Communicable diseases surveillance

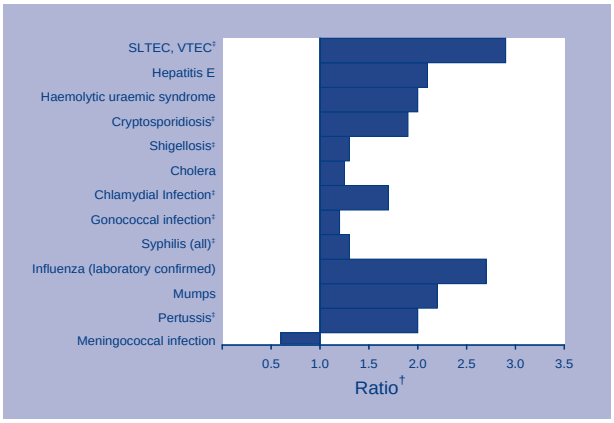
Highlights for 2nd quarter, 2005

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 select disease notifications with an onset in the second quarter of 2005 compared with a five-year mean for the same period. The number of notifications received in the quarter was above the five-year mean for haemolytic uraemic syndrome (HUS), cholera, influenza (laboratory-confirmed) and mumps. The following diseases were above the five-year mean for the same period and exceeded two standard deviations from the five-year mean: Shiga-like toxin producing *Escherichia coli*/verotoxin producing *E. coli* (SLTEC/VTEC), hepatitis E, cryptosporidiosis, shigellosis, chlamydial infection, gonococcal infection, syphilis (all categories) and pertussis. The number of notifications received was below the five-year mean for meningococcal infection (Figure 1).

Figure 1. Selected* diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 April to 30 June 2005 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.

‡ Notifications above or below the 5-year mean plus two standard deviations for the same period.

Gastrointestinal illnesses

Botulism

One case of infant botulism in a four-month-old female was reported in this quarter from rural Victoria. The source of the botulism was unknown.

Cryptosporidiosis

There were 828 notifications of cryptosporidiosis during the quarter which is 1.9 times the five-year mean for the same period. The majority of cases were reported by Queensland (283/828), New South Wales (269/828) and Victoria (143/828).

Five hundred and nineteen of the notifications (63%) were identified as *Cryptospiridium parvum* infection; there was no species information provided for the remaining 37 per cent. Children aged under five years accounted for 46 per cent (383/828) of the total number of notifications.

Queensland reported an outbreak in March 2005 in a child care facility where 20 children and eight adult staff were affected.

In New South Wales, 105 of the 269 cases were reported in May 2005 and the notification rates for *Cryptospiridium* spp have been higher than usual since March 2005, with a peak in late April of more than 35 cases per week. Of the cases reported since May, 162 cases have been investigated for risk factors. The most common risk factor during the exposure period was found to be swimming in a public pool. The increased notification rates of cryptospiridia also appear to relate to increased testing of stools for *Cryptospiridium* spp by private laboratories since late 2004.

Haemolytic uraemic syndrome

There were four notifications of HUS during this reporting period, which is two times the five-year mean for the same period. Three of the notifications were reported from Victoria, while the fourth case was reported from South Australia.

Hepatitis E

Eight notifications of hepatitis E were received for the quarter, which is two times the five-year mean for the same period. Six of the eight cases were acquired overseas and the place of acquisition in the other cases was unknown.

Shiga-like toxin producing *Escherichia colil* verotoxin producing *E. coli*

Twenty-nine notifications of SLTEC/VTEC were received during the quarter, which is almost three times the five-year mean for the same period. Nineteen of the 29 notifications were reported from South Australia.

A case of HUS was notified from South Australia in late April. An *E. coli* serotype O111 was isolated. This case attended the same church as another SLTEC/VTEC case (also serotype O111), although the two cases did not report attending the church at the same time or eating common food. A third SLTEC/VTEC case occurred in a sibling of the HUS case and transmission was thought to be person-to-person. Both church cases had the same pulsed field gel electrophoresis pattern. Information on SLTEC/VTEC disease transmission and prevention was provided and discussed with the Elders of the church and the family of cases.

From 3–13 May, the Institute of Medical and Veterinary Science expanded the screening of bloody stools to include diarrhoeal stools. Ten SLTEC/VTEC cases were notified during this period including the sibling of the HUS case.

Shigellosis

There were 177 notifications of shigellosis during the quarter, which is 1.3 times the five-year mean for the same period. The notifications were mainly from the Northern Territory (48), New South Wales (35), and Victoria and Western Australia (32 each).

Fourteen per cent were reported as imported from overseas, 16 per cent were locally acquired and the places of acquisition of the rest were unknown.

Sixty-four per cent (114/177) of the cases had species recorded. The most frequently notified species was *Shigella sonnei* biotype A, with a further 25 notifications of *Shigella sonnei* of unknown biotype (Table 1).

Previously published work has shown that the prevalent species of shigellae in New South Wales over a four month period in 2000, was *Shigella sonnei* biotype G.[1] *Shigella sonnei* biotype G has also been associated with an outbreak in a child care centre in Victoria in 2000.[2]

Quarantinable diseases

Cholera

There was one notification of cholera from Western Australia in a 49-year-old female returning from Indonesia. The isolate was identified as *Vibrio cholerae O1* Ogawa, a toxin-producing strain, as confirmed by polymerase chain reaction for the presence of the ctx A gene.

Table 1. Notifications of shigellosis, 1 April to 30 June 2005, by species and type

Shigella species	Subtype/biotype	Number of notifications	Per cent of notifications (%)
Shigella boydii	Not typed	2	2
Shigella flexneri	1	2	2
Shigella flexneri	2	1	1
Shigella flexneri	2A	13	11
Shigella flexneri	4	9	8
Shigella flexneri	4a	1	1
Shigella flexneri	4a mannitol neg	7	6
Shigella flexneri	4b	6	5
Shigella flexneri	6	4	4
Shigella flexneri	Not typed	8	7
Shigella sonnei	biotype A	29	25
Shigella sonnei	biotype F	1	1
Shigella sonnei	biotype G	6	5
Shigella sonnei	Not typed	25	22
Total		114	100

Sexually transmissible infections

Chlamydial infection

During the quarter there were 10,856 notifications of chlamydial infection received from all jurisdictions, which is 1.7 times the five-year mean for the same period. The majority of these notifications were reported by New South Wales (2,823), Queensland (2,746) and Victoria (2,339).

Seventy-eight per cent of the notifications were reported from the 15–29 year age group. Sixty per cent of the chlamydial infection notifications were reported from females.

Vaccine preventable diseases

Influenza (laboratory-confirmed)

There were 740 cases of laboratory-confirmed influenza in the second quarter of 2005. This was nearly three times the average number of notifications for this time of year. New South Wales, Queensland and Victoria each contributed 31 per cent toward the total number of notifications. Seventy-seven per cent of the national laboratory-confirmed influenza notifications were type A, 21 per cent type B and two per cent were of unknown type.

