Communicable diseases surveillance

Highlights for 2nd quarter, 2006

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'.

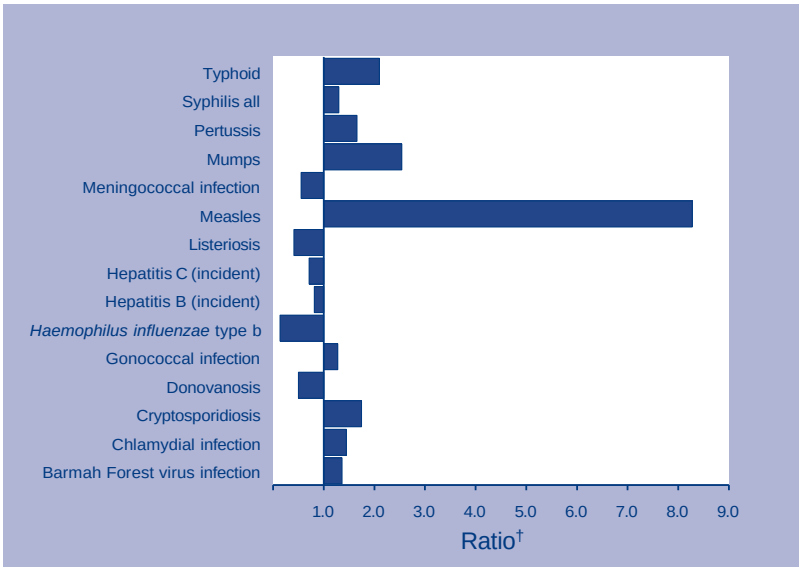
Figure 1 shows the changes in selected disease notifications with an onset in the second quarter of 2006, compared with the five year mean for the same period. The following diseases were above the five year mean: cryptosporidiosis, chlamydial infection, gonococcal infection, measles, mumps, pertussis, Barmah Forest virus infection, and typhoid. Diseases for which the number of notifications was below the five year mean for the same period included hepatitis B, hepatitis C, listeriosis, and meningococcal infection.

Gastrointestinal illnesses

Cryptosporidiosis

There were 919 notifications of cryptosporidiosis during the quarter which is 1.7 times the five year mean for the same period. All jurisdictions reported cases but the majority were from Victoria (360), Queensland (203) and New South Wales (182). This continued a trend reported in the first quarter. Four hundred and forty-seven (72%) notifications had information on the infecting species and all were identified as *Cryptosporidium parvum* infection.

Figure 1. Selected* diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 April to 31 June 2006 with historical data*



* Selected diseases are chosen each quarter according to current activity. Five year averages and the ratios of notifications in the reporting period in the five year mean should be interpreted with caution. Changes in surveillance practice, diagnostic techniques and reporting, may contribute to increases or decreases in the total notifications received over a five year period. Ratios are to be taken as a crude measure of current disease activity and may reflect changes in reporting rather than changes in disease activity.

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

After observing a marked increase in the number of cryptosporidiosis notifications, the Communicable Disease Control Unit in Victoria attempted to gather risk factor information (using telephone interview or postal questionnaire) for all cases notified between 1 January and 31 May 2006. In the second quarter, a total of 14 swimming pools were associated with two or more confirmed cases of cryptosporidiosis. An additional outbreak was linked to a special school. Control measures for implicated pools included hyperchlorination and advice to facility managers about preventing contamination and control measures. Person-to-person spread was the suspected mode of transmission in the school and infection control advice was provided to the manager by environmental health officers, (Joy Gregory and James Fielding, personal communication).

Typhoid

There were 21 notifications of typhoid during the quarter which was 2.1 times the five year mean for the same period. Notifications were mainly from New South Wales (4), Victoria (5) and four each from Western Australia and Queensland. The imported status in the notifications showed 16 were imported from overseas, four were locally-acquired and one was unknown.

Sexually transmissible infections

Chlamydial infections

There were 11,192 notifications of chlamydial infection in the quarter which was 1.4 times the five year mean. The highest rates of notification continued to be in the 20–24 year age group, for both females (1,477 cases per 100,000 population) and males (846 cases per 100,000 population).

Gonococcal infections

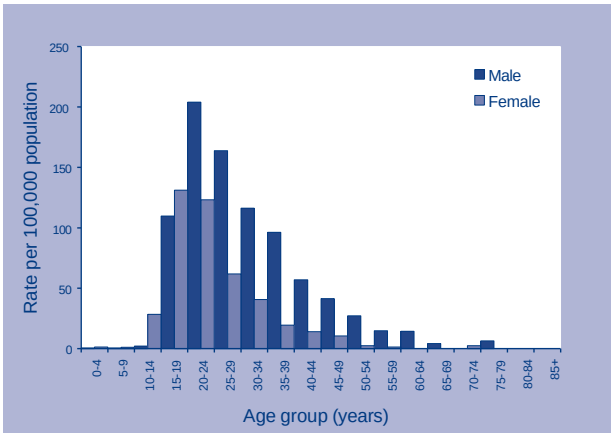
There were 2,294 notifications of gonococcal infection in the quarter which was 1.3 times the five year mean. There was a higher incidence in men, compared to women (2:1). The highest rates of notification were report in the 20–24 year age group for males (204 cases per 100,000 population) and the 15–19 year age group for females (131 cases per 100,000 population) (Figure 2).

Vaccine preventable diseases

Measles

There were 96 cases of measles reported in the quarter, which is 8.3 times the five year mean for the same period. Cases were reported from New South Wales (46 cases), Western Australia (25 cases), Tasmania (11), South Australia (8), Victoria (4) and one each in

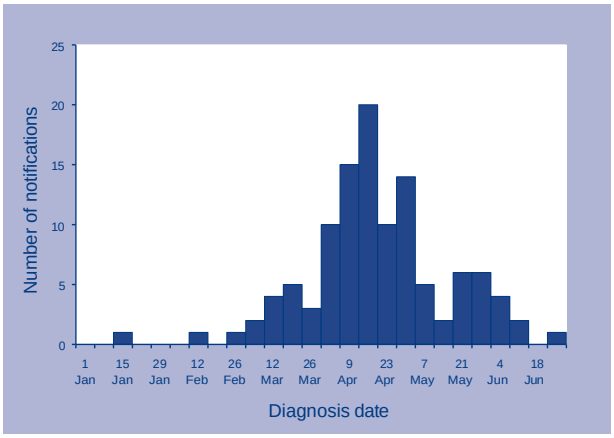
Figure 2. Notification rates of gonococcal infections, Australia, 1 April to 30 June 2006, by age group and sex



Queensland and the Australian Capital Territory. Of the 96 cases, 40 were male and 56 female; 23 were aged less than 5 years and the remainder were aged between 5 and 30 years. All of the children with vaccination status recorded were unvaccinated.

