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Communicable Diseases Intelligence

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Contents:

Editor Dr Robert Hall

OVERSEAS BRIEFS

1. CHOLERA IN ZAMBIA - UPDATE

As of 15 January 1991 the cholera epidemic in Ndola, Zambia's second largest city, had claimed over 90 lives and was unlikely to be contained in the near future because of machinery failures at the water treatment facilities.

2. YELLOW FEVER IN ECUADOR

As of 11 January 1991 the WHO reported four suspected cases of yellow fever, with 2 fatalities, in Zamora Chinchipe province of Ecuador. Travellers to the endemic zone of the country are strongly recommended to be vaccinated.

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SHORTAGE OF TETANUS IMMUNOGLOBULIN

(Notice from Dr R J Kimber, Chairman, National Blood Transfusion Committee, Australian Red Cross Society, 21 January 1991)

Tetanus Immunoglobulin 250 IU is prepared from plasma of Red Cross blood donors who have a suitable antibody titre. It is used for passive protection of individuals who have a tetanus-prone wound and who have either not been adequately immunised or whose status is uncertain.

There is likely to be a temporary shortage of this product in the next two months. If this occurs practitioners are advised that 5 ml of IM Normal Immunoglobulin would contain the equivalent of 250 IU of Tetanus Immunoglobulin.

Use of Tetanus Immunoglobulin in the Australian community is high in comparison with other countries, e.g. New Zealand and Switzerland. This may be due to a lower incidence of tetanus vaccination in the Australian community or an inability of practitioners to establish a vaccination history in individuals.

The NH&MRC has approved the following guidelines for use of Tetanus Immunoglobulin and these will appear in the fourth edition of Immunisation Procedures.

Table 1. Tetanus Prophylaxis-Guide to Tetanus Prophylaxis in wound management

History of active tetanus immunisation	Clean, Minor Wounds		All Other Wounds	
	tetanus toxoid[a]	tetanus immune globulin	tetanus toxoid[a]	tetanus immune globulin
Uncertain, or less than 3 doses	Yes	No	Yes	Yes
3 Doses or more	No[b]	No	No[c]	No

a Adult or child 8 years and over - use tetanus toxoid or ADT. Child 7 years or less use tetanus toxoid or CDT or DPT (if due, on routine immunisation schedule).

b Yes, if more than 10 years since last dose.

c Yes, if more than 5 years since last dose.

AUSTRALIAN HIV SURVEILLANCE REPORT: 28 DECEMBER 1990

The National Centre in HIV Epidemiology and Clinical Research reports that as at 30 November 1990 a total of 14,417 diagnoses of HIV infection and 2,347 cases of AIDS had been reported in Australia.

For the most recent reporting period, 3 November to 30 November 1990 (weeks 45-48), 16 new cases of AIDS and 43 new diagnoses of HIV infection were reported.

The following tables provide more detailed information on a State/Territory basis.

Table 1. New diagnoses of AIDS and deaths from AIDS occurring in the period 3-30 November (weeks 45-48) 1990, by sex and State/Territory in which diagnosis was made.

STATE/ TER-RITORY	CASES			DEATHS		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
ACT	1	0	1	0	0	0
NSW	11	0	11	9	0	9
NT	0	0	0	0	0	0
QLD	0	0	0	0	0	0
SA	0	0	0	0	0	0
TAS	0	0	0	0	0	0
VIC	3	0	3	3	0	3
WA	1	0	1	0	0	0
TOTAL	16	0	16	12	0	12

Table 2. Cumulative cases of AIDS and deaths from AIDS by sex and State/Territory in which diagnosis was made, to 30 November 1990.

STATE/ TER-RITORY	CASES			DEATHS		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
ACT	31	1	32	20	0	20
NSW	1449	43	1492	890	28	918
NT	5	0	5	2	0	2
QLD	166	7	173	101	5	106
SA	75	3	78	38	1	39
TAS	12	1	13	5	1	6
VIC	436	10	446	249	5	254
WA	101	7	108	58	3	61
TOTAL	2275	72	2347	1363	43	1406

Table 3. New diagnoses of HIV infection, period 3-30 November (weeks 45-48) 1990, and cumulative since the introduction of HIV antibody testing to 30 November 1990, by sex and State/Territory.

STATE/ TER-RITORY	WEEKS 45 - 48 1990[1]			CUMULATIVE TO 30 NOVEMBER 1990			
	MALE	FEMALE	TOTAL	MALE	FEMALE	SEX UN-KNOWN	TOTAL
ACT	0	0	0	13	0	97	110
NSW[2]	-	-	-	5262	293	4245	9800
NT	-	-	-	54	4	0	58
QLD	16	0	16	939	36	0	975
SA[3]	-	-	-	333	27	0	360
TAS	0	0	0	49	3	0	52
VIC	24	2	26	2415	72	0	2487
WA	1	0	1	544	31	0	575
TOTAL	41	2	43	9609	466	4342	14417

1. Dashes indicate counts unavailable. 2. Estimates from NSW Dept of Health, 10 December 1990. 3. Cumulative counts to 18 May 1990.

GONOCOCCAL SURVEILLANCE - AUSTRALIA, 1 JULY - 30 SEPTEMBER 1990

(Contributed by the Australian Gonococcal Surveillance Programme - AGSP Co-ordinator Dr J W Tapsall, The Prince of Wales Hospital, Sydney, NSW, 2031)

This report provides details of the sensitivity to penicillin of 414 strains of *Neisseria gonorrhoeae* examined by participating laboratories throughout Australia in the September quarter. The number of strains examined in this quarter represents a decrease of approximately 15% in the number of strains examined from the same sources in the corresponding quarter in 1989, thereby continuing a trend towards a reduction in the overall numbers of cases of gonorrhoea. The number of strains examined in this quarter is virtually identical with that recorded in the June 1990 quarter. Increased numbers of strains are usually isolated in the warmer months.

Strains isolated in Sydney, Melbourne and Brisbane are categorised as "less sensitive", "fully sensitive" or else as penicillinase producing gonococci in the accompanying Table 1.. As was noted in the report for the June 1990 quarter (CDI 90/25), the number of isolates in some centres is now too low to express them as percentages. An interesting change in this quarter has been in the number of strains classed as relatively resistant to penicillin by virtue of chromosomally, as opposed to plasmid mediated, mechanisms. The number of strains in this category (MIC 1.0 mg/L) increased from 10 in the June quarter to 41 in the current period. These strains had been increasing in number until the June quarter and they now appear to be prominent again in Sydney, Melbourne and Adelaide and in all three centres outnumber the PPNG isolated over the same period. One such strain was also isolated in Brisbane but none were seen in other centres.

The total number of PPNG in this quarter was 47, representing a marked reduction over the 85 cases recorded in Australia for the corresponding period in 1989. For the first time in a considerable period, imported cases of PPNG (24) outnumbered locally acquired cases (11). Even in Sydney the imported cases were more frequently encountered than endemically acquired infections, (in 12 cases, the source of the infection was not obtained).

