

Communicable Diseases Surveillance

Highlights for 3rd quarter, 2002

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. This additional information has enabled the reporting of more informative highlights each quarter.

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia. NNDSS collates data on notifiable communicable diseases from State or Territory health departments. The Virology and Serology Laboratory Reporting Scheme (LabVISE) is a sentinel surveillance scheme which collates information on laboratory diagnosis of communicable diseases. 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'.

Figure 1 shows the changes in disease notifications with an onset in the third quarter of 2002, compared with the 5-year third quarter mean. Disease notifications above or below the 5-year mean, plus- or minus- two standard deviations are marked with an asterisk. Diseases where the number of cases reported was two standard deviations above the mean of the same reporting period in the last 5 years in the current quarter were hepatitis E, shiga-like toxin producing *Escherichia coli* and ornithosis. The reports of Ross River virus infection, leptospirosis and tuberculosis were two standard deviations below the 5-year mean in this quarter. These and other disease trends are discussed below with additional commentary provided by State and Territory health authorities.

Due to the difficulties in data transmission in this quarter, Victorian data for sexually transmitted diseases, incident hepatitis B and C diseases, Ross River virus infection, dengue, tuberculosis and Barmah Forest virus infections were not updated and the numbers presented (Table 2) should be interpreted with caution.

Gastrointestinal disease

Campylobacteriosis

In all jurisdictions, there were fewer reports of campylobacteriosis in the third quarter (3,075) compared with the mean for the last five years (3,380, Table 2). Campylobacteriosis notifications are lowest in winter months and show a seasonal peak in spring and summer. Notifications of campylobacteriosis in Australia, which have increased steadily since 1991, may now be stabilising (Figure 2).

Figure 1. Selected¹ diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 July to 30 September 2002 with historical data²

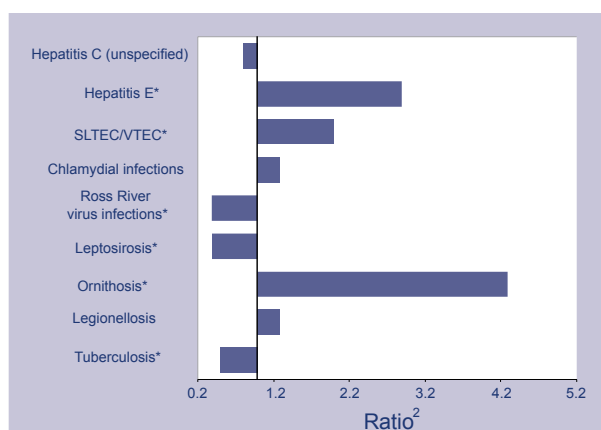
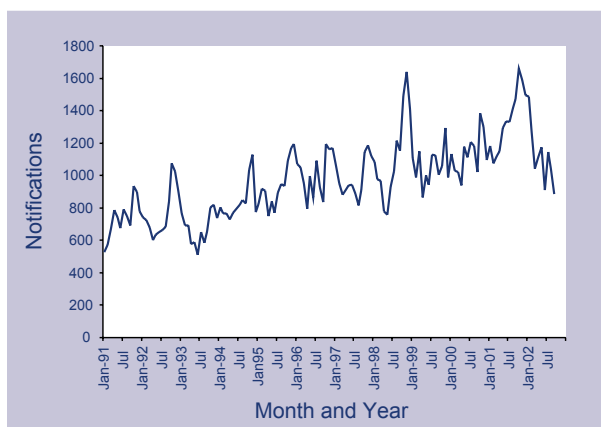


Figure 2. Trends in notifications of campylobacteriosis, Australia, 1991 to 2002

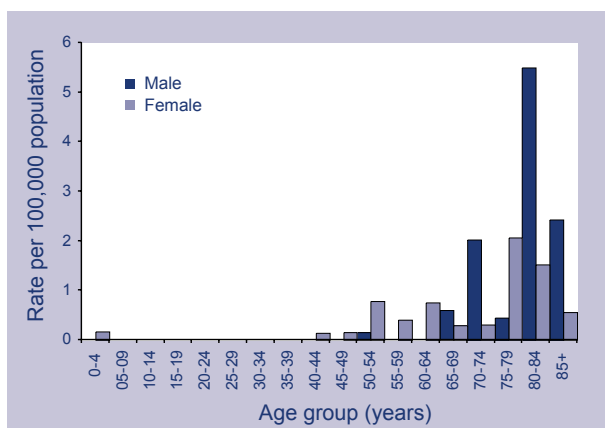


Despite the national totals of campylobacteriosis showing a decrease in this quarter, there was an increase in cases of campylobacteriosis in Far North Queensland. Interviews were conducted with 24 cases who had eaten chicken in the 7 days before onset of illness and 17/24 (71%) had eaten chicken in the 3 days before onset. Sixty-three per cent (15/24) had purchased fresh chicken to take home and cook. No other food, water or environmental exposures were common among cases. The results of quantitative testing of raw chicken samples and comparison of strains to isolates from cases remain to be assessed. Preliminary data suggests that approximately 80 per cent of raw chicken sold at retail outlets are contaminated with *Campylobacter*. The same poultry abattoir in North Queensland, was identified as a common link for cases of *Campylobacter* infection in 2000. This abattoir is the main supplier of chickens to region.

Listeriosis

Listeriosis is a serious bacterial disease caused by consumption of food contaminated with *Listeria monocytogenes*. The elderly and those with reduced immune function are at increased risk of infection and represent the majority of listeriosis cases in Australia (Figure 3).

Figure 3. Notification rates of listeriosis, Australia, 1 January to 30 September 2002, by age and sex



There was an increase in cases of listeriosis in Queensland during the quarter. Two cases reported consuming the same brand of smoked cod from South Africa and Argentina. Food samples tested positive for *Listeria*. As the cod was not marketed as a ready-to-eat food, there was no food recall, however, the importer was asked to clearly mark the food as requiring cooking before consumption.

In Western Australia, there was a recall of a feta cheese product contaminated with *Listeria*. The Communicable Disease Control Section of the Health Department of Western Australia advised that neither of the 2 cases of listeriosis reported in Western Australia in the quarter were associated with the consumption of this feta cheese product.

Salmonellosis

The number of notifications of salmonellosis was at a low level (101 cases) which is typical of winter months. There were 14 cases of *Salmonella* Hvittingfoss in Victoria, 11 of which were investigated as a possible cluster. One had a recent history of travel overseas, one was a breast-fed baby, and of the remaining nine, six had consumed cashews. There was, however, no common source or brand of cashews among the cases, no positive microbiology on samples, and no further cases. A case control study was not conducted and the source of the infections remains unknown.

Shiga-like toxin producing *Escherichia coli*

There were 12 cases of shiga-like toxin producing *Escherichia coli* (SLTEC/VTEC) infection notified to the NNDSS in the third quarter. This is twice the five-year mean for third quarter (Figure 1). The Communicable Diseases Control Branch of the South Australian Health Commission reported a cluster of SLTEC infections during the quarter. In South Australia all faeces with microscopic or macroscopic blood sent to microbiology laboratories are routinely screened by PCR for shiga toxin. Positive specimens are further screened using a multiplex PCR for multiple pathogenic genes. A cluster of four children (three females, one male: age range 1–7 years) and one female (aged 47 years) has been identified. Dates of onset ranged from 6 to 16 September 2002; four of the cases were residents of metropolitan Adelaide and one was from rural South Australia. The investigation has established a possible direct link between animal contact at a petting zoo and illness for 3 cases and an indirect link for a fourth. The multiplex PCR has detected the same pattern of genes in faeces from the 5 human cases and from a swab of the coat of one of the animals included in the environmental investigation. Shiga toxin positive *E. coli* O26 has been isolated from three of the human specimens. None of the cases developed haemolytic uraemic syndrome (HUS). Active surveillance of health services did not identify any other recent cases of HUS.

Other foodborne disease outbreaks

An outbreak of foodborne disease at a conference was reported from Western Australia in September 2002. An electronic questionnaire emailed to 533 delegates, of which 350 replied, identified 80 cases (23% attack rate). No pathogen was identified nor was a definitive link to any food established.

Quarantinable disease

Cholera

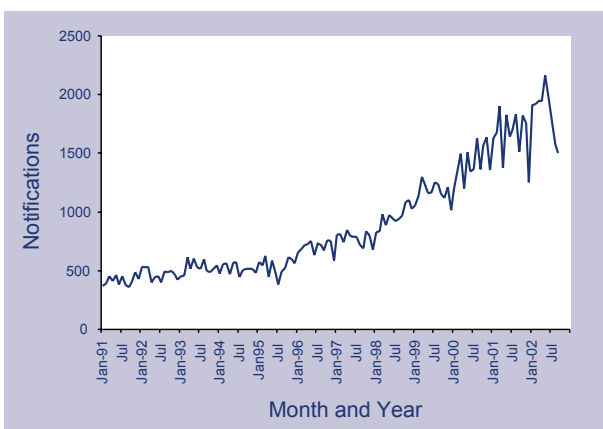
There were 3 cases of cholera reported to the NNDSS in the third quarter of 2002. One case, from South Australia, was subsequently identified as an infection with non-cholera *Vibrio* acquired in China. The other 2 cases were confirmed as *V. cholerae* O1, both acquired overseas (one in Pakistan and one in Vietnam).

