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Communicable Diseases Intelligence

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Editor Dr I.F. Cook

VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTING SCHEME: A total of 1 078 reports were processed during this period.

Twenty-two cases of Q fever were reported during this period:

- 2 females aged 42 and 50 years;
- 20 males:
  - 15 between the ages of 19 and 48;
  - a 66 year old and a 70 year old; and
  - 3 for who ages were not provided.

Occupational exposure details were only provided for four Queensland cases:

- a shearer (24 years);
- a meatworker (39 years);
- a grazier (21 years); and
- a tradesman (66 years).

Only one patient was involved in the South Australian field trial, a 19 year old male who was vaccinated while incubating the disease. (The incubation period for Q fever is 15-25 days.)

A high titre of antibody to measles was detected in the cerebrospinal fluid of a 14 year old male with CNS symptons.

Herpes simplex virus type 1 was isolated from two females, aged 1 and 19 years, with exudative tonsilitis.

The Bulletin is compiled and distributed by the Public Health Section, Communicable Diseases Branch, Department of Community Services and Health.

OVERSEAS BRIEF: MENINGITIS EPIDEMIC IN SUDAN

Following reports of a meningococcal meningitis epidemic in Sudan, it is recommended that all travellers to Sudan consider vaccination with the bivalent A/C meningococcal meningitis vaccine, Mencevax (R) AC (Smith, Kline & French), prior to travel. This vaccine is available at the vaccinees own expense from the Commonwealth Serum Laboratories in Melbourne (03) 389 1276.

The Sudanese Ministry of Health released the following data on the epidemic on 15 March 1988:

Area of Sudan	Cases	Deaths
Khartoum	1234	29
Other parts of Sudan	1659	59

Although the serogroup responsible for this epidemic has not been defined it is likely to be due to group A or C as sudan lies with in meningitis belt of Africa.

CONDOMS FOR PREVENTION OF SEXUALLY TRANSMITTED DISEASES

(Based on MMWR, Vol 37, No 9, 11 March 1988)

Introduction

The most effective strategy for preventing sexually transmitted diseases (STDs) is to avoid exposure. Abstinance, and sexual intercourse with one mutually faithful uninfected partner are the only totally effective strategies to prevent infection with an STD. Behaviour that eliminates or reduces the risk of one STD will probably reduce the risk of all STDs. Proper use of condoms with each act of sexual intercourse can reduce, but not eliminate, risk of STD to the wearer and his sexual partner. Individuals likely to become, or known to be infected with an STD, particularly human immunodeficiency virus (HIV) should be made aware of this.

Efficacy

A condom provides a mechanical barrier that reduces the risk of infections acquired as a result of exposure to:

- cervical, vaginal, vulvar, or rectal secretions or lesions (for the wearer); and
- semen, urethral discharge, lesions on the head or shaft of the penis (for the wearer's partner).

For infectious agents spread from lesions rather than fluids, condoms may offer less protection because areas of skin not covered by the condom may be infectious or vulnerable to infection.

Laboratory and epidemiological studies have provided information about the effectiveness of condoms in preventing STD. Laboratory tests have shown latex condoms to be effective mechanical barriers to:

- HIV[1];
- herpes simplex virus (HSV)[2-4];
- cytomegalovirus (CMV)[5];
- hepatitis B virus (HBV)[6];
- *Chlamydia trachomatis*[2]; and
- *Neisseria gonorrhoeae*[4].

Latex condoms blocked passage of HBV and HIV in laboratory studies, but natural membrane condoms (made from lamb cecum), which contain small pores, did not[6-8]. The experimental conditions employed in these studies may be more extreme than those encountered in actual use; however, they suggest that latex condoms afford greater protection against viral STD than do natural membrane condoms.