Table 1. Penicillin sensitivity of isolates of *N. gonorrhoeae* 1 July - 30 September 1990

Sensitive: MIC = 0.004 - 0.016 mg/L

PPNG = penicillinase producing *N. gonorrhoea*

centre	PERCENTAGE OF ISOLATES					
	sensitive[1]		Less Sensitive[2]		PPNG	
Brisbane	11	(12)	57	(65)	13	(7.2)
Sydney	3.6	(1.2)	46	(41.4)	19	(34.5)
Melbourne	7.1	(5)	57.1	(64)	12	(16)

Less Sensitive: MIC = 0.06 - 0.25 mg/L

Figures in parenthesis represent data from the same period in 1989.

INCREASE OF NEISSERIA GONORRHOEAE ISOLATES WITH COMBINED PLASMID-MEDIATED RESISTANCE TO TETRACYCLINE (TRNG) AND PENICILLIN (PPNG)

(Adapted from CDWR Vol 16(43), October 1990 and Infectious Diseases Alert Vol 10 (2), October 15 1990)

Antimicrobial resistance in *Neisseria gonorrhoeae* may be controlled by genes on either plasmid or chromosome[1]. The types of resistance mechanisms identified so far include plasmid- mediated penicillin resistance (PPNG), high level plasmid-mediated tetracycline resistance (TRNG) and chromosomally mediated resistance occurring through a variety of genetic mutations and producing variable degrees of resistance to a broad spectrum of antimicrobial agents.

Isolates of *N. gonorrhoeae* resistant to tetracycline (MIC 16 ug/ml) were first reported in the US in 1985[2]. The high levels of resistance to tetracycline in the isolates was found to be due to the presence of a 25.2 megadalton (Mda) conjugative plasmid thought to be derived from a 24.5 Mda gonococcal transfer plasmid by insertion of the TetM determinant.

TRNG are presumptively identified by MIC and/or disk diffusion susceptibility tests at the local laboratory level and may be further characterised at reference laboratories using antimicrobial susceptibility testing, auxotyping, reactivity with *N. gonorhoeae* specific monoclonal antibodies, serovardetermination and plasmid analysis[3]. The presence of the 25.2 Mda plasmid can be confirmed by hybridization studies.

Since the isolation of TRNG in the US, similiar strains have been identified in Canada, the United Kingdom[4], the Netherlands[5], France[6], Spain[7] and parts of Africa[8].

The emergence of TRNG is of importance for two reasons:

- the high level of resistance to tetracycline and;
- it has been shown experimentally that the 25.2 Mda plasmid can transfer both itself and B. lactamase plasmids to Neisseria and related species[9].

Statistics from Canada have shown that TRNG isolates accounted for 0.24% of cases of gonorrhoea in 1988 and this rose to 0.38% in 1989. Table 1. shows the distribution of TRNG in the Provinces of Canada from 1986 to 1989. The number of TRNG isolates which were also penicillinase producing (PP/TRNG) increased from 20% during the period from 1986-1988 to 66.7% in 1989. Figure 1. shows the numbers of TRNG isolates and PP/TRNG reported in Canada from 1986 to 1989. The number of TRNG isolates are probably under-reported in Canada as not all laboratories screen all isolates of *N.gonorrhoeae* for resistance to both penicillin and tetracycline. This is a problem in other countries as well.

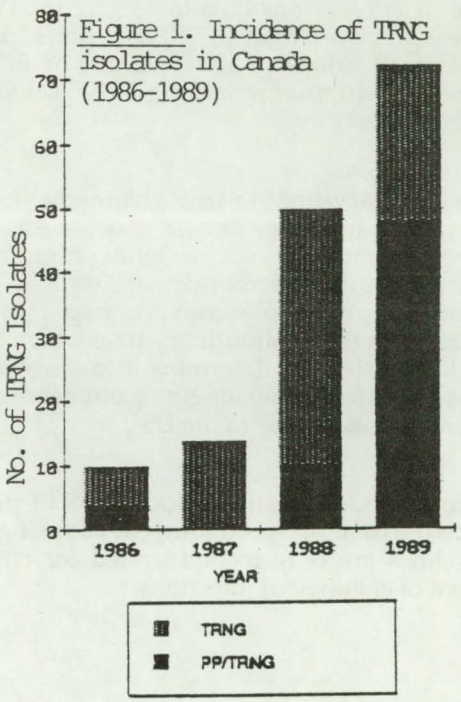

Figure 1. Incidence of TRNG isolates in Canada (1986–1989)

Table 1. TRNG tested by LCDC (1986-1989)

Number[a] Isolated in Province							
Date	British Columia	Alberta	Saskat-chewan	Ontario	Quebec	Nova Scotia	Total
1986	2 (0)	4 (4)					6 (4)
1987		1 (0)		13 (0)			14 (0)
1988	12 (0)		1 (1)	30 (4)	6 (4)	1 (1)	50 (10)
1989	5 (0)	1 (1)		62 (43)	4 (4)		72 (48)
Total	19 (0)	6 (5)	1 (1)	105 (47)	10 (8)	1 (1)	142 (62)

The most common test to screen for susceptibility to tetracycline is the disk diffusion assay[10] in which a zone size of 20 mm when using a 30ug tetracycline disk, is presumptive of plasmid mediated tetracycline resistance (MIC correlate 16ug/ml).

Table 2. gives the number of cases of PPNG and TRNG reported in the US for 1988-89[9]. There was a statistically significant increase in PPNG from 3.2% in 1988 to 7.4% in 1989 of total *N. gonorrhoeae* isolates and a smaller increase in TRNG from 4.0% to 4.9% of total isolates. There was an increase in PP/TRNG isolates from 0.3% to 0.9% of all isolates. This increase of PP/TRNG isolates will further challenge the selection of gonorrhoea therapies.

The use of tetracyclines to treat chlamydial infections and pelvic inflammatory disease may have assisted in the development of TRNG[1], as tetracycline can select for tetM containing microorganisms such as group B streptococci, mycoplasmas, ureaplasmas and gardnerellas in the genitourinary tract which have the ability to transfer the determinant to *N. gonorrhoeae*. Tetracyclines are thus no longer recommended for the treatment of gonorrhoea in the US[9].

The recommended treatment for TRNG at present is either ceftriaxone or spectinomycin as a single dose. Tetracyclines are only recommended for concurrent treatment of chlamydial infections.

CDI Editorial Comment

Dr John Tapsall from the Gonococcal Surveillance Programme has confirmed that there have been no reports of indigenous TRNG in Australia. However, 2 imported cases of TRNG have been reported, both acquired in Indonesia and an introduced case being a contact of one of these imported cases. These strains were identified as TRNG by exhibiting reduced zones at inhibition (2mm annular radius) on the disk diffusion assay using a 30ug tetracycline disk. One strain was also a lactamase producer (PP/TRNG).

