



COMMUNICABLE DISEASES INTELLIGENCE

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

MEASLES EPIDEMIC ON THE SOUTH COAST OF NEW SOUTH WALES - INTERIM REPORT

Sam G¹, Raman S², Skimmer J³, Van Buynder P¹

Introduction

During the period 20 August to 8 November 1994, a total of 214 measles notifications was received by the South Eastern New South Wales Public Health Unit from the South Coast District of New South Wales.

The epidemic was centred in the Bega Valley area with 43% of known cases occurring in students attending Bega High School. The outbreak peaked during the first week of the Term 3 school holidays (week commencing September 26).

Measles cases were defined as persons having an illness characterised by:

- a generalised maculopapular rash resembling measles
- a high fever (38°C)
- one or more of the following: cough, coryza, conjunctivitis or Koplik spots.

Case notifications

On 22 September, two days prior to the end of the school term, the South Eastern New South Wales Public Health Unit was notified of two cases of clinically diagnosed measles in Bega High school students by a South Coast general practitioner. Follow-up with the school identified a high level of measles related absenteeism during the preceding two week period.

Potential sources for further case identification were contacted throughout the area including hospitals, general practitioners, schools, and pre-school and child-care centres. The need for future prompt notification of cases was stressed during this process.

A high attack rate amongst high-school aged children was identified and questionnaires were distributed to the two local high schools to ascertain the degree of under-reporting of cases.

Immunisation campaign

The need for measles vaccination for all unimmunised children as well as a recommendation for a booster dose for children aged between 10 and 17 years who had been previously vaccinated was highlighted in school letters and through the local media.

Community Health immunisation clinics were made available after hours and on weekends during the peak of the epidemic. These were well attended with in excess of 1200 children vaccinated over a four week period. Local general practitioners reported large attendances for measles vaccination.

To date, only two notifications of adverse reactions to measles-mumps-rubella vaccine have been notified. Both cases were reported as persistent screaming and high fever, and recovered without hospitalisation.

Epidemic demography

During the outbreak, cases were reported from almost all population centres in the South Coast District (Table). The epidemic commenced in, and was initially confined to the Bega Valley area, however, as time progressed cases were reported further north in the Eurobodalla shire. Overall, 76.2% of cases (163) were reported from the Bega Valley area, and 18.2% (39) from Eurobodalla. Secondary cases were subsequently reported in the Monaro and Southern Tablelands Districts.

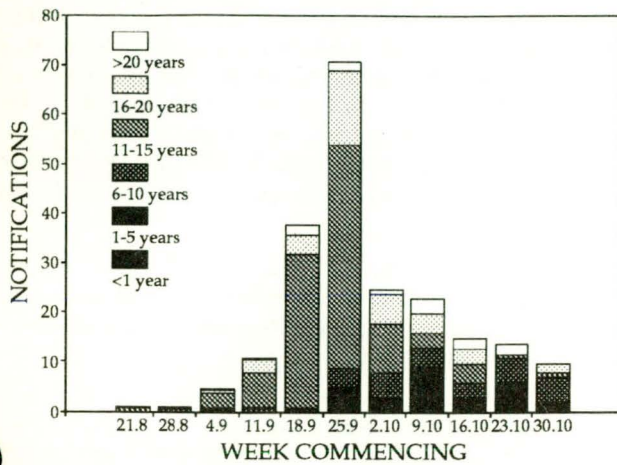
Table. Measles notifications made to the South Eastern Public Health Unit, 20 August to 8 November 1994, by residential area

Residential area	Notifications
Bega	123 (57.5%)
Pambula-Merimbula	18 (8.4%)
Eden	22 (10.3%)
Bateman's Bay-Moruya-Narooma	36 (16.8%)
Queanbeyan	6 (2.8%)
Bodalla	3 (1.4%)
Crookwell	3 (1.4%)
Cooma	2 (0.9%)
Yass	1 (0.5%)
Total	214 (100%)

For the six weeks from the onset of the outbreak, cases consisted primarily of high school aged children (Figure 1). As the epidemic progressed, the proportion of primary school aged children increased. There were similar proportions of males and females in each age group (Figure 2). Aboriginality was reported in 7% of notified cases (15).

1. South Eastern Public Health Unit, Goulburn, New South Wales.
 2. National Centre for Epidemiology and Population Health, Australian National University, Canberra.
 3. North Sydney Public Health Unit, Hornsby, New South Wales.

Figure 1. Measles notifications made to the South Eastern Public Health Unit, 20 August to 8 November 1994, by week of onset and age group



Serological confirmation was obtained for a total of 35 cases (16.4%).

Hospitalisations

During the epidemic there were 29 (13.6%) hospital admissions, including six Aboriginal children. The predominant reasons for hospital admission were pneumonia/respiratory infection and dehydration. There have been no deaths to date. A further investigation of hospital admission associated morbidity is planned.

Immunisation status of cases

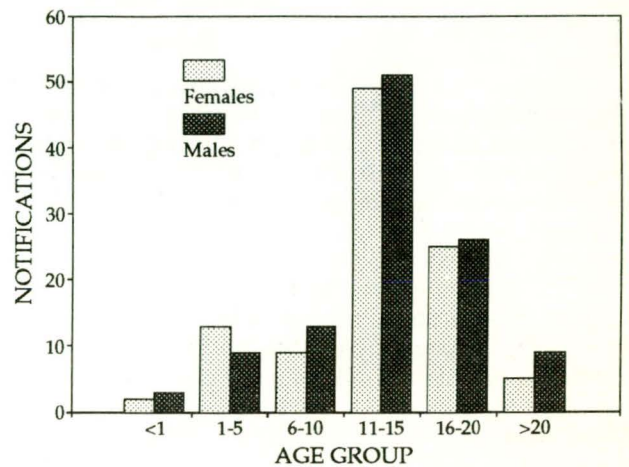
Twenty-two per cent of high school aged children were reported by their parents as immunised, 36% were reported as not immunised, and 42% reported as unknown. Data based on questionnaires distributed to high school students will be reported on later.

Discussion

The characteristics of this epidemic are similar to those recently described^{1,2} with the highest attack rate being in high school students. Reporting of the immunisation status of the cases during the outbreak was based on parental recall, which has been reported to be inaccurate³. In the absence of reliable data on the immunisation status of high school students at the time of reporting, the role of vaccine efficacy in determining susceptibility to contracting measles cannot be examined in this report. However, reduced vaccine efficacy in those vaccinated pre-1980 has been described elsewhere⁴.

Under-reporting was found to occur at all stages of the epidemic despite continued active surveillance. Investigation revealed that many general practitioners were

Figure 2. Measles notifications made to the South Eastern Public Health Unit, 20 August to 8 November 1994, by week on onset and age group



unaware of the requirement to notify measles immediately, and some were not aware of the requirement to notify at all. The importance of prompt notification for the success of school exclusion policies was also poorly understood. Of eight cases diagnosed in an Accident and Emergency department, none were notified by the hospital. The delay in notification of early cases until the onset of the school holiday period also made control measures more difficult.

The rapid implementation of numerous clinics by Community Health staff during the early phase of the epidemic enabled large numbers of children located throughout a large area to be vaccinated in a relatively short period.

Further clusters of cases continue to occur on the South Coast and a full report will follow on cessation of the epidemic.

References

1. Merianos A, Miller NC, Patel M. Control of a community outbreak of measles which started in a poorly immunised high school population. *Aust J Public Health* 1993;17:231-236.
2. Cheah D, Lane JM, Passaris I. Measles vaccine efficacy study in a Canberra high school: a study following a measles outbreak. *J Paed Child Health* 1993;29:455-458.
3. Goldstein KP, Kviz FJ, Daum RS. Accuracy of immunization histories provided by adults accompanying preschool children to a pediatric emergency department. *JAMA* 1993;270:2190-2194.
4. Yuan L. Measles outbreak in 31 schools: risk factors for vaccine failure and evaluation of a selective re-vaccination strategy. *Can Med Assoc J* 1994;150:1093-1098.

INFLUENZA IMMUNISATION IN VICTORIA 1994

JA Carnie, S Ng, G Keesham, P Norris, *Infectious Diseases Unit, Health and Community Services, Victoria*

Introduction

For the past two years the Department of Health and Community Services Victoria has conducted an Influenza Immunisation Campaign during the period February to May. The objective of this campaign has been to increase awareness of the need for influenza immunisation and has been targeted at both health care providers and at-risk persons. In order to evaluate these campaigns we conducted a telephone survey in August 1994 to assess influenza immunisation coverage. We report here the findings with some comparisons with a similar survey conducted in 1992.

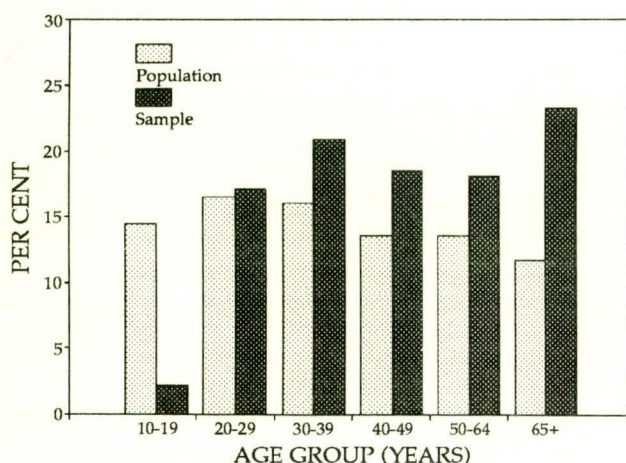
Methods

Two interviewers surveyed persons chosen by systematic sampling from all Victorian White Pages telephone directories (two metropolitan and 11 non-metropolitan). The sample size was sufficient to yield results with 99% confidence for overall vaccination rates of 10 to 20%.

