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Contents:

Editor *Dr Ian Welch*

VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTING SCHEME: A total of 1248 reports were processed during this period.

Q fever Eight cases of Q fever were reported. Exposure details were provided for two of these: a 30 year old male employed as a meat inspector and a 21 year old male abattoir worker.

Cytomegalovirus was isolated from a three-year old boy suffering from sudden unilateral nerve deafness.

Three virus isolates were listed as complications of pertussis. A one-year old girl with lower respiratory tract disease was discovered to have adenovirus (untyped) (a common complication of pertussis) and twin girls aged 4 months were found to have parainfluenza type 3.

Polio virus strains have been identified in association with the death of three babies. In a case of Sudden Infant Death Syndrome, poliovirus type 1 was isolated from the nasopharynx of a 2 month-old boy. A nasopharyngeal post mortem sample from a 5 month old boy revealed poliovirus type 2 and poliovirus type 3 was identified in a post-mortem faecal sample from another 5 month old boy.

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- Figures given may be subject to revision.

Rhinovirus was isolated from a post-mortem nasopharyngeal specimen from a three-month old boy who suffered Sudden Infant Death Syndrome.

Rubella: Reports of rubella infections have become more common recently. Up until 13 September 1989, an average of 8.2 cases were reported per fortnight. In contrast, the average since then has been 39.2 cases per fortnight.

14/09/89 - 27/09/89	36	(QLD: 16; VIC: 14; SA: 6)
28/09/89 - 11/10/89	21	(VIC: 10; SA: 6; NSW/ACT: 5)
12/10/89 - 25/10/89	34	(VIC: 15; SA: 16)
26/10/89 - 08/11/89	59	(VIC: 14; SA: 13; NSW/ACT: 27)
09/11/89 - 22/11/89	47	(VIC: 11; SA: 22; NSW/ACT: 10)
23/11/89 - 06/11/89	38	(VIC: 11; SA: 17; WA:8)

The significance of this increase in the number of reports is unknown. Rubella diagnoses this fortnight included a 2 year old boy who had been immunized against rubella, a 22 year old woman who was 8-9 weeks pregnant at the time of illness, and a female (age unknown) who had been vaccinated against rubella one week previously. (In the latter case, the patient had probably become infected prior to vaccination, as the incubation period for rubella is commonly 16-18 days and ranges from 14 to 23 days.) Rubella virus was also isolated from a male foetus whose mother had had rubella whilst she was pregnant: the virus was found in the foetal peritoneal fluid, skin, muscle, thymus, heart, lung, kidney, leucocytes, eye and placenta.

OVERSEAS BRIEFS:

1. Dengue in Vanuatu

A recent update from the Vanuatu Health Department states that two outbreaks of dengue have recently occurred in Santo and Merdara Islands (Banks Group). The number of cases in Vila has declined (probably due to recent dry conditions), however the proportion of haemorrhagic and shock cases has increased, indicating that re-infection is occurring.

2. Influenza in the Northern Hemisphere

As the influenza season in Australia is coming to an end, increasing numbers of reports of isolates are being made by countries of the Northern Hemisphere.

Four cases of influenza A (H3N2) were reported from Japan in September. In October, sporadic cases of influenza A were reported from USA and Canada, and local outbreaks occurred in UK, Belgium and Iran.

Influenza A (H3N2) activity increased in Europe during November. In the UK, the virus was isolated during local outbreaks in two schools, two army barracks and one hospital geriatric ward in the week ending 24 November (more details below). There have also been isolates of influenza A (H3N2) from sporadic cases in the Paris region of France since mid-November and isolates of as yet untyped influenza A from Belgium and Finland.

Influenza A (H3N2) was also isolated in November from sporadic cases in Alberta, and British Columbia and a local outbreak in Manitoba, Canada. The USA has reported isolates of influenza A (H3N2) from 3 states, untyped influenza A from one state and influenza like illness in an additional 12 states.

Influenza B was detected in sporadic cases in Hong Kong in October. In November, it was isolated during a local outbreak in Trieste, Italy and from sporadic cases in the Canadian provinces of British Columbia and Quebec.

Commonwealth Serum Laboratory Contribution: The National WHO Influenza Reference Centre, Commonwealth Serum Laboratories, has received further details regarding the influenza outbreak in the UK. A message dated 7 December from the WHO Collaborating Centre, Mill Hill, reports an outbreak of mainly H3N2 A/Shanghai-like virus. Following initial localized outbreaks in Scotland and Wales, the outbreak has now reached most parts of England and has affected mainly children and young adults. The formulation of influenza vaccine available in Australia for the 1989 winter included the A/Sichuan strain of H3N2. This is closely related to the A/Shanghai virus, and would be expected to conver a reasonable degree of protection against the current UK strain. Post-vaccination serology conducted at the CSL centre this year also indicates that the Australian vaccine induced good anti-A/Shanghai antibody responses. The Australian influenza vaccine formulation for the 1990 winter (CDI 89/21) will include an A/Shanghai-like strain.

CDI Editorial Comment: persons in at risk groups for influenza should be considered for influenza vaccination if they are proposing to travel to the Northern Hemisphere this (Northern) winter.

3. Meningitis in the United Republic of Tanzania

The epidemic of meningitis notified earlier this year in the Arusha region is reported to be currently confined to three districts - Babati, Kiteto and Arumeru. The last case in Ngorongoro was registered on 30 October. A total of 1249 cases were recorded up to 30 November. It has been confined that the epidemic was caused by *Neisseria meningitis* serogroup A. Control measures are still in place and travellers visiting northern Tanzania are advised to be vaccinated against meningitis.

4. Cholera in Malaysia Angola and China

Several areas of Malaysia are currently considered to be infected areas for cholera. They are all within Peninsular (West) Malaysia:

Johor -	Johor Bahru District
Pulau Pinang -	MPPP District
Sabah -	Kota Kinabalu District, Penampang District, Semporna District, Sandakan District and Tawau District
Selangor State -	Klang District

29 cases (2 deaths) occurred in these areas between 25 June and 23 November this year.

In Angola, where the cholera epidemic was thought to be in decline, 4-5 cases per day are still occurring in Luanda and an average of 1 case per day has been registered in Uige Province.

Earlier this year, 1186 cases of cholera, with 17 deaths occurred in part of Southern Zinjiang Autonomous Region of China. The outbreak was caused by poor sanitation and a contaminated water supply. The first cases appeared on 29 May and the last occurred on 20 September. No cases are currently being reported and the area is therefore not considered to be infected at present.

CDI Editorial Comment:

Travellers to Cholera-infected areas should take care in the selection of foods and drinking water. The cholera vaccine is of limited efficacy and is not generally recommended.

MEASLES (Rubeola)

Measles has been recognised as a clinical entity for about 2000 years. Man, and possibly monkeys are the only known natural hosts for the virus. Measles is one of the most contagious of the transmissible diseases and is spread by direct contact with respiratory secretions from infected persons. Virus enters a susceptible host via the upper respiratory tract and possibly the eye, and propagates in the respiratory epithelium and regional lymphatic tissue. The incubation period is about 8-14 days.

Prodromal (ie before the appearance of the rash) symptoms may include malaise, anorexia, dry cough, sore throat, headache, fever, coryza, conjunctivitis, respiratory involvement and Koplik spots on the buccal mucosa. Leucopenia is common. The rash which ensues is erythematous and maculopapular. It usually begins on the face, spreads to the body and extremities and lasts about 5 days. During resolution of the rash, some involved areas may desquamate.