The reports above from the US and Canada showing the rapid spread of TRNG once it has become established in a country should increase the awareness of Australian laboratories and encourage them to screen their *N. gonorrhoeae* isolates, particularly PPNG for resistance to tetracyclines. The reference laboratories in each State or Territory which are members of the Australian Gonococcal Surveillance Programme would be pleased to receive any isolates of *N. gonorrhoeae* that have a reduced zone of inhibition to tetracycline and would carry out further testing on these isolates.

Table 2. Incidence of PPNG and TRNG isolates in the US for 1988 and 1989

	No. of isolates		
	1988	1989	Total
Total *N. gonorrhoeae*	4620	4689	9309
PPNG	149	346	495
TRNG	184	229	413
PP/TRNG	15	41	66

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MUMPS - WHY VACCINATE?

(Based on CDNZ 90/10, October 1990)

Introduction

Many people regard mumps as a minor illness which is a normal part of childhood and not important enough to be worth preventing in young children. However, it can have devastating effects, fortunately in only a small proportion of cases.

Mumps is generally a mild illness in children causing fever, headache and inflammation of the salivary (parotid) glands, which causes the cheeks to swell. however, it can be substantial in terms of pain and suffering to the individual, missed days from school and in loss of working days for parents having to care for their children at home.

Mumps potentially involves many organs other than the parotid glands. Most common are the testes and central nervous system but also the pancreas, liver and kidneys can be affected. Although long term complications are unusual, serious sequelae such as diabetes, arthritis and deafness are possible[1]. Mumps is the major cause of unilateral deafness in New Zealand and it is the commonest form of aseptic meningitis in children.

Complications

The most common serious manifestation of mumps is orchitis which has been reported to occur in 20% to 30% of postpubertal males who contract mumps. It can reduce fertility though sterility due to mumps orchitis is rare[2].

Central nervous system involvement is common in clinically uncomplicated mumps disease. Patients with clinical evidence of CNS infection usually have aseptic meningitis. Much less common is mumps meningoencephalitis which may be associated with such permanent sequelae as paralysis, cranial nerve palsies and possibly hydrocephalus[2].

Sensorineural deafness occurs as a complication of mumps independent of meningeal involvement. The resulting deafness can be unilateral or bilateral and may be permanent. It is likely that the incidence of less profound hearing loss is much greater than the incidence of deafness but this often goes unrecognised[2].

New Zealand's Situation

Data on mumps are not routinely collected in New Zealand. Hospital discharge data for the years 1980 to 1987 provides us with a picture of trends in the incidence of the disease. Mumps cases peaked in 1982 with 234 admissions and in 1985 and 1986, with 163 and 146 admissions respectively (Figure 1). The number of admissions in intervening years generally ranged from 20 to 28, with 90 in 1981 - leading up to the outbreak of 1982. A very small proportion of people with mumps required hospitalisation so these figures are not a reliable indication of the total number of people with mumps but may only provide evidence into crude trends.

The Vaccine

Rigorous testing has been done on the measles, mumps and rubella (MMR) vaccine to ensure its safety and effectiveness. The mumps component of MMR consists of an attenuated live virus capable of inducing a strong immune response without causing clinically apparent illness in most cases.

Mumps vaccine can cause mild parotitis in some children (about 1%) and their may be a chance of one in 100,000 of mumps vaccine meningitis[3]. This infection is only mild and recovery is usual after a few days. The risk of contracting meningitis from wild mumps virus is 15%, so this figure compares very favourably.

Is Eradication Possible?

In the United States the epidemiology of this disease is changing and outbreaks involving adolescents and young adults are occurring more frequently[4,5]. People who suffer from mumps in these older age groups are more susceptible to the serious complications of the disease. The reason for the shift in peak incidence rates in the US has been attributed to failure to vaccinate rather than vaccination failure[1].

In line with the World Health Organisation goal of immunisation for all by the year 2000, New Zealand can potentially eradicate measles, mumps and rubella. These diseases are preventable but eradication is only likely with 90% to 95% vaccination coverage. A lower level of coverage could lead to a greater percentage of total mumps infections occurring in the older age groups[6].

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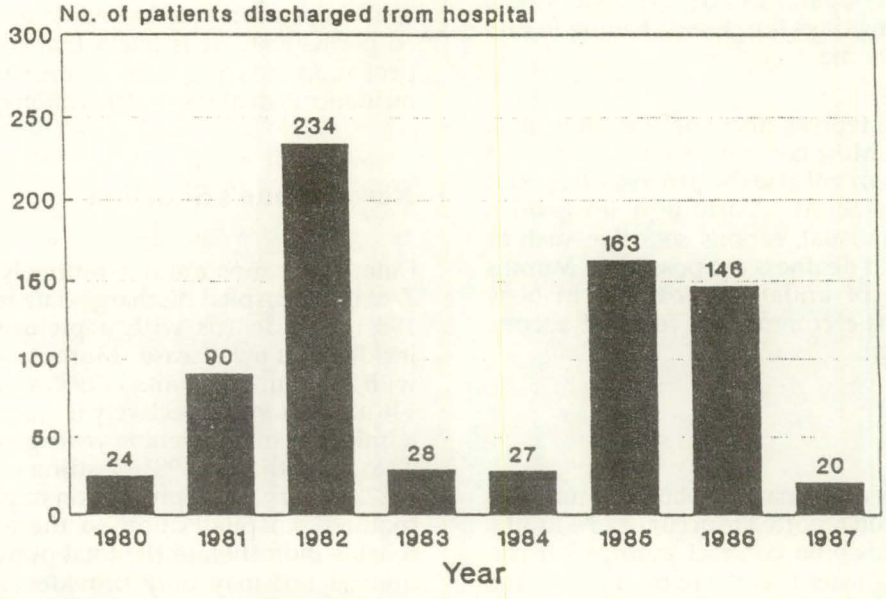
Figure 1. Hospital Discharge Data for Mumps



PUBLIC HEALTH BURDEN OF VACCINE-PREVENTABLE DISEASES AMONG ADULTS: STANDARDS FOR ADULT IMMUNISATION PRACTICE

(Based on MMWR 1990; 39(41) 725-29)

Immunisation programs in the United States have markedly reduced the occurrence of vaccine-preventable diseases in children; however, adults who were not infected or immunised during childhood may be at increased risk for these diseases and their complications[1]. Adults may also be at increased risk for vaccine-preventable diseases because of advancing age, occupation, lifestyle, or development of certain chronic diseases. Some vaccine-preventable diseases (e.g. hepatitis B) primarily affect persons ⩾20 years of age (Table 1.); for these diseases, most targeted risk groups for immunisation are adults[2]. Of the 19 national health objectives for the year 2000 that target infectious diseases, 10 are related to adult immunisation[3]. This report describes the public health impact of influenza, pneumococcal disease, hepatitis B, and measles on U.S. adults.

