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VALIDATION OF REPORTED RISK EXPOSURE IN PERSONS WITH NEWLY DIAGNOSED HIV INFECTION

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Abstract

To validate reported risk exposure in persons with newly diagnosed HIV infection, the New South Wales Health Department in collaboration with the National Centre in HIV Epidemiology and Clinical Research commenced enhanced surveillance of HIV risk exposure in 1994. The enhanced surveillance included all new diagnoses of HIV infection, where reported mode of infection was other than male homosexual contact or vertical transmission. Of the 116 notifications of HIV followed up for 1994, 63 cases were available for analysis. Twenty cases (32%) had risk exposure categories reassigned of which nine were revised to male homosexual contact. Doctors were more likely to be satisfied with reported risk exposure in females than in males and least satisfied with the exposure category 'unknown'. Although no unusual modes of transmission of HIV were uncovered through this study, the process gives patients the opportunity to request investigation into the mode of acquiring HIV infection and may raise awareness amongst doctors of the importance of adequate contact tracing and counselling.

Introduction

Since the initial recognition of the epidemic of infection with human immunodeficiency virus (HIV) there has been great interest in the modes of transmission of the virus. In Australia, as in most western countries, HIV infection has been attributed largely to sexual transmission of HIV between men[1]. Of the 18,782 cases of newly diagnosed HIV infection reported to the National Centre in HIV Epidemiology and Clinical Research (NCHECR) by 31 December 1994, male homosexual contact was the mode of transmission for more than 80% of cases with recorded exposure[2]. Similarly, for New South Wales up to December 31 1993, of the known risk exposure categories, male homosexual contact has accounted for 85%[3]. Concern about the risk of explosive spread of HIV among injecting drug users (IDU) and heterosexual spread has remained, even though prevalence of HIV among IDUs has been low[4].

For the majority of notifications of HIV infection or Acquired Immunodeficiency Syndrome (AIDS), information on history of possible exposure to HIV has been elicited from the person with HIV infection by a doctor, nurse or counsellor, and may have been prone to self-reporting biases. Partly because of the perceived limitations of the accuracy of self-reported HIV exposure history, there has been ongoing debate in Australia about the extent of HIV transmission through other modes, particularly heterosexual contact[5]. There has also been renewed interest in New South Wales in obtaining accurate exposure histories in new cases of HIV infection, following the report of patient-to-patient transmission of HIV in a doctor's surgery[6,7], and the recent look-back investigation of patients potentially exposed to an HIV-infected health care worker[8].

In 1994, the AIDS / Infectious Diseases Branch (AIDB) of the New South Wales Health Department, in collaboration with the NCHECR, commenced enhanced surveillance of HIV risk exposure. Included were all new diagnoses of HIV infection, where reported mode of infection was other than 'male to male sexual contact' or 'vertical transmission' (children born to HIV positive mothers). The aims of the enhanced surveillance were to ensure the collection and validation of data on HIV infection risk factors, to identify and investigate cases where the mode of transmission was unusual, and to provide an opportunity for patients to have their exposure to HIV investigated.

We report results of risk factor investigations for 1994.

Methods

Information on cases of newly diagnosed HIV infection, including 2+2 name code (first two letters of the patient's surname and given name), sex, date of birth, current postcode of residence, and HIV exposure category, was routinely collected by the four New South Wales HIV reference laboratories and forwarded to the New South Wales Health Department. Two months following receipt of a notification of newly diagnosed HIV infection for which HIV exposure category was other than male homosexual contact or vertical transmission, the Health Department sent an exposure assessment questionnaire to the doctor involved in the patient's HIV diagnosis. The design of the questionnaire was based on that used in the pilot study of assessment of patient report of HIV exposure carried out in 1991[9].

The doctor was requested to confirm available information on the patient with newly diagnosed HIV infection including their reported exposure to HIV. More detailed information was sought if the reported history of exposure to HIV was through receipt of HIV-infected blood or tissue, injecting drug use, origin in a country with a high rate of heterosexual transmission or hetero-

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sexual contact in Australia. The doctor was also asked if the patient would like their case investigated further.

Where the questionnaire was not returned after a period of six weeks the Health Department contacted the doctor and either a repeat questionnaire was sent or the doctor urged to fill out the questionnaire. Completed questionnaires were reviewed by the Medical Advisor (AIDB), and then forwarded to the NCHECR.

Results

Questionnaires were sent to the diagnosing doctor for 116 new HIV diagnoses notified to the New South Wales Health Department where risk exposure was not male homosexual contact or vertical transmission. Of these, 27 (23%) were forwarded to other doctors, since the requesting doctor was unable to provide the information asked for in the questionnaire. By July 31 1995, 79 questionnaires had been returned to the New South Wales Health Department. Of these five were found to be duplicate notifications, one case was diagnosed in 1993 and therefore not part of the study, and 10 patients did not return to their doctor to collect their HIV result. This left 63 cases available for analysis. Of these, 44 (70%) were males.

Table 1 compares data on the 63 cases, by HIV exposure reported on the initial notification to that reported on the returned questionnaire. In total, 20 cases had risk exposure categories reassigned, of which nine (14%) were revised to male homosexual contact. Of the 10 cases remaining in the 'other / undetermined' category, one was a confirmed occupationally acquired case, and two (males) denied any risk factors, but expressly did not wish to have further investigation of exposure to HIV. Final revised exposure categories included some cases where further information is required to classify exposure (Table 2).

Of the 54 questionnaires returned with risk exposure other than male homosexual contact, doctors were generally satisfied with reported risk exposure in only 33 cases (60%). Doctors were more likely to be satisfied with reported risk exposure in females (17 / 19, 90%) than in males (16 / 35, 46%) ($p<0.01$). The risk exposure category that doctors remained unsatisfied with was the 'unknown' category, which remained at 10 / 54 (19%, all males). Of all the responses received, only two cases wanted their HIV risk exposure further investigated. Both were followed up by the Health Department.

Discussion

As a result of our investigation, report of exposure to HIV was reclassified in 20 cases (32%) of newly diagnosed HIV infection when risk exposure was explored in detail, including nine who were revised to male homosexual exposure. Doctors were less satisfied with exposure categories for males with heterosexual transmission and they were least satisfied with the 'unknown' category.

A recent study in Italy comparing two AIDS surveillance systems revealed that concordance of risk exposure classification between the two systems was high for male homosexual contact, low for heterosexual transmission in males and even lower among men whose risk group could not be determined[10]. This may be because some of the males are reluctant to reveal or identify with male homosexual contact. Since male homosexual contact remains a predominant risk factor in

Table 1. Initial and revised HIV risk exposure categories for newly diagnosed HIV infection, excluding male homosexual contact and vertical transmission, New South Wales, 1994

	HIV exposure category initially reported	HIV exposure reported on the returned questionnaire
Injecting drug use[1]	5	4
Heterosexual contact[2]	37	36
Receipt of blood products[3]	6	4
Other / undetermined[4]	15	10
Male homosexual[5]	0	9
Total	63	63

1. Exposure reported on the returned questionnaire revised from IDU to heterosexual contact for one male, from IDU to 'other / undetermined' exposure for one female, and from heterosexual contact only to heterosexual contact and IDU for one male.
2. Exposure reported on the returned questionnaire was revised from 'other / undetermined' to heterosexual contact for four cases (2 male, 2 female), from heterosexual contact and IDU to heterosexual contact for one male, from heterosexual contact to homosexual contact for three males, from heterosexual contact to 'other / undetermined' for two males and from heterosexual contact only to heterosexual contact and IDU for one male.
3. Refers only to blood products received prior to 1985. Exposure reported on the returned questionnaire was revised from receipt of blood to 'other / undetermined' for two cases.
4. Exposure reported on the returned questionnaire was revised from 'other / undetermined' to homosexual contact in six cases and heterosexual contact in four cases. Exposure was revised to 'other / undetermined' from IDU for one female, from heterosexual contact for two males and from receipt of blood products for two cases.
5. Six cases revised from 'other / undetermined' and three revised from heterosexual contact.

Table 2. Revised exposure categories by sex, after detailed analysis of risk exposures, for newly diagnosed HIV infections excluding male homosexual contact and vertical transmission, New South Wales, 1994

	Revised HIV exposure category		
	Male	Female	Total
Injecting drug use	1	0	1[1]
Heterosexual	1	0	1
Not further specified	0	0	0
Heterosexual contact	20	16	36
Sex with ID user	0	2	2
Sex with bisexual male	-	3	3
From specifed high risk country	4	5	9
Sex with person from specified high risk country	5	2	7
Sex with person with medically acquired HIV	1	0	1
Sex with HIV infected person, exposure not specified	1	3	4
Not further specified	9	1	10
Occupational exposure	0	1	1
More information sought (receipt of blood; other)	4	2	6
Not known	10	0	10
Total	35	19	54

1. Of the four cases reported as IDU on the returned questionnaire, two had inconsistent histories and one was from a country with a high rate of heterosexual transmission.

our population, education and prevention efforts should be concentrated in this area[11].

In our study, exposure to HIV was most frequently attributed to heterosexual contact. In the majority of these cases the heterosexual contact was reported as occurring in a specified high risk country or due to sex with a person from a specified high risk country. This pattern of heterosexual transmission, predominantly involving people from countries with high levels of heterosexual transmission, is similar to that observed in th United Kingdom[12].

One case of occupationally acquired HIV was confirmed and another possible case of occupationally acquired HIV is still being investigated. Both of these were in health care workers who sustained needlestick injuries; both cases were already being investigated at the local hospital level. From overseas studies we know that HIV infection attributable to occupational exposure is extremely uncommon [13,14,15]. There have been only five confirmed cases of occupationally acquired HIV in Australia, including one for 1994[2]. Systematic surveillance of occupational exposure in Australia, however, only commenced in 1995. This will be expanded in New South Wales in 1996, to include all hospitals able to participate.

In our study only one person had IDU confirmed as their risk exposure. This result is consistent with the low prevalence of HIV infection previously documented among IDUs in Australia, other than among those who also report male homosexual contact[3], and similar to the results of the pilot study validating HIV risk exposures[8]. This is reassuring but should not give rise to complacency, as the high rate of hepatitis C infection among IDUs suggests that sharing of injecting equipment and thus potential HIV transmission continues to occur[16].

