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Contents:

Editor Dr I.F. Cook

VIRUSES, CHLAMYDIAS, COXIELLAS, RICKETTSIAS AND MYCOPLASMAS REPORTING SCHEME: A total of 1551 reports were processed during this period.

Six cases of Q fever were reported during this period. All were males between 17 and 38 years of age. No occupational exposure details were provided.

An additional fourteen reports of the isolation of echovirus type 30 in Victoria were received during this period. Ten of the fourteen patients were adults between 21 and 32 years of age. All except for a 9 day old infant exhibited symptoms of meningeal infection; most isolates were from cerebrospinal fluid samples.

Cytomegalovirus was isolated from a saliva swab from a 76 year old female with phrenic nerve palsy.

Respiratory syncytial virus was isolated from a nasopharyngeal aspirate from a 2 year old female with encephalitis.

Rotavirus was identified by latex agglutination in the faeces of a one week old female with diarrhoea and rectal bleeding.

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MUMPS IN THE WORKPLACE - CHICAGO
(Based on MMWR (1988) 37: 533-538)

Between 18 August and 25 December 1987, 116 employees at three futures exchanges in Chicago developed clinically diagnosed mumps (Figure 1). (A case of mumps was defined as the acute onset of facial or jaw swelling (parotitis) lasting over 2 days or as acute epididymo-orchitis without parotitis). Three cases subsequently occurred in household contacts of affected exchange employees. Twenty-one persons developed complications; nine were hospitilised.

In September 1987, the employee health nurse at one of Chicago's four futures exchanges notified the Chicago Department of Health (CDOH) of a cluster of mumps cases among employees. Of the 119 cases subsequently identified among employees of three exchanges and their household contacts, three patients were tested for and had mumps-specific IgM antibody. Seventy-six cases occurred in persons working at exchange A; 39 cases, in persons at exchange B; and one case, in a person at exchange C.

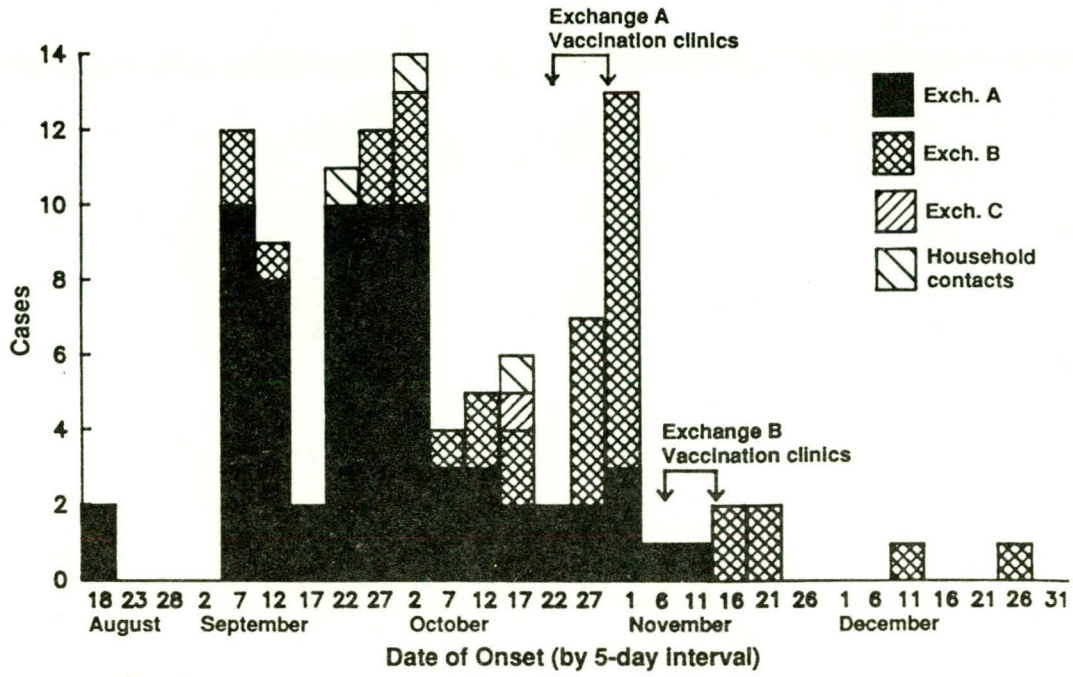
Eighty-two (69%) of the affected exchange employees completed questionnaires. Two men at exchange A reported the onset of facial swelling on 18 August. One was a 23-year-old phone clerk; the other a 30-year-old trader working in a different area of the exchange. The first case at exchange B occurred in a 27-year-old man who had no known contact with any exchange A employee with mumps; he had onset of facial swelling on 6 September. The only case at exchange C occurred in a 29-year-old woman whose facial swelling developed on 13 October; she had no known contact with anyone with mumps from exchanges A or B.

Cases at exchanges A, B, and C could not be epidemiologically linked. Based on a median incubation period of 16-18 days, up to eight generations of cases occurred at exchanges A and B (Figure 1).

Because some employees work at multiple exchanges, the actual numbers of persons at risk, their ages, and their genders were not known for each of the exchanges. Based on estimates by exchange officials of the population at risk (approximately 7,300 persons at each of exchanges A and B), the crude attack rate for exchange A (10 cases/1,000 workers) was twice that of exchange B (5 cases/1,000 workers). No denominator estimates were available for exchange C.

Age was known for 104 of the 119 patients and ranged from 17 to 70 years (median: 25 years). Persons under 30 years of age accounted for 77% of the cases. By comparison, during January to July 1987 (a period of widespread mumps activity in Chicago and its six metropolitan counties) 106 cases were reported in persons 20 years of age or older. In the futures exchanges, almost twice as many men (79) as women (40) developed mumps. Of 92 patients for whom race/ethnicity was known, 84 (91%) were white, non-Hispanic, 7 (8%) were black, and one was Hispanic. Although demographic data were not available for the population at risk, it was predominantly young, male, and white. Of the 99 patients for whom occupation was known, 94 (95%) worked on the trading floor.

Figure 1: Reported mumps cases, by date of onset* - Chicago futures exchanges, August - December 1987



*Date of onset not available for seven patients in exchange A and five patients in exchange B.

Although more than one third of the 82 patients for whom information was available believed they had previously been vaccinated against mumps, only three could provide an immunisation record as documentation. Almost three quarters of the patients had attended elementary or secondary school in Illinois, which did not have a mumps immunisation law for school attendees until 1987.

In cooperation with exchanges A and B, the CDOH sponsored four voluntary vaccination clinics during the outbreak (Figure 1). Four hundred and fifty-one doses of monovalent mumps vaccine were administered free of charge to nearly 6% of the workers at the two exchanges. The number of vaccinated persons who were actually susceptible was not known.

Twenty-three complications occurred in 21 patients (Table 1). Fifteen (31%) of the 48 ill men reported epididymo-orchitis that lasted an average of 9 days (range: 2-21 days). One of two cases of pancreatitis and one case of aseptic meningitis occurred in men with epididymo-orchitis. One case each of oophoritis and arthritis was reported.

Three women with mumps were pregnant; one developed premature labor that was subsequently arrested.

Nine (11%) of the 82 patients for whom data are available required hospitalisation for a total of 41 days (range: 1-9 days; mean: 5 days) (Table 1). Epididymo-orchitis was responsible for four of nine hospital admissions.

