

Communicable diseases surveillance

Highlights for 2nd quarter, 2004

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.

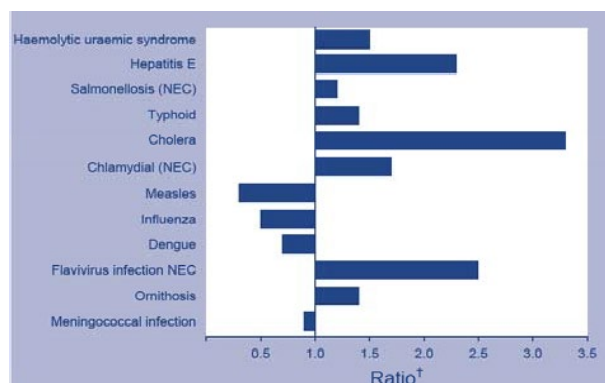
The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia. NNDSS collates data on notifiable communicable diseases from State or Territory health departments. The Virology and Serology Laboratory Reporting Scheme (LabVISE) is a sentinel surveillance scheme which collates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

Please note: Figure 3 published in *Commun Dis Intell* 2004;28:409 was incorrect. The figure has been corrected in this version.

Figure 1 shows the changes in disease notifications with an onset in the second quarter 2004 compared with a 5-year mean for the same period. Diseases notifications outside the 5-year mean plus or minus two standard deviations are marked.

During the second quarter of 2004, there were increases in flavivirus NEC, cholera, chlamydial infections, haemolytic uraemic syndrome and ornithosis. There were declines in measles, dengue and influenza.

Figure 1. Selected* diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 April to 30 June 2004 with historical data



* Selected diseases are chosen each quarter according to current activity.

† Ratio of current quarter total to mean of corresponding quarter for the previous five years.

Gastrointestinal disease

Haemolytic uraemic syndrome

There were three cases of haemolytic uraemic syndrome (HUS) in the second quarter, two from New South Wales and one from Western Australia. The cases were unrelated and no enterohaemorrhagic *Escherichia coli* were isolated.

Hepatitis E

There were nine cases of hepatitis E notified in the second quarter, which takes the year to date to 20 cases, well above the 5-year mean. There was a history of overseas travel to endemic areas (South Asia, South America and China) in all cases.

Typhoid

There were 15 cases of typhoid notified to the National Notifiable Diseases Surveillance System (NNDSS) in the second quarter. This is also above the 5-year mean for the quarter. Eight cases were reported from New South Wales, three from Western Australia, two from Victoria and one each in Queensland and South Australia. Of the 15 cases, overseas travel was confirmed in eight cases and three cases were born overseas. Of the overseas born, one case, born in China and who had no recent overseas travel was thought to be a carrier. Of the remaining three cases, two occurred in spouses, possibly co-primary and probably locally acquired, since no travel or link to an overseas traveller could be established. There was no information on travel in the remaining two cases.

Cholera

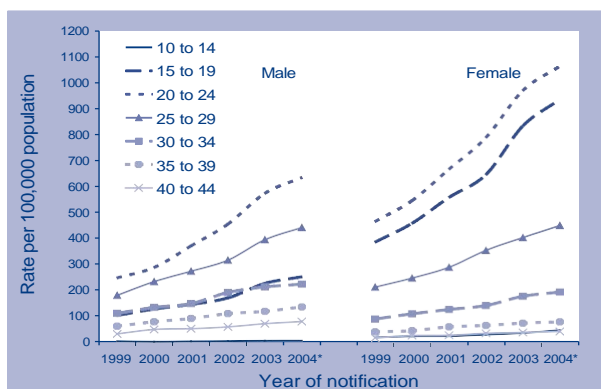
There were two cases of cholera reported in second quarter, one in Queensland and one in Victoria. The Queensland case occurred in a 50-year-old traveller returning from Thailand and was a *Vibrio cholerae* 01. The case reported in Victoria was in a 33-year-old traveller diagnosed with *V. cholerae* 01 Ogawa.

Sexually transmitted infections

Chlamydial infections

Notifications of chlamydial infections continued to increase in the second quarter. There were 8,904 notifications and a rate of 179.3 notifications per 100,000 population. Increases in *Chlamydia* notifications since 1999 have been greatest in women aged 15–24 years and men aged 20–24 years (Figure 2). The annualised rates for the first half of 2004 reached 1,063 per 100,000 in 20–24 year-old women, 935 per 100,000 in 15–19 year-old women and 633 per 100,000 in 20–24 year men.

Figure 2. Trends in notification rates of chlamydial infection aged 10 to 44 years, Australia, 1999 to 2004 (YTD), by sex



Vaccine preventable diseases

Measles

There were seven cases of measles notified in the second quarter of 2004 all in young adults aged between 18 and 31 years. Four cases were reported from Victoria and one each in New South Wales, South Australia and Western Australia. Two of the cases in Victoria were in an unvaccinated traveller returning from Asia and a contact. The cases in South Australia and Western Australia were also overseas-acquired. In the latter, there was concern that travel during the infectious period may have caused secondary cases, but despite extensive fol-

low-up none were reported. The New South Wales case occurred in a unvaccinated 31-year-old without a history of overseas travel, but with possible workplace exposure to infected travellers.

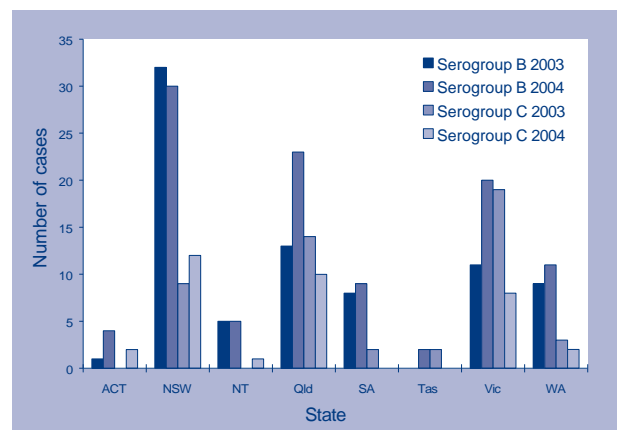
Flavivirus NEC

There were 29 cases of flavivirus NEC in second quarter. Twenty-five of these were reported from Queensland. Craig Davis from Queensland Health reported that these were a mixture of imported cases from China, the Philippines, East Timor and Papua New Guinea and serological detection as a result of extra screening as part of control efforts in local dengue outbreaks.

Meningococcal infection

There were 120 notifications of meningococcal infection in the second quarter of 2003. Provisional meningococcal serogroup data up to the end of June show that while the overall numbers had not declined there had been a significant change in the proportion of serogroup B and C. Serogroup C notifications have fallen from 26 per cent in the first half of 2003 to 17 per cent of notifications in 2004 (YTD). Conversely, serogroup B notifications increased as a proportion of all notification from 41 per cent in 2003 to 52 per cent (Figure 3). While there is a natural variation in the frequency of meningococcal serogroups, the fall in serogroup C is likely to be the result of the meningococcal serogroup C vaccination (MenCCV) program that commenced in January 2003.