The aetiological agent of measles is a paramyxovirus of the genus Morbillivirus. Other pathogenic paramyxoviruses include mumps, parainfluenza and respiratory syncytial viruses. Measles virions are roughly spherical, with diameters of 125-250nm. The outer envelope is 10-20nm thick, within which is a coiled helical nucleocapsid protein. The viral genome is a single stranded RNA molecule, MW 5-6 x 10^6 daltons (17-20Kb). The virion also contains an RNA dependent RNA polymerase.

The viral envelope has a high lipid content and is rapidly inactivated by organic solvents or surface-active agents. It is also very sensitive to acids, proteolytic enzymes, strong light and desiccation. Nevertheless, aerosol droplets of the virus will remain infective for several hours.

In a recent study on the impact of measles on patients and their families, data from 32 British cases of measles (age range 11-16) from 21 households were examined [1]. Morbidity was significant, with a mean of 10.1 days of school missed per patient. None of the patients was hospitalised and no serious complications were diagnosed. Nevertheless, the data suggested that the burden of the disease on the patient and family is considerable, even in relatively mild cases.

In this study, an estimate of the impact on health care services was also made. In single case households the illness resulted in a mean of 0.6 home visits by a doctor and 1.0 surgery visits by the mother. In multi-case households these means were 1.0 and 2.1 respectively.

The most common acute complications of measles infection are otitis media, pneumonia and encephalitis, which may result from viral replication or bacterial superinfection. Death occurs in a small proportion of cases.

Subacute sclerosing panencephalitis (SSPE) occurs as a late consequence of measles infection in about $1/10^6$ cases. SSPE is a chronic, degenerative neurological disorder which may occur up to about 13 years after measles infection. Symptoms include mental and motor deterioration, myoclonic jerks and electroencephalographic dysrhythmias.

Vaccination of susceptible persons against measles is the only practical means of preventing spread of the disease. Isolation measures are unlikely to be effective because patients are most infectious during the prodromal phase of the illness, before appearance of the rash.

Measles vaccine is a live attenuated strain of the virus. It is available as monovalent, combined measles mumps or measles mumps-rubella formulations in Australia. It is highly efficacious and adverse reactions are usually mild. The National Health and Medical Research Council (NHMRC) recommends immunisation against measles at 12-15 months of age. NHMRC also recommends that immunisation be offered as a trivalent measles/mumps/rubella vaccine [2].

Over the last several years there has been considerable debate as to optimum timing of measles vaccination. There is argument as to whether vaccination should be offered at 12 or 15 months. The theoretically higher probability of maternal antibody interference (and hence lower seroconversion rates) at 12 months of age argues for vaccination at 15 months. A counter argument suggests that deferring vaccination until 15 months increases the probability of natural infection with wild virus. To date, however, there have been no suitably controlled Australian studies comparing directly relative merits of measles vaccination at 12 and 15 months.

A recent study in Aboriginal children in central Australia examined seroconversion rates after measles vaccination at 9 months of age [3]. The background to the study was two measles epidemics in central Australia in 1979 and 1981/82 respectively. In the first, there were 237 cases among aboriginal children, of whom 5 died. Of the 5 deaths, 4 were

aged 12 months or less. During the second epidemic 125 Aboriginal children were admitted to Alice Springs Hospital with measles. Almost 50% of these children were less than 12 months of age at the time of admission. Four children infected with the virus when they were younger than 12 months subsequently died.

The study examined seroconversion rates in a total of 82 aboriginal children vaccinated against measles in the 4 week period after they reached 9 months of age. Postimmunisation titres were determined at least 6 weeks after immunisation. Seventy six of the 82 subjects seroconverted, with a four-fold or greater rise in antibody titre after immunisation indicating a 93% seroconversion rate (95% confidence limits 84.9-96.6%). This result, taken with the epidemiological data indicate that in some circumstances vaccination of children at less than 12 months of age might be justified. The authors also suggest that to achieve an even higher seroconversion rate, a second dose of vaccine could be considered at 18 months of age.

SUMMARY

Measles is an acute, febrile, exanthematous disease of viral aetiology. It is highly infectious among susceptible individuals and its morbidity has a significant impact on patients and their families even in uncomplicated cases. The most common complications in the acute phase include otitis media, pneumonia and encephalitis, which may be due to viral replication or bacterial superinfection. Subacute sclerosing panencephalitis can occur as a complication more than a decade after the acute phase. Measles vaccine is safe and highly efficacious and is administered subcutaneously as a single dose, usually at 12-15 months of age. There is some evidence that vaccination at less than 12 months may be justified in some cases.

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NOTIFICATIONS OF SEXUALLY TRANSMITTED DISEASES IN VICTORIA ANNUAL REPORT 1988

(Based on the report of the same name by Benny Monheit, Michael Norris and Joc Forsyth, Epidemiology Section, AIDS/STD Unit, Health Department, Victoria; Microbiological Diagnostic Unit, University of Melbourne.

This report summarises the information available to the Health Department Victoria on the notification of sexually transmitted diseases during 1988. The information is presented from a number of sources: the Melbourne STD Centre, Private Practitioners, Hospitals and the Microbiological Diagnostic Unit at Melbourne University.

In Victoria the following STDs are notifiable by clinicians under the Venereal Diseases Act 1958:

Syphilis
Gonorrhoea
Gonorrhoeal ophthalmia
Soft Chancre
Venereal Warts
Venereal Granuloma

In interpreting the data in this report it must be recognised that most STDs in Victoria are treated in general practice and that most of these STDs are not notified. A recent questionnaire by Connors and Forsyth of general practitioners in Victoria estimated that only 20% of notifiable STDs are actually notified to the Health Department [1]. Therefore the data in this report can only provide a general indication of the incidence of STDs in the community and look at trends over time.

During 1989 it is planned to try to improve the STD surveillance system by incorporating other sources of data (especially from laboratories) and computerisation of patient information at the Melbourne STD Centre.

This report contains information on five STDs: Non Specific Urethritis (N.S.U., also referred to as Non gonococcal urethritis), gonorrhoea, venereal herpes, genital warts and syphilis. No notifications of gonorrhoeal ophthalmia, venereal granuloma or soft chancre were received during 1988.

A total of 1,962 cases of notifiable sexually transmitted diseases were reported in 1988. In addition, 3,389 cases of NSU and Herpes were reported even though these are not notifiable under current legislation. These have been incorporated into the report as they provide useful data on the epidemiology of STDs in Victoria.

Figure 1 shows the number and gender distribution of each of the STDs notified in Victoria in 1988. 83% of the cases notified were in males and 17% were in females.