One national outbreak occurred during this quarter, with cases notified from all States and Territories except the Northern Territory. The outbreak began at Easter 2006 and subsided in June 2006 (Figure 3). Two smaller outbreaks occurred at the end of the 1st quarter.

Figure 3. Measles notifications, Australia, 1 January to 30 June 2006



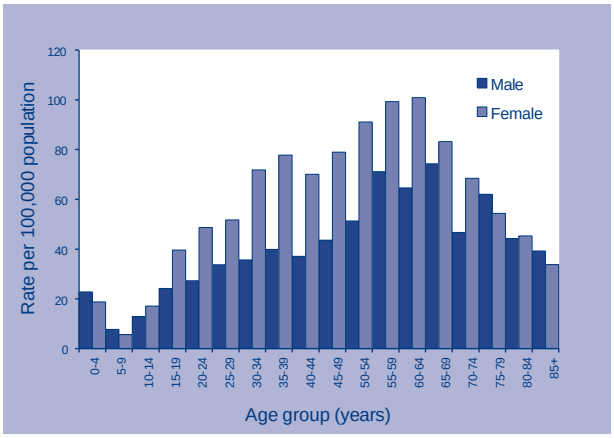
Mumps

There were 84 notifications of mumps in the quarter, which was 2.4 times the five year mean for the same period. There were 46 male and 42 female cases with an age range from 3 to 74 years.

Pertussis

There were 2,482 pertussis notifications were received in the quarter which was 1.7 times the five year mean for the same period. The majority of notifications were reported by New South Wales (1,143) and Queensland (486). Infants less than one year accounted for 1.4 per cent (35 cases) of the 2,482 notifications. The highest rate of infection in females occurred in the 60–64 year age group, (100 cases per 100,000 population). The highest rate in males was 74 cases per 100,000 population in the 65–69 year age group (Figure 4).

Figure 4. Notification rates of pertussis, Australia, 1 April to 30 June 2006, by age group and sex



Vectorborne diseases

Barmah Forest virus infection

There were 635 cases of Barmah Forest virus (BFV) infection in the quarter which was 1.4 times the five year mean for the same period. The majority of cases were from Queensland (288 cases) and New South Wales (218). Nationally, the infection rate was 13.8 cases per 100,000 population, but it was higher in the Northern Territory at 67.1 cases per 100,000 population (34 cases) and Queensland with 29.1 cases per 100,000 population.

Other bacterial infections

Meningococcal infection

There were 69 notifications of meningococcal infection in the quarter which was 0.6 times the five-year mean. Of the 69 cases, 47 (68%) were serogroup B, 5 (7%) were serogroup C, 2 were serogroup Y, 1 was serogroup A, and the serogroups of the remaining 14 cases was unknown. There were three deaths reported in the quarter, one each in patients with serogroup B, C and not typed.

Of the serotype C cases, one was aged less than one year and the remainder were aged 17 to 31 years. No cases were vaccinated.

Tables

A summary of diseases currently being reported by each jurisdiction is provided in Table 1. There were 32,727 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 April and 30 June 2006 (Table 2). The notification rate of diseases per 100,000 population for each state or territory is presented in Table 3.

There were 3,519 reports received by the Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 April to 30 June 2006 (Tables 4 and 5).

Table 1. Reporting of notifiable diseases by jurisdiction

Disease	Data received from:
Bloodborne diseases	
Hepatitis B (incident)	All jurisdictions
Hepatitis B (unspecified)	All 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
Tularemia	All jurisdictions
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
Malaria	All jurisdictions
Murray Valley encephalitis virus	All jurisdictions
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.

Table 2. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2006, by date of onset*

Disease	State or territory								Total 2nd quarter 2006†	Total 1st quarter 2006	Total 2nd quarter 2005	Last 5 years mean 2nd quarter	Year to date 2006	Last 5 years YTD mean	Ratio‡
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Bloodborne diseases															
Hepatitis B (incident)	0	14	2	13	1	1	27	16	74	67	59	90.8	141	178.2	0.8
Hepatitis B (unspecified)	30	835	70	257	59	14	377	76	1,718	1,652	1,611	1,643.6	3,370	3,262.0	1.0
Hepatitis C (incident)	5	12	1	0	9	0	30	29	86	120	99	121.4	206	252.0	0.7
Hepatitis C (unspecified)	52	1,392	57	756	99	67	622	196	3,241	3,884	3,102	3,633.2	7,125	7,513.4	0.9
Hepatitis D	0	6	0	0	0	0	0	0	6	9	4	6.6	15	11.4	0.9
Gastrointestinal diseases															
Botulism	0	0	0	0	0	0	0	0	0	0	1	0.3	0	1.0	0.0
Campylobacteriosis§	85	NN	63	919	473	119	1,242	383	3,284	3,636	3,530	3,417.8	6,920	7,466.2	1.0
Cryptosporidiosis‖	36	182	12	203	66	8	370	42	919	1,510	828	525.6	2,429	1,514.2	1.7
Haemolytic uraemic syndrome	0	0	0	0	0	0	0	0	0	5	4	2.4	5	5.6	0.0
Hepatitis A	0	25	7	3	3	0	8	12	58	105	87	97.8	163	209.6	0.6
Hepatitis E	0	1	0	1	1	0	1	0	4	7	7	4.6	11	12.2	0.9
Listeriosis	0	5	0	0	0	0	1	1	7	25	14	17.0	32	34.2	0.4
Salmonellosis (NEC)	25	406	108	667	141	47	302	168	1,864	3,099	1,957	1,842.8	4,963	4,537.8	1.0
Shigellosis	1	16	33	23	7	1	20	31	132	188	180	140.0	320	314.0	0.9
SLTEC, VTEC¶	0	3	0	4	8	0	0	2	17	17	32	15.0	34	31.2	1.1
Typhoid	0	7	1	4	0	0	5	4	21	23	10	10.0	44	37.6	2.1
Quarantinable diseases															
Cholera	0	0	0	0	0	0	0	0	0	0	1	1.0	0	2.0	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