Figure 3. Notifications of serogroup B and C meningococcal infection, January to June 2003 and January to June 2004, by jurisdiction

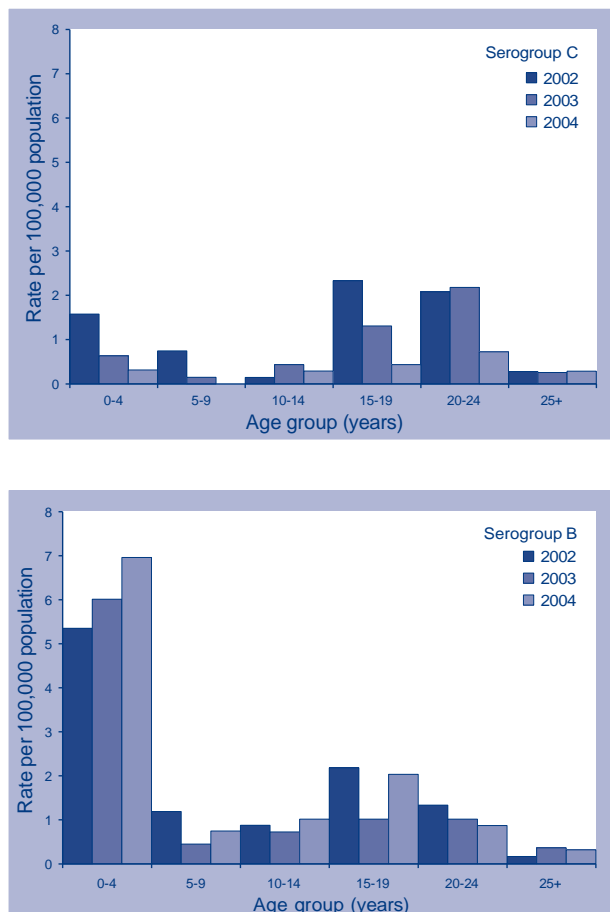


Further analysis of three years data which examined age specific rates of serogroup B and C disease was performed. Figure 4 shows rates of serogroup B and serogroup C meningococcal disease in the first six months of 2002, 2003 and 2004. While a decline in serogroup C disease was evident in all

age groups under 25 years between 2003 and 2004, there were declines in the rates of serogroup C disease between 2002 and 2003 in the under-5s, 5–9 and 15–19 year age groups. An increase in rates of serogroup B disease was seen in all age groups under 20 years in 2003 and 2004. However rates of serogroup B disease also increased in 2002 and 2003 in the under 5 years.

This analysis of rates by age group suggests that some of the change in rates of serogroup B and C disease preceded the implementation of the MenCCV program. Changes in rates since vaccination commenced in 2003 should be interpreted in the light of natural variation in different age groups and jurisdictions.

Figure 4. Notification rates of meningococcal infection, January to June 2002 to 2004, by age group: Panel A, Serogroup C, Panel B, Serogroup B



LabVISE

Laboratory reports from the Virology and Serology Laboratory Reporting Scheme (LabVISE) are shown in Table 4. In the second quarter there were fewer reports of influenza A and B viruses and an increase in reports of respiratory syncytial virus compared with the same period in 2003. The lower rate of influenza reports confirms the low rate of influenza notifications in NNDSS (Table 2) compared with the last three years average (Figure 1).

There were 81 reports of Norovirus to LabVISE in the quarter compared to 13 in the same period in 2003. This increase is likely to reflect increased Norovirus activity in Australia during the quarter. An outbreak of Norovirus affecting 140 passengers on a cruise ship was reported in May¹. An outbreak in the Royal Hobart Hospital caused the postponement of elective surgery and isolation of gastroenteritis cases in June². In New South Wales, widespread outbreaks of Norovirus were reported in the central-west of the State, that affected hospitals and aged care facilities. OzFoodNet continued investigations of food-borne outbreaks of Norovirus associated with Japanese oysters (see OzFoodNet report).

The increase in norovirus outbreaks worldwide since 2002 has been associated with the emergence of a new predominant variant of norovirus genogroup II4. This variant was detected in nine of 10 European countries³ and in the United States of America.⁴ The Public Health Laboratory Network reported that a local variant of the norovirus II4 genogroup has been identified in recent outbreaks, distinct from the European variant (Greg Smith, Queensland Health Scientific Services, personal communication).

With thanks to: Mark Bartlett (NSW Health), Craig Davis (Queensland Health) and Minda Sarna (Health Department of Western Australia).

References

1. ProMed-Mail Viral Gastroenteritis Update 2004 (17). Australia: pacific cruise affected by suspected norovirus outbreak. *ProMed Mail* (www.promedmail.org) 2004; Archive Number 20040511.1276.
2. ProMed-Mail Viral Gastroenteritis Update (19) Australia (NSW): City and ste-wide viral gastroenteritis outbreak. *ProMed Mail* (www.promedmail.org) 2004; Archive Number 20040531.1485.
3. Lopman B, Vennema H, Kohli E, Pothier P, Sanchez A, Negredo A et al. Increase in viral gastroenteritis outbreaks in Europe and epidemic spread of new norovirus variant. *Lancet* 2004;363:682–688.
4. Widdowson M-A, Cramer E, Hadley L, Bresee JS, Beard S, Bulen SN et al. Outbreaks of acute gastroenteritis on cruise ships and on land: identification of a predominant circulating strain of norovirus – United States, 2002. *Infect Dis* 2004;190:27–36.

Tables

A summary of diseases currently being reported by each jurisdiction is provided in Table 1. There were 27,163 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 April and 30 June 2004 (Table 2). The notification rate of diseases per 100,000 population for each State or Territory is presented in Table 3.

There were 4,737 reports received by the Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 April and 30 June 2004 (Tables 4 and 5).

Please note: The wrong data was published for tables 2 and 3 in *Commun Dis Intell* 2004;28:412–416. The data has been corrected in this version.

Table 1. Reporting of notifiable diseases by jurisdiction

Disease	Data received from:	Disease	Data received from:
Bloodborne diseases		Vaccine preventable diseases	
Hepatitis B (incident)	All jurisdictions	Congenital Rubella	All jurisdictions
Hepatitis B (unspecified)	All jurisdictions except NT	Diphtheria	All jurisdictions
Hepatitis C (incident)	All jurisdictions except Qld	<i>Haemophilus influenzae</i> type b	All jurisdictions
Hepatitis C (unspecified)	All jurisdictions	Influenza [†]	All jurisdictions
Hepatitis D	All jurisdictions	Measles	All jurisdictions
Hepatitis (NEC)	All jurisdictions except WA	Mumps	All jurisdictions
Gastrointestinal diseases		Pertussis	All jurisdictions
Botulism	All jurisdictions	Pneumococcal disease (invasive)	All jurisdictions
Campylobacteriosis	All jurisdictions except NSW	Poliomyelitis	All jurisdictions
Cryptosporidiosis	All jurisdictions	Rubella	All jurisdictions
Haemolytic uraemic syndrome	All jurisdictions	Tetanus	All jurisdictions
Hepatitis A	All jurisdictions	Vectorborne diseases	
Hepatitis E	All jurisdictions	Barmah Forest virus infection	All jurisdictions
Listeriosis	All jurisdictions	Flavivirus infection (NEC) [‡]	All jurisdictions
Salmonellosis	All jurisdictions	Dengue	All jurisdictions
Shigellosis	All jurisdictions	Japanese encephalitis	All jurisdictions
SLTEC, VTEC	All jurisdictions	Kunjin virus [§]	All jurisdictions except ACT
Typhoid	All jurisdictions	Malaria	All jurisdictions
Quarantinable diseases		Murray Valley encephalitis [§]	All jurisdictions except ACT
Cholera	All jurisdictions	Ross River virus infection	All jurisdictions
Plague	All jurisdictions	Zoonoses	
Rabies	All jurisdictions	Anthrax	All jurisdictions
SARS	All jurisdictions except ACT	Australian bat lyssavirus	All jurisdictions
Smallpox	All jurisdictions except ACT, NSW, Qld, SA	Brucellosis	All jurisdictions
Tularemia	All jurisdictions except ACT, NSW, NT, Qld, SA	Leptospirosis	All jurisdictions
Viral haemorrhagic fever (NEC)	All jurisdictions	Lyssaviruses (NEC)	All jurisdictions
Yellow fever	All jurisdictions	Ornithosis	All jurisdictions
Sexually transmissible infections		Q fever	All jurisdictions
Chlamydial (NEC)	All jurisdictions	Other bacterial infections	
Donovanosis	All jurisdictions	Creutzfeldt-Jakob disease	All jurisdictions except, ACT, NSW, NT, Qld, SA
Gonococcal infection	All jurisdictions	Legionellosis	All jurisdictions
Syphilis (unspecified)*	All jurisdictions	Leprosy	All jurisdictions
Syphilis < 2 years duration	All jurisdictions except NSW, Qld, SA, Tas, Vic	Meningococcal infection	All jurisdictions
Syphilis > 2 years duration	All jurisdictions except ACT, NT	Tuberculosis	All jurisdictions
Syphilis - congenital	All jurisdictions except ACT, NT		

* Syphilis data from South Australia, Tasmania and Western Australia cannot yet be classified into less than 2 years and more than 2 years duration. NSW classifies syphilis into < 1 year and > 1 years or unknown duration.

