Additional reports

Australian Sentinel Practice Research Network

The Australian Sentinel Practices Research Network (ASPREN) is a national surveillance system that is owned and operated by the Royal Australian College of General Practitioners and directed through the Discipline of General Practice at the University of Adelaide.

The network consists of general practitioners who report presentations on a number of defined medical conditions each week. ASPREN was established in 1991 to provide a rapid monitoring scheme for infectious diseases that can alert public health officials of epidemics in their early stages as well as play a role in the evaluation of public health campaigns and research of conditions commonly seen in general practice. The aim of ASPREN is to also provide an indicator of the burden of disease in the primary health care setting and to detect trends in consultation rates.

The list of conditions is reviewed annually by the ASPREN management committee and an annual report is published. In 2007, four conditions are being monitored all of which are related to communicable diseases. They include influenza like illness (ILI), gastroenteritis and varicella infections (chickenpox and shingles). Definitions of these conditions are described in Surveillance systems reported in CDI, *published in* Commun Dis Intell *2007;31:158.*

Reporting period 1 April to 30 June 2007

Sentinel practices contributing to ASPREN were located in all jurisdictions other than the Northern Territory and Tasmania. A total of 92 general practitioners contributed data to ASPREN in the second quarter of 2007. Each week an average of 56 general practitioners provided information to ASPREN at an average of 5,539 (range 3,500 to 7,463) consultations per week.

In the second quarter of 2007, influenza-like illness rates increased from mid-June (24.2 ILI per 1,000 consultations) (Figure 1). Two peaks were observed in mid-April (22.2 ILI per 1,000 consultations) and end of June (25.9 ILI per 1,000 consultations). In the corresponding period in 2006, ILI rates also peaked in mid-June, but at a slightly higher rate than in 2007 (29.1 ILI per 1,000 consultations) and decreased towards the end of June (between 14.8–16.3 ILI per 1,000 consultations).

Reports of gastroenteritis from 1 April to 30 June 2007 were lower compared to the same period in 2006 (Figure 2). During this reporting period, consultation rates for gastroenteritis showed a downward trend from mid-May onwards (between 4.6 to 9 cases per 1,000 consultations).

Reports of varicella infections were reported at a lower rate for the second quarter of 2007 compared with the same period in 2006 but there was no recognisable seasonal pattern. From 1 April to 30 June 2007, rates for chickenpox fluctuated between 0 to 2.4 cases per 1,000 consultations (Figure 3).

In the second quarter of 2007, rates for shingles fluctuated between less than 1 to 2.8 cases per 1,000 consultations (Figure 4).

Figure 1: Consultation rates for influenza like illness, ASPREN, 2006 to 30 June 2007, by week of report

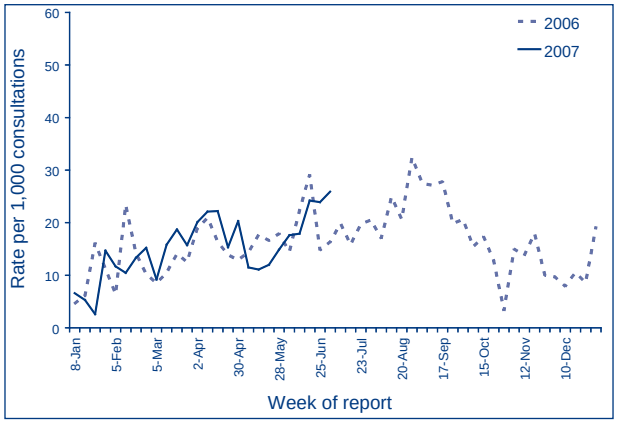


Figure 2. Consultation rates for gastroenteritis, ASPREN, 2006 to 30 June 2007, by week of report

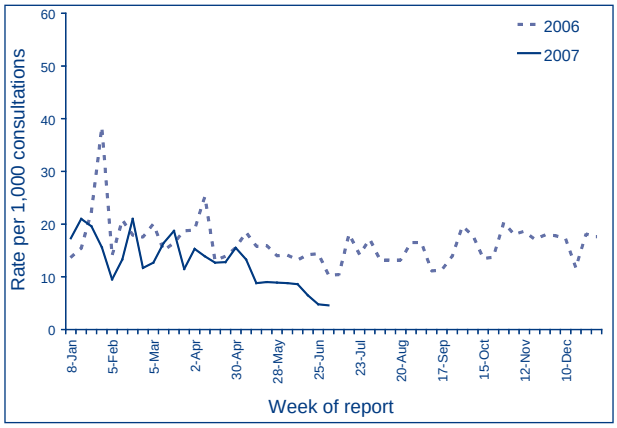


Figure 3. Consultation rates for chickenpox, ASPREN, 2006 to 30 June 2007, by week of report