The actual effectiveness of condom use in STD prevention is more difficult to assess. It is difficult to determine if a user has been exposed to an infected partner or whether the condom was correctly used. However, several cross-sectional and case-control studies have shown that condom users and/or their partners have a lower frequency of gonorrhoea, ureaplasma infection, pelvic inflammatory disease, and cervical cancer than persons who do not use condoms[9]. Consistent previous condom use was associated with seronegativity during the one to three year follow-up period in a recent study of HIV antibody-negative heterosexual spouses of patients with acquired immunodeficiency syndrome (AIDS)[10]. Another recent investigation of prostitutes in Zaire has also suggested a protective association between a history of condom use and HIV seronegativity[11].

Condoms are not always effective in preventing STD. Failure of condoms to protect against STD is probably explained by user failure more often than by product failure.

User failure includes failure to:

- use a condom with each act of sexual intercourse;
- put the condom on before any genital contact occurs; and
- completely unroll the condom.

Other user behaviours that may contribute to condom breakage include:

- inadequate lubrication;
- use of oil-based lubricants that weaken latex; and
- inadequate space at the tip of the condom.

Product failure refers to condom breakage or leakage due to deterioration or poor manufacturing quality. Deterioration may result from age or improper postmanufacturing storage conditions. No scientific data on the frequency or causes of condom breakage are available. Likewise, no data are available comparing the susceptibility to breakage of condoms of various sizes, thicknesses, or types, ie, natural versus latex, lubricated versus nonlubricated, or ribbed versus smooth. Experimental methods need to be developed to test the factors associated with breakage. Such information is necessary to provide users with accurate instructions on proper condom use.

Quality assurance

Since 1976, condoms have been regulated under the Medical Device Amendments to the Federal Food, Drug, and Cosmetic Act. Within the Food and Drug Administration (FDA), the Center for Devices and Radiological Health is responsible for assuring the safety and effectiveness of condoms as medical devices. Beginning in the spring of 1987, FDA undertook an expanded program to inspect latex condom manufacturers, repackagers, and importers to evaluate their quality control and testing procedures. In its testing of condoms, FDA uses a water-leak test in which a condom in filled with 300 mL of water and checked for leaks. The FDA has also adapted its inspection sampling criteria to conform with the American Society for Testing and Materials Standard D3492-83 for latex condoms. FDA criteria and the industry acceptable quality level (AQL) for condoms specify that, in any given batch, the failure rate due to water leakage cannot exceed four condoms per thousand. Batches exceeding the specified rejection criteria are recalled or barred from sale. Among batches of condoms that have met the AQL, the average failure rate observed was 2.3/1,000.

As of February 1988, FDA had examined samples from 430 batches of domestically produced and foreign-made condoms. These examinations have resulted in the testing of over 102,000 condoms. In FDA's sampling methodology, the sample size is determined by the size of the batch of condoms introduced into the market, the inspection level, and the AQL. Approximately 38,000 domestically produced condoms from 165 different batches of condoms were tested. Nineteen of those batches (approximately 12%) had leakage rates of over 4/1,000 and failed the test. By contrast, approximately 21% of the 265 foreign-manufactured batches failed to meet AQL standards. Thus far, as a result of both FDA's sampling program and the manufacturers' quality assurance programs, four domestic manufacturers have conducted 16 condom recalls.

FDA samples foreign-made condoms before they are passed through U.S. customs. If two or more of a given foreign manufacturer's batches offered for import are found to have leakage rates of more than 4/1,000, future shipments from that manufacturer are automatically detained at the port of entry. Seven foreign firms are presently on this automatic detention list. FDA also has the authority to seize any lot that is found to be violative if the manufacturer or importer does not take appropriate action.

Use of spermicides with condoms

The active ingredients (surfactants) in commercially available spermicides have been shown in the laboratory to inactivate sexually transmitted agents, including HIV[9,12,13]. Vaginal use of spermicides is associated with a lower risk of gonorrhoea and chlamydial infection in epidemiologic studies of women[9,14].

The use of spermicide-containing condoms may provide additional protection against STD in the event of condom leakage or seepage. However, the spermicidal barrier would no longer be in place if the condom breaks. If extra protection is desired,

vaginal application of spermicide is likely to afford greater protection than the use of spermicide in the condom because a larger volume of spermicide would already be in place in the event of condom breakage. Neither the safety nor the efficacy of spermicides in preventing sexually transmitted infections of the anal canal or oropharynx has been studied.