We faced some unavoidable problems with the implementation of the study, such as time delays and poor compliance. Collection and notification of HIV data by laboratories takes at least two months, often longer with some laboratories. Exposure information could not be obtained from 23% of the doctors who requested HIV tests. This may indicate that some doctors who request HIV tests do not undertake adequate pre-test and post-test counselling. Pre-test and post-test counselling are mandatory for HIV testing and require that a thorough history of patient risk exposures is taken, so that appropriate advice is given[17]. Some doctors were unable to trace patients' records from the namecode and date of birth. The need to protect patient confidentiality results in some compromise in data quality. Some doctors may have been daunted by the length and complexity of the questionnaireand some reported that they found the questionnaire confusing. Suggestions for streamlining the process and reducing time delays both at the laboratory level and at AIDB have been incorporated. The questionnaire has also been modified to improve compliance in the future.

The 57% (63/110) response rate we achieved in this study is similar to the 60% response rate achieved when this project was piloted in 1991, as a validation of patient report of exposure to HIV[9]. This is expected for a voluntary system with a complicated questionnaire, where the nature of the information sought is extremely sensitive. This raises the possibility of bias, however. If the majority of non respondents belonged to one group, such as IDUs, this could significantly bias the results.

The main impact of this study in reclassification of risk factors was in reducing the 'other / undetermined' category from 3.3% to 2.2% of total notifications. Although no new or unusual modes of transmission of HIV were uncovered through our study, the process gives patients the opportunity to request investigation into the mode of acquiring HIV infection. Another potential benefit of this project is to improve initial reporting by doctors of risk exposure to HIV in order to reduce the number of questionnaires to validate the report. We also expect that this project will raise awareness amongst doctors of the importance of undertaking adequate contact tracing, as well as pre-test and post-test counselling, for all patients tested for HIV.

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SCHOOL ENTRY IMMUNISATION CERTIFICATES: A USEFUL TOOL FOR IMMUNISATION SURVEILLANCE?

Rozaini Leckie[1], *Smita Shah*[1] *and Bin Jalaludin*[2] *on behalf of the Auburn Immunisation Task Force*

Abstract

In New South Wales, all children starting school must provide a certificate of immunisation to school authorities. We conducted a study to document the usefulness of immunisation certificates in surveillance of immunisation uptake in these children.

In late 1994 we reviewed immunisation records in all primary schools in the Auburn local government area. We classified a child's immunisation status as 'complete immunisation', 'incomplete immunisation' or 'invalid'.

Schools had immunisation certificates for 72% of all kindergarten children. Seventeen per cent of kindergarten children did not have any form of written immunisation documentation. Only 57% of kindergarten children who presented an immunisation certificate were fully immunised.

Until further evaluation is done, we suggest that immunisation certificates are not an adequate source of data for determining uptake rates in children starting kindergarten in New South Wales. They may also be of only limited value in the containment of vaccine preventable disease outbreaks in schools.

Background

Immunisation against a number of childhood infectious diseases is practised throughout the world, and has had a marked effect on reducing the incidence of these diseases. Immunisation has cost benefits for measles, mumps, rubella, and pertussis[1,3].

Data from the 1989-90 National Health Survey identified only 53% of children aged six years and under as fully immunised[4]. To prevent illness and morbidity in unimmunised children, the New South Wales Public Health (Amendment) Act 1992 requires parents of all children starting school in the kindergarten class of 1994 and thereafter, to provide a certificate of immunisation to school authorities[5]. The certificates contain details of the childrens' immunisation status and are obtained from general practitioners, local councils, community health centres and public health units (Figure). The immunisation certificates are held at schools so that unimmunised children can be easily identified and excluded from school in the event of an outbreak of a vaccine preventable disease at the school. The certificates also provide an ideal opportunity for regular surveillance of the immunisation status of kindergarten children. However, for surveillance to be useful, all children must present certificates that are correctly completed. The Auburn Immunisation Task Force* reviewed the completeness and accuracy of immunisation certificates held by primary schools in the Auburn area in 1994 to determine their usefulness as a data source.

Figure. NSW Health Department Immunisation Certificate

Methods

The review of immunisation certificates aimed to document the proportion of kindergarten children in the

1 Auburn Hospital and Community Health Services, Auburn, New South Wales.
2 Western Sector Public Health Unit, North Paramatta, New South Wales.

* The Auburn Immunisation Task Force is an advocate for promoting immunisation uptake in the local Auburn community. It is an intersectoral group with representatives from community health services, Auburn Hospital, the Western Sector Public Health Unit, preschools and schools, local government, the Western Sydney Division of General Practice, migrant health services, Commonwealth Serum Laboratories, the Salvation Army and parents.

Table 1. Immunisation status of children with immunisation certificates in the Auburn local government area

Status	Number	%
Complete immunisation	301	56.7
Incomplete immunisation	22	4.1
Invalid certificate	208	39.2
Total	531	100.0

Auburn local government area who had presented immunisation certificates or other written immunisation records to their school, determine the immunisation status of these kindergarten children according to information contained in the immunisation certificates and assess what proportion of immunisation certificates were correctly completed.

The study was conducted in October and November 1994. We wrote to the principals of all primary schools in the Auburn local government area informing them of the study and requesting their cooperation.

A short checklist was devised to obtain the relevant information needed for the review. Two school health staff (either two school nurses, or a school nurse and a medical officer) reviewed all immunisation records in each school. Immunisation records refer to any written evidence of immunisation documentation including immunisation certificates.

We classified a child's immunisation status as 'complete immunisation' if all boxes in Section A of the immunisation certificate were ticked and the appropriate box in the Issuer's Declaration section was also ticked. A child's immunisation status was classified as 'incomplete immunisation' if both Section B and the the appropriate box in the Issuer's Declaration were ticked. We considered the immunisation certificate 'invalid' if information in the certificate was inconsistent, for example if all appropriate boxes in Section A were ticked but not the corresponding appropriate box in the Issuer's Declaration section.

Results

We reviewed the immunisation records of kindergarten classes of all primary schools in the Auburn local government area. There were five Catholic (236 students) and five Government (501 students) schools. There was a total of 737 kindergarten children in the 10 schools (range: 14 to 131).

The schools had immunisation certificates for 72% of all kindergarten children (n=531). Eleven per cent of kindergarten children (n=80) had written immunisation documentation other than immunisation certificates, and 17% of kindergarten children (n=126) did not have any form of written immunisation documentation.

Only 57% of kindergarten children who presented an immunisation certificate were fully immunised (Table 1). Four per cent of kindergarten children with immunisation certificates were not fully immunised, and 39% of all immunisation certificates had inconsistent information regarding immunisation status (invalid certificates).

A significantly larger proportion of kindergarten children in Government schools had presented immunisation certificates to school authorities than in Catholic schools (Table 2). There were no differences in whether immunisation certificates were correctly completed (Table 3). Government schools had a

Table 2. Immunisation documentation by type of school, Auburn local government area, 1994

	Government Schools		Catholic Schools	
	Number	%	Number	%
Immunisation certificates held at school	375	74.9	156	66.1*
Other immunisation documentation held at school	28	5.6	52	22.0*
No evidence of any written immunisation documentation at school enrolment	98	19.6	28	11.9*
Total kindergarten enrolment	501	100.0	236	100.0

* $p<0.05$

Table 3. Immunisation status of children with immunisation certificates, by type of school, Auburn local government area, 1994

	Government Schools		Catholic Schools	
Status	Number	%	Number	%
Complete immunisation	211	56.3	90	57.7
Incomplete immunisation	11	2.9	11	7.1
Invalid certificate	153	40.8	55	35.2
Total	375	100.0	156	100.0

significantly larger proportion of kindergarten children without any form of written immunisation documentation than Catholic schools. Catholic schools had a significantly larger proportion of children with written immunisation documentation other than immunisation certificates than Government schools.

Discussion

We undertook this study to determine the usefulness of immunisation certificates for routine surveillance of immunisation uptake in children starting kindergarten. If immunisation certificates were correctly completed for each and every child, then these records would be a resource efficient and useful source of information for monitoring immunisation rates in the community. With the introduction of computerised school records, this avenue for data collection is even more appealing.

Victoria has implemented similar legislation for the past four years. In 1991, the first year of the implementation of the Victorian legislation, 87.2% of children in preparatory year had presented an immunisation certificate (fully immunised, 85.2%; not fully immunised, 2.0%), and in 1992 this proportion was 89.9% (fully immunised, 85.4%; not fully immunised, 4.2%)[6].

In our study, we found that only 72% of kindergarten children had presented an immunisation certificate to their school as part of their educational records. A review of only 70% of certificates to determine immunisation uptake rates may result in a biased estimate. We also found that only 60% of the certificates were completed correctly, with inconsistent information in the other 40%. The inconsistent information would not be useful when determining immunisation uptake rates in a surveillance program based on immunisation certificates. In addition, in the event of an outbreak of a vaccine preventable disease in a school in New South Wales, only a valid immunisation certificate is acceptable as evidence of immunisation.

Our rates for the number of immunisation certificates held at schools (72%) are lower than rates reported in both northern and eastern Sydney, where the rates were 84% and 81% respectively[7,8]. This is most likely due to different methods of data collection. Both the other studies relied on schools replying to a telephone call or a mailed questionaire. In our study, we individually reviewed all immunisation documentation held by the schools.

There was a high percentage of children with other forms of written immunisation records, for example doctors' letterheads or pages from script pads. This suggests that health authorities need to do more to educate immunisation providers, parents and the education sector on the school entry requirements. In addition they must ensure that immunisation providers are supplied with adequate numbers of immunisation certificates.

Many children did not present any form of written immunisation record to school authorities. In our study we did not attempt to elucidate the reasons for this. In an outbreak of a vaccine preventable disease these children would be considered non-immunised and excluded from school.

We reviewed the immunisation certificates in the first year of implementation of the school entry legislation. We hope that in subsequent years, with better informed immunisation providers, parents and school staff, a greater proportion of children starting kindergarten will have an immunisation certificate. Until further evaluation is done, we suggest that immunisation certificates are not an adequate source of data for determining immunisation uptake rates in children starting kindergarten in New South Wales. They may also be of only limited value in the containment of a vaccine preventable disease outbreak in schools.

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SURVEILLANCE DATA IN *CDI*

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Communicable Diseases Intelligence publishes reports from several national communicable diseases surveillance schemes on a regular basis. These surveillance schemes are conducted to monitor the occurrence of communicable diseases in Australia, to detect trends and to highlight needs for further investigation or for the implementation or modification of control measures.