Mumps

There were 73 notifications of mumps in the quarter, which is 2.2 times the five-year mean for the same period. The majority of cases were reported from New South Wales (31) and Queensland (32). Of the 73 cases, 51 cases (70%) were reported from the 20–34 year age group.

Pertussis

For the second quarter, 2,370 pertussis notifications were received, from which 1,395 (60%) were reported by New South Wales. Three per cent of the notifications were reported in infants aged less than one year. Pertussis activity in the quarter was two times the average number of notifications for this time of year.

Other bacterial infections

Meningococcal infections

There were 75 notifications of meningococcal infection during the quarter, which was two-thirds the average number reported in the quarter over the previous five years. Of the 75 cases, meningococcal serogroup data were available for 62 cases. There were 47 cases of serogroup B (62%), eight cases of serogroup C (11%), four cases of serogroup Y and two cases of serogroup W135 (Table 2). Thirteen cases were not typed (17%).

One case of serogroup A received from Victoria was in an Ethiopian refugee. This was only the third notification of serogroup A received over the past five years, the last one occurring in 2004.

Table 2 shows that during the quarter, there were three deaths from meningococcal infections, two from serogroup B and one from serogroup Y. There were no reported deaths during the quarter from *Neisseria meningiditis* serogroup C, for which a vaccine is currently available as part of the Australian Standard Vaccination Schedule.[3]

References

1. O'Sullivan B, Delpech V, Pontivivo G, Karagiannis T, Marriott D, Harkness J*, et al.* Shigellosis linked to sex venues, Australia*. Emerg Infect Dis* 2002;8:862–864.

2. Genobile D, Gaston J, Tallis GF, Gregory JE, Griffith JM, Valcanis M*, et al.* An outbreak of shigellosis in a child care centre*. Commun Dis Intell* 2004;28:225–229.

3. National Health and Medical Research Council. *The Australian Immunisation Handbook*. 8th edn. Canberra; 2003.

Table 2. Notifications and deaths due to meningococcal infection, 1 April to 30 June 2005, by State and serogroup

Jurisdiction	Notification by serogroup							Death(s) by serogroup						
	A	B	C	W135	Y	NT	Total	A	B	C	W135	Y	NT	Total
ACT	0	1	1	0	0	0	2	0	0	0	0	0	0	0
NSW	0	17	2	2	2	10	33	0	1	0	0	1	0	2
NT	0	1	1	0	0	2	4	0	0	0	0	0	0	0
Qld	0	10	2	0	0	1	13	0	1	0	0	0	0	1
SA	0	3	0	0	0	0	3	0	0	0	0	0	0	0
Tas	0	3	0	0	0	0	3	0	0	0	0	0	0	0
Vic	1	8	2	0	1	0	12	0	0	0	0	0	0	0
WA	0	4	0	0	1	0	5	0	0	0	0	0	0	0
Total	1	47	8	2	4	14	75	0	2	0	0	1	0	3

NT Not typed.

Tables

A summary of diseases currently being reported by each jurisdiction is provided in Table 3. There were 31,148 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 April and 30 June 2005 (Table 4). The notification rate of diseases per 100,000 population for each State or Territory is presented in Table 5.

There were 2,494 reports received by the Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 April and 30 June 2005 (Tables 6 and 7).

Table 3. Reporting of notifiable diseases by jurisdiction

Disease	Data received from:
Bloodborne diseases	
Hepatitis B (incident)	All jurisdictions
Hepatitis B (unspecified)	All jurisdictions
Hepatitis C (incident)	All jurisdictions except Qld
Hepatitis C (unspecified)	All jurisdictions
Hepatitis D	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 diseases	
Cholera	All jurisdictions
Plague	All jurisdictions
Rabies	All jurisdictions
Smallpox	All jurisdictions except Qld
Tularemia	All jurisdictions except Qld
Viral haemorrhagic fever	All jurisdictions
Yellow fever	All jurisdictions
Sexually transmissible infections	
Chlamydial infection*	All jurisdictions
Donovanosis	All jurisdictions
Gonococcal infection	All jurisdictions
Syphilis (all)	All jurisdictions
Syphilis <2 years duration	All jurisdictions
Syphilis >2 years or unspecified duration	All jurisdictions
Syphilis - congenital	All jurisdictions

Disease	Data received from:
Vaccine preventable diseases	
Diphtheria	All jurisdictions
Haemophilus influenzae type b	All jurisdictions
Influenza (laboratory confirmed)*	All jurisdictions
Measles	All jurisdictions
Mumps	All jurisdictions
Pertussis	All jurisdictions
Pneumococcal disease (invasive)	All jurisdictions
Poliomyelitis	All jurisdictions
Rubella	All jurisdictions
Rubella - congenital	All jurisdictions
Tetanus	All jurisdictions
Vectorborne diseases	
Barmah Forest virus infection	All jurisdictions
Flavivirus infection (NEC)†	All jurisdictions
Dengue	All jurisdictions
Japanese encephalitis virus	All jurisdictions
Kunjin virus‡	All jurisdictions except ACT
Malaria	All jurisdictions
Murray Valley encephalitis virus‡	All jurisdictions except ACT
Ross River virus infection	All jurisdictions
Zoonoses	
Anthrax	All jurisdictions
Australian bat lyssavirus	All jurisdictions
Brucellosis	All jurisdictions
Leptospirosis	All jurisdictions
Lyssaviruses unspecified	All jurisdictions
Ornithosis	All jurisdictions
Q fever	All jurisdictions
Other bacterial infections	
Legionellosis	All jurisdictions
Leprosy	All jurisdictions
Meningococcal infection	All jurisdictions
Tuberculosis	All jurisdictions

* Laboratory confirmed influenza is not notifiable in South Australia but reports are forwarded to NNDSS.

† Flavivirus (NEC) replaced Arbovirus (NEC) from 1 January 2004.

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

Table 4. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2005, by date of onset*