Figure 1: Gender distribution for each of the notified STDs: Victoria, 1988

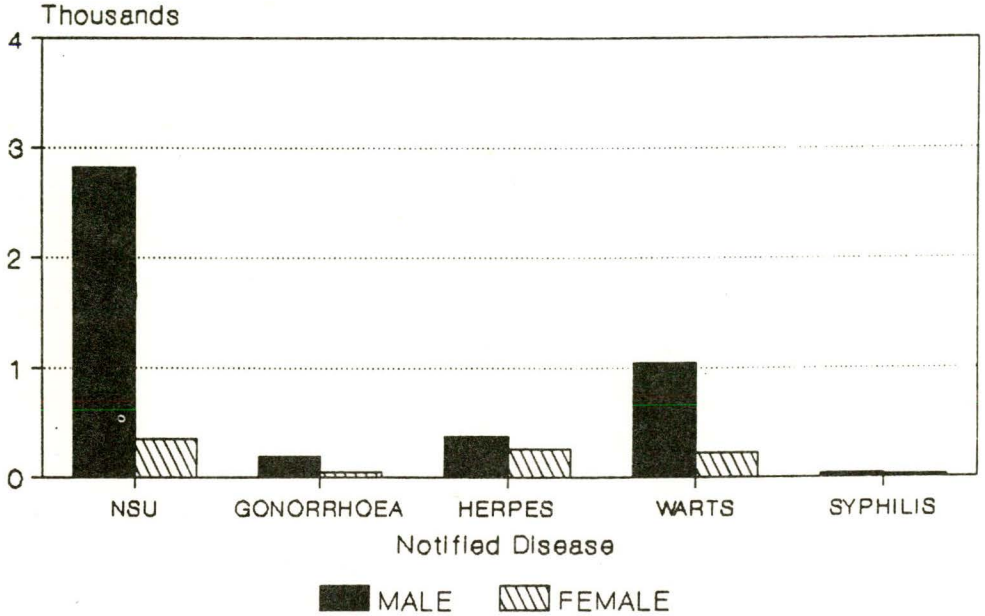
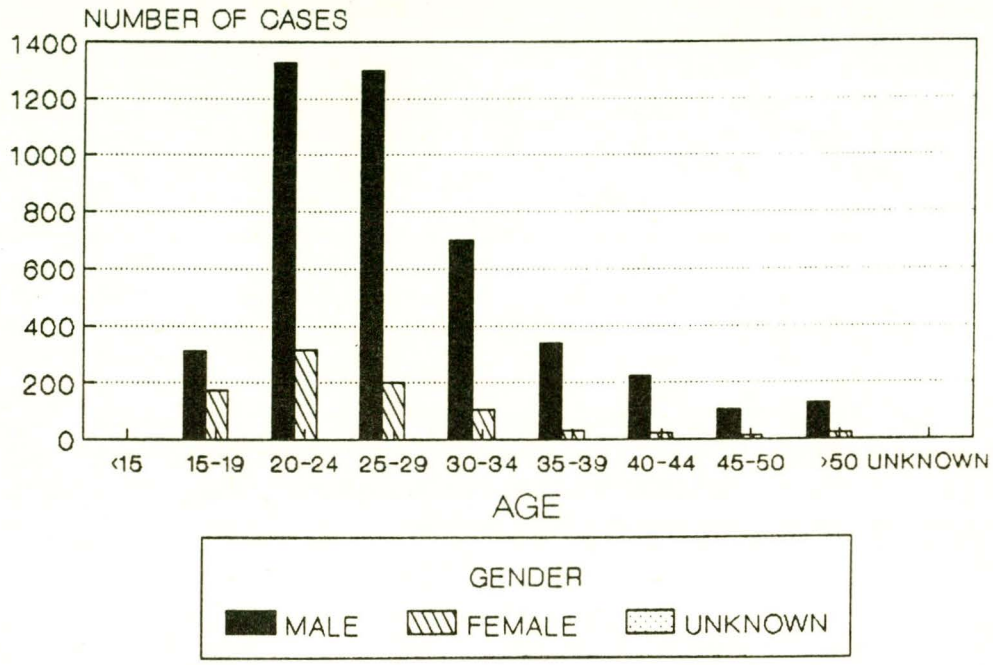


Figure 2 shows the age and gender distribution for all STDs notified in Victoria in 1988. 74% of cases occurred in the 20-34 year age group. 7.2% occurred in teenagers.

Figure 2: Age and gender distribution of for all notified STDs: Victoria, 1988



The percentage distribution of notified STDs is shown in Figure 3. NSU cases represented 59.1% of the total and venereal warts 23.7%.

Figure 3: Percentage Distribution of notified STDs: Victoria, 1988

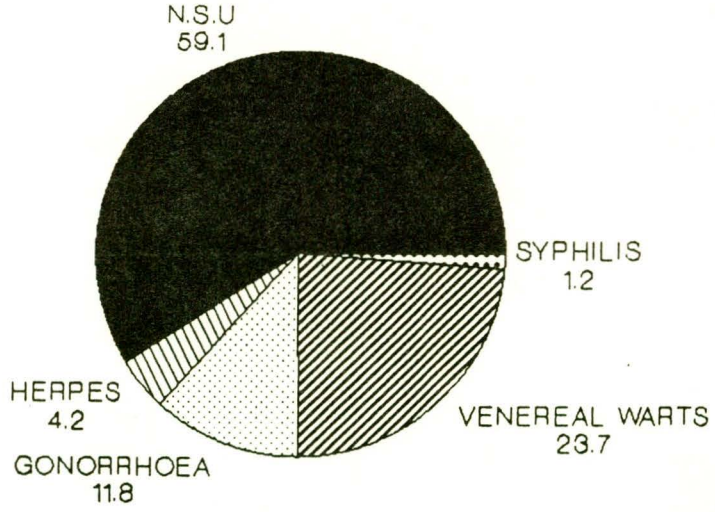


Table 1 shows the source of notifications for each of the STDs for 1988. The Melbourne STD centre provided 97.8% of the total number of notifications.

Table 1: Source of notifications for each STD: Victoria, 1988.

STD	Melbourne STD Centre	Private Practioners	Hospitals
NSU	3151	11	0
Herpes	613	8	8
Gonorrhoea	162	54	11
Venereal Warts	1262	6	0
Syphilis	46	17	2
Total	5234 (97.8%)	96 (1.8%)	21 (0.4%)

Table 2 presents a comparison of STD notifications for 1987 and 1988. These figures show an increase in reported cases of NSU and Venereal Warts, and a 59% reduction in the notifications for gonorrhoea. The 1988 total of 5351 reported cases of STDs shows a fall of 3.3% from the 1987 total.

Table 2: Comparision of STD notifications for Victoria, 1987 and 1988.

STD	1987	1988	Percent change
NSU	3070	3162	+2.9
Herpes	785	629	-19.9
Gonorrhoea	547	227	-59.0
Venereal Warts	1059	1268	+19.7
Syphilis	71	65	-8.5
Total	5532	5351	-3.3

Of the 5351 cases in 1988, 5145 (96%) were reported from the Melbourne metropolitan area which contains 72% of Victoria's population of 4.2 million. Only 4% of cases were reported from country regions. This data should be interpreted with caution as patients may travel to Melbourne for STD treatment, and some evidence suggests that country doctors are less likely to notify cases of STD from their patients.

The Microbiological Diagnostic Unit (MDU) at the University of Melbourne (the reference laboratory in Victoria for gonococci) report that a rising proportion of specimens submitted to them have come from homosexual/bisexual males; the proportion was 20% in 1987 and 33% in 1988. It is not known, however, to what extend these proportions are caused by selective reporting.

The MDU also reports that in 1988, 10% of cases of gonorrhoea acquired in Victoria and 30% of cases acquired abroad (30.4% of male cases and 20.8% of female cases) were caused by penicillinase producing *Neisseria gonorrhoeae*.

