Communicable Diseases Surveillance

Presentation of NNDSS data

With the move to a quarterly reporting system in *Communicable Diseases Intelligence*, the summary tables have changed to fall in line with a quarterly report. Table 2 presents 'date of notification' data, which is a composite of three dates: (i) the true onset date from a clinician, if available, (ii) the date the laboratory test was ordered, or (iii) the date reported to the public health unit. Table 3 presents the notification rate of Diseases by State or Territory for the current reporting quarter.

Table 2 now includes the following summary columns: current quarter totals, totals for the previous quarter; total for the same quarter in the previous year; a 5-year mean for the same quarter, the year to date total for each disease, the mean of the last 5 years year to date totals and the ratio of the current quarter to the mean of to the mean of the second quarter for the last 5 years.

Notifiable Diseases 2001

The Communicable Diseases Network Australia has revised the list of Diseases that are reportable to the NNDSS. All jurisdictions are working towards reporting against the new national list. Transmission of a dataset consistent with the new list will depend upon changes to public health legislation and IT system development. The following new diseases have been added to the NNDSS database: anthrax, Murray Valley encephalitis, Kunjin virus infection, cryptosporidiosis, influenza (laboratory-confirmed), Australian bat lyssavirus infection and invasive pneumococcal disease (laboratory-confirmed). Data on the following diseases will no longer be collected: chancroid infection, hydatid disease, lymphogranuloma venereum, non-TB mycobacterial infections, and yersiniosis.

Highlights for 2nd quarter, 2001

Communicable Disease Surveillance Highlights report on data from various sources, including the National Notifiable Diseases Surveillance System (NNDSS) and several disease specific surveillance systems that provide regular reports to Communicable Diseases Intelligence*. These national data collections are complemented by intelligence provided by State and Territory communicable disease epidemiologists and/or data managers who have formed a Data Management Network. This additional information has enabled the reporting of more informative highlights each month.*

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia, and the CDI *Virology and Serology Laboratory Reporting Scheme (LabVISE) is a sentinel surveillance scheme. In this report, data from the NNDSS are referred to as 'notifications' or 'cases', and those from ASPREN are referred to as 'consultations' or 'encounters' while data from the LabVISE scheme are referred to as 'laboratory reports'.*

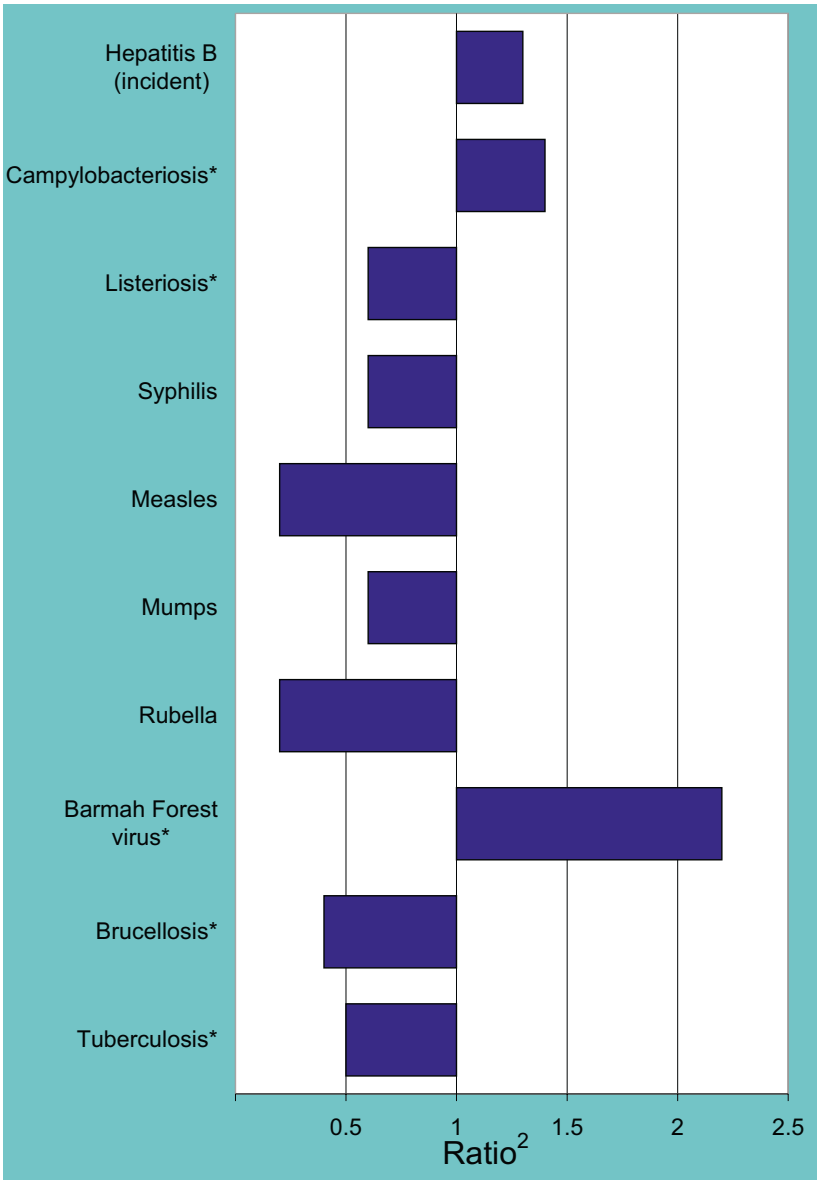
Three types of data are included in National Influenza Surveillance, 2001. These are sentinel general practitioner surveillance conducted by the Australian Sentinel Practice Research Network (ASPREN), the Department of Human Services (Victoria), the Department of Health (New South Wales) and the Tropical Influenza Surveillance Scheme, Territory Health Services (Northern Territory); laboratory surveillance data from the Communicable Diseases Intelligence *Virology and Serology Laboratory Reporting Scheme (LabVISE) and the World Health Organization Collaborating Centre for Influenza Reference and Research; and absenteeism surveillance conducted by Australia Post. For further information about these schemes, see* Commun Dis Intell *2000;24:9-10.*

Figure 1 shows the changes in disease notifications compared with the 5-year second quarter mean. Disease notifications above or below the 5-year mean, plus- or minus- two standard deviations are marked with an asterisk. These and other disease trends are discussed below.

Bloodborne diseases

Incident (acute) hepatitis B notifications were above the normal range for the second quarter compared with the 5-year mean. In this quarter, 43 notifications were received from Victoria compared with 29 in first quarter. The Victorian incident hepatitis B notification rate rose from 2.4 per 100,000 in the first quarter 2001 to 3.6 per 100,000 population in the second quarter. Injecting drug use has been identified in 65 per cent of the notified cases in Victoria (year to date). The Victorian Department of Human Services has started an enhanced acute hepatitis B surveillance program to obtain more detailed risk factor information to inform prevention strategies. A public health alert has been released through the Needle and Syringe Program to inform intravenous drug users of harm minimisation strategies and the need for primary prevention through vaccination.

Figure 1. Selected[1] Diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 April to 30 June 2001 with historical data[2]

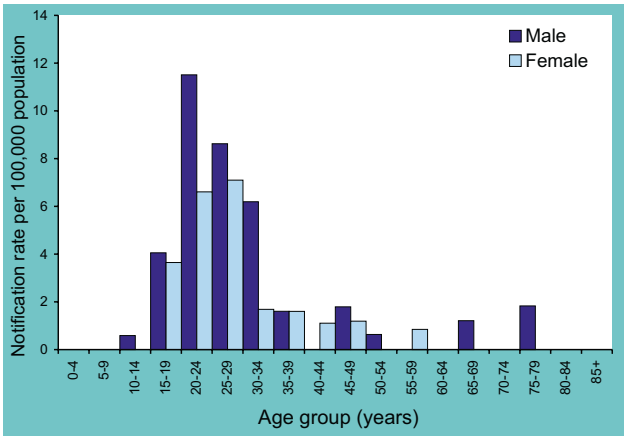


1. Selected Diseases are chosen each quarter according to current activity.
2. Ratio of current quarter total to mean of corresponding quarter for the previous five years.

* Notifications above or below the 5-year mean plus- or minus- two standard deviations.

Figure 2 shows the notification rate of incident hepatitis B infections reported in this quarter by age group and sex. Age- and sex-specific rates per 100,000 population show a male preponderance in the 20-34 year age range.

