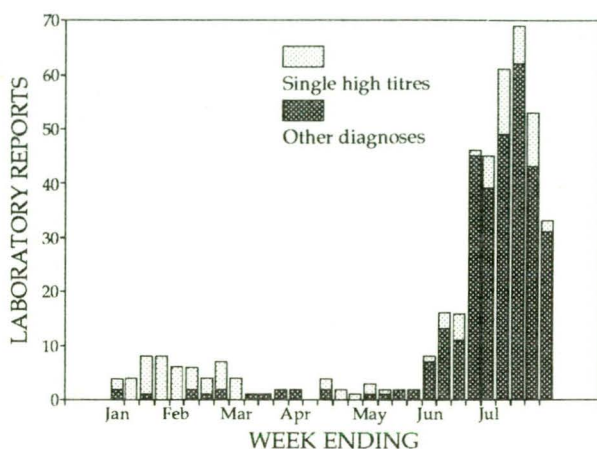
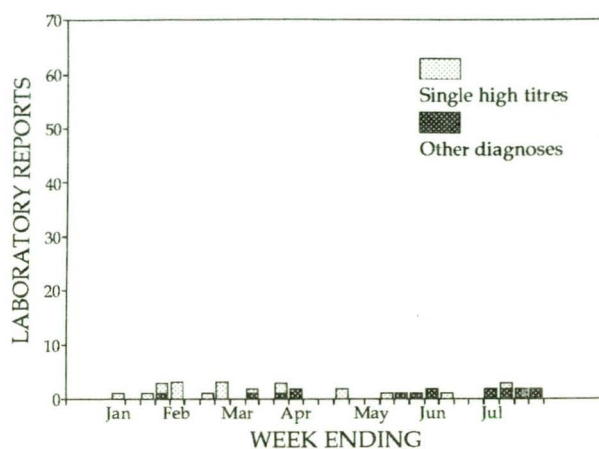


Figure 8. Influenza B laboratory reports, 1994, by method of diagnosis and week of specimen collection



- The Australian Capital Territory Schools Absenteeism Surveillance revealed absenteeism rates of 7.7% on Tuesday 9 August and 6.4% in the week on Tuesday 16 August.
- New South Wales schools absenteeism surveillance reported absenteeism of 7.1% in the week ending 6 August and 4.3% in the week ending 12 August. The rates reported in this scheme have fluctuated throughout the season.

Laboratory surveillance

- The CDI Virology and Serology Reporting Scheme has received 436 reports of influenza A so far this year, 338 other than single high titres. The number of reports continues to rise (Figure 7). Influenza A was reported for 161 patients this fortnight including 16 H₃N₂ strains. Forty-seven diagnoses were by antigen detection, 81 by virus isolation, 11 by fourfold rise in titre, and 22 by single high titre. Included were 82 males and 79 females, 10 in the over 65 year age group. Reports were received for Victoria (41), Western Australia (25), Queensland (22), New South Wales (17) and South Australia (56). Included was virus isolation from the nasopharynx of a 2 month old female and a 4 month old male. Also included was a fourfold rise in titre reported for a 55 year old male with fever who had recently returned from Vanuatu, and diagnosis by single high titre for a 35 year old pregnant female at 24 weeks' gestation.
- There have been 36 reports of influenza B so far this year, 17 with diagnoses other than single high titre (Figure 8). Two reports of influenza B virus were received this period. Included was an 84 year old Victorian male with pneumonia (fourfold rise in titre) and a 33 year old female from New South Wales (single high titre). The number of reports received for influenza B is the lowest since 1990.

Sterile Sites Surveillance (LabDOSS)

Data for this fortnight have been provided by 11 laboratories. There were 251 reports of recent sepsis:

New South Wales: South West Area Pathology Health Service Liverpool 47; ICPMR Westmead 35; John Hunter Hospital Newcastle 15.

Queensland: Sullivan, Nicolaides and Partners 24; Greenslopes Hospital 11; Nambour Hospital 10.