Influenza and Pneumococcal Disease

Influenza. The impact of influenza is greatest in persons 65 years of age. A typical influenza epidemic can cause ⩾20,000 excess deaths, 80%-90% of which occur among persons aged 65 years. From January through March 1990, a major influenza epidemic was associated with a high proportion of pneumonia and influenza (P&I) deaths. Influenza A(H3N2), the predominant circulating subtype, accounted for 98% of the isolates reported to CDC. During the 1989-90 season, the proportion of all P&I deaths reported from 121 cities reporting regularly to CDC reached its highest level in 5 years. Persons ⩾65 years of age accounted for approximately 80% of P&I-related deaths during the epidemic.

Pneumococcal Disease. Disease caused by *Streptococcus pneumoniae* (pneumococcus) remains a problem in the very young, the elderly, and persons with certain high-risk conditions[4]. Pneumococcal pneumonia accounts for 10%-25% of all pneumonia and an estimated 40,000 deaths annually[1,4]. The estimated annual rate for pneumococcal bacteremia in 1984 was 15-19 per 100,000 population and in 1986-87 was 50 per 100,000 persons ⩾65 years of age, representing twofold to threefold increases over previously documented rates[5,6]. In 1986 and 1987, the case-fatality rate for bacteremic patients was 18% in Charleston County, South Carolina; 91% of persons aged 19-64 years with bacteremia had underlying medical conditions for which pneumococcal vaccine is recommended[6].

The year 2000 health objectives include reduction of epidemic-related P&I deaths and provision of influenza and pneumococcal vaccines to at least 60% of high-risk populations.

Hepatitis B

In 1989, 23,426 acute hepatitis B cases were reported in the United States. However, each year hepatitis B virus (HBV) infection occurs in an estimated 300,000 persons, primarily young adults, of whom 6%-10% become chronic HBV carriers. In addition, approximately 4000 persons die from HBV-related cirrhosis and 800, from HBV-related liver cancer[2]. Surveillance data suggest a recent decrease in the incidence of HBV infections among homosexual men[7]. From 1981 through 1988, however, hepatitis B cases in heterosexuals and intravenous (IV)-drug users increased by 76.9% and 77.1% respectively[7].

HBV infection is an occupational hazard for health-care workers, in whom an estimated 6000-8000 new HBV infections occur annually. Because the risk for HBV infection for health-care workers may be highest during training, immunisation should be completed during training in medical, dental and other health profession schools before the first occupational exposure to blood. In 1988, of 115 medical schools in the United States and Canada, 22(19%) required HBV immunisation at any time during medical school; 33(29%) of schools did not offer HBV immunisation to students[8].

The year 2000 health objectives include increasing hepatitis B immunisation levels to at least 90% of those at occupational risk for infection and at least 50% of those who use IV drugs.

Measles

In 1989, 18,193 measles cases were reported in the United States, the highest number reported since 1978. Of these, 3104 (17%) occurred among adults ⩾20 years of age. From 1980 through 1989, 6% of all reported measles cases were transmitted in college settings. Of all persons who acquired measles in college settings from 1986 through 1989, 49% had no evidence of measles vaccination. In 1989, 41 measles-associated deaths were reported: 10 deaths occurred among persons aged 19-35 years and nine of these persons had never been vaccinated. The year 2000 objectives target complete elimination of indigenous measles.

MMWR Editorial Note: Despite the continuing occurrence of vaccine-preventable diseases among adults in the United States, safe and effective vaccines recommended for adults[2,4,9,10] are not optimally used[1]. For example, influenza vaccine is approximately 75% effective in reducing deaths in high-risk elderly persons[1]; however, based on the 1985 United States Immunisation Survey (USIS), only 20% of high-risk persons had received influenza vaccine in 1984. Moreover, CDC's Behavioral Risk Factor Surveillance

System determined that the mean influenza vaccine coverage rate in 1987 was 32% among adults ≥65 years of age in the 31 participating states and the District of Columbia.

Pneumococcal vaccine is 60% effective in preventing invasive pneumococcal infections[4]. Immunisation against pneumococcal disease is recommended for persons aged ≥65 years and for persons with underlying conditions, including many persons for whom influenza vaccine is recommended[4]. Despite these recommendations, the 1985 USIS indicated that only 10% of high-risk persons had been immunised with pneumococcal vaccine.

For the current hepatitis B immunisation strategy to succeed, high-risk populations and their health-care providers must recognise the role of heterosexual activity in the transmission of HBV[7]. Moreover, IV-drug users and all sexually active adults with multiple sex partners should be immunised to prevent infection with HBV. Universal immunisation of infants and/or adolescents represents the optimal strategy to prevent hepatitis B in all groups.

Recent declines in the incidence of HBV infections among health-care workers are probably due to both increased use of the hepatitis B vaccine in this population and increased adherence to universal precautions in the workplace. However, hepatitis B in health-care workers could be further reduced if medical, dental and allied schools of health required all students to be immunised before they have contact with patients[2]. Regulations proposed by the Occupational Safety and Health Administration may mandate availability of hepatitis B vaccine to all at-risk health-care personnel at the employer's expense. These regulations may accelerate and broaden the use of hepatitis B vaccine in health-care workers and assure maximal efforts to prevent occupationally acquired infection in the 1990s[11].

To prevent measles outbreaks and ensure high levels of immunity among young adults on college and university campuses, the American College Health Association has recommended that colleges and universities implement a Prematriculation Immunisation Requirement (PIR). PIRs require that students present evidence of immunity to measles and other vaccine-preventable diseases as a condition for matriculation[12]. As of March 1990, 22 states, the District of Columbia, and Puerto Rico have implemented PIR laws or policies for colleges and universities. However, of the five states in which large college outbreaks occurred in 1989, only one had a PIR in place. In addition, the Immunisation Practices Advisory Committee (ACIP) now recommends a routine two-dose measles vaccination schedule. Colleges, technical schools and other institutions for post-high school education should require that, at the time of school entry, students provide documentation of two doses of live measles-containing vaccines or other evidence of measles immunity (i.e., documentation of prior physician-diagnosed measles disease or laboratory evidence of measles immunity)[10]. State and college PIRs can be used to enhance implementation of the ACIP recommendations and limit outbreaks in college settings.

In 1988, the National Coalition for Adult Immunisation (NCAI) was formed to enhance efforts to immunise adults. The NCAI is a network of private, professional and volunteer organisations and public health agencies. The goal of the NCAI is to reduce vaccine-preventable disease and death among adults in the United States by increasing the awareness of physicians, other health-care providers and the general public about the need for and benefits of immunisation. The NCAI supports the use of influenza, pneumococcal, hepatitis B, measles, mumps and rubella vaccines and tetanus and diphtheria toxoids in adults.

To unify the diverse interests of the member organisations and offer a foundation of common goals among health-care providers, policy makers and consumer interest groups, the NCAI has developed and adopted the "Standards for Adult Immunisation Practice" (Table 2). The standards outline basic strategies that, if fully implemented, could markedly improve delivery of vaccines to adults and help achieve year 2000 national health objectives. Sustained collaborative efforts of the public and private sectors of health care are needed to decrease the public health impact of vaccine-preventable diseases.