An historical comparative review of gonorrhoea and syphilis incidences in Victoria shows that notifications have decreased dramatically since 1982 (Table 3). During this period there was no change in STD notification procedures, so it is assumed that this decrease reflects a real trend, rather than a drop in doctors' compliance with STD notifications.

Table 3: Gonorrhoea and Syphilis notifications in Victoria, 1982-1988

Year	Gonorrhoea	Syphilis
1982	3381	262
1983	2417	174
1984	1533	174
1985	1420	70
1986	1085	68
1987	547	71
1988	227	65

The decline in notifications since 1982 is a continuation of the general decline in notifications of gonorrhoea and syphilis occurring from 1917 to 1988. The rates of notification of these diseases per 100,000 population are shown in Figures 4 and 5.

Figure 4: Notifications of Gonorrhoea per 100,000 population, Victoria: 1917-1988.

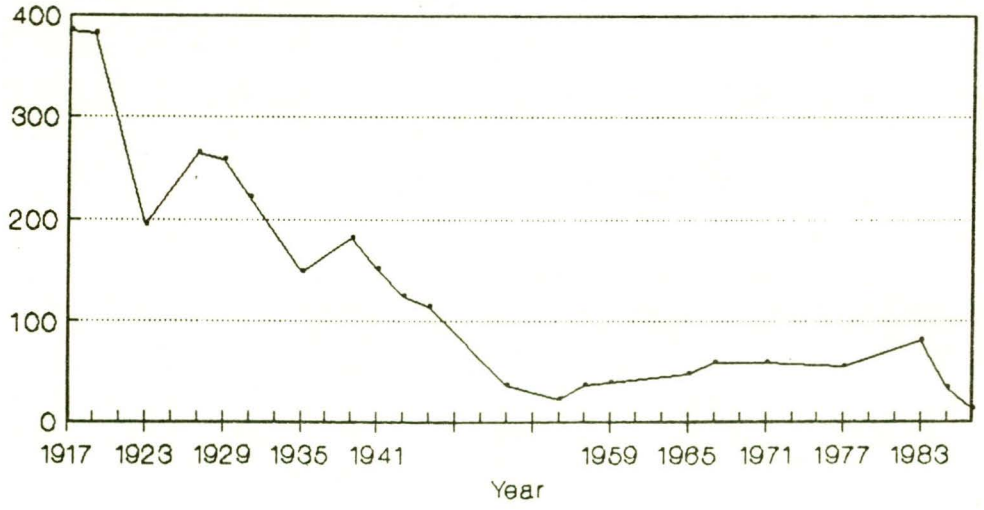
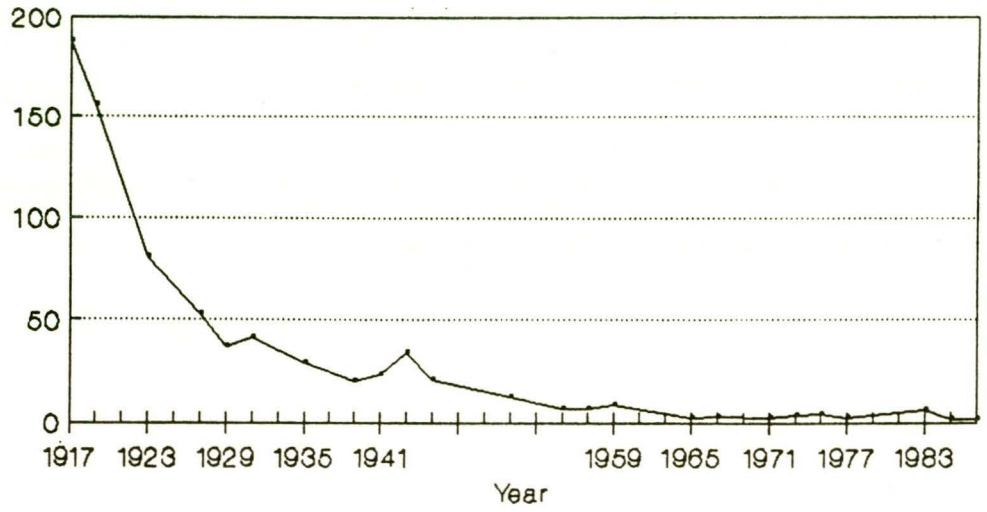


Figure 5: Notifications of Syphilis per 100,000 population, Victoria: 1917-1988.



The explanation for the fall in STD notifications in the early part of this century is not well understood. A number of reasons have been suggested and include:

1. Decrease in the compliance of filling out notification forms (especially after the introduction of compulsory notifications in 1916) [2].

2. Introduction of sulphonamide antibotics in 1938 and penicillin in the 1940's.

3. Better follow up and treatment of cases. The annual report of the Department of Health in 1944 proudly declared that this decrease was due to

   "the continous effort of the staff of the Department of Health, the civil police and special sections of the fighting services, to bring for examination, and if necessary treatment, all reported contacts of infected persons" [3]

4. The further fall of STDs in the late 1980's may be due to the effectiveness of education campaigns and greater public awareness of AIDS and its prevention. (Reference: A Time to Care, A Time to Act, 1988, P67.)

CDI Editorial Comment

Figures 6 and 7 show the total Australian incidence per 100,000 population for gonorrhoea and syphilis, 1969-1988 and for gonorrhoea, syphilis, non-specific urethritis and donovanosis (venereal granuloma), 1980-1988. These data are based on notifications of diseases collected under the National Diseases Returns ('Notifiable Diseases'). It should be noted that they do not include any cases of non-specific urethritis from Victoria, South Australia, Western Australia, Tasmania or the Australian Capital Territory, where this disease is not notifiable. Similarly, cases of donovanosis from South Australia are not included.

The incidence of gonorrhoea in Australia since 1969 reflects the incidence in Victoria, with a sharp decline since about 1982. The Australian incidence of syphilis increased during the early 1970s and has since remained static. Non-specific urethritis appears to have increased in prevalence during the 1980s whilst donovanosis has been reported at a constant low rate (133 notifications in 1988).

Figure 6: Gonorrhoea and Syphilis Incidence/10,000 in Australia, 1969-1988.