† Laboratory confirmed influenza is not notifiable in the ACT or South Australia but reports are forwarded to NNDSS.

‡ Flavivirus (NEC) replaces Arbovirus (NEC) from 1 January 2004. Western Australian data cannot yet be classified.

§ In the Australian Capital Territory, Murray Valley encephalitis virus and Kunjin are combined under Murray Valley encephalitis.

Table 2. Notifications of diseases received by State and Territory health authorities for the period 1 April to 30 June 2004, by date of onset*

Disease	State or territory								Total 2nd quarter 2004 ¹	Total 1st quarter 2004	Total 2nd quarter 2003	Last 5 years mean 2nd quarter	Year to date 2004	Last 5 years YTD mean	Ratio [†]
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Bloodborne diseases															
Hepatitis B (incident)	2	17	2	13	2	10	9	5	60	70	90	99.2	130	190.6	0.6
Hepatitis B (unspecified)	12	1,324	NN	216	66	30	386	87	2,121	1,479	1,470	1,817.2	3600	3,458.2	1.2
Hepatitis C (incident)	3	4	NN	NN	8	2	13	18	48	79	110	114.0	127	247.0	0.4
Hepatitis C (unspecified)	58	1,218	72	709	182	170	714	275	3,398	3,572	3,292	4,237.4	6970	8,699.0	0.8
Hepatitis D	0	2	0	5	0	0	1	0	8	4	5	5.4	12	10.8	1.5
Gastrointestinal diseases															
Botulism	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Campylobacteriosis ²	77	NN	43	767	401	208	1,211	389	3,096	4,437	3,515	3,295.8	7533	6,870.8	0.9
Cryptosporidiosis [‡]	0	60	27	215	17	6	82	31	438	515	310	452.0	953	1,493.7	1.0
Haemolytic uraemic syndrome	0	2	0	0	0	0	0	1	3	3	2	2.0	6	6.6	1.5
Hepatitis A	0	32	3	7	1	0	15	16	74	106	108	174.4	180	399.4	0.4
Hepatitis E	0	1	0	1	0	2	5	0	9	11	1	4.0	20	6.2	2.3
Listeriosis	0	11	0	3	1	0	3	1	19	17	19	15.8	36	35.2	1.2
Salmonellosis (NEC)	44	524	102	666	145	48	321	137	1,987	2,772	1,602	1,676.0	4759	4,281.0	1.2
Shigellosis	1	20	36	23	15	2	15	31	143	154	103	130.6	297	285.0	1.1
SLTEC, VTEC ³	0	0	0	2	5	0	1	0	8	12	12	9.2	20	26.6	0.9
Typhoid	0	8	0	1	1	0	2	3	15	27	6	11.0	42	35.0	1.4
Quarantinable diseases															
Cholera	0	0	0	1	0	0	1	0	2	1	1	0.6	3	1.4	3.3
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
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Tularemia	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

Table 2. Notifications of diseases received by State and Territory health authorities for the period 1 April to 30 June 2004, by date of onset* continued

Disease	State or territory								Total 2nd quarter 2004 ¹	Total 1st quarter 2004	Total 2nd quarter 2003	Last 5 years mean 2nd quarter	Year to date 2004	Last 5 years YTD mean	Ratio [†]
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Sexually transmissible diseases															
Chlamydia	157	2,329	443	2,136	666	258	1,866	1,049	8,904	9,215	7,432	5,236.8	18119	10,387.2	1.7
Donovanosis	0	0	0	1	0	0	0	0	1	2	3	4.6	3	10.4	0.2
Gonococcal infection ⁴	6	319	443	318	123	16	257	400	1,882	1,751	1,684	1,599.0	3633	3,190.0	1.2
Syphilis (unspecified)	5	0	57	0	0	0	0	0	62	82	134	213.8	144	423.2	0.3
Syphilis < two years duration	0	47	1	24	8	0	23	8	111	142	104	96.5	253	202.5	1.2
Syphilis > two years or unknown duration	0	220	17	33	1	0	87	27	385	409	249	259.5	794	514.0	1.5
Syphilis - congenital	0	0	2	0	0	0	1	0	3	2	3	2.8	5	4.4	1.1
Vaccine preventable disease															
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.2	0.0
<i>Haemophilus influenzae</i> type b	0	1	1	1	0	0	0	0	3	7	8	10.2	10	15.8	0.3
Influenza (laboratory confirmed) [‡]	1	106	4	26	13	2	8	1	161	107	130	306.3	268	395.7	0.5
Measles	0	1	0	0	1	0	4	1	7	11	27	26.8	18	71.6	0.3
Mumps	0	12	0	5	1	0	0	0	18	24	12	39.8	42	69.0	0.5
Pertussis	13	573	1	140	59	8	112	147	1,053	1,107	832	1,100.6	2160	2,273.0	1.0
Pneumococcal disease (invasive) [‡]	17	226	18	107	51	23	106	42	590	328	544	510.7	918	768.3	1.2
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Rubella	0	6	0	4	0	0	0	0	10	6	11	51.4	16	105.8	0.2
Rubella - congenital	0	0	0	0	0	0	0	0	0	1	0	0.0	1	0.2	0.0
Tetanus	0	0	0	1	0	0	0	0	1	2	0	0.4	3	2.4	2.5
Vectorborne diseases															
Barmah Forest virus infection	0	135	8	157	3	0	3	10	316	319	760	397.8	635	662.6	0.8
Dengue	2	6	5	47	0	0	3	1	64	236	264	88.6	300	227.6	0.7
Flavivirus infection NEC	0	4	0	24	0	0	1	0	29	74	15	11.4	103	32.0	2.5
Japanese encephalitis [‡]	0	0	0	0	0	0	0	0	0	1	0	0.0	1	0.0	0.0
Kunjin virus [‡]	0	0	0	0	0	0	0	0	0	6	5	2.3	6	7.3	0.0
Malaria	4	19	8	75	8	8	19	8	149	127	155	169.4	276	380.8	0.9
Murray Valley encephalitis [‡]	0	0	1	0	0	0	0	0	1	0	0	0.0	1	1.5	0.0
Ross River virus infection	3	324	17	866	7	10	21	138	1,386	2,444	2,350	1,386.2	3830	2,812.2	1.0

Disease	State or territory								Total 2nd quarter 2004 ¹	Total 1st quarter 2004	Total 2nd quarter 2003	Last 5 years mean 3rd quarter	Year to date 2004	Last 5 years YTD mean	Ratio [†]
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Zoonoses															
Anthrax [‡]	0	0	0	0	0	0	0	0	0	0	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	3	0	0	1	0	4	6	7	5.0	10	12.0	0.8
Leptospirosis	0	5	1	46	0	0	0	0	52	65	28	67.4	117	143.6	0.8
Lyssavirus unspecified [‡]	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Ornithosis	0	15	0	0	1	0	37	0	53	70	44	37.0	123	62.8	1.4
Q fever	0	52	1	34	6	0	11	2	106	110	121	150.2	216	320.4	0.7
Other bacterial infections															
Creutzfeldt-Jakob disease	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Legionellosis	1	26	3	3	10	0	34	11	88	86	87	113.4	174	191.4	0.8
Leprosy	0	0	0	0	0	0	0	0	0	2	2	1.2	2	2.4	0.0
Meningococcal infection	1	46	4	22	5	6	27	9	120	96	104	136.6	216	241.8	0.9
Tuberculosis	0	52	3	19	18	3	64	16	175	227	192	225.8	402	474.4	0.8
Total	407	7,747	1,323	6,721	1,825	812	5,464	2,864	27,163	30,324	25,953	24,296.5	57,487	50,053.4	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 from New South Wales where it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.