Figure 2. Notification rate of incident hepatitis B, Australia, 1 April to 30 June 2001, by age group and sex



Gastrointestinal disease

In this quarter we report for the first time, cases of shigellosis from New South Wales, where the disease has now become specifically notifiable. Previously, shigellosis cases in New South Wales were reported as 'foodborne disease' or 'gastroenteritis in an institution'. Campylobacteriosis is not a specific notifiable disease in New South Wales. In this quarter cryptosporidiosis was reported from all jurisdictions except Tasmania.

Botulism

A case of infant botulism was reported from Queensland in the second quarter. A 10 week-old infant presented with acute flaccid paralysis (prominent bulbar weakness). Subsequently, *Clostridium botulinum* type B was isolated from faeces. The infant had a history of probable consumption of honey within the 2 weeks prior to onset. New infant feeding guidelines, currently under review by the National Health and Medical Research Council, advise that infants under 1 year of age not be fed honey.

Campylobacteriosis

Notifications of campylobacteriosis in the second quarter 2001 were above the range of 5-years' data for the second quarter. Campylobacteriosis is now the major cause of sporadic gastroenteritis in Australia and is more than twice as commonly reported as salmonellosis. This pattern is found throughout industrialised countries.[1] Despite the large number of cases, outbreaks of campylobacteriosis are rarely identified (see OzFoodNet report for first quarter 2001 in this issue, pp103-106).

Cryptosporidiosis

Cryptosporidiosis became nationally notifiable with effect from January 2001. Cryptosporidiosis is spread by a faecal-oral route and includes person to person, animal to person, waterborne and foodborne transmission. The prevalence of infection is between 1 and 4.5 per cent of individuals in developed countries and 3 to 20 per cent of individuals in developing countries.[2] Children under 2 years of age, animal handlers, travellers, and men who have sex with men are recognised to be at greater risk of infection.

Infections with *Cryptosporidium* may be asymptomatic and carriers may shed oocysts in their faeces. The infective dose is very small (approx 100 oocysts) and previous exposure in immunocompetent adults is not entirely protective, although it may decrease the severity of the disease caused by subsequent infections. People with markedly impaired immune systems due to HIV/AIDS infection are susceptible to severe persistent diarrhoea caused by cryptosporidiosis and the infection may spread to the biliary tract. Declines in the prevalence of cryptosporidiosis in HIV/AIDS patients treated with highly active anti-retroviral therapy have been reported.[3]

During the early part of this quarter sporadic cryptosporidiosis infections, possibly associated with use of swimming pools, were reported from several jurisdictions in Australia. Victoria continued to observe increased notifications of cryptosporidiosis compared to previous years, predominantly confined to the Melbourne metropolitan area. (Cryptosporidiosis became notifiable in Victoria from 16 May 2001, prior to which notifications were received from doctors and laboratories on a voluntary basis.) The majority of cases reported exposure to public swimming pools before becoming ill. Small clusters were associated with several pools.

Figure 3 shows the notification rate for cryptosporidiosis by age group and sex for this quarter. More than half of all notifications in this quarter were in children aged less than 5 years. There was no difference in the notification rate between males and females.

Last summer in the United States of America, 5 outbreaks of cryptosporidiosis associated with swimming pool use were reported. The Centers for Disease Control and Queensland Health have published guidelines on the education of swimmers and pool staff, pool design modifications and improved operation and maintenance procedures in order to prevent outbreaks,[4] see also http://www.qld.health.gov.au/healthyliving/.

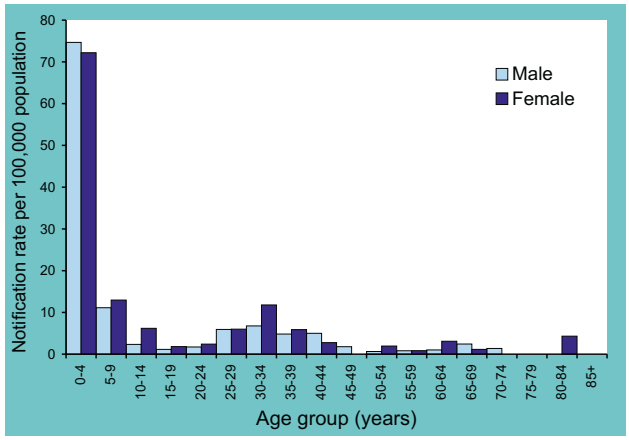
Salmonellosis

Several outbreaks of *Salmonella* Typhimurium infection were reported from around the country. In South Australia, *Salmonella* Typhimurium PT126 was recognised as a cause of gastroenteritis in 15 people in the early part of the year. This outbreak was associated with the consumption of custard fruit tarts (see OzFoodNet first quarter report, this issue). Since the beginning of May, another 34 cases have been identified in South Australia but no food source has yet been identified. Investigations are continuing.

Gary Dowse, Medical Epidemiologist from the Communicable Disease Control Branch, Health Department of Western Australia, reported on an outbreak of *Salmonella* Typhimurium PT64. 'An outbreak of Salmonellosis associated with eating fried ice cream at a Perth restaurant was reported from Western Australia in June. Over 30 patrons reported being ill, with a relatively short incubation period and several being hospitalised, indicating the food was heavily contaminated. *Salmonella* Typhimurium PT64 was isolated from faecal specimens from 20 patrons, 2 remaining serves of fried ice cream and 1 asymptomatic food handler. Cases were infected over several days, apparently from the same pre-prepared batch of fried ice cream. Preparation involved coating the ice cream with a layer of sponge cake, which was then dipped in an egg mix and frozen. Serves were removed from the freezer and deep-fried for a short period, when required. The means of contamination was not identified. This is the second outbreak of *Salmonella* food poisoning associated with eating fried ice cream reported from Western Australia in recent years. An outbreak associated with fried ice cream has also been reported previously from New South Wales.[5,]

Health Department officials in Victoria investigated a cluster of 14 cases of *Salmonella* Typhimurium PT104 that were notified between February and July 2001. Following reports of a similar outbreak in Sweden, the source was identified as 2 brands of 'Helva', a type of sweet made from sesame seeds, sugar and flavourings that had been imported from

Figure 3. Notification rate of cryptosporidiosis, Australia, 1 April to 30 June 2001, by age group and sex



Turkey. The Australia New Zealand Food Authority coordinated a national recall of the 2 products.

Two cases of *Salmonella* Typhimurium PT99 in southern Victoria were associated with an outbreak of gastroenteritis epidemiologically linked to the consumption of lambs fry at a local hotel buffet in early June. Further cases in the region are currently being investigated.

In Queensland, more than 30 cases of *Salmonella* Bovismorbificans PT32 were reported in June. A link was made to consumption of a particular product from a major fast food chain. The outbreak is currently under investigation and further details will be provided on completion of investigations.

Quarantinable diseases

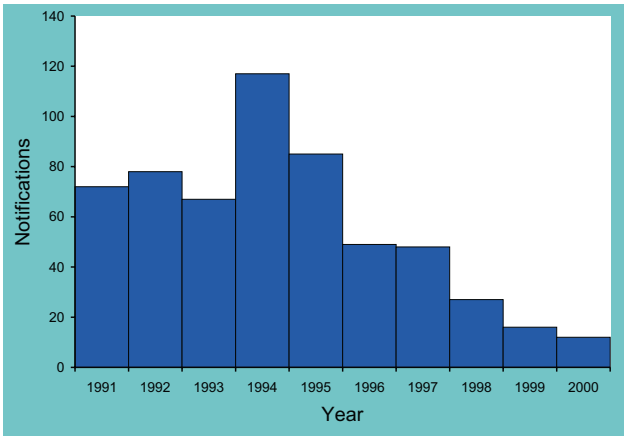
No quarantinable Diseases were reported in Australia in the second quarter of 2001.

Sexually transmitted infections

A review of syphilis notifications in Queensland is being carried out to distinguish new cases from re-tests and to remove duplicates. Hence no syphilis data were available for Queensland in this quarter which explains the low number of notifications of syphilis in this report.

Eight cases of donovanosis were reported in this quarter. All cases were from the Northern Territory, Western Australia or Queensland. Donovanosis is a notifiable disease in all jurisdictions except South Australia. Donovanosis is a chronic genital ulcer disease that generally occurs in indigenous Australians in rural and remote communities. Notifications of donovanosis have fallen significantly over the past 10 years (Figure 4), and particularly since 1994 due to the introduction of more sensitive and acceptable testing methods and more effective treatment with azithromycin. The Office for Aboriginal and Torres Strait Islander Health (OATSIH) is designing a donovanosis eradication plan based on strengthening primary health care services in rural and remote areas to provide early diagnosis and treatment for donovanosis. Laboratory confirmation using sensitive polymerase chain reaction (PCR) methods, the use of standard treatment protocols, active case follow-up and enhanced surveillance are also important aspects of the eradication plan. Enhanced surveillance for donovanosis will include continued passive surveillance in all States and Territories, active surveillance in local areas, laboratory notification in Western Australia and the Northern Territory and standardised data collection protocols. The impact of this program over the next few years may be to initially increase notifications of donovanosis to the NNDSS. There have been 10 notifications of donovanosis in total in 2001 compared with 12 notifications in all of 2000.