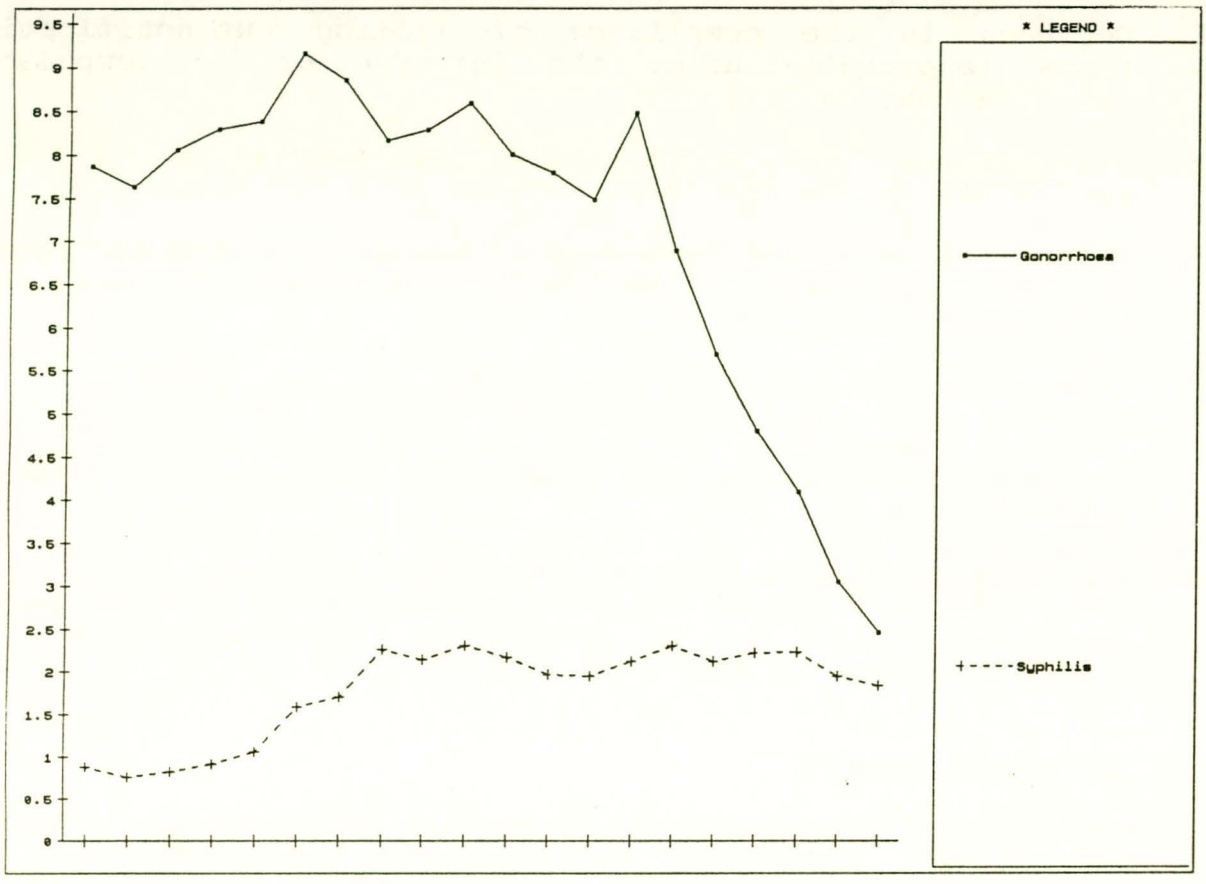
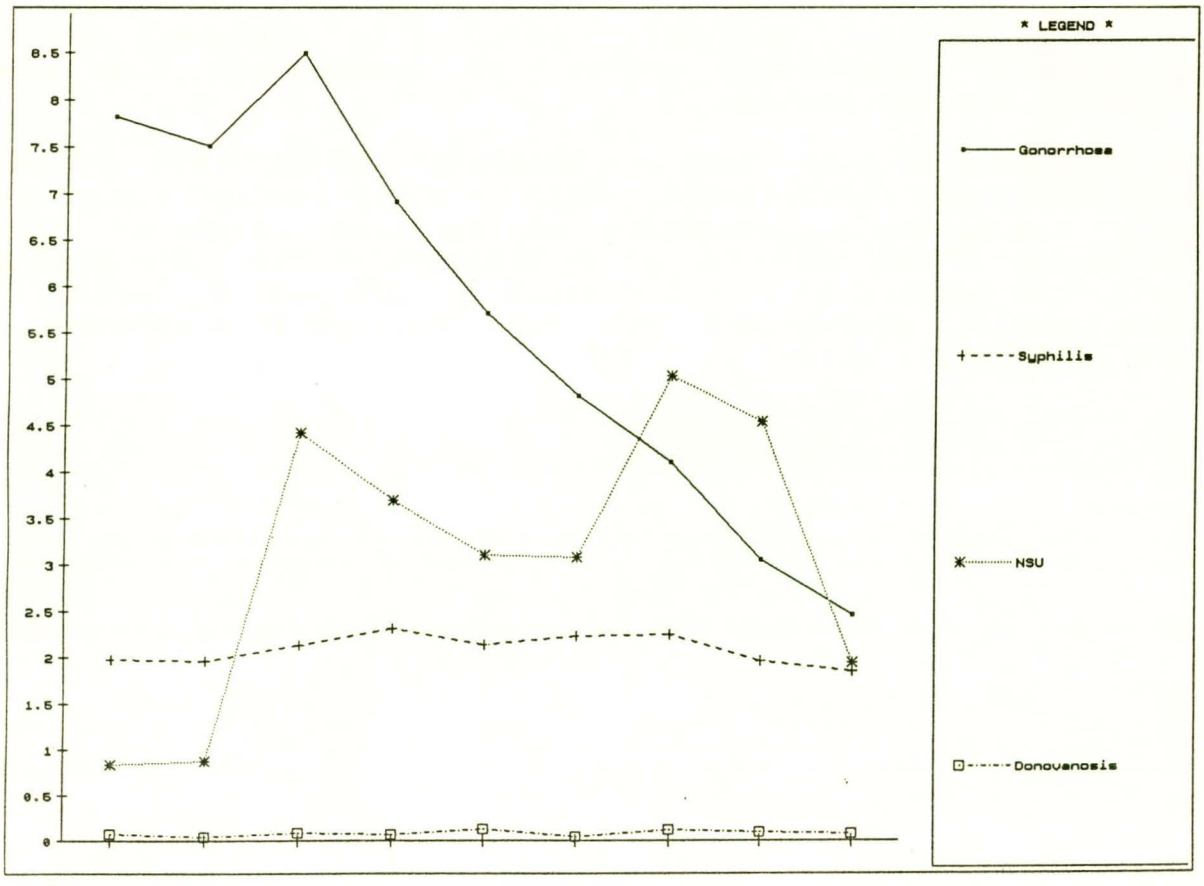


Figure 7: Gonorrhoea, Syphilis Non-specific urethritis and donovanosis Incidence/10,000 in Australia, 1980-1988.



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DRUGS FOR THE TREATMENT OF AIDS APPROVED AND IN DEVELOPMENT IN AUSTRALIA AND THE UNITED STATES OF AMERICA

(Contributed by P.F.S. Liehne, W. Lucerne, AIDS National Strategy and Policy Section, Commonwealth Department of Community Services and Health, Canberra.)

AIDS is one of the most serious challenges to public health this century. It is estimated that between 5 and 10 million people worldwide are infected with human immunodeficiency virus [1]. Australia alone is estimated to have around 15,000 people infected with HIV [2]. The median duration of survival of people infected with HIV from the date of diagnosis is 10.4 months [3], and with zidovudine treatment, this has extended to some 22 months.

There is an urgent need to find a cure or develop an effective treatment for HIV infection and its sequelae. In Australia and throughout the world research is being urgently undertaken in the development and clinical evaluation of new antiviral drugs, immune system stimulants and prophylactic treatments for combating the HIV and AIDS-related infections.

The Australian National Centre in AIDS Epidemiology and Clinical Research is currently conducting a number of trials of zidovudine for patients with HIV infection and has plans for trials of Interleukin-2 as an adjunct to hepatitis B vaccination in HIV seropositive individuals, and megestrol acetate and eicosapentanoic acid (EPA) in the treatment of cachexia associated with HIV infection.

The greatest impetus for the development of anti-HIV/AIDS drugs has been in the USA. Table 1 presents a list of drugs currently approved for treatment of HIV/AIDS in the USA and Australia [4,5]. Table 1 indicates that only zidovudine is approved for use in Australia for patients with severe ARC or AIDS. In addition there is a range of prescription drugs that is being used to treat various opportunistic infections.