Prevalence of use

Recent studies suggest that condom use for STD prevention is increasing in selected populations, but is still infrequent.

In 1985, a sample of New York City male homosexuals reported a significant increase in condom use with both insertive and receptive anal intercourse after the respondents became aware of AIDS[15]:

- in the year before learning of AIDS, the men used condoms an average of 1% of the time when engaging in insertive anal intercourse;
- in the ensuing year, 20% of respondents reported consistent condom use.

In a prospective study in San Francisco:

- in 1984, 39% of the men reported having anal intercourse - 26% of these men used condoms[16];
- in April 1987, 19% of the San Francisco respondents reported anal intercourse; 79% used condoms.

The trends in condom use for STD prevention among heterosexual men and women are unknown. In a 1986-87 survey of female prostitutes in the United States, 4% reported condom use with each vaginal exposure[17].

Proper selection and use

The Public Health Service has previously made recommendations on reducing the risk of HIV infection through consistent use of condoms[18]. Additional recommendations include a guideline for manufacturers published by FDA that recommends proper labelling of condoms to include adequate instructions for use (Center for Devices and Radiological Health, FDA; letter to all U.S. condom manufacturers, importers, and repackagers, April 7, 1987).

Users can increase the efficacy of condoms in preventing infection by using a condom properly from start to finish during every sexual exposure. It is not known whether brands of condoms with increased thickness offer any more protection for anal or vaginal intercourse than thinner brands. Even with a condom, anal intercourse between an infected individual and an uninfected partner poses a risk of transmitting HIV and other sexually transmitted infections because condoms may break.

The following recommendations for proper use of condoms to reduce the transmission of STD are based on current information:

1. Latex condoms should be used because they offer greater protection against viral STD than natural membrane condoms[7].

2. Condoms should be stored in a cool, dry place out of direct sunlight.

3. Condoms in damaged packages or those that show obvious signs of age (e.g. those that are brittle, sticky, or discoloured) should not be used. They cannot be relied upon to prevent infection.

4. Condoms should be handled with care to prevent puncture.

5. The condom should be put on before any genital contact to prevent exposure to fluids that may contain infectious agents. Hold the tip of the condom and unroll it onto the erect penis, leaving space at the tip to collect semen, yet assuring that no air is trapped in the tip of the condom.

6. Adequate lubrication should be used. If exogenous lubrication is needed, only water-based lubricants should be used. Petroleum- or oil-based lubricants (such as petroleum jelly, cooking oils, shortening, and lotions) should not be used since they weaken the latex.

7. Use of condoms containing spermicides may provide some additional protection against STD. However, vaginal use of spermicides along with condoms is likely to provide greater protection.

8. If a condom breaks, it should be replaced immediately. If ejaculation occurs after condom breakage, the immediate use of spermicide has been suggested[19]. However, the protective value of postejaculation application of spermicide in reducing the risk of STD transmission is not known.

9. After ejaculation, care should be taken so that the condom does not slip off the penis before withdrawal; the base of the condom should be held while withdrawing. The penis should be withdrawn while still erect.

10. Condoms should never be reused.

Condoms should be made more widely available through health-care providers who offer services to sexually active men and women, particularly in STD clinics, family planning clinics, and drug-treatment centers. These same facilities should become more assertive in counselling patients on STD prevention. Recommendations for prevention of STD, including HIV infection, should emphasize that risk of infection is most effectively reduced through abstinence or sexual intercourse with a mutually faithful uninfected partner. Condoms do not provide absolute protection from any infection, but if properly used, they should reduce the risk of infection.

CDI editorial comment

In Australia, condoms are regulated under the Therapeutic Goods Act 1966. Rubber (latex) condoms must comply with the Australian Standard (No. 1919-1985). This Standard includes a test which indicates the elasticity of the condom, the burst

test, as well as the water-leak test used by the FDA. For the burst test, a condom is filled with air at a specified rate, if it bursts at a volume of less than 12 litres it is counted as a failure.