Sexually transmitted infections

Chlamydial infection

There were 4,844 notifications of chlamydial infection in the third quarter of 2002, which was 30 per cent higher than the five-year mean (Figure 1). Chlamydial infections have been increasing in Australia since 1991 (Figure 4).

Figure 4. Trends in notifications of chlamydial infections, Australia, 1991 to 2002



Vaccine preventable diseases

Measles

There was a small outbreak of measles in North Queensland and New South Wales in July–August 2002. The outbreak was initiated by a 16-year-old visitor from Europe, who had travelled through

Thailand and resulted in 7 cases. The outbreak is described in more detail in a short report in this (Hanna).¹

One of the 7 cases was an unimmunised child from northern New South Wales, who subsequently infected two unimmunised siblings. The measles viral genotype in all cases in both States was identified as D5. This genotype has previously been identified as circulating in Thailand (Victorian Infectious Diseases Reference Laboratory annual report, 2001).

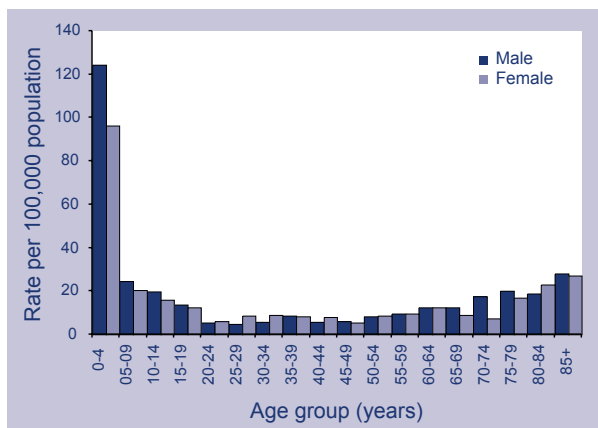
In August, a sailor from South-East Asia developed laboratory-confirmed measles within a few days of flying into Sydney. The public health unit assessed the risk to coworkers on the ship and among dock workers and recommended immunoglobulin to those who were susceptible. No further transmission was identified.

Two linked cases of measles occurred in Victoria in August in young adults without a history of travel. The first case, a nurse, may have been infected through contact with two other measles cases, neither of whom had a history of travel. Both cases were identified as measles genotype H1.

Influenza

There were 2,564 notifications of laboratory-confirmed influenza in the third quarter of 2002. The largest number of cases (944) and the highest rate (103.9 cases per 100,000 population) was in Queensland. The majority of notifications in the third quarter were influenza A; LabVISE data (Table 4) shows the ratio of influenza A:B isolations of 4.8:1. The majority of cases of laboratory-confirmed influenza cases were in children aged less than 5 years and in the elderly aged 65 years or more (Figure 5).

Figure 5. Notification rates of influenza, Australia, 1 January to 30 September 2002, by age and sex

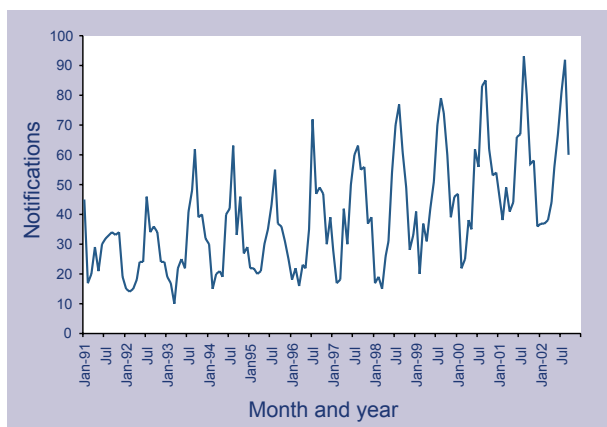


Other bacterial diseases

Meningococcal disease

There were 233 notifications of meningococcal disease in third quarter of 2002. The largest number of reports was from New South Wales (76 cases) and the highest rate was in Victoria (5.4 cases per 100,000 population). An analysis of meningococcal notification by month of onset, indicates a continuing increase since 1991 (Figure 6).

Figure 6. Trends in notifications of meningococcal infections, Australia, 1991 to 2002



There were three confirmed and one unconfirmed linked cases of meningococcal disease in a small Queensland rural community of 5,000 people. Two cases were identified as meningococcal group C and the third as a group Y. The group Y isolate did, however, show evidence of similarity with the group C cases on the basis of genetic typing. The cases were aged between 19 and 40 years. Tetravalent polysaccharide vaccine was offered to all people aged 18–40 years who lived or worked in the community and surrounds. In all, 2,300 vaccines were given. There were no further cases in the community and all the identified cases recovered.

A small cluster of meningococcal disease occurred in a child-care group in Victoria in July 2002. There were two confirmed cases of meningococcal serogroup C in children aged 4 and 5 years, both of whom attended the same day care centre. One child also attended a second child-care centre and conjugate meningococcal serogroup C vaccine was offered to children and staff at both centres.

Legionellosis

Public health authorities warned people to take care handling potting mix after a second death due to legionellosis disease in New South Wales in 2002. The death of a 77-year-old Sydney man in July 2002 follows that of a 78-year-old man in

January 2002. Other people infected with the illness in New South Wales this year have recovered. There were no deaths following *legionella* infection associated with potting mix in New South Wales last year, one case in 2000 and another single case in 1999. There were four deaths in 1998. *Legionella longbeachae* has been associated with lower respiratory infection in immunocompetent and immunocompromised individuals. The organism, especially in Australia, appears to be unique in being associated with pneumonia associated with exposure to soil. It has been found in soil and potting mixes from Australia but not from potting mix made in Europe. Importantly, the *legionellae* from the soil and the patient appeared to be closely related. Cases of *L. longbeachae* associated with potting mix have been described in the United States of America and Japan.

LabVISE

During the period July to September 2002, 12 participating laboratories (3 each in New South Wales, Western Australia and Victoria and one each in South Australia, Queensland and Tasmania), contributed 6,212 reports to LabVISE. Although there were no contributing laboratories in the Northern Territory, samples from this jurisdiction were included in reports from participating reference laboratories.

Of the 6,212 reports received, 4,532 (73%) were of viral infections and the remainder (1,680) were bacterial, spirochaete, fungal, protozoan or helminthic infections. Of the viral infections, reports of respiratory syncytial virus (1,302 reports) represented 28 per cent of all viral identifications and influenza virus (1,175 reports) represented a further 26 per cent of the viral pathogen total. This pattern of increased respiratory viral infections is typical of winter months. Among reports of non-viral pathogens, *Chlamydia trachomatis* (706 reports) represented 42 per cent of the total.

With thanks to:

Craig Davis, Queensland Health

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Graham Tallis, Department of Human Services, Victoria

References

1. Hanna JN, Symons DJ, Lyon MJ. A measles outbreak in the Whitsundays, Queensland: the shape of things to come? *Commun Dis Intell* 2002;26:589–592.

Tables

A summary of diseases currently being reported by each jurisdiction is provided in Table 1. There were 22,527 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 July and 30 September 2002 (Table 2). The notification rate of diseases per 100,000 population for each State or Territory is presented in Table 3.

There were 6,212 reports received by the Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 July to 30 September 2002 (Tables 4 and 5).