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

* Date of onset = the true date of onset. If this is not available, the 'date of onset' is equivalent to the earliest of two dates: (i) specimen collection date or (ii) the date of notification to a public health unit. Hepatitis B and C unspecified were analysed by date of notification.

† Ratio = ratio of current quarter total to the mean of last 5 years for the same quarter.

‡ Notifiable from January 2001. Ratio and mean calculations are based on the last three years.

NN Not notifiable.

NEC Not elsewhere classified.

**Table 3. Notification rates of diseases by state or territory, 1 April to 30 June 2004.
(Rate per 100,000 population)**

Disease ¹	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Bloodborne diseases									
Hepatitis B (incident)	2.5	1.0	4.0	1.4	0.5	8.4	0.7	1.0	1.2
Hepatitis B (unspecified)	14.9	79.2	NN	22.8	17.3	25.2	31.5	17.8	43.1
Hepatitis C (incident)	3.7	0.2	NN	NN	2.1	1.7	1.1	3.7	1.2
Hepatitis C (unspecified)	71.9	72.9	145.2	74.7	47.7	142.5	58.2	56.3	68.4
Hepatitis D	0.0	0.1	0.0	0.5	0.0	0.0	0.1	0.0	0.2
Gastrointestinal diseases									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Campylobacteriosis ²	95.4	NN	86.7	80.8	105.0	174.4	98.7	79.7	94.0
Cryptosporidiosis	0.0	3.6	54.4	22.7	4.5	5.0	6.7	6.4	8.8
Haemolytic uraemic syndrome	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Hepatitis A	0.0	1.9	6.0	0.7	0.3	0.0	1.2	3.3	1.5
Hepatitis E	0.0	0.1	0.0	0.1	0.0	1.7	0.4	0.0	0.2
Listeriosis	0.0	0.7	0.0	0.3	0.3	0.0	0.2	0.2	0.4
Salmonellosis (NEC)	54.5	31.3	205.7	70.2	38.0	40.2	26.2	28.1	40.0
Shigellosis	1.2	1.2	72.6	2.4	3.9	1.7	1.2	6.4	2.9
SLTEC, VTEC ³	0.0	0.0	0.0	0.2	1.3	0.0	0.1	0.0	0.2
Typhoid	0.0	0.5	0.0	0.1	0.3	0.0	0.2	0.6	0.3
Quarantinable diseases									
Cholera	0.0	0.0	0.0	0.1	0.0	0.0	0.1	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
Smallpox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tularemia	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									
Chlamydia	194.5	139.3	893.4	225.0	174.4	216.3	152.2	214.9	179.3
Donovanosis	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Gonococcal infection	7.4	19.1	893.4	33.5	32.2	13.4	21.0	82.0	37.9
Syphilis (unspecified)	6.2	0.0	114.9	0.0	0.0	0.0	0.0	0.0	1.2
Syphilis < 2 years duration	0.0	2.8	2.0	2.5	2.1	0.0	1.9	1.6	2.2
Syphilis > 2 years or unknown duration	0.0	13.2	34.3	3.5	0.3	0.0	7.1	5.5	7.8
Syphilis - congenital	0.0	0.0	4.0	0.0	0.0	0.0	0.1	0.0	0.1

Table 3. Notification rates of diseases by state or territory, 1 April to 30 June 2004. (Rate per 100,000 population), *continued*

Disease ¹	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
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	0.1	2.0	0.1	0.0	0.0	0.0	0.0	0.1
Influenza (laboratory confirmed)	1.2	6.3	8.1	2.7	3.4	1.7	0.7	0.2	3.2
Measles	0.0	0.1	0.0	0.0	0.3	0.0	0.3	0.2	0.1
Mumps	0.0	0.7	0.0	0.5	0.3	0.0	0.0	0.0	0.4
Pertussis	16.1	34.3	2.0	14.7	15.5	6.7	9.1	30.1	21.2
Pneumococcal disease (invasive)	21.1	13.5	36.3	11.3	13.4	19.3	8.6	8.6	11.9
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.2
Rubella - congenital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tetanus	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Vectorborne diseases									
Barmah Forest virus infection	0.0	8.1	16.1	16.5	0.8	0.0	0.2	2.0	6.4
Dengue	2.5	0.4	10.1	5.0	0.0	0.0	0.2	0.2	1.3
Flavivirus infection (NEC)	0.0	0.2	0.0	2.5	0.0	0.0	0.1	0.0	0.6
Japanese encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kunjin virus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaria	5.0	1.1	16.1	7.9	2.1	6.7	1.5	1.6	3.0
Murray Valley encephalitis	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Ross River virus infection	3.7	19.4	34.3	91.2	1.8	8.4	1.7	28.3	27.9
Zoonoses									
Anthrax	0.0	0.0	0.0	0.0	0.0	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	0.3	0.0	0.0	0.1	0.0	0.1
Leptospirosis	0.0	0.3	2.0	4.8	0.0	0.0	0.0	0.0	1.0
Lyssavirus unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	0.9	0.0	0.0	0.3	0.0	3.0	0.0	1.1
Q fever	0.0	3.1	2.0	3.6	1.6	0.0	0.9	0.4	2.1
Other bacterial infections									
Legionellosis	1.2	1.6	6.0	0.3	2.6	0.0	2.8	2.3	1.8
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	1.2	2.8	8.1	2.3	1.3	5.0	2.2	1.8	2.4
Tuberculosis	0.0	3.1	6.0	2.0	4.7	2.5	5.2	3.3	3.5

1. Rates are subject to retrospective revision.

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

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

NN Not Notifiable.

NEC Not Elsewhere Classified.

Table 4. Virology and serology laboratory reports by state or territory¹ for the reporting period 1 April to 30 June 2004, and total reports for the year²

	State or territory								This period 2004	This period 2003	Year to date 2004 ³	Year to date 2003
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Measles, mumps, rubella												
Measles virus	0	0	0	1	1	0	3	1	6	26	13	40
Mumps virus	0	0	0	0	1	0	0	0	1	2	3	7
Rubella virus	0	1	0	1	0	0	0	0	2	4	8	12
Hepatitis virus												
Hepatitis A virus	0	0	2	1	0	0	0	6	9	19	19	36
Hepatitis E virus	0	0	0	0	0	0	2	0	2	–	7	–
Arboviruses												
Ross River virus	0	8	3	211	9	0	6	12	249	900	680	1,112
Barmah Forest virus	1	1	1	33	4	0	0	1	41	264	126	341
Dengue not typed	0	0	0	0	0	0	0	1	1	7	1	22
Flavivirus (unspecified)	0	0	2	26	0	0	1	0	29	65	78	104
Adenoviruses												
Adenovirus type 40	0	0	0	0	0	0	0	5	5	9	5	20
Adenovirus not typed/ pending	1	60	0	22	71	1	26	16	197	242	367	455
Herpesviruses												
Herpes virus type 6	0	1	0	0	0	0	1	0	2	2	2	3
Cytomegalovirus	1	96	2	18	27	3	9	0	156	240	364	511
Varicella-zoster virus	0	38	5	171	58	0	12	61	345	375	794	794
Epstein-Barr virus	0	20	19	138	137	0	8	100	422	381	1,051	839
Other DNA viruses												
Molluscum contagiosum	0	0	0	0	0	0	0	1	1	2	1	10
Poxvirus group not typed	0	0	0	0	0	0	1	0	1	–	2	1
Parvovirus	0	5	0	6	1	0	7	28	47	56	108	106
Picornavirus												
Coxsackievirus A9	0	1	0	0	0	0	0	0	1	12	1	12
Coxsackievirus A16	1	2	0	0	0	0	0	0	3	2	5	4
Echovirus type 7	0	1	0	0	0	0	0	0	1	1	1	1
Echovirus type 9	0	2	0	0	0	0	0	0	2	5	2	9
Echovirus type 11	0	4	0	0	0	0	0	0	4	1	6	2
Echovirus type 22	0	1	0	0	0	0	0	0	1	–	2	–
Echovirus type 30	0	2	0	0	0	0	0	0	2	1	4	1
Poliovirus type 1 (uncharacterised)	0	4	0	0	0	0	0	0	4	17	6	26
Poliovirus type 2 (uncharacterised)	0	6	0	0	0	0	0	0	6	3	8	4
Poliovirus type 3 (uncharacterised)	0	1	0	0	0	0	0	0	1	1	1	1
Rhinovirus (all types)	1	48	0	0	7	0	3	32	91	127	172	251
Enterovirus not typed/ pending	0	20	1	3	1	0	7	12	44	45	86	89
Picornavirus not typed	0	0	0	0	0	1	1	0	2	3	4	5