Each batch must comply with an acceptable quality level (AQL) of 0.4% failure for leakage test and 1% for failure of the burst test (exact numbers of failures permitted in any given sample are calculated on the basis of random sampling plans).

It is the responsibility of the manfacturer or importer to ensure that all batches of condoms for supply in Australia comply with this standard. Samples may be tested by the Department of Community Services and Health. If condoms do not comply with the standards for leakage or bursting they will be subject to recall.

There is no standard for natural membrane condoms.

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ANTI-HIV TESTING OF BLOOD DONATIONS IN THE UNITED KINGDOM

(Based on CDR, 88/09, 4 March 1988).

Up to the end of December 1987, 5,840,520 donations (including plasmapheresis donations) had been screened for anti-HIV, and 90 (0.0015%) were confirmed to be positive (Table 1); 75 were male (83%) and 15 female (17%). The proportion of positives

confirmed in 1987 compared with 1986 is significantly less ($p < 0.001$). This result is not unexpected since many of the donors who were negative on their first test have donated two or more times since and all these donations are included in the total numbers tested.

Table 1: HIV antibody positive blood donations October 1985 - December 1987

	1985	1986	1987	Total
Donations	611,694	2,633,862	2,594,964	5,840,520
HIV positive males	14	44	17	75
females	–	10	5	15
Total HIV positive	14	54	22	90
Rate (%)	0.002	0.002	0.0010	0.0015

Data for first time donors have been collected since February 1986 in order to get a more accurate picture of the rate of positives in donors rather than donations. Approximately 400,000 new donors were tested in both 1986 and 1987, and while there were fewer confirmed positives in 1987 than 1986 (12 compared with 18), this difference is not statistically significant ($p = 0.25$). Also, the proportion of positives who were new donors in 1986 compared with 1987 (18/54 compared with 12/22) does not represent a significant increase ($p > 0.05$).

Table 2: Transmission category of HIV antibody positive blood donors

Transmission category	1985 (Oct-Dec)		1986		1987		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Homosexual male	6	–	15(5)	–	8(4)	–	29(9)	–
Bisexual male	1	–	9(3)	–	1(1)	–	11(4)	–
Intravenous drug user (IVDU)	5	–	9(5)	1(1)	–	–	14(5)	1(1)
Sexual partner of bisexual/IVDU	–	–	–	7(1)	–	5(2)	–	12(3)
Sexual contact of prostitutes abroad	–	–	3(2)	–	–	–	3(2)	–
Lived in Central Africa	1	–	3	–	2(1)	–	6(1)	–
Blood transfusion	–	–	–	1	–	–	–	1
None of the above	1	–	3	1	3(3)	–	7(3)	1
Not known yet	–	–	2(1)	–	3(1)	–	5(2)	–
Total	14	–	44(16)	10(2)	17(10)	5(2)	75(26)	15(4)

(Note: Bracketted figures represent first time donors.)

Of the 90 confirmed positives: 77 (86%) have so far admitted to being in a current major risk category, 8 have denied being at risk; and 5 are not yet classified (Table 2). More than half the males in 1986 and 1987 were either homosexual or bisexual, but none was an intravenous drug user in 1987 compared with 9 in 1986. So far almost all the females have been infected by sexual contact with males at risk, and the number of females continues to be small in comparison with males. More than 94% of all positives were over 41 years old (Table 3).

Table 3: Anti-HIV positive donors by age and sex
October 1985 - December 1987

	Age (years)						
	<20	21-30	31-40	41-50	51-60	>61	Total
1985: Male	2	11	1	-	-	-	14
Female	-	-	-	-	-	-	-
1986: Male	5(4)	25(8)	11(4)	1	2	-	44(16)
Female	-	5(1)	5(1)	-	-	-	10(2)
1987: Male	3(3)	10(6)	3(1)	-	1	-	17(10)
Female	-	4(2)	-	-	-	1	5(2)
Total	10(7)	55(17)	20(6)	1	3	1	90(30)

(Note: Bracketted figures represent first time donors.)