Table 2. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2006, by date of onset,* *continued*

Disease	State or territory								Total 2nd quarter 2006†	Total 1st quarter 2006	Total 2nd quarter 2005	Last 5 years mean 2nd quarter	Year to date 2006	Last 5 years YTD mean	Ratio‡
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Sexually transmissible infections															
Chlamydial infection**	199	2,835	515	2,811	805	215	2,459	1,353	11,192	11,698	10,909	7,730.6	22,890	15,368.0	1.4
Donovanosis	0	0	1	1	0	0	0	0	2	0	2	4.0	2	9.6	0.5
Gonococcal infection	7	398	512	387	191	10	338	451	2,294	2,346	2,059	1,794.8	4,640	3,571.2	1.3
Syphilis (all)	1	233	90	91	15	6	153	21	610	610	590	538.4	1,227	621.6	1.3
Syphilis < two years duration	0	21	42	38	1	0	62	8	172	158	161	154.0	330	286.5	1.1
Syphilis >two years or unspecified duration	1	212	48	53	14	6	91	13	438	452	429	400.0	897	745.5	1.1
Syphilis - congenital	0	2	3	0	0	0	0	0	5	3	6	4.8	8	8.0	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	2	1	7.2	3	12.4	0.1
Influenza (laboratory confirmed)‖	8	57	5	151	8	2	111	27	369	179	796	378.0	548	530.8	1.0
Measles	1	46	0	1	8	11	4	25	96	16	2	11.6	112	35.0	8.3
Mumps	0	50	1	22	4	0	6	5	88	42	74	34.6	130	64.2	2.5
Pertussis	77	1,143	21	486	484	5	220	46	2,482	2,418	2,556	1,496.8	4,900	3,000.0	1.7
Pneumococcal disease (invasive)‖	7	166	10	62	26	6	74	38	389	208	459	543.4	597	830.2	0.7
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Rubella	0	11	0	4	0	0	2	0	17	7	14	28.6	24	60.8	0.6
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	1	1	0.6	1	2.4	0.0
Vectorborne diseases															
Barmah Forest virus infection	1	218	34	288	45	0	10	39	635	731	438	466.0	1,366	789.2	1.4
Dengue	2	10	3	35	3	0	1	4	58	60	43	92.2	118	247.4	0.6
Flavivirus infection (NEC)	0	0	0	9	0	0	0	0	9	21	8	16.2	30	37.8	0.6
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	3	0	0	0	1	4	1	0	1.4	5	6.4	2.9
Malaria	4	29	18	91	6	10	28	22	208	215	168	152.2	423	361.8	1.4
Murray Valley encephalitis virus‖	0	0	0	0	0	0	0	1	1	0	0	0.0	1	2.0	0.0
Ross River virus infection	0	294	28	574	28	5	14	154	1,097	3,345	556	1,200.2	4,442	2,469.2	0.9

Table 2. Notifications of diseases received by State and Territory health authorities in the period 1 April to 30 June 2006, by date of onset,* *continued*

Disease	State or territory								Total 2nd quarter 2006†	Total 1st quarter 2006	Total 2nd quarter 2005	Last 5 years mean 2nd quarter	Year to date 2006	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	1	0	0.0	1	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	4	0	0	1	0	5	18	4	6.0	23	14.4	0.8
Leptospirosis	0	5	0	52	1	0	0	0	58	49	36	48.0	107	111.0	1.2
Lyssavirus unspecified‖	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Ornithosis	1	19	0	1	0	0	14	1	36	44	53	49.2	80	89.8	0.7
Q fever	1	33	2	25	6	0	3	0	70	97	116	148.4	167	307.8	0.5
Other bacterial infections															
Legionellosis	0	24	2	8	13	1	13	11	72	98	77	89.2	170	166.2	0.8
Leprosy	0	0	0	0	0	0	0	1	1	1	1	1.2	2	4.6	0.8
Meningococcal infection††	0	18	2	16	6	2	21	4	69	74	74	124.6	143	227.6	0.6
Tuberculosis	3	98	6	34	15	4	76	34	270	293	268	239.0	563	478.6	1.1
Total	553	8,594	1,637	8,764	2,874	553	6,553	3,198	32,726	38,116	30,839	26,757.5	70,842	55,233.0	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 on the last five years.

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

** Includes *Chlamydia trachomatis* identified from cervical, rectal, urine, urethral, throat and eye samples, except for South Australia which reports only genital tract specimens, Northern Territory which excludes ocular specimens, and Western Australia which excludes ocular and perinatal infections.

†† Only invasive meningococcal disease is nationally notifiable. However, New South Wales, the Australian Capital Territory and South Australia also report conjunctival cases.

Note Ratios for Syphilis < 2 years; syphilis >2 years or unspecified duration based on 2 years data

NN Not notifiable.

NEC Not elsewhere classified.

Table 3. Notification rates of diseases, 1 April to 30 June 2006, by state or territory. (Rate per 100,000 population)

Disease*	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
Bloodborne diseases									
Hepatitis B (incident)	0.0	0.8	3.9	1.3	0.3	0.8	2.2	3.2	1.5
Hepatitis B (unspecified)	36.9	49.3	138.1	25.9	15.3	11.5	30.0	15.1	33.8
Hepatitis C (incident)	6.2	0.7	2.0	0.0	2.3	0.0	2.4	5.8	1.7
Hepatitis C (unspecified)	64.0	82.2	112.4	76.3	25.7	55.2	49.5	39.0	63.8
Hepatitis D	0.0	0.4	0.0	0.0	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	0.0	0.0	0.0
Campylobacteriosis†	104.6	NN	124.3	92.7	122.7	98.1	98.9	76.2	96.9
Cryptosporidiosis	44.3	10.7	23.7	20.5	17.1	6.6	29.5	8.4	18.1
Haemolytic uraemic syndrome	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis A	0.0	1.5	13.8	0.3	0.8	0.0	0.6	2.4	1.1
Hepatitis E	0.0	0.1	0.0	0.1	0.3	0.0	0.1	0.0	0.1
Listeriosis	0.0	0.3	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Salmonellosis (NEC)	30.8	24.0	213.0	67.3	36.6	38.7	24.1	33.4	36.7
Shigellosis	1.2	0.9	65.1	2.3	1.8	0.8	1.6	6.2	2.6
SLTEC, VTEC‡	0.0	0.2	0.0	0.4	2.1	0.0	0.0	0.4	0.3
Typhoid	0.0	0.4	2.0	0.4	0.0	0.0	0.4	0.8	0.4
Quarantinable diseases									
Cholera	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plague	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rabies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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§	244.8	167.4	1,015.8	283.7	208.8	177.2	195.8	269.2	220.3
Donovanosis	0.0	0.0	2.0	0.1	0.0	0.0	0.0	0.0	0.0
Gonococcal infection	8.6	23.5	1,009.9	39.1	49.5	8.2	26.9	89.7	45.1
Syphilis (all)	1.2	13.8	177.5	9.2	3.9	4.9	12.2	4.2	12.0
Syphilis <2 years duration	0.0	1.2	82.8	3.8	0.3	0.0	4.9	1.6	3.4
Syphilis >2 years or unspecified duration	1.2	12.5	94.7	5.3	3.6	4.9	7.2	2.6	8.6
Syphilis - congenital	0.0	0.1	5.9	0.0	0.0	0.0	0.0	0.0	0.1