Disease	State or territory								Total 2nd quarter 2005†	Total 1st quarter 2005	Total 2nd quarter 2004	Last 5 years mean 2nd quarter	Year to date 2005	Last 5 years YTD mean	Ratio‡
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Bloodborne diseases															
Hepatitis B (incident)	1	12	4	18	1	1	14	7	58	73	72	100.0	131	190.2	0.6
Hepatitis B (unspecified)	20	942	49	206	88	13	446	114	1,878	1,880	1,413	1,788.0	3,758	3,457.6	1.0
Hepatitis C (incident)	5	11	0	NN	12	10	11	28	77	64	74	118.0	141	254.4	0.6
Hepatitis C (unspecified)	42	1,693	64	673	121	56	754	277	3,680	3,576	3,386	4,164.2	7,256	8,632.8	0.9
Hepatitis D	0	2	0	2	0	0	0	0	4	4	9	7.2	8	13.0	0.6
Gastrointestinal diseases															
Botulism	0	0	0	0	0	0	1	0	1	1	0	0.0	2	0.3	0.0
Campylobacteriosis§	84	NN	75	907	420	166	1,353	515	3,520	4,155	3,006	3,338.4	7,675	7,171.8	1.1
Cryptosporidiosis‖	14	269	19	283	40	4	143	56	828	1,247	432	447.3	2,075	1,364.0	1.9
Haemolytic uraemic syndrome	0	0	0	0	1	0	3	0	4	4	3	2.0	8	5.0	2.0
Hepatitis A	0	19	14	18	1	1	8	25	86	81	79	125.2	167	280.8	0.7
Hepatitis E	1	1	0	4	0	0	2	0	8	17	7	3.8	25	9.4	2.1
Listeriosis	0	6	0	2	0	0	4	1	13	13	21	17.6	26	37.4	0.7
Salmonellosis (NEC)	27	528	98	658	177	37	241	186	1,952	2,691	1,972	1,761.0	4,643	4,332.8	1.1
Shigellosis	0	35	48	19	9	2	32	32	177	226	147	133.0	400	285.4	1.3
SLTEC, VTEC¶	0	2	0	2	19	0	2	4	29	13	8	9.8	41	27.0	2.9
Typhoid	0	3	0	0	1	0	3	3	10	23	15	10.4	33	37.6	1.0
Quarantinable diseases															
Cholera	0	0	0	0	0	0	0	1	1	2	2	0.8	3	1.8	1.3
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 4. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2005, by date of onset,* *continued*

Disease	State or territory								Total 2nd quarter 2005[†]	Total 1st quarter 2005	Total 2nd quarter 2004	Last 5 years mean 2nd quarter	Year to date 2005	Last 5 years YTD mean	Ratio[‡]
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Sexually transmissible infections															
Chlamydial infection	183	2,823	477	2,746	719	255	2,339	1,317	10,859	10,293	8,995	6,351.8	21,152	12,707.0	1.7
Donovanosis	0	0	1	1	0	0	0	0	2	5	1	5.0	7	11.0	0.4
Gonococcal infection	1	372	558	318	138	6	267	377	2,037	2,042	1,937	1,710.0	4,079	3,394.2	1.2
Syphilis (all)	6	248	61	77	2	6	130	25	555	581	554	523.8	1,136	1,028.8	1.3
Syphilis < two years duration	2	46	32	29	0	2	30	1	142	144	136	NA	286	244.3	NA
Syphilis > two years or unspecified duration	4	200	28	47	2	4	100	24	409	432	414	NA	841	662.0	NA
Syphilis - congenital	0	2	1	1	0	0	0	0	4	5	4	4.0	9	6.6	1.0
Vaccine preventable disease															
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.2	0.0
Haemophilus influenzae type b	0	1	0	0	0	0	0	0	1	7	3	8.6	8	13.0	0.1
Influenza (laboratory confirmed)[‖]	4	225	17	220	3	1	227	43	740	372	166	274.0	1,112	370.0	2.7
Measles	0	2	0	0	0	0	0	0	2	5	6	18.0	7	46.6	0.1
Mumps	0	31	2	32	0	0	5	3	73	49	21	32.6	122	61.8	2.2
Pertussis	53	1,395	14	297	317	13	190	91	2,370	2,222	1,229	1,200.0	4,592	2,437.8	2.0
Pneumococcal disease (invasive)[‖]	6	159	21	87	35	10	86	29	433	257	621	565.8	690	856.8	0.8
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Rubella	0	5	0	2	0	0	2	5	14	6	11	36.2	20	76.6	0.4
Rubella - congenital	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.6	0.0
Tetanus	0	0	0	0	0	0	0	0	0	0	2	0.6	0	3.0	0.0
Vectorborne diseases															
Barmah Forest virus infection	0	144	19	249	4	0	6	12	434	359	319	415.4	793	704.4	1.0
Dengue	0	8	5	25	2	0	1	2	43	95	64	93.0	138	258.8	0.5
Flavivirus infection (NEC)	0	1	0	7	0	0	0	0	8	9	9	16.4	17	42.2	0.5
Japanese encephalitis virus[‖]	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.4	0.0
Kunjin virus[‖]	0	0	0	0	0	0	0	0	0	1	0	1.8	1	7.8	0.0
Malaria	1	21	19	60	4	6	36	20	167	352	150	173.2	519	366.6	1.0
Murray Valley encephalitis virus[‖]	0	0	0	0	0	0	0	0	0	2	1	0.3	2	2.0	0.0
Ross River virus infection	1	174	36	281	15	4	15	27	553	916	1,376	1,375.0	1,469	2,865.0	0.4

Table 4. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2005, by date of onset,* *continued*

Disease	State or territory								Total 2nd quarter 2005†	Total 1st quarter 2005	Total 2nd quarter 2004	Last 5 years mean 2nd quarter	Year to date 2005	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	0	0	3	12	6	5.6	15	12.6	0.5
Leptospirosis	0	3	1	26	1	0	0	2	33	40	55	56.0	73	124.6	0.6
Lyssavirus unspecified‖	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Ornithosis	0	38	0	0	1	0	6	0	45	37	58	43.6	82	81.0	1.0
Q fever	0	35	2	41	11	0	13	1	103	79	106	152.6	182	326.6	0.7
Other bacterial infections															
Legionellosis	0	17	1	14	12	0	8	16	68	86	93	120.2	154	196.6	0.6
Leprosy	0	0	0	1	0	0	0	0	1	4	1	1.4	5	3.6	0.7
Meningococcal infection	2	33	4	13	3	3	12	5	76	73	117	137.0	149	244.2	0.6
Tuberculosis	0	40	5	40	10	3	93	19	210	197	154	209.4	407	434.0	0.8
Total	451	9,298	1,614	7,332	2,167	597	6,454	3,243	31,156	32,171	26,701	25,601.2	63,323	52,906.8	1.2

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

† 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.

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

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

‖ Notifiable from January 2001 only. Ratio and mean calculations are based the last three years.

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

NN Not notifiable.

NEC Not elsewhere classified.

Table 5. Notification rates of diseases by state or territory, 1 April to 30 June 2005. (Rate per 100,000 population)