Of the 12 positives identified in the last six months (July-Dec 1987), 8 were new donors. Of the other 4, 3 had previously been tested and found negative. Their previous donations have been checked from stored sera and it was confirmed that these donations did not contain anti-HIV; the recipients are being followed up. In comparison, in the period up to June 1987 there were only 4 donors found anti-HIV positive who had been negative on a previous occasion and one who was classified as equivocally reactive on the first test. Seroconversion occurred during an interval of four to six months between donations.

It is important that the policy of combining anti-HIV testing of blood donations with a vigorous campaign to request those donors at risk from HIV infection to refrain from donating should be maintained.

ILLNESS CAUSED BY BARMAH FOREST VIRUS IN CENTRAL WESTERN NEW SOUTH WALES

(Contributed by R.A. Hawkes, C.R. Boughton, H.M. Naim, Arbovirus Research Unit, University of New South Wales and J. Bourke, Medical Practitioner, Warren)

On 21st January 1988, a 24 year-old man from Warren, in the central west of New South Wales presented to his local doctor with an illness, characterised by fever, arthralgia, myalgia, and a vesiculo-erythematous rash with general distribution. There were no neurological symptoms or signs. The patient recovered fully.

Laboratory studies with a wide range of arboviruses revealed no evidence of recent infection with any flavivirus, or with the alphaviruses Ross River and Sindbis (HI titres < 10). However the antibody class capture assay (ACCA) for IgM antibodies [1,2] and the haemagglutination-inhibition (HI) antibody results with Barmah Forest (BF) virus were:

Serum Date	Days Post-Onset	ACCA IgM (Optical Density*)	HI titre
21.1.88	3	1.53	40
29.1.88	11	1.92	320

*Optical density of panel of negative sera (mean + 3SD) = 0.425

The results indicate that the illness was caused by BF virus or a very closely related agent. It is noteworthy that no serological response occurred with Sindbis, the agent related most closely to BF virus [3].

Barmah Forest virus is an arbovirus of the alphavirus genus of Togaviridae. It has recently been shown to infect humans throughout much of New South Wales [4,5]. In the summer of 1984/85, three patients from Griffith, in south-western NSW presented with illnesses apparently caused by BF infection [6]. This is the first report of clinically apparent BF virus infection since that time.

The patient lives on a grazing property in the district, in proximity to local conditions favouring mosquito attack. The summer of 1987/88 has not been an unusually wet one, and it is possible that more cases would occur in seasons with higher precipitation. No sero conversions to BF virus in the flock of sentinel chickens at Warren occurred between 21st December 1987 and 22nd February 1988. This report is aimed at stimulating clinical and laboratory interest in BF as a possible cause of illness in rural areas.

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SALMONELLA ANATUM AND CLOSTRIDIUM PERFRINGENS OUTBREAK, PERTH, WESTERN AUSTRALIA

(Contributed by Mrs V. Wymer, Mrs E. Kittson, Mr R. Curtis and Mr R. Mogyorosy, Public Health and Enteric Diseases Unit. State Health Laboratories, Western Australia)

An outbreak of food poisoning involving over 200 people has been attributed to a Perth restaurant. *Salmonella anatum* was isolated from 46 of 102 diners and 5 of the restaurant staff. *Clostridium perfringens* was isolated from 10 patients (in 4 patients there was concomitent infection with *S anatum*).

S anatum was isolated from contaminated foodstuffs at the restaurant including ham, coppa (a meat smallgoods product), cooked rice dish, cooked chicken dish and quiche.

C perfringens was isolated from sliced ham and sliced turkey at the restaurant. Isolations of *Staphylococcus aureus* and *Bacillus cereus* were also recorded during monitoring of food quality.

Deficiencies in food handling practices appear to be implicated in this outbreak. Infected staff were not permitted to return to work until three consecutive stool samples, taken over approximately a ten day period, were negative.

No further cases of food poisoning have been diagnosed since the restaurant resumed full operations.