A starting point in each telephone directory was picked at random. Then the first number from every seventh page of the metropolitan directories and the first number from every eleventh page of the non-metropolitan directories was selected. If there was no answer the next number was dialled until a response was obtained. Residential and business numbers were included.

We telephoned during normal working hours and spoke to the first person who answered the telephone except if a child answered, in which case we asked to speak to an adult in the household. If an institution such as a nursing home was reached we asked to speak to a resident.

Figure 1. Age group distribution of the sample compared with the 1992 Victorian population



After noting the age group and sex of the respondent we determined if they were in a group for which influenza vaccine was recommended, that is, they had cardiac, pulmonary, renal, or hepatic disease, or diabetes; or they were aged over 65 years, a resident of a nursing home or chronic care facility, on medication which suppresses the immune system, or a health care worker.

We then asked if they had received influenza vaccine in 1993 or in 1994, and those respondents with risk factors who had not been vaccinated in 1994 were asked to give a reason for this.

We adjusted some results for age using the Victorian population from Australian Bureau of Statistics 1992 figures as the standard. We used Epi Info Version 5.0 to analyse the data.

Results

We telephoned 845 persons of whom 62 (7.3%) declined to be interviewed. The proportions who agreed to be interviewed were 521 of 568 (91.7%) in the metropolitan area, and 262 of 277 (94.5%) in the non-metropolitan areas. The difference was not significant.

The age distribution of the sample compared to that of the Victorian population (1992) shows that the sample was deficient in respondents under 20 years of age (Figure 1).

The overall influenza vaccination rate was 21.3% in 1994 (14.2% age-adjusted) and 20% in 1993 (12.3% age-adjusted).

In respondents 65 years and over, 61% (111/182) were vaccinated in 1993 and 62% (113/182) in 1994 (Figure 2). This was a considerable improvement over the coverage rate of 44.4%¹ in this age group in 1992.

Figure 2. Age group specific vaccination rates (per cent), 1994

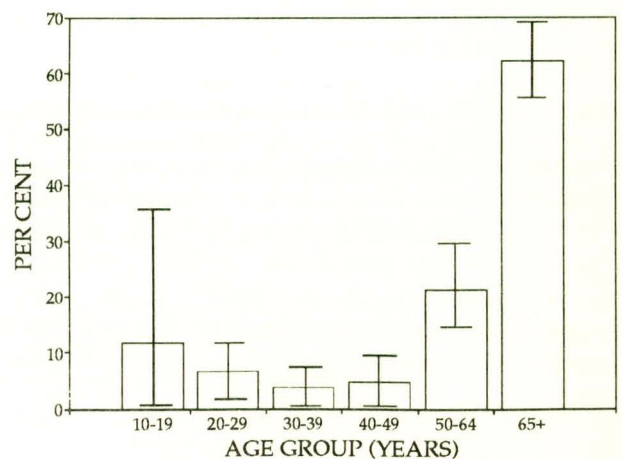
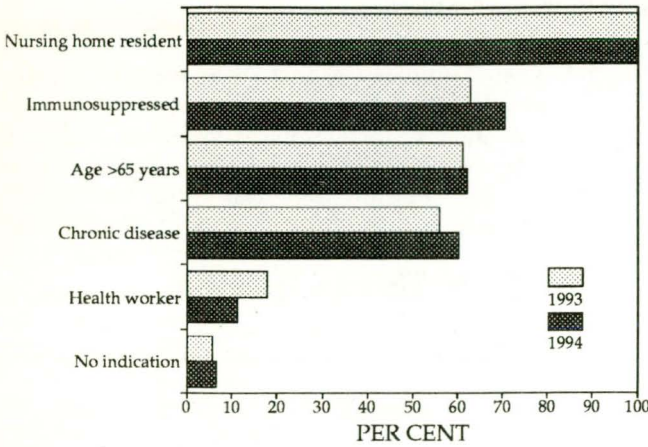


Figure 3. Vaccination rates by indication for vaccination¹, 1993 and 1994



1. Individuals may be included in more than one category.

The female:male ratio in the sample was approximately 2:1 but there was no significant difference in age adjusted influenza vaccination rates between females and males.

A total of 277 of the 783 interviewed persons (35.4%) had at least one indication for influenza vaccination, of whom 134 (48.3%) had been vaccinated.

The vaccination rates in 1994 for those with specific indications for vaccination varied from 11.1% in health workers to 100% in the eleven nursing home residents surveyed (Figure 3).

In 1994, in those with chronic medical conditions we found that of those under 65 years the coverage rate was only 30% (15/50) but for 65 years and over with such conditions the rate was 76.9% (70/91). Overall the coverage rate for persons with chronic medical conditions was 60.3%.

In those who were regarded as immunosuppressed, the overall coverage rate in 1994 was 70.5%. For those under 65 years, the coverage rate was 26.3% (5/19) and for those 65 years and over, the rate was 84.7% (50/59).

Stratified analysis of the population 65 years and over according to the presence or absence of other risk fac-

tors gave a vaccination rate of 46.1% (41/89) in the healthy elderly in 1994.

The vaccination rate in those under 65 years of age with no reported risk factors was 6.5% (33/506) in 1994 and 5.7% (29/506) in 1993.

Of the 143 persons with indications for influenza vaccine who had not been vaccinated in 1994, 138 provided a reason for not receiving the vaccine (Table 1).

Discussion

The overall influenza vaccination rate in the Victorian population has only marginally increased, from 13.3% in 1992² to 14.2% in 1994 (age-adjusted). However, among those aged 65 years and over, the rate has increased from 44% in 1992 to 62% in 1994, and this figure is particularly encouraging. Among persons with chronic medical conditions, the overall rate was 60.3% but in those aged under 65 years the rate was only 30% which is far short of the desirable 60% to 80% vaccination rate.

We found that 6.5% of our sample who were at low risk for the complications of influenza had been vaccinated; this represented over 200,000 doses of vaccine for the State overall. In a non-epidemic year this may not have a major impact on vaccine supplies but our experience in the past has been that sensationalist media coverage of influenza can result in a large increase in demand for vaccine among persons who may not require it for medical reasons. In an epidemic, however, there may be persons who require vaccine for reasons other than medical risks, for example, work in essential services.

There are potential sources of bias in the survey method used. The sample over-represented persons 65 years and older and under-represented those under 20 years of age. For this reason some results are age-adjusted. By phoning during normal working hours only we were more likely to reach retired persons, women not in paid employment and unemployed persons. This problem can be addressed by making calls after hours and on weekends and we propose to do this during our next survey.

The overall number of nursing home residents in the sample was only 11 and we are conducting a separate mail survey to assess influenza vaccine coverage in this group.

Table 1. Reasons for not being vaccinated in 1994 provided by persons with indication(s) for vaccination

Reason	Female	Male	Total	%
My doctor did not suggest it	29	8	37	26.8
Vaccine may have side effects	21	7	28	20.3
Allergic to eggs	0	1	1	0.7
Do not believe in immunisation	33	21	54	39.1
Did not get around to it	11	7	18	13.0
Total	94	44	138	100

It appears that the influenza immunisation message is getting through to people over 65 years but health care providers and the public still need to be convinced of the benefits of influenza vaccine for those with chronic medical conditions.

References

1. MacIntyre CR, Carnie JA, Plant AJ. Influenza vaccination in Victoria 1992 *Med J Aust* 1993; **159**:257-260.

CDI editorial comment

The National Health and Medical Research Council's recently revised recommendations on persons who should receive influenza vaccine were reproduced in *CDI* 1994;**18**:549.

REPORT OF THE 1994 SOUTH AUSTRALIAN INFLUENZA VACCINATION PROMOTION

John Carrangis, Communicable Disease Control Unit, South Australian Health Commission; adapted from *Communicable Disease Control Bulletin* 1994;(3): 312-313

Throughout Adelaide, influenza vaccination cover of adults over 65 years of age was 59% in 1994 compared to 57% in 1993, and 34% in 1991.

The influenza vaccine market growth increased by 6% in South Australia in the 1993-1994 period.

This is the fourth year that a continuous influenza vaccination promotion has been conducted targeting the at-risk group and directing promotion through doctors' surgeries and pharmacies. Promotion activities included milk carton and journal advertising, posters

(mainly in pharmacies and surgeries), the influenza vaccine priority request form (introduced in 1993) distributed via pharmacies, and product information supplied by the influenza vaccine manufacturers CSL Limited, Pasteur Merieux Australia and, for the first time, SmithKline Beecham.

There was less influenza reported this winter for South Australia from the Australian Sentinel Practice Research Network and from the Institute of Medical and Veterinary Science, Adelaide, than in the previous two years. Reports began to be received in June, earlier than

Table. The influenza vaccination promotion survey findings, South Australia, August 1994

	Age group (years)	Total number	% immunised	95% Confidence interval	1993 comparison
Persons surveyed	> 65	315	59%	± 3.58	184; 57% immunised
	< 65	403	16%	± 5.45	144; 19% immunised
Persons who had influenza vaccination discussed with them by their doctor	> 65	204 (65%)	86%	± 4.78	66% (± 8.4) cover
	< 65	92 (23%)	59%	± 6.33	23% (± 14.4) cover
Persons who had influenza vaccination discussed with them by pharmacy staff	> 65	77 (24%)	88%	± 7.18	
	< 65	29 (7%)	52%	± 18.19	
Persons who had seen advertisements in a doctor's surgery	> 65	217 (69%)	71%	± 6.07	
	< 65	276 (68%)	19%	± 4.64	
Persons who had seen advertisements at a pharmacy	> 65	135 (43%)	66%	± 8.00	
	< 65	171 (42%)	18%	± 5.77	
Persons who had seen advertisements on milk cartons	> 65	64 (20%)	55%	± 12.20	53% (± 9.9) cover
	< 65	62 (15%)	23%	± 10.41	34% (± 13.3) cover
Persons who had seen advertisements in councils, health centres or anywhere else	> 65	51 (16%)	61%	± 13.40	
	< 65	82 (20%)	16%	± 7.91	
Persons who had not seen any advertisement for influenza vaccination	> 65	31 (10%)	32%	± 16.46	
	< 65	71 (18%)	8%	± 6.49	

in recent years, peaked towards the end of July, then dropped markedly by mid-August. Media exaggeration of the dangers of the epidemic has not occurred, hence those at risk had no difficulty getting vaccine.