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12. American College Health Association. Position statement on immunisation policy. *J Am Coll Health* 1983;32:7-8.

Table 1. Number and percentage of selected vaccine-preventable diseases* reported in persons 20 years of age - United States, 1985-1989

Disease	Total Cases	CASES IN ADULTS	
		No.	(%)
Diphtheria	11	7	(63.6)
Hepatitis B	125,237	109,422	(87.4)
Measles	34,348	5,128	(14.9)
Mumps	34,198	3,632	(10.6)
Rubella	2,108	954	(45.3)
Tetanus	301	278	(92.4)

*influenza and pneumococcal disease are not included in the national system of notifiable disease reporting.

Table 2. National Coalition for Adult Immunisation (NCAI)* standards for adult immunisation practice, 1990

The NCAI

1. Encourages the promotion of appropriate vaccine use though information campaigns for health-care practitioners and trainees, employers and the public about the benefits of immunisations; and

2. Encourages physicians and other health-care personnel (in practice and in training) to protect themselves and prevent transmission to patients by assuring that they themselves are completely immunised; and

3. Recommends that all health providers routinely determine the immunisation status of their adult patients, offer vaccines to those for whom they are indicated and maintain complete immunisation records; and

4. Recommends that all health-care providers identify high-risk patients in need of influenza vaccine anddevelop a system to recall them for annual immunisation each autumn; and

5. Recommends that all health-care providers and institutions identify high-risk adult patients in hospitals and other treatment centres and assure that appropriate vaccination is considered either prior to discharge or as part of discharge planning; and

6. Recommends that all licensing/accrediting agencies support the development by health-care institutions of comprehensive immunisation programs for staff, trainees, volunteer workers, inpatients and outpatients; and

7. Encourages states to establish pre-enrollment immunisation requirements for colleges and other institutions of higher education; and

8. Recommends that institutions that train health-care professionals, deliver health-care, or provide laboratory or other medical support services require appropriate immunisations for persons at risk of contracting or transmitting vaccine-preventable illnesses; and

9. Encourages health-care benefit programs, third-party payers and governmental health-care programs to provide coverage for adult immunisation services; and

10. Encourages the adoption of a standard personal and institutional immunisation record as a means of verifying the immunisation status of patients and staff.

CDI Notice to Readers - correction

The move to desktop publishing has not been without casualty. A number of lines of text in the first article of CDI 15/1 (Chemoprophylaxis of Haemophilus influenzae type B infection) failed to appear in the final copy. The missing lines should have appeared in the right-hand column of page 2 in section i). The full section reads:

i) Household contacts: the risk to family contacts of an index case is greatest for children under 2 years of age (2-5% will develop Hib within 30 days, up to 1000 times the population rate) and negligible over 4 years of age[1].

CDI REPORTING SCHEME

VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTS

There were 1283 reports processed for the period (2 January to 15 January 1991)

Q fever was reported on 10 occasions (1 female, 9 males). Ages ranged from 10 to 60 years and exposure details were provided for only one patient - a 38 year old veterinarian presenting with severe prolonged fever and liver damage.

Adenovirus type 11 was isolated from a 19 year old male who presented with acute pericarditis preceede by viral symptoms.

Epstein-Barr virus was reported in a 36 year old male with hepatic failure. Acute Bells palsy was associated with the detection of Epstein-Barr virus in a 2 year old female.

Cytomegalovirus was isolated from a 1 month old male with a lung abscess, and from the brain, heart and lung tissues of a 4 month old male whose cause of death was to be further investigated.

Chlamydia trachomatis was isolated from a 9 day old female presenting with periorbital cellulitis.

NON-VIRAL PATHOGEN REPORTS

Seven (8) positive blood culture reports have been received since CDI Vol 15/1 (all reports were from Toowoomba Base Hospital Pathology Laboratory). The following organisms were isolated:

.*Candida albicans* from a 54 year old female with a history of PUO.

- *Escherichia coli* in 2 male patients aged 58 and 66 years.
- Methicillin resistant *Staphylococcus aureus* (MRSA) from an 80 year old male. There has been an emergence of MRSA at Toowoomba base hospital in the last month following the transfer of patients from Brisbane Hospital.
- *Proteus mirabilis* from a 77 year old female with renal failure.
- *Staphylococcus aureus* from a 90 year old male.
- *Streptococcus pneumoniae* from a 3 year old female with febrile conclusions.

Further interesting reports include:-

- One case of meningitis from Toowoomba Base Hospital Pathology Laboratory in a 7 day old female with clinical signs of meningitis including a bulging fontanelle. *Haemophilus parainfluenzae* was identified in the CSF.
- *Eikenella corrodens* in the pus from a thumb infection in a male in the 45-64 year age group.
- Vincents angina (mixed fusiform and spirochaetal anaerobes), 6 reports have been received, 2 patients were in the 5-14 year age group, 3 in the 15-24 year age group and one patient aged 39 years.
- Eight (8) further cases of whooping cough were reported from Queensland (7 from Dr Lynch's Rockhampton Pathology and one from Toowoomba Base Hospital Pathology Laboratory) this included a 31 year old female staff member of the renal unit ward. The age groups of the remaining patients were:

  – four (4) in the 5-14 year age group

  – one 17 year old female

- one 47 year old female and

- one 65 year old female.

The whooping cough epidemic seems to have continued through this summer, particularly in Queensland. Data on whooping cough cases from other States/Territories would be appreciated so that an overall picture can be examined.

Gastrointestinal Tract Infections

Sixty-nine (69) reports have been received for the period 22/11/90 to 1/01/91. Further details of isolates obtained are shown in the Table below.

AGE	Aeromonas Species	Campylobacter Species (C.jejuni)	Cryptosporidium species	Escherichia coli	Giardia lamblia	Salmonella species[a]	Shigella sonnei	Yersinia enterocolitic[a]
1-12 months		1 (1)		2	1	2		
1-4 years	7	2 (1)	4	1	3	3		2
5-14 years	1	3 (1)	1	2	1	3	2[b]	2
15-24 years					1	5		
25-44 years	1	3 (1)		3	3	1		
45-64 years					1	2		
65-74 years						2		
75+ years	1				1			
Not stated		2	1					
Total	10	11 (4)	6	8	11	18	2	4[c]

Notes:

a This includes three S.Birkenhead, seven S.Heidelberg, two S. Saint Paul and one each S.Infantis and S.Typhimurium.

b Siblings aged 10 and 12 years

c All were Y.enterocolitica biotype 4 serotype 3.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 2/01/91 TO 15/01/91