Table 2 lists those drugs currently under investigation in the USA for the treatment of people with HIV infection [4].

TABLE 1: DRUGS REGISTERED FOR TREATMENT OF HIV AND HIV RELATED ILLNESSES IN AUSTRALIA AND THE USA.

Drug Name	Indication	Development Status	Country
Bactrim (Trimethoprim and Sulfamethoxazole)	PCP treatment	approved	Aust/USA
DARAPRIM Pyrimethamine	toxoplasmosis treatment	approved	Aust/USA
Retrovir Zidovudine: AZT (a,b)	AIDS, advanced ARC	approved	Aust/USA
Septrin (Trimethoprim and Sulfamethoxazole)	PCP treatment	approved	Aust/USA
NebuPent Aerosol Pentamidine Isethionate	PCP prophylaxis	approved (Orphan Drug)	USA
Cytovene (Ganciclovir)	CMV retinitis	approved	USA
Pentam 300	PCP treatment	approved	USA
INTRONA Interferon alfa-2b	Kaposi's sarcoma	approved	USA
Roferon A+ Interferon alfa-2a	Kaposi's sarcoma	approved	USA

(a): Recent media reports have announced the breaking of the code in US trials of Zidovudine in patients with mild ARC and asymptomatic patients with T-cell counts below 500. Details of these trials are not yet available and as yet no decision has been made to extend Zidovudine to these groups in the USA.

(b): The USA Food and Drug Administration recently announced approval for the distribution of Zidovudine for use in treating children under the age of 13 who have AIDS or who are suffering from symptoms of advanced infection with the AIDS virus.

TABLE 2: DRUGS CURRENTLY UNDER INVESTIGATION IN USA FOR THE TREATMENT OF HIV AND HIV RELATED ILLNESSES.

(A) ANTIVIRALS

Drug Name	Indication	Development Status
AL 721	ARC PGL	Phase 1
AMPLIGEN	AIDS ARC	PHASE 1/2
ANTI-LEUKA	HIV infection	Phase 1
Butyl DNJ Deoxynojirmycin	AIDS ARC	Phase 1
Compound Q GLQ223	AIDS ARC	Phase 1
0.5 (monoclonal antibody against HTLV-III envelope)	AIDS	Preclinical
CS-8 Azidouridine	AIDS ARC	Phase 1
Cytovene Ganciclovir	CMV retinitis	Phase 3
D4T Didehydrodeoxy-thymine	AIDS ARC	Phase 1
ddA/ddI	AIDS, ARC	Phase 1
ddC Dideoxycytidine	AIDS/ARC (in combination with Retrovir)	Phase 2&3
	pediatric HIV (in combination with Retrovir)	Phase 1
ddI Dideoxyinosine	AIDS/ARC, pediatric HIV infection	Phase 1
Hypercin	AIDS/ARC	Phase 1
Peptide T d-ala-peptide T	AIDS/ARC	Phase 1
rCD4	AIDS/ARC	Phase 1&2

Trimming glucosidase inhibitors (eg castanospermine)	AIDS	Phase 1 starting
Recombinant Dideoxyinosine Soluble Human CD4	pediatric HIV infection	Phase 1
Receptin Recombinant Soluble Human CD4	AIDS/ARC	Phase 1&2
Retrovir Zidovudine	pediatric AIDS, Kaposi's sarcoma, asymptomatic HIV infection, less severe HIV disease, neurological involvement in combination with other therapies, post-exposure prophylaxis in health care workers	Phase 1&2
SK&F 106528 Recombinant Soluble CD4	ARC/PGL	Phase 1
Uendex Dextran Sulphate	AIDS/ARC, HIV positive asymptomatic HIV infection	Phase 1&2
USHERDEX 8 Dextran Sulphate	AIDS/ARC	Phase 2
Protease Inhibitors	AIDS	Preclinical
Virazole Ribavirin	HIV positive, asymptomatic	Phase 2&3
Zovirax Acyclovir	CMV retinitis, herpes zoster	Phase 2&3
	AIDS/ARC (in combination with Retrovir)	Phases 1,2&3

(B) CYTOKINES

Betaseron Recombinant Human Interferon Beta	AIDS/ARC (in combination with Retrovir)	Phase 3
	Kaposi's Sarcoma	Phase 2
	CMV retinitis (in combination with Cytovene)	Phase 2
	ARC	Phase 1&2

EPREX Epoetin alfa	severe anaemia associated with AIDS and Retrovir therapy	Treatment IND
Granulocyte Macrophage Colony Stimulating Factor	AIDS	Phase 2
Granulocyte Macrophage Colony	AIDS/ARC HIV infection	Phase 2
Stimulating Factor	CMV retinitis in combination with Cytovene	Phase 2
	AIDS (in combination with Retrovir)	Phase 1&2
	neutropenia	Phase 1
IL-2 Interleukin-2	AIDS/ARC HIV (in combination with Retrovir)	Phase 1
INTRONA Interferon alpha- 2b	AIDS (in combination with Retrovir)	Phase 2
Neupogen Granulocyte Colony Stimulating Factor	AIDS (in combination with Retrovir	Phase 3
Proleukin Interleukin-2: IL-2	AIDS/ARC (in combination with Retrovir)	Phase 1&2
Roferon Interferon alfa-2a	AIDS/ARC (in combination with Retrovir)	Phase 2
Thymic Humoral Factor	HIV positive	Phase 1
Timunox	HIV infection	Phase 2
Tumour Necrosis Factor: TNF	ARC (in combination with gamma interferon)	Phase 2
Wellferon	Kaposi's Sarcoma, HIV (in combination with Retrovir)	Phase 1&2

(C) IMMUNOMODULATORS

AMPLIGEN	AIDS/ARC	Phase 1&2
AS-101	AIDS/ARC (in combination Retrovir)	Phase 2&3
	AIDS/ARC	Phase 1&2
Bropirimine	Kaposi's Sarcoma	Phase 2
Carrisyn	AIDS/ARC	Phase 2
CL246738	Kaposi's Sarcoma	Phase 1&2
EL10 DHEA	HIV infection	Phase 1&2
Gamuine: N Human Serum Globulin	pediatric HIV infection: AIDS, ARC (in combination with Retrovir)	Phase 2&3
IMREG-1	AIDS, Kaposi's Sarcoma, ARC, PGL	Phase 3
IMREG-2	AIDS, Kaposi's Sarcoma, ARC, PGL	Phase 2
Imuthiol	AIDS, ARC	Phase 2&3
Diethyl-dithiocarbonate	AIDS, ARC (in combination with Retrovir)	Phase 1
Lentinan	ARC, HIV positive	Phase 1&2

(D) ANTI-INFECTIVES

Cilofungin	candida oesaphagitis	IND approved
Clindamycin with Primaquine	PCP treatment	Phase 1&2
DARAPRIM	toxoplasmosis prophylaxis	Phase 1&2
Diclazuril	crytosporidiosis	Phase 1
Diflucan, Fluconazole	crytococcal meningitis, candidiasis	Phase 3
Foscarnet	herpes zoster/simplex	Phase 3