Direct costs associated with health-care visits, medications, and hospitalisations for mumps were US$56,406. Seventy-eight employees for whom data were available missed a total of 538 days of work (median: 7 days). The average cost per case was US$1,473 (Table 2).

Table 1: Clinical findings of 21 persons with complications of mumps - Chicago futures exchanges, August - December 1987

Complication	No. persons	No. hospitalised	Total days hospitalised
Epididymo-orchitis	15	4	17
Pregnancy-related	2	2	8
Premature labor, infant with pneumonia	(1)	(1)	
First trimester pregnancy with dehydration	(1)	(1)	
Pancreatitis	2*	1*	4
Meningitis	1**	1**	9
Arthritis	1		
Oophoritis	1		
Parotitis (hospitalised)	1	1	3
Total	21	9	41

* One patient also had epididymo-orchitis.

** Patient also had epididymo-orchitis.

Table 2: Costs associated with mumps outbreak - Chicago futures exchanges, August - December 1987.

Cost category	Costs US$	Cost per case (N=82) US$	Total No.
Direct costs	$ 56,406	$ 688	
Health-care visits	$ 7,440		108
Days of hospitalisation	$ 32,918		41
Medications	$ 749		22
Outbreak control:			
Person-hours personnel	$ 11,817		284
Doses of mumps vaccine	$ 3,483		779
Indirect costs	$ 64,332	$ 785	
Workdays missed			538*
Total	$120,738	$1,473	

*Data available on 78 persons

MMWR Editorial Note

Since licensure of live-virus mumps vaccine in 1967, the United States has made great strides in the control of mumps. Reported cases of mumps declined to a record low of 2,982 in 1985 (1.2 cases/100,000 population), a 98% decrease from the 152,000 reported in 1968, the year mumps became a nationally notifiable disease. In 1986, however, the number of reported cases more than doubled (7,790 mumps cases; 2.8 cases/100,000), a trend that continued in 1987, when the total was almost 12,900 cases. In the first 30 weeks of 1988, 3,166 cases have been reported, a 67% decrease from the same period in 1987.

Recent outbreaks have occurred in high schools and on college campuses, reflecting a change in the epidemiology of mumps and a shift in risk from elementary school-aged children to adolescents and young adults [1-4]. During 1986-1987, 183 cases of clinically diagnosed mumps were reported from outbreaks at 10 Illinois colleges and universities [1,5]. The increase in mumps cases in adolescents and young adults is particularly important in view of the more severe illness, higher frequency of complications, and greater costs associated with mumps in these age groups than in younger persons [4-8].

The types and rates and complications found during this investigation were similar to those found in other studies. For example, epididymo-orchitis affects 10%-38% of postpubertal males with mumps [6]. The incidence of laboratory-verified aseptic meningitis increases with age and affects an estimated 0.6% of mumps cases in persons 20 years of age or older [9]. Clinically symptomatic meningitis, charactised by headache and neck stiffness, is considerably more common. Mumps illness during the first trimester of pregnancy has been associated with an increased rate of spontaneous abortion possibly because of its effect on hormonal function of the placenta [10].

Benefit-cost analyses have shown that US$7-$14 are saved for every dollar spent on mumps prevention [11,12]. In the futures exchanges outbreak, the nearly US$1,500 cost for each mumps case contrasted dramatically with the cost of mumps vaccine, US$4.47/dose in the public sector and US$8.80/dose in the private sector in Chicago.

The age-specific changes in mumps epidemiology observed since vaccine licensure are similar to those noted for measles and rubella and reflect a vaccination policy oriented toward preschool and elementary school children. Although mumps vaccine was licensed in December 1967, it was less widely distributed than measles and rubella vaccines because of its relative expense and its lower public health priority. (The mumps component makes up slightly more than half of the cost of combined measles-mumps-rubella (MMR) vaccine). Mumps vaccine was not recommended for universal use in children up to 12 months of age until 1977. Consequently, during 1967-1977, when the use of mumps vaccine was less prevalent, children may have had less exposure to mumps virus and no opportunity to receive mumps vaccine. As a result, a cohort of unvaccinated young adults may have remained susceptible as they entered the work force.

Direct evidence from field evaluations of vaccine efficacy and indirect evidence from vaccine use suggest that the failure to vaccinate susceptible persons, rather than vaccine failure or waning immunity, led to this outbreak[3,4]. Most cases at the futures exchanges were reported in unvaccinated young adults, most of whom had been born and educated in Illinois, a state that until recently lacked a mumps immunisation school law.

The effectiveness of school immunisation laws in reducing the incidence of mumps has been consistently demonstrated[2,4,13]. Illinois adopted comprehensive legislation in 1987 requiring mumps immunisation for children enrolling from kindergarten to grade 12. Such legislation is unlikely to markedly affect the current cohort of susceptible older adolescents and young adults but will probably reduce the number of mumps cases among school attendees and among future cohorts of young adults.

Closed environments such as the trading floors of the Chicago futures exchanges facilitate contact with respiratory secretions and person-to-person transmission of mumps. A peak in the number of mumps cases corresponded to the surge in futures trading activity that preceded the 19 October 1987 market decline (Figure 1). Anecdotal information from interviews with patients suggests that the intense activity at the futures exchanges may have encouraged some employees with mumps to work despite their illness, thus possibly exposing susceptible co-workers to mumps. Furthermore, the peak infectiousness of mumps occurs during the 48 hours before the onset of overt clinical illness[14]. Outbreaks of mumps in the prevaccine era characteristically occurred in closed populations such as prisons, orphanages, and among classes of military recruits[15]. Whether outbreaks similar to the Chicago one will occur in other workplace settings will depend on the mumps susceptibility of the work force and the nature of the workplace setting.

The outbreak among the Chicago futures exchanges was costly and could have been averted. It should alert both employers and the health-care community to have existence of mumps in adults and should remind persons of the need to have documented immunity to mumps. Furthermore, employers should report promptly to public health authorities cases of suspected mumps among employees. Current US recommendations for measles vaccination of adults assume that most persons born before 1957 were likely to have been naturally infected and thus generally do not require routine measles immunisation[16]. Based on the pattern of gradual introduction of mumps vaccine into use since 1967 and the preponderance of adult mumps cases in persons under 30 years of age, it may be both useful and practical to follow a similar guideline as that used for measles as a means of preventing other mumps outbreaks in adult populations.

CDI Editorial Comment

In Australia, monovalent mumps vaccine was incorporated into the National Health & Medical Research Council's (NH&MRC) routine immunisation schedule in late 1980[17] (amended to the combined measles/mumps vaccine in mid 1981[18,19] and to the combined measles/mumps/rubella vaccine in 1987[20]). However, neither mumps vaccine nor measles/mumps vaccine was available in any sizeable quantity in Australia until early 1984[21].

In addition, NH&MRC has consistently recommended that immunisation status be checked on school entry[22-26]. Only Victoria has a legal requirement that immunisation history be checked in primary schools. In South Australia a similar system has been proposed. The ACT has an ordinance requiring immunisation for children in long day-care and private preschools. Other state and territory health ministers are currently investigating the implementation of such a system, with exemptions on defined medical, religious or personal grounds. This has resulted from a resolution of the Australian Health Ministers Conference. A number of medical associations such as the Royal College of General Practitioners and the College of Physicians have publicly stated their support for the introduction of compulsory immunisation.

