

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* 2008;32:134–135.

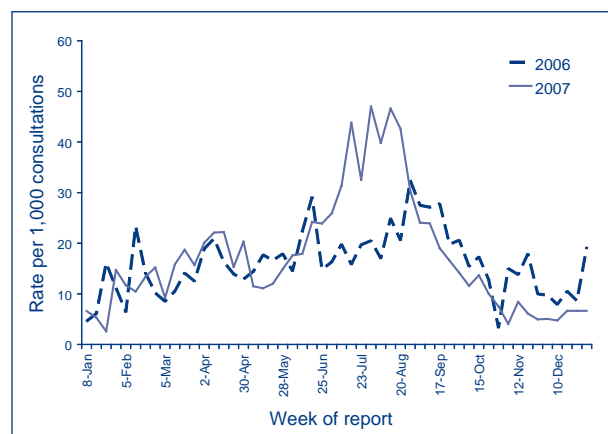
Data on influenza-like illness, gastroenteritis, chickenpox and shingles from 1 January to 31 December 2007 compared with 2006, are shown as the rate per 1,000 consultations in Figures 1, 2, 3 and 4, respectively.

Reporting period 1 October to 31 December 2007

Sentinel practices contributing to ASPREN were located in all jurisdictions other than the Northern Territory. A total of 92 general practitioners contributed data to ASPREN in the fourth quarter of 2007. Each week an average of 72 general practitioners provided information to ASPREN at an average of 7,231 (range 3,008 to 8,197) consultations per week.

In the fourth quarter of 2007, influenza-like illness (ILI) rates began to decrease from early November. From November to end of December, ILI rates were lower (4 to 8 cases per 1,000 consultations) compared with 8 to 18 cases per 1,000 consultations for the same period in 2006 (Figure 1).

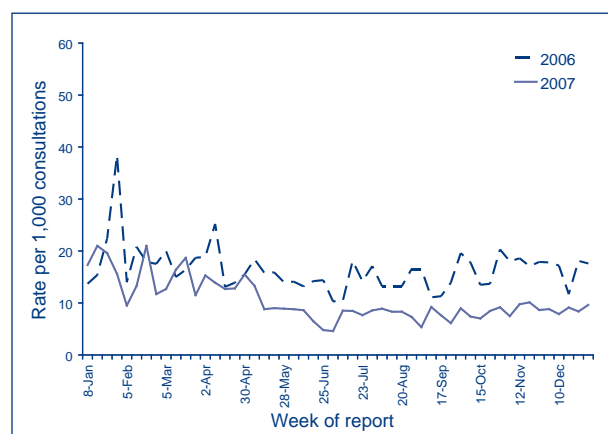
Figure 1. Consultation rates for influenza-like illness, ASPREN, 2006 to 31 December 2007, by week of report



Reports of gastroenteritis from 1 October to 31 December 2007 were lower compared with the same period in 2006 (Figure 2). During this reporting period, consultation rates for gastroenteritis remained constant (between 7 to 10 cases per 1,000 consultations).

Reports of varicella infections were reported at a lower rate for the fourth quarter of 2007 compared with the same period in 2006, but there was no recognisable seasonal pattern. From 1 October to 31 December 2007, rates for chickenpox fluctuated between 0 to 1.3 case per 1,000 consultations (Figure 3).

Figure 2. Consultation rates for gastroenteritis, ASPREN, 2006 to 31 December 2007, by week of report



In the fourth quarter of 2007, rates for shingles fluctuated between less than 1 to 1.4 cases per 1,000 consultations (Figure 4).

Figure 3. Consultation rates for chickenpox, ASPREN, 2006 to 31 December 2007, by week of report

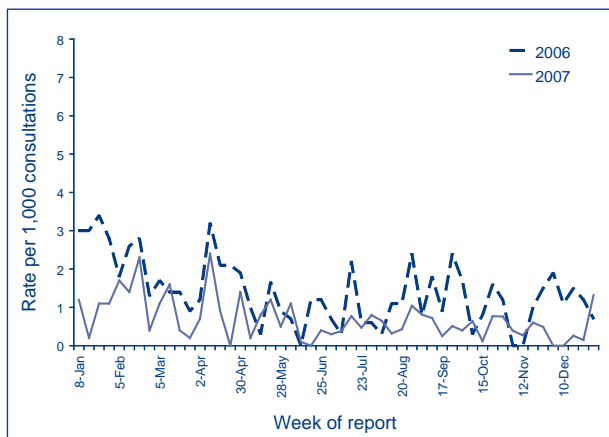
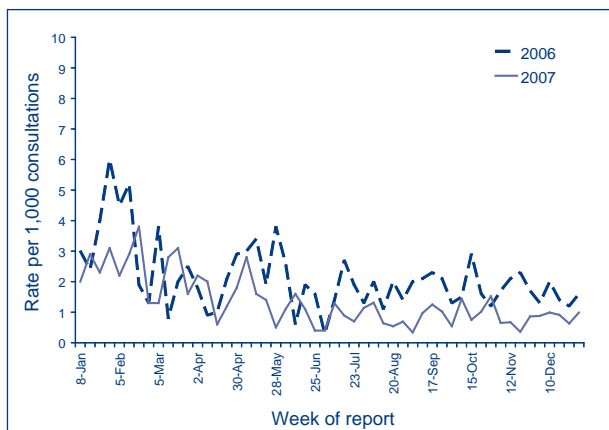


Figure 4. Consultation rates for shingles, ASPREN, 2006 to 31 December 2007, by week of report



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% 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 2008;32:134.