CODE 019 - FAIRFIELD HOSPITAL, MELBOURNE (VIC)
CODE 065 - STATE HEALTH LABORATORY SERVICES, PERTH (WA)
CODE 066 - PRINCESS MARGARET HOSPITAL, PERTH (WA)
CODE 111 - ROYAL CHIDLDRENS HOSPITAL, MELBOURNE (VIC)
CODE 112 - INSTITUTE OF CLINICAL PATHOLOGY & MEDICAL RESEARCH, WESTMEAD (NSW)
CODE 113 - PRINCE HENRY/PRINCE OF WALES HOSPITALS, SYDNEY (NSW)
CODE 114 - ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, CAMPERDOWN (NSW)
CODE 115 - STATE HEALTH LABORATORY, BRISBANE (QLD)
CODE 116 - WODEN VALLEY HOSPITAL, GARRAN (ACT)

		019	065	066	111	112	113	114	115	116	TOTAL
0100	ADENOVIRUS NOT TYPED	0	8	15	5	15	9	0	15	0	67
0101	ADENOVIRUS TYPE 1	1	0	0	0	2	0	0	0	0	3
0102	ADENOVIRUS TYPE 2	3	0	0	0	4	0	0	0	0	7
0103	ADENOVIRUS TYPE 3	2	0	0	0	3	0	0	0	0	5
0104	ADENOVIRUS TYPE 4	1	0	0	0	0	0	0	0	0	1
0105	ADENOVIRUS TYPE 5	1	0	0	0	0	0	0	0	0	1
0106	ADENOVIRUS TYPE 6	0	0	0	1	1	0	0	0	0	2
0108	ADENOVIRUS TYPE 8	3	0	0	0	1	0	0	0	0	4
0111	ADENOVIRUS TYPE 11	0	0	0	0	6	0	0	0	0	6
0112	ADENOVIRUS TYPE 12	0	0	0	0	3	0	0	0	0	3
0116	ADENOVIRUS TYPE 16	0	0	0	0	0	0	1	0	0	1
0128	ADENOVIRUS TYPE 28	1	0	0	0	0	0	0	0	0	1
0130	ADENOVIRUS TYPE 30	1	0	0	0	0	0	0	0	0	1
0146	ADENOVIRUS TYPE 46	1	0	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	3	0	0	4	0	0	7
0203	INFLUENZA B VIRUS	1	0	0	1	1	0	0	1	0	4
0301	PARAINFLUENZA VIRUS TYPE 1	0	0	0	0	1	0	0	0	0	1
0302	PARAINFLUENZA VIRUS TYPE 2	1	0	0	1	0	0	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	4	0	2	16	4	1	1	4	0	32
0399	PARAINFLUENZA VIRUS TYPING PEN	0	0	1	0	0	0	0	1	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	3	1	2	2	0	0	2	0	10
0500	RHINOVIRUS (ALL TYPES)	5	2	0	7	4	0	1	5	0	24
0600	MYCOPLASMA PNEUMONIAE	0	3	0	10	10	1	0	0	0	24
0700	ORNITHOSIS-PSITTACOSIS	0	0	0	0	0	1	0	0	0	1
0903	COXSACKIEVIRUS B3	0	0	0	0	3	0	0	0	0	3
0904	COXSACKIEVIRUS B4	2	0	0	0	1	0	1	0	0	4
0905	COXSACKIEVIRUS B5	0	0	0	0	2	0	0	0	0	2
1009	ECHOVIRUS TYPE 9	0	0	0	0	1	0	0	0	0	1
1014	ECHOVIRUS TYPE 14	0	0	0	0	1	0	1	0	0	2
1022	ECHOVIRUS TYPE 22	0	0	0	0	1	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	3	0	0	0	3
1101	POLIOVIRUS TYPE 1	0	0	0	0	1	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	0	0	3	0	2	0	0	5
1103	POLIOVIRUS TYPE 3	0	0	0	0	2	0	0	0	0	2
1200	MUMPS VIRUS	0	0	0	0	4	2	0	0	0	6
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	0	0	2	2	0	1	8	13
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	0	5	0	45	0	4	4	0	58
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	3	20	0	10	12	1	0	0	0	46
1303	VARICELLA-ZOSTER VIRUS	8	17	0	0	6	2	0	3	1	37
1306	HERPES SIMPLEX TYPE 1	39	58	0	1	10	5	0	74	0	187
1307	HERPES SIMPLEX TYPE 2	42	76	0	0	31	5	0	57	0	211
1399	HERPES VIRUS TYPING PENDING	0	0	0	4	0	0	0	0	0	4
1401	COXIELLA BURNETII	0	1	0	0	8	0	0	0	1	10
1502	PICORNIA VIRUS - NOT TYPED = E	0	10	1	0	1	2	0	16	0	30
1521	MEASLES VIRUS	3	2	0	6	3	1	0	0	0	15
1522	RUBELLA VIRUS	3	1	0	1	0	0	0	0	0	5
1532	HEPATITIS B ANTIGEN	0	26	0	0	49	10	1	24	0	110
1535	HEPATITIS A ANTIBODY	0	15	0	0	1	0	0	1	0	17
1536	HEPATITIS C VIRUS	0	8	0	0	0	0	0	0	0	8
1541	CHLAMYDIA A - C. TRACHOMATIS	0	45	3	0	24	1	0	14	5	92
1556	CMV - CYTOMEGALOVIRUS	27	4	9	5	15	3	0	34	0	97
1562	REOVIRUS (ALL TYPES)	0	0	0	0	11	0	0	0	0	11
1563	CORONAVIRUS	1	0	0	0	0	0	0	0	0	1
1564	ROTAVIRUS	0	0	6	11	18	0	1	0	0	36
1565	CALICI VIRUS	0	0	0	0	5	0	0	0	0	5
1566	NORWALK AGENT	0	0	0	0	0	1	0	0	0	1
1571	ENTEROVIRUS TYPE 71 (BCR)	1	0	0	0	0	0	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	15	0	20	1	0	0	36
9721	HTLV-1	0	1	0	0	0	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	2	0	0	0	0	2
9995	DENGUE NOT TYPED	0	0	0	0	1	0	0	0	0	1
TOTAL		154	300	43	99	328	70	18	256	15	1283

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES BY STATE OF CONTRIBUTING LABORATORY

PERIOD 2/01/91 TO 15/01/91

NSW: ICPMR; PHH/POW; RACH; ST GEORGE HOSP, KOGARAH; ROYAL NEWCASTLE HOSP.
VIC: FAIRFIELD; RCH; MDU, UNI MELB.
QLD: STATE LAB, BRIS; TOOWOOMBA PATH LAB; ROYAL BRIS HOSP; DR TB LYNCH, PATHOLOGIST, ROCKHAMPTON.
WA: STATE LAB, PERTH; PMH.
SA: IMVS.
TAS: ROYAL HOBART HOSP; DIAGNOSTIC SERVICES, LAUNCESTON; LAUNCESTON GEN HOSP; DIAGNOSTIC SERVICES, HOBART; HOBART PATH; MERSEY GEN HOSP, LATROBE.
ACT: WVH.