Although NH&MRC recommends mumps vaccination for susceptible children over 12 months of age, adolescents and adults[19,27], the majority of those currently vaccinated against mumps are under 6 years of age. Examination of data provided by contributing hospital laboratories to the CDI reporting scheme has shown a definite reduction in the numbers of mumps cases from 1985 onwards. However, it is still too early to comment on any demographic changes which may have resulted from mumps immunisation, in view of the limited data available.

Due to the high risk of acquiring mumps infection in Australia, it is recommended that any person over 1 year of age be vaccinated against mumps unless they have had medical practitioner documented mumps or have been previously vaccinated against this disease.

REFERENCES

1. MMWR (1987) 36: 496-8,503-5.
2. MMWR (1987) 36: 151-5.
3. Wharton M, Cochi SL, Hutcheson RH, Bistowish JM, Schaffner W. A large outbreak of mumps in the post-vaccine era. J Infect Dis (in press).
4. Am J Dis Child (1988) 142: 499-507.
5. Sosin DM, Cochi SL, Jennings CE, Preblud SR. Mumps outbreaks on university campuses; a new lesson for higher education. Presented at the 115th annual meeting of the American Public Health Association, New Orleans, Louisiana, 18-22 October, 1987.
6. Mayo Clin Proc (1977) 52: 3-7.
7. Am J Hyg (1959) 69: 91-111.
8. Pediatrics (1985) 76: 533-6.
9. Pediatrics (1978) 62: 965-9.
10. N Engl J Med (1966) 274: 768-71.
11. Am J Dis Child (1982) 136: 362-4.
12. Am J Public Health (1985) 75: 739-44.
13. JAMA (1987) 257: 2455-8.
14. N Engl J Med (1968) 279: 1357-61.
15. Feldman HA. Mumps. In: Evans AS, ed. Viral infections of humans: epidemiology and control. 2nd edition New York: Plenum Medical Book Co., 1982: 419-430.
16. MMWR (1987) 36: 409-18, 423-5.
17. Report of the Session (NH&MRC) 1980 90: 20.
18. Report of the Session (NH&MRC) 1981 91: 18.
19. NH&MRC Immunisation Procedures, Second edition 1982. p5-6, 12-14.

20. Report of the Session (NH&MRC) 1987 Nov. 104 (in press).
21. CSL, personal communication.
22. Report of the Session (NH&MRC) 1982 93: 17.
23. Report of the Session (NH&MRC) 1983 96: 25.
24. Report of the Session (NH&MRC) 1984 97: 25.
25. Report of the Session (NH&MRC) 1985 100: 29.
26. Report of the Session (NH&MRC) 1987 103 (in press).
27. NH&MRC Immunisation Procedures, Third edition 1986 p23-25.

AIDS UPDATE - INTERNATIONAL

(Based on WER (1988) 63: 277-278)

Country/Area	Number of cases	Date of report
Africa		
Algeria	13	26.03.88
Angola	60	31.03.88
Benin	12	30.06.88
Botswana	16	27.01.88
Burkina Faso	26	30.06.87
Burundi	1 408	30.06.88
Cameroon	25	05.01.88
Cape Verde	4	30.04.87
Central African Republic	432	15.06.88
Chad	7	15.06.88
Comoros	1	31.05.88
Congo	1 250	31.12.87
Côte d'Ivoire	250	20.11.87
Djibouti	—	01.10.87
Egypt	6	30.07.88
Equatorial Guinea	—	16.05.88
Ethiopia	45	31.05.88
Gabon	18	31.03.88
Gambia	9	03.06.88
Ghana	145	25.05.87
Guinea	10	22.07.88
Guinea-Bissau	29	15.06.88
Kenya	2 097	31.03.88
Lesotho	2	27.11.87
Liberia	2	11.03.88
Libyan Arab Jamahiriya	—	31.12.87
Madagascar	—	25.04.87
Malawi	583	31.10.87
Mali	29	14.01.88
Mauritania	—	15.06.88
Mauritius	1	09.06.88
Morocco	12	15.06.88
Mozambique	9	06.05.88
Niger	9	14.10.87
Nigeria	11	31.03.88
Reunion	3	28.04.88
Rwanda	987	31.03.88
Sao Tomé and Principe	1	11.02.88
Senegal	131	09.06.88
Seychelles	—	13.11.86
Sierra Leone	3	04.05.88
Somalia	—	31.12.87
South Africa	120	19.04.88
Sudan	82	15.06.88
Swaziland	7	01.07.87
Togo	2	15.06.88
Tunisia	21	30.07.88
Uganda	4 006	15.06.88
United Republic of Tanzania	1 608	17.10.87
Zaire	335	30.06.87
Zambia	993	05.08.88
Zimbabwe	119	30.04.88
Total	**14 939**	
Americas		
Anguilla	—	31.03.88
Antigua and Barbuda	3	30.06.87
Argentina	163	31.03.88
Bahamas	188	31.03.88
Barbados	55	31.12.87
Belize	7	31.12.87
Bermuda	75	30.09.87
Bolivia	6	22.01.88

Country/Area	Number of cases	Date of report
Americas *(contd)* —		
Brazil	2 956	02.04.88
British Virgin Islands	—	31.03.87
Canada	1 809	30.06.88
Cayman Islands	3	31.12.87
Chile	69	31.03.88
Colombia	174	31.12.87
Costa Rica	65	31.05.88
Cuba	27	31.12.87
Dominica	4	31.12.87
Dominican Republic	504	31.03.88
Ecuador	39	31.03.88
El Salvador	23	31.12.87
French Guiana	113	31.03.88
Grenada	8	31.12.87
Guadeloupe	74	31.12.87
Guatemala	34	31.12.87
Guyana	14	31.12.87
Haiti	1 374	31.03.88
Honduras	109	31.03.88
Jamaica	56	31.03.88
Martinique	38	31.12.87
Mexico	1 302	01.04.88
Montserrat	—	30.09.87
Nicaragua	—	31.12.87
Panama	30	31.12.87
Paraguay	8	31.12.87
Peru	69	31.12.87
Saint Kitts and Nevis	1	30.09.87
Saint Lucia	10	31.12.87
Saint Vincent and the Grenadines	8	31.12.87
Suriname	9	31.12.87
Trinidad and Tobago	227	31.12.87
Turks and Caicos Islands	5	31.12.87
United States of America	71 171	29.08.88
Uruguay	24	01.06.88
Venezuela	140	31.12.87
Total	**80 994**	
Asia		
Afghanistan	—	31.12.87
Bahrain	—	11.07.88
Bangladesh	—	15.06.88
Bhutan	—	14.04.87
Brunei Darussalam	—	08.09.87
Burma	—	14.04.87
China	3	31.07.88
China (Province of Taiwan)	1	26.01.86
Cyprus	5	30.07.88
Democratic People's Republic of Korea	—	10.05.88
Democratic Yemen	—	31.12.87
Hong Kong	12	26.04.88
India	9	09.05.87
Indonesia	3	30.07.88
Iran (Islamic Republic of)	—	31.12.87
Iraq	—	31.12.87
Israel	65	30.06.88
Japan	80	18.05.88
Jordan	3	01.07.88