Reporting period 1 July to 30 September 2007

The AGSP laboratories received a total of 651 gonococcal isolates of which 636 remained viable for susceptibility testing. This was about 25% less than the 869 gonococci reported for the same period in 2006. About 30% of this total was from New South Wales, 20% from Victoria, 17% from Queensland, 13% from each of Western Australia and the Northern Territory and 5% from South Australia. There were nine isolates from Tasmania and three from the Australian Capital Territory.

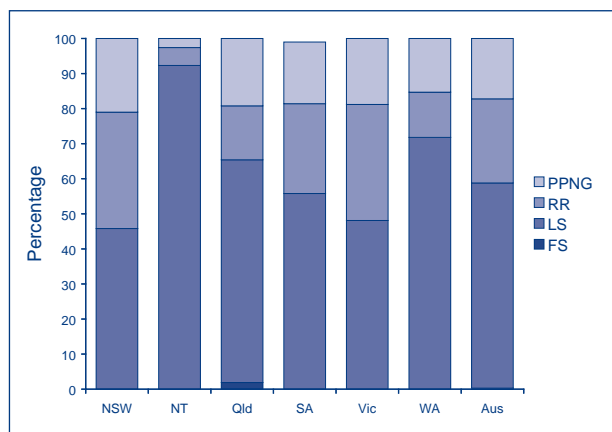
Penicillins

Two hundred and sixty-two (41.1%) of the 636 isolates examined were penicillin resistant by one or more mechanisms. One hundred and nine (17.1%) were penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 153 (24%) resistant by chromosomal mechanisms, (CMRP). The proportion of all strains resistant to the penicillins by any mechanism ranged from 7.5% in the Northern Territory to 54% in New South Wales and 52% in Victoria. High rates of penicillin resistance were also found in South Australia (44%), Queensland (34.6%) and in Western Australia (28.2%). All nine gonococci tested in Tasmania, but none of the three in the Australian Capital Territory, were penicillin resistant.

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

In New South Wales most of the penicillin resistance was with CMRP (63, 33.2%) with 40 PPNG (21%) and a similar distribution was also present in Victoria where 25 PPNG represented 18.8% of isolates tested, but 44 CMRP was 33% of isolates tested. In Queensland CMRP represented 15.4% of isolates tested, while PPNG were 19.2%, in South Australia PPNG were 17.6% and CMRP 26.5% and in Western Australia PPNG 15.3% and CMRP 12.9%. PPNG were also present in Tasmania and Northern Territory (3 and 2 isolates respectively), but there were no PPNG in the Australian Capital Territory. CMRP were present in Tasmania (6 isolates) and the Northern Territory (4). All the penicillin resistant strains in the Northern Territory were from Darwin.

Figure 5. Categorisation of gonococci isolated in Australia, 1 July to 30 September 2007, by penicillin susceptibility and region



- FS Fully sensitive to penicillin, MIC \leq 0.03 mg/L.
 LS Less sensitive to penicillin, MIC 0.06–0.5 mg/L.
 RR Relatively resistant to penicillin, MIC \geq 1 mg/L.
 PPNG Penicillinase producing *Neisseria gonorrhoeae*.

Ceftriaxone

Four isolates with decreased susceptibility to ceftriaxone (MIC range 0.06–0.12 mg/L) were detected, one each in New South Wales and South Australia and two in Queensland. It is emphasised that no treatment failures have been documented locally when a 250 mg IM dose of ceftriaxone has been used.

Spectinomycin

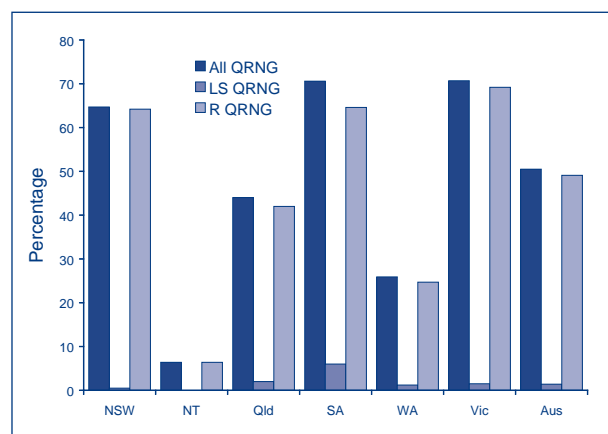
All isolates susceptible to this injectable agent.