Disease*	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Bloodborne diseases									
Hepatitis B (incident)	1.2	0.7	8.0	1.9	0.3	2.5	1.1	1.4	1.2
Hepatitis B (unspecified)	24.7	56.7	100.0	21.2	23.7	9.1	35.9	22.88	37.1
Hepatitis C (incident)	6.2	0.7	0.0	NN	3.4	7.5	1.0	5.9	2.0
Hepatitis C (unspecified)	51.8	100.8	128.1	69.3	33.9	46.5	60.7	55.7	73.4
Hepatitis D	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.1
Gastrointestinal diseases									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Campylobacteriosis†	103.7	NN	150.1	93.6	109.8	134.4	108.8	103.9	105.2
Cryptosporidiosis	17.3	16.0	38.0	29.2	10.4	3.3	11.5	11.3	16.5
Haemolytic uraemic syndrome	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.1
Hepatitis A	0.0	1.1	28.0	1.9	0.3	0.8	0.6	5.0	1.7
Hepatitis E	1.2	0.1	0.0	0.4	0.0	0.0	0.2	0.0	0.2
Listeriosis	0.0	0.4	0.0	0.2	0.0	0.0	0.3	0.2	0.3
Salmonellosis (NEC)	33.3	31.4	196.1	67.8	46.1	30.7	19.4	37.7	38.8
Shigellosis	0.0	2.1	96.0	2.0	2.1	1.7	2.6	6.5	3.5
SLTEC, VTEC‡	0.0	0.1	0.0	0.2	4.7	0.0	0.2	1.0	0.6
Typhoid	0.0	0.2	0.0	0.0	0.3	0.0	0.2	0.6	0.2
Quarantinable diseases									
Cholera	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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 infections									
Chlamydial infection	225.9	167.0	954.4	283.0	188.5	208.2	188.3	267.2	216.0
Donovanosis	0.0	0.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0
Gonococcal infection	1.2	22.2	1,116.5	32.8	38.1	4.1	21.5	76.1	40.7
Syphilis (all)	1.9	4.4	30.4	2.0	0.1	1.2	2.6	1.3	3.0
Syphilis < 2 years duration	0.6	0.5	15.9	0.7	0.0	0.4	0.6	0.1	0.7
Syphilis > 2 years or unspecified duration	1.2	3.8	13.9	1.2	0.1	0.8	2.0	1.2	2.3
Syphilis - congenital	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0

Table 5. Notification rates of diseases by state or territory, 1 April to 30 June 2005. (Rate per 100,000 population) , *continued*

Disease*	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
Haemophilus influenzae type b	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Influenza (laboratory confirmed)	4.9	13.4	34.0	22.8	0.8	0.8	18.4	8.7	14.8
Measles	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mumps	0.0	1.8	4.0	3.3	0.0	0.0	0.4	0.6	1.5
Pertussis	65.4	85.6	28.0	30.6	82.6	11.6	15.4	19.4	48.2
Pneumococcal disease (invasive)	8.6	9.6	42.0	9.1	9.1	8.3	7.0	5.7	8.7
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella	0.0	0.3	0.0	0.2	0.0	0.0	0.2	1.0	0.3
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	0.0	0.0	0.0	0.0	0.0	0.0
Vectorborne diseases									
Barmah Forest virus infection	0.0	8.6	38.0	25.7	1.0	0.0	0.5	2.4	8.6
Dengue	0.0	0.5	10.0	2.6	0.5	0.0	0.1	0.4	0.9
Flavivirus infection (NEC)	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.2
Japanese encephalitis virus	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	1.2	1.2	38.0	6.2	1.0	5.0	2.9	4.0	3.3
Murray Valley encephalitis virus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ross River virus infection	1.2	10.4	72.0	29.0	3.9	3.3	1.3	5.4	11.0
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	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.1
Leptospirosis	0.0	0.2	2.0	2.8	0.0	0.0	0.0	0.4	0.7
Lyssavirus unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	2.3	0.0	0.0	0.3	0.0	0.5	0.0	0.9
Q fever	0.0	2.1	4.0	4.3	2.9	0.0	1.2	0.2	2.1
Other bacterial infections									
Legionellosis	0.0	1.0	2.0	1.5	3.4	0.0	0.6	3.2	1.4
Leprosy	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	2.5	2.0	8.0	1.3	0.8	2.5	1.0	1.0	1.6
Tuberculosis	0.0	4.0	10.0	4.1	2.6	3.3	7.5	3.8	4.8

* Rates are subject to retrospective revision.

† Not reported for New South Wales where it is only notifiable as ‘foodborne disease’ or ‘gastroenteritis in an institution’.

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

NN Not notifiable.

NEC Not elsewhere classified.

Table 6. Virology and serology laboratory reports by state or territory* for the reporting period 1 April to 30 June 2005, and total reports for the year†

	State or territory								This period 2005	This period 2004	Year to date 2005	Year to date 2004
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Measles, mumps, rubella												
Measles virus	–	1	–	–	–	–	–	–	1	6	3	13
Mumps virus	–	–	–	6	1	–	4	–	11	1	17	3
Rubella virus	–	–	–	2	–	–	1	–	3	2	7	8
Hepatitis viruses												
Hepatitis A virus	–	–	1	4	5	–	–	–	10	9	16	19
Hepatitis D virus	–	–	–	–	3	–	1	–	4		6	3
Hepatitis E virus	–	–	–	–	1	–	2	–	3	6	9	11
Arboviruses												
Ross River virus	–	2	3	55	9	2	3	–	74	250	282	681
Barmah Forest virus	–	3	–	66	5	–	–	–	74	41	128	126
Flavivirus (unspecified)	–	–	–	7	–	–	–	–	7	29	20	78
Adenoviruses												
Adenovirus not typed/pending	–	22	–	17	67	–	48	–	154	278	262	449
Herpesviruses												
Cytomegalovirus	5	86	4	27	69	3	24	1	219	191	377	399
Varicella-zoster virus	1	34	7	187	107	4	10	–	350	403	711	853
Epstein-Barr virus	–	4	7	160	166	–	13	34	384	539	936	1,168
Other DNA viruses												
Poxvirus group not typed	–	1	–	–	–	–	–	–	1	1	1	2
Parvovirus	1	3	–	10	5	–	5	–	24	57	78	118
Picornavirus family												
Coxsackievirus A9	–	1	–	–	–	–	–	–	1	1	2	1
Coxsackievirus A16	1	2	–	–	–	–	–	–	3	3	3	5
Echovirus type 6	–	1	–	–	–	–	–	–	1		2	
Echovirus type 7	–	2	–	–	–	–	–	–	2	1	5	1
Echovirus type 9	–	1	–	–	–	–	–	–	1	2	1	2
Echovirus type 11	–	2	–	–	–	–	–	–	2	4	3	6
Echovirus type 13	–	1	–	–	–	–	–	–	1		1	
Echovirus type 18	–	2	–	–	–	–	–	–	2		9	3
Echovirus type 22	–	1	–	–	–	–	–	–	1	1	1	2
Echovirus type 30	–	8	–	–	–	–	–	–	8	2	17	4
Poliovirus type 1 (uncharacterised)	–	2	–	–	–	–	–	–	2	4	4	6
Poliovirus type 2 (uncharacterised)	–	1	–	–	–	–	–	–	1	6	5	8
Poliovirus type 3 (uncharacterised)	–	1	–	–	–	–	–	–	1	1	2	1
Rhinovirus (all types)	–	65	–	–	14	1	–	–	80	106	155	187
Enterovirus type 71 (BCR)	–	1	–	–	–	–	–	–	1		2	2
Enterovirus not typed/pending	4	24	–	4	2	–	5	–	39	45	63	87
Picornavirus not typed	–	–	–	–	–	1	–	–	1	2	1	4

Table 6. Virology and serology laboratory reports by state or territory* for the reporting period 1 April to 30 June 2005, and total reports for the year,† *continued*