Figure 4. Notifications of donovanosis, Australia, 1991 to 2000, by date of notification



Vaccine preventable diseases

Laboratory-confirmed influenza and invasive pneumococcal disease are newly notifiable vaccine preventable diseases in 2001. Data were received from all jurisdictions except Victoria, Queensland and South Australia. Influenza was added to the list of notifiable diseases in these jurisdictions at the end of the first quarter and data will be available from the third quarter of 2001. Administrative changes to include influenza as a notifiable disease are under way in the Australian Capital Territory.

Invasive pneumococcal disease data were available from all jurisdictions except Tasmania and South Australia, where surveillance has only recently commenced.

Measles, mumps and rubella notifications were all reduced compared with the 5-year mean of second quarter notifications. This decline reflects the continuing impact of the Measles Control Campaign in 1998 when 1.7 million children in Australia received the measles-mumps-rubella vaccine.

No measles cases were reported from the Australian Capital Territory, the Northern Territory, South Australia or Victoria. There were single cases of measles reported from Western Australia, Queensland and Tasmania. Both the Western Australian and Queensland cases were infected overseas. A cluster of 7 cases of measles was reported from western Sydney. The first case possibly acquired the infection while travelling overseas. Five of the 7 cases were laboratory confirmed. Three cases were infants aged between 8 and 12 months, and the other 4 were in young adults aged 19 to 26 years, who were unlikely to have been vaccinated against measles.

A measles outbreak in Papua New Guinea (PNG) in late June prompted a warning from the Communicable Diseases Network Australia (CDNA) to travellers to PNG to consider measles vaccination. The media release warned doctors and health care workers to be alert for measles in people returning to Australia from PNG (CDNA media release 01/01, 23 July 2001).

Vectorborne diseases

Murray Valley encephalitis and Kunjin viral infection are now notifiable Diseases in all jurisdictions except the Australian Capital Territory, where such infections are combined under Murray Valley encephalitis.

Murray Valley encephalitis

Two cases of Murray Valley encephalitis (MVE) virus infection, which occurred in the first quarter of 2001 and were not previously reported, have been noted in reports to the Communicable Diseases Network Australia. Since the NNDSS analysis is by date of notification, delays in reporting mean that these cases do not appear in Table 1.

The first case was in a 59-year-old man from South Australia who acquired the infection in the Northern Territory. The second case, in a German tourist who was infected in the Northern Territory at the end of April, was reported on ProMED-mail in May 2001. This 23-year-old man developed viral encephalitis on his return to Germany, presented as febrile and disoriented and suffered repeated convulsions. An acute flavivirus infection was suggested and MVE was diagnosed serologically. Confirmation was provided by Dr Dominic Dwyer's laboratory at ICPMR in Sydney (ProMED Viral enceph., imported – Germany ex Australia (03) 20010524.0252).

Kunjin virus infection

Three cases of Kunjin were reported in this quarter. In 2 cases the date of notification of disease was in the first quarter and reported in the second quarter, thus not appearing in Table 1. These cases were resident in Western Australia and the Northern Territory. A third case, from Victoria, was notified to State authorities in June, but the report was not received in the NNDSS before the end of the quarter. Delays in reporting may be considerable in diseases with insidious onset or where symptoms mimic other diseases and several infections are considered in the differential diagnosis. Delays may also occur when the definitive serological tests are not widely available. Since Kunjin virus infection is a newly notifiable disease this year, delays in reporting may also occur because of a lack of awareness among reporting laboratories and doctors.

The Western Australia case presented with a 4 month history of aching joints and tiredness, so the date of onset was estimated to be around Christmas 2000. This case was confirmed serologically. The Northern Territory case occurred in a 23-year-old female. The third case reported from Victoria, had a history of travel in outback New South Wales, South Australia, Queensland and the Northern Territory during the incubation period.

Malaria

Four cases of *Plasmodium falciparum* malaria in Sudanese refugees were reported from Tasmania. These occurred in a family group who appear to have acquired the disease in Angola.

Barmah Forest virus

Reports of Barmah Forest virus (BF) infections in this quarter were above the range of notifications based on the last 5 years data. Increased numbers of notifications from New South Wales (255 YTD compared with 191 in 2000) and Queensland (440 YTD compared with 333 in 2000) were noted. National notifications for April and May were the highest ever recorded for those months and the numbers for June were the highest for that month since 1995. A comparison of notifications by month for the first 6 months shows higher BF notifications throughout this period in 2001 (Figure 5). Barmah Forest virus infections were largely in adult populations (96% of notifications in this quarter were in persons aged 20 years or more) and affected men and women equally (Figure 6).

Zoonoses

Among the zoonotic Diseases reported to NNDSS, data were available from all States and Territories for all diseases with the exception of anthrax and ornithosis. Anthrax is not yet a notifiable disease in South Australia. Ornithosis was only made a notifiable disease in Queensland at the end of June 2001.

There were only 2 cases of brucellosis reported to the NNDSS in this quarter, both from Queensland. This was a significant decrease from the 5-year mean for this quarter.

Q fever

Notifications of Q fever, though within the range of the last 5 years' notifications, show an increase in Victoria (24 YTD compared with 23 for all of 2000) and Queensland (228 YTD compared with 334 for all of 2000). There was an outbreak of Q fever linked to an abattoir in northern Victoria, with a total of 21 confirmed cases. Screening and vaccination of susceptible employees was undertaken.

This increase in Q fever notifications may be associated with increased public awareness and testing before vaccination, in occupational groups. Abattoir workers who are at high risk of infection are eligible for the vaccine, funding for which was recently provided to the States and Territories by the Commonwealth, under the National Q Fever Management Program. A breakdown of notifications by age and sex (Figure 7), shows a strong male preponderance (male to female ratio 4.4:1) and infection mainly in adults (92% in persons aged more than 20 years).

Figure 5. Notifications of Barmah Forest virus, Australia, January to June 1999 to 2001, by date of notification

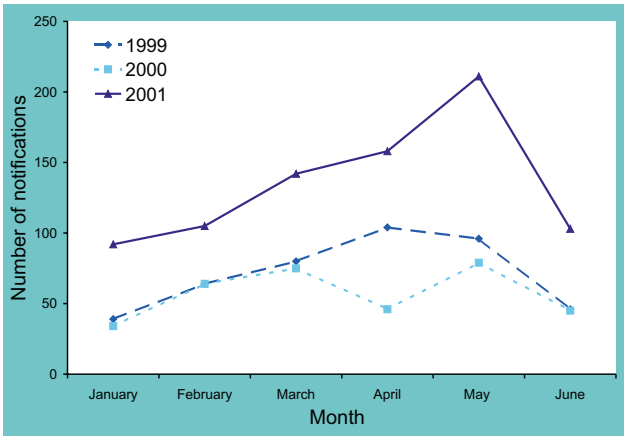


Figure 6. Notifications of Barmah Forest virus, Australia, 1 April to 30 June 2001, by age and sex

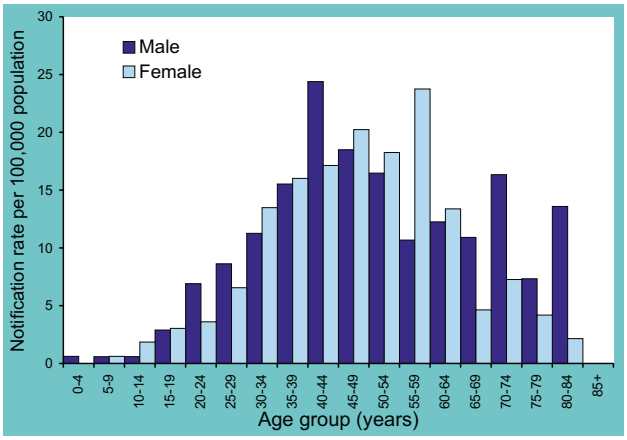
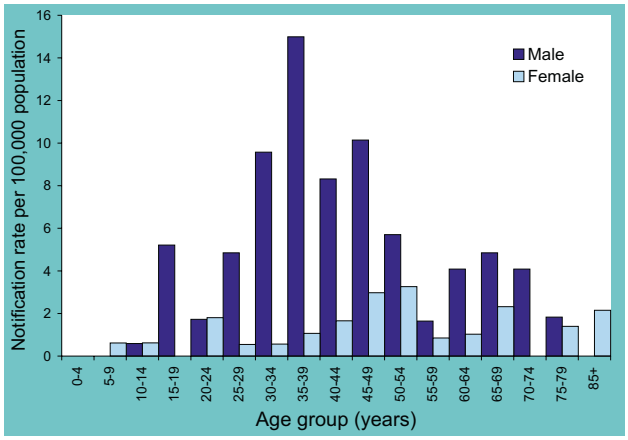


Figure 7. Notifications of Q fever, Australia, 1 April to 30 June 2001, by age and sex



Other diseases

Legionellosis

Notifications of legionellosis are well down on last year (137 YTD compared with 319 for the same period in 2000). The Melbourne Aquarium outbreak in the second quarter of 2000 had a significant impact on the burden of disease in Victoria. Victoria reported 31 cases in the second quarter of 2001, which represented more than 40 per cent of all reports of legionellosis in Australia in the same period. The Victorian Government has recently strengthened requirements for the maintenance of cooling towers to prevent contamination with the *Legionella* bacteria. Contaminated cooling towers have been implicated in outbreaks of legionellosis world-wide.