South Australia: Institute of Medical and Veterinary Science, Adelaide 69.

Western Australia: Sir Charles Gairdner Hospital, Perth, 5.

Northern Territory: Alice Springs Hospital, 6.

Tasmania: Royal Hobart Hospital 16; Northern Tasmanian Pathology Services, Launceston 13.

Organisms reported 5 or more times from blood are detailed in Table 4.

Other blood isolates not included in Table 4 were:

Gram positive: 1 *Bacillus* species, 3 *Corynebacterium jeikeium*, 1 *Corynebacterium* species, 3 *Enterococcus faecalis*, 1 *Enterococcus faecium*, 2 *Enterococcus* species, 1 *Streptococcus* group A, 1 *Streptococcus* group B, 2 *Streptococcus* group G, 2 *Streptococcus 'milleri'*, 1 *Streptococcus sanguis*, 1 *Streptococcus viridans*, 2 *Streptococcus mitis*, 1 *Streptococcus salivarius*.

Gram negative: 2 *Acinetobacter* species, 1 *Acinetobacter calcoaceticus*, 1 *Citrobacter freundii*, 1 *Citrobacter* species, 3 *Enterobacter aerogenes*, 4 *Enterobacter cloacae*, 4 *Enterobacter* species, 4 *Haemophilus influenzae* (2 type b and 2 type not specified), 1 *Haemophilus parainfluenzae*, 3 *Klebsiella oxytoca*, 3 *Klebsiella pneumoniae*, 3 *Klebsiella* species, 1 *Morganella morganii*, 1 *Neisseria meningitidis*, 3 *Proteus mirabilis*, 4 *Pseudomonas aeruginosa*, 1 *Salmonella* species, 2 *Salmonella* Typhi, 3 *Serratia marcescens*, 1 *Serratia* species.

Anaerobes: 1 *Clostridium perfringens*, 1 *Clostridium* species.

Table 4. 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	Hospital acquired	Neonatal	
<i>Staphylococcus aureus</i>	4	1	4	1				12	9			50 ²
<i>Staphylococcus epidermidis</i>	1	2						2				8
<i>Staphylococcus coagulase negative</i>								7	3		3	22
<i>Streptococcus pneumoniae</i>								2				17
<i>Escherichia coli</i>		2		13				6	1	1		46
<i>Bacteroides fragilis</i>				3				2				5

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

Table 5. LabDOSS reports of meningitis and/or CSF isolates, by organism and age group

	1-11 months	1-4 years	5-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	Total
<i>Enterobacter cloacae</i>		1							1
<i>Enterococcus faecalis</i>						1			1
<i>Enterococcus faecium</i>		1							1
<i>Escherichia coli</i>					1				1
<i>Haemophilus influenzae</i> type b				1					1
<i>Staphylococcus aureus</i>	1								1
<i>Staphylococcus coagulase negative</i>						1			1
<i>Streptococcus pneumoniae</i>		1			1		1	1	4

Fungi: 2 *Candida albicans*, 2 *Candida* species.

Most blood isolates were for elderly persons (Figure 9).

Meningitis and/or CSF isolate reports

There were 11 reports of meningitis and/or CSF isolates (Table 5). Included was *Haemophilus influenzae* type b reported for a 33 year old immunocompromised male.

Isolates from sites other than blood or CSF

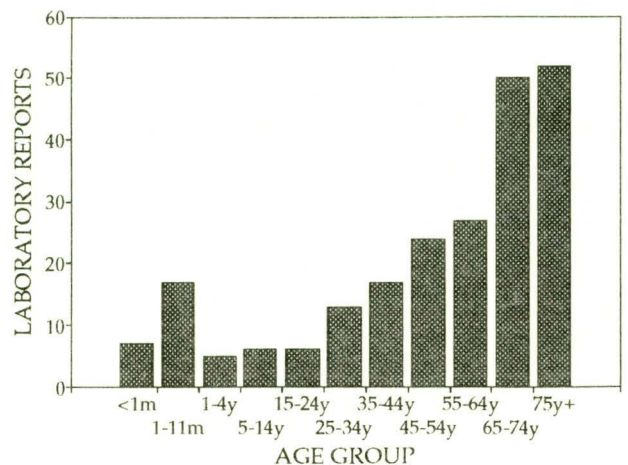
Peritoneal fluid: 2 *Staphylococcus aureus* (1 MRSA), 2 *Staphylococcus epidermidis*, 1 *Escherichia coli*.