A total of 608 *S anatum* cases have been diagnosed over the past 25 years in Western Australia; 202 of these were recorded in the metropolitan area including 51 cases diagnosed amongst immigrants. *S anatum* is the fourth commonest serotype isolated from humans and has been implicated in two previous institutional type outbreaks in Perth involving a total of 38 persons.

Non-human isolations of *S anatum* include raw meats, offal, sausages, casings, salamis, prawns, pet meats, animal feeds, poultry and litter, feral pigs, goats, buffalo, brumbies, livestock, domestic pets, reptiles, marsupials and birds. Environmental sources comprise water catchment storage and supply, rivers, ponds, sewerage, abattoir and meat process effluents.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

TOTAL VIRAL ISOLATIONS BASED ON DATE OF COLLECTION
PERIOD - FORTNIGHTLY
VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

Period 21-3-88 to 3-4-88

1. CODE 019 - FAIRFIELD(VIC)
2. CODE 065 - STATE LAB(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	2	2	1	0	1	7	1	14	28
0101	ADENOVIRUS TYPE 1	0	0	0	4	1	0	0	0	5
0102	ADENOVIRUS TYPE 2	0	1	0	4	0	0	0	0	5
0103	ADENOVIRUS TYPE 3	0	0	0	0	7	0	0	0	7
0106	ADENOVIRUS TYPE 6	1	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	2	0	0	0	0	2
0201	INFLUENZA A VIRUS	0	2	0	0	2	3	0	1	8
0203	INFLUENZA B VIRUS	0	0	0	0	1	1	0	0	2
0301	PARAINFLUENZA VIRUS TYPE 1	1	0	0	9	0	0	0	1	11
0302	PARAINFLUENZA VIRUS TYPE 2	0	0	0	1	2	0	0	0	3
0303	PARAINFLUENZA VIRUS TYPE 3	2	1	4	1	1	0	1	0	10
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	5	1	0	4	0	2	4	16
0500	RHINOVIRUS (ALL TYPES)	2	0	1	12	2	0	1	1	19
0600	MYCOPLASMA PNEUMONIAE	2	1	2	6	43	7	1	10	72
0700	ORNITHOSIS-PSITTACOSIS	0	0	1	0	4	1	0	0	6
0809	COXSACKIEVIRUS A9	2	0	0	2	0	0	0	2	6
0904	COXSACKIEVIRUS B4	0	0	0	1	0	0	0	0	1
0905	COXSACKIEVIRUS B5	1	0	0	1	0	0	0	0	2
1005	ECHOVIRUS TYPE 5	0	1	0	0	0	0	0	0	1
1009	ECHOVIRUS TYPE 9	0	0	0	0	1	0	0	0	1
1018	ECHOVIRUS TYPE 18	0	0	0	1	0	0	0	0	1
1100	POLIOVIRUS NOT TYPED	0	0	0	8	0	3	0	2	13
1101	POLIOVIRUS TYPE 1	0	0	1	0	2	0	0	0	3
1102	POLIOVIRUS TYPE 2	0	0	0	0	1	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	0	2	0	0	27	5	0	0	34
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	7	0	0	0	0	4	0	11
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	5	3	8	1	18	2	0	6	43
1303	VARICELLA-ZOSTER VIRUS	1	2	0	0	3	4	0	2	12
1306	HERPES SIMPLEX TYPE 1	35	18	22	0	2	0	0	32	109
1307	HERPES SIMPLEX TYPE 2	74	33	16	0	2	0	0	80	205
1399	HERPES VIRUS TYPING PENDING	0	0	0	2	0	0	0	0	2
1401	COXIELLA BURNETI	0	0	1	0	15	1	0	5	22
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	0	8	6	0	21	35
1521	MEASLES VIRUS	0	0	0	1	0	1	0	0	2
1522	RUBELLA VIRUS	0	0	1	0	8	1	0	0	10
1532	HEPATITIS B ANTIGEN	1	3	23	0	43	4	3	38	115
1535	HEPATITIS A ANTIBODY	0	2	1	0	4	0	0	1	8
1541	CHLAMYDIA A - C. TRACHOMATIS	16	8	52	0	26	2	0	24	128
1556	CMV - CYTOMEGALOVIRUS	18	2	1	1	23	4	0	6	55
1564	ROTAVIRUS	4	0	0	2	0	7	3	0	16
1599	ENTEROVIRUS TYPING PENDING	0	0	0	6	0	5	1	0	12
9992	ROSS RIVER VIRUS	2	1	0	0	0	0	0	28	31
9994	SMALL VIRUS (LIKE) PARTICLE	0	2	0	0	0	0	1	0	3
9998	ARBO. GROUP B. (UNSPECIFIED)	0	0	0	0	0	0	0	1	1
TOTAL		169	96	136	65	251	64	18	279	1078