The 1994 influenza study was undertaken by Product Management for the Communicable Disease Control Unit to assess influenza vaccine coverage and the impact of the vaccination promotion activities. A total of 718 persons was surveyed in 21 local government areas (Table). They were drawn from various senior citizen groups and did not include younger adults or children.

Sixty-five per cent of the at-risk persons had influenza vaccination discussed with them by their doctor (86% vaccinated) and 24% had vaccination discussed with

them by pharmacy staff (88% vaccinated). There was a good recall of the advertisements on milk cartons (55%), in doctors' surgeries (71%), in pharmacies (66%) and elsewhere (61%).

These results have provided useful information for the planning of the 1995 promotion.

The goal for 1995 is to reach 65% influenza vaccination cover in the over 65 year age group. To help achieve this, plans for increased education/promotion activity with doctors, pharmacy staff and the public are being considered. Results of a study with pharmacists about the future of the influenza vaccine priority request form will also be considered.

GONOCOCCAL SURVEILLANCE, AUSTRALIA, 1 APRIL TO 30 JUNE 1994

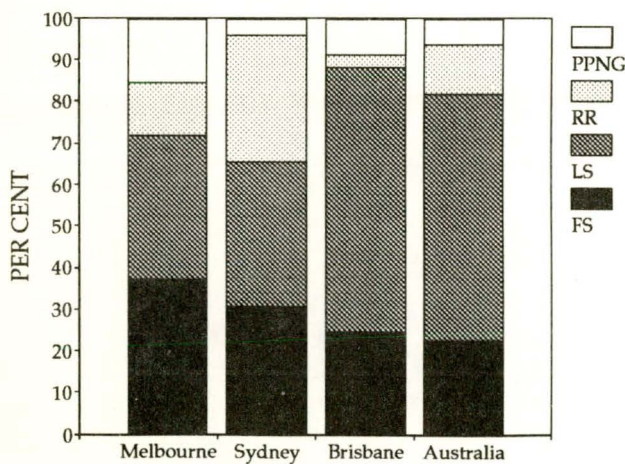
Derived from the Australian Gonococcal Surveillance Programme - AGSP. Coordinator, JW Tapsall, The Prince of Wales Hospital, Sydney

The antibiotic sensitivities of 463 strains of *Neisseria gonorrhoeae* were examined by participating laboratories in the April - June quarter of 1994. All isolates were examined for their sensitivity to penicillin and 384 of these for susceptibility to spectinomycin, ceftriaxone and ciprofloxacin and for high level tetracycline resistance (TRNG).

Figure 1 compares the penicillin sensitivity of isolates examined in Melbourne, Sydney and Brisbane and for Australia as a whole and Figure 2 shows the same data for the corresponding period in 1993. Marked differences in regional sensitivity patterns were observed,

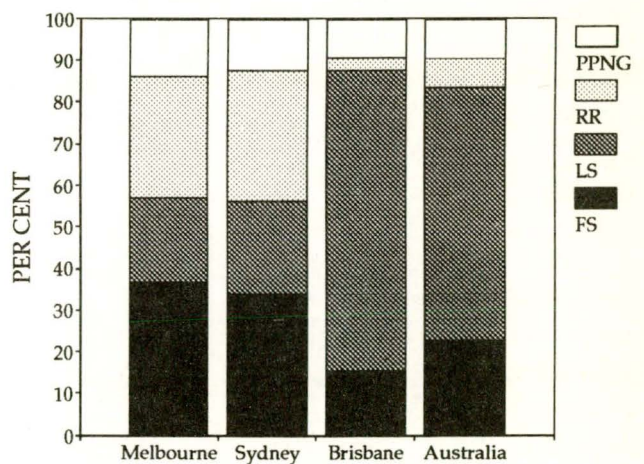
but these are somewhat obscured in aggregated national data. Resistance to the penicillins was high in Sydney and Melbourne with intrinsic (chromosomally mediated) resistance (CMRNG) prominent in Sydney (30% of isolates) and penicillinase-producing *Neisseria gonorrhoeae* (PPNG) more frequently isolated in Melbourne (15% of strains). CMRNGs were also detected in Brisbane, Adelaide and Alice Springs and PPNG in Adelaide and Brisbane. The total number of PPNG in Australia (29) was just over half the total of the CMRNG (54), but the majority of these isolates were in Sydney (33). Forty-three PPNG were found in the April - June

Figure 1. Proportional penicillin sensitivity of isolates of *Neisseria gonorrhoeae* by region and for Australia, 1 April to 30 June 1994



FS Fully sensitive to penicillin, MIC \leq 0.03 mg/L.
 LS Less sensitive to penicillin, MIC 0.06 - 0.5 mg/L.
 RR Relatively resistant to penicillin, MIC \geq 1 mg/L.
 PPNG Penicillinase producing *Neisseria gonorrhoeae*.

Figure 2. Proportional penicillin sensitivity of isolates of *Neisseria gonorrhoeae* by region and for Australia, 1 April to 30 June 1993¹



FS Fully sensitive to penicillin, MIC \leq 0.03 mg/L.
 LS Less sensitive to penicillin, MIC 0.06 - 0.5 mg/L.
 RR Relatively resistant to penicillin, MIC \geq 1 mg/L.
 PPNG Penicillinase producing *Neisseria gonorrhoeae*.

1. NB: data for Sydney in 1993 have been revised from those previously published.

Table. Gonococcal isolates, Australia, 1 April to 30 June 1994, by sex and participating laboratory¹

	Melbourne	Sydney	Brisbane	Australia
Male	71 (76)	92 (151)	89 (68)	341 (315)
Female	7 (6)	16 (14)	49 (30)	102 (55)
Male:female ratio	10.1:1.0 (12.6:1.0)	5.7:1.0 (10.8:1.0)	1.4:1.0 (2.0:3.0)	3.3:1.0 (5.7:1.0)

1. Figures in parentheses represent data for the corresponding period in 1993.

quarter of 1993. The number of PPNG has slowly declined over recent years.

All 384 isolates tested were sensitive to spectinomycin and ceftriaxone, although again a small number of isolates with somewhat elevated MICs to ceftriaxone were detected. A total of nine strains (2.3%) from patients in Sydney, Melbourne and Brisbane showed decreased susceptibility to ciprofloxacin. Two of these isolates had high level resistance to the quinolones (MIC ≥ 1 mg/L). Nineteen gonococci (4.9%) possessed high level resistance to tetracyclines (TRNG) and these strains were isolated in Sydney, Melbourne, Adelaide and Brisbane.

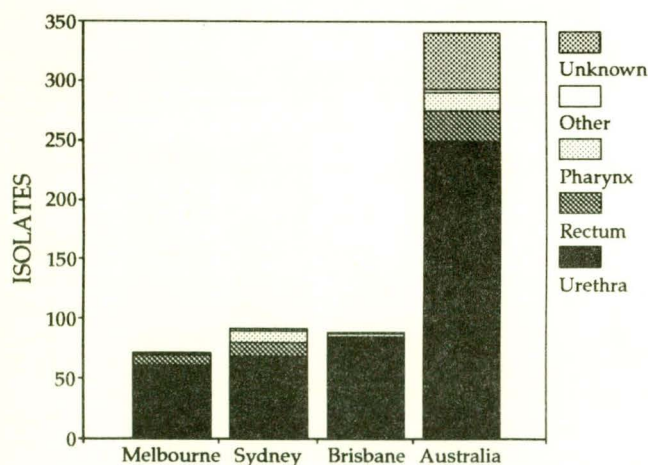
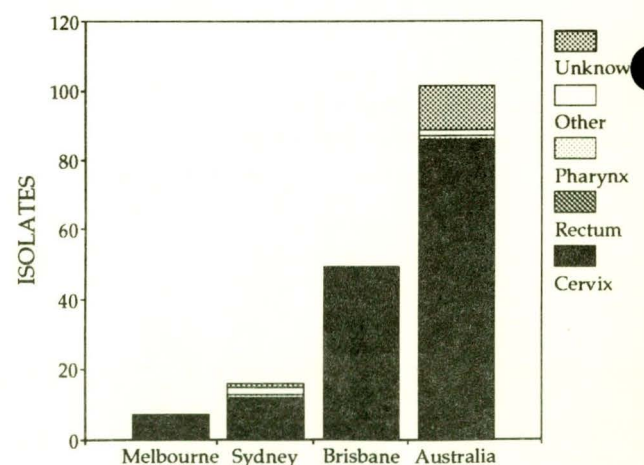
The total number of strains tested, 463, was slightly more than the 420 examined in January - March and virtually the same as the 468 seen in the corresponding period in 1993. Data on the site of infection and the sex of infected patients (when available) is shown for those centres with higher numbers of strains and as a com-

bined total for Australia in the Table and in Figures 3 and 4. A marked alteration in the male:female ratio of disease occurred in Sydney in this quarter (from 11:1 to 6:1 when 1993 and 1994 data are compared) and this is responsible for a decline in this ratio for Australia in this present period.

This report completes the thirteenth continuous year of surveillance by the AGSP.

Correction

There are two corrections required for the previous report in this series, 'Gonococcal surveillance, Australia, 1 January to 31 March 1994', published in *CDI* 1994;18:494-495. The caption for Figure 2 should refer to the period 1 January to 31 March 1993, not 1994. In Figures 3 and 4, the Y-axis labels should read 'ISOLATES', not 'PER CENT'.