Surveillance has been defined by the World Health Organization as the 'continuing scrutiny of all aspects of the occurrence and spread of disease that are pertinent to effective control'; it is characterised by 'methods distinguished by their practicability, uniformity, and frequently by their rapidity, rather than complete accuracy' [1]. Although some surveillance schemes aim for complete case ascertainment, some include only a sample of all cases of the conditions under surveillance, and these samples are subject to systematic and other biases. Results generated from surveillance schemes must therefore be interpreted with caution, particularly when comparing results between schemes, between different geographical areas or jurisdictions and over time. Surveillance data may therefore also differ from data on communicable diseases which may be gathered in other settings.

The major features of the surveillance schemes for which *CDI* publishes regular reports in the *Communicable Diseases Surveillance* section are described below. Other surveillance schemes for which *CDI* publishes occasional reports include the National Mycobacterial Surveillance System (conducted under the auspices of the Communicable Diseases Network of Australia and New Zealand and described in *CDI* 1995; **19**: 334-343), the Australian Tuberculosis Laboratory Reporting Scheme (described in *CDI* 1995; **19**: 343-345), the Hib Case Surveillance Scheme (described in *CDI* 1995; **19**: 86-90), the Australian Gonococcal Surveillance Programme (see for example *CDI* 1995; **19**: 668-670) and the National *Neisseria* Network (*CDI* 1995; **19**: 286-289). Quarterly and annual reports of human isolates of enteric pathogens reported to the National *Salmonella* Surveillance Scheme are also reproduced (see for example *CDI* 1995; **19**: 618-626).

National Notifiable Diseases Surveillance System

The National Notifiable Diseases Surveillance System (NNDSS) was established in 1990 under the auspices of the Communicable Diseases Network Australia New Zealand (CDNANZ). National compilations of notifiable diseases have been published intermittently in a number of publications since 1917 (see *CDI* 1993; **17**: 226-236).

The System coordinates the national surveillance of 41 communicable diseases or disease groups endorsed by the National Health and Medical Research Council (NHMRC)[2]. Under this scheme, notifications are made to State and Territory health authorities under the provisions of the public health legislation operative in their separate jurisdictions. Computerised, de-identified unit records of notifications are supplied to the Network secretariat at the Department of Human Services and Health for collation, analysis and publication in *CDI*.

Data provided for each notification include a unique record reference number, State or Territory code, disease code, date of onset, date of notification to the relevant health authority, sex, age, Aboriginality, postcode of residence, and the confirmation status of the report (as defined by each State or Territory). Date of onset, sex, age, Aboriginality, postcode of residence and confirmation status are nonmandatory data items, but are supplied if known.

Each fortnight, State and Territory health authorities submit a file of notifications received for the entire calendar year to date; the data files therefore include notifications for both the current reporting period and updated notifications for all previous reporting periods in the current year.

The data are presented, currently each fortnight, in tabular form. Cases reported to State and Territory health authorities in the current reporting period are listed by State or Territory, and totals for Australia are presented for the current period, the current year to date, and for the corresponding periods of the previous year.

One table includes data on the diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation. Another table includes diseases that are only rarely notified (fewer than 50 cases notified throughout Australia in each of the previous five years). Notifications of the remaining diseases are presented in the final table, except for HIV infection and AIDS notifications, which are not tabulated in this section of *CDI*. Surveillance for these conditions is conducted separately and is reported in the *HIV and AIDS Surveillance* reports (see below).

A commentary on the notifications received accompanies the tables in each issue; graphs are used to illustrate time trends and other features of the data. Currently included in each issue is a graph of the notifications received for eight selected diseases during the reporting period along with comparative historical data (averages of the number of notifications received in related reporting periods of the last three years).

The interval from the end of a reporting period to the date of publication of collated data in *CDI* is currently 16 days.

The quality and completeness of data compiled in the National Notifiable Diseases Surveillance System are influenced by various factors. Tables, graphs and commentary must be interpreted with caution, particularly when comparisons are made between States and Territories and with data from previous years. The NHMRC has recommended that data be routinely collected on all 41 national notifiable diseases, and has issued uniform case definitions for all of these [2]. Each State or Territory health authority, however, determines which diseases will be notifiable within their jurisdiction, and which notifications are accepted as satisfying criteria which in some cases differ from the NHMRC case definitions. Moreover, the mechanisms of notification differ between States and Territories; notifications may be required from any or all of treating clinicians, diagnostic laboratories and hospitals; and in some cases, different diseases are notifiable by different mechanisms. The proportion of cases seen by health care providers which are the subject of notification to health authorities is not known with certainty for any disease, and may vary among diseases, beween jurisdictions and over time.

CDI Laboratory Reporting Schemes

There are two *CDI* Laboratory Reporting Schemes: the Virology and Serology Reporting Scheme (LabVISE) and the Laboratory Database of Organisms from Sterile Sites (LabDOSS). The *CDI* Laboratory Reporting Schemes rely on the voluntary participation of laboratories and we gratefully acknowledge their contributions.

Virology and Serology Reporting Scheme (LabVISE)

The Virology and Serology Laboratory Reporting Scheme began operating in 1977. At present the scheme comprises 21 sentinel laboratories from all States and the Australian Capital Territory which contribute data on the laboratory identification of viruses and other organisms. Laboratories elect to submit data either on computer disk using LabVISE software (written in Epi Info), or on paper forms in the same format. Each record includes mandatory data fields (laboratory, specimen collection date, a patient identifier code, specimen source, the agent detected and the method of diagnosis), and optional fields (specimen code number, sex, date of birth or age, postcode of residence, clinical diagnosis, risk factors and comments).

Reports are collated, analysed and published currently each fortnight. Each report includes three summary tables. The first table lists the agents by group (measles-mumps-rubella, hepatitis viruses, arboviruses, and others) and State or Territory. Also included are the national totals for the reporting period, an historical national average of the reports in six previous reporting periods (the corresponding periods of the last two years and the periods immediately preceding and following those), and the totals of reports received in the current year. The second table lists the organisms grouped by clinical information as supplied in the laboratory reports, and the total for the reporting period. The third table shows total reports for the period by contributing laboratory. The delay between date of specimen collection and date of publication ranges from two weeks to several months. A commentary on the laboratory reports includes the observation of recent trends (with accompanying graphical presentation) and further details of interesting cases.

Data derived from this scheme must be interpreted with caution as the number and type of reports received is subject to a number of biases, including the location of participating laboratories, the availability of diagnostic services and diagnostic practices.

Sterile Sites Surveillance (LabDOSS)

The Laboratory Database of Organisms from Sterile Sites (LabDOSS) was introduced in January 1992 and monitors significant isolates from normally sterile sites. It is used on a national basis to compile more detailed information than is available to the National Notifiable Diseases Surveillance System on infections such as those caused by *Haemophilus influenzae* type b. Information is also collected on diseases which are not included in the list of national notifiable diseases, such as meningitis caused by *Streptococcus pneumoniae* and by *Cryptococcus neoformans.*

Twenty laboratories from around Australia currently contribute reports to this scheme. As for LabVISE, each report includes a laboratory identifier, the date of specimen collection, the organism identification, data on the source of the specimen and identification methods. The reports usually contain the residential postcode of the patient, data on the patient's age and sex, and information on the clinical diagnosis and risk factors; relevant comments may also be included. Coded specimen and patient identifiers are also included to enable further follow-up with laboratories, as required, and the deletion or amalgamation of duplicate reports.

LabDOSS is currently published in alternate issues of *CDI.*

Organisms reported as isolated from blood specimens five or more times during the current reporting period are presented in a table which details the total number of reports for the fortnight, together with selected clinical and risk factor information. Organisms reported fewer than five times from blood specimens are listed in the text. Cerebrospinal fluid isolates and meningitis reports are tabulated by organism and age group, or listed as text. Isolates from other sites, such as peritoneal dialysate and joint fluid are also listed. Commentary and other information, such as outbreaks, is included as appropriate.

As for LabVISE, the number of reports of isolates made to LabDOSS is influenced by various factors, including the number, type and location of participating labora-

tories, and current diagnostic techniques and habits, as well as the actual occurrence of infections. These factors must be taken into account and the data interpreted with appropriate caution. The delay between the date of specimen collection and the date of publication ranges from two weeks to two months.

Hepatitis C surveillance

In 1995 the CDNANZ undertook a 12 month pilot study to enhance the NNDSS surveillance of hepatitis C by improving the identification of incident cases of hepatitis C infection and compiling information on associated risk factors. Notifications of hepatitis C are followed up with notifying practitioners to determine whether cases are incident or prevalent. Risk factor information is sought on those cases identified as being incident. Reports are collated, analysed and reported quarterly (*CDI* 1995;**19**:615-617).

Australian Sentinel Practice Research Network

The Research and Health Promotion Unit of the Royal Australian College of General Practitioners operates the Australian Sentinel Practice Research Network, a national network of general practices which report on a number of conditions each week. Each fortnight, the communicable diseases under surveillance in this scheme (defined in *CDI* 1995; **19**: 46) are reported. For each of the two reporting weeks reviewed, the number of cases of each listed disease encountered is tabulated, together with the rate of reporting per 1000 consultations. Brief comments on the reports accompany the table. Currently about 60 general practitioners from all States and Territories report on about 8000 consultations each week.

Sentinel Chicken Surveillance Programme

The Sentinel Chicken Surveillance Programme is coordinated by Annette Broom of the Arbovirus Research Laboratory in the Department of Microbiology at the University of Western Australia. The Programme provides an early warning of increased flavivirus activity, by monitoring flavivirus seroconversions in chickens in sentinel flocks in Western Australia, the Northern Territory, Victoria, Queensland and New South Wales. Information on seroconversions from this scheme is published every two months. Details of the locations of the chicken flocks and other information on the scheme were published in *CDI* 1992;**16**:55, *CDI* 1992;**16**:169 and *CDI* 1993;**17**:123.

HIV and AIDS Surveillance

National surveillance for HIV and AIDS is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR) located at Darlinghurst within the University of New South Wales, 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, either by the diagnosing laboratory (Australian Capital Territory, 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.

Currently, two tables on HIV infection diagnoses, AIDS diagnoses and AIDS deaths are published in alternate issues of *CDI*. The first table summarises data on new diagnoses of HIV infection and AIDS and on deaths from AIDS occurring during the stated reporting month, by sex and by State or Territory of diagnosis, and lists national totals for the month, the corresponding month of the previous year, and the current and previous year to date. The second is a tabulation of cumulative data on HIV diagnoses, AIDS diagnoses and on deaths from AIDS, by sex and by State or Territory, from the inception of HIV antibody testing in 1984 up to the end of the reporting period.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting period, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infections and AIDS is published quarterly in the *Australian HIV Surveillance Report*, available from the NCHECR.