Trisodium Phosphonoformate	HIV infection, CMV	Phase 1&2
	HIV positive (in combination with Retrovir)	Phase 1
Phosphorothioate oligodeoxynucleotides	AIDS	Preclinical
Mycostatin Pastille	prevention of oral candidiasis	Phase 3
Ornidyl Eflornithine	PCP treatment	IND approved (orphan drug)
Nebupent	PCP treatment	Phase 3 (orphan drug)
Piritrexim	PCP treatment	Phase 1&2
Pneumopent	PCP prophylaxis	Phase 3
Spiramycin	crytosporidial diarrhoea	Phase 2&3
Sporanox Intraconazole-R51211	maintenance therapy for crytococcal meningitis	Phase 2&3
	histoplasmosis	Phase 1&2
TI-23 CMV Monoclonal	CMV infection	Phase 1
Trimetrexate with Leukovorin	PCP treatment	Treatment IND: Phase 3

(E) OTHER

Megace	treatment of anorexia and cachexia associated with AIDS	Treatment IND
Sandostatin	HIV-related	Phase 1&3

(F) VACCINES

Anti-idiotype: Anti-CD4 Becton Dickinson	AIDS	Phase 1
Biocine	AIDS	Phase 1
HIVAC- le	AIDS	Phase 1
VaxSyn HIV-1 (gp 160)	AIDS	Phase 2 as vaccine
MicroGenesys	AIDS	Phase 2 as therapeutic
Repligen	AIDS	Phase 1
HIV Core Particle Immunostimulant: HIV immunogen Rorer	HIV positive	Phase 2
Viral Technologies	AIDS	Phase 1

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NOTICE: INDEX FOR CDI 1989

The index for 1989 issues of the Communicable Diseases Intelligence will be published in CDI issue 90/1.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 23/11/89 TO 6/12/89

1. CODE 019 - FAIRFIELD(VIC)
2. CODE 065 - STATE LAB(WA) PMH(WA)
3. CODE 110 - IMVS(SA)
4. CODE 111 - RCH(VIC)
5. CODE 112 - ICPMR(NSW) WVH(ACT)
6. CODE 113 - PHH POW(NSW)
7. CODE 114 - RAHC(NSW)
8. CODE 115 - STATE LAB(QLD)

		019	065	110	111	112	113	114	115	TOTAL
0100	ADENOVIRUS NOT TYPED	0	11	5	0	0	5	2	12	35
0101	ADENOVIRUS TYPE 1	2	1	4	0	3	0	0	0	10
0102	ADENOVIRUS TYPE 2	0	0	1	0	6	0	1	0	8
0103	ADENOVIRUS TYPE 3	3	0	2	0	4	0	1	0	10
0104	ADENOVIRUS TYPE 4	1	1	2	0	1	0	0	0	5
0105	ADENOVIRUS TYPE 5	0	1	0	0	2	0	1	0	4
0111	ADENOVIRUS TYPE 11	0	0	0	0	1	0	0	0	1
0115	ADENOVIRUS TYPE 15	1	0	0	0	0	0	0	0	1
0122	ADENOVIRUS TYPE 22	0	0	0	0	1	0	0	0	1
0124	ADENOVIRUS TYPE 24	0	0	0	0	1	0	0	0	1
0130	ADENOVIRUS TYPE 30	0	0	0	0	1	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	1	0	0	9	0	0	1	0	11
0201	INFLUENZA A VIRUS	0	3	2	0	2	1	0	0	8
0202	INFLUENZA A VIRUS SUBTYPE H3N2	0	0	0	0	0	0	0	3	3
0203	INFLUENZA B VIRUS	1	0	0	0	0	2	2	1	6
0303	PARAINFLUENZA VIRUS TYPE 3	2	11	12	14	10	1	5	8	63
0399	PARAINFLUENZA VIRUS TYPING PEN	0	0	0	2	0	0	0	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	0	3	0	0	1	4	3	11
0500	RHINOVIRUS (ALL TYPES)	5	3	7	10	0	1	0	1	27
0600	MYCOPLASMA PNEUMONIAE	2	2	18	6	0	1	0	0	29
0700	ORNITHOSIS-PSITTACOSIS	3	0	1	0	0	0	0	0	4
0809	COXSACKIEVIRUS A9	1	0	0	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	0	0	0	0	1	0	0	0	1
0902	COXSACKIEVIRUS B2	0	1	0	0	0	0	0	0	1
0903	COXSACKIEVIRUS B3	3	0	0	0	0	0	0	0	3
1011	ECHOVIRUS TYPE 11	0	0	1	0	0	0	0	0	1
1018	ECHOVIRUS TYPE 18	1	0	0	0	0	0	0	0	1
1028	ECHOVIRUS TYPE 28 = RHINO VIRU	0	0	0	0	0	0	1	0	1
1030	ECHOVIRUS TYPE 30	0	0	0	0	0	0	1	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	2	0	0	2
1101	POLIOVIRUS TYPE 1	1	0	1	0	0	0	0	0	2
1102	POLIOVIRUS TYPE 2	1	0	0	0	0	0	1	0	2
1103	POLIOVIRUS TYPE 3	1	0	0	0	0	0	0	0	1
1104	POLIOVIRUS - MIXED VACCINAL ST	0	2	0	0	0	0	0	0	2
1300	HERPES VIRUS GROUP - NOT TYPED	1	6	0	0	8	0	0	0	15
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	4	0	0	43	0	0	72	119
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	5	4	0	0	2	1	0	12
1303	VARICELLA-ZOSTER VIRUS	2	5	4	0	4	2	0	0	17
1306	HERPES SIMPLEX TYPE 1	46	43	22	0	5	2	0	1	119
1307	HERPES SIMPLEX TYPE 2	66	78	23	0	30	8	0	0	205
1399	HERPES VIRUS TYPING PENDING	0	0	0	1	0	0	1	0	2
1401	COXIELLA BURNETII	1	1	2	0	4	0	0	0	8
1502	PICORNIA VIRUS - NOT TYPED = E	0	1	0	0	0	1	0	10	12
1521	MEASLES VIRUS	2	0	0	0	0	1	0	0	3
1522	RUBELLA VIRUS	10	8	17	1	0	2	0	0	38
1530	HEPATITIS A VIRUS (CHANGE TO 1	5	0	5	1	1	0	0	0	12
1532	HEPATITIS B ANTIGEN	11	26	19	0	22	10	1	5	94
1535	HEPATITIS A ANTIBODY	0	4	0	0	1	0	0	0	5
1541	CHLAMYDIA A - C. TRACHOMATIS	0	57	26	0	20	2	0	26	131
1556	CMV - CYTOMEGALOVIRUS	48	13	8	4	1	1	9	5	89
1564	ROTAVIRUS	0	9	59	0	4	4	2	1	79
1599	ENTEROVIRUS TYPING PENDING	0	0	0	3	0	5	2	0	10
9992	ROSS RIVER VIRUS	0	3	13	0	0	0	0	0	16
9994	SMALL VIRUS (LIKE) PARTICLE	1	0	0	0	0	0	1	0	2
TOTAL		222	299	261	51	176	54	37	148	1248