Table 3. Notification rates of diseases, 1 April to 30 June 2006, by state or territory. (Rate per 100,000 population), *continued*

Disease*	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
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)	9.8	3.4	9.9	15.2	2.1	1.6	8.8	5.4	7.3
Measles	1.2	2.7	0.0	0.1	2.1	9.1	0.3	5.0	1.9
Mumps	0.0	3.0	2.0	2.2	1.0	0.0	0.5	1.0	1.7
Pertussis	94.7	67.5	41.4	49.0	125.5	4.1	17.5	9.2	48.8
Pneumococcal disease (invasive)	8.6	9.8	19.7	6.3	6.7	4.9	5.9	7.6	7.7
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella	0.0	0.6	0.0	0.4	0.0	0.0	0.2	0.0	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	1.2	12.9	67.1	29.1	11.7	0.0	0.8	7.8	12.5
Dengue	2.5	0.6	5.9	3.5	0.8	0.0	0.1	0.8	1.1
Flavivirus infection (NEC)	0.0	0.0	0.0	0.9	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	0.3	0.0	0.0	0.0	0.2	0.1
Malaria	4.9	1.7	35.5	9.2	1.6	8.2	2.2	4.4	4.1
Murray Valley encephalitis virus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Ross River virus infection	0.0	17.4	55.2	57.9	7.3	4.1	1.1	30.6	21.6
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	0.4	0.0	0.0	0.1	0.0	0.1
Leptospirosis	0.0	0.3	0.0	5.2	0.3	0.0	0.0	0.0	1.1
Lyssavirus unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	1.2	1.1	0.0	0.1	0.0	0.0	1.1	0.2	0.7
Q fever	1.2	1.9	3.9	2.5	1.6	0.0	0.2	0.0	1.4
Other bacterial infections									
Legionellosis	0.0	1.4	3.9	0.8	3.4	0.8	1.0	2.2	1.4
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Meningococcal infection‖	0.0	1.1	3.9	1.6	1.6	1.6	1.7	0.8	1.4
Tuberculosis	3.7	5.8	11.8	3.4	3.9	3.3	6.1	6.8	5.3

* 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).

§ Includes *Chlamydia trachomatis* identified from cervical, rectal, urine, urethral, throat and eye samples, except for South Australia which reports only genital tract specimens, Northern Territory which excludes ocular specimens, and Western Australia which excludes ocular and perinatal infections.

‖ Only invasive meningococcal disease is nationally notifiable. However, New South Wales, the Australian Capital Territory and South Australia also report conjunctival cases.

NN Not notifiable.

NEC Not elsewhere classified.

Table 4. Virology and serology laboratory reports by state or territory* for the reporting period 1 April to 30 June 2006, and total reports for the year†

	State or territory								This period 2006	This period 2005	Year to date 2006	Year to date 2005
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Measles, mumps, rubella												
Measles virus	0	23	0	0	9	6	3	0	41	1	52	3
Mumps virus	1	0	0	4	0	0	6	0	11	12	23	18
Rubella virus	0	0	0	1	0	0	3	0	6	3	8	7
Hepatitis viruses												
Hepatitis A virus	0	0	1	1	2	0	1	0	5	11	16	17
Hepatitis D virus	0	0	0	1	1	0	0	0	2	4	4	6
Hepatitis E virus	0	0	0	0	0	0	1	0	1	3	4	9
Arboviruses												
Ross River virus	0	9	4	149	15	0	2	9	188	74	976	282
Barmah Forest virus	0	5	0	61	7	0	4	0	77	76	221	130
Flavivirus (unspecified)	0	0	0	9	0	0	0	0	9	7	39	20
Adenovirus not typed/ pending	0	36	0	8	9	0	1	0	65	172	218	285
Herpesviruses												
Herpes virus type 6	0	0	0	0	0	0	1	0	1		2	1
Cytomegalovirus	0	60	0	31	51	6	12	0	160	240	485	411
Varicella-zoster virus	1	32	1	165	41	0	6	0	246	366	598	730
Epstein-Barr virus	0	4	22	133	33	5	6	68	271	412	814	981
Other DNA viruses												
Parvovirus	0	0	0	16	6	0	9	0	31	24	82	79
Picornavirus family												
Coxsackievirus A9	0	3	0	0	0	0	0	0	3	1	5	2
Coxsackievirus A16	0	2	0	0	0	0	0	0	2	3	2	3
Echovirus type 11	0	1	0	0	0	0	0	0	1	2	1	3
Echovirus type 18	0	1	0	0	0	0	0	0	1	3	1	10
Echovirus type 22	0	1	0	0	0	0	0	0	2	1	4	1
Echovirus type 30	0	4	0	0	0	0	0	0	4	10	15	19
Rhinovirus (all types)	0	9	0	0	1	0	0	0	11	89	28	171
Enterovirus not typed/ pending	2	16	0	4	0	0	0	0	22	41	76	65
Ortho/paramyoviruses												
Influenza A virus	0	0	0	3	6	0	2	0	11	96	40	120
Influenza B virus	0	2	0	1	5	0	6	0	14	49	20	82
Parainfluenza virus type 1	0	12	0	0	6	0	2	0	22	19	43	29
Parainfluenza virus type 2	0	3	0	1	0	0	0	0	5	27	6	33
Parainfluenza virus type 3	0	4	0	0	0	0	0	0	4	53	16	99
Respiratory syncytial virus	0	110	0	62	3	2	8	0	232	720	333	832
Other RNA viruses												
Rotavirus	0	22	0	0	7	5	1	0	44	170	107	239
Norwalk agent	0	0	0	0	0	0	273	0	273	80	463	95