	State or territory								This period 2005	This period 2004	Year to date 2005	Year to date 2004
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Ortho/ paramyoviruses												
Influenza A virus	–	5	1	9	42	–	6	–	63	31	86	71
Influenza B virus	–	2	–	4	23	–	9	–	38	25	70	37
Parainfluenza virus type 1	–	4	–	–	2	–	9	–	15	57	24	97
Parainfluenza virus type 2	–	13	–	4	6	–	4	–	27	4	33	6
Parainfluenza virus type 3	–	9	–	1	19	–	9	–	38	109	80	197
Respiratory syncytial virus	–	205	–	82	52	20	121	2	482	1,193	583	1,393
Paramyxovirus (unspecified)	–	–	–	–	–	–	9	–	9		9	
Other RNA viruses												
HTLV-1	–	–	–	–	1	–	–	–	1	4	3	6
Rotavirus	–	16	–	–	77	3	51	–	147	92	202	169
Norwalk agent	–	–	–	–	–	–	78	–	78	114	93	197
Other												
Chlamydia trachomatis not typed	–	219	3	581	471	20	6	1	1,301	1,247	2,460	2,432
Chlamydia psittaci	–	–	–	–	–	–	16	–	16	47	30	109
Mycoplasma pneumoniae	–	4	3	88	65	3	49	5	217	305	453	660
Mycoplasma hominis	–	1	–	–	–	–	–	–	1		2	1
Coxiella burnetii (Q fever)	–	4	–	13	28	–	6	–	51	32	85	80
Rickettsia prowazeki	–	–	–	–	29	–	–	–	29		51	
Rickettsia tsutsugamushi	–	–	–	–	7	–	–	–	7	1	18	1
Rickettsia - spotted fever group	–	–	–	–	44	1	–	–	45		94	
Streptococcus group A	–	–	–	93	–	1	44	–	138	98	242	223
Yersinia enterocolitica	–	2	–	–	–	–	–	–	2	1	6	2
Brucella species	–	–	–	1	–	–	–	–	1	3	3	3
Bordetella pertussis	–	23	–	35	251	–	44	–	353	112	734	268
Legionella pneumophila	–	3	–	–	4	–	–	–	7	33	14	53
Legionella longbeachae	–	1	–	–	4	–	1	–	6	22	18	38
Cryptococcus species	–	–	–	2	13	–	–	–	15	10	25	23
Leptospira species	–	–	–	9	4	–	–	–	13	3	16	16
Treponema pallidum	–	13	1	132	134	–	–	–	280	287	503	615
Entamoeba histolytica	–	–	–	3	–	–	1	–	4	1	8	5
Toxoplasma gondii	–	2	–	–	5	–	1	–	8	3	16	17
Total	0	272	7	957	1,059	25	168	6	2,494	2,205	4,778	4,546

* State or territory of postcode, if reported, otherwise state or territory of reporting laboratory.

† Data presented are for reports with reports dates in the current period.

– No data received this period.

Table 7. Virology and serology reports by laboratories for the reporting period 1 April to 30 June 2005*

State or territory	Laboratory	April 2005	May 2005	June 2005	Total this period
Australian Capital Territory	The Canberra Hospital	–	–	–	–
New South Wales	Institute of Clinical Pathology and Medical Research, Westmead	145	171	156	472
	New Children's Hospital, Westmead	69	96	127	292
	Repatriation General Hospital, Concord	–	–	–	–
	Royal Prince Alfred Hospital, Camperdown	–	–	–	–
	South West Area Pathology Service, Liverpool	–	–	–	–
Queensland	Queensland Medical Laboratory, West End	296	593	794	1,683
	Townsville General Hospital	–	–	–	–
South Australia	Institute of Medical and Veterinary Science, Adelaide	613	567	550	1,730
Tasmania	Northern Tasmanian Pathology Service, Launceston	13	17	24	54
	Royal Hobart Hospital, Hobart	–	–	–	–
Victoria	Monash Medical Centre, Melbourne	17	51	43	111
	Royal Children's Hospital, Melbourne	78	118	94	290
	Victorian Infectious Diseases Reference Laboratory, Fairfield	58	43	74	175
Western Australia	PathCentre Virology, Perth	–	–	–	–
	Princess Margaret Hospital, Perth	–	–	–	–
	Western Diagnostic Pathology	–	–	51	51
Total		1,289	1,656	1,913	4,858

* The complete list of laboratories reporting for the 12 months, January to December 2005, 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 2005, six 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 2005. 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 *2005;29:91.*

Data from 1 January to 30 June 2005 compared with 2004 are shown as the rate per 1,000 consultations in Figures 2 and 3.

Figure 2. Consultation rates for influenza-like illness, ASPREN, 1 January to 30 June 2005, by week of report

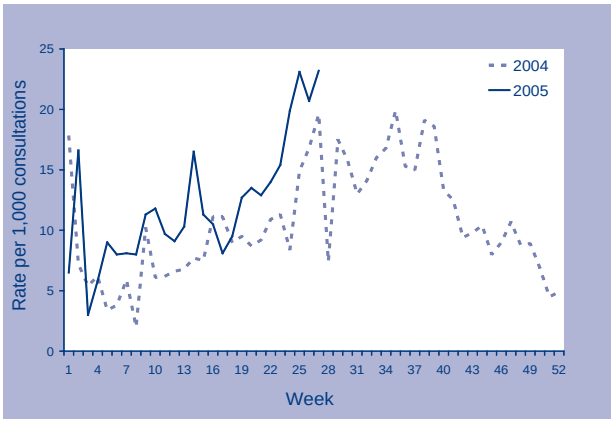
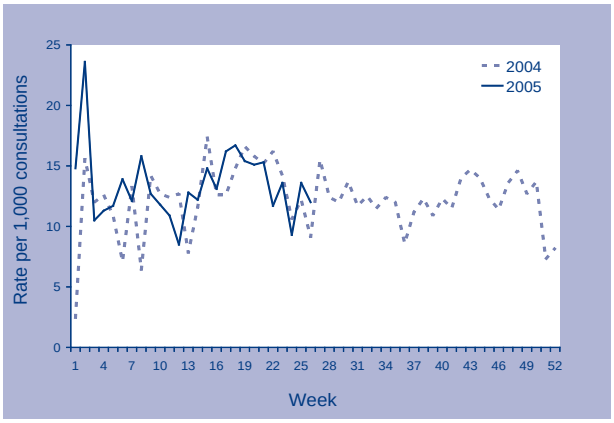


Figure 3. Consultation rates for gastroenteritis, ASPREN, 1 January to 30 June 2005, by week of report



Childhood immunisation coverage

Tables 8, 9 and 10 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 2004, at 24 months of age for the cohort born between 1 January and 31 March 2003, and at 6 years of age for the cohort born between 1 January and 31 March 1999 according to the Australian Standard Vaccination Schedule.

For information about the Australian Childhood Immunisation Register see Surveillance systems reported in CDI, published in Commun Dis Intell 2005;29:90 and for a full description of the methodology used by the Register see 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 on telephone +61 2 9845 1435 or email: brynleyh@chw.edu.au.