Figure 3. Gonococcal isolates from males, by region and for Australia, 1 April to 30 June 1994**Figure 4. Gonococcal isolates from females, by region and for Australia, 1 April to 30 June 1994**

ISOLATION OF VACCINIA VIRUS FROM A FINGER

Elizabeth Holstein, Bruce Harrower and Michael Lyon, Laboratory of Microbiology and Pathology, Queensland Health, Brisbane

We report on the isolation of vaccinia virus from a finger lesion. The Virus Laboratory of the Laboratory of Microbiology and Pathology, Queensland Health, performed routine viral cultures on specimens of vesicle fluid and two finger swabs collected from a patient over a four day period. A viral-like cytopathic effect (CPE) suggestive of herpes simplex virus (HSV) was seen after two days in MRC5 fibroblast cells inoculated with vesicle fluid and after six and seven days in MRC5 receiving swab specimens. CPE was also seen in Vero and HEp2 cell cultures but only after eleven to twelve days. Harvested cells from cultures did not show staining after treatment with fluorescent monoclonal antibody to HSV types 1 and 2. The isolates grew rapidly on passage to fresh cell cultures but again failed to react with antibody to HSV.

Request slips accompanying the specimens revealed that the patient had sustained a needlestick injury during the handling of material containing recombinant vaccinia virus. Negative staining of cell culture material followed by electron microscopic examination showed brick-shaped virus particles approximately 290 x 230 nm, morphologically typical of orthopox viruses¹. On the basis of this evidence and the clinical information supplied the isolate was identified as vaccinia. Interestingly, original attempts to use electron microscopy to find virus particles in the vesicle fluid had failed.

Acknowledgment

Noni Hudson, Electron Microscopy Unit, Royal Brisbane Hospital for electron microscopy of the virus isolate.

OVERSEAS BRIEFS

In the last two weeks, the following information has been supplied by the World Health Organization (WHO) and the Department of Foreign Affairs and Trade.

Influenza in the Northern Hemisphere

Influenza A isolates and antigen detections have been reported recently from the United Kingdom, the Czech Republic and France, and influenza B from Portugal.

Cholera update

Ten cases of cholera have been reported recently from Bari, a coastal town in southern Italy. *Vibrio cholerae* O1 biotype El Tor, serotype Ogawa was identified as the

Reference

1. Fenner F, Nakano JH. *Poxviridae: The Poxviruses*. In: Lenette EH, Halonen P, Murphy FA, editors. *Laboratory diagnosis of infectious diseases*. Volume II. New York: Springer-Verlag, 1988:177-210.

CDI editorial comment

There have been only three reports of vaccinia virus made to the CDI Virology and Serology Reporting Scheme since 1982, one in 1982, one in 1985 and one in 1987. All patients were male, aged 17, 39 and 78 years respectively. The virus was isolated from a skin specimen for two and identified by electron microscopy for the other.

Vaccinia vaccine has not been routinely used since the declaration of the eradication of smallpox in 1979. The National Health and Medical Research Council recommends, however, that it can be considered for research staff working with viable or potentially viable vaccinia or related poxvirus strains.

Reference

1. National Health and Medical Research Council. *The Australian immunisation procedures handbook*, 5th ed. Canberra: Australian Government Publishing Service, 1994.

causative organism. The presumed source of infection was fish, especially mullet and cuttle fish, contaminated with accidentally infected seawater, purchased at the local fish market. The Italian Ministry of Health has set up a special cholera commission in Bari, and the local population has been alerted to the potential hazards of consuming raw fish. As local sanitary and hygiene conditions are adequate, and as a result of the application of appropriate control measures, the WHO considers that the risk of a serious cholera outbreak is negligible.

Louangprabang and Sayaboury Provinces in the Lao People's Democratic Republic have recently been declared infected. There were 2794 cases and 128 deaths reported for the period 1 August to 10 October. Gaza has also been declared infected, with the occurrence of

41 cases and one death between 2 and 11 November. The outbreak followed heavy rains which caused flooding in almost all of Gaza City and surrounding refugee camps (including open sewers) and are believed to have caused contamination of domestic water supplies. Guinea-Bissau has also recently been declared cholera infected (594 cases and 38 deaths in an eleven day period in October).

Cholera cases have been reported for August, September and October from Algeria, Albania, Benin, Brazil, Burundi, Cambodia, Cameroon, Chad, Costa Rica, Cote d'Ivoire, Dagestan, Djibouti, El Salvador, Gaza, Ghana, Guinea, Guinea Bissau, Hong Kong, India, Italy, Laos, Moldova, Mozambique, Morocco, Niger, Nigeria, Philippines, Romania, Rwanda-Zaire, Sierra Leone, Singapore, Tajikistan, Uganda and Ukraine.

CDI NOTICE TO READERS

National Hydatid Disease Symposium

The Centre for Infectious Diseases and Microbiology (CIDM) at Westmead Hospital is organising a National Hydatid Disease Symposium to be held on Friday 3 March and Saturday morning, 4 March 1995, in the John Lowenthal Auditorium, Education Block, Westmead Hospital, Westmead, New South Wales.

The symposium's aims are:

1. to review the epidemiology, diagnosis, management and methods of control of hydatid disease in Australia,
2. to identify specific needs for improvements in and future directions of surveillance and control of hydatid disease in Australia.

The symposium will be of interest to health workers involved in diagnosis, surveillance, treatment and control of hydatid disease including veterinarians, surgeons, infectious diseases physicians, rural practitioners, microbiologists, serologists, public health and primary industry officers.

The first day of the symposium will consist of presentations from experts in various aspects of hydatid disease, with adequate opportunity for audience participation. Speakers will include Professor Andrew Thompson, Murdoch University; Professor Don McManus, Queensland Institute of Medical Research; Dr Marshall Lightowlers, University of Melbourne; Professor Miles Little, Department of Surgery, Westmead Hospital and Dr Trevor Beard, University of Tasmania.

On Saturday morning there will be a workshop for experts and other interested participants to discuss future needs for control and management of hydatid disease in Australia and to prepare a position paper incorporating their recommendations. This will be circulated to participants for comment and submitted for publication to a suitable refereed medical journal.

Registration

Early registration - before 31 January, 1995 \$40

31 January - 28 February, 1995 \$50

Registration includes lunch, morning and afternoon teas and a copy of the proceedings.

Provisional program

The provisional program for Friday 3 March includes sessions on

- hydatid disease epidemiology
 - overview
 - hydatid disease in wildlife in the Australian Capital Territory
 - molecular epidemiology
 - hydatid disease in urban hunting dogs
- diagnosis (serology, imaging)
 - overview of laboratory diagnosis
 - serology: ICPMR experience
 - imaging in diagnosis
- clinical presentation and management
 - in adults
 - in children
- prevention and control programs in Australia.
 - hydatid control in Tasmania
 - hydatid control in mainland Australia
 - immunisation

Further information

Further information, including more details of the program, is available from Dr John Walker or Professor Lyn Gilbert, CIDM, Westmead Hospital, phone (02) 633 7191; fax (02) 893 8659.

Registrations should be directed to Ms J Shaw, Department of Clinical Microbiology, Westmead Hospital, Westmead, NSW 2145.

COMMUNICABLE DISEASES SURVEILLANCE

Virology and Serology Reporting Scheme

There were 1651 reports received in the *CDI* Virology and Serology Reporting Scheme this fortnight (Tables 9, 10 and 11).

- Twenty-eight reports of **measles** were received this period, for 7 males and 21 females, 21 of whom were in the 5 to 24 year age group. A total of 137 reports was received for September, more than for any month since December 1993 (Figure 1).
- **Rubella** was reported for 168 patients this fortnight including 22 females in the 15 to 44 year age group. Diagnosis was by IgM detection (163) and fourfold rise in titre (5). More reports were received for the month of October (218) than for any month recorded by this Scheme (Figure 2).
- Twelve reports of **hepatitis A** were received, 7 males and 4 females (one sex unknown).
- Positive **hepatitis B** serology was reported for 67 patients this fortnight, 32 males and 33 females (2 sex not stated). Thirty-five patients were in the 25 to 44 year age group. Included were 12 pregnant women, one injecting drug user and a 15 year old male bone marrow transplant recipient.
- Positive **hepatitis C** serology was reported for 148 patients this fortnight, 81 males and 65 females (2 sex not stated). One hundred and nineteen reports were for the 25 to 44 year age group, and 14 for the 15 to 24 year age group. Included were 13 injecting drug users, 4 pregnant women and 2 HIV positive patients. Also included was a haemophiliac, a sex worker and a patient who had had a blood transfusion 5 years previously.
- **Ross River virus** infection was reported for 12 patients this period, all from Queensland with

specimen collection dates in late October. Included were 8 males and 4 females, age range 20 to 75 years. All diagnoses were presumptive (IgM detected).

- Three reports of **Barmah Forest virus** were received this fortnight, one from the Northern Territory (33 year old male) and 2 from Queensland (53 year old female and 30 year old male). All had specimen collection dates in late October and were diagnosed by IgM detection.
- Ninety-four reports of **adenovirus** were received this fortnight, 59 virus isolations, 28 antigen detections and 7 single high titres. Twenty-two patients were under the age of one year and a total of 41 were in the under 4 year age group. Included were 8 reports of **adenovirus type 2** and 5 reports of **adenovirus type 7**, including isolation from the eye of a one year old male.
- **Herpes simplex virus type 1** was reported for 181 patients this fortnight, 174 isolations and 7 antigen detections.
- One hundred and fifty-one reports of **herpes simplex virus type 2** were received this fortnight diagnosed by virus isolation (144) and antigen detection (7).
- Twenty reports of **untyped herpes simplex virus** were reported, 17 virus isolations, 2 IgM detections and one single high titre. Included was detection in the CSF of a 27 year old female with meningitis.
- There were 78 reports of **cytomegalovirus (CMV)** this fortnight, 46 virus isolations and 32 IgM detections. Included was isolation at post mortem from the lung of a one year old male who had died of SIDS.