Table 1. Reporting of notifiable diseases by jurisdiction

Disease	Data received from:*
Bloodborne diseases	
Hepatitis B (incident)	All jurisdictions
Hepatitis B (unspecified)	All jurisdiction, except NT
Hepatitis C (incident)	All jurisdictions except Qld and NT
Hepatitis C (unspecified)	All jurisdictions
Hepatitis D	All jurisdictions
Hepatitis NEC	All jurisdictions
Gastrointestinal diseases	
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 diseases	
Chlamydial infection	All jurisdictions
Donovanosis	All jurisdictions except SA
Gonococcal infection	All jurisdictions
Syphilis	All jurisdictions

Disease	Data received from:*
Vaccine preventable diseases	
Diphtheria	All jurisdictions
<i>Haemophilus influenzae</i> type b	All jurisdictions
Influenza	All jurisdictions
Measles	All jurisdictions
Mumps	All jurisdictions
Pertussis	All jurisdictions
Pneumococcal disease	All jurisdictions
Poliomyelitis	All jurisdictions
Rubella	All jurisdictions
Tetanus	All jurisdictions
Vectorborne diseases	
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 [†]
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 bacterial infections	
Legionellosis	All jurisdictions
Leprosy	All jurisdictions
Meningococcal infection	All jurisdictions
Tuberculosis	All jurisdictions

* Jurisdictions may not yet be reporting a disease either because legislation has not yet made that disease notifiable in that jurisdiction, or because notification data for that disease are not yet being reported to the Commonwealth

† In the Australian Capital Territory, infections with Murray Valley encephalitis virus and kunjin virus are combined under Murray Valley encephalitis

Table 2. Notifications of diseases received by State and Territory health authorities in the period 1 July to 30 September 2002, by date of notification*

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic [†]	WA	Total 3rd quarter 2002 ¹	Total 2nd quarter 2002 ¹	Total 3rd quarter 2001 ¹	Last five years mean 3rd quarter	Year to date 2002	Last five years YTD mean	Ratio [‡]
Bloodborne diseases															
Hepatitis B (incident)	0	27	4	12	4	5	2	3	57	122	119	91	276	254	0.6
Hepatitis B (unspecified)	26	863	NN	166	56	18	465	95	1,689	1,937	2,235	1,948	5,541	5,511	0.9
Hepatitis C (incident)	1	18	-	-	5	16	4	24	68	96	161	95	284	281	0.7
Hepatitis C (unspecified)	62	1,617	49	721	131	99	916	289	3,884	4,323	4,932	4,697	12,777	14,059	0.8
Hepatitis D	0	2	0	1	0	0	2	0	5	6	3	4	14	12	1.3
Hepatitis (NEC)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	-
Gastrointestinal diseases															
Botulism	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0
Campylobacteriosis ²	77	NN	63	889	623	127	884	412	3,075	3,199	4,212	3,380	10,074	9,541	0.9
Cryptosporidiosis	1	21	19	51	35	16	52	40	235	617	236	N/A	2,963	N/A	N/A
Haemolytic uraemic syndrome	0	1	0	0	0	0	0	0	1	3	1	2	7	8	0.5
Hepatitis A	0	25	18	8	3	1	13	11	79	81	149	359	306	1,357	0.2
Hepatitis E	1	3	0	0	0	0	0	0	4	6	1	1	11	7	2.9
Listeriosis	0	2	0	1	1	0	4	2	10	20	15	14	44	50	0.7
Salmonellosis	10	265	52	356	91	19	186	118	1,097	2,028	1,173	1,081	6,003	5,301	1.0
Shigellosis	0	22	19	19	4	1	16	20	101	130	126	120	379	460	0.8
SLTEC, VTEC ³	0	0	0	0	10	0	2	0	12	12	7	6	40	26	2.0
Typhoid	0	2	0	1	1	0	5	4	13	9	19	14	56	53	0.9
Quarantinable diseases															
Cholera	0	1	0	0	1	0	0	0	2	0	2	1	3	3	2.0
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

Table 2 (continued). Notifications of diseases received by State and Territory health authorities in the period 1 July to 30 September 2002, by date of notification*

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic [†]	WA	Total 3rd quarter 2002 ¹	Total 2nd quarter 2002 ¹	Total 3rd quarter 2001 ¹	Last five years mean 3rd quarter	Year to date 2002	Last five years YTD mean	Ratio [‡]
Sexually transmissible diseases															
Chlamydial infection	113	1,325	376	1,679	396	127	123	705	4,844	6,079	5,047	3,615	16,698	10,704	1.3
Donovanosis	0	0	1	2	NN	0	0	0	3	4	12	9	16	26	0.3
Gonococcal infection ⁴	5	276	435	223	43	3	79	311	1,375	1,685	1,518	1,323	4,630	4,233	1.0
Syphilis ⁵	2	167	140	105	1	3	43	30	491	480	369	425	1,343	1,217	1.2
Vaccine preventable diseases															
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
<i>Haemophilus influenzae</i> type b	0	0	0	1	1	0	0	1	3	11	4	10	25	28	0.3
Influenza	11	667	41	944	134	6	341	420	2,564	756	998	N/A	3,445	N/A	N/A
Measles	0	6	0	7	0	0	14	0	27	41	17	77	102	223	0.4
Mumps	0	7	0	0	3	0	1	4	15	20	20	48	54	144	0.3
Pertussis	6	331	3	411	82	4	127	38	1,002	1,175	2,962	2,037	3,984	4,743	0.5
Pneumococcal disease	8	281	25	204	42	19	158	90	827	577	657	N/A	1,701	N/A	N/A
Polio	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Rubella ⁶	1	11	0	64	0	1	0	1	78	52	70	182	186	466	0.4
Tetanus	0	0	0	0	0	0	0	0	0	0	0	1	2	4	0.0
Vectorborne diseases															
Arbovirus infection NEC	0	0	0	0	0	0	6	0	6	34	6	5	104	43	1.2
Barmah Forest virus infection	0	46	4	46	0	0	0	3	99	365	138	100	755	592	1.0
Dengue	2	13	3	10	2	0	0	4	34	67	48	29	188	186	1.2
Japanese encephalitis	0	0	0	0	0	0	0	0	0	0	0	N/A	0	N/A	N/A
Kunjin virus infection	-	0	0	0	0	0	0	0	0	0	0	N/A	0	N/A	N/A
Malaria	3	16	5	32	5	5	9	3	78	118	161	175	356	614	0.4
Murray Valley encephalitis	0	0	0	0	0	0	0	0	0	0	1	N/A	2	N/A	N/A
Ross River virus infection	0	15	1	66	6	0	1	3	92	567	158	212	1,326	3,828	0.4

Table 2 (continued). Notifications of diseases received by State and Territory health authorities in the period 1 July to 30 September 2002, by date of notification*

Disease	ACT	NSW	NT	Qld	SA	Tas	Vic [†]	WA	Total 3rd quarter 2002 ¹	Total 2nd quarter 2002 ¹	Total 3rd quarter 2001 ¹	Last five years mean 3rd quarter	Year to date 2002	Last 5 years YTD mean	Ratio [‡]
Zoonoses															
Anthrax	0	0	0	0	NIN	0	0	0	0	0	0	N/A	0	N/A	N/A
Australian bat lyssavirus	0	0	0	0	0	0	0	0	0	0	0	N/A	0	N/A	N/A
Brucellosis	0	1	0	6	0	0	1	0	8	8	4	13	29	25	0.6
Leptospirosis	0	5	0	7	0	2	0	0	14	44	38	36	128	170	0.4
Other lyssavirus	0	0	0	0	0	0	0	0	0	0	0	N/A	0	N/A	N/A
Ornithosis	0	59	2	1	1	0	9	1	73	66	29	17	158	56	4.3
Q fever	0	78	0	36	5	0	22	3	144	201	144	141	531	433	1.0
Other bacterial infections															
Legionellosis	1	7	1	9	15	0	13	13	59	96	60	47	215	216	1.3
Leprosy	0	0	0	0	0	0	0	0	0	0	1	2	3	4	0.0
Meningococcal infection	1	76	2	45	11	4	65	29	233	167	240	215	512	431	1.1
Tuberculosis	4	66	7	16	5	2	15	11	126	250	251	260	641	762	0.5
Total	335	6,322	1,270	6,139	1,717	478	3,578	2,688	22,527	25,452	26,344	20,793	75,912	66,074	1.1

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. Not reported for New South Wales because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.

3. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).

4. Northern Territory, Queensland, South Australia, Victoria and Western Australia: includes gonococcal neonatal ophthalmia.

5. Includes congenital syphilis.

6. 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 authority.

† The number of notifications received from Victoria this quarter were fewer than expected due to technical difficulties in data transmission.

‡ Ratio = ratio of current quarter total to mean of the same reporting period over the last 5 years calculated as described above.

NA Not calculated as only notifiable for under 5 years.

NIN Not notifiable

NEC Not elsewhere classified.

- Elsewhere classified.