Surveillance of Serious Adverse Events Following Vaccination

The Serious Adverse Events Following Vaccination Surveillance Scheme is a national surveillance scheme initiated through the National Childhood Immunisation Committee. The scheme aims to identify and report in a timely fashion all serious adverse events which follow childhood vaccination. This permits (i) the identification of illnesses of infrequent occurrence that may be associated with vaccination, (ii) the estimation of rates of occurrence of events temporally associated with vaccination, (iii) monitoring for unusually high rates of adverse events, (iv) the provision of information to inform the debate on the risks and benefits of vaccines and (v) the identification of areas that require further research. The definition used for a case of a serious adverse event following vaccination was published in *CDI* 1995; **19**: 273-274.

Reports on serious adverse events are collected by State and Territory health authorities and forwarded to the Department of Human Services and Health every fortnight. Information collected on each case includes the vaccine(s) temporally associated with the event, possible risk factors in the child's medical history and details about the nature, timing and outcome of the event. Methods of collecting reports vary between States and Territories. Telephone reporting is accepted to mini-

mise health care provider paperwork. States and Territories also report on follow up at 60 days.

Reports of the surveillance scheme are published in alternate issues of *CDI*. Acceptance of a report does not imply a causal relationship between the administration of the vaccine and the medical outcome, or that the report has been verified as to its accuracy.

National Influenza Surveillance

Influenza surveillance in Australia is based on several schemes collecting a range of data which can be used to measure influenza activity. From autumn to spring, the results of each of the schemes are published together as *National Influenza Surveillance* to facilitate a national view of influenza activity. Fortnightly reports include all data received in the two weeks preceding publication, so information from individual surveillance schemes does not always refer to the same time period.

In 1995, four sentinel general practitioner schemes contributed reports of influenza-like illness: the Australian Sentinel Practice Research Network, the Australian Capital Territory Sentinel General Practice Scheme, the New South Wales Sentinel General Practice Scheme and the Victorian Sentinel General Practice Scheme. The number of cases of influenza and the total consultations for each week are reported, and a graph depicts the data for the season to date.

Absenteeism surveillance encompasses reports for a selected day each week of the proportion of the 37,000 employees of Australia Post absent on sick leave, and of the proportion of students absent from selected schools in the Australian Capital Territory and in New South Wales, also on one chosen day each week. A graph of all absenteeism data reported for the year is also published.

The *CDI* Virology and Serology Reporting Scheme contributes laboratory reports of influenza diagnoses, by week of specimen collection, virus type and method of diagnosis (reported in the tables) and graphs of the data for the year to date.

The WHO Collaborating Centre for Influenza Reference and Research at the Commonwealth Serum Laboratories, Melbourne provides information on antigenic analysis of isolates received from Australia and also from New Zealand, other countries of the region and South Africa.

The Victorian Department of Health and Community Services contributes data on hospital admissions for influenza and / or pneumonia, the total deaths and death rate recorded in Victoria each fortnight. The South Australian Health Commission reports total weekly death rates.

References

1. Last JM. *A dictionary of epidemiology*. New York: Oxford University Press, 1988.
2. National Health and Medical Research Council. *Surveillance Case Definitions*. Canberra: NHMRC, 1994.

OVERSEAS BRIEFS

In the last four weeks the following information has been supplied by the World Health Organization

Influenza in the Northern Hemisphere

Influenza activity continues to rise in Europe and North America. Outbreaks have also been reported in the Islamic Republic of Iran and Israel. During late November and December Croatia, Czech Republic, France, Netherlands, Norway, Romania and the Russian Federation reported marked rises in influenza activity. The virus continues to spread in the UK. Influenza A, subtype H_3N_2 has been most widely reported. In Canada, Poland, Switzerland and parts of France influenza A, H_1N_1 has been most commonly reported.

Ebola Haemorrhagic fever in Cote D'Ivoire

The Ebola case in Western Cote D'Ivoire previously hospitalised under strict isolation has now been discharged. A female contact who was also hospitalised had a bacterial infection and is reponding to antibiotic treatment. There is no indication that the virus has spread to contacts either in the hospital or the community.

Yellow fever

Liberia

A total of 359 cases including nine deaths was reported in Buchanan, Bassa County to 15 December 1995. A single case was reported in Bong County but cases in other areas have not yet been confirmed.

Sierra Leone

A case of serologically confirmed yellow fever has been reported in Kenema, Eastern Province. Due to yellow fever activity in the adjacent country of Liberia, Sierra Leone has begun a mass vaccination campaign. Vaccination against yellow fever is strongly recommended for all travellers to Sierra Leone.

CDI NOTICE TO READERS

CDI Editorial Advisory Board

An Editorial Advisory Board has been appointed to guide the future development of *Communicable Diseases Intelligence*. It is chaired by Professor Charles Watson, Dean of the Faculty of Health and Behavioural Sciences at the University of Wollongong, New South Wales.

Other members are Associate Professor Margaret Burgess, Director, Australian Immunisation Research Centre, Royal Alexandra Hospital for Children, Westmead, New South Wales; Dr Scott Cameron, Senior Consultant, Communicable Disease Control Unit, South Australian Health Commission; Dr Gavin Frost, Senior Medical Advisor, AIDS and Communicable Diseases Branch, Department of Human Services and Health; Dr Jeffrey Hanna, Medical Director, Tropical Public Health Unit, Queensland Health Department, Cairns, Queensland; Associate Professor John Kaldor, Deputy Director of the National Centre for HIV Epidemiology and Clinical Research, Sydney, New South Wales; Mrs Margery Kennett, Senior Scientist, Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital, Fairfied, Victoria; Dr Christine Roberts, Director of the Master of Applied Epidemiology Program, National Centre for Epidemiology and Population Health, Australian National University, Canberra, Australian Capital Territory.

CDI Instructions for authors

Communicable Diseases Intelligence (*CDI*) is a fortnightly publication of the AIDS / Communicable Diseases Branch, Commonwealth Department of Human Services and Health and the Communicable Diseases Network of Australia and New Zealand. Its aim is to provide timely information about communicable diseases in Australia to inform and assist those with responsibility for their control in a wide variety of settings.

CDI invites contributions dealing with any aspect of communicable disease incidence, risk factors, surveillance or control in Australia. They can be in the form of original articles, short reports, surveillance summaries, reviews or correspondence.

On receipt of an article, *CDI* sends a brief acknowledgment indicating that it will be considered for publication. Contributions are then reviewed and, if accepted, prepared for publication in consultation with the corresponding authors. Authors may be asked to revise articles as a result of the review process and the final decision about publication is made by the Editor.

CDI is published on alternate Mondays except for the fortnight of Christmas-New Year. It is finalised for the printer on the Friday prior to the publication date. Very topical brief contributions may be published in the fortnight of receipt, by arrangement with the editorial staff.

Submission procedure

A single copy of the contribution should be submitted to the Editor, *Communicable Diseases Intelligence*, at the address below. A covering letter should identify the corresponding author and be signed by all authors agreeing to possible publication.

The contribution should be provided in hard copy and on diskette (3 1/2 inch disks preferred). WordPerfect text format is ideal, although most IBM-compatible word processing formats can be converted. Short contributions may also be sent by email.

Authors

Authors of articles should be identified by their first name, last name, institution and address, with phone and fax contacts for the corresponding author. Each author should have participated sufficiently to take public responsibility for the article. Others contributing to the work should be recognised in the acknowledgments.

Articles and short reports

The text of articles should be structured with abstract, introduction, methods, results, discussion, acknowledgments and references, as far as is possible. Short contributions may need fewer subsections. There is no strict word limit for articles but manuscripts of 2000 words or less are preferred. Include a word count with the contribution.

Tables and figures

All tables and figures should be referred to within the results section and should not duplicate information in the text. If graphs are to be included, also provide the numerical data on which these are based to enable production in house style. Black and white illustrations or photographs can be included if required.

References

References should be identified consecutively in the text by the use of superscript numbers. The Vancouver reference style is used by *CDI* (see International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *Med J Aust* 1991; **155**: 197-201). All unpublished material should be referred to within the text (instead of the reference list) as personal communications or unpublished observations. The only exception is material which has been accepted for publication (in press).

Contact details

Contributions and requests for further information should be sent to: The Editor (Dr Helen Longbottom), *Communicable Diseases Intelligence*, AIDS / Communicable Diseases Branch, GPO Box 9848, Canberra, ACT 2601. Phone: (06) 289 8606 Fax: (06) 289 7791 Email: helen.longbottom@hhlgcs.ausgovhhcs.telememo.au

CDI Electronic Distribution

Communicable Diseases Intelligence is available in electronic format in the following ways:

CDI-BBS

The *CDI* bulletin board system (BBS) is designed for access via a telephone line. A computer and a modem are required.

The sections of *CDI* available on BBS include:

- text from *CD*I articles and communicable diseases surveillance;
- tables from the Virology and Serology Reporting Scheme;
- tables from the National Notifiable Diseases Surveillance System;
- tables from the Australian Sentinel Practice Research Network;
- text of the National Notifiable Diseases Surveillance System Annual Report;
- text of the Virology and Serology Reporting Scheme Annual Report.

The *CDI*-BBS is accessible on 06-281 6695.

The text and tables are named such that each issue of *CDI* can be retrieved by date. These can be viewed on screen or downloaded to a personal computer as a text file.

Internet Site

Parts of *CDI* as detailed above are available on the Department's FTP site which can be accessed via an Internet / AARNET connection using *ftp://ftp.health.gov.au* in directory */pub/cdi/*.

In addition to the text and table formats, the full version of *CDI* is available at this site in portable document format (.PDF). This version of *CDI* can be read using Adobe Acrobat Reader which is available free of charge. The Reader will allow you to view, search and print.

Access to *CDI* via the Department's world wide web (WWW) site (*http://www.health.gov.au*) will be available soon.

The Australian Childhood Immunisation Register

The Australian Childhood Immunisation Register administered by the Health Insurance Commission (HIC) commenced operation on 1 January 1996.

The establishment of the Register was required to help redress the continuing epidemics of vaccine preventable diseases which have occurred in Australia since 1993. The Register is a component of the National Childhood Immunisation Program.

It is anticipated that the Register will provide information about immunisation coverage which is not currently available. The Register will provide a management tool for health authorities to monitor immunisation coverage and improve service delivery. The data collected will also form the basis of an optional recall reminder scheme which will have the ability to inform parents when their child's immunisations are due or overdue.

Immunisation providers will receive a payment for notifying details of immunisation encounters in children from birth to six years of age to the Register.