Country/Area	Number of cases	Date of report
Asia *(contd)*		
Kuwait	1	31.12.87
Lebanon	5	31.12.87
Malaysia	3	31.01.88
Maldives	—	30.06.87
Mongolia	—	30.06.88
Nepal	—	15.06.88
Oman	6	30.04.88
Pakistan	5	30.07.88
Philippines	15	11.07.88
Qatar	32	31.12.87
Republic of Korea	3	23.04.88
Singapore	4	31.01.88
Sri Lanka	1	19.05.88
Syrian Arab Republic	4	30.07.88
Thailand	8	01.07.88
Turkey	9	31.05.88
Viet Nam	—	08.09.87
Yemen	—	31.12.87
Total	277	
Europe		
Albania	—	31.03.88
Austria	202	08.08.88
Belgium	368	30.06.88
Bulgaria	3	30.06.88
Czechoslovakia	11	30.06.88
Denmark	301	31.07.88
Finland	32	30.06.88
France	4 211	30.06.88
German Democratic Republic	6	30.06.88
Germany, Federal Republic of	2 307	31.07.88
Greece	127	30.06.88
Hungary	13	31.07.88
Iceland	6	30.06.88
Ireland	49	30.06.88

Country/Area	Number of cases	Date of report
Europe *(contd)*		
Italy	2 233	31.07.88
Luxembourg	12	30.06.88
Malta	12	30.06.88
Monaco	1	31.12.87
Netherlands	564	01.08.88
Norway	89	31.07.88
Poland	3	05.08.88
Portugal	152	31.07.88
Romania	8	30.06.88
San Marino	—	18.02.88
Spain	1 471	30.06.88
Sweden	214	31.07.88
Switzerland	502	30.06.88
USSR	4	30.06.88
United Kingdom	1 669	05.08.88
Yugoslavia	40	30.06.88
Total	14 610	
Oceania		
Australia	943	02.08.88
Cook Islands	—	08.09.87
Fiji	—	08.09.87
French Polynesia	1	31.01.88
Kiribati	—	18.01.88
Mariana Islands	—	05.08.87
New Caledonia and Dependencies	—	08.09.87
New Zealand	85	08.07.88
Papua New Guinea	4	01.08.88
Samoa	—	14.07.88
Solomon Islands	—	08.09.87
Tonga	1	06.10.87
Tuvalu	—	08.09.87
Vanuatu	—	05.07.88
Total	1 034	
World total	111 854	

Note: Thailand has revised its previous report of 12 cases to 8 cases.

NUMBER OF SEX PARTNERS AND POTENTIAL RISK OF SEXUAL EXPOSURE TO HUMAN IMMUNODEFICIENCY VIRUS

(Based on MMWR (1988) 37:565-568)

Human immunodeficiency virus type 1 (HIV-1) and other sexually transmitted diseases (STDs) are spread from infected persons to their sex partners during unprotected sexual exposures[1]. The US Public Health Service estimates that between 945,000 and 1,410,000 Americans have been infected with HIV-1[2], but the number of Americans at risk because of unprotected sexual exposures is unknown. Estimates of current levels of sexual activity are based in part on a survey of sexual behaviour conducted 40 years ago[3].

The National Opinion Research Center (NORC) has been conducting an annual General Social Survey (GSS) on important social issues since 1972[4]. From 14 February to 25 April 1988, face-to-face interviews were conducted with a probability sample of adults (18 or more years of age) residing in US households. At the conclusion of the GSS interview, NORC interviewers asked respondents to complete and return in a sealed envelope a one-page self-administered questionnaire that included the following questions:

. How many sex partners have you had in the last 12 months?
. Was one of the partners your husband or wife or regular sex partner?
. If you had other partners, please indicate all categories that apply to them: close personal friend; neighbour, co-worker, or long-term acquaintance; casual date or pick-up; person you paid or [who] paid you for sex; other.
. Have your sex partners in the last 12 months been exclusively male, both male and female, or exclusively female?

The GSS response rate in 1988 was 77.3%; 93.9% of the 1,481 respondents answered the question about number of sex partners in the past 12 months (Table 1). Overall, 21.5% said they had no sex partner in the past 12 months, 59.6% said one, 10.6% said two to four, 2.2% said five or more, and 6.1% did not answer the question. Six percent of the 638 men and 1.2% of the 843 women indicated that at least one of their sex partners in the past 12 months was a casual date or pick-up. Four (0.6%) men and no women reported that at least one of their partners was a person you paid or [who] paid you for sex.

Of the 504 men who reported having one or more sex partners within the past 12 months, 14 (2.8%) reported their partners were exclusively male, two (0.4%) indicated their partners included males and females, 460 (91.3%) indicated their partners were exclusively female, and 28 (5.6%) did not answer this question. Of the 14 men who said they had sexual intercourse with male partners exclusively, 10 reported one partner in the past 12 months, two reported three partners, one reported four partners, and one reported between 21 and 100 partners. Six of the 16 men with homosexual exposures said they were married at the time of interview, eight had never married, and two had been married previously. Of the 567 women who reported having one or more partners within the past 12 months, one (0.2%) reported her partners were exclusively female, 541 (95.4%) reported their partners were exclusively male, and 25 (4.4%) did not answer this question.

MMWR Editorial Note:

Many epidemiological models of the sexual transmission of HIV-1 [5] and other STDs [6] require estimates of the average rate of acquiring new sex partners per unit of time. These estimates can be obtained from reliable data on the number of sex partners reported by men and women classified by age and marital status. The distributions reported in the GSS suggest that the vast majority of the US population has no or only one sex partner within a year; thus, most Americans appear to be at relatively low risk of infection with HIV-1 and other STDs from sexual exposures.

However, a sizeable percentage of young, never-married men report more than 10 partners in the past 12 months: 4.6% of those aged 18-29 years and 2.9% of those aged 30-44 years. When these percentages are applied to the total number of such men in the United States [7], over 700,000 single men 18-29 years and over 100,000 single men 30-44 years may have 10 or more partners per year and hence appear to be at considerable risk of sexual exposure to HIV-1 and other STDs.

Table 1: Percentage of respondents reporting numbers of sex partners in the past 12 months, by marital status, sex, and age group of respondent - General Social Survey (GSS), 1988

All respondents

Men (%)

No. partners	18–29 (n=165)	30–44 (n=231)	45–60 (n=110)	≥61 (n=132)	Total (n=638)
0	9.7	8.2	16.4	30.3	14.6
1	46.1	71.0	64.6	60.6	61.3
2	9.1	5.6	6.4	0.8	5.6
3	9.7	3.9	1.8	2.3	4.7
4	6.1	2.6	0.9	2.3	3.1
5–10	8.5	1.3	0.9	0	2.8
>10	3.0	0.9	1.8	0	1.4
No answer	7.9	6.5	7.3	3.8	6.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Women (%)

No. partners	18–29 (n=191)	30–44 (n=252)	45–60 (n=151)	≥61 (n=245)	Total (n=843)*
0	7.3	7.1	28.5	60.8	26.7
1	66.0	77.8	62.9	29.8	58.2
2	13.1	5.2	2.6	0.8	5.2
3	4.2	4.8	0.7	0	2.5
4	2.1	0.8	0	0	0.7
5–10	1.0	0.4	0	0.4	0.5
>10	0	0.4	0.7	0	0.2
No answer	6.3	3.6	4.6	8.2	5.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Married spouse in the household

Men (%)