Immunisation coverage for children 'fully immunised' at 12 months of age for Australia increased marginally from the last quarter by 0.3 percentage points to 91.0 per cent (Table 8). There was a substantial increase in 'fully immunised' coverage by State and Territory in only one jurisdiction, the Australian Capital Territory, with an increase of 3.0 percentage points. As expected, the Australian Capital Territory also had increases in coverage for individual vaccines.

There was a 0.1 per cent increase in coverage for children 'fully immunised' at 24 months of age for Australia, to 91.8 per cent (Table 9). Coverage for individual vaccines remained largely unchanged in most jurisdictions and was greater than 95 per cent in almost all jurisdictions for all vaccines, except *Haemophilus influenzae* type b and measles-mumps-rubella.

Table 10 shows immunisation coverage estimates for children 'fully immunised' at 6 years of age and for individual vaccines for Australia by state and territory. Coverage was largely unchanged in most jurisdictions, apart from decreases in Tasmania and the Australian Capital Territory. This was also reflected in individual vaccines. Coverage for

Table 8. 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 2004; assessment date 30 June 2005

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Number of children	1,012	21,604	903	13,187	4,445	1,353	15,600	6,485	64,589
Diphtheria, tetanus, pertussis (%)	96.4	92.1	92.8	91.9	91.7	92.9	93.1	91.0	92.3
Poliomyelitis (%)	96.3	92.0	92.5	91.8	91.7	93.1	93.0	90.9	92.2
Haemophilus influenzae type b (%)	96.9	93.9	96.3	93.8	94.6	94.9	94.8	93.8	94.3
Hepatitis B (%)	97.2	94.8	96.9	94.4	94.7	94.8	94.7	93.5	94.6
Fully immunised (%)	95.7	90.6	91.9	90.8	91.0	91.2	91.8	90.0	91.0
Change in fully immunised since last quarter (%)	+2.9	-0.1	-0.3	-0.0	-0.1	-1.7	+1.0	+0.7	+0.3

Table 9. 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 2003; assessment date 30 June 2005*

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	981	21,109	926	12,740	4,237	1,391	15,052	6,191	62,627
Diphtheria, tetanus, pertussis (%)	94.6	94.8	96.3	94.8	94.7	97.0	95.8	93.8	95.0
Poliomyelitis (%)	94.5	94.7	96.5	94.8	94.7	97.2	95.7	93.7	94.9
Haemophilus influenzae type b (%)	93.0	92.7	94.3	93.5	93.4	95.7	94.3	91.3	93.3
Measles, mumps, rubella (%)	93.7	92.9	95.6	93.4	93.6	95.5	94.4	92.0	93.4
Hepatitis B(%)	95.0	95.4	97.8	95.6	95.5	97.6	96.5	94.2	95.7
Fully immunised (%)	91.6	91.2	93.6	91.6	92.1	94.6	92.9	90.0	91.8
Change in fully immunised since last quarter (%)	-2.0	+0.3	-1.3	-0.3	-0.7	+0.6	+0.7	-0.6	+0.1

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2004;28:422.

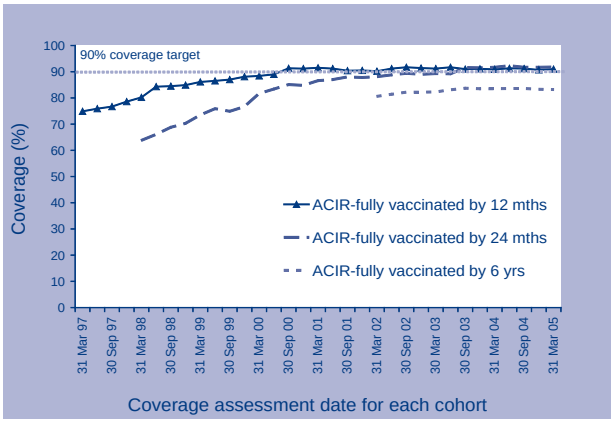
Table 10. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 1999; assessment date 30 June 2005

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,032	22,320	852	13,611	4,749	1,618	15,956	6,745	66,883
Diphtheria, tetanus, pertussis (%)	88.3	85.1	85.3	81.3	83.8	83.1	87.0	82.3	84.4
Poliomyelitis (%)	88.4	85.0	86.7	81.6	84.0	83.3	87.3	82.5	84.5
Measles, mumps, rubella (%)	88.1	84.9	87.0	81.5	84.0	82.8	87.0	82.4	84.4
Fully immunised (%)	87.9	83.8	84.3	79.9	82.8	81.9	86.2	80.8	83.2
Change in fully immunised since last quarter (%)	-1.9	+0.1	-0.8	-0.7	+0.0	-2.3	+0.4	+1.0	-0.1

vaccines assessed at 6 years is at or near 85 per cent in most jurisdictions, but Western Australia, Tasmania and Queensland still remain below this.

Figure 4 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 6 years, although the rate of increase has slowed over the past two years for all age groups. The figure shows that there have now been seven consecutive quarters where 'fully immunised' coverage at 24 months of age has been greater than 'fully immunised' coverage at 12 months of age, following the removal of the requirement for the 18 month DTPa vaccine. However, both measures have been above 90 per cent for this 21-month period and show levels of high coverage being maintained over a significant period of time.

Figure 4. Trends in vaccination coverage, Australia, 1997 to 2005, by age cohorts



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 *2005;29:92-93.*

Reporting period 1 January to 31 March 2005

The AGSP laboratories received a total of 985 isolates in this quarter of which 952 underwent susceptibility testing. This represents a slight decrease from the 1,001 reported for the same period in 2004 and 1,051 seen in 2003. About 33 per cent of this total was from New South Wales, 20 per cent from Queensland, 16 per cent from Victoria, 15 per cent from the Northern Territory, 11 per cent from Western Australia and four per cent from South Australia. Small numbers of isolates were also received from Tasmania and the Australian Capital Territory.

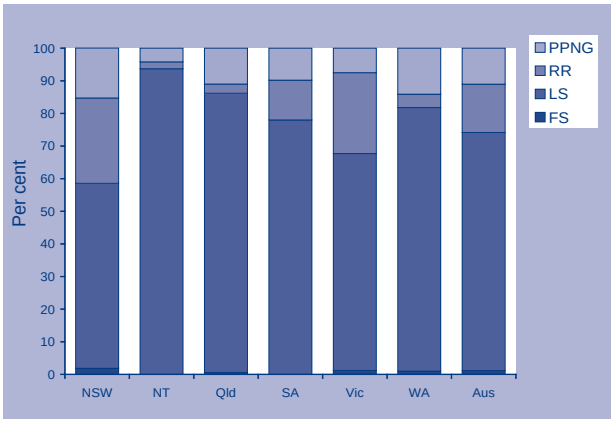
Penicillins

In this quarter 246 (25.8%) of all isolates examined were penicillin resistant by one or more mechanisms. One hundred and five (11%) were penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 141 (14.8%) resistant by chromosomal mechanisms, (CMRNG). The proportion of all strains resistant to the penicillins by any mechanism ranged from 6.2 per cent in the Northern Territory to 41 per cent in New South Wales.