Meningococcal disease

The number of meningococcal disease notifications was slightly increased compared with the average of the last 5 years. The totals for the first half of this year (n=271) were above those reported in the first 6 months of 2000 (n=215).

LabVISE

The Laboratory Virology and Serology (LabVISE) reporting scheme is a passive surveillance scheme based on voluntary reports of infectious agents contributed to the Commonwealth Department of Health and Aged Care, by sentinel virology and serology laboratories around Australia.

Comments on second quarter 2001 LabVISE data

Reports to LabVISE were lower (9,304 reports) in this quarter, than for the same quarter last year (11,303 reports). Reports were received from all States and Territories through 13 participating laboratories (Table 4).

Data collected in the LabVISE surveillance scheme supplemented that collected in the NNDSS in the same quarter. Year to date totals of isolates of Barmah Forest virus are almost double in number (200) compared with the same period in 2000 (n=104). These were mostly from Queensland (n=95), where reports of BF infection to NNDSS were also increased compared with previous years. Similarly year to date totals reported to LabVISE of isolates of *Coxiella burnetti*, the causative organism of Q fever, are increased (n=72) compared with the same period (n=32) last year. These reports were largely from Queensland (n=20) or Victoria (n=24). Both these States also reported increased Q fever cases to the NNDSS.

All reports of Norwalk-like virus (NLV) in this quarter were notified from Victoria. This may reflect a reporting bias because the Victorian Infectious Diseases Research Laboratory, unlike other laboratories, routinely screens stool specimens for the Norwalk virus. These reports included samples from 4 recognised outbreaks of NLV in this quarter in Victoria. Two of these outbreaks were in childcare centres, one in a primary school and one in an aged care facility. The frequency and size of these outbreaks were similar to those previously seen in this season in Victoria (Joy Gregory, OzFoodNet, Department of Human Services, Victoria, personal communication). NLV is the leading cause of diarrhoea and vomiting in the United Kingdom[6] and may comprise up to 11 per cent of all episodes of acute primary gastroenteritis in the USA.[7]

References

1. Allos BM. *Campylobacter jejuni* infections: update on emerging issues and trends. *CID* 2001;32:1201-1206.
2. Chin J. Control of Communicable Diseases Manual. (7th edition ed.) Washington: American Public Health Association, 2000.
3. Clark DP. New insights into human cryptosporidiosis. *Clin Microbiol Rev* 1999;12:554-563.
4. CDC. Protracted outbreaks of cryptosporidiosis associated with swimming pool use - Ohio and Nebraska, 2000. *MMWR* 2001;50:406-410.
5. Tsirigotes N, Biffin B, Jalaludin B. *Salmonella* outbreak and deep fried ice cream. *Commun Dis Intell* 1994;18:254-255.
6. Cheesborough JS, Green J, Gallimore CI, Wright PA, Brown DWG. Widespread environmental contamination with Norwalk-like viruses (NLV) detected in a prolonged hotel outbreak of gastroenteritis. *Epidemiol Infect* 2000;125:93-98.
7. Mead PS, Slutsker L, Dietz V, et al. Food-related illness and death in the United States. *Emerging Infectious Diseases* 1999;5:607-625.

Tables

There were 20,278 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 April and 30 June 2001 (Table 2). Figure 1 illustrates, for selected Diseases, the 2nd quarter 2001 totals as ratios to the mean of the 2nd quarters for the previous 5 years. A summary of Diseases currently being reported by each jurisdiction is provided in Table 1. The notification rate of Diseases per 100,000 population for each State or Territory is presented in Table 3.

There were 4,908 reports received by the *CDI* Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 April to 30 June 2001 (Tables 4 and 5).

The Australian Sentinel Practice Research Network (ASPREN) data for weeks 13-17 to 22-26, ending 1 July 2001, are included in this issue of *Communicable Diseases Intelligence* (Table 6).

Table 1. Reporting of notifiable diseases by jurisdiction

Disease	Data received from:*
Bloodborne	
Hepatitis B (incident)	All jurisdictions
Hepatitis B (unspecified)	All jurisdictions except NT
Hepatitis C (incident)	All jurisdictions
Hepatitis C (unspecified)	All jurisdictions
Hepatitis D	All jurisdictions
Gastrointestinal	
Botulism	All jurisdictions
Campylobacteriosis	All jurisdictions except NSW
Cryptosporidiosis	All jurisdictions
Haemolytic Uraemic Syndrome	All jurisdictions
Hepatitis A	All jurisdictions
Hepatitis E	All jurisdictions
Listeriosis	All jurisdictions
Salmonellosis	All jurisdictions
Shigellosis	All jurisdictions
SLTEC, VTEC	All jurisdictions
Typhoid	All jurisdictions
Quarantinable	
Cholera	All jurisdictions
Plague	All jurisdictions
Rabies	All jurisdictions
Viral haemorrhagic fever	All jurisdictions
Yellow fever	All jurisdictions
Sexually transmissible	
Chlamydial infection	All jurisdictions
Donovanosis	All jurisdictions except SA
Gonococcal infection	All jurisdictions
Syphilis	All jurisdictions
Vaccine preventable	
Diphtheria	All jurisdictions
Haemophilus influenzae type b	All jurisdictions
Influenza	All jurisdictions except ACT, Qld, SA & Vic
Measles	All jurisdictions
Mumps	All jurisdictions
Pertussis	All jurisdictions
Pneumococcal disease	All jurisdictions except SA & Tas
Rubella	All jurisdictions
Tetanus	All jurisdictions
Vectorborne	
Arbovirus infection NEC	All jurisdictions
Barmah Forest virus infection	All jurisdictions
Dengue	All jurisdictions
Japanese encephalitis	All jurisdictions
Kunjin	All jurisdictions except ACT†
Malaria	All jurisdictions
Murray Valley encephalitis	All jurisdictions except ACT†
Ross River virus infection	All jurisdictions
Zoonoses	
Anthrax	All jurisdictions except SA
Australian Bat lyssavirus	All jurisdictions
Brucellosis	All jurisdictions
Leptospirosis	All jurisdictions
Ornithosis	All jurisdictions
Other lyssaviruses (NEC)	All jurisdictions
Q Fever	All jurisdictions
Other	
Legionellosis	All jurisdictions
Leprosy	All jurisdictions
Meningococcal infection	All jurisdictions
Tuberculosis	All jurisdictions

* Jurisdictions not yet reporting on Diseases either because legislation has not yet made some Diseases notifiable in that jurisdiction or data are not yet being reported to the Commonwealth

† Combined under Murray Valley encephalitis

Table 2. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2001, by date of notification*