Pleural fluid: 1 *Staphylococcus aureus*.

Joint fluid: 1 *Staphylococcus aureus*.

Other: 2 *Clostridium perfringens* (one from products of conception of a 20 year old female), 2 *Escherichia coli*, 1 *Mycoplasma* species, 1 *Proteus mirabilis*, 1 *Staphylococcus aureus*, 1 *Staphylococcus coagulase negative*, 1 *Streptococcus* group B, 1 *Streptococcus* group G.

Figure 9. LabDOSS reports of blood isolates, by age group



National Notifiable Diseases Surveillance System, 24 July to 6 August 1994

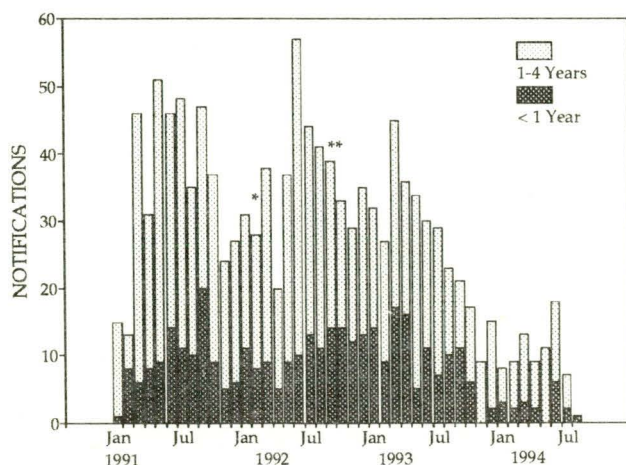
There were 1750 notifications received in the period. (Tables 6, 7 and 8 and Figure 12)

- Twenty-three cases of **Ross River virus infection** were reported; 7 cases were male and 16 were female. Recorded ages were between the 10-14 and the 75-79 years age group. Onset dates were in June (one) and July (22).
- A single case of **dengue** was reported for a male in the 0-4 years age group resident in rural Queensland. The onset date was in April.
- A single case of **brucellosis** was notified for a male in the 70-74 year age group resident in rural Victoria. The recorded onset date was in August.
- There were 84 cases of **gonococcal infection** reported for the period. Forty-six cases were male, 37 were female and the sex of one case was unrecorded. Cases were aged between the 0-4 and the 55-59 years age group with one case aged less than one year and one case aged 5 years.
- Nine cases of **Haemophilus influenzae type b** were reported; 6 cases were male and 3 were female. Recorded ages were from the 0-4 to the 80-84 years age group. The number of cases in children aged less than 5 years continues to decline with four cases aged less than 5 years and one case aged less than one year (Figure 10). The onset dates were in July (8) and August (one). There were no apparent clusters.
- Fifty-six notifications of **hepatitis A** were received; 33 cases were male and 23 were female. Recorded ages were between the 0-4 and the 70-74 years age group with 47 cases aged less than 40 years. Thirty-

four per cent of cases were resident in the Brisbane Statistical Division.