Providers in most States and Territories will send this information directly to the HIC. However, in Queensland, the Northern Territory and the Australian Capital Territory, providers are requested to continue forwarding details of immunisation encounters directly to Queensland Health (through the VIVAS system), Territory Health Services and ACT Health respectively. These health authorities will arrange for the information to be sent to the HIC for inclusion in the Register.

Providers in other States can send information to the HIC electronically using electronic data interchange or by completing a voucher similar to the Medicare direct bill form.

A data collection fee will be payable to recognised service providers regardless of the administrative arrangements employed in the States and Territories for forwarding information to the HIC.

The document *Childhood Immunisation - Schedules, Guidelines and the Register* developed by the National Childhood Immunisation Committee and endorsed by the Royal Australian College of General Practitioners, the Australian College of Paediatrics and the Australian Medical Association was recently mailed to general practitioners and paediatricians. This document provides advice on recommended immunisation practices and the notification of information about immunisation encounters to the Register.

Immunisation providers will be eligible for a payment for information about vaccinations only when the vaccines are administered in accordance with:

- the NHMRC recommendation on simultaneous administration of vaccines;
- the NHMRC Standard Childhood Vaccination Schedule or State or Territory Schedule; or
- a declaration being made that the clinical indications for variation from the above Schedules have been noted in the patient's record.

The objective of the National Childhood Immunisation Program is to increase immunisation coverage rates to an extent that disease transmission is interrupted. Experience in other countries has demonstrated that this is an achievable goal. However, the participation of immunisation providers in the Register is fundamental to achieving this objective.

Further information

Further information about the Australian Childhood Immunisation Register can be obtained by contacting

the Health Insurance Commission on 1800 653 809 (free call) or your State or Territory Immunisation co-ordinator.

Additional copies of the document *Childhood Immunisation - Schedules, Guidelines and the Register* can be obtained by contacting Ms Anne-Marie Fraser, AIDS / Communicable Diseases Branch on (06) 289 8416 (email: anne-marie.fraser@hhlgcs.ausgovhhcs.telememo.au).

COMMUNICABLE DISEASES SURVEILLANCE

Virology and Serology Reporting Scheme

There were 1703 reports received in the *CDI* Virology and Serology Reporting Scheme this period (Tables 7, 8 and 9).

- Two reports of **measles** were received this period. The number of reports is low compared to the same period last year. Fewer reports have been received so far for 1995 than for any year since 1989 (Figure 1).
- **Rubella** was reported for 30 patients this period, all diagnosed by IgM detection. Included were 12 females, 3 of whom were of childbearing age, and 18 males. The number of rubella reports has declined in recent months after peaking in October (Figure 2).
- One reports of **mumps** was received this period from South Australia, diagnosed by IgM detection.
- **Hepatitis A** was reported for 10 patients this period including 6 males and 4 females.
- Positive **hepatitis B** serology was reported for 72 patients this fortnight including 39 males and 31 females. A total of 61 was in the 15 to 44 year age range.
- One hundred and fourteen reports of positive **hepatitis C** serology were received this period. Included were 72 males and 35 females. Seventy-seven reports were for the 25 to 44 yearage group.
- Positive **hepatitis D** serology was reported for a 44 year old male from Queensland.
- **Ross River virus** was reported for 3 patients this period. Two were from Western Australia and one from New South Wales. All diagnoses were by IgM detection. The number of reports received remain low.
- Three reports of **Barmah Forest virus** were received this period. The number of reports continues to decrease.
- Four reports of **flavivirus** were received diagnosed by IgM detection.
- One hundred and forty-three reports of **adenovirus** were received this reporting period diagnosed by virus isolation (122), antigen detection (19) and single high titre (2). Seventy-seven reports were for the 0 to 4 year age group. Untyped adenovirus reports were received for 84 patients. There were 12 reports of eye disease including adenovirus type 3 (one) and type 19 (one).
- **Herpes simplex virus type 1** was reported for 219 patients this reporting period. Diagnosis was by virus isolation (215) and antigen detection (4).
- Two hundred and thirty-eight reports of **herpes simplex virus type 2** were received this period diagnosed by virus isolation (236) and antigen detection (2).

Figure 1. Measles laboratory reports 1982 to 1995, by year of specimen collection

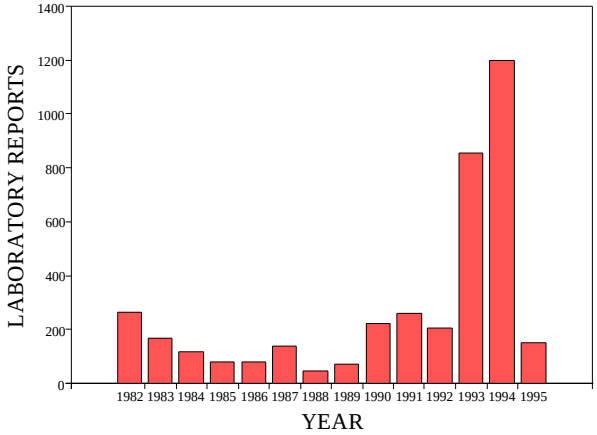
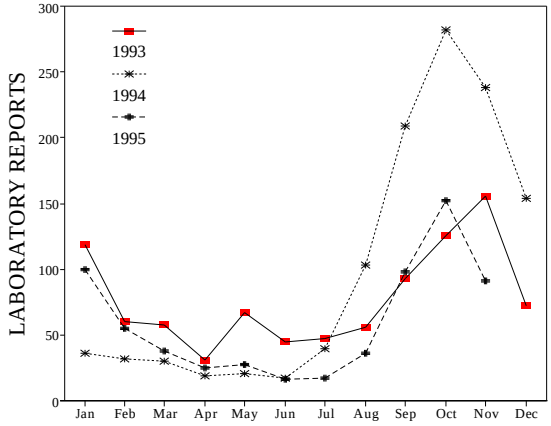


Figure 2. Rubella laboratory reports, 1993 to 1995, by month of specimen collection



- One case of **untyped herpes simplex virus** was reported for a 59 year old female with encephalitis.
- Eighty-one reports of **cytomegalovirus** were received this period. Diagnosis was by virus isolation (58), antigen detection (2), nucleic acid detection (one) and IgM detection (20). Included was one HIV / AIDS patient, 6 transplant recipients and one transplant patient. One death was reported for a 71 year old male from Tasmania.
- **Varicella-zoster virus** was reported for 34 patients this period. Diagnosis was by virus isolation (19), antigen detection (14) and nucleic acid detection (one). One report was received for a 31 year old pregnant female.
- Fifty-nine reports were received for **Epstein-Barr virus** this reporting period. Diagnosis was by single high titre (3) and IgM detection (56). Included was a 21 year old male with encephalitis and a one year old male with hepatosplenomegaly.
- **Coxsackievirus** was reported for 3 patients this period. Included was a 28 year old female with meningitis from whom **Coxsackievirus B5** was isolated and a one month old infant also with meningitis from whom **Coxsackievirus A9** was isolated.
- Nine reports of **echovirus** were received this period. Cases were reported from New South Wales (7), Victoria (one) and the Australian Capital Territory (one).
- **Enterovirus type 71** was reported for a one year old male.
- Sixty reports of **untyped enterovirus** were received this period. Included was one report of encephalitis and two of meningitis.
- **Rhinovirus** was reported for 63 patients this period. Cases were reported from Victoria (23), South Australia (4), Queensland (27), New South Wales (8) and the Australian Capital Territory (one).
- **Influenza A** was reported for 9 patients this period. Diagnosis was by isolation (one), single high titre (6) and fourfold rises in titre (2). A total of 766 reports has been received for 1995. Ninety-two isolates were identified as being H_1N_1 subtypes and 9 as H_3N_2 subtypes. The number of reports received has continued to decline after reaching a peak in July.
- Thirteen reports of **influenza B** were received this period. Diagnosis was by isolation (7), single high titre (5) and fourfold rise in titre (one). The number of reports continued to decline this reporting period with a total of 348 reports received for 1995.
- **Parainfluenza virus type 3** was reported for 111 patients this reporting period. Diagnosis was by virus isolation (94), antigen detection (15), single high titre (one) and four fold rise in titre (one). Reporting continues to decline after reaching a peak in August. More reports were received for 1995 than for the previous two years (Figure 3).
- One hundred and twenty-one reports of **respiratory syncytial virus (RSV)** were received this reporting period. Method of diagnosis included virus isolation (115) and antigen detection (6). One hundred and ten reports were received for the under 4 years age group. The number of reports continues to decline. More reports were received in 1995 than for any previous year recorded by this scheme (Figure 4).
- **Rotavirus** was reported for 116 patients this period. One hundred and two reports were for patients below 4 years of age. Rotavirus reporting has continued to decline since August.
- ***Chlamydia trachomatis*** was reported for 65 patients this period. Diagnosis was by isolation (8), antigen detection (32), nucleic acid detection (22) and IgM detection (3). Included were 34 females and 30 males.