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total 2nd quarter 2001[1]	Total 1st quarter 2001[1]	Total 2nd quarter 2000[1]	Last 5 years mean 2nd quarter	Year to date 2001	Last 5 years YTD mean	Ratio†
Bloodborne															
Hepatitis B (incident)	2	15	1	15	6	5	43	7	94	96	108	72	240	148	1.3
Hepatitis B (unspecified)[2]	14	534	NN	196	51	7	534	161	1,497	1,487	2,075	1,847	2,853	3,633	0.8
Hepatitis C (incident)	7	13	0	0	25	0	12	6	63	82	112	67	143	141	0.9
Hepatitis C (unspecified)[2]	37	1,252	36	728	136	88	1,236	376	3,889	4,309	5,007	4,445	7,918	9,107	0.9
Hepatitis D	0	4	0	1	0	0	1	0	6	5	6	3	11	7	1.9
Gastrointestinal									0						
Botulism	0	0	0	1	0	0	0	0	1	1	0	0.2	2	0	5.0
Campylobacterosis[3]	106	-	83	959	506	128	1,263	584	3,629	3,394	3,248	2,791	6,810	5,877	1.1
Cryptosporidiosis	2	35	91	80	20	NDR	108	49	385	255	NDR	n/a	599	n/a	n/a
Haemolytic uraemic syndrome	0	0	0	0	0	0	0	0	0	2	1	2	2	7	0.0
Hepatitis A	2	27	16	35	5	0	26	4	115	96	215	497	210	1,201	0.2
Hepatitis E	0	0	0	0	0	0	2	0	2	1	0	0.4	3	3	5.0
Listeriosis	0	3	0	3	2	0	0	0	8	21	17	14	29	34	0.6
Salmonellosis	10	299	85	538	126	45	249	198	1,550	2,180	1,564	1,599	3,655	4,065	1.0
Shigellosis	4	21	28	19	10	2	26	12	122	116	142	160	235	344	0.8
SLTEC,VTEC[4]	0	0	0	1	4	0	1	0	6	16	5	5	22	15	1.1
Typhoid	0	4	2	1	0	0	2	1	10	33	17	14	43	42	0.7
Quarantinable															
Cholera	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0.0
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Rabies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Viral haemorrhagic fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Yellow fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Sexually transmissible															
Chlamydial infection	52	792	265	1,290	665	80	490	660	4,294	4,696	4,270	3,036	8,733	6,018	1.4
Donovanosis	0	0	4	1	NN	0	0	3	8	2	4	7	10	16	1.1
Gonococcal infection[5]	2	249	325	208	85	5	176	342	1392	1,457	1,708	1,412	2,737	2,747	1.0
Syphilis[6]	1	148	62	0	6	2	3	42	264	278	484	422	536	841	0.6

Table 2 (continued). Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 May 2001, by date of notification*

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total 2nd quarter 2001[1]	Total 1st quarter 2001[1]	Total 2nd quarter 2000[1]	Last 5 years mean 2nd quarter	Year to date 2001	Last 5 years YTD mean	Ratio[†]
Vaccine preventable															
Diphtheria	0	0	0	0	0	0	0	0	0	1	0	0	1		0.0
Haemophilus influenzae type b	0	5	3	3	2	0	0	1	14	5	6	12	19	21	1.2
Influenza*	NDR	9	2	NDR	NDR	0	NDR	13	24	12	NDR	n/a	24	n/a	n/a
Measles	0	9	0	1	0	1	0	1	12	70	32	80	82	174	0.2
Mumps	0	6	0	0	2	1	7	14	30	31	64	47	57	90	0.6
Pertussis	17	602	37	223	281	11	101	12	1,284	1,217	1,107	1,020	2,494	2,388	1.3
Pneumococcal disease*	8	84	29	97	NDR	NDR	50	58	326	87	NDR	n/a	391	n/a	n/a
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0		0.0
Rubella[7]	0	6	0	27	0	2	5	0	40	55	53	206	95	482	0.2
Tetanus	0	0	0	0	0	0	0	0	0	1	1	1	1	3	0.0
Vectorborne															
Arbovirus infection NEC	0	5	1	0	0	0	8	0	14	9	27	14	23	41	1.0
Barmah Forest virus infection	1	188	8	230	0	0	2	17	446	324	169	200	760	451	2.2
Dengue	1	9	10	19	3	0	3	5	50	33	40	37	83	140	1.3
Japanese encephalitis	0	0	0	0	0	0	0	0	0	0	NDR	n/a	0	n/a	n/a
Kunjin virus infection	NDR	0	0	0	0	0	0	0	0	0	NDR	n/a	0	n/a	n/a
Malaria	1	25	15	70	3	5	21	8	148	230	276	199	375	459	0.7
Murray Valley encephalitis	NDR	0	0	0	0	0	0	0	0	2	NDR	n/a	2	n/a	n/a
Ross River virus infection	4	323	19	659	13	1	55	56	1,130	1,577	1,408	1,608	2,681	4,482	0.7
Zoonoses															
Anthrax*	0	0	0	0	NN	0	0	0	0	0	NDR	n/a	0	n/a	n/a
Australian bat lyssavirus*	0	0	0	0	0	0	0	0	0	0	NDR	n/a	0	n/a	n/a
Brucellosis	0	0	0	2	0	0	0	0	2	6	2	5	8	13	0.4
Leptospirosis	0	17	1	34	0	1	6	1	60	70	75	65	130	127	0.9
Other lyssavirus (NEC)*	0	0	0	0	0	0	0	0	0	0	NDR	n/a	0	n/a	n/a
Ornithosis	0	6	0	NDR	2	0	14	1	23	29	23	19	52	34	1.2
Q fever	1	28	0	95	3	1	18	4	150	169	118	144	319	275	1.0

Table 2 (continued). Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2001, by date of notification*

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total 2nd quarter 2001[1]	Total 1st quarter 2001[1]	Total 2nd quarter 2000[1]	Last 5 years mean 2nd quarter	Year to date 2001	Last 5 years YTD mean	Ratio[†]
Other															
Legionellosis	0	20	1	12	4	1	31	7	76	65	237	93	137	158	0.8
Leprosy	0	0	0	0	0	0	0	0	0	1	2	1	1	4	0.0
Meningococcal infection	0	59	5	23	7	2	36	11	143	128	131	112	271	183	1.3
Tuberculosis	1	37	0	5	0	1	67	14	125	163	214	236	287	508	0.5
Total	273	4,834	1,129	5,576	1,967	389	4,596	2,668	21,432	22,812	22,968	20,495	43,084	44,284	1.0

1. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.
2. Unspecified numbers should be interpreted with some caution as the magnitude may be a reflection of the numbers of tests being carried out.
3. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
4. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).
5. NT, Qld, SA , Vic and WA: includes gonococcal neonatal ophthalmia.

NA Not calculated as only notifiable for under 5 years.

6. Includes congenital syphilis.
7. Includes congenital rubella

* Date of notification = a composite of three dates: (i) the true onset date from a clinician, if available, (ii) the date the laboratory test was ordered, or (iii) the date reported to the public health unit.

† Ratio = ratio of current month total to mean of last 5 years calculated as described above.

NDR No data received.

NN. Not Notifiable

NEC Not Elsewhere Classified.

\- Elsewhere Classified.

Table 3. Notification rates of diseases by State or Territory, 1 April to 30 June 2001. (Rate per 100,000 population)

Disease[1]	State or Territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Bloodborne									
Hepatitis B (incident)	2.6	0.9	2.0	1.7	1.6	4.3	3.6	1.5	1.9
Hepatitis B (unspecified)[2]	17.9	32.8	NN	21.8	13.6	6.0	44.5	33.9	31.3
Hepatitis C (incident)	9.0	0.8	0.0	0.0	6.7	0.0	1.0	1.3	1.3
Hepatitis C (unspecified)[2]	47.4	77.0	73.4	81.0	36.3	74.9	103.1	79.2	80.7
Hepatitis D	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.1
Gastrointestinal									
Botulism	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Campylobacterosis[3]	135.7	_	169.1	106.6	134.9	108.9	105.3	123.1	113.6
Cryptosporidiosis	2.6	2.2	185.4	8.9	5.3	NDR	9.0	10.3	8.0
Haemolytic uraemic syndrome	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis A	2.6	1.7	32.6	3.9	1.3	0.0	2.2	0.8	2.4
Hepatitis E	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Listeriosis	0.0	0.2	0.0	0.3	0.5	0.0	0.0	0.0	0.2
Salmonellosis	12.8	18.4	173.2	59.8	33.6	38.3	20.8	41.7	32.2
Shigellosis	5.1	1.3	57.1	2.1	2.7	1.7	2.2	2.5	2.5
SLTEC,VTEC[4]	0.0	0.0	0.0	0.1	1.1	0.0	0.1	0.0	0.1
Typhoid	0.0	0.2	4.1	0.1	0.0	0.0	0.2	0.2	0.2
Quarantinable									
Cholera	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plague	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rabies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viral haemorrhagic fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sexually transmissible									
Chlamydial infection	66.6	48.7	540.0	143.4	177.3	68.1	40.9	139.1	89.1
Donovanosis	0.0	0.0	8.2	0.1	NN	0.0	0.0	0.6	0.2
Gonococcal infection[5]	2.6	15.3	662.3	23.1	22.7	4.3	14.7	72.1	28.9
Syphilis[6]	1.3	9.1	126.3	0.0	1.6	1.7	0.3	8.8	5.5
Vaccine preventable									
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haemophilus influenzae type b	0.0	0.3	6.1	0.3	0.5	0.0	0.0	0.2	0.3
Influenza*	NDR	0.6	4.1	NDR	NDR	0.0	NDR	2.7	1.1
Measles	0.0	0.6	0.0	0.1	0.0	0.9	0.0	0.2	0.2
Mumps	0.0	0.4	0.0	0.0	0.5	0.9	0.6	2.9	0.6
Pertussis	21.8	37.0	75.4	24.8	74.9	9.4	8.4	2.5	26.6
Pneumococcal disease	10.2	5.2	59.1	10.8	NDR	NDR	4.2	12.2	7.5
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella[7]	0.0	0.4	0.0	3.0	0.0	1.7	0.4	0.0	0.8
Tetanus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vectorborne									
Arbovirus infection NEC	0.0	0.3	2.0	0.0	0.0	0.0	0.7	0.0	0.3
Barmah Forest virus infection	1.3	11.6	16.3	25.6	0.0	0.0	0.2	3.5	9.3
Dengue	1.3	0.6	20.4	2.1	0.8	0.0	0.3	1.1	1.0
Japanese encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kunjin virus infection	NDR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaria	1.3	1.5	30.6	7.8	0.8	4.3	1.8	1.7	3.1
Murray Valley encephalitis	NDR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ross River virus infection	5.1	19.9	38.7	73.3	3.5	0.9	4.6	11.8	23.4