Figure 5 shows the proportions of gonococci fully sensitive (MIC ≤0.03 mg/L), less sensitive (MIC 0.06–0.5 mg/L), relatively resistant (MIC ≥1 mg/L) or else 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.

The highest number and proportion of PPNG was found in New South Wales where the 49 PPNG were 15.3 per cent of all isolates. Fourteen PPNG representing 14.1 per cent of all isolates were found in Western Australia, 12 (7.5%) in Victoria and 20 (11%) in Queensland. Six PPNG (4.2%) were found in the Northern Territory, all from Darwin. Increases in PPNG numbers (compared with the first quarter of 2004) were noted in Queensland (from 6 to 20) and New South Wales. More isolates were resistant to the penicillins by separate chromosomal mechanisms and CMRNG were especially prominent in Victoria (40 isolates, 25 per cent of all gonococci

Figure 5. Categorisation of gonococci isolated in Australia, 1 January to 31 March 2005, by penicillin susceptibility and region



FS Fully sensitive to penicillin, MIC ≤0.03 mg/L.

LS Less sensitive to penicillin, MIC 0.06–0.5 mg/L.

RR Relatively resistant to penicillin, MIC ≥1 mg/L.

PPNG Penicillinase producing *Neisseria gonorrhoeae.*

tested) and New South Wales (84 CMRNG, 26%). Five CMRNG were present in Queensland (2.8% of all Queensland isolates) and Western Australia (4%), four (12%) in South Australia and three (2.1%, again all from Darwin) in the Northern Territory. No PPNG or CMRNG were reported from Tasmania or the Australian Capital Territory.

Ceftriaxone

Fifteen isolates with decreased susceptibility to ceftriaxone (MIC range 0.06–0.12 mg/L) were detected. Thirteen were found in New South Wales and one each in Victoria and Queensland. These strains have been particularly prominent in Japan for quite some time and the decreased susceptibility is associated with the presence of altered *penA* gene resulting in a changed penicillin binding protein 2. All 15 isolates were penicillin resistant, 14 by chromosomal mechanisms and one was a PPNG. Twelve were also quinolone resistant. It is emphasised that no treatment failures have been documented locally when a 250 mg IM dose of ceftriaxone has been used.

Spectinomycin

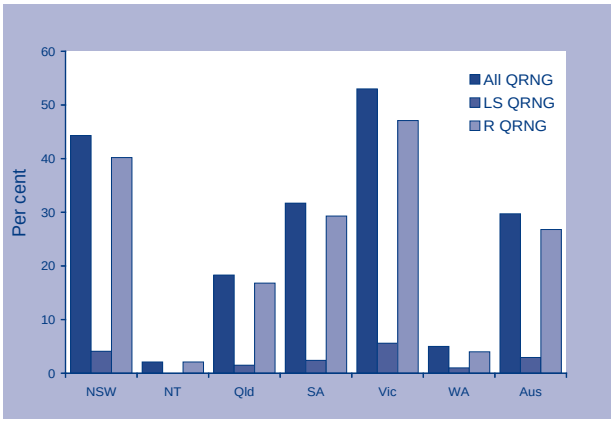
All isolates were susceptible to this injectable agent.

Quinolone antibiotics

The total number (283) and proportion (29.7%) of quinolone resistant *Neisseria gonorrhoeae* (QRNG) were both substantially higher than the corresponding figures in the first quarter of 2004 (188 QRNG, 20.5%) and 2003 (108 isolates, 11.5%). The majority of QRNG (255 of 283, 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 ≥1 mg/L) groups.

QRNG were again widely distributed and were detected in all states and territories with the exception of Tasmania (Figure 6). The highest proportion of QRNG was found in Victoria where 85 QRNG represented 53 per cent of all isolates. In New South Wales there were 142 QRNG (44% of isolates), in Queensland 33 (18.3%), in South Australia 13 (32%) and in Western Australia 5 (5%). Two QRNG were detected in the Northern Territory and a single isolate was detected in the Australian Capital Territory.

Figure 6 The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 January to 31 March 2005, by jurisdiction



LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.

R QRNG Ciprofloxacin MICs ≥1 mg/L.

High level tetracycline resistance

The number (145) and proportion (15.2%) of tetracycline resistance *Neisseria gonorrhoeae* (TRNG) detected also increased when compared with the 2004 (107, 11.7%) figures. TRNG were found in all states and territories and represented between 10 per cent (Queensland) and 23 per cent (South Australia and Victoria) of isolates in mainland states. Six TRNG were present in the Northern Territory, two in Tasmania and one in the Australian Capital Territory.

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. For more information see Commun Dis Intell *2005;29:93.*

Laboratory confirmed cases of invasive meningococcal disease for the period 1 to 30 June 2005, are included in this issue of Communicable Diseases Intelligence *(Table 11).*

Table 11. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 April to 30 June 2005, 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	05			1	2	1	2							2	4
	04			(0)	(4)	(2)	(4)							(2)	(8)
New South Wales	05			17	33	2	9	2	3	3	3	0	1	24	49
	04			(22)	(37)	(5)	(9)	(1)	(2)	(2)	(2)	(5)	(11)	(37)	(61)
Northern Territory	05			2	3	2	2			0	0			4	5
	04			(1)	(6)	(1)	(1)			(1)	(1)			(3)	(8)
Queensland	05	0	0	12	21	2	6	0	0	0	0	0	0	14	27
	04	(1)	(1)	(11)	(23)	(5)	(12)	(1)	(1)	(1)	(1)	(6)	(8)	(19)	(40)
South Australia	05			4	4	0	2							4	6
	04			(5)	(9)	(0)	(0)							(5)	(9)
Tasmania	05			2	2	0	0			0	0	0	0	2	2
	04			(0)	(2)	(0)	(0)			(1)	(1)	(1)	(3)	(2)	(6)
Victoria	05	1	1	8	15	2	3	0	0	0	2	0	1	11	22
	04	(0)	(0)	(18)	(28)	(9)	(9)	(1)	(3)	(0)	(0)	(1)	(2)	(25)	(42)
Western Australia	05			4	9	0	0	1	2					5	11
	04			(8)	(12)	(1)	(3)	(0)	(0)					(9)	(14)
Australia	05	1	1	50	89	9	24	3	5	3	5	0	2	66	126
	04	(1)	(1)	(65)	(121)	(19)	(37)	(4)	(6)	(5)	(5)	(8)	(18)	(102)	(188)

Numbers of laboratory-confirmed diagnoses of invasive meningococcal disease made in the same period in 2004 are shown in parentheses.

Q2 = 2nd quarter.

Ytd = Year to 30 June 2005.