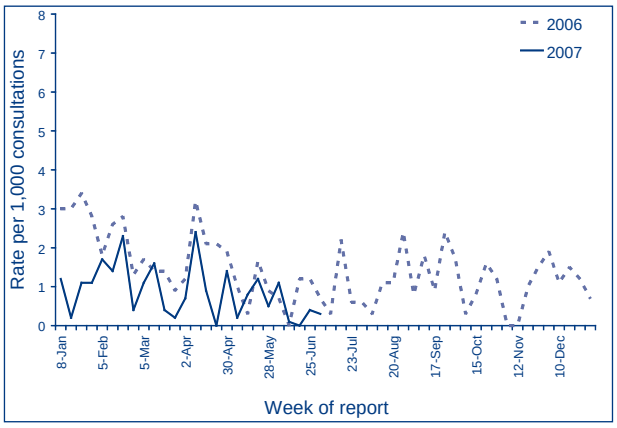
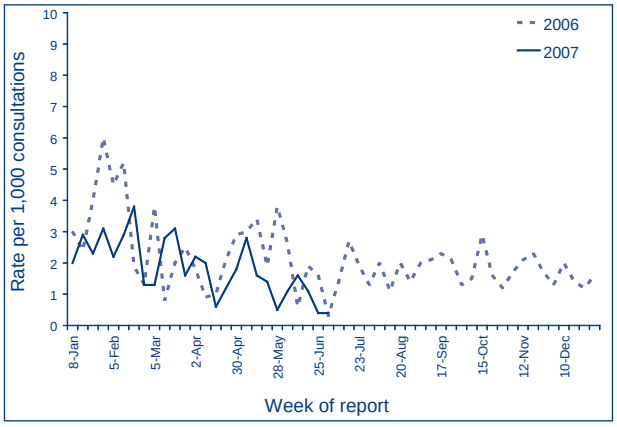


Figure 4. Consultation rates for shingles, ASPREN, 2006 to 30 June 2007, by week of report



Gonococcal surveillance

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

The Australian Gonococcal Surveillance Programme (AGSP) reference laboratories in the various states and territories report data on sensitivity to an agreed 'core' group of antimicrobial agents quarterly. The antibiotics currently routinely surveyed are penicillin, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens and currently used in Australia to treat gonorrhoea. When in vitro resistance to a recommended agent is demonstrated in 5 per cent or more of isolates from a general population, it is usual to remove that agent from the list of recommended treatment.[1] *Additional data are also provided on other antibiotics from time to time. At present all laboratories also test isolates for the presence of high level (plasmid-mediated) resistance to the tetracyclines, known as TRNG. Tetracyclines are however, not a recommended therapy for gonorrhoea in Australia. Comparability of data is achieved by means of a standardised system of testing and a program-specific quality assurance process. Because of the substantial geographic differences in susceptibility patterns in Australia, regional as well as aggregated data are presented. For more information see* Commun Dis Intell *2007;31:162.*

Reporting period 1 January to 31 March 2007

The AGSP laboratories received a total of 856 isolates in this quarter of which 846 underwent susceptibility testing. This is considerably less than the 1,110 isolates reported in this period in 2006 and also less than the 985 reported in the first quarter of 2005. About 33% of this total was from New South Wales, 24% from Victoria, 12% from the Northern Territory, 11% from Queensland, 10% from Western Australia and 8% from South Australia. Small numbers of isolates were also received from Tasmania and the Australian Capital Territory.