No. partners	18–29 (n=50)	30–44 (n=156)	45–60 (n=79)	≥61 (n=93)	Total (n=378)
0	3.8	8.9	20.4	8.5	
1	80.0	87.2	78.5	74.2	81.2
2	2.0	2.6	3.8	0	2.1
3	4.0	0	1.3	1.1	1.1
4	2.0	0	0	1.1	0.5
5–10	0	0.6	1.3	0	0.5
>10	0	0	1.3	0	0.3
No answer	12.0	5.8	5.1	3.2	5.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Women (%)

No. partners	18–29 (n=84)	30–44 (n=143)	45–60 (n=82)	≥61 (n=98)	Total (n=410)
0	3.5	7.3	24.5	8.8	
1	89.3	91.6	85.4	65.3	82.9
2	3.6	0	0	1.0	1.0
3	2.4	0	0	0	0.5
4	0	0	0	0	0
5–10	0	0	0	1.0	0.2
>10	0	0	1.2	0	0.2
No answer	4.8	4.9	6.1	8.2	6.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

No longer married

Men (%)

No. partners	18-29 (n<30)†	30–44 (n=40)	45–60 (n<30)†	≥61 (n=30)	Total (n=101)
0		5.0		43.3	21.8
1		42.5		36.7	40.6
2		17.5		3.3	10.9
3		15.0		3.3	8.9
4		7.5		6.7	6.9
5–10		5.0		0	2.0
>10		2.5		0	1.0
No answer		5.0		6.7	7.9
Total		**100.0**		**100.0**	**100.0**

Women (%)

No. partners	18-29 (n<30)†	30–44 (n=80)	45–60 (n=61)	≥61 (n=136)	Total (n=294)
0		8.8	52.5	84.6	52.7
1		58.8	36.1	6.6	29.9
2		15.0	6.6	0.7	6.8
3		12.5	1.6	0	4.4
4		1.2	0	0	0.3
5–10		1.2	0	0	0.3
>10		1.2	0	0	0.3
No answer		1.2	3.3	8.1	5.1
Total		**100.0**	**100.0**	**100.0**	**100.0**

Never married

Men (%)

No. partners	18–29 (n=108)	30–44 (n=35)	45-60 (n<30)†	≥61 (n<30)†	Total (n=159)
0	14.8	31.4			24.5
1	29.6	31.4			27.0
2	13.0	5.7			10.7
3	12.0	8.6			10.7
4	7.4	8.6			6.9
5–10	13.0	0			8.8
>10	4.6	2.9			4.4
No answer	5.6	11.4			6.9
Total	**100.0**	**100.0**			**100.0**

Women (%)

No. partners	18–29 (n=90)	30–44 (n<30)†	45-60 (n<30)†	≥61 (n<30)†	Total (n=139)
0	14.4				24.5
1	45.6				45.3
2	21.1				14.4
3	4.4				4.3
4	4.4				3.6
5–10	2.2				1.4
>10	0				0
No answer	7.8				6.5
Total	**100.0**				**100.0**

*Total includes all age groups (four women did not report their ages).
†Responses for categories with <30 respondents are not shown.

The distribution of partners reported in the GSS is similar to another survey of 713 adults aged 18-64 years conducted in November 1986 in the United Kingdom[8]. In that survey, 20% of 481 men and 25% of 232 women reported no partners of the opposite sex in the prior 12 months, 66% of men and 65% of women reported one partner, 9% of men and 3% of women reported two or more partners, and 5% of men and 9% of women refused to answer or were not asked the question. Similarly, a US telephone survey of 2,095 adults conducted by the Los Angeles Times in July 1987 yielded estimates of 15% with no sex partners in the last year, 70% with one partner , 8% with two to four partners, 3% with five or more partners, and 4% refused to answer or were 'not sure'.

While the response rate in the GSS varies by a few percentage points from one year to another, the 1988 rate of 77.3% is well within the usual range. Furthermore, the GSS data compare closely with decennial census and current population survey data on demographic and economic characteristics of the US population[9]. Almost half (47%) the 1,481 respondents in the 1988 GSS were telephoned after the survey to verify that they had participated, and these telephone call-backs provide additional confidence in the quality of the GSS data. Finally, those who did not respond to the self-administered sex-partner questionnaire (6.1%) did not appear to be different in their demographic characteristics (sex, age, race, or marital status) from those who responded; however, nonrespondents to the sex-partner supplement were slightly less well educated.

Nevertheless, the GSS sample size was small, and respondents may have been reluctant to answer sensitive questions about sexual activities with the same degree of candour with which they answer less sensitive questions. Further studies with larger samples are under way to assess the validity of responses to sensitive questions about sexual activities and to obtain better estimates of the risk of sexual exposure to HIV-1 and other STDs in the United States.

REFERENCES

1. Science (1985) 229:1352-7.
2. MMWR (1987) (suppl S-6):40.
3. Kinsey AC, Poneroy WB, Martin CE. Sexual behaviour in the human male. Philadelphia: WB Saunders, 1948.
4. Davis JA, Smith TW. General Social Surveys, 1972-1987: cumulative codebook. Chicago: National Opinion Research Center, 1987.
5. Nature (1987) 326:137-42.
6. Hethcote HW, Yorke JA. Gonorrhoea transmission dynamics and control. In: Levin S, ed. Lecture notes in biomathematics; vol 56. Berlin: Springer-Verlag, 1984.
7. Bureau of the Census. Statistical abstract of the United States: 1988. Washington, DC: US Department of Commerce, Bureau of the Census, 1987:40.
8. British Market Research Bureau Limited. AIDS advertising campaign: report on four surveys during the first year of advertising, 1986-87. London: Department of Health and Social Security and the Welsh Office, Her Majesty's Stationery Office, 1987.
9. Smith TW, Fujimoto R. Annotated bibliography of papers using the General Social Surveys. 6th ed. Chicago: National Opinion Research Center, 1986.

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

Period 1. 1 January 1988 - 31 January 1988

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Amoebiasis										
Ankylostomiasis				3	2		NN		5	5
Anthrax										
Arbovirus infection	1		40		3				44	44
Brucellosis										
Campylobacter infection	124		NN	108	20	NN	9	NN	261	261
Chancroid				NN	1				1	1
Cholera										
Congenital rubella syndrome			NN			NN		NN		
Diphtheria							4		4	4
Donovanosis			11	NN	3		2		16	16
Giardiasis	29		NN	69	23	NN	NN	NN	121	121
Genital herpes	66		35		NN	NN	7	4	112	112
Gonococcal ophthalmia neonatorum		NN		1	NN	NN		NN	1	1
Gonnorhoea	48	2	71	27	68	1	42	1	260	260
Hepatitis A (infectious)	8	9	5		11		3		36	36
Hepatitis B (serum)	13	8	19		41		1	2	84	84

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Hepatitis - unspecified	3	5	1		NN	NN			9	9
Hydatid disease										
Lassa fever			NN			NN		NN		
Legionnaires disease	3		NN			NN		NN	3	3
Leprosy					1				1	1
Leptospirosis	3	1			2				6	6
Lymphogranuloma venereum				NN	NN	NN		NN		
Marburg disease			NN			NN		NN		
Malaria	7	7	8	4					26	26
Measles	7	NN		1	1	NN	NN	1 #	10	10
Meningococcal infections	2	1			1	NN	3		7	7
Non-specific urethritis	239		NN	NN	NN	NN	4	NN	243	243
Ornithosis										
Pertussis (whooping cough)	4	3	NN	4	3	NN		NN	14	14
Plague										
Poliomyelitis										
Q fever	10		12		1				23	23

Voluntary notification only at this stage.