Table 3 (continued). Notification rates of diseases by State or Territory, 1 April to 30 June 2001. (Rate per 100,000 population)

Disease[1]	State or Territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Zoonoses									
Anthrax*	0.0	0.0	0.0	0.0	NN	0.0	0.0	0.0	0.0
Australian bat lyssavirus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brucellosis	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Leptospirosis	0.0	1.0	2.0	3.8	0.0	0.9	0.5	0.2	1.2
Other lyssavirus (NEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	0.4	0.0	NDR	0.5	0.0	1.2	0.2	0.6
Q fever	1.3	1.7	0.0	10.6	0.8	0.9	1.5	0.8	3.1
Other									
Legionellosis	0.0	1.2	2.0	1.3	1.1	0.9	2.6	1.5	1.6
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	0.0	3.6	10.2	2.6	1.9	1.7	3.0	2.3	3.0
Tuberculosis	1.3	2.3	0.0	0.6	0.0	0.9	5.6	2.9	2.6

1. Rates are subject to retrospective revision.
2. Unspecified numbers should be interpreted with some caution as the magnitude may be a reflection of the numbers of tests being carried out.
3. Not reported for NSW because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
4. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).
5. NT, Qld, SA , Vic and WA: includes gonococcal neonatal ophthalmia.
6. Includes congenital syphilis.
7. Includes congenital rubella.

NDR No data received.
NN Not Notifiable
NEC Not Elsewhere Classified.
- Elsewhere Classified.

Table 4. Virology and serology laboratory reports by laboratories for the reporting period 1 April to 30 June 2001[1]

State or Territory	Laboratory	April 2001	May 2001	June 2001	Total this period
Australian Capital Territory	The Canberra Hospital	-	-	-	-
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	127	42	108	277
	New Children's Hospital, Westmead	73	108	136	317
New South Wales	Repatriation General Hospital, Concord	-	-	-	0
	Royal Prince Alfred Hospital, Camperdown	25	44	53	122
	South West Area Pathology Service, Liverpool	105	130	209	444
Queensland	Queensland Medical Laboratory, West End	556	665	436	1,657
	Townsville General Hospital	1	17	-	18
South Australia	Institute of Medical and Veterinary Science, Adelaide	427	513	-	940
Tasmania	Northern Tasmanian Pathology Service, Launceston	2	19	10	31
	Royal Hobart Hospital, Hobart	-	-	-	0
Victoria	Monash Medical Centre, Melbourne	19	49	22	90
	Royal Children's Hospital, Melbourne	64	91	98	253
	Victorian Infectious Diseases Reference Laboratory, Fairfield	117	122	99	338
Western Australia	PathCentre Virology, Perth	-	-	-	-[2]
	Princess Margaret Hospital, Perth	52	103	182	337
	Western Diagnostic Pathology	30	38	16	84
Total		1,598	1,941	1,369	4,908

1. The complete list of laboratories reporting for the 12 months, January to December 2001, will appear in every report from January 2000 regardless of whether reports were received in this reporting period. Reports are not always received from all laboratories.
2. Data received from PathCentre Virology, Perth from October 2000 to August 2001 is awaiting processing by the Department of Health and Aged Care. A special report on these data will appear in a later edition of *Communicable Diseases Intelligence* (*CDI*). The CDI Editorial staff apologise for any inconvenience this may cause.

- Nil reports

Table 5. Virology and serology laboratory reports by State or Territory[1] for the reporting period 1 April to 30 June 2001, and total reports for the year[2]

	State or Territory[1]								This period 2001	This period 2000	Year to date 2001[3]	Year to date 2000
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Measles, mumps, rubella												
Measles virus	-	2	-	2	-	1	1	-	6	14	91	26
Mumps virus	-	-	-	1	-	-	2	-	3	8	11	31
Rubella virus	-	1	-	10	-	1	-	-	12	10	25	23
Hepatitis viruses												
Hepatitis A virus	-	1	4	15	3	-	3	1	27	41	39	94
Hepatitis D virus	-	-	-	-	1	-	1	-	2	2	3	3
Hepatitis E virus	-	-	-	-	-	-	1	-	1	1	3	2
Arboviruses												
Ross River virus	-	11	11	260	17	-	8	3	310	492	659	1,065
Barmah Forest virus	-	2	1	95	1	-	-	-	99	41	200	104
Dengue not typed	-	-	-	-	-	-	1	-	1	30	1	164
Flavivirus (unspecified)	-	-	1	3	-	-	8	-	12	6	15	37
Adenoviruses												
Adenovirus type 1	-	-	-	-	1	-	-	-	1	2	1	4
Adenovirus type 2	-	-	-	-	-	-	1	-	1	3	2	6
Adenovirus type 3	-	-	-	-	-	-	1	-	1	3	3	12
Adenovirus type 4	-	-	-	-	-	-	1	-	1	-	2	4
Adenovirus type 7	-	-	-	-	-	-	3	-	3	2	9	4
Adenovirus type 8	-	-	-	-	-	-	4	-	4	-	8	-
Adenovirus not typed/pending	2	37	-	-	87	-	45	7	178	263	368	546
Herpes viruses												
Cytomegalovirus	-	60	-	38	92	2	48	6	246	303	596	621
Varicella-zoster virus	3	32	9	100	28	-	55	6	233	325	602	749
Epstein-Barr virus	-	22	15	161	140	-	13	60	411	664	802	1,207
Other DNA viruses												
Parvovirus	-	1	-	26	17	-	17	-	61	73	103	167
Picornavirus family												
Coxsackievirus A16	-	-	-	-	-	-	1	-	1	1	2	3
Echovirus type 9	-	14	-	-	-	1	-	-	15	-	49	3
Echovirus type 11	-	-	-	-	-	-	1	-	1	2	4	6
Echovirus type 13	-	2	-	-	-	-	-	-	2	-	8	-
Echovirus type 18	-	1	-	-	-	-	-	-	1	-	4	-
Echovirus type 30	1	1	-	-	1	-	-	-	3	32	23	107
Echovirus not typed/pending	-	-	-	-	-	-	3	-	3	3	4	4
Poliovirus type 1 (unchar)	-	3	-	-	-	-	-	-	3	1	9	4
Poliovirus type 2 (unchar)	-	3	-	-	-	-	-	-	3	1	7	3
Poliovirus type 3 (unchar)	-	1	-	-	-	-	-	-	1	2	2	3
Poliovirus - mixed strain (unchar)	-	-	-	-	-	-	1	-	1	-	1	-
Rhinovirus (all types)	1	62	-	1	-	-	1	-	65	116	141	212
Enterovirus type 71 (BCR)	-	2	-	-	-	-	-	-	2	-	20	-
Enterovirus not typed/pending	-	10	-	2	-	1	15	-	28	282	93	583

Table 5 (continued). Virology and serology laboratory reports by State or Territory[1] for the reporting period 1 April to 30 June 2001, and total reports for the year[2]

