Communicable diseases surveillance

Highlights for 1st 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'.

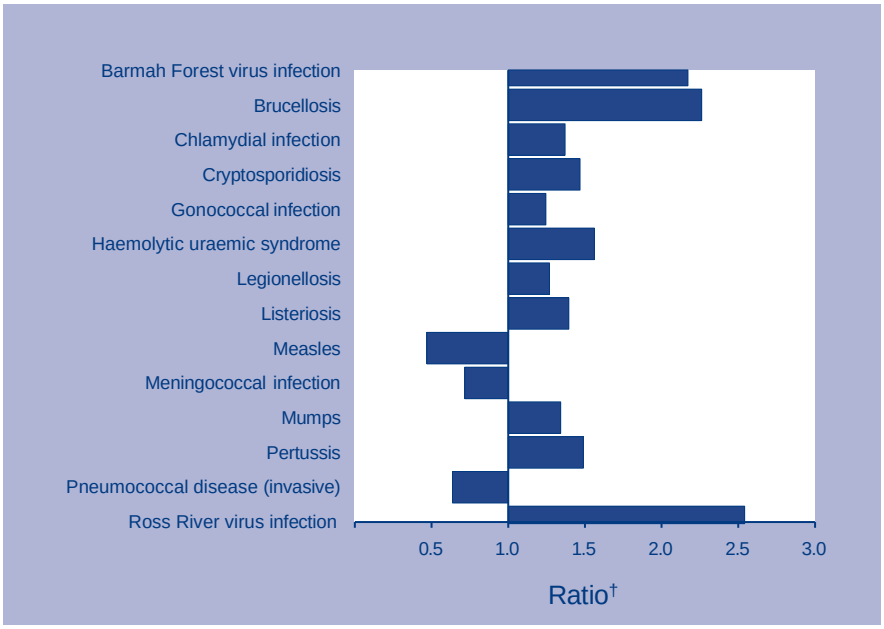
Figure 1 shows the changes in select disease notifications with an onset in the first quarter of 2006, compared with a five year mean for the same period. The following diseases were above the five year mean: cryptosporidiosis, haemolytic uraemic syndrome, listeriosis, chlamydial infection, gonococcal infection, mumps, pertussis, Barmah Forest virus infection, Ross River virus infection, brucellosis and legionellosis. Diseases for which the number of notifications was below the five year mean for the same period include hepatitis A, measles, pneumococcal disease and meningococcal infection.

Gastrointestinal illnesses

Cryptosporidiosis

There were 1,454 notifications of cryptosporidiosis during the quarter which was 1.5 times the five year mean for the same period. All jurisdictions reported cases but the majority were from New South Wales, Victoria and Queensland. This continued a trend reported in the last quarter. One thousand and

Figure 1. Selected* diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 January to 31 March 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.

twenty-two notifications (70%) had information on the infecting species and all were identified as *Cryptosporidium parvum* infection.

A report for the Communicable Diseases Network of Australia on the increases in cryptosporidiosis in this quarter concluded that seasonal increases in cryptosporidiosis had been higher and more prolonged in 2005 and 2006 compared to the previous four years. Cryptosporidiosis had increased in New South Wales and Victoria and declined in Queensland although this State continues to report a significant proportion of all cases. A relative increase was observed in the proportion of notifications in cases aged more than four years compared with those aged less than four years, particularly in Victoria (Rhonda Owen, personal communication).

Listeriosis

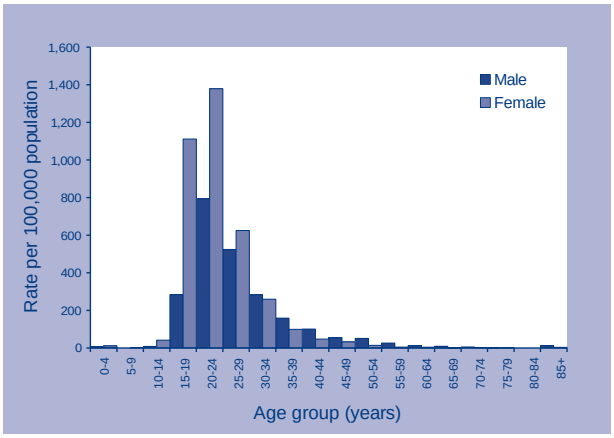
There were 24 cases of listeriosis reported to NNDSS in the first quarter which was 1.4 times the five year mean. Nine cases were from New South Wales and eight from Western Australia. The cases occurred in the elderly (19 of the 24 cases were aged 60 years or more) and in people with underlying medical conditions. OzFoodNet undertook investigations for a common food source (see OzFoodNet report).

Sexually transmissible infections

Chlamydial infections

There were 10,492 notifications of chlamydial infection in the quarter which was 1.4 times the five year mean. The highest rates of notification continue to be among young women (1,378 cases per 100,000 population) and men (794 cases per 100,000 population) (Figure 2).