Table 4. 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 2006	This period 2005	Year to date 2006	Year to date 2005
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
Other												
Chlamydia trachomatis not typed	5	212	1	483	209	13	8	0	938	1,348	2,415	2,539
Chlamydia psittaci	0	3	0	0	0	0	13	0	16	16	26	30
Chlamydia species	0	0	0	0	0	0	1	0	1		1	
Mycoplasma pneumoniae	0	10	3	128	22	4	66	18	251	244	596	502
Coxiella burnetii (Q fever)	0	0	2	9	5	0	4	0	20	52	68	87
Rickettsia tsutsugamushi	0	0	0	0	3	0	0	0	3	8	20	19
Rickettsia - spotted fever group	0	0	0	0	5	0	0	0	5	48	62	97
Streptococcus group A	0	1	0	104	0	0	22	0	127	138	264	242
Yersinia enterocolitica	0	1	0	0	0	0	0	0	1	2	4	6
Brucella species	0	0	0	1	0	0	0	0	1	1	3	3
Bordetella pertussis	0	12	0	55	65	0	27	0	162	365	591	751
Legionella pneumophila	0	3	0	0	1	0	3	0	7	7	15	14
Legionella longbeachae	1	0	0	0	1	0	0	0	2	7	10	19
Cryptococcus species	0	0	0	3	0	0	0	0	3	15	13	25
Leptospira species	0	0	0	4	0	0	0	0	4	13	11	16
Treponema pallidum	0	30	0	129	25	0	1	0	198	329	473	581
Toxoplasma gondii	0	4	0	3	2	1	5	0	15	10	31	20
Total	10	635	34	1,569	540	42	497	95	3,519	5,372	9,305	9,733

* 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 5. Virology and serology reports by laboratories for the reporting period 1 April to 30 June 2006*

State or territory	Laboratory	April 2006	May 2006	June 2006	Total this period
Australian Capital Territory	The Canberra Hospital	–	–	–	–
New South Wales	Institute of Clinical Pathology and Medical Research, Westmead	126	126	108	360
	New Children's Hospital, Westmead	64	60	–	124
	Repatriation General Hospital, Concord	–	–	–	–
	Royal Prince Alfred Hospital, Camperdown	25	8	–	33
	South West Area Pathology Service, Liverpool	49	60	50	165
Queensland	Queensland Medical Laboratory, West End	359	739	540	1,638
	Townsville General Hospital	–	–	–	–
South Australia	Institute of Medical and Veterinary Science, Adelaide	540	–	–	540
Tasmania	Northern Tasmanian Pathology Service, Launceston	11	15	6	32
	Royal Hobart Hospital, Hobart	–	–	–	–
Victoria	Monash Medical Centre, Melbourne	7	13	–	20
	Royal Children's Hospital, Melbourne	13	25	21	59
	Victorian Infectious Diseases Reference Laboratory, Fairfield	161	180	83	424
Western Australia	PathCentre Virology, Perth	–	–	–	–
	Princess Margaret Hospital, Perth	–	–	–	–
	Western Diagnostic Pathology	33	91	–	124
Total		1,388	1,323	808	3,519

* 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 40 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 3,000 and 4,000 consultations are recorded each week.

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

In 2006, six conditions are being monitored, four of which are related to communicable diseases. These include influenza, gastroenteritis, varicella and shingles. Definitions of these conditions were published in Commun Dis Intell *2006;30:158.*

Data from 1 January to 30 June 2006 compared with 2005 are shown as the rate per 1,000 consultations in Figures 5 and 6.

Figure 5. Consultation rates for influenza-like illness, ASPREN, 1 January to 30 June 2006, by week of report

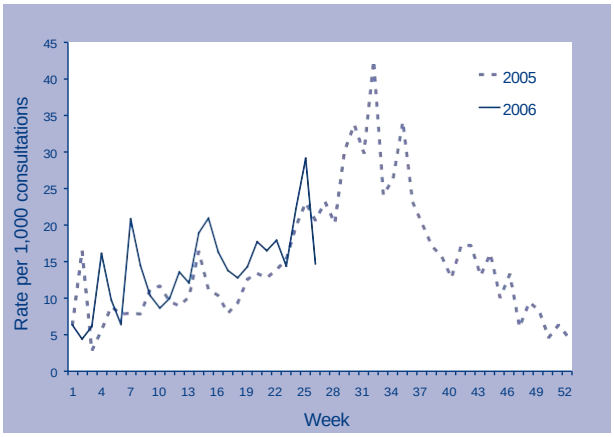
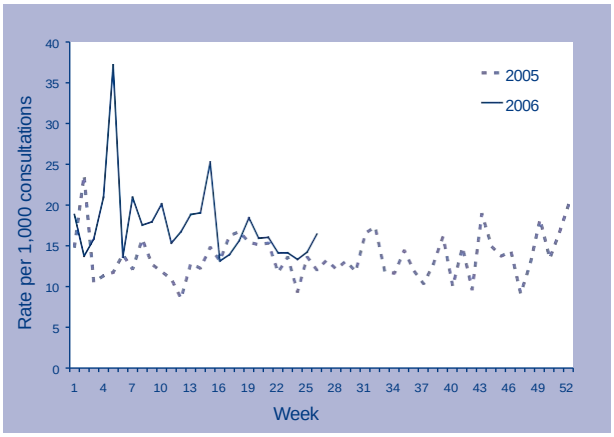


Figure 6. Consultation rates for gastroenteritis, ASPREN, 1 January to 30 June 2006, by week of report



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 2005, at 24 months of age for the cohort born between 1 January and 31 March 2004, and at 6 years of age for the cohort born between 1 January and 31 March 2000 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 *2006;30:157 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 at telephone: +61 2 9845 1435, Email: brynleyh@chw.edu.au.