Figure 3. Parainfluenza virus type 3 laboratory reports, 1993, to 1995 by month of specimen collection

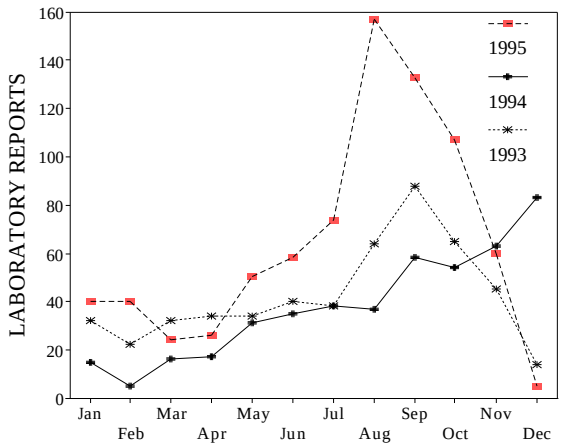


Figure 4. Respiratory syncytial virus laboratory reports, 1985 to 1995, by year of specimen collection

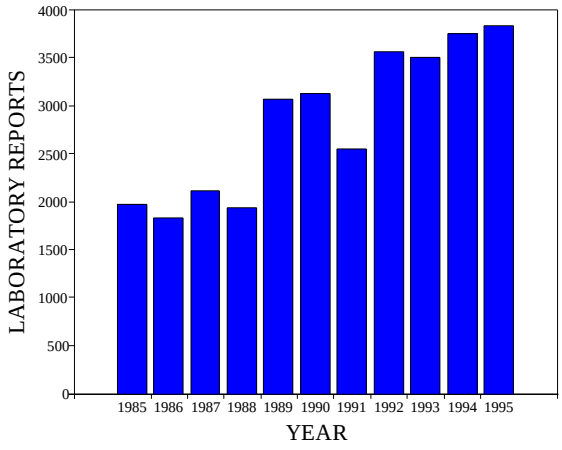


Table 1. Australian Sentinel Practice Research Network, weeks 48 and 49, 1995

Condition	Week 48, to 3 December 1995		Week 49, to 10 December 1995		Week 50, to 17 December 1995	
	Reports	Rate per 1000 encounters	Reports	Rate per 1000 encounters	Reports	Rate per 1000 encounters
Influenza	14	2.0	20	3.0	27	4.0
Rubella	3	0.5	4	0.6	6	0.9
Measles	0	0	0	0	0	0
Chickenpox	10	1.5	9	1.3	19	2.8
Pertussis	1	0.2	2	0.3	3	0.4
Gastroenteritis	99	14.4	85	12.6	103	15.3

- ***Chlamydia psittaci*** was reported for 14 patients this reporting period. Twelve of these reports were for males. Diagnosis was by single high titre (7), four fold rise in titre (5) and IgM detection (2). All reports for the period were received from Victoria. The number of psittacosis reports received for 1995 is high compared to previous years, a total of 665 reports. The male:female ratio for 1995 was 1.6:1.0 with 390 reports received for the 45 years and over agegroup.
- Seventeen reports of ***Mycoplasma pneumoniae*** were received this period for 8 males and 9 females. Method of diagnosis included single high titre (3), IgM detection (9) and total antibody (5).
- Seven cases of ***Coxiella burnetii*** (Q Fever) were reported this period. Diagnosis included four fold rise in titre (4) and IgM detection (3).
- Two reports of ***Rickettsia australis*** were received this reporting period. Method of diagnosis was single high titre (one) and four fold rise in titre (one).
- ***Rickettsia tsutsuganushi*** was reported for an 11 year old female from the Northern Territory.
- ***Toxoplasma gondii*** was reported for a one year old infant with severe hearing loss. Method of diagnosis was IgM detection.
- One report of ***Entamoeba histolytica*** was received for a 60 year old female refugee.

Australian Sentinel Practice Research Network

Data for weeks 48, 49 and 50 ending 3, 10 and 17 December respectively, are included in this issue of *CDI* (Table 1). There was a total of 6879, 6754 and 6748 consultations reported for weeks 48, 49 and 50 respectively. The rate of consultation for pertussis and gastroenteritis rose in mid December. The number of reports of measles remains low.

Surveillance of Serious Adverse Events Following Vaccination

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

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

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

Table 2. Adverse events following vaccination for the period 26 November to 23 December 1995

Event	Vaccines					Reporting States or Territories	Total reports for this period
	DTP	DTP / OPV / Hib	DTP / OPV	DTP / Hib	MMR		
Persistent screaming	1	3	2	1		ACT, NSW, Qld	7
Hypotonic/ hyporesponsive episode		1			1	NSW, NT	2
Other					1	ACT	1
Total	1	4	2	1	2		10

Table 3. LabDOSS reports of blood isolates, by organism and clinical information

Organism	Clinical information						Risk factors				Total[1]
	Bone / Joint	Lower respiratory	Endocarditis	Gastrointestinal	Urinary tract	Skin	Surgery	Immunosuppressed	IV line	Neonatal	
Enterococcus faecalis							1	2			5
Staphylococcus aureus	3	1	1	1	3	8	4	8	3	1	40[2]
Staphylococcus epidermidis						3	1	3	1		8
Staphylococcus coagulase negative									2		10
Streptococcus pneumoniae		6		1				1			16
Escherichia coli	1			8	12	1	6	3			38
Pseudomonas aeruginosa		1		1	1	1		3	1		6

1. Only organisms with 5 or more reports are included in this table.
2. MRSA 3.

Results for the reporting period 26 November 1995 to 23 December 1995

There were 10 reports of serious adverse events following vaccination for the reporting period 26 November to 23 December 1995. Reports were received from the Australian Capital Territory (2), New South Wales (5), the Northern Territory (1) and Queensland (2).

Of the 10 reports, 7 were cases of persistent screaming, two of hypotonic/hyporesponsive episodes and one was a severe local reaction following second dose MMR vaccine (Table 2).

Events associated with DTP vaccine alone or DTP in combination with other vaccines were associated with the first (5) and second (2) doses, with one dose number not reported. Four children were hospitalised. All children had recovered at the time the initial report was sent in.

Sterile Sites Surveillance (LabDOSS)

Data for this four weekly period have been provided by 9 laboratories. There were 195 reports of significant sepsis:

New South Wales: South Western Area Pathology 22; Royal North Shore Hospital 43;
Tasmania: Royal Hobart Hospital 14; Northern Tasmania Pathology Service 6;
Queensland: Sullivan and Nicholaides Partners 23; Ipswich General Hospital 12;
Australian Capital Territory: Woden Valley Hospital 34;
Northern Territory: Alice Springs Hospital 29.

Organisms reported 5 or more times from blood are detailed in Table 3. Other blood isolates not included in Table 3 were:

Gram positive: 1 *Corynebacterium* species, 1 *Enterococcus* species, 1 *Enterococcus faecalis*, 2 *Listeria monocytogenes* (47 year old male with a malignancy), 2 *Streptococcus* Group B, 1 *Streptococcus* Group F, 3 *Streptococcus* 'milleri', 1 *Streptococcus sanguis*, 2 *Streptococcus viridans* and *2 Streptococcus* species.

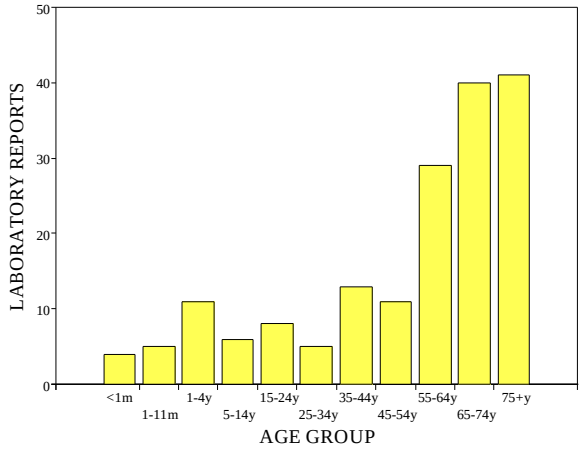
Gram negative: 3 *Acinetobacter* species, 1 *Campylobacter jejuni*, 1 *Campylobacter* species, 2 *Citrobacter diversus*, 1 *Enterobacter cloacae*, 1 *Enterobacter* species, 1 *Haemophilus influenzae*, 2 *Klebsiella oxytoca*, 2 *Klebsiella pneumoniae*, 1 *Morganella morganii*, 3 *Proteus mirabilis*, 1 *Proteus vulgaris*, 1 *Salmonella typhi*, 1 *Shigella* species and 1 *Xanthomonas maltophilia*.

Anaerobes: 2 *Bacteroides fragilis*, 4 *Clostridium perfringens*, and 1 *Clostridium* species.

Fungi: 2 *Candida albicans*.

There were 110 (64% of total) blood isolates reported for patients over the age of 55 years (Figure 5).

Figure 5. LabDOSS reports of blood isolates, by age group



Hospital acquired blood isolates

A total of 22 isolates were reported as being hospital acquired. The most commonly reported organisms were *Escherichia coli* (4), *Staphylococcus aureus* (6, including 3 MRSA) and *Staphylococcus epidermidis* (3).

Meningitis and/or CSF isolate reports

There were 3 reports of meningitis and / or CSF isolates. Included was 1 *Escherichia coli,* 1 *Klebsiella pneumoniae* and 1 *Streptococcus* Group B.

Isolates from sites other than blood or CSF

Joint fluid: Three reports were received this period including 1 *Enterobacter* species and 2 *Staphylococcus aureus.*

Peritoneal dialysate: A total of three reports was received. Included was 1 *Acinetobacter* species, 1 *Bacillus* species and 1 *Staphylococcus aureus.*

Pleural fluid: Two reports of organisms isolated from pleural fluid were received this period including 1 *Pseudomonas* species and 1 *Streptococcus* Group B.

Other: 1 *Enterobacter* species, 1 *Enterococcus faecium,* 1 *Enterococcus* species, 1 *Escherichia coli,* 1 *Klebsiella* species, 1 *Salmonella* species, 3 *Staphylococcus aureus,* 1 *Staphylococcus aureus* and 1 *Staphylococcus epidermidis.*

National Notifiable Diseases Surveillance System, 26 November to 23 December 1995