Figure 2. Notification rates of chlamydial infections, Australia, 1 January to 31 March 2006, by age group and sex



Vaccine preventable diseases

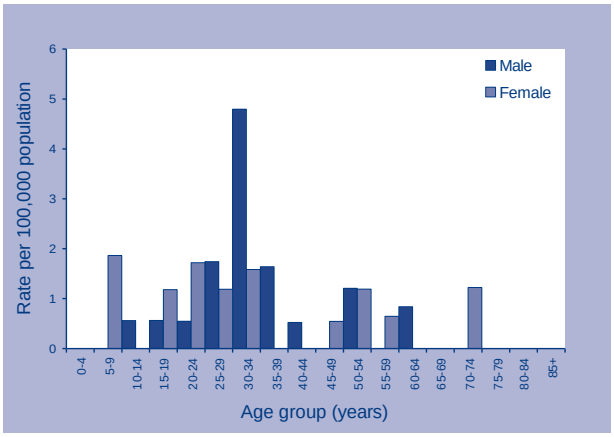
Measles

There were 11 cases of measles reported in the quarter. Cases were reported from New South Wales (5 cases), Victoria (4 cases) and one case each in South Australia and Western Australia. Of the 11 cases, seven were male and four female; three were aged less than five years and the remainder were aged between 20 and 30 years. All of the seven cases with vaccination status recorded were unvaccinated.

Mumps

There were 40 notifications of mumps in the quarter, which was 1.3 times the five year mean for the same period. There were 22 male and 18 female cases with an age range from 6 to 72 years (Figure 3).

Figure 3. Notification rates of mumps, Australia, 1 January to 31 March 2006, by age group and sex



The vaccination status data in the notifications showed that one case was partially vaccinated, 22 were not vaccinated while the vaccination status for the remaining 17 cases was unknown.

Pertussis

Two thousand two hundred and forty-eight pertussis notifications were received in the quarter which was 1.5 times the five year mean for the same period. Of the total number of notifications, 1,059 were reported by New South Wales and 467 were from Queensland. Of the 2,248 notifications 1.4 per cent (32 cases) were reported in infants aged less than one year. The highest rate of infection in females (100 cases per 100,000 population) occurred in the

50–54 year age group. The highest rate in males was 73 cases per 100,000 population in the 65–69 year age group.

Vectorborne diseases

Barmah Forest virus infection

There were 703 cases of Barmah Forest virus infection in the fourth quarter which was 2.2 times the five year mean for the same period. The majority of cases were from Queensland (265 cases) and New South Wales (265 cases). Nationally, the infection rate was 13.8 cases per 100,000 population, but it was higher in the Northern Territory at 96.7 cases per 100,000 population (49 cases) and Queensland with 26.7 cases per 100,000 population.

Ross River virus infection

This quarter, 3,228 notifications of Ross River virus infection were reported compared to 928 in the same period last year. The majority of cases were from Queensland (1,583) and New South Wales (680), while the notification rates were above the national rate in the Northern Territory, Queensland and Western Australia.

Other bacterial infections

Legionellosis

There were 98 cases of legionellosis reported in the first quarter, which was 1.3 times the five year mean. Twenty-nine cases were reported in both New South Wales and Victoria, which included cases in outbreaks in metropolitan Sydney and Melbourne respectively.

Meningococcal infection

There were 74 notifications of meningococcal infection in the quarter which was 70 per cent of the five year mean. Of the 74 cases, 44 (59%) were serogroup B, 7 (9%) were serogroup C, 3 were serogroup W135, 1 was serogroup Y and the serogroups of the remaining 17 cases was unknown. There were two deaths reported in the quarter, both in patients with serogroup B disease.

Of the serotype C cases, two were eligible for vaccination – one of these was a fully vaccinated 15-year-old, and one was a 5-year-old who was not vaccinated. The remaining cases were aged 24 to 74 years. Serogroup C disease continues to decline in Australia as a result of the National Meningococcal C Vaccination Program which commenced in 2003 and completed vaccination of all under 19-year-olds by the end of 2004.

Tables

A summary of diseases currently being reported by each jurisdiction is provided in Table 1. There were 34,999 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 January and 31 March 2006 (Table 2). The notification rate of diseases per 100,000 population for each State or Territory is presented in Table 3.

There were 5,543 reports received by the Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 January to 31 March 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 January to 31 March 2006, by date of onset*

Disease	State or territory								Total 1st quarter 2006†	Total 4th quarter 2005	Total 1st quarter 2005	Last 5 years mean 1st quarter	Year to date 2006	Last 5 years YTD mean	Ratio‡
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Bloodborne diseases															
Hepatitis B (incident)	1	13	3	14	0	2	18	11	62	53	75	88.0	62	87.6	0.7
Hepatitis B (unspecified)	22	657	36	243	73	8	401	96	1,536	1,660	1,798	1,652.0	1,536	1,652.4	0.9
Hepatitis C (incident)	0	12	0	0	15	2	28	27	84	79	88	132.0	84	132.2	0.6
Hepatitis C (unspecified)	51	1,634	73	803	112	82	697	273	3,725	3,573	3,473	3,986.0	3,725	3,986.4	0.9
Hepatitis D	0	2	0	3	0	0	0	0	5	6	4	5.0	5	4.8	1.0
Gastrointestinal diseases															
Botulism	0	0	0	0	0	0	0	0	0	0	1	1.0	0	0.5	0.0
Campylobacteriosis§	110	NN	54	907	429	135	1,302	573	3,510	4,979	4,177	4,068.0	3,510	4,067.6	0.9
Cryptosporidiosis‖	39	397	26	333	78	11	498	72	1,454	785	1,257	990.0	1,454	989.8	1.5
Haemolytic uraemic syndrome	0	4	0	0	1	0	0	0	5	8	4	3.0	5	3.2	1.6
Hepatitis A	2	35	13	17	3	1	15	7	93	68	82	112.0	93	112.2	0.8
Hepatitis E	1	2	0	0	0	0	2	0	5	2	17	8.0	5	7.6	0.7
Listeriosis	0	9	0	0	2	0	5	8	24	18	13	17.0	24	17.2	1.4
Salmonellosis (NEC)	36	719	93	1,167	195	81	464	270	3,025	2,461	2,720	2,702.0	3,025	2,701.8	1.1
Shigellosis	1	25	28	40	11	1	21	52	179	171	228	173.0	179	173.4	1.0
SLTEC, VTEC¶	0	3	0	2	10	0	0	0	15	24	15	16.0	15	16.2	0.9
Typhoid	3	7	1	1	1	0	6	3	22	9	23	28.0	22	28.0	0.8
Quarantinable diseases															
Cholera	0	0	0	0	0	0	0	0	0	0	2	1.0	0	1.0	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 January to 31 March 2006, by date of onset,* *continued*