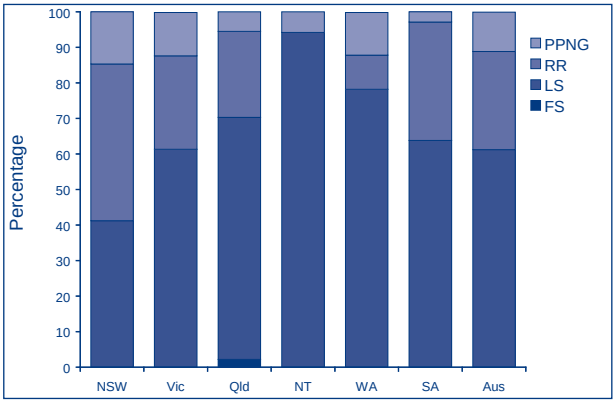
Penicillins

In this quarter, 327 (38.7%) isolates examined were penicillin resistant by one or more mechanisms. Ninety-four (11.1%) were penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 233 (27.6%) were penicillin resistant by chromosomal mechanisms (CMRP). The proportion of all strains resistant to the penicillins by any mechanism ranged from 5.8% in the Northern Territory to 58.7% in New South Wales. These represent the highest rates of penicillin resistance seen to date in this surveillance system. In the corresponding quarter in 2006, 33.6% of isolates were penicillin resistant by any mechanism.

Figure 5 shows the proportions of gonococci fully sensitive (MIC ≤ 0.03 mg/L), less sensitive (MIC 0.06–0.5 mg/L), relatively resistant (MIC ≥ 1 mg/L) or PPNG aggregated for Australia and by state or territory. A high proportion of those strains classified as PPNG or resistant by chromosomal mechanisms fail to respond to treatment with penicillins (penicillin, amoxycillin, ampicillin) and early generation cephalosporins.

The highest number and proportion of PPNG and CMRP were found in New South Wales where there were 42 PPNG (14.7%) and 126 CMRP (44%). Victoria had 54 (26%) CMRP and 25 (12.2%) PPNG. Western Australia had more PPNG (10, 12%) than CMRP (8, 9.6%) whereas CMRP were more prominent in Queensland (22, 24%) than PPNG (5, 5.5%). Six PPNG but no CMRP were found in the Northern Territory. South Australia had a high proportion of CMRP (23, 33%) and two (2.9%) PPNG. There were three PPNG reported from the Australian Capital Territory and one from Tasmania but no CMRP were seen in either of these jurisdictions.

Figure 5. Categorisation of gonococci isolated in Australia, 1 January to 31 March 2007, 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 one each in Western Australia and the Australian Capital Territory. This is the same number seen nationally in the first quarter of 2006.

Spectinomycin

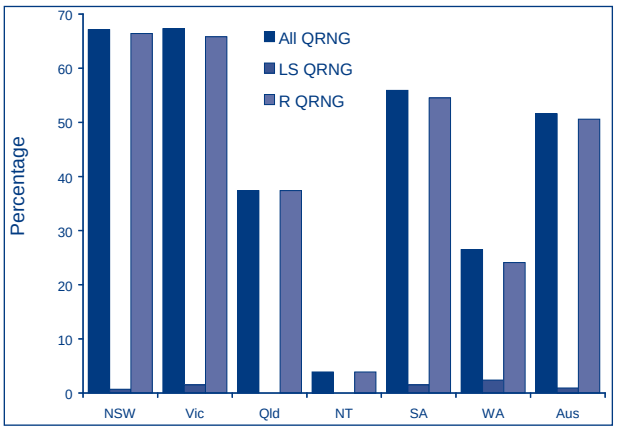
All isolates were susceptible to this injectable agent.

Quinolone antibiotics

The total number (436) and proportion (51.6%) of quinolone resistant *N. gonorrhoeae* (QRNG) were also the highest recorded for Australia for any quarter. In the corresponding period in 2006, there were 387 (35.5%) QRNG which was 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%). All but eight of the 436 QRNG detected in this quarter had ciprofloxacin MICs of 1 mg/L or more and 375 had ciprofloxacin MICs of 4 mg/L or more. 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. Thus not only is there an increase in the number of QRNG but also an upward shift in resistance levels.

QRNG were present in all jurisdictions (Figure 6). The highest number of QRNG was found in New South Wales (191) which represented 66.8% of all isolates. The 138 QRNG in Victoria formed a slightly higher (67.3%) proportion of all isolates there. In South Australia, 38 QRNG represented 55.9% of all gonococci tested; in Queensland there were 34 (37.4%) QRNG, and in Western Australia 22 (26.5%) QRNG. Six QRNG were detected in the Northern Territory, two in Tasmania and five in the Australian Capital Territory.