Table 3. Notification rates of diseases by State or Territory, 1 July to 30 September 2002. (Rate per 100,000 population)

Disease	State or Territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic [†]	WA	
Bloodborne diseases									
Hepatitis B (incident)	0.0	1.6	8.0	1.3	1.1	4.2	0.2	0.6	1.2
Hepatitis B (unspecified)	32.1	52.2	NN	18.3	14.8	15.2	38.6	19.9	35.0
Hepatitis C (incident)	1.2	1.1	-	-	1.3	13.5	0.3	5.0	1.7
Hepatitis C (unspecified)	76.5	97.9	98.0	79.3	34.6	83.7	76.0	60.6	79.7
Hepatitis D	0.0	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.1
Hepatitis (NEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gastrointestinal diseases									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Campylobacteriosis ²	95.0	-	126.0	97.8	164.5	107.4	73.3	86.5	95.5
Cryptosporidiosis	1.2	1.3	38.0	5.6	9.2	13.5	4.3	8.4	4.8
Haemolytic uraemic syndrome	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	<0.1
Hepatitis A	0.0	1.5	36.0	0.9	0.8	0.8	1.1	2.3	1.6
Hepatitis E	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Listeriosis	0.0	0.1	0.0	0.1	0.3	0.0	0.3	0.4	0.2
Salmonellosis	12.3	16.0	104.0	39.2	24.0	16.1	15.4	24.8	22.5
Shigellosis	0.0	1.3	38.0	2.1	1.1	0.8	1.3	4.2	2.1
SLTEC, VTEC ³	0.0	0.0	0.0	0.0	2.6	0.0	0.2	0.0	0.2
Typhoid	0.0	0.1	0.0	0.1	0.3	0.0	0.4	0.8	0.3
Quarantinable diseases									
Cholera	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	<0.1
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 diseases									
Chlamydial infection	139.4	80.2	751.9	184.8	104.6	107.4	10.2	147.9	99.4
Donovanosis	0.0	0.0	2.0	0.2	NN	0.0	0.0	0.0	0.1
Gonococcal infection ⁴	6.2	16.7	869.9	24.5	11.4	2.5	6.6	65.3	28.2
Syphilis ⁵	2.5	10.1	280.0	11.6	0.3	2.5	3.6	6.3	10.1
Vaccine preventable diseases									
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Haemophilus influenzae</i> type b	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.2	0.1
Influenza	13.6	40.4	82.0	103.9	35.4	5.1	28.3	88.1	52.6
Measles	0.0	0.4	0.0	0.8	0.0	0.0	1.2	0.0	0.6
Mumps	0.0	0.4	0.0	0.0	0.8	0.0	0.1	0.8	0.3
Pertussis	7.4	20.0	6.0	45.2	21.7	3.4	10.5	8.0	20.6
Pneumococcal disease	9.9	17.0	50.0	22.4	11.1	16.1	13.1	18.9	17.0
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella ⁶	1.2	0.7	0.0	7.0	0.0	0.8	0.0	0.2	1.6
Tetanus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 3 (continued). Notification rates of diseases by State or Territory, 1 July to 30 September 2002. (Rate per 100,000 population)

Disease	State or Territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic*	WA	
Vectorborne diseases									
Arbovirus infection NEC	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
Barmah Forest virus infection	0.0	2.8	8.0	5.1	0.0	0.0	0.0	0.6	2.0
Dengue	2.5	0.8	6.0	1.1	0.5	0.0	0.0	0.8	0.7
Japanese encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kunjin virus infection	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaria	3.7	1.0	10.0	3.5	1.3	4.2	0.7	0.6	1.6
Murray Valley encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ross River virus infection	0.0	0.9	2.0	7.3	1.6	0.0	0.1	0.6	1.9
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	0.1	0.0	0.7	0.0	0.0	0.1	0.0	0.2
Leptospirosis	0.0	0.3	0.0	0.8	0.0	1.7	0.0	0.0	0.3
Other lyssavirus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	3.6	4.0	0.1	0.3	0.0	0.7	0.2	1.5
Q fever	0.0	4.7	0.0	4.0	1.3	0.0	1.8	0.6	3.0
Other bacterial infections									
Legionellosis	1.2	0.4	2.0	1.0	4.0	0.0	1.1	2.7	1.2
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	1.2	4.6	4.0	5.0	2.9	3.4	5.4	6.1	4.8
Tuberculosis	4.9	4.0	14.0	1.8	1.3	1.7	1.2	2.3	2.6

1. Rates are subject to retrospective revision.

2. Not reported for New South Wales because it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.

3. Infections with Shiga-like toxin (verotoxin) producing *E. coli* (SLTEC/VTEC).

4. Northern Territory, Queensland, South Australia, Victoria and Western Australia: includes gonococcal neonatal ophthalmia.

5. Includes congenital syphilis.

6. Includes congenital rubella.

* The number of notifications received from Victoria this quarter were fewer than expected due to technical difficulties in data transmission.

NN Not notifiable

NEC Not elsewhere classified.

- Elsewhere classified.

Table 4. Virology and serology laboratory reports by State or Territory¹ for the reporting period 1 July to 30 September 2002, and total reports for the year²

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total 3rd period 2002	This period 2001	Year to date 2002 ³	Year to date 2001
Measles, mumps, rubella												
Measles virus	-	-	-	-	-	-	6	-	6	8	15	104
Mumps virus	-	-	-	-	-	-	2	-	2	4	13	31
Rubella virus	-	-	-	17	1	-	2	1	21	21	69	51
Hepatitis viruses												
Hepatitis A virus	-	-	-	3	2	-	-	4	9	21	48	64
Hepatitis D virus	-	-	-	-	1	-	1	-	2	6	5	10
Hepatitis E virus	-	-	-	-	-	-	1	-	1	-	5	4
Arboviruses												
Ross River virus	-	-	-	9	-	1	2	3	15	30	362	808
Barmah Forest virus	-	1	-	21	2	-	1	1	26	20	155	240
Dengue not typed	-	-	-	-	-	-	-	8	8	34	152	185
Murray Valley encephalitis virus	-	-	-	-	-	-	-	1	1	1	6	7
Flavivirus (unspecified)	-	-	-	2	-	-	1	-	3	6	31	21
Adenoviruses												
Adenovirus type 40	-	-	-	-	-	-	-	8	8	8	29	43
Adenovirus not typed/ pending	-	47	-	12	67	-	5	59	190	314	557	766
Herpesviruses												
Cytomegalovirus	-	40	-	18	115	-	16	8	197	281	728	903
Varicella-zoster virus	-	26	-	125	28	4	10	109	302	371	1,198	1,280
Epstein-Barr virus	-	11	-	93	101	-	9	78	292	384	1,159	1,311
Other DNA viruses												
Contagious pustular dermatitis (Orf virus)	-	-	-	-	-	-	-	1	1	1	1	4
Molluscum contagiosum	-	-	-	-	-	-	-	3	3	1	15	10
Parvovirus	-	1	-	6	22	-	15	5	49	99	218	251
Poxvirus group not typed	-	-	-	-	-	-	1	-	1	2	5	2
Picornavirus family												
Coxsackievirus A9	-	1	-	-	-	-	-	-	1	-	2	2
Coxsackievirus B2	-	2	-	-	-	-	-	-	2	-	3	-
Echovirus type 6	-	1	-	-	-	-	-	1	2	1	58	2
Echovirus type 9	-	2	-	-	-	-	-	-	2	17	16	75
Echovirus type 13	-	1	-	-	-	-	-	-	1	12	15	28
Enterovirus — not typed	-	2	-	2	4	-	2	88	98	194	365	601
Poliovirus type 1 (uncharacterised)	-	4	-	-	-	-	-	-	4	8	18	17
Poliovirus type 2 (uncharacterised)	-	3	-	-	-	-	-	-	3	6	11	15
Poliovirus type 3 (uncharacterised)	-	1	-	-	-	-	-	-	1	5	3	7
Poliovirus not typed	-	1	-	-	-	-	-	-	1	-	1	-
Rhinovirus (all types)	-	46	-	-	5	-	-	36	87	119	280	319

Table 4 (continued). Virology and serology laboratory reports by State or Territory¹ for the reporting period 1 July to 30 September 2002, and total reports for the year²