- Forty-four notifications of **hepatitis B** were received with three cases from States and Territories that report incident cases only. The incident cases were male and they were aged from the 5-9 to the 60-64 years age group.
- There were nine cases of **legionellosis** reported in the period; 8 cases were male and one case was female. Cases ranged in age between the 25-29 and the 80-84 years age groups. Onset dates were July (8) and August (one). Cases were resident in the statistical divisions on Sydney (4), Hunter New South Wales (one), Adelaide (3), and Melbourne (one).
- A single case of **leptospirosis** was reported for a male in the 25-29 years age group who was resident in rural Queensland.
- A single case of **listeriosis** was reported for a male in the 70-74 years age group resident in Melbourne. The recorded onset date was July.
- Thirty-seven cases of **malaria** were reported; 30 cases were male and 7 cases were female. Cases were aged from the 0-4 to the 75-79 years age group. Seven cases were resident in the 'malaria receptive zone'. Onset dates were January (one), February (one), March (2), April (7), May (9), June (7), July (9), and August (one).
- There were 148 notifications of **measles** received in the period; 64 cases were male, 78 cases were female, and the sex of 6 cases were unrecorded. Cases were aged between the 0-4 and the 55-59 years age group with a mean age of 11.6 years. There were 19 apparent clusters of between 2 and 28 cases each in the same postcode areas. Apparent clusters were in New South Wales (one), Queensland (17), Tasmania (one).
- Twenty-six notifications of **meningococcal meningitis** were received in the period; 15 cases were male and 11 cases were female. Cases were aged between the 0-4 and the 60-64 years age group with 18 cases aged less than 20 years. Onset dates were in June (2), July (19), and August (2). There was an apparent cluster of two cases in the same postcode area in Queensland with onset dates one day apart.
- One hundred and fifty-two cases of **pertussis** were reported (Figure 11); 67 cases were male and 85 were female. Recorded ages were between the 0-4 and the 80-84 years age group with 6 cases aged less than one year. There were 24 apparent clusters of between 2 and 10 cases each in the same postcode area. Apparent clusters were in New South Wales (6), Queensland (12), South Australia (4) and Western Australia (2).
- There were 16 notifications of **Q fever** received. Thirteen cases were male and 3 case were female. Recorded ages were between the 20-24 and the 55-59 years age group.

Figure 10. *Haemophilus influenzae* type b infection notifications, by age group and month of onset, January 1991 to August 1994



* PRP-D approved in February 1992.
 ** Infant vaccine approved in September 1992.

- Seventy-seven notifications of **rubella** were received; 43 cases were male and 34 cases were female. Cases ranged in age from the 0-4 to the 70-74 years age group with a mean age of 21.5 years. Seventeen cases were females in the 15-44 years age group.
- There were 46 cases of **syphilis** reported; 23 cases were male and 23 cases were female. Recorded ages were between the 15-19 and the 85-89 years age group.
- Thirty-three cases of **tuberculosis** were reported; 19 cases were male and 14 cases were female. Cases were aged between the 5-9 and the 95-99 years age group. Onset dates were March (1), May (6), June (14), and July (12).
- Nine cases of **yersiniosis** were reported; 4 cases were male, 4 cases were female, and the sex of one case was unrecorded.