Immunisation coverage for children 'fully immunised' at 12 months of age for Australia increased marginally by 0.5 percentage points to 90.7 per cent (Table 6), whilst coverage for all individual vaccines due at 12 months of age also increased by 0.4–0.5 percentage points. The only significant movements in coverage for individual vaccines by jurisdiction was in Tasmania, where coverage for all four vaccines due at 12 months increased by 2.5–2.8 percentage points.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia also increased marginally from the last quarter by 0.3 percentage points to 92.4 per cent (Table 7). There were no significant changes in coverage in any jurisdiction for 'fully immunised' coverage or for coverage for individual vaccines. It is notable that the estimate for 'fully immunised' at 24 months of age has been higher than the 12 months coverage estimate since the 18 month DTPa booster was no longer required from September 2003.

It is also notable that, for the two vaccines where no further doses are due between 6 months and 24 months of age (DTP and polio), coverage at the national level was 95.2 per cent and 95.2 per cent respectively at 24 months versus 92.2 and 92.1 per cent at 12 months. This suggests that delayed notification or delayed vaccination is making an important contribution to the coverage estimates at 12 months of age and that the 'fully immunised' estimate in particular is likely to be a minimum estimate.

Table 8 shows immunisation coverage estimates for 'fully immunised' and for individual vaccines at 6 years of age for Australia and by state or territory. Surprisingly, 'fully immunised' coverage for Australia decreased 1.1 percentage points and is the lowest it's been since early 2003. Coverage decreased in almost all jurisdictions except in the Northern Territory where it increased by 2.6 percentage points. Victoria and Western Australia experienced the most significant decreases, 2 and 1.8 percentage points respectively. It appears that the driver of this decrease is a drop in coverage for polio vaccine, which mirrored the decrease in 'fully immunised' coverage. A change in the immunisation schedule occurred in November 2005, with oral polio vaccine replaced with the injectable inactivated poliovirus vaccine, together with DTPa. It is possible that this change may have been associated with problems in completing encounter forms.

Figure 7 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 11 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 18 month DTPa vaccine. However, both measures have been above 90 per cent for this 30-month period and show levels of high coverage for the vaccines included maintained over a significant period of time. Currently, coverage for the more recent vaccines, meningococcal C conjugate at 12 months and pneumococcal conjugate at 2, 4, and 6 months, are not included in the 12 or 24 months coverage data respectively.

Figure 7. Trends in vaccination coverage, Australia, 1997 to 2005, by age cohorts

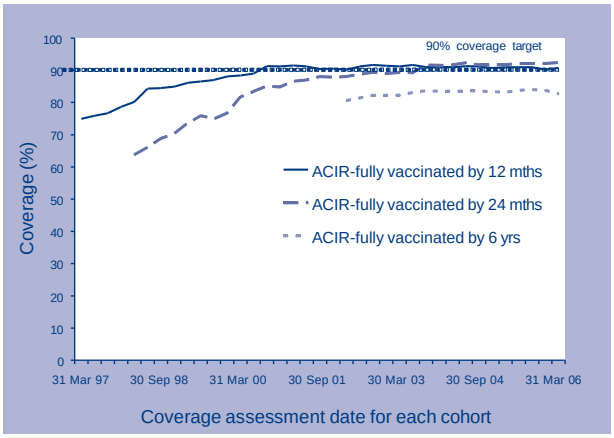


Table 6. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 2005; assessment date 30 June 2006

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,058	22,163	863	13,601	4,474	1,376	15,462	6,612	65,609
Diphtheria, tetanus, pertussis (%)	91.4	91.8	91.4	92.1	92.2	95.6	93.4	90.6	92.2
Poliomyelitis (%)	91.4	91.7	91.1	92.0	91.9	95.4	93.3	90.5	92.1
Haemophilus influenzae type b (%)	93.7	93.5	94.9	94.2	94.8	96.1	94.9	93.7	94.2
Hepatitis B (%)	93.8	94.8	95.5	94.6	95.3	96.0	94.8	93.5	94.7
Fully immunised (%)	90.7	90.1	90.6	90.8	91.0	93.8	91.8	89.1	90.7
Change in fully immunised since last quarter (%)	-1.4	+0.1	-0.9	+0.5	+0.4	+2.6	+1.5	-0.2	+0.5

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 2004; assessment date 30 June 2006*

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,053	21,756	900	13,417	4,513	1,367	15,813	6,600	65,419
Diphtheria, tetanus, pertussis (%)	96.8	95.0	97.3	94.9	94.7	96.3	96.0	94.4	95.2
Poliomyelitis (%)	96.8	94.9	97.3	94.9	94.8	96.4	95.9	94.4	95.2
Haemophilus influenzae type b (%)	95.2	93.3	95.0	93.9	93.5	95.3	94.6	92.7	93.8
Measles, mumps, rubella (%)	95.3	93.4	95.7	93.8	94.1	95.0	95.0	93.1	94.0
Hepatitis B(%)	97.3	95.7	97.8	95.5	95.5	97.0	96.4	95.2	95.8
Fully immunised (%)	94.2	91.7	94.4	92.2	92.2	93.6	93.5	91.3	92.4
Change in fully immunised since last quarter (%)	+2.1	+0.1	+0.1	+0.4	+1.4	-0.8	+0.3	+1.2	+0.3

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2005;29:329.

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 2000; assessment date 30 June 2006

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,014	22,676	879	13,812	4,682	1,561	16,007	6,800	67,431
Diphtheria, tetanus, pertussis (%)	85.9	85.5	86.3	84.4	83.5	84.2	87.5	79.9	85.0
Poliomyelitis (%)	85.1	84.1	86.2	83.2	83.1	83.8	85.9	78.7	83.8
Measles, mumps, rubella (%)	84.8	85.2	86.2	84.5	83.6	84.1	87.6	79.9	85.0
Fully immunised (%)[1]	83.2	83.0	84.6	81.8	82.4	82.6	85.1	77.3	82.7
Change in fully immunised since last quarter (%)	-3.8	-1.0	+2.6	-0.0	-0.2	-1.0	-2.0	-1.7	-1.1

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 *2006;30:157.*

Reporting period 1 January to 31 March 2006

The AGSP laboratories received a total of 1,110 isolates in this quarter of which 1,089 underwent susceptibility testing. This is slightly more than the 985 reported in the first quarter of 2005. A total of 1,001 isolates were received for the same period in 2004 and 1,051 in 2003. About 31 per cent of this total was from New South Wales, 26 per cent from Victoria, 13 per cent from each of Queensland and the Northern Territory, 9 per cent from Western Australia and 5 per cent from South Australia. Small numbers of isolates were also received from Tasmania and the Australian Capital Territory.