Figure 1. Measles laboratory reports, 1993 to 1994, by month of specimen collection

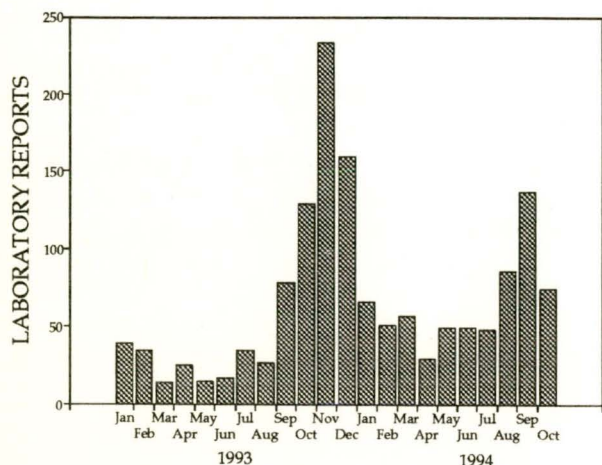
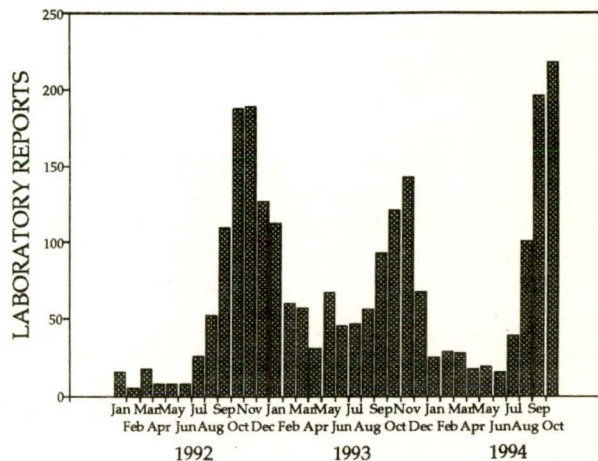


Figure 2. Rubella laboratory reports, 1992 to 1994, by month of specimen collection



- **Varicella-zoster virus** was reported for 55 patients this period. Diagnosis was by virus isolation (19), antigen detection (25), IgM detection (8) and single high titre (3). Included was isolation from a 26 year old pregnant female with chickenpox at 27 weeks' gestation and from a 2 month old female. Varicella-zoster specific IgM was detected in the serum of a 6 month old female with haemorrhagic varicella.
- Eighty-seven reports of **Epstein Barr virus** were received this period including a report for a 7 year old male with right upper quadrant pain and abnormal LFTs.
- **Human herpes virus type 6** was reported for a 17 month old male with skin manifestations. Diagnosis was by IgM detection.
- Six reports of **parvovirus** were received this fortnight, all diagnosed by IgM detection. Included were 2 males and 4 females, all in the 5 to 64 year age group.
- **Coxsackievirus type B2** was reported for 5 patients this period including isolation from the faeces of a one year old male with facial palsy.
- **Rhinovirus** was reported for 35 patients, 25 of whom were under the age of 4 years. Diagnosis was by virus isolation in all cases.
- **Influenza A** was reported for 5 patients this fortnight. Included was a 9 year old female with a malignancy who had been excreting this virus for 2 months. Diagnosis was by isolation from a bronchial lavage specimen. The remaining 4 diagnoses were by single high titre.
- A single report of **influenza B** (B/Panama/45/90-like) was received for a 54 year old female who had recently returned from Thailand.
- No reports of **parainfluenza virus type 1** were received this period, following a decline in the number of reports received in recent months. There were many reports received this year than in 1992, the last year when there was substantial activity of this virus reported (Figure 3).
- Forty-three reports of **parainfluenza virus type 3** were received this fortnight, 31 virus isolations, 11 antigen detections and one single high titre. Thirty-seven patients were under the age of 4 years, 26 being in the under one year age group. The number of reports received is below average for the time of year (Figure 4).
- Sixty-nine reports of **respiratory syncytial virus (RSV)** were received this fortnight, 43 for patients under the age of one year and a total of 58 in the under 4 year age group. The number of reports has declined in recent months (Figure 5).
- **Rotavirus** was reported for 155 patients this period, 82 males and 72 females (one sex not stated). One hundred and thirty-five patients were less than 4 years of age, 46 being in the under one year age group.

Figure 3. Parainfluenza virus type 1 laboratory reports, 1992 and 1994, by month of

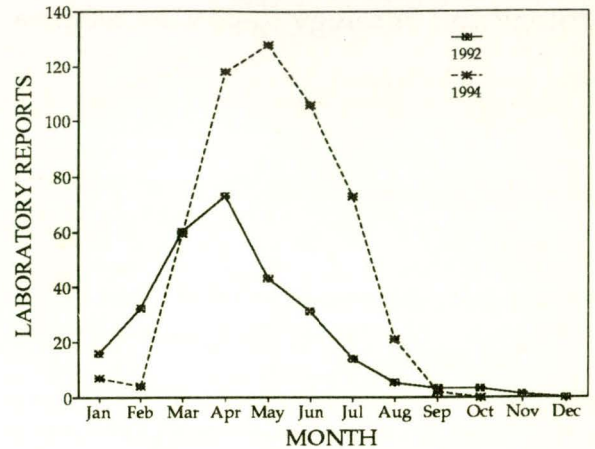


Figure 4. Parainfluenza virus type 3 laboratory reports, 1989 to 1993 average and 1994, by month of specimen collection

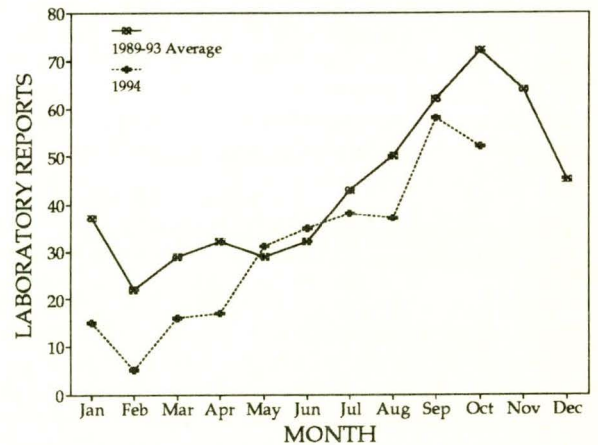
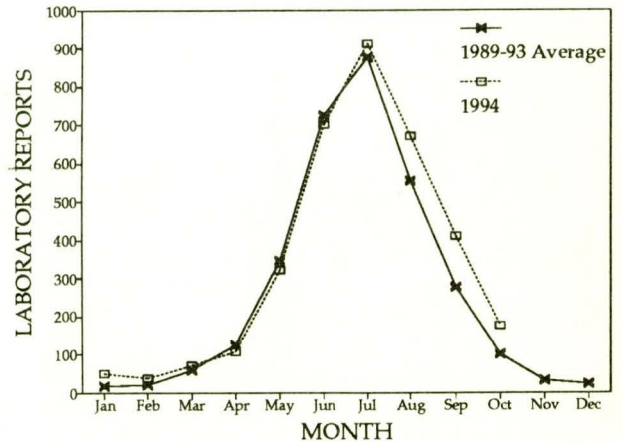


Figure 5. Respiratory syncytial virus laboratory reports, 1989 to 1993 average and 1994, by month of specimen collection



- Sixty-five reports of *Chlamydia trachomatis* were received this fortnight, 25 males and 39 females (one sex not stated). Fifty-seven patients were in the 15 to 44 year age group. Diagnosis was by culture (29), antigen detection (31), nucleic acid detection (4) and single high titre (one).
- Twelve reports of *Mycoplasma pneumoniae* were received this period, 6 males and 6 females, 7 under the age of 14 years.
- *Coxiella burnetii* (Q fever) was reported for 6 patients this period, all males, one of whom was a meatworker.
- Positive *Brucella* serology was reported for 2 patients including a 36 year old male meat worker from Queensland.
- Forty-five reports of *Bordetella* were received this fortnight, 35 *Bordetella pertussis* (6 isolations, 7 antigen detections and 22 IgA detections) and 10 *Bordetella* species (7 IgM detections and 3 IgA detections). Eighteen patients were male and 27 female, 21 in the 5 to 14 year age group.
- Positive syphilis serology was reported for 8 patients this period, 4 males and 4 females. Included was a 25 year old female who had had a fetal death *in utero*.
- *Echinococcus granulosus* (hydatid disease) was reported for a 30 year old male diagnosed by immunoelectrophoresis.

Australian Sentinel Practice Research Network

Data for week 44 (ending 6 November) are included in this issue of *CDI* (Table 1). There were 9235 consultations reported for the week. The rate of influenza reporting remained high in Western Australia and rose in Victoria but remained low elsewhere. Pertussis continues to be reported more frequently than earlier in the year.