Disease	State or territory								Total 1st quarter 2006†	Total 4th quarter 2005	Total 1st quarter 2005	Last 5 years mean 1st quarter	Year to date 2006	Last 5 years YTD mean	Ratio‡
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Sexually transmissible infections															
Chlamydial infection**	209	3,029	462	2,462	731	255	1,884	1,460	10,492	9,858	10,342	7,650.0	10,492	7,650.2	1.4
Donovanosis	0	0	0	0	0	0	0	0	0	3	5	6.0	0	5.6	0.0
Gonococcal infection	8	474	378	426	117	5	386	421	2,215	1,952	2,052	1,778.0	2,215	1,778.2	1.2
Syphilis (all)	4	251	55	72	12	6	92	45	528	490	538	300.0	537	300.0	1.8
Syphilis < two years duration	0	27	35	25	3	2	22	5	119	125	155	132.0	119	132.0	0.9
Syphilis > two years or unspecified duration	4	224	20	47	0	4	70	40	409	364	383	347.0	409	347.0	1.2
Syphilis - congenital	0	2	1	0	0	0	0	0	3	3	5	3.0	3	3.2	0.9
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	2	0	0	0	0	0	3	5	7	5.0	3	5.2	0.6
Influenza (laboratory confirmed)‖	4	32	8	86	3	7	10	25	175	417	384	153.0	175	153.2	1.1
Measles	0	5	0	0	1	0	4	1	11	2	5	23.0	11	23.4	0.5
Mumps	0	19	2	6	1	0	7	5	40	37	51	30.0	40	29.8	1.3
Pertussis	76	1,059	26	467	325	8	235	52	2,248	2,819	2,260	1,508.0	2,248	1,508.4	1.5
Pneumococcal disease (invasive)‖	3	60	9	36	12	5	43	15	183	333	268	287.0	183	287.2	0.6
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Rubella	0	4	0	2	2	0	0	0	8	3	6	32.0	8	32.2	0.2
Rubella - congenital	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.4	0.0
Tetanus	0	0	0	0	0	0	0	0	0	1	0	2.0	0	1.8	0.0
Vectorborne diseases															
Barmah Forest virus infection	6	220	49	265	86	0	9	68	703	296	364	324.0	703	323.6	2.2
Dengue	3	14	11	21	3	0	1	6	59	48	95	155.0	59	155.4	0.4
Flavivirus infection (NEC)	0	0	0	10	0	0	9	0	19	4	9	22.0	19	22.0	0.9
Japanese encephalitis virus‖	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.2	0.0
Kunjin virus‖	0	0	0	0	0	0	0	0	0	2	1	5.0	0	5.0	0.0
Malaria	5	31	11	91	8	4	27	33	210	140	349	211.0	210	211.4	1.0
Murray Valley encephalitis virus‖	0	0	0	0	0	0	0	1	1	0	2	2.0	1	2.0	0.5
Ross River virus infection	5	680	171	1,583	193	6	164	426	3,228	762	928	1,270.0	3,228	1,269.8	2.5

Table 2. Notifications of diseases received by State and Territory health authorities in the period 1 January to 31 March 2006, by date of onset,* *continued*

Disease	State or territory								Total 1st quarter 2006†	Total 4th quarter 2005	Total 1st quarter 2005	Last 5 years mean 1st quarter	Year to date 2006	Last 5 years YTD mean	Ratio‡
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
Zoonoses															
Anthrax‖	0	1	0	0	0	0	0	0	1	0	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	1	0	18	0	0	0	0	19	18	12	8.0	19	8.4	2.3
Leptospirosis	0	6	2	38	0	0	0	0	46	26	40	63.0	46	63.0	0.7
Lyssavirus unspecified‖	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Ornithosis	0	23	0	1	0	0	8	1	33	28	38	41.0	33	40.6	0.8
Q fever	0	36	0	36	4	0	9	3	88	79	82	160.0	88	159.6	0.6
Other bacterial infections															
Legionellosis	2	29	0	9	7	1	29	21	98	82	88	77.0	98	77.2	1.3
Leprosy	0	0	0	0	0	0	0	0	0	1	5	3.0	0	3.4	0.0
Meningococcal infection††	0	27	2	16	3	2	19	5	74	105	74	103.0	74	103.2	0.7
Tuberculosis	0	62	5	38	16	1	90	30	242	182	231	232.0	242	232.4	1.0
Total	595	9,836	1,576	9,285	2,457	629	6,575	4,055	34,999	32,081	32,756	28,914.0	35,008	28,917.1	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. Note: Ratios for Syphilis < 2 years; syphilis > 2 years or unspecified duration based on 2 years data

§ 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.