Penicillins

In this quarter 366 (33.6%) of all isolates examined were penicillin resistant by one or more mechanisms. Ninety (8.3%) were penicillinase producing (PPNG) and 276 (25.3%) resistant by chromosomal mechanisms, (CMRNG). The proportion of all strains resistant to the penicillins by any mechanism ranged from 3.4 per cent in the Northern Territory to 51 per cent in New South Wales.

Figure 8 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 penicillinase producing aggregated for Australia and by state or territory. A high proportion of 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 of PPNG was found in Victoria where the 32 PPNG were 10.9 per cent of all isolates. Thirteen PPNG representing 13.5 per cent of all isolates were found in Western Australia, 18 (12.5%) in Queensland and 20 (5.8%) in New South Wales. Five PPNG were found in the Northern Territory. South Australia was the only jurisdiction with no PPNG. More isolates were resistant to the penicillins by separate chromosomal mechanisms and CMRNG notably increased in both New South Wales (156 isolates, 45.5% of all gonococci tested, double the 2005 number and proportion) and Victoria (86 isolates, 29.4%, twice the number in 2005). Increases in CMRNG were also noted in Queensland over the equivalent period in 2005 (to 13 from 5 and 10.4% from 2.8% of isolates) and Western Australia (10, 10.4%) and eight (14%) in South Australia. CMRNG were reported from Tasmania and the Australian Capital Territory, but not the Northern Territory.

Figure 8. Categorisation of gonococci isolated in Australia, 1 January to 31 March 2006, 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.*

Ceftriaxone

Seven isolates with decreased susceptibility to ceftriaxone (MIC range 0.06–0.12 mg/L) were detected; five in New South Wales and two in Queensland. Fifteen strains of this type were found in this period in 2005.

Spectinomycin

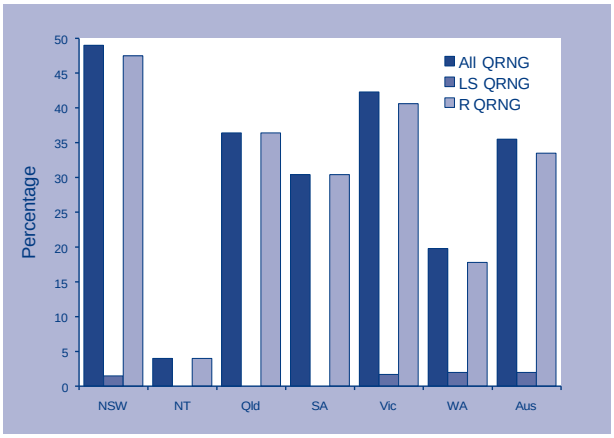
All isolates susceptible to this injectable agent.

Quinolone antibiotics

The total number (387) and proportion (35.5%) of quinolone resistant *N. gonorrhoeae* (QRNG) were both substantially higher than the corresponding figures in the first quarter of 2005 (283 QRNG, 29.7%), 2004 (188 QRNG, 20.5%) and 2003 (108 isolates, 11.5%). The majority of QRNG (375 of 387, 97%) 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 jurisdictions (Figure 9). The highest number and proportion of QRNG was found in New South Wales where 168 QRNG represented 49 per cent of isolates. In Victoria there were 124 QRNG (42.3% of isolates), in Queensland 52 (36.4%), in South Australia 17 (30.4%) and in Western Australia 19 (19.6%). Six QRNG were detected in the Northern Territory and two each in Tasmania and in the Australian Capital Territory. These numbers represent increases, sometimes considerable, in all states and territories, except for Victoria where numbers decreased.

Figure 9. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 January to 31 March 2006 , by jurisdiction



LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.

R QRNG Ciprofloxacin MICs ≥1 mg/L.

High level tetracycline resistance

Nationally the number (115) and proportion (10.6%) of high level tetracycline resistant *Neisseria gonorrhoeae* (TRNG) detected decreased when compared with 2005 data (145 QRNG, 15.5%) but approximated the 2004 (107, 11.7%) figures. TRNG were found in all states and territories.

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 *2006;30:157.*

Laboratory confirmed cases of invasive meningococcal disease for the period 1 April to 30 June 2006, 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 2006, 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	06					1	1							1	1
	05			1	2	1	2							2	4
	04			0	4	2	4							2	8
New South Wales	06			13	22	1	2	1	1	0	1	0	3	15	29
	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	06			1	2									1	2
	05			2	3	2	2							4	5
	04			1	6	1	1			1	1			3	8
Queensland	06	2	2	10	25	3	4							15	31
	05			12	21	2	6							14	27
	04	1	1	11	23	5	12	1	1	1	1	6	8	19	40
South Australia	06			3	6			1	1					4	7
	05			4	4	0	2							4	6
	04			5	9									5	9
Tasmania	06			2	3	0	1							2	4
	05			2	2									2	2
	04			0	2					1	1	1	3	2	6
Victoria	06			19	29	0	2	0	1	0	2			19	34
	05	1	1	8	15	2	3			0	2	0	1	11	22
	04			18	28	9	9	1	3			1	2	25	42
Western Australia	06			4	9									4	9
	05			4	9			1	2					5	11
	04			8	12	1	3							9	14
Total	06	2	2	52	96	5	10	2	3	0	3	0	3	61	117
	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

Q2 = 2nd quarter.

YTD = Year to 30 June 2006.

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 2006, as reported to 30 June 2006, are included in this issue of Communicable Diseases Intelligence *(Tables 10 and 11).*

Table 10. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 January to 31 March 2006, by sex and state or territory of diagnosis

	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	2	17	0	3	3	0	4	7	36	26	36	26
	Male	2	94	3	24	13	1	64	6	207	204	207	204
	Not reported	0	1	0	0	0	0	0	0	1	0	1	0
	Total*	4	112	3	27	16	1	68	13	244	230	244	230
AIDS diagnoses	Female	0	1	0	0	0	0	0	1	2	8	2	8
	Male	0	19	1	0	1	0	13	0	34	43	34	43
	Total*	0	20	1	0	1	0	13	1	36	51	36	51
AIDS deaths	Female	0	1	0	2	0	0	1	0	4	2	4	2
	Male	0	4	0	2	1	0	2	0	9	14	9	14
	Total*	0	5	0	4	1	0	3	0	13	16	13	16

* Totals include people whose sex was reported as transgender.