Table 1. Australian Sentinel Practice Research Network, week 44, 1994

Condition	Week 44, to 6 November 1994	
	Reports	Rate per 1000 encounters
Influenza	52	5.6
Measles	5	0.5
Chickenpox	13	1.4
Pertussis	4	0.4
Gastroenteritis	128	13.9

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

Table 2. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 30 June 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	1	0	1	0	0	2	3	7	8	41	42
	Male	4	26	1	13	4	0	14	2	64	65	441	471
	Sex not reported	0	1	0	0	0	0	0	0	1	1	10	5
	Total ¹	4	28	1	15	4	0	16	5	73	74	492	521
AIDS diagnoses	Female	0	1	0	0	0	0	1	0	2	1	7	10
	Male	1	8	1	7	4	0	6	0	27	28	242	220
	Total ¹	1	10	1	7	4	0	7	0	30	29	250	230
AIDS deaths	Female	0	1	0	0	0	0	0	0	1	0	15	10
	Male	0	21	1	5	2	0	13	0	42	39	241	261
	Total ¹	0	22	1	5	2	0	13	0	43	39	256	272

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

Table 3. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 June 1994, by sex and State or Territory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	AUSTRALIA
HIV diagnoses	Female	11	505	4	80	40	3	145	53	841
	Male	144	9407	73	1389	510	68	3060	676	15327
	Sex not reported	0	2043	0	2	0	0	44	0	2089
	Total ¹	155	11963	77	1475	550	71	3256	730	18277
AIDS diagnoses	Female	2	100	0	21	13	2	32	10	180
	Male	58	2846	21	461	213	25	1049	208	4881
	Total ¹	60	2952	21	484	226	27	1086	218	5074
AIDS deaths	Female	2	66	0	14	9	2	15	3	111
	Male	39	1954	16	316	129	20	799	136	3409
	Total ¹	41	2025	16	331	138	22	817	139	3529

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

Victoria Street, Darlinghurst NSW 2010. Telephone: (02) 332 4648 Facsimile: (02) 332 1837.

HIV and AIDS diagnoses and AIDS deaths reported for 1 to 30 June 1994 and cumulative to 30 June 1994, as reported to 30 September 1994, are included in this issue of *CDI* (Tables 2 and 3).

Sterile Sites Surveillance (LabDOSS)

Data for this fortnight have been provided by 13 laboratories. There were 285 reports of recent significant sepsis:

New South Wales: ICPMR, Westmead 36; John Hunter Hospital 29; Prince of Wales Hospital 37; Royal North Shore Hospital 33; Royal Prince Alfred Hospital

12.

Queensland: Greenslopes Hospital 14; Ipswich General Hospital 3; Nambour General Hospital 10.

South Australia: Institute of Medical and Veterinary Science, Adelaide 48.

Western Australia: Sir Charles Gardiner Hospital 17.

Tasmania: Northern Tasmanian Pathology Service 6; Royal Hobart Hospital 12.

ACT: Woden Valley Hospital 28.

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 cereus* (reported in a 30 year old female who became febrile after clipping of a cerebral aneurysm, from New South Wales), 1 *Bacillus*

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>	5	2	4	1	2	7	13	9	9	2	1	61 ²
<i>Staphylococcus epidermidis</i>								1	3		2	6
<i>Staphylococcus coagulase negative</i>		1		1	1	3	2	2	3			16
<i>Enterococcus faecalis</i>					1		1					5
<i>Streptococcus group A</i>	3					2						5
<i>Streptococcus group B</i>			1	1			2				1	7
<i>Streptococcus group G</i>	1	1				2	1					5
<i>Streptococcus pneumoniae</i>		13			1	1		2				21
<i>Escherichia coli</i>	2	1		12	13		2	3			1	40
<i>Klebsiella pneumoniae</i>		1		3	1		4	2	1		1	13
<i>Pseudomonas aeruginosa</i>		1			4		3	6	1		1	14
<i>Bacteroides fragilis</i>				2		1	1					5

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

2. MRSA 14.

species, 1 *Corynebacterium jeikeium*, 1 *Corynebacterium* species, 1 *Enterococcus faecium*, 1 *Listeria monocytogenes* (reported in a 70 year old immunocompromised female, from New South Wales), 1 Group D *Streptococcus*, 1 *Streptococcus 'milleri'*, 2 *Streptococcus sanguis*, 1 *Streptococcus 'viridans'*, 3 *Streptococcus* species.

Gram negative: 1 *Acinetobacter* species, 1 *Branhamella catarrhalis*, 1 *Campylobacter jejuni*, 1 *Campylobacter* species, 3 *Citrobacter diversus*, 3 *Citrobacter freundii*, 1 *Citrobacter* species, 2 *Enterobacter aerogenes*, 1 *Enterobacter cloacae*, 2 *Enterobacter* species, 1 *Flavimonas oryzihabitans* (reported in a 29 year old immunocompromised male, from Western Australia), 1 *Flavibacterium* species, 1 *Haemophilus influenzae* (biotype not available, reported in a 81 year old male who died, from Queensland), 1 *Kingella kingae* (reported in a 15 month old female who presented with diarrhoea and vomiting, from New South Wales), 3 *Klebsiella oxytoca*, 3 *Morganella morganii* (one isolate reported in a 38 year old male with a skin cellulitis wound, from Western Australia; one isolate in a 71 year old female with gastrointestinal disease, from New South Wales; one isolate in a one month old male with a urinary tract infection, from South Australia), 4 *Proteus mirabilis*, 1 *Pseudomonas* species, 1 *Salmonella* species, 1 *Salmonella* Typhi (reported in a 16 year old female from South Australia, no risk factors were available), 3 *Serratia* species, 1 *Xanthomonas maltophilia*.

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

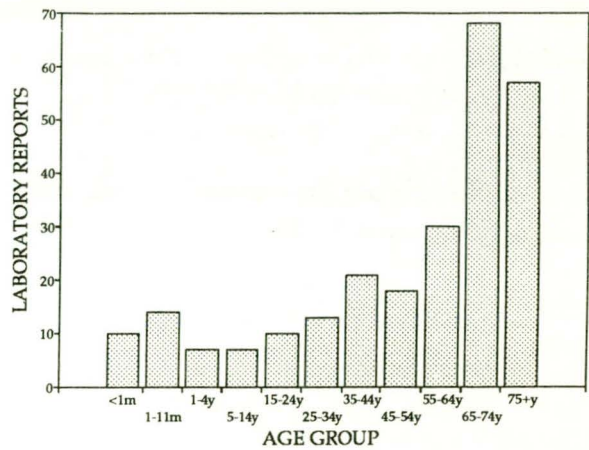
Fungi: 3 *Candida albicans*.

There were 24 blood isolates from patients aged less than one year and 155 from patients aged 55 years and over (Figure 6).

Hospital acquired blood isolates

A total of 91 isolates of different organisms were reported as hospital acquired. The five most commonly reported organisms were: 6 *Klebsiella pneumoniae*; 10 *Pseudomonas aeruginosa*; 31 *Staphylococcus aureus* (including 14 MRSA); 9 *Staphylococcus coagulase negative*.

Figure 6. LabDOSS reports of blood isolates, by age group



Meningitis and/or CSF isolate reports

There were 11 reports of meningitis and/or CSF isolates (Table 5). One isolate was *Cryptococcus neoformans* reported in a 28 year immunocompromised male from New South Wales. One isolate was *Escherichia coli* reported in a 76 year old male from New South Wales. There were three isolates of *Neisseria meningitidis*, reported in a two year old male who presented with a subacute onset, and no rash, over 10 days (serogroup X,Y,Z or W-135); an eleven year old male (no serogroup available) and; an 18 year old female (serogroup C). Both these latter two patients were from Queensland. Three isolates were *Staphylococcus coagulase negative*. These were reported in a 31 year old male whose risk factors included neurosurgery, from New South Wales; and in a 47 year old woman and a 48 year old woman, both from South Australia. One isolate was *Staphylococcus haemolyticus*, reported in a 27 year old immunocompromised male from Tasmania. One isolate of *Staphylococcus epidermidis* was reported in a 37 year old female whose risk factor was neurosurgery, from Tasmania. One isolate was *Streptococcus pneumoniae* in a 48 year old female from South Australia.

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

	1-4 years	5-14 years	15-24 years	25-34 years	35-44 years	45-64 years	75+ years	Total
<i>Escherichia coli</i>							1	1
<i>Neisseria meningitidis</i>	1 ¹	1	1 ²					3
<i>Staphylococcus coagulase negative</i>				1		2		3
<i>Staphylococcus epidermidis</i>					1			1
<i>Staphylococcus haemolyticus</i>				1				1
<i>Streptococcus pneumoniae</i>						1		1
<i>Cryptococcus neoformans</i>				1				1

1. Group X,Y,Z, or W-135.
 2. Group C.

Isolates from sites other than blood or CSF

Joint fluid: 7 *Staphylococcus aureus* (2 MRSA).

Peritoneal fluid: 1 *Staphylococcus aureus*, 1 *Staphylococcus epidermidis*.

Pleural Fluid: 1 *Citrobacter* species, 1 *Enterococcus faecalis*, 1 *Enterococcus* species, 1 *Escherichia coli*.

Other: 1 *Escherichia coli*, 1 *Salmonella* species.

National Notifiable Diseases Surveillance System, 30 October to 12 November 1994

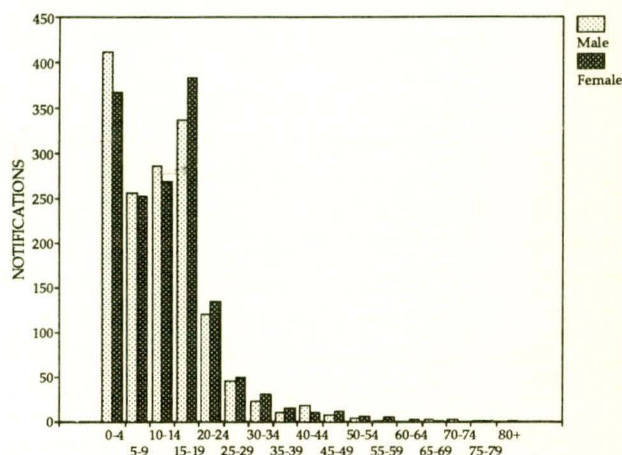
There were 2012 notifications received in the period. (Tables 6, 7 and 8 and Figure 9). No notifications were received for New South Wales due to revisions being made to the New South Wales Infectious Diseases Surveillance System. No notifications of sexually transmissible diseases were received from Victoria.