	State or Territory[1]								This period 2001	This period 2000	Year to date 2001[3]	Year to date 2000
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Ortho/paramyxoviruses												
Influenza A virus	1	19	-	1	21	-	1	6	49	161	144	357
Influenza B virus	-	2	-	-	7	-	6	1	16	70	49	97
Parainfluenza virus type 1	-	1	-	-	5	-	2	1	9	130	15	180
Parainfluenza virus type 2	-	3	-	2	5	-	3	5	18	15	24	21
Parainfluenza virus type 3	-	17	-	4	25	-	8	28	82	39	165	110
Respiratory syncytial virus	2	599	-	67	50	10	128	98	954	1,032	1,112	1,285
Other RNA viruses												
Rotavirus	-	77	1	-	50	5	74	173	380	234	527	365
Astrovirus	-	-	-	-	-	-	1	-	1	-	1	-
Reovirus (unspecified)	-	-	-	-	-	-	1	-	1	-	1	1
Norwalk agent	-	-	-	-	-	-	34	-	34	3	115	4
Other												
Chlamydia trachomatis not typed	13	119	26	293	155	12	2	5	625	869	1,347	1,748
Chlamydia psittaci	-	2	-	-	-	-	18	-	20	25	41	50
Chlamydia species	-	1	-	-	-	-	-	-	1	3	4	6
Mycoplasma pneumoniae	-	30	4	83	26	2	31	1	177	150	356	299
Coxiella burnetii (Q fever)	2	2	-	20	-	-	24	-	48	8	72	32
Rickettsia - Spotted fever group	-	-	-	-	-	1	1	-	2	-	2	1
Streptococcus group A	-	13	6	58	-	-	17	-	94	72	192	181
Brucella species	-	-	-	2	-	-	-	-	2	1	2	4
Bordetella pertussis	-	35	3	58	93	-	48	-	237	110	451	275
Legionella pneumophila	-	1	-	-	-	-	22	-	23	12	28	15
Legionella longbeachae	-	-	-	-	-	-	1	-	1	19	1	35
Legionella species	-	-	-	-	-	-	7	-	7	1	7	1
Cryptococcus species	-	4	-	3	7	-	-	-	14	7	25	8
Leptospira species	-	-	-	8	3	-	-	-	11	24	26	33
Treponema pallidum	-	35	73	130	102	-	-	-	340	237	654	367
Entamoeba histolytica	-	-	-	1	-	-	4	-	5	1	7	9
Toxoplasma gondii	-	1	-	-	-	-	7	-	8	4	16	8
Echinococcus granulosus	-	-	-	-	6	-	1	-	7	11	10	14
Total	25	1,229	154	1,444	943	36	676	401	4,908	5,961	9,304	11,303

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. From January 2000 data presented are for reports with report dates in the current period. Previously reports included all data received in that period.
3. Totals comprise data from all laboratories. Cumulative figures are subject to retrospective revision, so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

\- No data received this period.

Table 6. Australian Sentinel Practice Research Network reports, weeks 13-17 to 22-26, 2001

Week number	13-17		18-21		22-26	
Ending on	29 April 2001		27 May 2001		01 July 2001	
Doctors reporting	288		259		317	
Total encounters	31,597		29,688		36,934	
Condition	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Influenza	137	4.3	181	6.1	333	9.1
Influenza with culture	5	0.2	9	0.3	5	0.1
Chickenpox	60	1.9	43	1.4	104	2.8
Shingles	50	1.6	38	1.3	61	1.7

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia. The system coordinates the national surveillance of more than 50 communicable diseases or disease groups endorsed by the Communicable Diseases Network Australia and the National Public Health Partnership. Notifications of these diseases are made to State and Territory health authorities under the provisions of their respective public health legislations. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see Commun Dis Intell *2000;24:6-7.*

LabVISE is a sentinel reporting scheme. Currently 17 laboratories contribute data on the laboratory identification of viruses and other organisms. This number may change throughout the year. Data are collated and published in Communicable Diseases Intelligence *monthly. These data should be interpreted with caution as the number and type of reports received is subject to a number of biases. For further information, see* Commun Dis Intell *2000;24:10.*

ASPREN currently comprises about 120 general practitioners from throughout the country, not all of whom report each week. Between 7,000 and 8,000 consultations are reported each week, with special attention to 12 conditions chosen for sentinel surveillance in 2001. Communicable Diseases Intelligence *reports the consultation rates for four of these. For further information, including case definitions, see* Commun Dis Intell *2001;25:106.*

Additional Reports

Australian encephalitis: Sentinel Chicken Surveillance Programme

Sentinel chicken flocks are used to monitor flavivirus activity in Australia. The main viruses of concern are Murray Valley encephalitis (MVE) and Kunjin which cause the potentially fatal disease encephalitis, in humans. Currently 30 flocks are maintained in the north of Western Australia, 9 in the Northern Territory, 12 in New South Wales and 10 in Victoria. The flocks in Western Australia and the Northern Territory are tested year round but those in New South Wales and Victoria are tested only from November to March, during the main risk season.

Results are coordinated by the Arbovirus Laboratory in Perth and reported bimonthly. For more information and details of the location of sentinel chicken sites see Commun Dis Intell *2000;24:8-9.*

A K Broom,[1] J Azuolas,[2] D Dwyer,[3] L Hueston,[3] J S Mackenzie,[4] L Melville,[5] D W Smith[6] and P I Whelan[7]

1. Department of Microbiology, The University of Western Australia
2. Victorian Institute of Animal Science, Victoria
3. Virology Department, Westmead Hospital, New South Wales
4. Department of Microbiology, The University of Queensland
5. Berrimah Agricultural Research Centre, Northern Territory
6. PathCentre, Western Australia
7. Territory Health Services, Northern Territory

May/June 2001

Sentinel chicken serology was carried out for 26 of the 30 flocks in Western Australia in May and June 2001. The number of seroconversions to flaviviruses have decreased in the north of Western Australia but Murray Valley encephalitis (MVE) and Kunjin virus (KUN) activity was still detected in both the Kimberley and Pilbara regions. In May there were 10 seroconversions from the Kimberley and 22 from the Pilbara. The majority of these were to MVE virus. Flavivirus activity decreased significantly in June and there was only one seroconversion to MVE from the Aboriginal community of Kalumburu in the far north Kimberley and 4 seroconversions (2 KUN, 2 MVE/KUN) from Marble Bar, Paraburdoo and Ophthalmia Dam (near Newman) in the Pilbara. The number of chickens positive for flavivirus antibodies by ELISA at each site and the identity of the infecting virus(es) are shown in Table 7. There have been no cases of disease caused by MVE virus reported from Western Australia during the 2001 wet season.

Serum samples from 7 of the 8 Northern Territory sentinel chicken flocks were tested at the University of Western Australia in May and June 2001. There were 4 new seroconversions to flaviviruses in May (3 KUN, 1 Flavi only) and one to MVE virus from the Alice Springs flock in June 2001. In May, Kunjin virus seroconversions were reported from Howard Springs, Beatrice Hill Farm and the new flock at Gapuwiyak. The single seroconversion to a flavivirus (not MVE or Kunjin) was from Leanyer. A media warning was sent out by the Territory Health Services in May warning of continuing flavivirus activity, particularly in the Top End of the Northern Territory.

Flavivirus activity was not detected in New South Wales or Victoria in May 2001 and the sentinel chicken surveillance programs in these States have now finished for the season.

The State health departments provide funding for the sentinel chicken surveillance programs in Western Australia, the Northern Territory, New South Wales and Victoria.

Table 7. Flavivirus seroconversions in Western Australian sentinel chicken flocks, May and June 2001

	May 2001				June 2001		
Location	MVE	KUN	MVE/KUN	FLAVI	MVE	KUN	MVE/KUN
Kimberley							
Kalumburu			1	1	1#		
Kununurra	2			1			
Derby*	3			1			
Broome*		1					
Pilbara							
Port/South Hedland*	1						
Harding Dam*	2	1					
Marble Bar	2						1#
Tom Price	4	1	1				
Paraburdoo	2	1	1			1#	
Ophthalmia Dam	3	1				1	1#
Newman town		1					
Onslow	1#						

MVE antibodies to Murray Valley encephalitis virus detected by ELISA
KUN antibodies to Kunjin virus detected by ELISA
FLAVI antibodies to a flavivirus only detected by ELISA
Some results not yet confirmed
* Two flocks at this town

Gonococcal surveillance

John Tapsall, The Prince of Wales Hospital, Randwick, NSW, 2031 for the Australian Gonococcal Surveillance Programme.