Figure 6. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 January to 31 March 2007, 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 (125) and proportion (14.8%) of high level tetracycline resistance (TRNG) detected increased when compared with the 2006 data (115 TRNG, 10.6%) but remained lower than in this period in 2005 (145 TRNG, 15.5%). TRNG were found in all states and territories except Tasmania and elsewhere represented between 9% (South Australia) and 23% of isolates (Western Australia) in mainland states. Five TRNG were present in the Northern Territory, and two in the Australian Capital Territory.

Reference

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

Childhood immunisation coverage

Tables 1, 2 and 3 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 2006, at 24 months of age for the cohort born between 1 January and 31 March 2005, and at 6 years of age for the cohort born between 1 January and 31 March 2001 according to the National Immunisation Program.

For information about the Australian Childhood Immunisation Register see Surveillance systems reported in CDI, *published in* Commun Dis Intell *2007;31:163–164 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 0.2 percentage points to 91.2% (Table 1), whilst there were no important changes in coverage for all individual vaccines due at 12 months of age. There were also no noteworthy movements in coverage for individual vaccines by jurisdiction.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia increased from the last quarter by 0.5 percentage points to 92.5% (Table 2). 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 children '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% at 24 months versus 91.9% and 91.8% 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.

Immunisation coverage for children 'fully immunised' at 6 years of age for Australia decreased marginally from the last quarter by 0.1 percentage point to 87.9% (Table 3). There were no important changes in coverage for all individual vaccines due at 6 years of age and no noteworthy movements in coverage for individual vaccines by jurisdiction.

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 few years for all age groups. It should be noted that currently, coverage for the vaccines added to the National Immunisation Program since 2003 (varicella at 18 months, meningococcal C conjugate at 12 months and pneumococcal conjugate at 2, 4, and 6 months) are not included in the coverage data.

Table 1. 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 2006; assessment date 30 June 2007

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
Total number of children	1,201	22,789	910	14,440	4,545	1,581	16,420	6,999	68,885
Diphtheria, tetanus, pertussis (%)	94.8	91.9	91.3	91.8	91.5	91.6	92.9	89.4	91.9
Poliomyelitis (%)	94.8	91.8	91.3	91.7	91.5	91.5	92.8	89.4	91.8
Haemophilus influenzae type b (%)	96.6	94.8	95.8	94.0	94.7	95.6	95.0	93.5	94.6
Hepatitis B (%)	96.6	94.7	95.9	93.8	94.7	95.6	94.8	93.4	94.5
Fully immunised (%)	94.3	91.5	91.1	90.9	90.5	91.4	91.8	88.9	91.2
Change in fully immunised since last quarter (%)	+2.5	+0.3	+0.3	+0.1	+0.1	-1.1	+0.5	-0.9	+0.2

Table 2. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth 1 January to 31 March 2005; assessment date 30 June 2007[7]

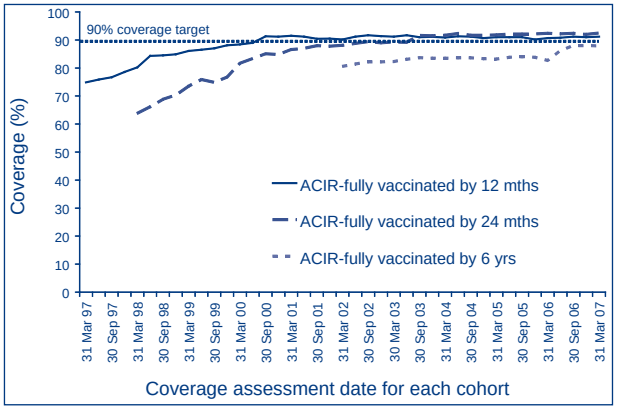
Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,082	22,126	855	13,938	4,477	1,381	15,628	6,821	66,308
Diphtheria, tetanus, pertussis (%)	94.7	95.2	96.6	94.8	95.5	97.0	96.0	94.0	95.2
Poliomyelitis (%)	94.7	95.1	96.1	94.7	95.4	97.0	95.9	93.9	95.2
Haemophilus influenzae type b (%)	93.6	94.3	93.9	93.7	94.1	96.7	94.7	93.0	94.1
Measles, mumps, rubella (%)	92.4	93.9	94.6	93.6	94.2	95.9	94.8	92.7	94.0
Hepatitis B(%)	95.0	95.9	97.4	95.6	96.3	97.3	96.6	95.1	96.0
Fully immunised (%)	91.9	92.3	92.5	92.2	93.0	95.2	93.8	90.6	92.5
Change in fully immunised since last quarter (%)	-1.1	+0.8	-0.7	+0.9	+1.4	+1.2	+0.4	+0.0	+0.5