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1.

Period 21-3-88 to 3-4-88

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 TRA CT
11. CODE 06 ... - SKIN MUCOUS

		1	2	3	4	5	6	7	8	9	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	0	13	0	0	0	0	11	0	0	1	0	25
0101	ADENOVIRUS TYPE 1	1	1	0	0	0	0	0	0	0	0	0	2
0102	ADENOVIRUS TYPE 2	0	4	0	0	0	0	1	0	0	0	0	5
0103	ADENOVIRUS TYPE 3	1	1	0	0	0	0	2	0	0	0	0	4
0106	ADENOVIRUS TYPE 6	0	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	2	0	0	0	0	0	0	0	0	0	2
02[redacted]	INFLUENZA A VIRUS	2	3	0	0	0	0	0	0	0	0	0	5
02[redacted]	INFLUENZA B VIRUS	1	1	0	0	0	0	0	0	0	0	0	2
0301	PARAINFLUENZA VIRUS TYPE 1	0	11	0	0	0	0	0	0	0	0	0	11
0302	PARAINFLUENZA VIRUS TYPE 2	0	3	0	0	0	0	0	0	0	0	0	3
0303	PARAINFLUENZA VIRUS TYPE 3	1	9	0	0	0	0	0	0	0	0	0	10
0400	RESPIRATORY SYNCYTIAL VIRUS (R	2	14	0	0	0	0	0	0	0	0	0	16
0500	RHINOVIRUS (ALL TYPES)	1	17	0	0	0	0	0	0	0	0	0	18
0600	MYCOPLASMA PNEUMONIAE	9	56	0	0	0	1	0	0	0	0	0	66
0700	ORNITHOSIS-PSITTACOSIS	0	4	0	0	0	0	0	0	0	0	0	4
0809	COXSACKIEVIRUS A9	0	0	0	4	0	0	2	0	0	0	0	6
0904	COXSACKIEVIRUS B4	0	1	0	0	0	0	0	0	0	0	0	1
0905	COXSACKIEVIRUS B5	0	1	0	1	0	0	0	0	0	0	0	2
1005	ECHOVIRUS TYPE 5	0	0	0	0	0	0	1	0	0	0	0	1
1009	ECHOVIRUS TYPE 9	0	0	0	0	0	0	1	0	0	0	0	1
1018	ECHOVIRUS TYPE 18	0	0	0	0	0	0	0	0	0	0	1	1
1100	POLIOVIRUS NOT TYPED	0	1	0	1	0	0	4	0	1	0	0	7
1101	POLIOVIRUS TYPE 1	0	2	0	0	0	0	1	0	0	0	0	3
1102	POLIOVIRUS TYPE 2	0	0	0	1	0	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	10	2	0	0	0	1	0	0	1	0	10	24
1301	HERPES SIMPLEX VIRUS - NOT TYP	0	0	0	0	0	0	0	0	0	0	9	9
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	7	4	0	0	0	1	0	0	0	0	0	12
1303	VARICELLA-ZOSTER VIRUS	2	0	0	0	0	0	0	0	0	0	7	9
1306	HERPES SIMPLEX TYPE 1	1	7	0	0	0	0	0	0	0	1	47	56
1307	HERPES SIMPLEX TYPE 2	10	0	0	0	0	0	0	0	0	0	46	56
1399	HERPES VIRUS TYPING PENDING	0	0	1	1	0	0	0	0	0	0	0	2
1401	COXIELLA BURNETI	4	0	0	0	0	0	0	0	0	0	0	4
15[redacted]	PICORNIA VIRUS - NOT TYPED = E	0	7	0	0	2	3	11	0	0	0	5	28
1521	MEASLES VIRUS	0	0	0	0	0	1	0	0	0	0	1	2
1522	RUBELLA VIRUS	2	1	0	0	0	0	0	0	0	0	2	5
1532	HEPATITIS B ANTIGEN	44	0	0	0	0	0	0	58	0	0	1	103
1535	HEPATITIS A ANTIBODY	0	0	0	0	0	0	0	7	0	0	0	7
1541	CHLAMYDIA A - C. TRACHOMATIS	14	0	0	0	0	0	0	0	0	0	0	14
1556	CMV - CYTOMEGALOVIRUS	4	7	1	0	0	0	1	0	0	3	0	16
1564	ROTAVIRUS	0	0	0	0	0	0	16	0	0	0	0	16
1599	ENTEROVIRUS TYPING PENDING	0	2	0	4	0	0	5	0	0	0	1	12
9992	ROSS RIVER VIRUS	8	0	0	0	0	0	0	0	0	0	2	10
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	0	3	0	0	0	0	3
9993	ARBO. GROUP B. (UNSPECIFIED)	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL		125	174	2	12	2	7	60	65	2	5	132	586