The Australian Gonococcal Surveillance Programme (AGSP) reference laboratories in the various States and Territories report data on sensitivity to an agreed 'core' group of antimicrobial agents quarterly. The antibiotics currently routinely surveyed are penicillin, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens and currently used in Australia to treat gonorrhoea. When in vitro resistance to a recommended agent is demonstrated in 5 per cent or more of isolates from a general population, it is usual to remove that agent from the list of recommended treatment.[1] Additional data are also provided on other antibiotics from time to time. At present all laboratories also test isolates for the presence of high level (plasmid-mediated) resistance to the tetracyclines, known as TRNG. Tetracyclines are however, not a recommended therapy for gonorrhoea in Australia. Comparability of data is achieved by means of a standardised system of testing and a program-specific quality assurance process. Because of the substantial geographic differences in susceptibility patterns in Australia, regional as well as aggregated data are presented.

Reporting period 1 January to 31 March 2001

The AGSP laboratories examined a total of 938 isolates in this quarter, virtually the same number as in the past two years. About 36 per cent of this total was from New South Wales, 19 per cent from Victoria, 18 per cent from Queensland, 12 per cent from the Northern Territory, 8 per cent from Western Australia and 6 per cent from South Australia. Isolates from other centres were few.

Penicillins

Figure 1 shows the proportions of gonococci fully sensitive (MIC 0.03 mg/L), less sensitive (MIC 0.06 – 1 mg/L), relatively resistant (MIC 1 mg/L) or else penicillinase producing (PPNG) aggregated for Australia and by State and Territory. A high proportion those strains classified as PPNG or else resistant by chromosomal mechanisms fail to respond to treatment with penicillins (penicillin, amoxycillin, ampicillin) and early generation cephalosporins.

In this quarter about 23 per cent of all isolates were penicillin resistant by one or more mechanisms, 9 per cent PPNG and 14 per cent by chromosomal mechanisms (CMRNG). The proportion of penicillin resistant strains ranged from 7 per cent in the Northern Territory to 34 per cent in New South Wales.

The number of PPNG isolated across Australia (85) was slightly less in this quarter than in the corresponding period in 2000 (91). The highest proportion of PPNG was found in isolates from Victoria (16%) and Western Australia (11%). PPNG were present in all jurisdictions including 5 (4.5%) in the Northern Territory. South East Asian countries were the main source of external acquisition, but local acquisition was prominent in New South Wales.

More isolates were resistant to the penicillins by separate chromosomal mechanisms (132). These CMRNG were especially prominent in New South Wales (27%) and Queensland (11%). Three CMRNG were detected in the Northern Territory.

Ceftriaxone

Low numbers of isolates with decreased susceptibility to ceftriaxone (MICs 0.06/0.12 mg/L) were present in New South Wales, Victoria, Queensland and South Australia.

Spectinomycin

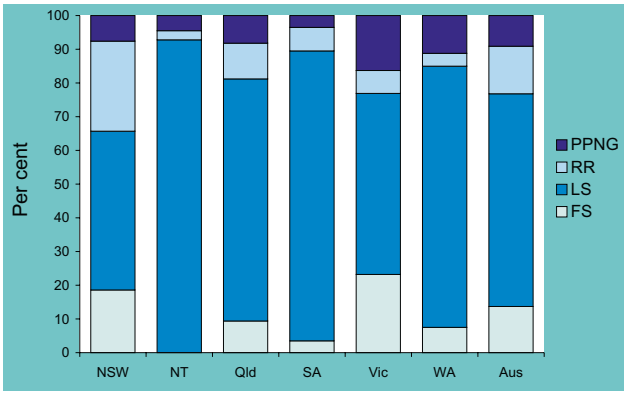
All isolates susceptible to this injectable agent.

Quinolone antibiotics

Quinolone resistant *N. gonorrhoeae* (QRNG) are defined as those isolates with an MIC to ciprofloxacin equal to or greater than 0.06 mg/L. QRNG are further subdivided into less sensitive (ciprofloxacin MICs 0.06 – 0.5 mg/L) or resistant (MIC 1 mg/L) groups.

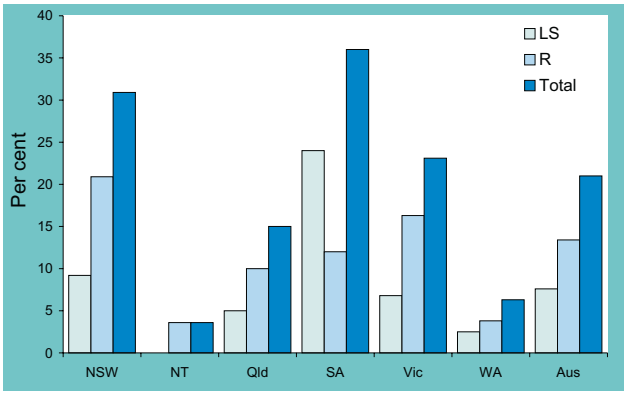
The total number (197) and proportion (21%) of all QRNG was again high and little changed from the first quarter of 2000 (183 isolates, 20%). QRNG were again widely distributed. High rates were maintained in South Australia (36%), New South Wales (31%), Victoria (22%) and

Figure 1. Categorisation of gonococci isolates, Australia, 1 January to 31 March 2001, by penicillin susceptibility and region



FS Fully sensitive to penicillin, MIC 0.03 mg/L
LS Less sensitive to penicillin, MIC 0.06 – 0.5 mg/L
RR Relatively resistant to penicillin, MIC 1 mg/L
PPNG Penicillinase producing *Neisseria gonorrhoeae*

Figure 2. Distribution of *N. gonorrhoeae* showing quinolone resistance, Australia, 1 January to 31 March 2001



LS QRNG Ciprofloxacin MICs 0.06 – 0.5 mg/L
R QRNG Ciprofloxacin MICs 1 mg/L

Queensland (15%). Six per cent of Western Australian isolates were QRNG. Seventy-two of the New South Wales, 23 of the Victorian and 17 of the Queensland QRNG exhibited high level resistance (MIC ciprofloxacin 1 mg/L) and higher level QRNG were also seen in the Northern Territory, South Australia and Western Australia. Local acquisition became increasingly prominent and MICs ranged up to 16mg/L. The majority of QRNG (126 of 197, 64%) are now in the high level category and this is a shift from the situation at this time last year.

High level tetracycline resistance (TRNG)

The number (73) and proportion (7.8%) of TRNG detected declined. TRNG represented 14 per cent of isolates from Queensland and Victoria, 7 per cent from South and Western Australia and 6 per cent from the Northern Territory.

Reference

1. Anon. Management of sexually transmitted Diseases. World Health Organization 1997; Document WHO/GPA/TEM94.1 Rev.1 p 37.

HIV and AIDS Surveillance

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (Australian Capital Territory, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, and annually in HIV/AIDS and related Diseases in Australia Annual Surveillance Report. The reports are available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Internet: http://www.med.unsw.edu.au/nchecr. Telephone: (02) 9332 4648. Facsimile: (02) 9332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 January to 31 march 2001, as reported to 30 June 2001, are included in this issue of Communicable Diseases Intelligence *(Tables 8 and 9).*

Table 8. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 January to 31 march 2001, by sex and State or Territory of diagnosis

										Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2001	This period 2000	Year to date 2001	Year to date 2000
HIV diagnoses	Female	0	6	0	7	1	0	5	0	19	21	19	21
	Male	0	26	1	21	8	2	22	1	81	198	81	198
	Sex not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total[1]	0	32	1	28	9	2	28	1	101	220	101	220
AIDS diagnoses	Female	0	1	0	0	0	0	1	0	2	7	2	7
	Male	0	5	1	9	0	0	9	0	24	69	24	69
	Total[1]	0	6	1	9	0	0	11	0	27	76	27	76
AIDS deaths	Female	0	1	0	0	0	0	1	0	2	3	2	3
	Male	0	3	0	3	0	0	5	0	11	29	11	29
	Total[1]	0	4	0	3	0	0	6	0	13	32	13	32

1. Persons whose sex was reported as transgender are included in the totals.

Table 9. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 31 March 2001, by sex and State or Territory

		State or Territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	27	640	10	170	64	5	233	123	1272
	Male	229	11261	109	2092	702	80	4050	946	19,469
	Sex not reported	0	242	0	0	0	0	24	0	266
	Total[1]	256	12164	119	2269	766	85	4322	1075	21,056
AIDS diagnoses	Female	9	202	0	50	25	3	73	26	388
	Male	87	4750	37	865	351	45	1699	359	8193
	Total[1]	96	4964	37	917	376	48	1781	387	8606
AIDS deaths	Female	4	115	0	33	16	2	51	17	238
	Male	68	3254	24	582	234	29	1302	255	5748
	Total[1]	72	3377	24	617	250	31	1360	273	6004

1. Persons whose sex was reported as transgender are included in the totals.