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total 3rd period 2002	This period 2001	Year to date 2002 ³	Year to date 2001
Ortho/paramyxoviruses												
Influenza A virus	-	289	-	150	187	-	37	310	973	543	1,359	702
Influenza B virus	-	30	-	16	68	-	3	85	202	75	425	136
Parainfluenza virus type 1	-	6	-	-	32	-	-	27	65	16	248	33
Parainfluenza virus type 2	-	2	-	1	5	-	-	6	14	20	59	45
Parainfluenza virus type 3	-	8	-	1	56	-	2	37	104	319	254	528
Respiratory syncytial virus	-	293	-	43	213	11	57	685	1,302	1,286	2,408	2,473
Other RNA viruses												
Astrovirus	-	-	-	-	-	-	1	-	1	-	1	1
HTLV-1	-	-	-	-	1	-	-	1	2	4	3	17
Rotavirus	-	202	-	-	95	11	60	113	481	679	867	1,302
Norwalk agent	-	-	-	-	-	-	49	-	49	19	186	130
Other												
<i>Borrelia burgdorferi</i>	-	-	-	-	-	-	-	1	1	-	1	-
<i>Brucella abortus</i>	-	-	-	-	-	-	-	1	1	-	2	1
<i>Brucella</i> species	-	-	-	1	-	-	-	-	1	1	4	3
<i>Chlamydia trachomatis</i> not typed	-	86	-	270	176	6	1	167	706	646	2,585	2,496
<i>Chlamydia psittaci</i>	-	-	-	-	-	-	10	2	12	12	40	58
<i>Chlamydia pneumoniae</i>	-	1	-	-	-	-	-	1	2	2	4	7
<i>Chlamydia</i> species	-	1	-	-	-	-	-	-	1	-	3	4
<i>Chlamydia</i> - typing pending	-	4	-	-	-	-	-	-	4	-	5	-
<i>Mycoplasma pneumoniae</i>	-	46	-	52	73	3	99	32	305	231	880	620
<i>Coxiella burnetii</i> (Q fever)	-	-	-	13	15	-	16	8	52	41	164	125
<i>Streptococcus</i> group A	-	-	-	71	-	-	21	-	92	75	302	262
<i>Yersinia enterocolitica</i>	-	2	-	1	-	-	-	-	3	2	7	4
<i>Bordetella pertussis</i>	-	7	-	43	46	-	46	16	158	470	723	925
<i>Legionella pneumophila</i>	-	-	-	-	-	-	20	-	20	18	66	48
<i>Legionella longbeachae</i>	-	2	-	-	1	-	7	5	15	8	37	19
<i>Legionella</i> species	-	-	-	-	-	-	4	-	4	5	9	12
<i>Cryptococcus</i> species	-	2	-	-	6	-	-	-	8	3	23	18
<i>Leptospira</i> species	-	-	-	2	-	-	-	-	2	6	18	33
<i>Treponema pallidum</i>	-	28	-	163	75	-	-	14	280	254	968	886
<i>Entamoeba histolytica</i>	-	-	-	1	-	-	-	3	4	-	19	9
<i>Toxoplasma gondii</i>	-	2	-	-	-	-	3	1	6	11	20	27
<i>Echinococcus granulosus</i>	-	-	-	-	-	-	1	2	3	4	23	17
Total	0	1,201	0	1,136	1,397	36	511	1,931	6,212	6,724	17,256	18,102

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 5. Virology and serology laboratory reports by laboratories for the reporting period 1 July to 30 September 2002¹

	Laboratory	July 2002	August 2002	September 2002	Total this period
Australian Capital Territory	The Canberra Hospital	-	-	-	-
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	188	116	30	334
	New Children's Hospital, Westmead	234	152	-	386
	Royal Prince Alfred Hospital, Camperdown	-	-	-	-
	South West Area Pathology Service, Liverpool	214	186	81	481
Queensland	Queensland Medical Laboratory, West End	478	551	107	1136
	Townsville General Hospital	-	-	-	0
South Australia	Institute of Medical and Veterinary Science, Adelaide	757	640	-	1397
Tasmania	Northern Tasmanian Pathology Service, Launceston	27	9	-	36
Victoria	Monash Medical Centre, Melbourne	47	-	-	47
	Rickettsia Reference Laboratory, Geelong	-	-	-	0
	Royal Children's Hospital, Melbourne	149	56	10	215
	Victorian Infectious Diseases Reference Laboratory, Fairfield	152	97	-	249
Western Australia	PathCentre Virology, Perth	493	488	-	981
	Princess Margaret Hospital, Perth	473	339	79	891
	Western Diagnostic Pathology	-	35	24	59
Total		3,212	2,669	331	6,212

1. The complete list of laboratories reporting for the 12 months, January to December 2002, will appear in every report regardless of whether reports were received in this reporting period. Reports are not always received from all laboratories.

- Nil reports

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia. The system provides 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 legislation. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see Commun Dis Intell 2002;26:58.

LabVISE is a sentinel reporting scheme. Currently 15 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 quarterly. 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 2002;26:61.

Additional reports

Australian Sentinel Practice Research Network

The Research and Health Promotion Unit of the Royal Australian College of General Practitioners operates the Australian Sentinel Practice Research Network (ASPREN). ASPREN is a network of general practitioners who report presentations of defined medical conditions each week. The aim of ASPREN is to provide an indicator of the burden of disease in the primary health setting and to detect trends in consultation rates.

There are currently about 66 general practitioners participating in the network from all States and Territories. Seventy-five per cent of these are in metropolitan areas and the remainder are rural based. Between 4,000 and 6,000 consultations are recorded each week.

The list of conditions is reviewed annually by the ASPREN management committee and an annual report is published.

In 2002, 10 conditions are being monitored, six of which are related to communicable diseases. These include influenza, gastroenteritis and acute cough. Definitions of these conditions were published in *Commun Dis Intell* 2002;26:57.

Data to the end of September 2002 are shown as the rate per 1,000 consultations by week in Figures 7 to 9.

Figure 7. Consultation rates for influenza-like illness, ASPREN, 1 January to 30 September 2002 and 2001, by week of report.

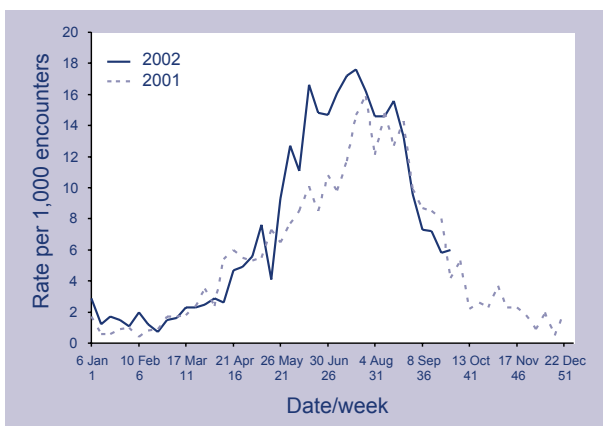


Figure 8. Consultation rates for gastroenteritis, ASPREN, 1 January to 30 September 2002, by week of report

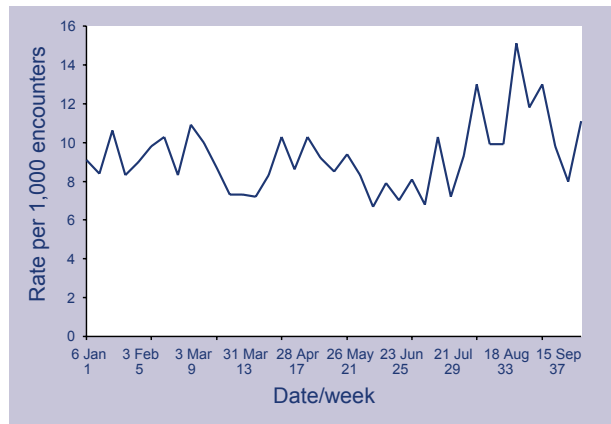
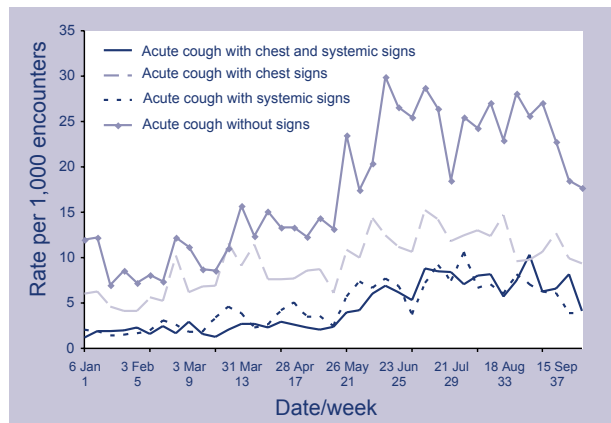


Figure 9. Consultation rates for acute cough, ASPREN, 1 January to 30 September 2002, by week of report



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. For more information see Commun Dis Intell 2002;26:61.

Reporting period 1 April to 30 June 2002

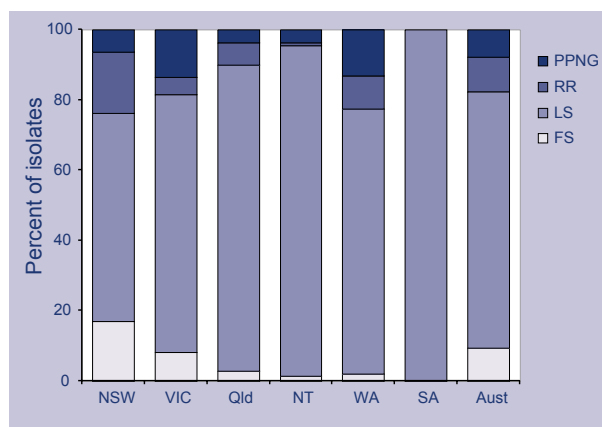
The Australian Gonococcal Surveillance Programme (AGSP) laboratories examined a total of 1,000 isolates in this quarter, an increase on the 858 recorded in the same period in 2001. About 40 per cent of this total was from New South Wales, 20 per cent from Victoria, 14 per cent from Queensland, 13 per cent from the Northern Territory, 10 per cent from Western Australia and 2 per cent from South Australia. Isolates from other centres were few. The progressive total of gonococci examined by the AGSP to 30 June is about 10 per cent higher than in 2001.