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2.

Period 21-3-88 to 3-4-88

12. CODE 10 - EYE
13. CODE 59 - GENITAL
14. CODE 39 - ENDOCRINE/SALIVARY GL.
15. CODE 36 - RETICULO-ENDOTHELIAL
16. CODE 29 - MUSCLE/JOINT
17. CODE 69 - CONGENTIAL
18. CODE P3 - PUO
19. CODE G3 - FEVER/MALAISE
20. CODE 09 - OTHER
21. CODE A1 - SIDS

		12	13	14	15	16	17	18	19	20	21	TOTAL
0100	ADENOVIRUS NOT TYPED	1	0	0	0	0	0	0	1	1	0	3
0101	ADENOVIRUS TYPE 1	2	0	0	0	0	0	0	0	0	1	3
0103	ADENOVIRUS TYPE 3	2	0	0	0	0	0	0	0	1	0	3
0201	INFLUENZA A VIRUS	0	0	0	0	0	0	1	1	1	0	3
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	1	0	0	0	1
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	1	0	1	0	4	0	6
0700	ORNITHOSIS-PSITTACOSIS	0	0	0	0	0	0	1	0	1	0	2
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	1	0	0	0	5	6
1300	HERPES VIRUS GROUP - NOT TYPED	2	5	1	0	0	0	0	0	2	0	10
1301	HERPES SIMPLEX VIRUS - NOT TYP	1	0	0	1	0	0	0	0	0	0	2
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	1	0	12	0	1	0	1	7	9	0	31
1303	VARICELLA-ZOSTER VIRUS	0	0	0	0	1	0	0	1	1	0	3
1306	HERPES SIMPLEX TYPE 1	4	44	1	0	0	0	0	0	4	0	53
1307	HERPES SIMPLEX TYPE 2	0	147	0	0	1	0	0	0	1	0	149
1401	COXIELLA BURNETI	0	0	0	0	0	0	9	5	4	0	18
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	1	0	0	1	1	0	4	0	7
1522	RUBELLA VIRUS	0	0	2	0	1	0	0	0	2	0	5
1532	HEPATITIS B ANTIGEN	0	0	0	0	0	0	0	0	12	0	12
1535	HEPATITIS A ANTIBODY	0	0	0	0	0	0	0	0	1	0	1
1541	CHLAMYDIA A - C. TRACHOMATIS	2	112	0	0	0	0	0	0	0	0	114
1556	CMV - CYTOMEGALOVIRUS	2	2	4	1	0	1	4	6	19	0	39
9992	ROSS RIVER VIRUS	0	0	0	0	17	0	0	3	1	0	21
TOTAL		17	310	21	2	22	3	19	24	68	6	492