Figure 11. Pertussis notifications by month of onset, January 1991 to July 1994

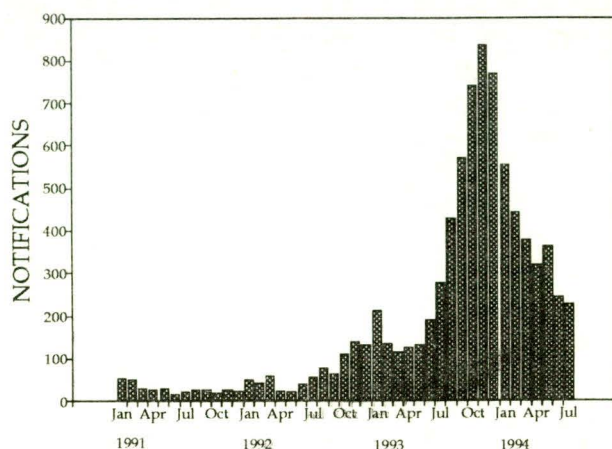
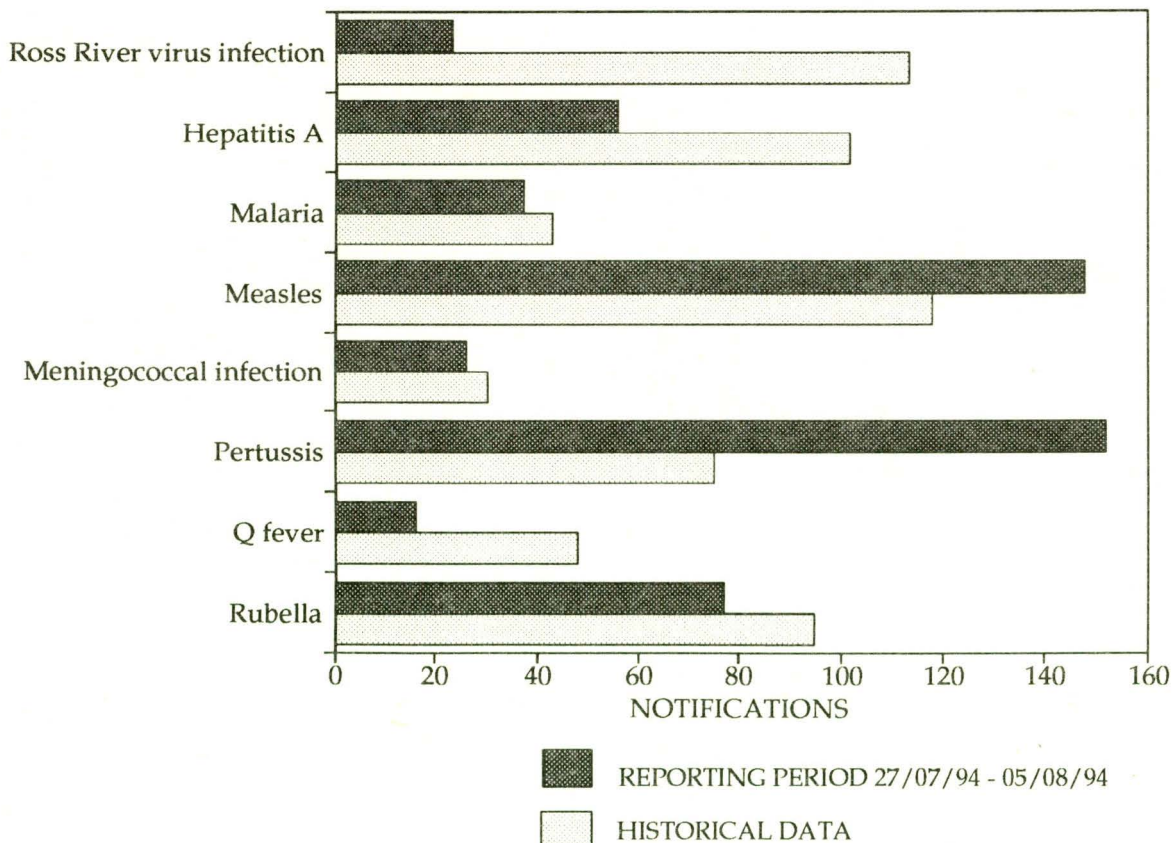


Figure 12. Selected National Notifiable Diseases Surveillance System reports, and historical data¹



1. The historical data are the averages of the number of notifications in 6 previous 2-week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 6. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 24 July to 6 August 1994

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA ¹			
									This period	This period	Year to date	Year to date
									1994	1993	1994	1993
Diphtheria	0	0	0	0	0	0	0	0	0	1	23	17
<i>Haemophilus influenzae</i> b infection	0	1	0	1	2	0	4	1	9	18	133	291
Measles	4	11	1	119	3	4	4	2	148	204	2197	1281
Mumps	1	0	NN	NN	0	NN	0	0	1	0	12	7
Pertussis	1	30	0	59	32	1	13	16	152	117	3137	1057
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0
Rubella ²	0	2	1	52	1	0	11	10	77	104	923	1816
Tetanus	0	0	0	NN	0	0	0	0	0	0	10	7

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.