NN Not notifiable.

NEC Not elsewhere classified.

Table 3. Notification rates of diseases, 1 January to 31 March 2006, by state or territory. (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	0.8	5.9	1.4	0.0	1.6	1.4	2.2	1.2
Hepatitis B (unspecified)	27.1	38.8	71.0	24.5	18.9	6.6	31.9	19.1	30.2
Hepatitis C (incident)	0.0	0.7	0.0	0.0	3.9	1.6	2.2	5.4	1.7
Hepatitis C (unspecified)	62.7	96.5	144.0	81.0	29.1	67.6	55.5	54.3	73.3
Hepatitis D	0.0	0.1	0.0	0.3	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†	135.3	NN	106.5	91.5	111.3	111.3	103.7	114.0	103.6
Cryptosporidiosis	48.0	23.4	51.3	33.6	20.2	9.1	39.7	14.3	28.6
Haemolytic uraemic syndrome	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Hepatitis A	2.5	2.1	25.6	1.7	0.8	0.8	1.2	1.4	1.8
Hepatitis E	1.2	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.1
Listeriosis	0.0	0.5	0.0	0.0	0.5	0.0	0.4	1.6	0.5
Salmonellosis (NEC)	44.3	42.5	183.4	117.8	50.6	66.8	37.0	53.7	59.5
Shigellosis	1.2	1.5	55.2	4.0	2.9	0.8	1.7	10.3	3.5
SLTEC, VTEC‡	0.0	0.2	0.0	0.2	2.6	0.0	0.0	0.0	0.3
Typhoid	3.7	0.4	2.0	0.1	0.3	0.0	0.5	0.6	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§	257.1	178.9	911.3	248.4	189.6	210.2	150.0	290.5	206.5
Donovanosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gonococcal infection	9.8	28.0	745.6	43.0	30.3	4.1	30.7	83.8	43.6
Syphilis (all)	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.2
Syphilis < 2 years duration	0.0	1.6	69.0	2.5	0.8	1.6	1.8	1.0	2.3
Syphilis > 2 years or unspecified duration	4.9	13.2	39.4	4.7	0.0	3.3	5.6	8.0	8.0
Syphilis - congenital	0.0	0.1	2.0	0.0	0.0	0.0	0.0	0.0	0.1

Table 3. Notification rates of diseases, 1 January to 31 March 2006, by state or territory. (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	3.9	0.0	0.0	0.0	0.0	0.0	0.1
Influenza (laboratory confirmed)	4.9	1.9	15.8	8.7	0.8	5.8	0.8	5.0	3.4
Measles	0.0	0.3	0.0	0.0	0.3	0.0	0.3	0.2	0.2
Mumps	0.0	1.1	3.9	0.6	0.3	0.0	0.6	1.0	0.8
Pertussis	93.5	62.5	51.3	47.1	84.3	6.6	18.7	10.3	44.2
Pneumococcal disease (invasive)	3.7	3.5	17.8	3.6	3.1	4.1	3.4	3.0	3.6
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella	0.0	0.2	0.0	0.2	0.5	0.0	0.0	0.0	0.2
Rubella - congenital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tetanus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vectorborne diseases									
Barmah Forest virus infection	7.4	13.0	96.7	26.7	22.3	0.0	0.7	13.5	13.8
Dengue	3.7	0.8	21.7	2.1	0.8	0.0	0.1	1.2	1.2
Flavivirus infection (NEC)	0.0	0.0	0.0	1.0	0.0	0.0	0.7	0.0	0.4
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	6.2	1.8	21.7	9.2	2.1	3.3	2.2	6.6	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	6.2	40.2	337.3	159.7	50.1	4.9	13.1	84.8	63.5
Zoonoses									
Anthrax	0.0	0.1	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	1.8	0.0	0.0	0.0	0.0	0.4
Leptospirosis	0.0	0.4	3.9	3.8	0.0	0.0	0.0	0.0	0.9
Lyssavirus unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	1.4	0.0	0.1	0.0	0.0	0.6	0.2	0.6
Q fever	0.0	2.1	0.0	3.6	1.0	0.0	0.7	0.6	1.7
Other bacterial infections									
Legionellosis	2.5	1.7	0.0	0.9	1.8	0.8	2.3	4.2	1.9
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningococcal infection‖	0.0	1.6	3.9	1.6	0.8	1.6	1.5	1.0	1.5
Tuberculosis	0.0	3.7	9.9	3.8	4.2	0.8	7.2	6.0	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).