Penicillins

Figure 10 shows the proportions of gonococci fully sensitive (MIC \leq 0.03 mg/L), less sensitive (MIC 0.06 – 0.5 mg/L), relatively resistant (MIC \geq 1 mg/L) or else penicillinase producing (PPNG) aggregated for Australia and by State or Territory. A high proportion of 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 17.7 per cent of all isolates were penicillin resistant by one or more mechanisms — 7.7 per cent PPNG and 10 per cent by chromosomal mechanisms (CMRNG). The proportion of penicillin resistant strains ranged from nil in South Australia to 24 per cent in New South Wales.

Figure 10. Categorisation of gonococci isolated in Australia, 1 April to 30 June 2002, by penicillin susceptibility and region



- FS fully sensitive to penicillin, MIC \leq 0.03 mg/L
 LS less sensitive to penicillin, MIC 0.06 – 0.5 mg/L
 RR relatively resistant to penicillin, MIC \geq 1 mg/L
 PPNG penicillinase producing *Neisseria gonorrhoeae*

The number of PPNG isolated across Australia (n=77) was higher in this quarter than in the corresponding period in 2001 (n=58). The highest proportion of PPNG was found in isolates from Victoria (13.6%) and Western Australia (13.2%). PPNG were present in all jurisdictions except South Australia including 5 (3.7%) in the Northern Territory. Data on geographic acquisition were available in 26 cases only, mostly from New South Wales and Western Australia. Local acquisition was prominent in both these States.

More isolates were resistant to the penicillins by separate chromosomal mechanisms (n=100, 10%). These CMRNG were especially prominent in New South Wales (71 CMRNG 17.4% of all isolates there), and Western Australia (9.2%). A single CMRNG was detected in the Northern Territory.

Ceftriaxone

Low numbers of isolates with decreased susceptibility to ceftriaxone (n=6, 1.5%) were present in New South Wales, but none were found elsewhere in Australia in this quarter. Treatment failure with cefixime, an oral third generation cephalosporin not available in Australia, has now been reported in Japan.²

Spectinomycin

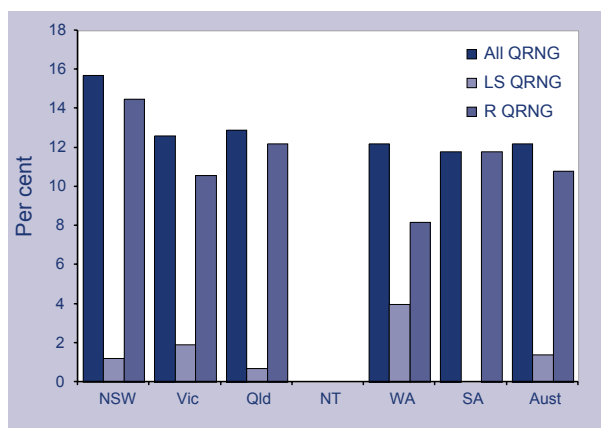
All isolates were susceptible to this injectable agent.

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 \geq 1 mg/L) categories.

The total number (n=122) of all QRNG was lower than in the corresponding period in 2001 (n=165), but similar in distribution to that seen in recent quarters (Figure 11). QRNG made up 12.2 per cent of all strains examined nationally and this proportion was lower than in 2001 (19%). QRNG were again widely distributed and represented between 12 per cent and 16 per cent in most jurisdictions. The exception was the Northern Territory where no QRNG were detected. In all jurisdictions, the high level resistance category of QRNG (MIC ciprofloxacin \geq 1 mg/L) predominated. Nationally, 108 of the 122 QRNG were in this category.

Figure 11. Distribution in Australia of *N. gonorrhoeae* displaying quinolone resistance, 1 April to 30 June 2002



LS QRNG Ciprofloxacin MICs 0.06 – 0.5 mg/L

R QRNG Ciprofloxacin MICs \geq 1 mg/L

High level tetracycline resistance

The number (122) and proportion (12.2%) of high level tetracycline resistance (TRNG) detected was double that of the same period in 2001. TRNG represented between 10 per cent and 15 per cent of isolates in Queensland, Victoria, New South Wales, and Western Australia and 4 per cent in the Northern Territory.

Reference

1. Management of sexually transmitted diseases. World Health Organization; Document WHO/GPA/TEM94.1 Rev.1 1997:37.
2. WHO Western Pacific Gonococcal Antimicrobial Surveillance Programme. Surveillance of antibiotic resistance in *Neisseria gonorrhoeae* in the WHO Western Pacific Region, 2001. *Commun Dis Intell* 2002;26:541–545.

Australian Paediatric Surveillance Unit

The Australian Paediatric Surveillance Unit (APSU) conducts nationally based active surveillance of rare diseases of childhood, including specified communicable diseases and complications of rare communicable diseases in children. The primary objectives of the APSU are to document the number of Australian children under 15 years newly diagnosed with specified conditions, their geographic distribution, clinical features, current management and outcome. Contributors to the APSU are clinicians known to be working in paediatrics and child health in Australia. In 2001, over 1,000 clinicians participated in the surveillance of 15 conditions through the APSU, with an overall response rate of 98 per cent. For further information please contact the APSU on telephone: +61 2 9845 2200, e-mail: apsu@chw.edu.au.

The results for January to December 2001 are shown in Table 6.

Reporting period January to December 2001

About the APSU communicable diseases studies

Acute flaccid paralysis

Heath Kelly, Bruce Thorley, Kerri Anne Brussen, Jayne Antony, Elizabeth Elliott, Anne Morris

Acute flaccid paralysis (AFP) surveillance in children <15 commenced through the APSU in 1995. To the end of 2001 there were 232 confirmed cases of AFP. Based on these data, the estimated incidence was 0.9 (95% CI 0.8-1.1) per 100,000 children.

Congenital cytomegalovirus infection

William Rawlinson, Daniel Trincado, Gillian Scott, Sian Munro, Pamela Palasanthiran, Mark Ferson, David Smith, Geoff Higgins, Michael Catton, Alistair McGregor, Dominic Dwyer, Alisson Kesson

Congenital cytomegalovirus (CMV) surveillance in children <12 months of age commenced through the APSU in 1999. Between January 1999 and December 2001 there were 16 confirmed cases of CMV. The estimated incidence was 2.1 (95% CI 1.2-3.5) per 100,000 live births.

Congenital rubella

Margaret Burgess, Jill Forrest

Surveillance of newly diagnosed congenital rubella in children and adolescents aged <16 years commenced in 1993. Forty-two children with congenital rubella were identified through the APSU between May 1993 and December 2001. Twenty-seven of these children were born in Australia, 21 of which had defects attributable to congenital rubella. The estimated incidence of congenital rubella was 1.2 (95% CI 0.8-1.7) per 100,000 live births.

HIV infection, AIDS and perinatal exposure to HIV

Ann McDonald, John Kaldor, Michelle Good, John Ziegler

Between January 1997 and December 2001, 97 children with perinatally acquired HIV infection were reported through the APSU (72%), the National HIV/AIDS surveillance program (18%) or both sources (10%). The estimated incidence was 7.8 (95% CI 6.3-9.5) per 100,000 live births.

Table 6. Confirmed cases of communicable diseases reported to the Australian Paediatric Surveillance Unit January to December 2001*

Condition	Current reporting period 2001	Previous reporting period 2000
Acute flaccid paralysis	44	38
Congenital cytomegalovirus	6	10
Congenital rubella	0	0
Perinatal exposure to HIV	24	15
Neonatal herpes simplex virus infection	11	8

* Surveillance data are provisional and subject to revision

Neonatal herpes simplex virus infection

Cheryl Anne Jones, David Isaacs, Peter McIntyre, Tony Cunningham, Suzanne Garland

There were 43 confirmed cases of neonatal herpes simplex virus infection in infants <28 days of age between January 1997 and December 2001. The estimated incidence was 3.4 (95% CI 2.5-4.6) per 100,000 live births.

Hospitalised pertussis in infancy

Peter McIntyre, Elizabeth Elliott, Anne Morris, Greta Ridley, John Massie, Julie McEniery, Geoff Knight

Between January and December 2001, children <12 months of age admitted to hospital with pertussis were reported to the APSU. There were 140 confirmed cases of hospitalised pertussis in 2001. The estimated incidence was 56/100,000 (95%CI 47-66) per 100,000 live births.

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, viral hepatitis and sexually transmissible infections 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/nchechr>. Telephone: +61 2 9332 4648. Facsimile: +61 2 9332 1837. For more information see Commun Dis Intell 2002;26:59.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 April to 30 June 2002, as reported to 30 September 2002, are included in this issue of Communicable Diseases Intelligence (Tables 7 and 8).