2. NT, Tas: CRS only.
 NN Not Notifiable.

Table 7. Notifications of other diseases¹ received by State and Territory health authorities in the period 24 July to 6 August 1994

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA ²			
									This period	This period	Year to date	Year to date
									1994	1993	1994	1993
Arbovirus infection												
Ross River virus infection	0	0	3	20	0	NN	0	0	23	100	3652	4818
Dengue	0	0	0	0	1	NN	0	0	1	167	14	552
NEC ³	0	0	NN	6	0	0	0	1	7	34	459	413
Campylobacteriosis ⁴	19	-	5	75	126	3	113	26	367	258	5757	4652
Chlamydial infection (NEC) ⁵	9	NN	3	118	24	3	21	10	188	209	3885	4005
Donovanosis	0	NN	0	2	NN	NN	0	0	2	3	63	32
Gonococcal infection ⁶	0	10	8	47	5	0	6	8	84	78	1784	1771
Hepatitis A	0	15	1	33	1	0	2	4	56	50	1238	1227
Hepatitis B incident ⁷	-	1	0	-	0	0	1	1	3	-	216	-
Hepatitis B unspecified ⁷	7			34					41	103	860	1510
Hepatitis C incident ⁷	-	0	0	-	0	-	-	-	0	-	13	-
Hepatitis C unspecified ⁷	9			87		2	102	48	257	317	5479	4108
Hepatitis (NEC)	0	1	0	3	0	0	0	NN	4	0	30	44
Legionellosis	0	5	0	0	3	0	1	0	9	9	135	120
Leptospirosis	0	0	0	1	0	0	0	0	1	4	96	106
Listeriosis	0	0	0	0	0	0	1	0	1	3	21	33
Malaria	2	6	0	22	1	0	6	0	37	25	469	386
Meningococcal infection	0	5	2	13	2	0	1	3	26	23	198	167
Ornithosis	0	NN	0	0	0	0	0	0	0	4	59	56
Q fever	0	3	0	11	1	0	1	0	16	56	410	532
Salmonellosis (NEC)	2	16	8	38	23	1	35	6	129	116	3795	3106
Shigellosis ⁴	0	-	0	8	4	0	1	8	21	28	489	482
Syphilis	0	24	11	8	2	0	1	0	46	82	1290	1395
Tuberculosis	0	9	2	6	1	1	14	0	33	48	639	653
Typhoid ⁸	0	1	0	0	0	0	0	0	1	1	26	27
Yersiniosis (NEC) ⁴	0	-	0	8	0	0	0	1	9	19	284	269

1. For HIV and AIDS, see Tables 2 and 3. For rarely notified diseases, see Table 7.

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. SA, 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. Comparative totals for 1993 comprise incident and unspecified cases.

8. NSW and Vic includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

- Elsewhere Classified.

Table 8. Notifications of rare¹ diseases received by State and Territory health authorities in the period 24 July to 6 August 1994

DISEASES	Total this period	Reporting States or Territories	Year to date 1994
Botulism	0		0
Brucellosis	1	Vic	10
Chancroid	0		0
Cholera	0		3
Hydatid infection	0		28
Leprosy	0		5
Lymphogranuloma venereum	0		0
Plague	0		0
Rabies	0		0
Yellow fever	0		0
Other viral haemorrhagic fevers	0		0

1. Fewer than 50 cases of each of these diseases were notified each year during the period 1988 to 1993.

Table 9. Virology and serology laboratory reports by State or Territory¹ for the reporting period 28 July to 8 August 1994, historical data², and total reports for the year