§ 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 January to 31 March 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	–	4	–	3	1	–	3	–	11	2	11	2
Mumps virus	–	–	1	3	2	–	6	–	12	6	12	6
Rubella virus	–	–	–	–	1	–	–	1	2	4	2	4
Hepatitis virus												
Hepatitis A virus	–	–	1	4	5	–	–	–	10	6	10	6
Hepatitis D virus	–	–	–	–	1	–	–	–	1	2	1	2
Hepatitis E virus	–	–	–	–	–	–	1	–	1	6	1	6
Arboviruses												
Ross River virus	–	29	23	487	186	1	21	36	783	208	783	208
Barmah Forest virus	–	4	–	43	93	–	–	–	140	54	140	54
Flavivirus (unspecified)	–	1	–	21	–	–	6	–	28	13	28	13
Adenoviruses												
Adenovirus not typed/ pending	6	33	–	16	62	–	2	–	119	113	119	113
Herpesviruses												
Herpes virus type 6	–	–	–	–	–	–	1	–	1	1	1	1
Cytomegalovirus	–	46	–	39	201	7	4	–	297	171	297	171
Varicella-zoster virus	1	30	–	236	67	1	9	–	344	364	344	364
Epstein-Barr virus	–	8	23	225	188	1	16	78	539	569	539	569
Other DNA viruses												
Parvovirus	–	3	–	11	31	–	5	–	50	55	50	55
Picornaviruses												
Coxsackievirus A9	–	2	–	–	–	–	–	–	2	1	2	1
Echovirus type 5	–	2	–	–	–	–	–	–	2	–	2	–
Echovirus type 22	–	2	–	–	–	–	–	–	2	–	2	–
Echovirus type 30	–	7	–	–	–	–	–	–	7	9	7	9
Rhinovirus (all types)	–	5	–	–	5	–	–	–	10	82	10	82
Enterovirus not typed/ pending	4	41	–	6	1	–	–	–	52	24	52	24
Ortho/ paramyxoviruses												
Influenza A virus	–	1	–	2	22	–	–	–	25	24	25	24
Influenza B virus	–	1	–	–	2	–	–	–	3	33	3	33
Parainfluenza virus type 1	–	7	–	–	4	–	–	–	11	10	11	10
Parainfluenza virus type 2	–	–	–	–	1	–	–	–	1	6	1	6
Parainfluenza virus type 3	–	3	–	–	7	–	1	–	11	46	11	46
Respiratory syncytial virus	–	12	–	53	6	1	3	–	75	112	75	112
Other RNA viruses												
HTLV-1	–	–	–	–	4	–	–	–	4	2	4	2
Rotavirus	–	7	–	–	32	10	3	–	52	69	52	69
Norwalk agent	–	–	–	–	–	–	181	–	181	15	181	15

Table 4. Virology and serology laboratory reports by state or territory* for the reporting period 1 January to 31 March 2006, 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	6	204	–	648	533	19	21	2	1,433	1,191	1,433	1,191
Chlamydia psittaci	–	–	–	–	–	–	7	–	7	14	7	14
Mycoplasma pneumoniae	1	6	4	137	105	11	51	20	335	258	335	258
Mycoplasma hominis	–	10	–	–	–	–	–	–	10	1	10	1
Coxiella burnetii (Q fever)	–	1	–	17	24	–	5	–	47	35	47	35
Rickettsia - spotted fever group	–	–	–	–	56	–	–	–	56	49	56	49
Streptococcus group A	–	5	–	101	–	–	31	–	137	104	137	104
Yersinia enterocolitica	–	2	–	1	–	–	–	–	3	4	3	4
Brucella species	–	–	–	2	–	–	–	–	2	2	2	2
Bordetella pertussis	1	6	3	49	301	1	62	–	423	386	423	386
Legionella pneumophila	–	3	–	–	3	–	1	–	7	7	7	7
Legionella longbeachae	–	–	–	–	5	–	1	–	6	12	6	12
Cryptococcus species	–	1	–	2	7	–	–	–	10	10	10	10
Leptospira species	–	2	–	1	4	–	–	–	7	3	7	3
Treponema pallidum	–	7	2	145	110	–	1	–	265	252	265	252
Toxoplasma gondii	–	3	–	4	4	3	2	–	16	10	16	10
Echinococcus granulosus	–	–	–	–	3	–	–	–	3	5	3	5
Total	19	498	57	2,256	2,077	55	444	137	5,543	4,350	5,543	4,350

* 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 January to 31 March 2006*

State or territory	Laboratory	January 2006	February 2006	March 2006	Total this period
Australian Capital Territory	The Canberra Hospital	–	–	–	–
New South Wales	Institute of Clinical Pathology and Medical Research, Westmead	116	118	153	387
	New Children's Hospital, Westmead	19	20		39
	Repatriation General Hospital, Concord	–	–	–	–
	Royal Prince Alfred Hospital, Camperdown	–	–	–	–
	South West Area Pathology Service, Liverpool	–	–	–	–
Queensland	Queensland Medical Laboratory, West End	794	769	802	2,365
	Townsville General Hospital	–	–	–	–
South Australia	Institute of Medical and Veterinary Science, Adelaide	700	645	753	2,098
Tasmania	Northern Tasmanian Pathology Service, Launceston	24	17	11	52
	Royal Hobart Hospital, Hobart	–	–	–	–
Victoria	Monash Medical Centre, Melbourne	6			6
	Royal Children's Hospital, Melbourne	39	28	50	117
	Victorian Infectious Diseases Reference Laboratory, Fairfield	147	87	63	297
Western Australia	PathCentre Virology, Perth	–	–	–	–
	Princess Margaret Hospital, Perth	–	–	–	–
	Western Diagnostic Pathology	78	88	16	182
Total		1,923	1,772	1,848	5,543

* The complete list of laboratories reporting for the 12 months, January to December 2006, 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. There are two definitions for influenza for 2006. 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 *2006;30:158.*

Data from 1 January to 31 March 2006 compared with 2005 are shown as the rate per 1,000 consultations in Figures 4, and 5.