		NSW	VIC	QLD	WA	ACT	TOTAL
0100	ADENOVIRUS NOT TYPED	24	5	15	23	0	67
0101	ADENOVIRUS TYPE 1	2	1	0	0	0	3
0102	ADENOVIRUS TYPE 2	4	3	0	0	0	7
0103	ADENOVIRUS TYPE 3	3	2	0	0	0	5
0104	ADENOVIRUS TYPE 4	0	1	0	0	0	1
0105	ADENOVIRUS TYPE 5	0	1	0	0	0	1
0106	ADENOVIRUS TYPE 6	1	1	0	0	0	2
0108	ADENOVIRUS TYPE 8	1	3	0	0	0	4
0111	ADENOVIRUS TYPE 11	6	0	0	0	0	6
0112	ADENOVIRUS TYPE 12	3	0	0	0	0	3
0116	ADENOVIRUS TYPE 16	1	0	0	0	0	1
0128	ADENOVIRUS TYPE 28	0	1	0	0	0	1
0130	ADENOVIRUS TYPE 30	0	1	0	0	0	1
0146	ADENOVIRUS TYPE 46	0	1	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	4	3	0	0	0	7
0203	INFLUENZA B VIRUS	1	2	1	0	0	4
0301	PARAINFLUENZA VIRUS TYPE 1	1	0	0	0	0	1
0302	PARAINFLUENZA VIRUS TYPE 2	0	2	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	6	20	4	2	0	32
0399	PARAINFLUENZA VIRUS TYPING PEN	0	0	1	1	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	2	2	2	4	0	10
0500	RHINOVIRUS (ALL TYPES)	5	12	5	2	0	24
0809	COXSACKIEVIRUS A9	3	0	0	0	0	3
0902	COXSACKIEVIRUS B2	5	0	0	0	0	5
0903	COXSACKIEVIRUS B3	3	0	0	0	0	3
0904	COXSACKIEVIRUS B4	2	2	0	0	0	4
0905	COXSACKIEVIRUS B5	2	0	0	0	0	2
1009	ECHOVIRUS TYPE 9	1	0	0	0	0	1
1014	ECHOVIRUS TYPE 14	2	0	0	0	0	2
1022	ECHOVIRUS TYPE 22	1	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	3	0	0	0	0	3
1101	POLIOVIRUS TYPE 1	1	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	5	0	0	0	0	5
1103	POLIOVIRUS TYPE 3	2	0	0	0	0	2
1200	MUMPS VIRUS	6	0	0	0	0	6
1300	HERPES VIRUS GROUP - NOT TYPED	4	0	1	0	8	13
1301	HERPES SIMPLEX VIRUS - NOT TYP	49	0	4	5	0	58
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	13	13	0	20	0	46
1303	VARICELLA-ZOSTER VIRUS	8	8	3	17	1	37
1306	HERPES SIMPLEX TYPE 1	15	40	74	58	0	187
1307	HERPES SIMPLEX TYPE 2	36	42	57	76	0	211
1399	HERPES VIRUS TYPING PENDING	0	4	0	0	0	4
1401	COXIELLA BURNETII	8	0	0	1	1	10
1502	PICORNIA VIRUS - NOT TYPED = E	3	0	16	11	0	30
1521	MEASLES VIRUS	4	9	0	2	0	15
1522	RUBELLA VIRUS	0	4	0	1	0	5
1532	HEPATITIS B ANTIGEN	60	0	24	26	0	110
1535	HEPATITIS A ANTIBODY	1	0	1	15	0	17
1536	HEPATITIS C VIRUS	0	0	0	8	0	8
1541	CHLAMYDIA A - C. TRACHOMATIS	25	0	14	48	5	92
1556	CMV - CYTOMEGALOVIRUS	18	32	34	13	0	97
1562	REOVIRUS (ALL TYPES)	11	0	0	0	0	11
1563	CORONAVIRUS	0	1	0	0	0	1
1564	ROTAVIRUS	19	11	0	6	0	36
1565	CALICI VIRUS	5	0	0	0	0	5
1566	NORWALK AGENT	1	0	0	0	0	1
1571	ENTEROVIRUS TYPE 71 (BCR)	0	1	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	21	15	0	0	0	36
9721	HTLV-1	0	0	0	1	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	2	0	0	0	0	2
9995	DENGUE NOT TYPED	1	0	0	0	0	1
TOTAL		416	253	256	343	15	1283

NOTE: DIRECT COMPARISION BETWEEN STATES IS NOT POSSIBLE SINCE:
- SOME STATES HAVE MORE THAN ONE CONTRIBUTING LABORATORY; AND
- INTERSTATE REFERRRALS OCCUR REGULARLY.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1

PERIOD 2/01/91 TO 15/01/91

1. CODE 00, 99 ..... - NO ILL OR DATA
2. CODE 01, 02, 11, 12 - RESPIRATORY
3. CODE E3 ..... - ENCEPHALITIS
4. CODE M3 ..... - MENINGITIS
5. CODE 04 ..... - PARALYSIS
6. CODE 05, 13 ..... - CNS OTHER UNSPEC
7. CODE 07, 49 - GASTRO INTESTINAL
8. CODE 17, 47 - HEPATIC
9. CODE 19 ... - CVS
10. CODE 89 ... - URINARY TRACCT
11. CODE 06 ... - SKIN MUCOUS