	State or Territory ¹							Total this fortnight	Historical data ²	Total reported this year
	NSW	NT	Qld	SA	Tas	Vic	WA			
MEASLES, MUMPS, RUBELLA										
Measles virus		4	1	5		2	1	13	8.5	642
Mumps virus				1		3		4	2.2	56
Rubella virus	3	2				1	2	8	14.3	322
HEPATITIS VIRUSES										
Hepatitis A virus	2			2		2	5	11	15.2	231
Hepatitis B virus	29		5	3		16	15	68	99.2	1,558
Hepatitis C virus	80	1		64	6	15	88	254	147.2	3,678
ARBOVIRUSES										
Ross River virus	1							1	28.3	1,422
Dengue not typed							1	1	7.2	17
Flavivirus (unspecified)						1		1	5.8	12
ADENOVIRUSES										
Adenovirus type 1						2		2	4.2	43
Adenovirus type 8						2		2	1.0	64
Adenovirus not typed/pending	9		17	8		11	4	49	49.5	787
HERPES VIRUSES										
Herpes simplex virus type 1	19		35	38	1	42	25	160	155.7	3,028
Herpes simplex virus type 2	51		36	24	4	29	25	169	201.5	3,338
Herpes simplex not typed/pending	15						2	17	33.8	442
Cytomegalovirus	16		33	2	3	14	9	77	69.8	1,070
Varicella-zoster virus	4		6	7		8	8	33	29.7	654
Epstein-Barr virus	6			29		5	2	42	57.2	903
Herpes virus group - not typed	1						1	2	.7	14
OTHER DNA VIRUSES										
Parvovirus							2	2	7.2	48

Table 9. Virology and serology laboratory reports by State or Territory¹ for the reporting period 28 July to 8 August 1994, historical data², and total reports for the year, continued

	State or Territory ¹							Total this fortnight	Historical data ²	Total reported this year
	NSW	NT	Qld	SA	Tas	Vic	WA			
PICORNA VIRUS FAMILY										
Coxsackievirus A16						1		1	.7	43
Coxsackievirus B4						2		2	.0	12
Echovirus type 3						1		1	.0	1
Echovirus type 6						1		1	2.0	46
Echovirus type 11	1							1	3.7	39
Echovirus type 14	1							1	.8	6
Echovirus type 30						1		1	2.5	249
Rhinovirus (all types)	6		29			10	2	47	21.5	599
Enterovirus not typed/pending	5		38			4	31	78	27.3	910
ORTHO/PARAMYXOVIRUSES										
Influenza A virus	16		18	56		30	25	145	76.2	487
Influenza A virus H ₃ N ₂	1		4			11		16	8.2	30
Influenza B virus	1					1		2	25.8	105
Parainfluenza virus type 1			7	25		4	3	39	5.2	506
Parainfluenza virus type 2			1	1				2	7.0	47
Parainfluenza virus type 3			6	8		2	5	21	19.3	200
Parainfluenza virus typing pending						5	1	6	2.3	53
Respiratory syncytial virus	53		109	40	4	99	60	365	428.2	2,243
OTHER RNA VIRUSES										
Rotavirus	52		13	13	2	50	14	144	129.7	887
OTHER										
<i>Chlamydia trachomatis</i> - A-K	1							1	.2	1
<i>Chlamydia trachomatis</i> not typed	1		46	10	2	13	17	89	91.8	1,646
<i>Chlamydia psittaci</i>						6		6	2.2	53
<i>Chlamydia</i> species				1				1	.0	4
<i>Mycoplasma pneumoniae</i>				11		7	1	19	67.7	613
<i>Coxiella burnetii</i> (Q fever)				1		4		5	12.7	201
<i>Cickettsia australis</i>	1							1	.0	3
<i>Yersinia enterocolitica</i>	4							4	.2	11
<i>Bordetella pertussis</i>	1				1	9		11	7.3	364
<i>Bordetella</i> species	3							3	6.3	174
<i>Cryptococcus neoformans</i>	2							2	.0	4
<i>Treponema pallidum</i>	22							22	17.7	246
<i>Toxoplasma gondii</i>	4					2		6	1.5	54
<i>Echinococcus granulosus</i>	2							2	.7	9
TOTAL	413	7	404	349	23	416	349	1,961	1,906.5	28,175