Table 4. Virology and serology laboratory reports by state or territory¹ for the reporting period 1 April to 30 June 2004, and total reports for the year,² continued

	State or territory								This period 2004	This period 2003	Year to date 2004 ³	Year to date 2003
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Ortho/paramyxoviruses												
Influenza A virus	0	0	0	2	15	0	0	2	19	101	58	204
Influenza B virus	0	2	1	0	13	0	0	2	18	32	30	59
Parainfluenza virus type 1	0	12	0	4	5	0	4	4	29	10	69	26
Parainfluenza virus type 2	0	0	0	2	1	0	0	0	3	30	5	49
Parainfluenza virus type 3	0	4	1	1	37	0	2	36	81	86	169	197
Respiratory syncytial virus	1	553	3	85	66	7	66	78	859	537	1,053	679
Other RNA viruses												
HTLV-1	0	0	1	0	0	0	0	0	1	4	3	8
Rotavirus	0	25	0	0	1	7	16	16	65	84	142	143
Reovirus (unspecified)	0	2	0	0	0	0	0	0	2	–	2	1
Calicivirus	0	0	0	0	0	0	0	26	26	46	26	80
Norovirus	0	0	0	0	0	0	81	0	81	13	164	41
Other												
<i>Chlamydia trachomatis</i> not typed	9	177	2	388	319	6	8	140	1,049	1,087	2,226	2,318
<i>Chlamydia pneumoniae</i>	0	0	0	0	0	0	2	0	2	6	4	10
<i>Chlamydia psittaci</i>	0	0	0	0	2	0	43	0	45	25	104	42
<i>Chlamydia</i> spp typing pending	0	2	0	0	0	0	0	0	2	–	2	–
<i>Chlamydia</i> species	0	1	0	0	0	0	0	1	2	–	2	–
<i>Mycoplasma pneumoniae</i>	0	39	9	129	33	2	47	9	268	232	623	433
<i>Coxiella burnetii</i> (Q fever)	1	0	0	5	16	0	5	1	28	37	76	93
<i>Rickettsia tsutsugamushi</i>	0	0	0	0	0	0	0	1	1	1	1	1
<i>Streptococcus</i> group A	0	1	0	60	0	0	35	0	96	126	221	271
<i>Yersinia enterocolitica</i>	0	1	0	0	0	0	0	0	1	2	2	4
<i>Brucella abortus</i>	0	0	0	0	1	0	0	0	1	1	4	2
<i>Brucella</i> species	0	3	0	0	0	0	0	0	3	–	3	2
<i>Bordetella pertussis</i>	2	21	0	12	17	0	14	22	88	117	244	256
<i>Bordetella parapertussis</i>	0	0	0	0	0	0	1	0	1	–	1	–
<i>Legionella pneumophila</i>	0	5	0	0	2	0	19	0	26	10	46	53
<i>Legionella longbeachae</i>	0	1	0	0	6	0	6	4	17	18	33	28
<i>Legionella</i> species	0	3	0	0	0	0	2	0	6	1	10	4
<i>Cryptococcus</i> species	0	0	0	2	5	0	0	0	7	9	20	12
<i>Leptospira</i> species	0	0	0	3	0	0	0	0	3	5	16	11
<i>Treponema pallidum</i>	1	33	0	109	82	0	0	0	225	302	553	674
<i>Entamoeba histolytica</i>	0	0	0	0	0	0	0	1	1	3	5	6
<i>Toxoplasma gondii</i>	0	0	0	0	0	0	1	0	1	7	15	21
<i>Echinococcus granulosus</i>	0	0	0	0	2	0	0	0	2	6	6	11
Total	19	1,207	52	1,434	940	27	439	619	4,737	5,750	9,865	10,557

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 reports by laboratories for the reporting period 1 April to 30 June 2004*

State or territory	Laboratory	April 2004	May 2004	June 2004	Total this period
Australian Capital Territory	The Canberra Hospital	–	–	–	–
New South Wales	Institute of Clinical Pathology and Medical Research, Westmead	144	134	135	413
	New Children's Hospital, Westmead	89	93	105	287
	Repatriation General Hospital, Concord	–	–	–	–
	Royal Prince Alfred Hospital, Camperdown	17	31	28	76
	South West Area Pathology Service, Liverpool	87	132	190	409
Queensland	Queensland Medical Laboratory, West End	455	567	465	1,487
	Townsville General Hospital				
South Australia	Institute of Medical and Veterinary Science, Adelaide	436	502	–	938
Tasmania	Northern Tasmanian Pathology Service, Launceston	10	6	11	27
	Royal Hobart Hospital, Hobart	–	–	–	–
Victoria	Monash Medical Centre, Melbourne	15	27	31	73
	Royal Children's Hospital, Melbourne	62	65	10	137
	Victorian Infectious Diseases Reference Laboratory, Fairfield	79	79	73	231
Western Australia	PathCentre Virology, Perth	–	21	510	531
	Princess Margaret Hospital, Perth	–	–	–	–
	Western Diagnostic Pathology	11	57	60	128
Total		1,405	1,714	1,618	4,737

* The complete list of laboratories reporting for the 12 months, January to December 2004, will appear in every report regardless of whether reports were received in this reporting period. Reports are not always received from all laboratories.

- No data received this period.

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 50 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 2004, nine conditions are being monitored, four of which are related to communicable diseases. These include influenza, gastroenteritis, varicella and shingles. There are two definitions for influenza for 2004. A patient may be coded once or twice depending on their symptoms. The definition for influenza 1 will include more individuals. Definitions of these conditions were published in *Commun Dis Intell* 2004;28:99–100.

Data from 1 April to 30 June 2004 are shown as the rate per 1,000 consultations in Figures 5, 6, 7, and 8.

Figure 5. Consultation rates for influenza-like illness, ASPREN, 1 April to 30 June 2004, by week of report

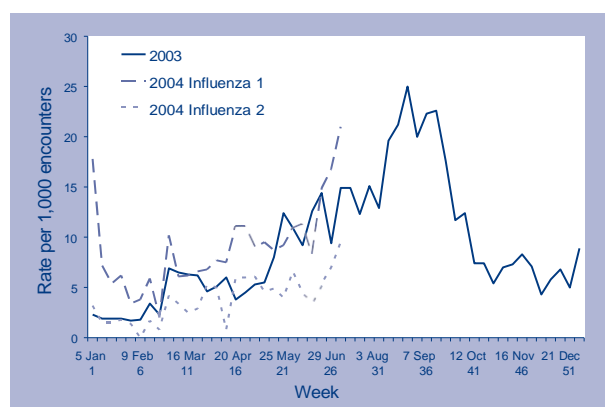


Figure 6. Consultation rates for gastroenteritis, ASPREN, 1 April to 30 June 2004, by week of report

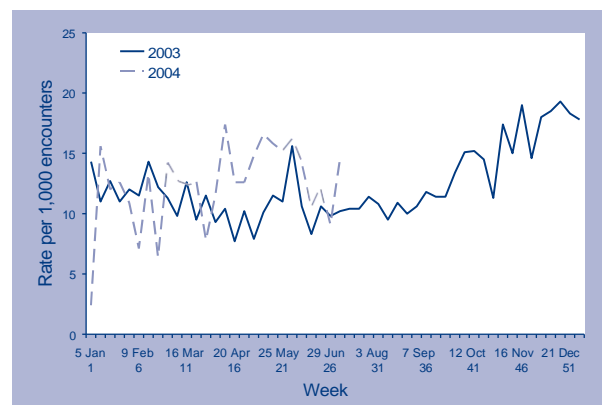


Figure 7. Consultation rates for chickenpox, ASPREN, 1 April to 30 June 2004, by week of report