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2005;30:399

Table 3. 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 2001; assessment date 30 June 2007

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,039	21,920	938	13,560	4,582	1,577	15,785	6,710	66,111
Diphtheria, tetanus, pertussis (%)	90.1	88.5	85.8	88.6	86.4	90.4	91.1	85.1	88.7
Poliomyelitis (%)	90.4	88.4	85.7	88.9	86.3	90.2	91.4	85.3	88.8
Measles, mumps, rubella (%)	89.9	88.6	85.9	88.7	86.3	90.6	91.2	85.3	88.8
Fully immunised (%)[1]	89.4	87.7	84.8	87.8	85.7	89.8	90.6	84.2	87.9
Change in fully immunised since last quarter (%)	+0.8	-0.5	-1.5	+0.6	-0.2	-0.9	-0.4	+1.0	-0.1

Figure 7. Trends in vaccination coverage, Australia, 1997 to 2007, by age cohorts



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 2007, as reported to 30 June 2007, are included in this issue of Communicable Diseases Intelligence *(Tables 4 and 5).*

Table 4. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 January to 31 March 2007, 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 2007	This period 2006	YTD 2007	YTD 2006
HIV diagnoses	Female	0	8	0	10	2	2	7	0	29	39	29	39
	Male	1	105	1	45	21	0	58	0	231	223	231	223
	Not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total*	1	113	1	55	23	2	65	0	260	262	260	262
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	4	0	4
	Male	0	10	2	2	0	0	8	1	23	46	23	46
	Total*	0	10	2	2	0	0	8	1	23	51	23	51
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	3	0	3
	Male	0	4	1	1	1	0	2	0	9	15	9	15
	Total*	0	4	1	1	1	0	2	0	9	19	9	19

* Totals include people whose sex was reported as transgender.

Table 5. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 31 March 2007, and reported by 30 June 2007, by sex and state or territory

	Sex	State or territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	32	883	23	279	102	12	374	203	1,908
	Male	260	13,555	132	2,774	955	109	5,309	1,212	24,306
	Not reported	0	230	0	0	0	0	22	0	252
	Total*	292	14,697	155	3,062	1,058	121	5,727	1,422	26,534
AIDS diagnoses	Female	10	251	4	71	32	4	111	41	524
	Male	92	5,427	45	1,032	409	53	2,004	427	9,489
	Total*	102	5,696	49	1,105	442	57	2,127	470	10,048
AIDS deaths	Female	7	136	1	42	20	2	61	26	295
	Male	73	3,586	28	664	280	33	1,415	295	6,374
	Total*	80	3,733	29	708	300	35	1,485	322	6,692

* Totals include people whose sex was reported as transgender.

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 *2007;31:162.*

Laboratory confirmed cases of invasive meningococcal disease for the period 1 April to 30 June 2007, are included in this issue of Communicable Diseases Intelligence *(Table 6).*

Table 6. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 April to 30 June 2007, by serogroup and state or territory

State or territory	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	07			0	1						1			0	2
	06					1	1							1	1
New South Wales	07			5	17	3	6	2	2	1	1	3	4	14	30
	06			13	22	1	2	1	1	0	1	0	3	15	29
Northern Territory	07				1	1	1							1	2
	06			1	2									1	2
Queensland	07			8	19	1	1					1	1	10	21
	06			10	25	3	4							13	29
South Australia	07			3	4									3	4
	06			3	6			1	1					4	7
Tasmania	07									1	1			1	1
	06			2	3	0	1							2	4
Victoria	07			15	21	2	2	3	3	1	1	1	1	22	28
	06			19	29	0	2	0	1	0	2			19	34
Western Australia	07			4	7									4	7
	06			4	9									4	9
Total	07			35	70	7	10	5	5	3	3	5	6	55	94
	06			52	96	5	10	2	3	0	3	0	3	61	117

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 2007 are included in Tables 7 and 8. Data include cases reported and entered by 12 July 2007. 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 *2007;31:163–164.*

Reporting period 1 April to 30 June 2007

There were 2,232 reports to NEPSS of human *Salmonella* infection in the second quarter of 2007. This represents a seasonal decline in incidence after the first quarter, the final count for which was 3,249 reports, the highest quarterly count in more than 15 years. The 2,232 reports for the second quarter also represent the highest count in the second quarter for more than 15 years, 27% greater than the 10-year historical average.