Figure 4. Consultation rates for influenza-like illness, ASPREN, 1 January to 31 March 2006, by week of report

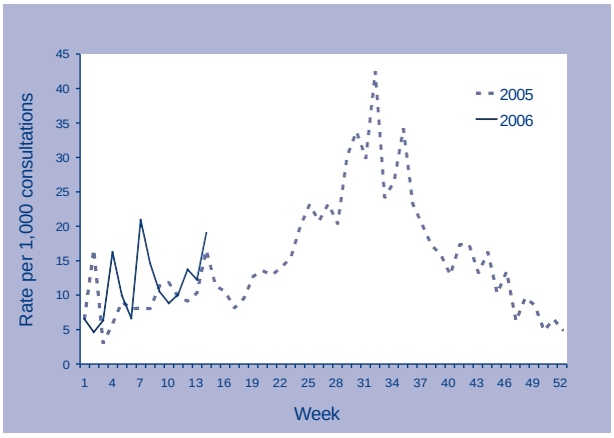
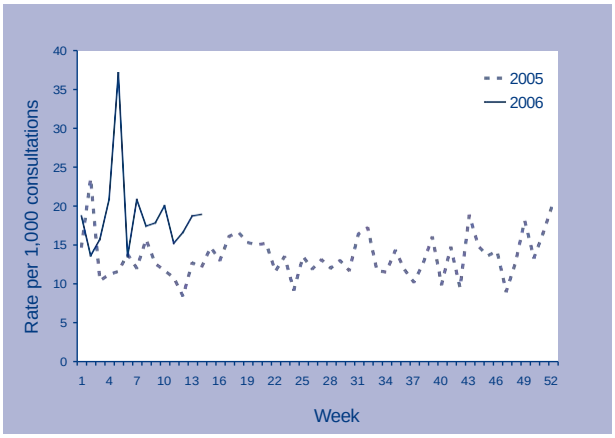


Figure 5. Consultation rates for gastroenteritis, ASPREN, 1 January to 31 March 2006, by week of report



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 January to 31 March 2006, are included in this issue of Communicable Diseases Intelligence *(Table 6).*

Table 6. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 January to 31 March 2006, by jurisdiction and serogroup

Jurisdiction	Year	Serogroup													
		A		B		C		Y		W135		ND		All	
		Q1	*ytd*	Q1	*ytd*	Q1	*ytd*	Q1	*ytd*	Q1	*ytd*	Q1	*ytd*	Q1	*ytd*
Australian Capital Territory	06													0	*0*
	05			1	*1*	1	*1*							2	*2*
	04					2	*2*							2	*2*
New South Wales	06			9	*9*	1	*1*			1	*1*	4	*4*	14	*14*
	05			15	*15*	7	*7*	1	*1*			1	*1*	24	24
	04			19	*19*	5	*5*	1	*1*	1	*1*	5	*5*	31	*31*
Northern Territory	06			1	*1*									1	*1*
	05			1	*1*									1	*1*
	04			3	*3*									3	*3*
Queensland	06			15	*15*	1	*1*							16	*16*
	05			10	*10*	5	*5*							15	*15*
	04			12	*12*	7	*7*					2	*2*	21	*21*
South Australia	06			3	*3*									3	*3*
	05					2	*2*							2	*2*
	04			4	*4*									4	4
Tasmania	06			1	*1*	1	*1*							2	*2*
	05													0	*0*
	04			2	2							2	*2*	4	*4*
Victoria	06			10	*10*	2	*2*	1	*1*	2	*2*			15	*15*
	05			7	*7*	1	*1*			2	*2*	1	*1*	11	*11*
	04			9	*9*	4	*4*	2	*2*			1	*1*	16	*16*
Western Australia	06			5	*5*									5	*5*
	05			5	5			1	*1*					6	*6*
	04			4	*4*	1	*1*							5	*5*
Total	06			44	*44*	5	*5*	1	*1*	3	*3*	4	*4*	57	*57*
	05			39	*39*	16	*16*	2	*2*	2	*2*	2	*2*	61	*61*
	04			53	*53*	19	*19*	3	*3*	1	*1*	10	*10*	86	*86*

Q1 = 1st quarter.

YTD = Year to 31 March 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 October and 31 December 2005, as reported to 31 March 2006, are included in this issue of Communicable Diseases Intelligence *(Tables 7 and 8).*

Table 7. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 October to 31 December 2005, 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	0	4	0	2	2	0	9	3	20	35	95	121
	Male	0	88	0	33	11	0	64	13	209	193	861	774
	Not reported	0	0	0	0	0	0	0	0	0	0	0	1
	Total*	0	92	0	35	13	0	73	16	229	228	956	897
AIDS diagnoses	Female	0	0	1	0	0	0	0	0	1	7	26	21
	Male	0	12	0	9	1	0	12	3	37	42	168	156
	Total*	0	12	1	9	1	0	12	3	38	49	194	179
AIDS deaths	Female	0	2	0	0	0	0	0	0	2	1	5	7
	Male	0	5	0	4	1	0	3	1	14	27	56	83
	Total*	0	7	0	4	1	0	3	1	16	28	61	90

* Totals include people whose sex was reported as transgender.