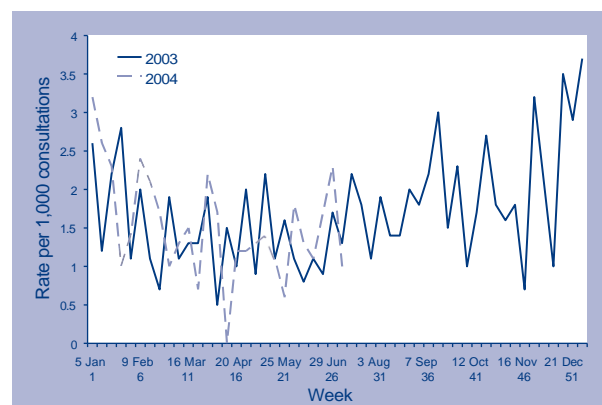
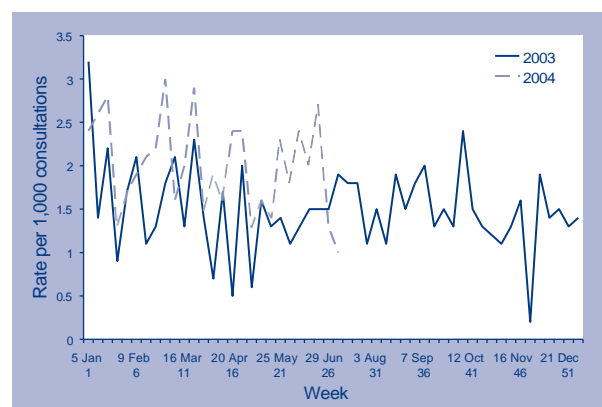


Figure 8. Consultation rates for shingles, ASPREN, 1 April to 30 June 2004, by week of report



Childhood immunisation coverage

Tables 6, 7 and 8 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 12 months of age for the cohort born between 1 January and 31 March 2003, at 24 months of age for the cohort born between 1 January and 31 March 2002, and at 6 years of age for the cohort born between 1 January and 31 March 1998 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, Email: brynleyh@chw.edu.au.

Immunisation coverage for children 'fully immunised' at 12 months of age for Australia decreased marginally from the last quarter by 0.2 percentage points to 90.9 per cent (Table 6). There were substantial decreases in 'fully immunised' coverage by State and Territory in two jurisdictions, the Northern Territory (-3.9%) and the Australian Capital Territory (-2.3%), whilst all other jurisdictions experienced very little change in coverage. Both jurisdictions also experienced decreases in coverage for diphtheria, tetanus, pertussis (DTP), poliomyelitis (OPV), *Haemophilus influenzae* type b (Hib) and hepatitis B (Hep B). Significant changes in coverage in jurisdictions like the Northern Territory and the Australian Capital Territory, who have relatively small populations, are likely to be the result of small numbers of unimmunised children having large impacts on the coverage percentages.

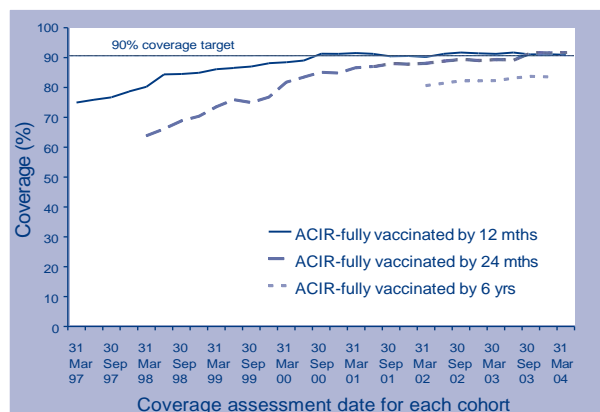
Coverage for children 'fully immunised' at 24 months of age for Australia increased marginally from the last quarter by 0.2 percentage points to 91.7 per cent (Table 7). Coverage for individual vaccines for Australia basically remained largely unchanged. DTP coverage remained high for this age group for all jurisdictions due to the removal of the 4th dose of DTP (due at 18 months) from the immunisation schedule from the December 2003 quarter onwards. The only other significant jurisdictional change in coverage for this age group was an increase in DTP coverage in Tasmania (+1.7%).

Table 8 shows immunisation coverage estimates for 'fully immunised' and for individual vaccines at six years of age for Australia and by state or territory. 'Fully immunised' coverage at six years of

age for Australia remained the same, however there was a significant decrease in coverage in Tasmania (-3.7%) and an increase in coverage in Western Australia (+1.5%). Coverage for all individual vaccines at six years of age remained largely unchanged in most states and territories with the only significant changes occurring in Tasmania for DTP (-3.9%), OPV (-3.4%) and MMR (-3.8%). Coverage for vaccines assessed at six years is now over 85 per cent in the majority of jurisdictions, and close to 85 per cent in most jurisdictions, although coverage in Western Australia, Tasmania and the Northern Territory for this age group remains well below other jurisdictions.

Figure 9 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, 24 months and six years, although the rate of increase has slowed over the past year for all age groups.

Figure 9. Trends in vaccination coverage, Australia, 1997 to 2004, by age cohorts



Acknowledgement: These figures were provided by the Health Insurance Commission (HIC), to specifications provided by the Australian Government 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 6. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 2003; assessment date 30 June 2004

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Number of children	974	20,842	945	12,335	4,188	1,372	14,814	5,991	61,461
Diphtheria, tetanus, pertussis (%)	92.7	92.1	87.4	92.6	92.4	94.7	93.1	90.9	92.3
Poliomyelitis (%)	92.7	92.0	86.9	92.5	92.2	94.6	93.0	90.8	92.2
<i>Haemophilus influenzae</i> type b (%)	93.7	94.0	92.3	95.0	94.9	96.0	95.2	93.4	94.5
Hepatitis B (%)	93.7	94.8	93.9	95.1	95.3	95.7	94.8	93.0	94.7
Fully immunised (%)	90.8	90.4	85.2	91.6	91.4	93.4	91.7	89.3	90.9
Change in fully immunised since last quarter (%)	-2.3	-0.6	-3.9	+0.1	-0.4	+1.6	+0.2	+0.3	-0.2

Table 7. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 2002; assessment date 30 June 2004

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	980	21,468	915	12,595	4,566	1,466	15,295	6,402	63,687
Diphtheria, tetanus, pertussis (%)	95.0	95.5	97.3	95.2	95.7	97.0	95.9	94.6	95.5
Poliomyelitis (%)	94.6	94.7	97.2	94.6	95.3	96.8	95.3	94.0	94.9
<i>Haemophilus influenzae</i> type b (%)	92.0	92.8	95.4	93.6	94.1	95.2	93.9	92.4	93.4
Measles, mumps, rubella (%)	92.5	92.9	95.9	93.6	94.1	95.8	94.0	92.9	93.5
Hepatitis B(%)	95.1	95.4	98.1	95.2	95.9	97.5	96.2	95.1	95.7
Fully immunised (%)	90.0	91.0	94.5	91.9	92.7	94.9	92.3	90.6	91.7
Change in fully immunised since last quarter (%)	+1.6	+0.3	+0.8	-0.1	-0.0	+2.8	-0.1	+0.3	+0.2

Table 8. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 1998; assessment date 30 June 2004

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,040	21,660	934	13,272	4,777	1,549	15,481	6,516	65,229
Diphtheria, tetanus, pertussis (%)	86.5	85.2	80.3	85.0	84.9	82.4	87.2	82.7	85.2
Poliomyelitis (%)	86.7	85.2	81.7	85.1	85.2	82.8	86.7	82.7	85.2
Measles, mumps, rubella (%)	85.6	84.3	82.4	84.8	84.3	81.4	87.0	82.6	84.8
Fully immunised (%) ¹	84.9	83.2	78.7	83.6	83.3	80.4	85.5	81.1	83.5
Change in fully immunised since last quarter (%)	+0.8	0.0	-1.3	+0.6	-0.0	-3.7	-0.3	+1.5	+0.1

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 2004;28:100.