- Twenty notifications of **Ross River virus infection** were received; 9 cases were male, 10 cases were female, and the sex of one case was not recorded. Cases were aged from the 20-24 to the 70-74 years age group. Recorded onset dates were in August (one), September (one), and October (18).
- There were 4 notifications of **brucellosis**. All cases were males and the recorded ages were in the 20-39 years age group.
- There were 534 cases of **campylobacteriosis** reported; 288 cases were male, 236 cases were female, and the sex of 10 cases was not recorded. The cases were aged from the 0-4 to the 85-89 years age groups with 19% of cases in the 0-4 years age group.
- Ninety-six notifications of **gonococcal infection** were received; 61 cases were male and 35 were female. The cases were aged from the 0-4 to the 55-59 years age groups. There was a single case recorded for a female aged less than one year.
- Five notifications of ***Haemophilus influenzae* type b** were received; 4 cases were male and one was female. Recorded ages were less than one year (2), 3 years (one), 5 years (one), and 8 years (one). All onset dates were in October. There were no apparent clusters.
- Eight incident cases of **hepatitis B** were reported; two cases were male and six cases were female. The cases were aged between the 15-19 and the 35-39 years age groups.
- There were 5 notifications of **legionellosis** received; 4 cases were male and one was female. The cases were aged from the 20-24 to the 65-69 years age groups. All recorded onset dates were in October. There were no apparent clusters.
- Two cases of **leptospirosis** were reported, for males in the 15-19 and the 30-34 years age group

respectively. Both cases were resident in the Statistical Division of Southwestern Victoria.

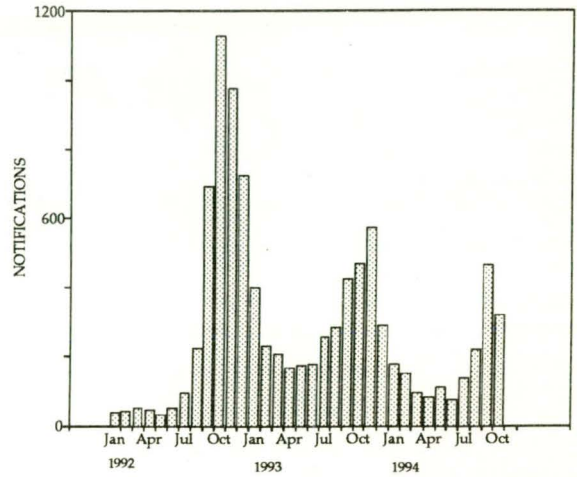
- A single cases of **listeriosis** was reported for a male in the 70-74 years age group resident in southern Queensland.
- Five notifications of **malaria** were received. The cases were all males. One case was in the 0-4 years age group and the remainder were aged between 34 and 39 years. Recorded onset dates were in September (3) and October (2).
- There were 101 notifications of **measles** received; 49 cases were male and 52 were female. The cases were aged between the 0-4 and the 45-49 years age groups with a mean age of 12.6 years. The male/female ratio of cases in 1994 is 1/1 and with peak number of notifications in the 0-4 and the 15-19 years age groups (Figure 7). There were 18 apparent clusters of between 2 and 9 cases each resident in the same postcode area.
- Five cases of **meningococcal infection** were reported; 3 cases were male and 2 were female. The cases were aged from the 10-14 to the 25-29 years age groups. Recorded onset dates were in October. There were no apparent clusters.
- There were 211 cases of **pertussis** reported; 84 cases were male and 127 were female. Recorded ages were between the 0-4 and the 90-94 years age group with 17 cases reported in children aged less than one year. Forty-seven per cent of the cases were reported by Queensland.
- Twenty-six notifications of **Q fever** were received; 21 cases were male and 5 were female. Recorded ages were between the 0-4 and the 45-49 years age groups. Eleven of the cases were resident in the Goulburn Statistical Division of Victoria and 7 were resident in the Loddon-Campaspe Statistical Division of Victoria.

Figure 7. Notifications of measles, 1994, by age group and sex



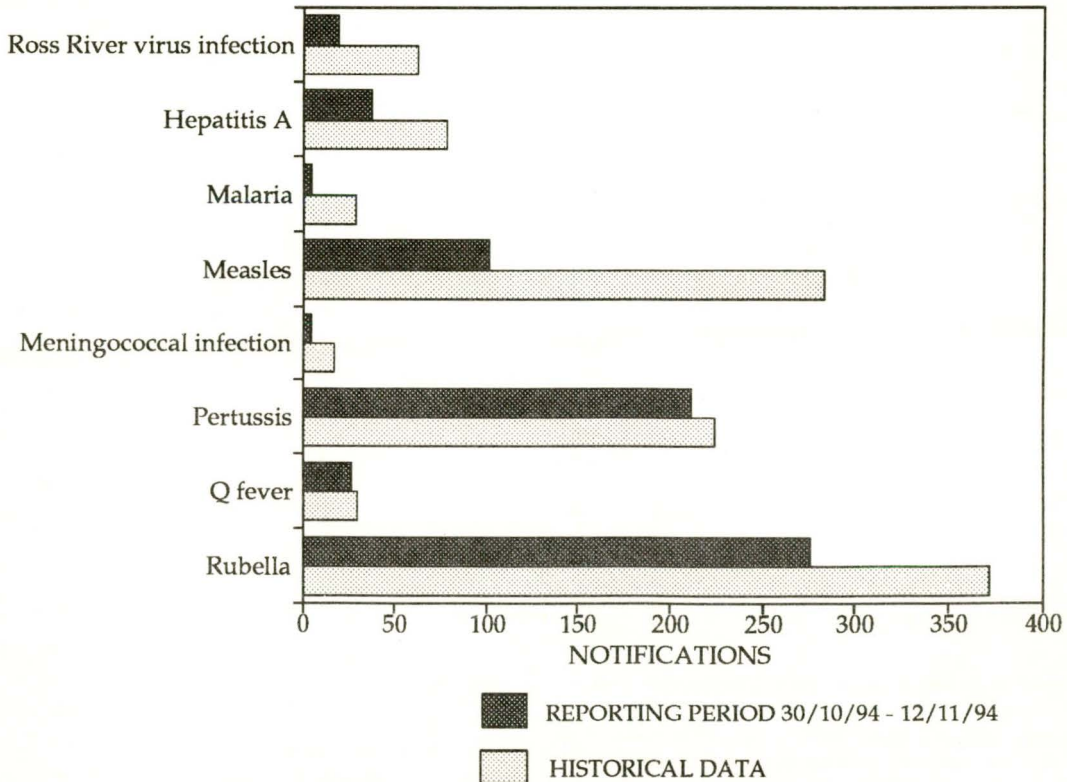
- The number of reports of **rubella** remains high with 275 notifications received for the period (Figure 8). One hundred and eighty-four of the cases were male, 80 were female, and the sex of 11 cases was unrecorded. The cases were aged between the 0-4 and the 60-64 years age groups with a mean age of 24.7 years. There were 39 reports received for females in the 15-44 years age group. Eighty-three per cent of reports were received from Queensland.
- There were 133 notifications of **salmonella (not elsewhere classified)** received in the period; 61 cases were male, 67 were female, and the sex of 5 cases was unrecorded. The cases were aged between the 0-4 and the 80-84 years age group with 50 cases in the 0-4 years age group. There were 6 apparent clusters between 2 and 20 cases each in the same postcode area and with an onset date no more than 2 days apart.
- Seventeen cases of **syphilis** were reported; 2 cases were male and 15 were female. The cases were aged between the 0-4 and the 35-39 years age group with a single case reported for a female aged less than one year.
- A single cases of **tetanus** was reported for a male in the 75-79 years age group resident in the Statistical Division of Adelaide.

Figure 8. Notifications of rubella, by month of onset, 1992 to 1994



- Nineteen notifications of **tuberculosis** were received; 14 cases were male and 5 were female. Recorded ages were between the 5-9 and the 75-79 years age group.
- Eight notifications of **yersiniosis** were received; 5 were male and 3 were female. Recorded ages were between the 0-4 and the 40-44 years age group. All onset dates were in October.

Figure 9. 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 30 October to 12 November 1994

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA ¹			
									This period 1994	This period 1993	Year to date 1994	Year to date 1993
Diphtheria	0		0	0	0	0	0	0	0	0	24	0
<i>Haemophilus influenzae</i> b infection	0		0	1	0	0	3	1	5	9	159	363
Measles	9		9	64	4	1	6	8	101	413	3524	3271
Mumps	0		1	NN	0	NN	0	0	1	3	18	21
Pertussis	3		8	100	33	1	31	35	211	351	4567	2709
Poliomyelitis	0		0	0	0	0	0	0	0	0	0	0
Rubella ²	2		2	229	3	0	5	34	275	258	2244	3095
Tetanus	0		0	NN	1	0	0	0	1	0	15	9

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. Tas: CRS only.
NN Not Notifiable.