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 28 July to 10 August 1994

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
MEASLES, MUMPS, RUBELLA													
Measles virus					1			7				5	13
Mumps virus												4	4
Rubella virus								2				6	8
HEPATITIS VIRUSES													
Hepatitis A virus							7					4	11
Hepatitis B virus							22					46	68
Hepatitis C virus							30					224	254
ARBOVIRUSES													
Ross River virus												1	1
Dengue not typed												1	1
Flavivirus (unspecified)												1	1
ADENOVIRUSES													
Adenovirus type 1					2								2
Adenovirus type 8									2				2
Adenovirus not typed/pending	1			1	25	10			3		1	8	49
HERPES VIRUSES													
Herpes simplex virus type 1		1			6			69	8		39	37	160
Herpes simplex virus type 2								47			73	49	169
Herpes simplex not typed/pending						1		6				10	17
Cytomegalovirus				1	43			1				32	77
Varicella-zoster virus								26			1	6	33
Epstein-Barr virus					4					1		37	42
Herpes virus group - not typed								1			1		2
OTHER DNA VIRUSES													
Parvovirus								1		1			2
PICORNA VIRUS FAMILY													
Coxsackievirus A16					1								1
Coxsackievirus B4					1							1	2
Echovirus type 3								1					1
Echovirus type 6		1											1
Echovirus type 11		1											1
Echovirus type 14												1	1
Echovirus type 30		1											1
Rhinovirus (all types)					41							6	47
Enterovirus not typed/pending		1	1		39	5		1				31	78
ORTHO/PARAMYXOVIRUSES													
Influenza A virus					118							27	145
Influenza A virus H ₃ N ₂					15							1	16
Influenza B virus					1							1	2
Parainfluenza virus type 1					38							1	39
Parainfluenza virus type 2					2								2
Parainfluenza virus type 3					20							1	21
Parainfluenza virus typing pending					6								6
Respiratory syncytial virus					331							34	365

Table 10. Virology and serology laboratory reports by clinical information for the reporting period 28 July to 10 August 1994, continued

	Encephalitis	Meningitis	Other CNS	Congenital	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
OTHER RNA VIRUSES													
Rotavirus						141						3	144
OTHER													
<i>Chlamydia trachomatis</i> - A-K												1	1
<i>Chlamydia trachomatis</i> not typed											88	1	89
<i>Chlamydia psittaci</i>					5							1	6
<i>Chlamydia</i> species					1								1
<i>Mycoplasma pneumoniae</i>					11							8	19
<i>Coxiella burnetii</i> (Q fever)												5	5
<i>Rickettsia australis</i>												1	1
<i>Yersinia enterocolitica</i>												4	4
<i>Bordetella pertussis</i>					10							1	11
<i>Bordetella</i> species												3	3
<i>Cryptococcus neoformans</i>												2	2
<i>Treponema pallidum</i>												22	22
<i>Toxoplasma gondii</i>			1									5	6
<i>Echinococcus granulosus</i>												2	2
TOTAL	1	5	2	2	721	157	59	162	13	2	203	634	1961

Table 11. Virology and serology laboratory reports by contributing laboratories for the reporting period 28 July to 10 August 1994

STATE OR TERRITORY	LABORATORY	REPORTS
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	90
	Prince Henry/Prince of Wales Hospitals, Sydney	199
	Royal Alexandra Hospital for Children, Camperdown	44
	South West Area Pathology Service, Liverpool	81
Queensland	Nambour Hospital	21
	State Health Laboratory, Brisbane	383
South Australia	Institute of Medical and Veterinary Science, Adelaide	348
Tasmania	Northern Tasmanian Pathology Service, Launceston	9
	Royal Hobart Hospital	2
	Royal Hobart Hospital, Hobart	11
Victoria	Commonwealth Serum Laboratories, Melbourne	13
	Microbiological Diagnostic Unit, University of Melbourne	13
	Monash Medical Centre, Melbourne	31
	Royal Children's Hospital, Melbourne	198
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	161
Western Australia	Princess Margaret Hospital, Perth	105
	State Health Laboratory Services, Perth	252
TOTAL		1961