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/nchecr. Telephone: +61 2 9332 4648. Facsimile: +61 2 9332 1837. For more information see Commun Dis Intell *2005;29:91–92.*

HIV and AIDS diagnoses and deaths following AIDS reported for 1 January to 31 March 2005, as reported to 30 June 2005, are included in this issue of Communicable Diseases Intelligence *(Tables 12 and 13).*

Table 12. New diagnoses of HIV infection, new diagnoses of AIDS, and deaths following AIDS occurring in the period 1 January to 31 March 2005, 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 2005	This period 2004	YTD 2005	YTD 2004
HIV diagnoses	Female	0	5	0	7	0	0	7	5	24	38	24	38
	Male	0	78	0	36	15	0	37	8	174	215	174	215
	Sex not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total*	0	83	0	43	15	0	44	13	198	254	198	254
AIDS diagnoses	Female	0	1	0	3	0	0	2	0	6	4	6	4
	Male	0	8	0	4	0	0	10	2	24	45	24	45
	Total*	0	9	0	7	0	0	12	2	30	50	30	50
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	1	0	1
	Male	0	5	0	2	0	0	2	1	10	15	10	15
	Total	0	5	0	2	0	0	2	1	10	16	10	16

* Totals include people whose sex was reported as transgender.

Table 13. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 31 March 2005 and reported by 30 June 2005, by sex and state or territory

	Sex	State or territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	31	791	18	238	84	8	318	170	1,658
	Male	247	12,779	123	2,474	849	89	4,803	1,111	22,475
	Not reported	0	235	0	0	0	0	22	0	257
	Total*	278	13,833	141	2,721	934	97	5,162	1,288	24,454
AIDS diagnoses	Female	9	225	2	66	31	4	99	35	471
	Male	92	5,181	42	982	387	48	1,883	414	9,029
	Total*	101	5,421	44	1,050	419	52	1,992	451	9,530
AIDS deaths	Female	6	128	1	41	20	2	59	23	280
	Male	71	3,518	26	642	269	32	1,372	289	6,219
	Total*	77	3,655	27	685	289	34	1,439	313	6,519

* Totals include people whose sex was reported as transgender.

National Enteric Pathogens Surveillance System

Since 1980, the National Enteric Pathogens Surveillance System (NEPSS) has collected, analysed and disseminated 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.*

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.

NEPSS is operated by the Microbiological Diagnostic Unit, Public Health Laboratory, Department of Microbiology and Immunology, University of Melbourne; and is overseen by a Steering Committee of state, territory and commonwealth stakeholders. NEPSS can be contacted at the above address or by telephone: +61 3 8344 5701, facsimile: +61 3 8344 7833 or email joanp@unimelb.edu.au

Scientists, diagnostic and reference laboratories contribute data to NEPSS, which is supported by state and territory health departments and the Australian Government Department of Health and Ageing.

Reports to the National Enteric Pathogens Surveillance System of Salmonella infection for the period 1 April to 30 June 2005 are included in Tables 14 and 15. Data include cases reported and entered by 18 July 2005. 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 *2005;29:93–94.*

Second quarter 2005

The total number of reports to NEPSS of human *Salmonella* infection fell to 1,794 in the second quarter of 2005, 30 per cent less than in the first quarter of 2005. This decline after the summer peak is typical of seasonal trends in the incidence of salmonellosis in Australia. The second quarter count was nine per cent less than the comparable second quarter of 2004 but approximately nine per cent greater than the ten-year historical mean for this period.

During the second quarter of 2005, the 25 most common *Salmonella* types in Australia accounted for 1,168 cases, 65 per cent of all reported human *Salmonella* infections. Nineteen of the 25 most common *Salmonella* infections in the second quarter of 2005 were among the 25 most commonly reported in the first quarter of 2005.

S. Typhimurium 170 (and the related *S*. Typhimurium 108) was the most common serovar/phage type. Two-thirds of cases were from New South Wales. *S*. Typhimurium 197 was less common than in the first quarter (when a large outbreak occurred in Victoria) but counts remain well above historical averages, particularly in Queensland and New South Wales.

Reports of other salmonellae with recent increases and counts that remain above historical averages include *S*. Hvittingfoss (in the eastern States, particularly Queensland), *S*. Aberdeen (in Queensland), and *S*. Corvallis and *S*. Enteritidis 6a (both typically acquired overseas).

S. Typhimurium phage types 135 (widespread) and 9 (south-eastern mainland states) and *S*. Saintpaul (northern states, particularly Queensland) remain very common, each with approximately 100 reports during the quarter.

Acknowledgement: We thank scientists, contributing laboratories, state and territory health departments, and the Australian Government Department of Health and Ageing for their contributions to NEPSS.

Table 14. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 April to 30 June 2005, as reported to 18 July 2005

	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all *Salmonella* for quarter	30	483	78	635	124	36	242	166	1,794
Total contributing *Salmonella* types	15	92	37	115	47	11	83	68	213

Table 15. Top 25 *Salmonella* types identified in Australia, 1 April to 30 June 2005, by state or territory

National rank	*Salmonella* type	State or territory								Total 2nd quarter 2005	Last 10 years mean 2nd quarter	Year to date 2005	Year to date 2004
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	*S.* Typhimurium 170	7	129	0	20	2	1	14	5	178	47	343	379
2	*S.* Typhimurium 135	1	39	0	19	9	12	10	15	105	133	234	349
3	*S.* Saintpaul	1	4	8	69	2	1	6	11	102	87	259	234
4	*S.* Typhimurium 9	5	56	2	4	6	0	26	1	100	115	268	246
5	*S.* Hvittingfoss	5	9	2	43	0	0	16	2	77	24	132	106
6	*S.* Typhimurium 197	0	21	0	37	0	0	8	1	67	11	449	142
7	*S.* Virchow 8	1	10	3	45	1	0	1	0	61	50	163	231
8	*S.* Birkenhead	0	18	0	39	0	0	1	0	58	57	129	173
9	*S.* Aberdeen	0	4	1	41	0	0	1	0	47	30	112	72
10	*S.* Chester	1	5	4	21	5	0	3	6	45	40	118	127
11	*S.* Infantis	0	14	2	2	11	1	9	3	42	30	94	90
12	*S.* Muenchen	0	6	0	13	3	0	4	11	37	33	101	73
13	*S.* Waycross	0	4	0	29	1	0	0	0	34	28	78	89
14	*S.* Typhimurium RDNC	2	5	1	4	4	0	2	4	22	18	54	57
15	*S.* Enteritidis 6a	0	6	0	3	1	0	4	7	21	3.6	43	24
16	*S.* Stanley	0	7	1	3	1	0	2	5	19	10	34	33
17	*S.* Anatum	0	2	2	5	0	0	2	7	18	24	37	61
18	*S.* Typhimurium 12	0	9	0	1	1	0	2	5	18	18	76	188
19	*S.* Mississippi	0	2	0	0	0	13	3	0	18	18	49	53
20	*S.* Typhimurium untypable	0	4	0	3	0	0	6	5	18	16	33	11
21	*S.* Reading	0	10	1	4	0	0	3	0	18	6	29	25
22	*S.* Corvallis	1	5	0	1	4	0	6	0	17	1.2	44	23
23	*S.* Virchow 25 var 1	0	1	0	15	0	0	0	0	16	0	22	0
24	S Agona	0	2	0	7	4	0	1	1	15	16	30	52
25	*S.* Ball	0	0	15	0	0	0	0	0	15	10	28	35