Table 11. 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 2006, by sex and state or territory

	Sex	State or territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	32	834	18	247	94	8	344	189	1,766
	Male	257	13,194	128	2,613	896	96	5,058	1,167	23,409
	Not reported	0	231	0	0	0	0	22	0	253
	Total*	289	14,288	146	2,869	991	104	5,444	1,363	25,494
AIDS diagnoses	Female	10	245	3	68	31	4	105	37	503
	Male	93	5,324	42	1,010	394	50	1,939	419	9,271
	Total*	103	5,586	45	1,080	426	54	2,054	458	9,806
AIDS deaths	Female	7	135	1	41	20	2	60	24	290
	Male	73	3,560	26	654	274	32	1,387	292	6,298
	Total*	80	3,705	27	697	294	34	1,455	317	6,609

* 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. Communicable Diseases Intelligence *NEPSS quarterly reports include only* Salmonella*. NEPSS receives reports of* Salmonella *isolates that have been serotyped and phage typed by the six* Salmonella *laboratories in Australia.* Salmonella *isolates are submitted to these laboratories for typing by primary diagnostic laboratories throughout Australia.*

A case is defined as the isolation of a Salmonella *from an Australian resident, either acquired locally or as a result of overseas travel, including isolates detected during immigrant and refugee screening. Second and subsequent identical isolates from an individual within six months are excluded, as are isolates from overseas visitors to Australia. The date of the case is the date the primary diagnostic laboratory isolated* Salmonella *from the clinical sample.*

Quarterly reports include historical quarterly mean counts. These should be interpreted cautiously as they may be affected by outbreaks and by surveillance artefacts such as newly recognised and incompletely typed Salmonella*.*

NEPSS may be contacted at the Microbiological Diagnostic Unit, Public Health Laboratory, Department of Microbiology and Immunology, The University of Melbourne; 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 2006 are included in Tables 12 and 13. Data include cases reported and entered by 20 July 2006. 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 *2006;30:159–160.*

Second quarter 2006

There were 1,663 reports to NEPSS of human *Salmonella* infection in the second quarter of 2006, 43 per cent less than in first quarter of 2006. 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 2005 and close to the 10-year historical mean for this period.

During the second quarter of 2006, the 25 most common *Salmonella* types in Australia accounted for 1,057 cases, 64 per cent of all reported human *Salmonella* infections. Twenty-two of the 25 most common *Salmonella* infections in the second quarter of 2006 were also among the 25 most commonly reported in preceding quarter.

The recent occurrence of particular *Salmonella* serovars and phage types reflects the established distribution and incidence of various common endemic strains, and the abatement of various local and widespread outbreaks of the last Australian summer.

The most common *Salmonella* was *S.* Typhimurium phage type 135. This historically common phage type caused widespread outbreaks in late 2005 and early 2006. *S.* Saintpaul was typically common in Queensland with an increase in cases reported from Western Australia and Victoria. A moderate increase in cases of *S.* Birkenhead, concentrated in southern Queensland and northern New South Wales, contributed to the prominence of this serovar. *S.* Typhimurium phage type 170 remains common, albeit somewhat less so than in 2004 and 2005.

S. Waycross, *S.* Weltevreden and *S.* Javiana were reported more frequently than expected (all mostly in Queensland), as were *S.* Typhimurium 44 and *S.* Oranienburg (both in Victoria).

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 12. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 April to 30 June 2006, as reported to 20 July 2006

	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all *Salmonella* for quarter	20	366	48	618	60	49	335	167	1,663
Total contributing *Salmonella* types	17	106	25	111	36	14	90	68	211

Table 13. Top 25 *Salmonella* types identified in Australia, 1 April to 30 June 2006, by state or territory

National rank	*Salmonella* type	State or territory								Total 2nd quarter 2006	Last 10 years mean 2nd quarter	Year to date 2006	Year to date 2005
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	*S.* Typhimurium PT 135	1	42	0	46	2	19	29	10	149	133	412	240
2	*S.* Saintpaul	1	3	2	49	2	0	14	24	95	90	261	265
3	*S.* Birkenhead	0	28	0	52	0	0	0	1	81	59	192	130
4	*S.* Typhimurium PT 170	2	41	0	7	0	2	24	2	78	65	244	352
5	*S.* Virchow PT 8	0	4	1	62	0	1	2	1	71	56	182	164
6	*S.* Typhimurium PT 9	1	19	0	8	2	3	23	1	57	118	215	274
7	*S.* Waycross	0	9	1	38	0	0	0	0	48	30	108	78
8	*S.* Muenchen	0	9	4	19	3	0	3	7	45	35	100	102
9	*S.* Aberdeen	0	3	0	40	0	1	0	0	44	33	111	111
10	*S.* Infantis	0	13	2	2	10	0	9	4	40	32	108	94
11	*S.* Typhimurium PT 44	0	3	0	2	3	0	28	2	38	12	115	6
12	*S.* Hvittingfoss	1	3	1	17	0	0	6	4	32	31	97	135
13	*S.* Typhimurium PT 12	0	15	0	2	1	0	4	8	30	20	70	77
14	*S.* Chester	0	5	2	9	3	1	2	7	29	41	92	119
15	*S.* Oranienburg	1	2	1	3	1	1	16	4	29	18	112	26
16	*S.* Weltevreden	0	3	3	20	0	0	1	0	27	10	57	29
17	*S.* Anatum	0	1	0	10	1	0	2	10	24	24	75	37
18	*S.* Typhimurium PT RDNC	0	8	1	7	1	2	4	1	24	19	63	57
19	*S.* Typhimurium PT 197	0	4	0	8	0	0	7	1	20	18	61	455
20	*S.* Typhimurium untypable	1	4	0	3	0	0	4	6	18	17	47	38
21	*S.* Stanley	0	10	0	2	0	0	4	1	17	11	42	36
22	*S.* Virchow PT 25 var 1	0	2	0	15	0	0	0	0	17	1.6	44	22
23	*S.* Javiana	0	5	0	11	0	0	0	0	16	7	25	22
24	*S.* Mississippi	0	0	0	0	0	9	4	1	14	18	69	49
25	*S.* Bovismorbificans PT 11	0	0	0	0	0	0	14	0	14	0.2	21	2