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Rabies				NN		NN		NN		
Salmonella infections	99	14	66	35	44	26	25	4	313	313
Shigella infections	9	1	11	2	8		16		47	47
Smallpox										
Syphilis	16		80	2	26		51		175	175
Tetanus			1						1	1
Trachoma		NN		1	8	NN	NN		9	9
Tuberculosis (all forms)	31	23	17		12	2	4	2	91	91
Typhoid fever	6		1						7	7
Typhus (all forms)			2						2	2
Vibrio parahaemolyticus infection			NN			NN		NN		
Yellow fever										
Yersinia infections	15		NN			NN	1	NN	16	16

NN - Not notifiable

(Note: Data collected under the National Diseases Returns may bear little or no correlation to that collected under the CDI laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.)

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

Period 2. 1 February 1988 - 27 February 1988

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Amoebiasis			1	3					4	4
Ankylostomiasis				3	1		NN		4	9
Anthrax										
Arbovirus infection	9		36		7		4		56	101 *
Brucellosis			2						2	2
Campylobacter infection	166		NN	139	28	NN	6	NN	339	600
Chancroid			1	NN					1	2
Cholera										
Congenital rubella syndrome			2			NN		NN	2	2
Diphtheria							1		1	5
Donovanosis	1		3	NN	3		2		9	25
Giardiasis	38		NN	89	34	NN	NN	NN	161	282
Genital herpes	81		19		NN	NN		9	109	221
Gonococcal ophthalmia neonatorum		NN			NN	NN		NN		1
Gonnorhoea	56	2	52	34	78	7	51	4	284	544
Hepatitis A (infectious)	6	3	3		23		2		37	87 *

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Hepatitis B (serum)	29	5	51		49		1	6	141	227 *
Hepatitis - unspecified	2	5	3		NN	NN		2	12	25 *
Hydatid disease			1						1	1
Lassa fever			NN			NN		NN		
Legionnaires disease	2		NN			NN		NN	2	5
Leprosy										1
Leptospirosis	1	3	3			2			9	17 *
Lymphogranuloma venereum				NN	NN	NN		NN		
Marburg disease			NN			NN		NN		
Malaria	11	6	9	3	6		1	2	38	64
Measles	2	NN		1	3	NN	NN		6	16
Meningococcal infections	2				1	NN	3		6	13 *
Non-specific urethritis	241		NN	NN	NN	NN	13	NN	254	497
Ornithosis										1 *
Pertussis (whooping cough)	5	2	NN	1	1	NN		NN	9	25 *
Plague										
Poliomyelitis										

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Q fever	10		18		1				29	52 *
Rabies				NN		NN		NN		
Salmonella infections	149	7	60	46	53	14	38	3	370	683
Shigella infections	14	2	15	6	3		23		63	110
Smallpox										
Syphilis	26	2	53	3	13		62		159	334
Tetanus										1
Trachoma		NN		1	4	NN	NN		5	14
Tuberculosis (all forms)	29	22	12	1	5	7	4	1	81	181 *
Typhoid fever	2		2						4	11
Typhus (all forms)										2
Vibrio parahaemolyticus infection			NN			NN		NN		
Yellow fever										
Yersinia infections	21		NN	1		NN		NN	22	39

NN - Not notifiable

(Note: Data collected under the National Diseases Returns may bear little or no correlation to that collected under the CDI laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.)

* ADJUSTMENT TO THE CUMULATIVE TOTAL SINCE LAST REPORT

Arbovirus infection	+1 South Australia	Q fever	+5 South Australia
Hepatitis A infection	+14 South Australia	Tuberculosis (all forms)	+9 South Australia
Hepatitis B (Serum)	+2 South Australia	Yersinia infections	+1 South Australia
Hepatitis - unspec.	+4 South Australia	Ornithosis	+1 South Australia
Leptospirosis	+2 South Australia	Pertussis	+2 South Australia
Meningococcal Infect.	+2 South Australia		

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

Period 3. 28 February 1988 - 26 March 1988

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Amoebiasis	1		1		1				3	7
Ankylostomiasis				2	2		NN		4	13
Anthrax										
Arbovirus infection	8		44		5		9		66	167
Brucellosis			1						1	3
Campylobacter infection	177		NN	166	47	NN	10	NN	400	1000
Chancroid				NN						2
Cholera										
Congenital rubella syndrome			NN			NN		NN		2
Diphtheria							4		4	9
Donovanosis			1	NN	2				3	28
Giardiasis	47		NN	93	42	NN	NN	NN	182	464
Genital herpes	64		10		NN	NN	1	6	81	302
Gonococcal ophthalmia neonatorum		NN			NN	NN		NN		1
Gonnorhoea	54	3	30	25	36	3	47		198	742
Hepatitis A (infectious)	12	16	2		21		4		55	143 *

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Hepatitis B (serum)	32	16	10		42	1		1	102	330 *
Hepatitis - unspecified	2				NN	NN	1		3	28
Hydatid disease	2								2	3
Lassa fever			NN			NN		NN		
Legionnaires disease	1		NN			NN		NN	1	6
Leprosy	2								2	2 *
Leptospirosis	2		4			1			7	24
Lymphogranuloma venereum				NN	NN	NN		NN		
Marburg disease			NN			NN		NN		
Malaria	12	9	12	3	3		3	1	43	108 *
Measles	3	NN			1	NN	NN		4	20
Meningococcal infections			1			NN	2		3	20 *
Non-specific urethritis	269		1	NN	NN	NN	1	NN	271	768
Ornithosis		1							1	3 *
Pertussis (whooping cough)	1	2	NN	6	1	NN		NN	10	35
Plague										
Poliomyelitis										

DISEASE	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL	CUMULATIVE TOTAL
Q fever	17		17	1					35	92
Rabies				NN		NN		NN		
Salmonella infections	80	25	101	42	29	15	33	4	329	1012
Shigella infections	14	1	10	5	17		18		65	175
Smallpox										
Syphilis	26	3	36	8	5		37	1	116	450
Tetanus				1					1	2
Trachoma		NN		5	2	NN	NN		7	21
Tuberculosis (all forms)	34	22	14		20	1	1	1	93	274
Typhoid fever	2	1	1						4	15
Typhus (all forms)										2
Vibrio parahaemolyticus infection			NN			NN		NN		
Yellow fever										
Yersinia infections	9		NN	5	2	NN		NN	16	55

NN - Not notifiable

(Note: Data collected under the National Diseases Returns may bear little or no correlation to that collected under the CDI laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.)