Table 7. Notifications of other diseases¹ received by State and Territory health authorities in the period 30 October to 12 November 1994

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA ²				
									This period 1994	This period 1993	Year to date 1994	Year to date 1993	
Arbovirus infection													
Ross River virus infection	0		0	18	0	-	1	1	20	62	3839	5205	
Dengue	0		0	0	0	-	0	0	0	1	18	681	
NEC ³	0		0	5	0	0	2	0	7	22	539	520	
Campylobacteriosis ⁴	17	-	14	95	136	32	184	56	534	357	8667	6891	
Chlamydial infection (NEC) ⁵	1	NN	18	79	41	10		19	168	214	5524	5664	
Donovanosis	0	NN	2	1	NN	NN		0	3	93	99	57	
Gonococcal infection ⁶	0		26	33	11	0		26	96	88	2431	2419	
Hepatitis A	0		2	14	1	2	13	5	37	9	1592	1769	
Hepatitis B incident	0		2	1	1	0	1	3	8	73	295	240	
Hepatitis C incident	-		0	-	0	-	-	-	0	0	15	23	
Hepatitis C unspecified	10		0	98	0	0	123	40	271	337	7798	6418	
Hepatitis (NEC)	0		0	1	0	0	0	NN	1	2	42	63	
Legionellosis	0		1	1	0	0	1	2	5	1	184	148	
Leptospirosis	0		0	0	0	0	2	0	2	7	119	148	
Listeriosis	0		0	1	0	0	0	0	1	1	24	46	
Malaria	0		0	2	0	0	2	1	5	39	629	574	
Meningococcal infection	0		0	2	0	0	2	1	5	18	315	328	
Ornithosis	0	NN	0	1	1	0	0	0	2	5	75	86	
Q fever	0		0	4	1	0	21	0	26	22	544	785	
Salmonellosis (NEC)	4		20	28	27	4	32	18	133	198	4669	4083	
Shigellosis ⁴	0	-	4	5	2	0	1	5	17	14	639	629	
Syphilis	0		11	4	0	0		2	17	71	1793	1982	
Tuberculosis	0		0	3	7	0	9	0	19	65	880	945	
Typhoid ⁷	0		0	0	0	0	0	0	0	3	36	60	
Yersiniosis (NEC) ⁴	0	-	0	7	1	0	0	0	8	11	365	394	

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. 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 8. Notifications of rare¹ diseases received by State and Territory health authorities in the period 30 October to 12 November 1994

DISEASES	Total this period	Reporting States or Territories	Year to date 1994
Botulism	0		0
Brucellosis	4	Qld 3, Vic 1	26
Chancroid	0		0
Cholera	0		3
Hydatid infection	0		37
Leprosy	0		9
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 3 to 16 November 1994, historical data², 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	2	1	17	1		6		28	42.2	1,005
Rubella virus		1		163	4				168	67.5	878
HEPATITIS VIRUSES											
Hepatitis A virus		3		3	1		5		12	13.0	318
Hepatitis B virus	2	24		19	5		17		67	87.7	2,117
Hepatitis C virus	12	15		38	63	11	9		148	148.2	5,339
Hepatitis D virus				2			2		4	1.0	24
ARBOVIRUSES											
Ross River virus				12					12	13.5	1,516
Barmah Forest virus			1	2					3	2.8	210
ADENOVIRUSES											
Adenovirus type 1					2				2	6.8	60
Adenovirus type 2					5		3		8	7.2	58
Adenovirus type 3			1		2		1		4	7.5	48
Adenovirus type 7					5				5	.2	10
Adenovirus type 8							3		3	4.3	73
Adenovirus not typed/pending		17		19	15		9	12	72	50.0	1,168
HERPES VIRUSES											
Herpes simplex virus type 1		3		77	43	4	52	2	181	160.8	4,260
Herpes simplex virus type 2		4		82	34	1	30		151	184.2	4,618
Herpes simplex not typed/pending	3	11			2		1	3	20	27.0	599
Herpes virus type 6		1							1	.0	2
Cytomegalovirus	1	10		32	4	4	19	8	78	54.8	1,570
Varicella-zoster virus	1	5		29	10		9	1	55	30.5	926
Epstein-Barr virus	3	9		33	32		10		87	56.2	1,296
Herpes virus group - not typed		1							1	1.5	15

Table 9. Virology and serology laboratory reports by State or Territory¹ for the reporting period 3 to 16 November 1994, historical data², 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											
Parvovirus		1		2	3				6	6.3	76
PICORNA VIRUS FAMILY											
Coxsackievirus B2		2			3				5	.2	25
Coxsackievirus B4		1							1	.5	15
Echovirus type 6					1		2		3	.3	64
Echovirus type 30		1					2		3	6.0	268
Poliovirus type 1 (uncharacterised)					1				1	3.0	28
Poliovirus type 2 (uncharacterised)						1			1	1.5	28
Rhinovirus (all types)	1	4		8			22		35	39.0	912
Enterovirus not typed/pending		2		29			2		33	35.2	1,163
ORTHO/PARAMYXOVIRUSES											
Influenza A virus		1		1	3				5	19.7	951
Influenza B virus							1		1	7.2	118
Parainfluenza virus type 2							2	1	3	.5	58
Parainfluenza virus type 3	3	8		12	6		7	7	43	29.2	369
Parainfluenza virus typing pending								3	3	.3	68
Respiratory syncytial virus	1	8		20	12	2	20	6	69	24.3	3,572
OTHER RNA VIRUSES											
Rotavirus	3	35			59	9	11	38	155	95.5	2,164
Small virus (like) partide		1							1	1.7	30
OTHER											
<i>Chlamydia trachomatis</i> not typed		12		27	22	1	2	1	65	112.7	2,149
<i>Chlamydia psittaci</i>							1		1	3.2	61
<i>Chlamydia</i> spp typing pending					3				3	.2	10
<i>Chlamydia</i> species					4				4	1.3	25
<i>Mycoplasma pneumoniae</i>				9	1		2		12	75.7	850
<i>Coxiella burnetii</i> (Q fever)		2		2			2		6	9.8	270
<i>Streptococcus</i> group A		3	1	20					24	9.2	297
<i>Brucella</i> species				2					2	.0	5
<i>Bordetella pertussis</i>				1			10	24	35	10.0	587
<i>Bordetella</i> species				10					10	7.8	209
<i>Treponema pallidum</i>	1	7							8	9.5	378
<i>Toxoplasma gondii</i>							2		2	1.5	69
<i>Echinococcus granulosus</i>							1		1	.0	10
TOTAL	32	194	4	671	346	33	265	106	1,651	1,478.0	40,939

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 3 to 16 November 1994

	Encephalitis	Meningitis	Other CNS	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
MEASLES, MUMPS, RUBELLA												
Measles virus				1			13				14	28
Rubella virus				2	2		73		4		87	168
HEPATITIS VIRUSES												
Hepatitis A virus						10					2	12
Hepatitis B virus						20					47	67
Hepatitis C virus			1			24				1	122	148
Hepatitis D virus						4						4
ORBOVIRUSES												
Ross River virus				1					2		9	12
Barmah Forest virus									2		1	3
ADENOVIRUSES												
Adenovirus type 1				1							1	2
Adenovirus type 2				7							1	8
Adenovirus type 3				1				3				4
Adenovirus type 7				3				2				5
Adenovirus type 8								3				3
Adenovirus not typed/pending	1	1		32	22						16	72
HERPES VIRUSES												
Herpes simplex virus type 1				14			100	10		49	8	181
Herpes simplex virus type 2							53	1		94	3	151
Herpes simplex not typed/pending		1					9			8	2	20
Herpes virus type 6							1					1
Cytomegalovirus				28	2	1			2	2	43	78
Varicella-zoster virus			1	1			39		1	1	12	55
Epstein-Barr virus				8		1					78	87
Herpes virus group - not typed								1				1
OTHER DNA VIRUSES												
Parvovirus							2				4	6
PICORNA VIRUS FAMILY												
Coxsackievirus B2				3							2	5
Coxsackievirus B4		1										1
Echovirus type 6		1		2								3
Echovirus type 30		2									1	3
Poliovirus type 1 (uncharacterised)				1								1
Poliovirus type 2 (uncharacterised)				1								1
Rhinovirus (all types)				29							6	35
Enterovirus not typed/pending			1	19	4		3				6	33

Table 10. Virology and serology laboratory reports by clinical information for the reporting period 3 to 16 November 1994, continued

	Encephalitis	Meningitis	Other CNS	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
ORTHO/PARAMYXOVIRUSES												
Influenza A virus				3							2	5
Influenza B virus				1								1
Parainfluenza virus type 2				3								3
Parainfluenza virus type 3			1	37							5	43
Parainfluenza virus typing pending				3								3
Respiratory syncytial virus				62							7	69
OTHER RNA VIRUSES												
Rotavirus				1	148						6	155
Small virus (like) partide					1							1
OTHER												
<i>Chlamydia trachomatis</i> not typed				1				7		50	7	65
<i>Chlamydia psittaci</i>											1	1
<i>Chlamydia</i> spp typing pending										3		3
<i>Chlamydia</i> species				1						3		4
<i>Mycoplasma pneumoniae</i>				6							6	12
<i>Coxiella burnetii</i> (Q fever)						1					5	6
<i>Streptococcus</i> group A				4			2		1		17	24
<i>Brucella</i> species											2	2
<i>Bordetella pertussis</i>				35								35
<i>Bordetella</i> species				5							5	10
<i>Treponema pallidum</i>											8	8
<i>Toxoplasma gondii</i>											2	2
<i>Echinococcus granulosus</i>											1	1
TOTAL	1	6	4	316	179	61	295	27	12	211	539	1651

Table 11 Virology and serology laboratory reports by contributing laboratories for the reporting period 3 to 16 November 1994

STATE OR TERRITORY	LABORATORY	REPORTS
Australian Capital Territory	Woden Valley Hospital, Canberra	33
New South Wales	Prince Henry/Prince of Wales Hospitals, Sydney	8
	Royal Alexandra Hospital for Children, Camperdown	57
	Royal Prince Alfred Hospital, Camperdown	13
	South West Area Pathology Service, Liverpool	93
Queensland	Queensland Medical Laboratory, West End	544
	State Health Laboratory, Brisbane	153
South Australia	Institute of Medical and Veterinary Science, Adelaide	347
Tasmania	Northern Tasmanian Pathology Service, Launceston	14
	Royal Hobart Hospital, Hobart	15
Victoria	Commonwealth Serum Laboratories, Melbourne	2
	Microbiological Diagnostic Unit, University of Melbourne	2
	Monash Medical Centre, Melbourne	24
	Royal Children's Hospital, Melbourne	92
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	148
Western Australia	Princess Margaret Hospital, Perth	106
TOTAL		1651