Table 7. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 April to 30 June 2002, by sex and State or Territory of diagnosis

	Sex	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Totals for Australia			
										This period 2002	This period 2001	Year to date 2002	Year to date 2001
HIV diagnoses	Female	0	6	1	0	1	0	5	3	16	22	45	47
	Male	1	70	0	27	1	0	42	4	145	155	316	326
	Not reported	0	0	0	0	0	0	0	0	0	1	0	1
	Total ¹	1	76	1	27	2	0	47	7	161	178	364	375
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	3	7	7
	Male	0	11	0	4	3	0	7	1	26	36	71	69
	Total ¹	0	11	0	4	3	0	7	1	26	39	79	77
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	1	2	3
	Male	0	8	0	3	0	0	1	0	12	15	25	29
	Total ¹	0	8	0	3	0	0	1	0	12	16	27	32

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

Table 8. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 31 March 2002, by sex and State or Territory

	Sex	State or Territory								Australia
		ACT	NSW	NT	QLD	SA	TAS	VIC	WA	
HIV diagnoses	Female	28	685	12	185	77	5	264	142	1,398
	Male	233	11,728	113	2,201	739	84	4,302	994	20,394
	Not reported	0	237	0	0	0	0	24	0	261
	Total ¹	261	12,675	125	2,393	816	89	4,606	1,142	22,107
AIDS diagnoses	Female	9	208	0	53	29	3	81	31	414
	Male	88	4,853	38	900	372	45	1,746	387	8,429
	Total ¹	97	5,074	38	955	401	48	1,836	420	8,869
AIDS deaths	Female	4	122	0	35	18	2	57	19	257
	Male	71	3,356	25	596	244	30	1,319	267	5,908
	Total ¹	75	3,487	25	633	262	32	1,383	287	6,184

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

Childhood immunisation coverage

Tables 9, 10 and 11 provide the latest quarterly report on childhood immunisation coverage from the Australian Childhood Immunisation Register (ACIR).

The data show the percentage of children fully immunised at age 12 months for the cohort born between 1 April to 30 June 2001; at 24 months of age for the cohort born between 1 April to 30 June 2000; and at 6 years of age for the cohort born between 1 April to 30 June 1996, according to the Australian Standard Vaccination Schedule.

A full description of the methodology used can be found in *Commun Dis Intell* 1998;22:36-37.

Commentary on the trends in ACIR data is provided by the National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS). For further information please contact the NCIRS at: telephone: +61 2 9845 1256, E-mail: brynleyh@chw.edu.au.

Immunisation coverage for 'fully immunised' children at 12 months for Australia has increased from the last quarter by 1.0 percentage point to 91.2 per cent (Table 9). The change in 'fully immunised' coverage varied by state and territory but all jurisdictions experienced an increase in coverage. The Northern Territory (+2.8%) and Western Australia (+1.8%) experienced the greatest increases in

coverage. All other states experienced not insignificant increases in coverage over the quarter. Coverage is hovering around the 91 per cent level in almost all jurisdictions with the highest level in Tasmania (92.9%) and the lowest in Western Australia (90.3%). The most dramatic changes in coverage were evident in the Northern Territory where increases of more than 2 per cent occurred for almost all vaccines. The continued increase in coverage at 12 months of age for all jurisdictions and for all vaccines is very encouraging and indicates that coverage has perhaps not reached a plateau as first thought. For the first time, every jurisdiction has coverage greater than 90 per cent for 'fully immunised' and for all individual vaccines. The highest coverage for an individual vaccine at 12 months of age is for hepatitis B vaccine. National coverage for hepatitis B is almost 95 per cent and five jurisdictions have reached over 95 per cent coverage — New South Wales (95.2%), the Northern Territory (96.9%), Queensland (95.1%), South Australia (95.2%) and Tasmania (96.4%).

Coverage measured by 'fully immunised' at 24 months for Australia increased from the last quarter by 0.7 percentage points to 88.8 per cent (Table 10). Coverage increased from the previous quarter in all jurisdictions except for New South Wales and the Australian Capital Territory with the greatest increases in the Northern Territory (+2.2%) and Western Australia (+2.1%). However, only two jurisdictions

(Tasmania and South Australia) have achieved greater than 90 per cent coverage for 'fully immunised' at 24 months of age. Coverage for individual vaccines by 24 months for Australia, however, is much greater. Coverage for OPV is 94.7 per cent and 94.3 per cent for Hib suggesting that at least part of the lower figure for fully immunised may relate to data issues. At

the jurisdiction level, the most important changes in coverage occurred for the Hib vaccine. There were decreases in Hib coverage at 24 months of age in all jurisdictions. The decreases were not dramatic with the greatest decrease in the Australian Capital Territory (-1.9%), but are of concern as they were universal.

Table 9. Percentage of children immunised at 1 year of age, preliminary results by disease and State or Territory for the birth cohort 1 April to 30 June 2001; assessment date 30 September 2002

Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Number of children	953	21,034	913	12,716	4,293	1,385	14,799	5,993	62,086
Diphtheria, tetanus, pertussis (%)	92.3	92.3	92.4	92.6	92.8	93.4	92.7	91.8	92.5
Poliomyelitis (%)	92.4	92.2	92.1	92.4	92.8	93.3	92.7	91.6	92.4
<i>Haemophilus influenzae</i> type b (%)	94.2	94.4	96.8	94.7	95.0	96.4	94.9	94.5	94.7
Hepatitis B (%)	94.5	95.2	96.9	95.1	95.2	96.4	94.4	94.0	94.9
Fully immunised (%)	90.8	91.0	91.3	91.4	91.8	92.9	91.3	90.3	91.2
Change in fully immunised since last quarter (%)	-1.0	+1.1	+2.7	+0.8	+0.9	+1.2	+0.6	+1.8	+1.0

Table 10. Proportion of children immunised at 2 years of age, preliminary results by disease and State or Territory for the birth cohort 1 April to 30 June 2000; assessment date 30 September 2002¹

Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Number of children	1,114	21,839	905	12,417	4,461	1,473	15,264	6,168	63,641
Diphtheria, tetanus, pertussis (%)	89.4	90.1	88.2	91.9	91.4	93.7	91.6	89.5	90.9
Poliomyelitis (%)	93.1	94.1	96.1	94.7	95.5	96.1	95.5	94.1	94.7
<i>Haemophilus influenzae</i> type b (%)	92.8	94.0	94.8	94.5	95.0	95.5	94.7	93.2	94.3
Measles, mumps, rubella (%)	91.6	93.1	95.6	94.2	94.8	95.2	94.2	93.3	93.8
Hepatitis B (%)	-	-	-	-	-	-	-	-	-
Fully immunised (%)²	87.2	87.7	87.4	89.9	90.0	92.8	89.5	87.1	88.8
Change in fully immunised since last quarter (%)	-1.3	+0.8	+1.5	+1.1	+2.5	+3.2	+0.7	+0.8	+1.0

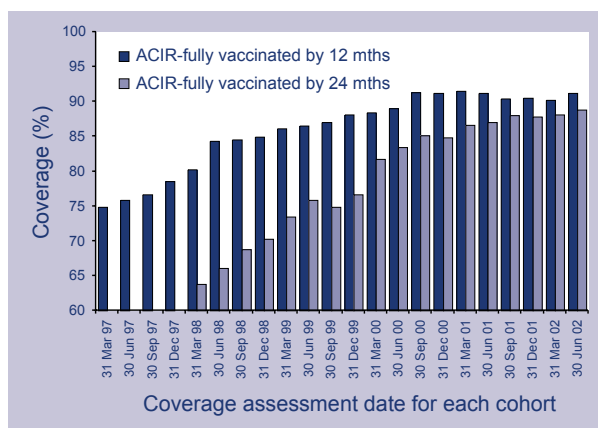
1. The 12 months age data for this cohort were published in *Commun Dis Intell* 2001;25:307.

2. These data relating to 2 year-old children should be considered as preliminary. The proportions shown as 'fully immunised' appear low when compared with the proportions for individual vaccines. This is at least partly due to poor identification of children on immunisation encounter forms.

Table 11 shows immunisation coverage estimates for individual vaccines and for 'fully immunised' children at 6 years of age for Australia and by state or territory. These are the second set of officially published ACIR figures of immunisation coverage estimates for this age group. 'Fully immunised' coverage at 6 years of age for Australia increased from the last quarter by 0.8 percentage points to 81.4 per cent. The greatest increases in coverage occurred in the Northern Territory (+11.3%) and Tasmania (+4.8%) whilst two jurisdictions experienced small decreases in 'fully immunised' coverage for this age group, Queensland (-0.5%) and South Australia (-0.1%). National coverage by individual vaccine also increased from the last quarter for all vaccines for this age group but there were wide variations in the changes in coverage by jurisdiction. Both the Northern Territory and Tasmania experienced large increases in coverage for DTP, OPV and MMR coverage at 6 years of age, whilst coverage for these three vaccines decreased in Queensland and South Australia. The recent report published by NCIRS shows that true levels of coverage at 6 years of age are actually higher than reported here as late immunisation is still common (NCIRS, 2001).