* ADJUSTMENT TO THE CUMULATIVE TOTAL SINCE LAST REPORT

Hepatitis A infection	+1 South Australia	Ornithosis	+1 South Australia
Hepatitis B (Serum)	+1 South Australia	Leprosy	-1 Western Australia
Malaria	+1 South Australia		
Meningococcal Infect.	+2 South Australia		

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES
BASED ON DATE OF REPORTING

PERIOD 20-9-88 TO 30-9-88

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	0	4	6	1	8	0	0	14	33
0101	ADENOVIRUS TYPE 1	6	4	4	0	1	0	1	0	16
0102	ADENOVIRUS TYPE 2	1	1	4	0	5	0	0	0	11
0103	ADENOVIRUS TYPE 3	0	1	1	0	1	0	0	0	3
0104	ADENOVIRUS TYPE 4	3	1	0	0	0	0	0	0	4
0105	ADENOVIRUS TYPE 5	0	0	2	0	1	0	0	0	3
0108	ADENOVIRUS TYPE 8	2	0	0	0	1	0	0	0	3
0111	ADENOVIRUS TYPE 11	0	0	0	0	3	0	0	0	3
0114	ADENOVIRUS TYPE 14	0	0	0	0	0	1	0	0	1
0122	ADENOVIRUS TYPE 22	0	0	0	0	2	0	0	0	2
0130	ADENOVIRUS TYPE 30	1	0	0	0	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	0	0	4	0	1	0	0	5
0201	INFLUENZA A VIRUS	16	8	20	0	7	13	0	0	64
0202	INFLUENZA A VIRUS SUBTYPE H3N2	0	0	0	0	1	0	0	0	1
0203	INFLUENZA B VIRUS	0	0	0	0	0	1	0	0	1
0206	INFLUENZA A H1N1	0	0	3	0	0	0	0	1	4
0301	PARAINFLUENZA VIRUS TYPE 1	0	0	4	0	0	0	0	0	4
0302	PARAINFLUENZA VIRUS TYPE 2	2	0	3	1	0	0	0	0	6
0303	PARAINFLUENZA VIRUS TYPE 3	0	4	22	1	6	0	0	5	38
0400	RESPIRATORY SYNCYTIAL VIRUS (R	8	18	11	11	7	0	1	2	58
0500	RHINOVIRUS (ALL TYPES)	4	4	13	16	2	0	4	11	54
0600	MYCOPLASMA PNEUMONIAE	7	1	18	9	11	4	0	0	50
0700	ORNITHOSIS-PSITTACOSIS	2	0	1	0	3	0	0	0	6
0809	COXSACKIEVIRUS A9	2	0	0	0	0	0	0	0	2
0816	COXSACKIEVIRUS A16	3	0	0	0	0	0	0	0	3
0904	COXSACKIEVIRUS B4	0	0	0	0	1	1	1	0	3
0905	COXSACKIEVIRUS B5	0	1	0	0	0	0	0	0	1
0906	COXSACKIEVIRUS B6	1	0	0	0	0	0	0	0	1
1009	ECHOVIRUS TYPE 9	0	15	0	0	2	0	0	0	17
1018	ECHOVIRUS TYPE 18	0	0	0	0	1	0	0	0	1
1022	ECHOVIRUS TYPE 22	0	0	1	0	0	0	0	0	1
1025	ECHOVIRUS TYPE 25	1	0	0	0	0	0	0	0	1
1030	ECHOVIRUS TYPE 30	14	0	0	0	0	0	0	0	14
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	1	0	0	1
1101	POLIOVIRUS TYPE 1	0	2	1	0	0	0	0	0	3
1102	POLIOVIRUS TYPE 2	0	0	1	0	1	0	0	0	2
1103	POLIOVIRUS TYPE 3	1	0	0	0	0	0	0	0	1
1200	MUMPS VIRUS	1	0	0	0	1	0	0	0	2
1300	HERPES VIRUS GROUP - NOT TYPED	1	3	0	0	87	2	0	0	93
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	7	5	19	1	20	2	4	0	58
1303	VARICELLA-ZOSTER VIRUS	1	3	0	1	3	1	2	2	13
1306	HERPES SIMPLEX TYPE 1	53	19	16	0	38	10	0	20	156
1307	HERPES SIMPLEX TYPE 2	64	40	15	0	103	20	0	56	298
1399	HERPES VIRUS TYPING PENDING	3	0	0	3	0	0	0	0	6
1401	COXIELLA BURNETI	0	0	0	0	6	0	0	0	6
1502	PICORNIA VIRUS - NOT TYPED = E	0	2	0	2	5	2	0	8	19
1521	MEASLES VIRUS	0	0	0	0	1	0	0	0	1
1522	RUBELLA VIRUS	2	0	0	0	3	1	0	0	6
1532	HEPATITIS B ANTIGEN	22	27	11	0	41	3	0	31	135
1535	HEPATITIS A ANTIBODY	6	4	7	0	3	0	0	2	22
1541	CHLAMYDIA A - C. TRACHOMATIS	0	60	24	0	17	3	0	9	113
1555	PAPOVAVIRUS GROUP (PAPILLOMA -	0	0	0	0	0	1	0	0	1
1556	CMV - CYTOMEGALOVIRUS	19	10	4	12	10	6	2	4	67
1564	ROTAVIRUS	1	30	40	0	11	22	7	8	119
1565	CALICI VIRUS	0	0	0	0	1	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	0	0	5	0	5	0	0	10
9992	ROSS RIVER VIRUS	0	0	0	0	1	0	0	0	1
9993	ASTROVIRUS	0	0	0	0	1	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	0	1	0	1
TOTAL		254	267	251	67	416	100	23	173	1551

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 1.

PERIOD 20-9-88 TO 30-9-88

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 TRACCT
11. CODE 06 ... - SKIN MUCOUS