Reporting period 1 April to 30 June 2004

The AGSP laboratories received a total of 873 isolates in this quarter of which 851 underwent susceptibility testing. The total received was about 10 per cent less than the 980 isolated or referred in 2003. About 31 per cent of this total was from New South Wales, 23 per cent from Victoria, 18 per cent from Queensland, 14.2 per cent from the Northern Territory, 8.4 per cent from Western Australia and 4.4 per cent from South Australia. Isolates from other centres were few.

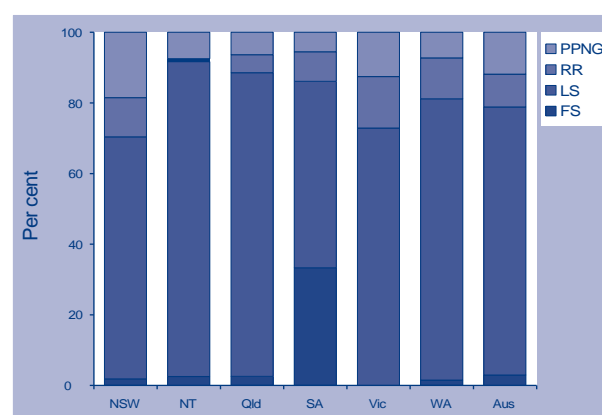
Penicillins

In this quarter 21.2 per cent of all isolates examined were penicillin resistant by one or more mechanisms—9.3 per cent penicillinase producing *neisseria gonorrhoeae* (PPNG) and 11.9 per cent by chromosomal mechanisms (CMRNG). The proportion of all penicillin resistant strains is little changed from the previous quarter, but is about five per cent more than in the corresponding period of 2003. The number of PPNG increased to 101 from the 72 seen in the same period in 2003, but the number of CMRNG decreased to 79 from 88. The proportion of all strains resistant to the penicillins by any mechanism ranged from 8.3 per cent in the Northern

Territory to 30 per cent in New South Wales. In the Northern Territory, nine of 10 resistant strains were PPNG.

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 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.

Figure 10. Categorisation of gonococci isolated in Australia, 1 April to 30 June 2004, 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 highest proportion of PPNG was found in New South Wales where the 50 PPNG were 18.5 per cent of all isolates. Twenty-five PPNG representing 12.5 per cent of all isolates were found in Victoria and 10 (6.4%) in Queensland. Five PPNG were found in Western Australia and two in South Australia. In addition to the increase in PPNG in the Northern Territory, PPNG numbers also rose markedly in New South Wales from the 14 detected in this period of 2003. Victoria maintained a high rate of PPNG, but numbers of PPNG were halved in other States. Numbers of isolates resistant to the penicillins by separate chromosomal mechanisms declined overall. This was mainly due to a decrease in numbers in New South Wales (from 58 to 30). In other jurisdictions, CMRNG numbers were unaltered or else increased from 2003 data.

Ceftriaxone

Three isolates with decreased susceptibility to ceftriaxone were detected in New South Wales. Small numbers of these strains have been seen for a number of years, mostly in New South Wales, but occasionally in other jurisdictions.

Spectinomycin

All isolates were susceptible to this injectable agent.

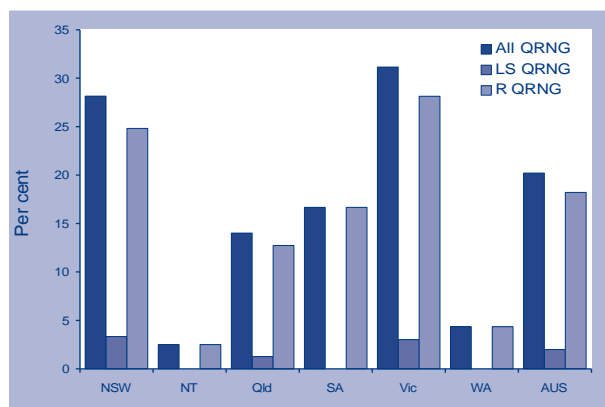
Quinolone antibiotics

The total number (172) and proportion (20.2%) of all quinolone resistant *N. gonorrhoeae* (QRNG) was slightly less than in the first quarter of 2004 (188, 20.5%), but substantially higher than the corresponding figures in the second quarter of 2003 (135 isolates, 14%). The majority of QRNG (155 of 172, 90%) exhibited higher-level resistance

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) groups.

QRNG were again widely distributed. The highest number (76) was found in New South Wales (28% of isolates) while 62 QRNG were 31 per cent of gonococci in Victoria. In South Australia there were six (16%) QRNG, in Queensland 19 (14%), and three each in Western Australia (4.3%) and the Northern Territory (2.5%) (Figure 11).

Figure 11. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 April to 30 June 2004, by jurisdiction



LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.

R QRNG Ciprofloxacin MICs \geq 1 mg/L.

High level tetracycline resistance

The number (121) and proportion (14.2%) of high level tetracycline resistance (TRNG) detected increased from the 2003 figures (92, 9.5%). TRNG are also PPNG when the different resistance determinants are both present on a single plasmid. The increase in PPNG noted above thus helps to explain the increase in TRNG. TRNG represented between 7.5 per cent (Northern Territory) and 20 per cent of all isolates (Western Australia) in the different jurisdictions.

Reference

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

Meningococcal surveillance

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

*The reference laboratories of the Australian Meningococcal Surveillance Programme report data on the number of laboratory confirmed cases confirmed either by culture or by non-culture based techniques. Culture positive cases, where a *Neisseria meningitidis* is grown from a normally sterile site or skin, and non-culture based diagnoses, derived from results of nucleic acid amplification assays and serological techniques, are defined as invasive meningococcal disease (IMD) according to Public Health Laboratory Network definitions. Data contained in the quarterly reports are restricted to a description of the number of cases per jurisdiction, and serogroup, where known. A full analysis of laboratory confirmed cases of IMD is contained in the annual reports of the Programme, published in Communicable Diseases Intelligence.*

Laboratory confirmed cases of invasive meningococcal disease for the period 1 April to 30 June 2004, are included in this issue of Communicable Diseases Intelligence (Table 9).

Table 9. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 April to 30 June 2004, by jurisdiction and serogroup

Jurisdiction	Year	Serogroup													
		A		B		C		Y		W135		ND		All	
		Q2	ytd	Q2	ytd	Q2	ytd	Q2	ytd	Q2	ytd	Q2	ytd	Q2	ytd
Australian Capital Territory	2004			1	6	1	1			1	1			3	8
	2003			(5)	(6)	(0)	(0)			(0)	(0)			(5)	(6)
New South Wales	2004	1	1	11	23	5	12	1	1	1	1	0	2	19	40
	2003	(0)	(0)	(9)	(17)	(8)	(15)	(0)	(0)	(0)	(0)	(6)	(8)	(23)	(40)
Northern Territory	2004			22	37	5	9	2	2	2	2	5	10	36	60
	2003			(26)	(37)	(6)	(13)	(1)	(3)	(1)	(1)	(8)	(12)	(42)	(66)
Queensland	2004			0	4	2	4							2	8
	2003			(0)	(1)	(0)	(0)							(0)	(1)
South Australia	2004			18	28	5	9	1	3	0	0	1	2	25	42
	2003			(8)	(13)	(9)	(22)	(0)	(0)	(1)	(1)	(2)	(5)	(20)	(41)
Tasmania	2004			5	9	0	0							5	9
	2003			(4)	(8)	(0)	(1)							(4)	(9)
Victoria	2004			6	10	1	2							7	12
	2003			(5)	(11)	(1)	(3)	(1)	(1)					(7)	(15)
Western Australia	2004			0	2	0	0			1	1	1	3	2	6
	2003						(1)								1
Australia	2004	1	1	63	119	19	37	4	6	5	5	7	17	99	185
	2003	(0)	(0)	(57)	(93)	(24)	(55)	(2)	(4)	(2)	(2)	(16)	(25)	(101)	(179)

Q2 = second quarter; ytd = year to 30/06/04; ND = not determined.