During the second quarter of 2007, the 25 most common *Salmonella* types in Australia accounted for 1,387 cases, 62% of all reported human *Salmonella* infections. Twenty-three of the 25 most common *Salmonella* infections in the second quarter of 2007 were also among those most commonly reported in the preceding quarter.

The most notable features of the current data are the widespread outbreaks of various phage types of *S.* Typhimurium. These include *S.* Typhimurium phage type 9 (in New South Wales and South Australia), *S.* Typhimurium phage type 44 (in Victoria), *S.* Typhimurium phage type 29 (in South Australia and New South Wales), *S.* Typhimurium phage type U302 (in New South Wales), *S.* Typhimurium phage type U307 (in Western Australia and Queensland), *S.* Typhimurium phage type 197 (in Queensland), *S.* Typhimurium phage type 35 (in New South Wales), and *S.* Typhimurium phage type 120. More recently, an increase in *S.* Typhimurium phage type 135 has also become apparent in the eastern states.

Other salmonellae manifesting increases over historical averages and outbreaks include *S.* Mississippi (in Tasmania), *S.* Montevideo (in New South Wales), and *S.* Oslo (in the Northern Territory).

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 7. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 April to 30 June 2007, as reported to 12 July 2007

	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all *Salmonella* for quarter	24	635	91	585	171	53	480	193	2,232
Total contributing *Salmonella* types	17	120	40	108	52	18	102	69	231

Table 8. Top 25 *Salmonella* types identified in Australia, 1 April to 30 June 2007, by state or territory

National rank	*Salmonella* type	State or territory								Total 2nd quarter 2007	Last 10 years mean 2nd quarter	Year to date 2007	Year to date 2006
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	*S.* Typhimurium PT 9	1	125	0	12	29	0	43	6	216	115	553	225
2	*S.* Typhimurium PT 135	4	53	0	51	3	5	45	12	173	140	425	421
3	*S.* Typhimurium PT 44	1	15	0	4	6	0	73	0	99	15	282	119
4	*S.* Saintpaul	0	8	7	48	0	0	4	16	83	93	220	270
5	*S.* Typhimurium PT 29	1	31	0	8	33	0	2	0	75	3	124	11
6	*S.* Typhimurium PT U302	0	49	0	8	1	1	6	3	68	3	109	21
7	*S.* Typhimurium PT 170	0	24	0	6	0	1	34	0	65	72	189	246
8	*S.* Virchow PT 8	0	5	1	52	2	0	3	1	64	64	150	189
9	*S.* Typhimurium PT U307	0	4	0	13	0	0	2	40	59	5	80	27
10	*S.* Birkenhead	0	18	0	31	0	0	1	0	50	62	143	197
11	*S.* Typhimurium PT 197	0	10	0	25	1	0	6	0	42	21	136	63
12	*S.* Aberdeen	0	1	2	36	0	0	1	0	40	34	90	113
13	*S.* Mississippi	0	2	0	1	0	29	2	1	35	19	111	70
14	*S.* Montevideo	0	24	0	6	0	0	5	0	35	8	77	19
15	*S.* Infantis	0	13	3	3	6	0	8	1	34	35	94	120
16	*S.* Chester	0	4	2	15	3	1	2	6	33	40	104	99
17	*S.* Hvittingfoss	0	6	0	21	0	0	5	1	33	33	74	99
18	*S.* Waycross	0	12	0	20	0	0	0	0	32	31	68	107
19	*S.* Stanley	1	6	0	7	1	0	10	2	27	12	65	42
20	*S.* Typhimurium (PT pending)	3	1	0	1	1	1	20	0	27	0	30	0
21	*S.* Muenchen	0	5	3	14	2	0	0	2	26	36	84	104
22	*S.* Typhimurium PT 126	0	1	0	2	2	0	14	0	19	26	28	17
23	*S.* Typhimurium PT 12	0	3	0	2	3	0	3	7	18	23	65	72
24	*S.* Virchow PT 34	0	0	0	5	0	0	12	0	17	21	28	26
25	*S.* Typhimurium untypable	0	4	0	1	0	0	4	8	17	17	55	48