Table 8. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 31 December 2005, and reported by 31 March 2006, by sex and state or territory

	Sex	State or territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	30	819	18	244	89	8	341	182	1,731
	Male	252	13,096	125	2,592	881	95	4,993	1,157	23,191
	Not reported	0	231	0	0	0	0	22	0	253
	Total*	282	14,174	143	2,845	971	103	5,375	1,346	25,239
AIDS diagnoses	Female	10	244	3	68	31	4	105	36	501
	Male	92	5,296	41	1,010	393	50	1,925	418	9,225
	Total*	102	5,557	44	1,080	425	54	2,040	456	9,758
AIDS deaths	Female	7	134	1	41	20	2	59	24	288
	Male	71	3,552	26	652	273	32	1,385	292	6,283
	Total*	78	3,696	27	695	293	34	1,452	317	6,592

* Totals include people whose sex was reported as transgender.

Childhood immunisation coverage

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

The data show the percentage of children fully immunised at 12 months of age for the cohort born between 1 October and 31 December 2004, at 24 months of age for the cohort born between 1 October and 31 December 2003, and at 6 years of age for the cohort born between 1 October and 31 December 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 *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 decreased for the first time in 12 months, a drop of 0.8 percentage points to 90.2 per cent (Table 9). Coverage for all individual vaccines due at 12 months of age decreased by 0.5–0.7 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 decreased by 1.6–2.2 percentage points.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia did not change from the last quarter, remaining at 92.1 per cent (Table 10). Similarly, there were no significant changes in coverage in any jurisdiction for 'fully immunised' coverage or for coverage for individual vaccines.

Table 9. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 2004; assessment date 31 March 2006

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Number of children	1,019	21,277	774	12,317	4,263	1,408	15,517	6,012	62,587
Diphtheria, tetanus, pertussis (%)	92.9	91.7	91.9	91.4	91.8	92.8	92.1	90.8	91.7
Poliomyelitis (%)	92.8	91.6	91.7	91.4	91.7	92.8	92.0	90.7	91.6
Haemophilus influenzae type b (%)	94.9	93.5	96.4	93.6	94.4	93.4	94.1	93.7	93.8
Hepatitis B (%)	95.6	94.6	96.8	94.1	94.7	93.5	94.0	93.7	94.3
Fully immunised (%)	92.2	90.0	91.5	90.3	90.6	91.2	90.3	89.3	90.2
Change in fully immunised since last quarter (%)	-1.6	-0.6	+1.4	-0.8	-0.7	-2.2	-1.7	+0.6	-0.8

Table 10. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 2003; assessment date 31 March 2006*

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,086	21,739	849	12,867	4,424	1,501	15,926	6,269	64,661
Diphtheria, tetanus, pertussis (%)	95.8	95.0	96.8	94.7	95.1	97.0	95.8	93.6	95.1
Poliomyelitis (%)	95.5	94.9	96.7	94.7	95.1	97.1	95.7	93.6	95.0
Haemophilus influenzae type b (%)	93.7	93.1	95.1	93.5	93.9	95.1	94.4	91.6	93.5
Measles, mumps, rubella (%)	93.5	93.4	95.9	93.3	94.3	95.5	94.9	92.4	93.8
Hepatitis B(%)	96.2	95.9	97.5	95.3	96.1	97.8	96.5	94.9	95.9
Fully immunised (%)	92.1	91.6	94.4	91.8	92.7	94.4	93.2	90.1	92.1
Change in fully immunised since last quarter (%)	-2.7	-0.1	+1.2	-0.1	+1.7	-0.0	+0.8	-1.3	-0.0

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2005;29:219.

Table 11 shows immunisation coverage estimates for 'fully immunised' and for individual vaccines at 6 years of age for Australia by state or territory. This was largely unchanged in all jurisdictions except for Tasmania. Coverage for all vaccines due at 6 years of age in Tasmania decreased by 3 percentage points. However, Tasmania is not a large jurisdiction in terms of population and has experienced such changes in coverage, in both directions, on numerous occasions since coverage at 6 years of age was first reported in 2002.

Figure 6 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 10 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 27-month period and show levels of high coverage for the vaccines included have been 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.

Figure 6. Trends in vaccination coverage, Australia, 1997 to 2005, by age cohorts

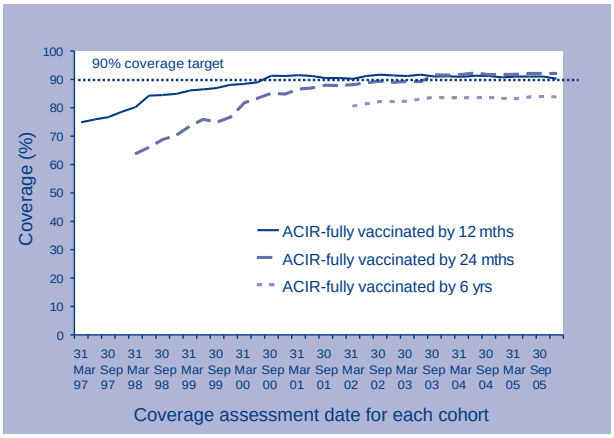


Table 11. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 1999; assessment date 31 March 2006