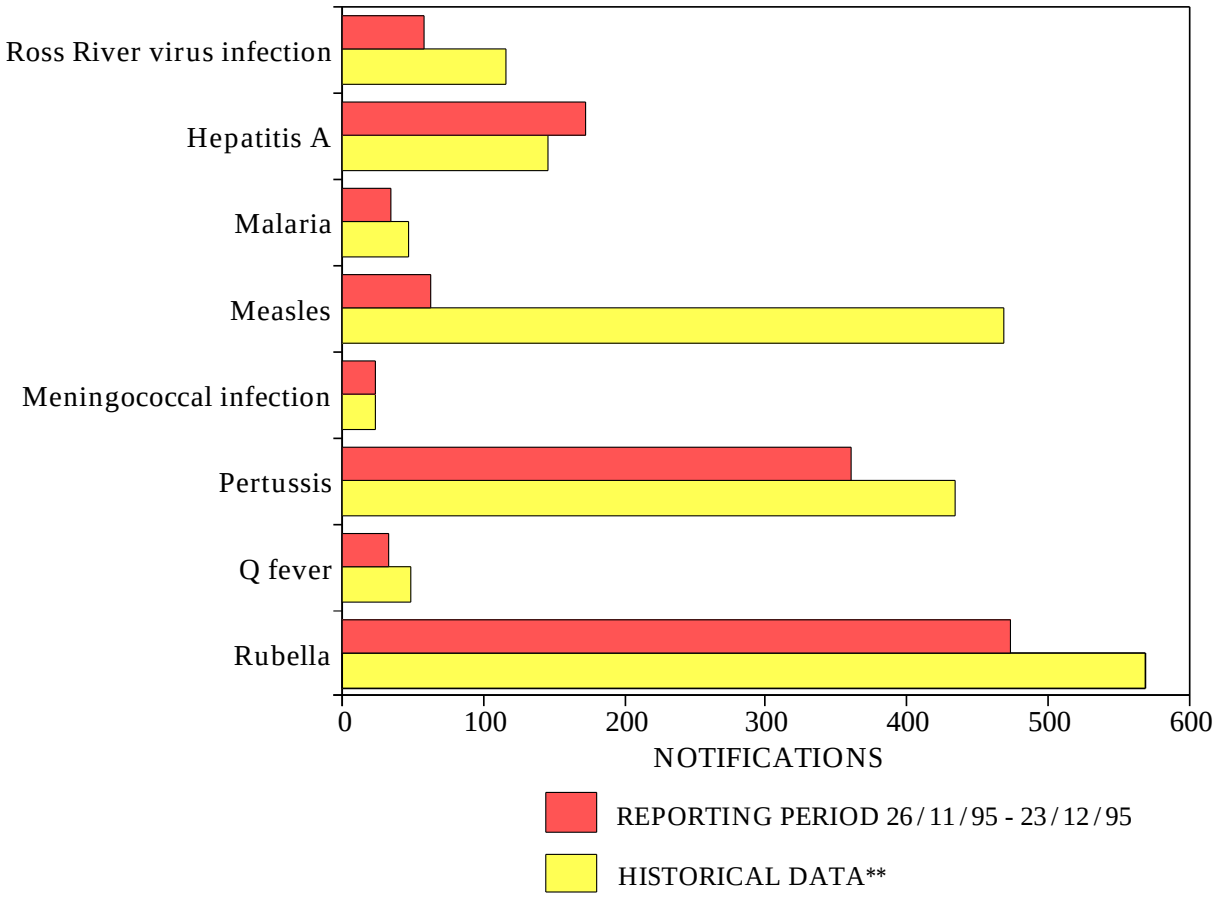
There were 4329 notifications received for this four week period (Tables 4, 5 and 6, and Figure 6).

- There were 57 notifications of **Ross River virus infection**; 27 cases were male, and 30 were female. Cases were from all age groups between 10 and 74 years, and were reported from New South Wales, the Northern Territory, Queensland, Victoria and Western Australia.
- Four cases of **brucellosis**, all in males, aged between 20 and 54 years, were notified from Queensland and Victoria.
- There were 930 notifications of **campylobacteriosis**; 498 cases were male, 428 cases were female, and the sex of 4 cases was not reported. Cases were reported from all age groups from 0-4 years to 80-84 years, with 25% being aged less than 5 years.
- There were 231 notifications of **gonococcal infection** received; 150 cases were male and 79 cases were female, the sex of the remaining cases not being reported. Three cases were recorded in infants and another in a child of 4 years. Other cases were from all age groups in the range from 10 to 59 years; 68% of the cases were aged between 15 and 29 years.
- Seven cases of ***Haemophilus influenzae* type b** infection were reported during the period, all but one in children under 5 years of age, from New South Wales, Queensland and Victoria.
- There were 172 cases of **hepatitis A** reported; 135 cases were male and 37 were female. The cases were from all age groups up to 79 years, including 104 cases (60%) between 20 and 39 years; 140 (80%) of the cases were reported from the metropolitan Statististical Divisions of Sydney, Brisbane and Melbourne.
- Twenty-six cases of **hepatitis B (incident)** were reported; 17 cases were males and 9 were female.
- One case of **hepatitis C (incident)** was reported for a male in the age group 35-39 years.
- Three cases of **hydatid disease** were notified, all in females over 60 years of age.
- Eight notifications of **legionellosis** were received. All cases but one were male, and were reported from metropolitan and rural Statistical Divisions. Ages ranged between 35 and 79 years.
- One case of **leprosy** was reported from the Kimberley statistical division of Western Australia.
- Nineteen cases of **leptospirosis** were reported. All but one were male. The ages of cases ranged from 15 to 64 years, most being in their 20s; all but 3 cases were reported from country areas.
- Four cases of **listeriosis** were reported during the period, 3 being females; their ages ranged from 35 to 69 years.
- There were 34 notifications of **malaria** received; 29 cases were male and 5 were female. Their ages ranged from 4 to 79 years. Cases were reported from 12 separate statistical divisions in 5 states and territories.
- Sixty-three cases of **measles** were reported; 35 were male and 28 were female. Eighteen cases were reported in children aged less than two years; the ages of other cases ranged between 2 years and 44 years, with 16 in the age range 10-19 years. There were 9 apparent clusters of 2 or 3 cases reported from the same postcode area, 1 occurring in the Australian Capital Territory, 2 in New South Wales, 1 in Queensland and 5 in Victoria.
- There were 23 cases of **meningococcal infection** reported; 13 cases were male and 10 were female. The cases were aged between 0 and 59 years, with 15 being in the age group 0-4 years. There was one apparent cluster of 2 cases reported from the same postcode area in the Australian Capital Territory.
- Twenty-eight cases of **ornithosis** were notified, including 25 from Victoria.
- There were 360 notifications of **pertussis**; 168 cases were male and 190 cases were female. All age-groups between 0-4 years and 85-89 years were represented. Twenty cases were aged less than one year, 38 more were aged less than 5 years, and there were 171 cases aged between 5 and 14 years. There were 70 apparent clusters of between 2 and 15 cases each in the same postcode area. Apparent clusters were in New South Wales (18), the Nothern Terri-

tory (1), Queensland (21), South Australia (22), Tasmania (1), Victoria (6) and Western Australia (1).

- Thirty-three notifications of **Q fever** were received, mostly from country regions of New South Wales, Queensland and Victoria; 28 cases were male and 5 were female; the age of cases ranged from 15 to 84 years.
- There were 473 cases of **rubella** reported; 339 cases were male, 133 cases were female, and the sex of one case was not reported. Recorded ages of cases were mostly from all age groups between 0-4 and 55-59 years, with 2 cases in older persons. Forty-nine cases were reported for females in the age range from 15 to 44 years. Nearly 50% of the cases (218) were reported in males 10-24 years of age.
- There were 381 cases of **salmonellosis** reported; 180 cases were male and 198 cases were female; the sex of the remaining 3 cases was not recorded. The cases were from all of the age groups 0-4 years to 85 years and older; 42% of the cases were aged less than 5 years.
- Eighty-five cases of **syphilis** were reported; 29 cases were male and 30 cases were female, the sex of the remaining case not being reported. Two cases, both males, were aged under one year. The other cases were from all age groups between 5-9 years and 65-69 years; one case was in a person over 85 years.
- There were 59 cases of **tuberculosis** reported; 31 were male and 28 were female. Three cases were aged under 5 years; the remainder were aged from 15 to 85 years and older.
- Three cases of **typhoid** were reported from the Perth Statistical Division. One case was male and two were female.
- Twenty-two cases of **yersiniosis** were reported; 11 cases were male, and 11 female. Cases were from all but one of the age groups between 15-19 years and 70-74 years.

Figure 6. Selected National Notifiable Diseases Surveillance System reports, and historical data[1]



1. The historical data are the averages of the number of notifications in 12 previous 2-week reporting periods: the corresponding 4 weeks of the last 3 years and the 2 week periods immediately preceding and following those.

Table 4. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 26 November to 23 December 1995

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA[1]			
									This period 1995	This period 1994	Year to date 1995	Year to date 1994
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae b infection	0	3	0	1	0	0	3	0	7	9	74	167
Measles	6	20	0	5	1	3	23	5	63	556	1315	4856
Mumps	0	3	1	NN	1	0	0	1	6	7	66	94
Pertussis	4	84	3	113	92	6	51	7	360	559	4257	5585
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0
Rubella	18	85	0	87	14	30	213	26	473	676	4067	3298
Tetanus	0	0	0	0	0	0	1	0	1	1	5	15

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

NN Not Notifiable.

Table 5. Notifications of other diseases[1] received by State and Territory health authorities in the period 26 November to 23 December 1995

DISEASES	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	TOTALS FOR AUSTRALIA[2]			
									This period 1995	This period 1994	Year to date 1995	Year to date 1994
Arbovirus infection												
Ross River virus infection	0	7	2	40	0	-	1	7	57	85	2526	3972
Dengue	0	0	0	0	0	-	0	0	0	0	28	17
NEC[3]	0	9	1	39	0	0	3	0	52	51	914	586
Campylobacteriosis[4]	17	-	13	194	272	37	254	143	930	970	10878	10025
Chlamydial infection (NEC)[5]	7	NN	34	225	7	26	48	94	441	595	6203	6436
Donovanosis	0	NN	3	1	NN	0	0	1	5	10	80	117
Gonococcal infection[6]	0	29	43	69	1	0	20	69	231	290	3096	2930
Hepatitis A	0	69	1	33	0	1	66	2	172	133	1563	1879
Hepatitis B	0	4	2	4	1	4	8	3	26	19	339	324
Hepatitis C incident	0	1	0	-	0	-	-	-	1	3	88	41
Hepatitis C unspecified	44		12	196		24	317	58	651	676	9441	8855
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	2	28	42
Legionellosis	0	2	1	0	1	0	2	2	8	9	172	177
Leptospirosis	0	2	0	2	0	1	12	2	19	11	145	122
Listeriosis	0	1	0	0	0	0	3	0	4	6	58	32
Malaria	1	5	0	15	0	0	12	1	34	38	617	696
Meningococcal infection	5	5	0	5	1	0	5	2	23	26	385	376
Ornithosis	0	NN	0	2	0	1	25	0	28	12	181	85
Q fever	0	12	0	8	1	0	11	1	33	53	471	662
Salmonellosis (NEC)	0	86	28	148	21	13	52	33	381	430	5961	5225
Shigellosis[4]	0	-	13	13	5	0	9	6	46	64	737	722
Syphilis	0	51	10	21	0	0	1	2	85	215	1794	2314
Tuberculosis	2	21	2	13	3	1	16	1	59	94	1138	1015
Typhoid[7]	0	0	0	0	0	0	0	3	3	0	41	50
Yersiniosis (NEC)[4]	0	-	0	15	4	0	3	0	22	41	312	410

1. For HIV and AIDS, see *CDI*; **19**: 652-653. For rarely notified diseases, see Table 6.
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 6. Notifications of rare[1] diseases received by State and Territory health authorities in the period 26 November to 23 December 1995

DISEASES	Total this period	Reporting States or Territories	Year to date 1995
Botulism	0		0
Brucellosis	4	Qld 3, Vic 1	31
Chancroid	0		2
Cholera	0		5
Hydatid infection	3	NSW 1, Vic 2	44
Leprosy	1	WA	7
Lymphogranuloma venereum	0		1
Plague	0		0
Rabies	0		0
Yellow fever	0		0
Other viral haemorrhagic fevers	0		0