		1	2	3	4	6	7	8	9	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	0	20	0	0	0	32	1	0	0	1	54
0101	ADENOVIRUS TYPE 1	1	2	0	0	0	0	0	0	0	0	3
0102	ADENOVIRUS TYPE 2	2	3	0	0	0	1	0	0	0	0	6
0103	ADENOVIRUS TYPE 3	0	2	0	0	0	1	0	0	0	0	3
0105	ADENOVIRUS TYPE 5	0	1	0	0	0	0	0	0	0	0	1
0106	ADENOVIRUS TYPE 6	0	0	0	0	0	1	0	0	0	0	1
0111	ADENOVIRUS TYPE 11	1	0	0	0	0	2	0	0	0	0	3
0112	ADENOVIRUS TYPE 12	1	0	0	0	0	1	0	0	0	0	2
0128	ADENOVIRUS TYPE 28	0	0	0	0	0	1	0	0	0	0	1
0130	ADENOVIRUS TYPE 30	0	0	0	0	0	1	0	0	0	0	1
0146	ADENOVIRUS TYPE 46	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	0	1	2	0	0	0	0	3
0203	INFLUENZA B VIRUS	0	4	0	0	0	0	0	0	0	0	4
0301	PARAINFLUENZA VIRUS TYPE 1	0	1	0	0	0	0	0	0	0	0	1
0302	PARAINFLUENZA VIRUS TYPE 2	0	2	0	0	0	0	0	0	0	0	2
0303	PARAINFLUENZA VIRUS TYPE 3	2	26	0	0	0	0	0	0	0	0	28
0399	PARAINFLUENZA VIRUS TYPING PEN	0	2	0	0	0	0	0	0	0	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	10	0	0	0	0	0	0	0	0	10
0500	RHINOVIRUS (ALL TYPES)	1	17	0	0	0	0	0	0	0	0	18
0600	MYCOPLASMA PNEUMONIAE	1	19	0	0	0	0	0	0	0	1	21
0700	ORNITHOSIS-PSITTACOSIS	1	0	0	0	0	0	0	0	0	0	1
0809	COXSACKIEVIRUS A9	1	0	0	0	0	2	0	0	0	0	3
0902	COXSACKIEVIRUS B2	1	0	0	0	0	3	0	0	0	0	4
0903	COXSACKIEVIRUS B3	0	1	0	0	0	0	0	0	0	0	1
0904	COXSACKIEVIRUS B4	0	0	0	1	0	1	0	0	0	0	2
0905	COXSACKIEVIRUS B5	1	0	0	0	0	1	0	0	0	0	2
1009	ECHOVIRUS TYPE 9	0	0	0	1	0	0	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	3	0	0	0	0	3
1101	POLIOVIRUS TYPE 1	1	0	0	0	0	0	0	0	0	0	1
1102	POLIOVIRUS TYPE 2	1	0	1	0	0	2	0	0	0	0	4
1103	POLIOVIRUS TYPE 3	1	0	0	0	0	1	0	0	0	0	2
1200	MUMPS VIRUS	0	0	1	0	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	1	2	0	0	0	0	0	1	4	8
1301	HERPES SIMPLEX VIRUS - NOT TYP	9	0	0	0	0	1	0	0	1	29	40
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	9	3	0	1	0	1	8	0	0	0	22
1303	VARICELLA-ZOSTER VIRUS	3	0	0	1	0	0	0	0	0	31	35
1306	HERPES SIMPLEX TYPE 1	4	16	1	0	0	0	0	3	1	117	142
1307	HERPES SIMPLEX TYPE 2	5	1	0	0	0	0	0	0	0	104	110
1399	HERPES VIRUS TYPING PENDING	0	0	0	0	0	0	0	0	0	3	3
1401	COXIELLA BURNETII	5	0	0	0	0	0	0	0	0	0	5
1502	PICORNIA VIRUS - NOT TYPED = E	2	10	0	1	2	9	0	0	0	2	26
1521	MEASLES VIRUS	4	0	0	0	0	1	0	0	0	10	15
1522	RUBELLA VIRUS	0	0	0	0	0	0	0	0	0	2	2
1532	HEPATITIS B ANTIGEN	62	0	0	0	0	1	47	0	0	0	110
1535	HEPATITIS A ANTIBODY	5	0	0	0	0	0	11	0	0	0	16
1536	HEPATITIS C VIRUS	7	0	0	0	0	0	1	0	0	0	8
1541	CHLAMYDIA A - C. TRACHOMATIS	11	1	0	0	0	0	0	0	0	0	12
1556	CMV - CYTOMEGALOVIRUS	6	29	0	0	0	3	1	2	11	0	52
1562	REOVIRUS (ALL TYPES)	2	0	0	0	0	8	0	0	0	0	10
1563	CORONAVIRUS	0	0	0	0	0	1	0	0	0	0	1
1564	ROTAVIRUS	0	2	0	0	0	34	0	0	0	0	36
1565	CALICI VIRUS	0	0	0	0	0	5	0	0	0	0	5
1571	ENTEROVIRUS TYPE 71 (BCR)	0	0	0	0	0	0	0	0	0	1	1
1599	ENTEROVIRUS TYPING PENDING	0	7	0	2	0	17	0	0	0	2	28
9721	HTLV-1	1	0	0	0	0	0	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	2	0	0	0	0	2
9995	DENGUE NOT TYPED	0	0	0	0	0	1	0	0	0	0	1
TOTAL		152	180	5	8	3	140	69	5	14	307	883

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 2/01/91 TO 15/01/91

12. CODE 10 - EYE
13. CODE 59 - GENITAL
14. CODE 39 - ENDOCRINE/SALIVARY GL.
15. CODE 38 - RETICULO-ENDOTHELIAL
16. CODE 29 - MUSCLE/JOINT
17. CODE 69 - CONGENTIAL
18. CODE P8 - PUO
19. CODE G8 - FEVER/MALAISE
20. CODE 09 - OTHER
21. CODE A1 - SIDS

		12	13	14	15	17	18	19	20	21	TOTAL
0100	ADENOVIRUS NOT TYPED	5	1	0	0	0	2	4	1	0	13
0102	ADENOVIRUS TYPE 2	0	0	0	0	0	0	1	0	0	1
0103	ADENOVIRUS TYPE 3	1	0	0	0	0	1	0	0	0	2
0104	ADENOVIRUS TYPE 4	1	0	0	0	0	0	0	0	0	1
0106	ADENOVIRUS TYPE 6	0	0	0	0	0	1	0	0	0	1
0108	ADENOVIRUS TYPE 8	4	0	0	0	0	0	0	0	0	4
0111	ADENOVIRUS TYPE 11	0	0	0	0	0	0	0	3	0	3
0112	ADENOVIRUS TYPE 12	1	0	0	0	0	0	0	0	0	1
0116	ADENOVIRUS TYPE 16	1	0	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	2	0	0	0	1	0	1	0	0	4
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	2	1	1	0	4
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	4	1	1	6
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	2	1	0	0	3
0902	COXSACKIEVIRUS B2	0	0	0	0	0	0	1	0	0	1
0903	COXSACKIEVIRUS B3	0	0	0	0	0	0	2	0	0	2
0904	COXSACKIEVIRUS B4	0	0	0	0	0	0	1	1	0	2
1014	ECHOVIRUS TYPE 14	0	0	0	0	0	0	1	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	0	0	0	0	1	0	0	1
1200	MUMPS VIRUS	0	0	1	1	0	0	2	1	0	5
1300	HERPES VIRUS GROUP - NOT TYPED	0	5	0	0	0	0	0	0	0	5
1301	HERPES SIMPLEX VIRUS - NOT TYP	1	17	0	0	0	0	0	0	0	18
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	6	5	0	2	5	6	0	24
1303	VARICELLA-ZOSTER VIRUS	1	0	0	0	0	0	0	1	0	2
1306	HERPES SIMPLEX TYPE 1	8	34	0	0	0	0	2	1	0	45
1307	HERPES SIMPLEX TYPE 2	1	98	0	0	1	0	0	1	0	101
1399	HERPES VIRUS TYPING PENDING	0	0	0	0	0	0	1	0	0	1
1401	COXIELLA BURNETII	0	0	0	0	0	1	2	2	0	5
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	3	0	1	0	0	0	4
1541	CHLAMYDIA A - C. TRACHOMATIS	4	76	0	0	0	0	0	0	0	80
1556	CMV - CYTOMEGALOVIRUS	0	10	1	1	6	3	6	18	0	45
1562	REOVIRUS (ALL TYPES)	0	0	0	0	0	0	0	1	0	1
1566	NORWALK AGENT	0	0	0	0	0	0	1	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	1	1	6	0	0	8
TOTAL		30	241	8	10	9	16	43	42	1	400