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	984	21,547	789	12,942	4,563	1,573	15,913	6,612	64,923
Diphtheria, tetanus, pertussis (%)	87.8	85.2	82.8	83.1	83.5	84.5	88.0	80.7	84.9
Poliomyelitis (%)	88.8	85.0	83.4	83.2	83.6	84.6	87.9	80.3	84.8
Measles, mumps, rubella (%)	88.2	85.1	83.9	83.4	83.7	84.6	88.0	80.4	84.9
Fully immunised (%)[1]	87.0	84.1	82.0	81.8	82.6	83.6	87.1	79.1	83.8
Change in fully immunised since last quarter (%)	-1.2	-0.6	-1.1	+0.4	+0.8	-3.0	-0.2	-0.5	-0.2

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 January to 31 March 2006 are included in Tables 12 and 13. Data include cases reported and entered by 24 April 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.*

First quarter 2006

The total number of reports to NEPSS of human *Salmonella* infection rose to 2,876 in the first quarter of 2006, 31 per cent more than in fourth quarter of 2005. The first quarter count was seven per cent more than the comparable first quarter of 2005 and approximately 12 per cent greater than the ten-year historical mean for this period. Indeed, the 2,876 reports represent the second highest count for any quarter since at least 1991.

A wide range of salmonellae have contributed to this excess of cases, including those associated with outbreaks and unseasonable increases in *S.* Typhimurium phage type 135 (widespread), *S.* Typhimurium phage type 44 (Victoria and New South Wales), *S.* Oranienberg (Western Australia), and *S.* Bovismorbificans phage type 24 (eastern states). More modest recent increases have involved *S.* Birkenhead (northern New South Wales), *S.* Infantis (New South Wales and South Australia), *S.* Hvittingfoss (Victoria and Queensland), S. Anatum (South Australia), *S.* Potsdam (New South Wales), and *S.* Virchow phage type 25 var 1 (Queensland). The sustained elevation in disease due to the related *S.* Typhimurium phage types 170 and 108 continues.

During the first quarter of 2006, the 25 most common *Salmonella* types in Australia accounted for 1,888 cases, 66 per cent of all reported human *Salmonella* infections. Twenty-two of the 25 most common *Salmonella* infections in the first quarter of 2006 were also among the 25 most commonly reported in preceding 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 12. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 January to 31 March 2006, as reported to 24 April 2006

	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all *Salmonella* for quarter	37	741	91	993	180	81	473	280	2,876
Total contributing *Salmonella* types	22	146	41	134	53	10	103	72	253

Table 13. Top 25 *Salmonella* types identified in Australia, 1 January to 31 March 2006, by state or territory

National rank	*Salmonella* type	State or territory								Total 1st quarter 2006	Last 10 years mean 1st quarter	Year to date 2006	Year to date 2005
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	*S.* Typhimurium PT 135	5	79	0	52	10	14	72	24	255	233	255	129
2	*S.* Typhimurium PT 170	3	97	0	24	0	11	30	0	165	81	165	165
3	*S.* Saintpaul	1	14	8	93	2	0	15	23	156	129	156	157
4	*S.* Typhimurium PT 9	4	25	0	23	19	8	69	6	154	180	154	166
5	*S.* Birkenhead	1	46	0	63	0	0	3	0	113	96	113	71
6	*S.* Virchow PT 8	1	9	2	94	0	0	2	1	109	93	109	102
7	*S.* Oranienburg	1	5	0	3	2	0	2	69	82	17	82	13
8	*S.* Typhimurium PT 44	0	18	0	12	4	4	33	4	75	19	75	5
9	*S.* Infantis	2	29	3	8	13	0	7	2	64	46	64	52
10	*S.* Aberdeen	0	2	0	59	0	0	2	1	64	43	64	65
11	*S.* Hvittingfoss	1	3	2	40	0	0	17	0	63	35	63	55
12	*S.* Chester	0	11	1	36	2	0	3	9	62	67	62	74
13	*S.* Mississippi	2	3	0	5	1	39	3	2	55	38	55	31
14	*S.* Waycross	1	14	0	39	0	0	0	0	54	46	54	44
15	*S.* Muenchen	0	11	4	23	1	0	2	9	50	59	50	65
16	*S.* Anatum	0	4	3	13	18	0	7	5	50	32	50	19
17	*S.* Bovismorbificans PT 24	0	15	1	23	3	0	8	0	50	4	50	6
18	*S.* Typhimurium RDNC	1	12	1	5	6	1	12	4	42	30	42	31
19	*S.* Potsdam	2	15	0	17	3	0	3	1	41	20	41	9
20	*S.* Typhimurium PT 197	0	9	0	24	1	0	5	0	39	56	39	383
21	*S.* Typhimurium PT 12	0	17	0	4	4	0	4	8	37	32	37	56
22	*S.* Typhimurium untypable	0	4	0	2	0	1	13	8	28	20	28	15
23	*S.* Weltevreden	0	4	4	13	2	0	3	1	27	11	27	14
24	*S.* Virchow PT 25 var 1	0	1	0	25	0	0	1	0	27	0	27	6
25	*S.* Typhimurium PT 108	0	3	0	1	22	0	0	0	26	11	26	20