Numbers of laboratory confirmed diagnoses of IMD made in the same periods in 2003 are also shown in parenthesis.

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 2003, over 1,000 clinicians participated in the surveillance of 14 conditions through the APSU, with an overall response rate of 96 per cent. The APSU can be contacted by telephone: +61 2 9845 2200, email: apsu@chw.edu.au. For more information see *Commun Dis Intell* 2004;28:101.

The results for 1 January and 31 March 2004 are shown in Table 10.

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

Table 10. Confirmed cases of communicable diseases reported to the Australian Paediatric Surveillance Unit between 1 January to 31 March 2004*

Condition	Previous reporting period January–December 2003	Current reporting period January–March 2004*
Acute flaccid paralysis	30	5
Congenital cytomegalovirus confirmed (< 3 weeks of age) suspected (3–52 weeks of age)	10	3
Congenital rubella	3	1
Perinatal exposure to HIV HIV infection	14 1†	6
Neonatal herpes simplex virus infection	6	2
Hepatitis C virus infection	11	2

* Surveillance data are provisional and subject to revision

† HIV infection through heterosexual contact

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 2004;28:99.

HIV and AIDS diagnoses and deaths following AIDS reported for January to March 2004, as reported to 30 June 2004, are included in this issue of Communicable Diseases Intelligence (Tables 11 and 12).

Table 11. New diagnoses of HIV infection, new diagnoses of AIDS, and deaths following AIDS occurring in the period 1 January to 31 March 2004, and reported by 30 June 2004, by sex and state or territory of diagnoses

	Sex	State or territory								Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2004	This period 2003	Year to date 2004	Year to date 2003
HIV diagnoses	Female	1	24	2	6	1	0	3	0	37	20	37	20
	Male	5	92	3	38	14	0	49	1	202	201	202	201
	Sex not reported	0	1	0	0	0	0	0	0	1	1	1	1
	Total ¹	6	117	5	44	15	0	53	1	241	221	241	221
AIDS diagnoses	Female	0	1	0	2	0	0	0	0	3	3	3	3
	Male	0	21	0	4	3	0	5	3	36	34	36	34
	Total ¹	0	22	0	6	4	0	5	3	40	38	40	38
AIDS deaths	Female	0	0	0	1	0	0	0	0	1	4	1	4
	Male	0	5	0	2	1	0	3	1	12	17	12	17
	Total	0	5	0	3	1	0	3	1	13	21	13	21

1. Totals include people whose sex was reported as transgender.

Table 12. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 31 March 2004 and reported by 30 June 2004, by sex and state or territory

	Sex	State or territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	30	747	17	215	81	7	292	159	1,548
	Male	247	12,413	121	2,347	800	85	4,624	1,049	21,686
	Not reported	0	237	0	0	0	0	22	0	259
	Total ¹	277	13,424	138	2,571	882	92	4,957	1,215	23,556
AIDS diagnoses	Female	9	217	1	58	30	4	89	34	442
	Male	93	5,077	41	952	383	47	1,828	407	8,828
	Total ¹	102	5,309	42	1,012	414	51	1,927	443	9,300
AIDS deaths	Female	6	126	0	40	20	2	58	22	274
	Male	72	3,433	26	622	257	32	1,350	277	6,069
	Total ¹	78	3,568	26	664	277	34	1,416	300	6,363

1. Totals include people whose sex was reported as transgender.

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 NEPSS 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.

Interpret historical quarterly mean counts cautiously – these may be affected by outbreaks and surveillance artefacts such as newly recognised 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. NEPSS can be contacted at the above address or by 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 April to 30 June 2004 are included in Tables 13 and 14. Data include cases reported and entered by 14 July 2004. Counts are preliminary, and subject to adjustment after completion of typing and reporting of further cases to NEPSS. For more information see *Commun Dis Intell* 2004;28:101–102.

1 April to 30 June 2004

The total number of reports to the National Enteric Pathogens Surveillance System (NEPSS) of human *Salmonella* infection declined to 1,980 in the second quarter of 2004, 27 per cent fewer than in first quarter of 2004, and nine per cent fewer than in the comparable first quarter of 2003. Case counts to 14 July 2004 are approximately 97 per cent of the expected final counts for the quarter.

During the second quarter of 2004, the 25 most common *Salmonella* types in Australia accounted for 1,363 cases, 69 per cent of all reported human *Salmonella* infections.

Twenty-two of the 25 most common *Salmonella* infections in the second quarter of 2004 were among the 25 most commonly reported in the previous quarter.

S. Typhimurium phage type 170 (including the similar *S. Typhimurium* phage type 108) has been one of the most common serovars since 2002. This quarter it was, for the first time, the most common *Salmonella* in Australia. It was also the most common in New South Wales, the Australian Capital Territory and South Australia, and among the most common in Victoria.

Reports of other common salmonellae with counts well above historical averages include *S. Typhimurium* phage type 12a (particularly in Queensland and Victoria), *S. Typhimurium* phage type 197 (in the eastern mainland states), *S. Typhimurium* phage type 12 (in New South Wales) and *S. Virchow* phage type 8, *S. Hvitvingfoss* and *S. Weltevreden* (in Queensland)

Acknowledgement

We thank scientists, diagnostic and reference laboratories, State and Territory health departments, and the Australian Government Department of Health and Ageing for their contributions to NEPSS.

Table 13. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 April to 30 June 2004, as reported to 14 July 2004

	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total all <i>Salmonella</i> for quarter	48	543	97	670	142	26	328	126	1980
Total contributing <i>Salmonella</i> types	19	105	43	117	45	14	78	63	220

Table 14. Top 25 *Salmonella* types identified in Australia, 1 April to 30 June 2004, by state or territory

National rank	<i>Salmonella</i> type	State or territory								Total 2nd quarter 2004	Last 10 years mean 2nd quarter	Year to date 2004	Year to date 2003
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	S Typhimurium 170	21	105	0	14	0	0	42	2	184	32	382	298
2	S Typhimurium 135	0	62	1	38	4	1	43	8	157	126	360	507
3	S Saintpaul	1	13	13	59	3	3	5	11	108	84	241	188
4	S Typhimurium 9	1	35	0	4	8	0	47	5	100	115	249	294
5	S Virchow 8	2	13	0	70	3	0	3	0	91	41	236	110
6	S Typhimurium 12a	2	7	1	47	8	1	16	6	88	13	99	25
7	S Birkenhead	0	22	0	42	0	0	3	1	68	54	175	124
8	S Typhimurium 197	5	17	0	13	2	0	20	0	57	6	141	110
9	S Typhimurium 12	2	37	0	5	3	0	4	1	52	13	195	62
10	S Chester	1	9	3	24	2	0	3	8	50	39	130	155
11	S Hvitvingfoss	0	1	3	35	0	0	3	0	42	20	108	58
12	S Aberdeen	0	1	2	37	0	0	0	0	40	27	76	55
13	S Typhimurium 108	0	4	0	0	35	0	0	0	39	4	82	27
14	S Infantis	2	11	1	2	8	1	11	1	37	29	90	135
15	S Typhimurium U290	1	14	0	4	0	0	16	0	35	7	89	77
16	S Waycross	0	10	0	21	0	0	0	0	31	27	92	48
17	S Muenchen	0	3	6	14	2	0	0	3	28	33	72	88
18	S Typhimurium RDNC	1	6	2	6	6	0	5	2	28	17	55	29
19	S Weltevreden	1	1	1	14	0	0	3	1	21	7	39	24
20	S Singapore	0	7	0	6	4	1	1	1	20	16	60	48
21	S Typhimurium 4	0	16	0	1	0	0	3	0	20	11	49	44
22	S Anatum	0	1	6	8	0	0	1	3	19	27	65	76
23	S Agona	1	7	0	1	2	0	7	1	19	16	53	42
24	S Potsdam	0	3	0	8	2	1	0	1	15	14	41	28
25	S Ball	0	0	12	0	1	0	1	0	14	9	31	29