Figure 12 shows the trends in vaccination coverage from the first ACIR-derived published coverage estimates in 1997 to the current estimates. There is a clear trend of increasing vaccination coverage over time for children aged 12 months and 24 months. However, the rate of increase in coverage is slowing with the curve beginning to flatten out and turn downward slightly for estimates at 12 months of age.

Figure 12. Trends in vaccination coverage, Australia, 1997 to 2002, by age cohorts



Reference

National Centre for Immunisation Research and Surveillance. Immunisation Coverage: Australia 2001. Report. Canberra: Department of Health and Aged Care, 2001. <http://www.health.gov.au/pubhlth/immunise/report.pdf>.

Acknowledgement: The Table figures were provided by the Health Insurance Commission (HIC), to specifications provided by the Commonwealth Department of Health and Ageing. For further information on these figures or data on the Australian Childhood Immunisation Register please contact the Immunisation Section of the HIC: Telephone: +61 2 6124 6607.

Table 11. Proportion of children immunised at 6 years of age, preliminary results by disease and State or Territory for the birth cohort 1 April to 30 June 1996; assessment date 30 September 2002

Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Number of children	1,023	22,081	15,740	13,011	4,758	6,759	1,549	822	65,743
Diphtheria, tetanus, pertussis (%)	85.5	83.4	85.8	83.9	84.5	81.8	85.9	85.2	84.1
Poliomyelitis (%)	85.4	83.4	86.3	84.4	84.8	82.1	86.1	86.7	84.4
<i>Haemophilus influenzae</i> type b (%)	-	-	-	-	-	-	-	-	-
Measles, mumps, rubella (%)	84.4	81.0	86.0	83.6	83.0	81.5	85.2	85.9	83.1
Hepatitis B(%)	-	-	-	-	-	-	-	-	-
Fully immunised (%)¹	83.5	79.1	84.4	82.1	81.7	79.3	84.5	83.3	81.4
Change in fully immunised since last quarter (%)	+2.2	+0.8	+11.3	-0.5	-0.1	+4.8	+1.1	+1.0	+0.8

1. These data relating to 6 year-old children should be considered as preliminary. The proportions shown as 'fully immunised' appear low when compared with the proportions for individual vaccines. This is at least partly due to poor identification of children on immunisation encounter forms.

National Enteric Pathogens Surveillance System

The National Enteric Pathogens Surveillance System (NEPSS) collects, analyses and disseminates data on human enteric bacterial infections diagnosed in Australia. These pathogens include *Salmonella*, *E. coli*, *Vibrio*, *Yersinia*, *Plesiomonas*, *Aeromonas* and *Campylobacter*. Communicable Diseases Intelligence quarterly reports include only *Salmonella*.

Data are based on reports to NEPSS from Australian laboratories of laboratory-confirmed human infection with *Salmonella*. *Salmonella* are identified to the level of serovar and, if applicable, phage-type. Infections apparently acquired overseas are included. Multiple isolations of a single *Salmonella* serovar/phage-type from one or more body sites during the same episode of illness are counted once only. The date of the case is the date the primary diagnostic laboratory isolated a *Salmonella* from the clinical sample.

Note that the historical quarterly mean counts should be interpreted with caution, and are affected by surveillance artefacts such as newly recognised (such as *S. Typhimurium* 197 and *S. Typhimurium* U290) and incompletely typed *Salmonella*.

Reported by Joan Powling (NEPSS Co-ordinator) and Mark Veitch (Public Health Physician), Microbiological Diagnostic Unit — Public Health Laboratory, Department of Microbiology and Immunology, University of Melbourne. For further information please contact NEPSS at the above address or on Telephone: +61 3 8344 5701, Facsimile: +61 3 9625 2689.

Reports to the National Enteric Pathogens Surveillance System of *Salmonella* infection for the period 1 July to 30 September 2002 are summarised in Tables 12 and 13. Data include cases reported and entered by 20 October 2002. Counts are preliminary, and subject to adjustment after completion of typing and reporting of further cases to NEPSS.

1 July to 30 September 2002

The total number of reports to NEPSS of human *Salmonella* infection fell to 1,035 in the third quarter of 2002, 43 per cent less than the second quarter of 2002. This third quarter nadir is typical of the seasonal variation seen in human salmonellosis in Australia.

During the third quarter of 2002, the 25 most common *Salmonella* types in Australia accounted for 620 (60 percent) of all reported human infections.

S. Typhimurium phage type 135, *S. Typhimurium* phage type 9, *S. Saintpaul*, *S. Typhimurium* phage type 170, and *S. Typhimurium* phage type 126 were the most common salmonellae in both the second and third quarters of 2002, although the counts of all 5 serovars and phage types fell in the third quarter.

The most notable increase in reports was for *S. Enteritidis* phage type 4b. This phage type was first reported to NEPSS in 2001, and infections are typically associated with travel to Bali.

In contrast, *S. Virchow* phage type 8, *S. Bovismorbificans* phage type 24, and *S. Typhimurium* phage type 8 were common in the second quarter, but rare in the third quarter.

We thank contributing laboratories, scientists, Joan Powling (NEPSS Co-ordinator) and Mark Veitch (Public Health Physician), Microbiological Diagnostic Unit - Public Health Laboratory, Department of Microbiology and Immunology, University of Melbourne. For further information please contact NEPSS at the above address or on Telephone: +61 3 8344 5701, Facsimile: +61 3 9625 2689.

Table 11. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 July to 30 September 2002, as reported to 20 October 2002

Vaccine	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all <i>Salmonella</i> for quarter	9	254	32	296	93	19	211	121	1,035
Total contributing <i>Salmonella</i> types	8	87	22	93	52	12	69	51	207

Table 12. Top 25 *Salmonella* types identified in Australian States and Territories, 1 July to 30 September 2002

National rank	<i>Salmonella</i> type	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Total 2nd quarter 2002	Last 10 years mean 2nd quarter	Year to date 2002	Year to date 2001	Total 2001
1	<i>S. Typhimurium</i> 135	2	28	0	7	4	6	24	11	82	68	531	470	636
2	<i>S. Typhimurium</i> 9	0	17	0	9	6	1	19	10	62	74	511	308	399
3	<i>S. Saintpaul</i>	0	6	2	32	2	1	10	5	58	40	320	210	289
4	<i>S. Typhimurium</i> 170	1	18	0	14	0	1	20	0	54	11	319	63	148
5	<i>S. Typhimurium</i> 126	0	3	0	4	6	0	15	6	34	16	177	220	313
6	<i>S. Enteritidis</i> 4b	0	12	0	0	0	1	9	11	33	<1	47	3	13
7	<i>S. Birkenhead</i>	0	10	0	16	1	0	2	0	29	20	200	180	253
8	<i>S. Infantis</i>	0	9	2	4	0	0	4	5	24	18	87	92	123
9	<i>S. Chester</i>	0	6	0	7	2	0	1	7	23	20	131	124	166
10	<i>S. Typhimurium</i> 197	1	12	0	6	0	0	4	0	23	<1	47	5	8
11	<i>S. Hittingfoss</i>	0	3	0	7	0	0	9	1	20	6	133	64	89
12	<i>S. Typhimurium</i> U290	0	4	1	1	0	0	12	2	20	<1	76	8	26
13	<i>S. Virchow</i> 8	0	3	0	16	0	0	0	0	19	13	249	188	245
14	<i>S. Aberdeen</i>	0	0	0	16	0	1	1	0	18	10	118	73	88
15	<i>S. Muenchen</i>	0	2	2	2	3	2	3	0	14	16	103	98	125
16	<i>S. Anatum</i>	0	3	2	5	0	0	1	3	14	12	66	52	58
17	<i>S. Agona</i>	1	5	2	1	1	1	2	0	13	15	66	37	56
18	<i>S. Havana</i>	0	1	0	3	5	0	0	3	12	10	30	34	46
19	<i>S. Singapore</i>	0	5	0	5	0	0	1	0	11	8	46	41	64
20	<i>S. Enteritidis</i> 26	0	3	0	5	0	0	3	0	11	4	36	11	24
21	<i>S. Waycross</i>	0	4	0	6	0	0	0	0	10	8	85	40	54
22	<i>S. Stanley</i>	1	1	0	3	1	0	2	2	10	12	42	80	107
23	<i>S. Typhimurium</i> 141	0	2	0	1	2	0	0	4	9	6	24	25	27
24	<i>S. Enteritidis</i> 6a	0	3	0	0	1	0	3	2	9	2	22	19	34
25	<i>S. Mgulani</i>	0	1	0	7	0	0	0	0	8	4	57	37	66