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1

PERIOD 23/11/89 TO 6/12/89

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	1	17	0	0	0	14	0	0	0	0	32
0101	ADENOVIRUS TYPE 1	4	4	0	0	0	1	0	0	0	0	9
0102	ADENOVIRUS TYPE 2	4	1	0	1	0	0	0	0	0	0	6
0103	ADENOVIRUS TYPE 3	1	3	0	0	0	3	0	0	0	0	7
0104	ADENOVIRUS TYPE 4	1	0	0	0	0	0	0	0	0	1	2
0105	ADENOVIRUS TYPE 5	0	3	0	0	0	1	0	0	0	0	4
0111	ADENOVIRUS TYPE 11	1	0	0	0	0	0	0	0	0	0	1
0130	ADENOVIRUS TYPE 30	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	7	0	0	0	2	0	0	0	0	9
0201	INFLUENZA A VIRUS	0	7	0	0	0	0	0	0	0	0	7
0202	INFLUENZA A VIRUS SUBTYPE H3N2	0	3	0	0	0	0	0	0	0	0	3
0203	INFLUENZA B VIRUS	0	5	0	0	0	0	0	0	1	0	6
0303	PARAINFLUENZA VIRUS TYPE 3	2	54	0	1	0	1	0	0	0	0	58
0399	PARAINFLUENZA VIRUS TYPING PEN	0	1	0	0	0	0	0	0	0	0	1
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	11	0	0	0	0	0	0	0	0	11
0500	RHINOVIRUS (ALL TYPES)	1	24	0	0	0	0	0	0	0	0	25
0600	MYCOPLASMA PNEUMONIAE	5	23	0	0	0	0	0	0	0	0	28
0700	ORNITHOSIS-PSITTACOSIS	2	2	0	0	0	0	0	0	0	0	4
0809	COXSACKIEVIRUS A9	0	1	0	0	0	0	0	0	0	0	1
0816	COXSACKIEVIRUS A16	0	0	0	0	0	0	0	0	0	1	1
0902	COXSACKIEVIRUS B2	0	1	0	0	0	0	0	0	0	0	1
0903	COXSACKIEVIRUS B3	0	1	0	2	0	0	0	0	0	0	3
1011	ECHOVIRUS TYPE 11	0	1	0	0	0	0	0	0	0	0	1
1018	ECHOVIRUS TYPE 18	0	1	0	0	0	0	0	0	0	0	1
1028	ECHOVIRUS TYPE 28 = RHINO VIRU	0	0	0	0	0	0	0	0	0	1	1
1030	ECHOVIRUS TYPE 30	0	0	0	1	0	0	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	2	0	0	0	0	2
1101	POLIOVIRUS TYPE 1	1	0	0	0	0	0	0	0	0	0	1
1104	POLIOVIRUS - MIXED VACCINAL ST	0	2	0	0	0	0	0	0	0	0	2
1300	HERPES VIRUS GROUP - NOT TYPED	0	0	1	0	0	0	0	0	0	7	8
1301	HERPES SIMPLEX VIRUS - NOT TYP	12	12	0	0	0	0	0	0	1	50	75
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	4	0	0	0	0	0	1	0	0	0	5
1303	VARICELLA-ZOSTER VIRUS	4	0	1	0	0	0	0	0	0	7	12
1306	HERPES SIMPLEX TYPE 1	0	5	0	0	0	0	1	0	0	75	81
1307	HERPES SIMPLEX TYPE 2	4	0	0	0	0	0	0	0	0	88	92
1399	HERPES VIRUS TYPING PENDING	0	0	0	0	0	0	0	0	0	2	2
1401	COXIELLA BURNETII	2	0	0	0	0	0	1	0	0	0	3
1502	PICORNIA VIRUS - NOT TYPED = E	0	3	0	0	1	7	0	0	0	0	11
1521	MEASLES VIRUS	0	1	0	0	0	0	0	0	0	1	2
1522	RUBELLA VIRUS	4	0	0	0	0	0	0	0	0	26	30
1530	HEPATITIS A VIRUS (CHANGE TO 1	5	0	0	0	0	0	7	0	0	0	12
1532	HEPATITIS B ANTIGEN	44	0	0	0	0	0	38	0	0	1	83
1535	HEPATITIS A ANTIBODY	2	0	0	0	0	0	3	0	0	0	5
1541	CHLAMYDIA A - C. TRACHOMATIS	18	0	0	0	0	0	0	0	0	0	18
1556	CMV - CYTOMEGALOVIRUS	1	17	1	1	1	2	2	2	6	0	33
1564	ROTAVIRUS	0	0	0	0	0	78	0	0	0	0	78
1599	ENTEROVIRUS TYPING PENDING	0	4	0	1	0	4	0	0	0	0	9
9992	ROSS RIVER VIRUS	0	0	0	0	0	0	0	0	0	10	10
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	2	0	0	0	0	2
TOTAL		123	214	3	7	2	118	53	2	8	270	800

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2

PERIOD 23/11/89 TO 6/12/89

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	16	17	18	19	20	21	TOTAL
0100	ADENOVIRUS NOT TYPED	2	0	0	0	0	0	0	1	0	3
0101	ADENOVIRUS TYPE 1	0	0	0	0	0	0	1	0	0	1
0102	ADENOVIRUS TYPE 2	1	0	0	0	0	0	1	0	0	2
0103	ADENOVIRUS TYPE 3	2	0	0	0	0	0	0	1	0	3
0104	ADENOVIRUS TYPE 4	2	0	0	0	0	0	1	0	0	3
0115	ADENOVIRUS TYPE 15	0	1	0	0	0	0	0	0	0	1
0122	ADENOVIRUS TYPE 22	0	0	0	0	0	0	0	1	0	1
0124	ADENOVIRUS TYPE 24	0	0	0	0	0	0	0	1	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	0	0	0	2	0	0	2
0201	INFLUENZA A VIRUS	0	0	0	0	0	0	0	1	0	1
0303	PARAINFLUENZA VIRUS TYPE 3	0	1	0	0	0	0	1	2	1	5
0399	PARAINFLUENZA VIRUS TYPING PEN	0	0	0	0	0	0	1	0	0	1
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	0	1	1	2
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	0	1	0	0	1
1101	POLIOVIRUS TYPE 1	0	0	0	0	0	0	0	0	1	1
1102	POLIOVIRUS TYPE 2	0	0	0	0	0	0	0	2	0	2
1103	POLIOVIRUS TYPE 3	0	0	0	0	0	0	0	1	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	7	0	0	0	0	0	0	0	7
1301	HERPES SIMPLEX VIRUS - NOT TYP	1	43	0	0	0	0	0	0	0	44
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	7	0	0	0	0	0	0	7
1303	VARICELLA-ZOSTER VIRUS	0	0	0	1	0	0	0	4	0	5
1306	HERPES SIMPLEX TYPE 1	7	27	0	0	0	0	2	2	0	38
1307	HERPES SIMPLEX TYPE 2	0	112	0	0	0	0	0	1	0	113
1401	COXIELLA BURNETII	0	0	0	0	0	1	3	1	0	5
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	0	0	1	0	0	0	1
1521	MEASLES VIRUS	0	0	0	0	0	0	1	0	0	1
1522	RUBELLA VIRUS	0	0	3	2	1	0	0	2	0	8
1532	HEPATITIS B ANTIGEN	0	1	0	0	0	0	0	10	0	11
1541	CHLAMYDIA A - C. TRACHOMATIS	2	111	0	0	0	0	0	0	0	113
1556	CMV - CYTOMEGALOVIRUS	10	1	2	1	5	3	4	30	0	56
1564	ROTAVIRUS	0	0	0	0	0	0	0	1	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	0	1	0	1
9992	ROSS RIVER VIRUS	0	0	0	6	0	0	0	0	0	6
TOTAL		27	304	12	10	6	5	18	63	3	448