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

Table 7. Virology and serology laboratory reports by State or Territory[1] for the reporting period 30 November to 27 December 1995 historical data[2], and total reports for the year

	State or Territory [1]								Total this fortnight	Historical data[2]	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
MEASLES, MUMPS, RUBELLA											
Measles virus							1	1	2	117.0	2
Mumps virus					1				1	5.0	1
Rubella virus		9	1		3		5	12	30	112.2	30
HEPATITIS VIRUSES											
Hepatitis A virus		4	1		1		4		10	18.8	10
Hepatitis B virus		27		19	8		18		72	98.7	72
Hepatitis C virus		8	8		55	12	8	23	114	301.2	114
Hepatitis D virus				1					1	.7	1
ARBOVIRUSES											
Ross River virus		1						2	3	166.2	3
Barmah Forest virus		3							3	20.3	3
Flavivirus (unspecified)		4							4	1.5	4
ADENOVIRUSES											
Adenovirus type 1					1		2		3	3.5	3
Adenovirus type 2							2		2	4.2	2
Adenovirus type 3							3		3	3.2	3
Adenovirus type 7							1		1	.7	1
Adenovirus type 19							1		1	.0	1
Adenovirus not typed / pending	1	11		98	13		5	5	133	72.8	133
HERPES VIRUSES											
Herpes simplex virus type 1	1	25	1	81	36	2	49	24	219	226.7	219
Herpes simplex virus type 2		31	3	91	36	2	54	21	238	248.2	238
Herpes simplex not typed / pending	5	14			2		4	5	30	35.0	30
Cytomegalovirus	3	13	1	37	1	5	9	12	81	81.7	81
Varicella-zoster virus		3		11	6		12	2	34	54.0	34
Epstein-Barr virus		14	1		25	1	9	9	59	93.2	59

Table 7. Virology and serology laboratory reports by State or Territory[1] for the reporting period 30 November to 27 December 1995 historical data[2], and total reports for the year, continued

	State or Territory [1]								Total this fortnight	Historical data[2]	Total reported this year
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
OTHER DNA VIRUSES											
Papovavirus group							1		1	.3	1
Parvovirus		1			2		1		4	6.0	4
PICORNA VIRUS FAMILY											
Coxsackievirus A9		2							2	1.5	2
Coxsackievirus B5							1		1	1.2	1
Echovirus type 9	1	3							4	.3	4
Echovirus type 14		3							3	.3	3
Echovirus type 18							1		1	.0	1
Echovirus type 22		1							1	.3	1
Poliovirus type 2 (uncharacterised)		3							3	.5	3
Poliovirus type 3 (uncharacterised)				1					1	.5	1
Rhinovirus (all types)	1	8		27	4		23		63	57.0	63
Enterovirus type 71 (BCR)							1		1	.0	1
Enterovirus not typed / pending				53			6		59	65.7	59
ORTHO / PARAMYXOVIRUSES											
Influenza A virus		1			6		2		9	29.0	9
Influenza B virus				3	9			1	13	16.3	13
Parainfluenza virus type 1				1					1	4.2	1
Parainfluenza virus type 2								3	3	1.2	3
Parainfluenza virus type 3		10		76	12		7	6	111	30.8	111
Parainfluenza virus typing pending							1		1	1.2	1
Respiratory syncytial virus		4		34	79		1	3	121	30.7	121
OTHER RNA VIRUSES											
HIV-1						1			1	3.7	1
Rotavirus		6			96	1	4	9	116	66.8	116
Norwalk agent						3	2		5	1.0	5
Small virus (like) particle							1		1	1.3	1
OTHER											
Chlamydia trachomatis	5	9	10	17	10	1	3	10	65	125.8	65
Chlamydia psittaci							14		14	6.7	14
Chlamydia species		6							6	.5	6
Mycoplasma pneumoniae		7		2			3	5	17	50.7	17
Coxiella burnetii (Q fever)		7							7	32.3	7
Rickettsia australis					1		1		2	.0	2
Rickettsia tsutsugamushi			1						1	.0	1
Rickettsia - Spotted fever group			1				1		2	.0	2
Bordetella pertussis							4		4	30.8	4
Cryptococcus species		1							1	2.2	1
Treponema pallidum		3					1		4	23.2	4
Entamoeba histolytica							2		2	.5	2
Toxoplasma gondii		1							1	2.2	1
Schistosoma species							6		6	.3	6
TOTAL	18	243	28	552	407	28	274	153	1,703	2,260.0	1,703

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 8. Virology and serology laboratory reports by clinical information for the reporting period 30 November to 27 December 1995

	Encephalitis	Meningitis	Other CNS	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
MEASLES, MUMPS, RUBELLA												
Measles virus							1				1	2
Mumps virus											1	1
Rubella virus							2				28	30
HEPATITIS VIRUSES												
Hepatitis A virus						4					6	10
Hepatitis B virus						21					51	72
Hepatitis C virus						50					64	114
Hepatitis D virus						1						1
ARBOVIRUSES												
Ross River virus											3	3
Barmah Forest virus											3	3
Flavivirus (unspecified)											4	4
ADENOVIRUSES												
Adenovirus type 1				2							1	3
Adenovirus type 2				2								2
Adenovirus type 3				2				1				3
Adenovirus type 7				1								1
Adenovirus type 19								1				1
Adenovirus not typed / pending				82	22		3	12			14	133
HERPES VIRUSES												
Herpes simplex virus type 1				18			131	10		27	33	219
Herpes simplex virus type 2				6			98	1		104	29	238
Herpes simplex not typed / pending	1	1		1			5			3	19	30
Cytomegalovirus				36			1	1			43	81
Varicella-zoster virus							31				3	34
Epstein-Barr virus	1			12							46	59
OTHER DNA VIRUSES												
Papovavirus group											1	1
Parvovirus							2		1		1	4
PICORNA VIRUS FAMILY												
Coxsackievirus A9			1								1	2
Coxsackievirus B5		1										1
Echovirus type 9											4	4
Echovirus type 14											3	3
Echovirus type 18							1					1
Echovirus type 22											1	1
Poliovirus type 2 (uncharacterised)					2						1	3
Poliovirus type 3 (uncharacterised)											1	1
Rhinovirus (all types)				50							13	63
Enterovirus type 71 (BCR)											1	1
Enterovirus not typed / pending	1	2	2	36	8		3				7	59

Table 8. Virology and serology laboratory reports by clinical information for the reporting period 30 November to 27 December 1995, continued

	Encephalitis	Meningitis	Other CNS	Respiratory	Gastrointestinal	Hepatic	Skin	Eye	Muscle/joint	Genital	Other/unknown	Total
ORTHO/PARAMYXOVIRUSES												
Influenza A virus				7							2	9
Influenza B virus				10							3	13
Parainfluenza virus type 1				1								1
Parainfluenza virus type 2				3								3
Parainfluenza virus type 3			1	104					1		5	111
Parainfluenza virus typing pending				1								1
Respiratory syncytial virus				118							3	121
OTHER RNA VIRUSES												
HIV-1				1								1
Rotavirus					115						1	116
Norwalk agent					5							5
Small virus (like) particle					1							1
OTHER												
Chlamydia trachomatis										53	12	65
Chlamydia psittaci				9							5	14
Chlamydia species											6	6
Mycoplasma pneumoniae		1		5			1				10	17
Coxiella burnetii (Q fever)											7	7
Rickettsia australis											2	2
Rickettsia tsutsugamushi											1	1
Rickettsia - Spotted fever group											2	2
Bordetella pertussis				4								4
Cryptococcus species											1	1
Treponema pallidum											4	4
Entamoeba histolytica											2	2
Toxoplasma gondii											1	1
Schistosoma species											6	6
TOTAL	3	5	4	511	153	76	279	26	2	187	457	1703

Table 9. Virology and serology laboratory reports by contributing laboratories for the reporting period 30 November to 27 December 1995

STATE OR TERRITORY	LABORATORY	REPORTS
Australian Capital Territory	Woden Valley Hospital, Canberra	15
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	157
	Royal Alexandra Hospital for Children, Westmead	21
	Royal North Shore Hospital, St Leonards	16
	Royal Prince Alfred Hospital, Camperdown	15
	South West Area Pathology Service, Liverpool	40
Queensland	State Health Laboratory, Brisbane	547
South Australia	Institute of Medical and Veterinary Science, Adelaide	406
Tasmania	Northern Tasmanian Pathology Service, Launceston	3
	Royal Hobart Hospital, Hobart	19
Victoria	Monash Medical Centre, Melbourne	23
	Royal Children's Hospital, Melbourne	52
	Unipath Laboratories	32
	Victorian Infectious Diseases Reference Laboratory, Fairfield Hospital	177
Western Australia	Princess Margaret Hospital, Perth	44
	Western Diagnostic Pathology	136
TOTAL		1703

NSW HEALTH DEPARTMENT

IMMUNISATION CERTIFICATE

for Primary School Enrolment

School copy

CHILD'S PERSONAL DETAILS

NAME: _____ DOB: _____
SURNAME GIVEN NAMES

ADDRESS: _____

_____ POST CODE: _____

SCHOOL: _____

SECTION A: COMPLETE IMMUNISATION

Please tick appropriate boxes indicating number of DOSES administered

	(DOSE)				
DIPHTHERIA	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
TETANUS	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
PERTUSSIS (Whooping Cough)	1 ☐	2 ☐	3 ☐	4 ☐	
POLIO	1 ☐	2 ☐	3 ☐		4 ☐
MEASLES or Measles/Mumps/Rubella	1 ☐				

COMPLETE ☐ *(Please tick OR if incomplete, go to section B)*

SECTION B: INCOMPLETE IMMUNISATION

Please tick the reason why the child has not been fully immunised.

Medical contraindication: ☐ Religious objection: ☐

Conscientious objection: ☐ Other: ☐

ISSUER'S DECLARATION

(Please tick appropriate box)

I certify that:

I have sighted all appropriate documentation to issue a Complete Certificate (Section A) ☐

OR I have issued an Incomplete Certificate and I have explained that, in the event of an outbreak of a vaccine preventable disease, the unimmunised child will be excluded from attending school for the duration of the outbreak. (Section B) ☐

DOCTOR/ISSUER'S NAME: _____

ADDRESS: _____

_____ TELEPHONE: _____

SIGNATURE & STAMP: _____

DATE: _____