		1	2	3	4	5	6	7	8	9	10	11	TOTAL
0100	ADENOVIRUS NOT TYPED	1	19	0	0	0	1	9	0	0	0	0	30
0101	ADENOVIRUS TYPE 1	1	14	0	0	0	0	0	0	0	0	0	15
0102	ADENOVIRUS TYPE 2	2	6	0	0	0	0	3	0	0	0	0	11
0103	ADENOVIRUS TYPE 3	0	0	0	0	0	0	3	0	0	0	0	3
0104	ADENOVIRUS TYPE 4	0	0	0	0	0	0	1	0	0	0	0	1
0105	ADENOVIRUS TYPE 5	0	2	0	0	0	0	0	0	0	0	0	2
0108	ADENOVIRUS TYPE 8	1	0	0	0	0	0	0	0	0	0	0	1
0111	ADENOVIRUS TYPE 11	1	0	0	0	0	0	2	0	0	0	0	3
0122	ADENOVIRUS TYPE 22	0	0	0	0	0	0	1	0	0	0	0	1
0130	ADENOVIRUS TYPE 30	0	0	0	0	0	0	1	0	0	0	0	1
0199	ADENOVIRUS TYPING PENDING	0	3	0	0	0	1	1	0	0	0	0	5
0201	INFLUENZA A VIRUS	4	45	0	0	0	0	1	0	2	0	0	52
0202	INFLUENZA A VIRUS SUBTYPE H3N2	0	1	0	0	0	0	0	0	0	0	0	1
0203	INFLUENZA B VIRUS	0	1	0	0	0	0	0	0	0	0	0	1
0206	INFLUENZA A H1N1	0	4	0	0	0	0	0	0	0	0	0	4
0301	PARAINFLUENZA VIRUS TYPE 1	0	4	0	0	0	0	0	0	0	0	0	4
0302	PARAINFLUENZA VIRUS TYPE 2	0	6	0	0	0	0	0	0	0	0	0	6
0303	PARAINFLUENZA VIRUS TYPE 3	1	34	0	0	0	0	1	0	0	0	0	36
0400	RESPIRATORY SYNCYTIAL VIRUS (R	1	52	1	0	0	0	1	0	0	0	0	55
0500	RHINOVIRUS (ALL TYPES)	0	51	0	0	0	2	0	0	0	0	0	53
0600	MYCOPLASMA PNEUMONIAE	3	43	0	0	0	0	0	0	0	0	0	46
0700	ORNITHOSIS-PSITTACOSIS	3	1	0	0	0	0	0	0	1	0	0	5
0816	COXSACKIEVIRUS A16	0	1	0	0	0	0	0	0	0	0	2	3
0904	COXSACKIEVIRUS B4	1	1	0	1	0	0	0	0	0	0	0	3
0905	COXSACKIEVIRUS B5	0	1	0	0	0	0	0	0	0	0	0	1
0906	COXSACKIEVIRUS B6	0	0	0	0	0	0	0	0	0	0	1	1
1009	ECHOVIRUS TYPE 9	0	1	0	10	0	0	0	0	0	0	2	13
1018	ECHOVIRUS TYPE 18	1	0	0	0	0	0	0	0	0	0	0	1
1022	ECHOVIRUS TYPE 22	0	1	0	0	0	0	0	0	0	0	0	1
1025	ECHOVIRUS TYPE 25	1	0	0	0	0	0	0	0	0	0	0	1
1030	ECHOVIRUS TYPE 30	0	0	0	13	0	0	0	0	0	0	0	13
1100	POLIOVIRUS NOT TYPED	0	0	0	0	0	0	1	0	0	0	0	1
1101	POLIOVIRUS TYPE 1	0	0	0	1	0	0	2	0	0	0	0	3
1102	POLIOVIRUS TYPE 2	0	0	0	0	0	0	1	0	0	0	0	1
1103	POLIOVIRUS TYPE 3	0	1	0	0	0	0	0	0	0	0	0	1
1200	MUMPS VIRUS	0	0	0	0	0	1	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	24	1	1	0	0	0	0	0	0	1	20	47
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	5	1	1	0	0	2	1	1	0	0	1	12
1303	VARICELLA-ZOSTER VIRUS	2	0	1	0	0	0	0	0	0	0	9	12
1306	HERPES SIMPLEX TYPE 1	9	10	0	0	0	0	0	0	0	0	63	82
1307	HERPES SIMPLEX TYPE 2	13	0	0	0	0	0	0	0	0	0	54	67
1399	HERPES VIRUS TYPING PENDING	0	0	1	0	0	0	0	0	0	0	2	3
1401	COXIELLA BURNETI	1	0	0	0	0	0	0	0	0	0	0	1
1502	PICORNIA VIRUS - NOT TYPED = E	2	5	0	0	1	2	6	0	0	0	1	17
1521	MEASLES VIRUS	0	0	0	0	0	1	0	0	0	0	0	1
1522	RUBELLA VIRUS	0	1	0	0	0	0	0	0	0	0	3	4
1532	HEPATITIS B ANTIGEN	69	1	0	0	0	0	0	58	0	1	0	129
1535	HEPATITIS A ANTIBODY	8	0	0	0	0	0	0	11	0	0	0	19
1541	CHLAMYDIA A - C. TRACHOMATIS	6	1	0	0	0	0	0	0	0	0	0	7
1556	CMV - CYTOMEGALOVIRUS	7	27	0	0	0	1	3	0	0	0	2	40
1564	ROTAVIRUS	0	0	0	0	0	1	116	0	0	0	0	117
1565	CALICI VIRUS	0	0	0	0	0	0	1	0	0	0	0	1
1599	ENTEROVIRUS TYPING PENDING	0	6	0	0	0	0	3	0	0	0	0	9
9993	ASTROVIRUS	0	0	0	0	0	0	1	0	0	0	0	1
9994	SMALL VIRUS (LIKE) PARTICLE	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL		167	345	5	25	1	12	160	70	3	2	160	950

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

VIRAL IDENTIFICATIONS BY CLINICAL INFORMATION TABLE 2.

PERIOD 20-9-88 TO 30-9-88

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	16	17	18	19	20	21	TOTAL
0100	ADENOVIRUS NOT TYPED	0	0	0	0	0	0	0	3	0	0	3
0101	ADENOVIRUS TYPE 1	0	0	0	0	0	0	0	0	0	1	1
0104	ADENOVIRUS TYPE 4	3	0	0	0	0	0	0	0	0	0	3
0105	ADENOVIRUS TYPE 5	0	0	0	0	0	0	0	0	1	0	1
0108	ADENOVIRUS TYPE 8	2	0	0	0	0	0	0	0	0	0	2
0114	ADENOVIRUS TYPE 14	0	0	0	0	0	0	0	1	0	0	1
0122	ADENOVIRUS TYPE 22	0	0	0	0	0	0	0	0	1	0	1
0201	INFLUENZA A VIRUS	0	0	0	0	0	0	1	10	1	0	12
0303	PARAINFLUENZA VIRUS TYPE 3	0	0	0	0	0	0	0	1	1	0	2
0400	RESPIRATORY SYNCYTIAL VIRUS (R	0	0	1	1	0	0	0	0	1	0	3
0500	RHINOVIRUS (ALL TYPES)	0	0	0	0	0	0	0	1	0	0	1
0600	MYCOPLASMA PNEUMONIAE	0	0	0	0	0	0	0	2	2	0	4
0700	ORNITHOSIS-PSITTACOSIS	0	0	0	0	0	0	1	0	0	0	1
0809	COXSACKIEVIRUS A9	0	0	0	0	0	0	0	2	0	0	2
1009	ECHOVIRUS TYPE 9	0	0	0	0	0	0	1	3	0	0	4
1030	ECHOVIRUS TYPE 30	0	0	0	0	0	0	0	1	0	0	1
1102	POLIOVIRUS TYPE 2	0	0	0	0	0	1	0	0	0	0	1
1200	MUMPS VIRUS	0	0	1	0	0	0	0	0	0	0	1
1300	HERPES VIRUS GROUP - NOT TYPED	1	45	0	0	0	0	0	0	0	0	46
1302	EPSTEIN-BARR VIRUS (EB VIRUS)	0	0	30	2	0	0	0	11	3	0	46
1303	VARICELLA-ZOSTER VIRUS	0	1	0	0	0	0	0	0	0	0	1
1306	HERPES SIMPLEX TYPE 1	2	68	0	0	0	0	0	0	4	0	74
1307	HERPES SIMPLEX TYPE 2	1	229	0	0	0	0	0	0	1	0	231
1399	HERPES VIRUS TYPING PENDING	0	2	0	0	0	0	0	0	1	0	3
1401	COXIELLA BURNETI	0	0	0	0	0	0	2	2	1	0	5
1502	PICORNIA VIRUS - NOT TYPED = E	0	0	0	0	0	0	0	2	0	0	2
1522	RUBELLA VIRUS	0	0	1	0	0	0	0	1	0	0	2
1532	HEPATITIS B ANTIGEN	0	0	0	0	0	0	0	1	5	0	6
1535	HEPATITIS A ANTIBODY	0	0	0	0	0	0	0	2	1	0	3
1541	CHLAMYDIA A - C. TRACHOMATIS	0	105	0	0	0	0	0	0	1	0	106
1555	PAPOVAVIRUS GROUP (PAPILLOMA -	0	0	0	0	0	0	1	0	0	0	1
1556	CMV - CYTOMEGALOVIRUS	0	1	0	2	0	2	1	6	14	1	27
1564	ROTAVIRUS	0	0	0	0	0	0	1	0	1	0	2
1599	ENTEROVIRUS TYPING PENDING	0	0	0	0	0	0	0	1	0	0	1
9992	ROSS RIVER VIRUS	0	0	0	0	1	0	0	0	0	0	1
TOTAL		9	451	33	5	1	3	8	50	39	2	601