Quinolone antibiotics

Nationally, the 321 quinolone resistant *N. gonorrhoeae* (QRNG) detected in this quarter represented 50.5% of all isolates tested. In the third quarter of 2006, the 325 QRNG represented 38% of all isolates while in 2005 there were 35.5% QRNG and in 2004 QRNG were 24% of all gonococci tested. The majority of QRNG (272 of 321, 98.6%) had higher-level resistance to ciprofloxacin of 1 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 \geq 1 mg/L) groups.

QRNG were detected in all states and territories with the exception of the Australian Capital Territory (Figure 6). The highest proportion of QRNG was found in Victoria where 94 QRNG represented 70.7% of isolates tested and South Australia where there were 24 QRNG (70.6% of isolates). In New South Wales there were 123 QRNG (64.7%), in Queensland 44 (42.3%) and in Western Australia 22 (25.9%) with five QRNG detected the Northern Territory and nine (of 9 tested) in Tasmania.

Figure 6. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 July to 30 September 2007, by jurisdiction



- LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.
 R QRNG Ciprofloxacin MICs \geq 1 mg/L.

High level tetracycline resistance

The number (129) and proportion (20.3%) of high level tetracycline resistance (TRNG) detected was higher than that recorded in this quarter in 2006 (102, 11.9%). TRNG were found in all states and territories except for Tasmania and the Australian Capital Territory and represented between 3.8% (Northern Territory) and 36.5% (Western Australia) of all isolates tested.

Reference

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

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/nchechr>. 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 April to 30 June 2007, as reported to 30 September 2007, and reported for 1 July to 30 September 2007, as reported to 31 December 2007 are included in this issue of *Communicable Diseases Intelligence* (Tables 1, 2, 3 and 4).

Table 1. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 April to 30 June 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	13	0	6	2	0	5	2	28	30	64	69
	Male	0	101	2	40	9	1	68	8	229	195	488	416
	Not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total*	0	116	2	46	11	1	73	10	259	225	554	485
AIDS diagnoses	Female	0	0	0	0	0	0	0	0	0	6	1	10
	Male	0	5	0	5	0	0	9	1	20	39	44	85
	Total*	0	5	0	5	0	0	10	1	21	45	46	96
AIDS deaths	Female	0	0	0	0	0	0	1	1	2	1	2	4
	Male	0	0	0	3	0	0	1	0	4	17	15	33
	Total*	0	0	0	3	0	0	2	1	6	19	17	39

* Totals include people whose sex was reported as transgender.

Table 2. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 30 June 2007, and reported by 30 September 2007, by sex and state or territory

	Sex	State or territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	32	898	23	285	104	12	379	212	1,945
	Male	260	13,661	135	2,814	964	110	5,380	1,239	24,563
	Not reported	0	230	0	0	0	0	22	0	252
	Total*	292	14,818	158	3,108	1,069	122	5,803	1,458	26,828
AIDS diagnoses	Female	10	251	4	72	32	4	111	41	525
	Male	92	5,432	45	1,043	409	53	2,015	428	9,517
	Total*	102	5,701	49	1,117	442	57	2,139	471	10,078
AIDS deaths	Female	7	136	1	42	20	2	62	27	297
	Male	73	3,586	28	672	280	33	1,416	295	6,383
	Total*	80	3,733	29	716	300	35	1,487	323	6,703

* Totals include people whose sex was reported as transgender.

Table 3. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 July to 30 September 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	17	0	5	4	0	10	3	39	31	105	100
	Male	2	80	0	36	7	1	69	18	213	203	707	619
	Not reported	0	2	0	0	0	0	0	0	2	0	4	0
	Total*	2	101	0	41	11	1	79	21	256	236	818	721
AIDS diagnoses	Female	0	1	0	0	0	0	1	0	2	6	4	16
	Male	0	3	0	3	0	2	10	2	20	49	71	134
	Total*	0	4	0	3	0	2	11	2	22	57	76	153
AIDS deaths	Female	0	0	0	0	0	0	0	1	1	0	5	4
	Male	0	3	0	0	0	0	1	1	5	24	23	57
	Total*	0	3	0	0	0	0	1	2	6	24	28	63

* Totals include people whose sex was reported as transgender.

Table 4. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 30 September 2007, and reported by 31 December 2007, by sex and state or territory

	Sex	State or territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	32	914	23	291	108	12	389	217	1,986
	Male	262	13,740	135	2,851	972	111	5,449	1,262	24,782
	Not reported	0	232	0	0	0	0	22	0	254
	Total*	294	14,917	158	3,151	1,081	123	5,882	1,486	27,092
AIDS diagnoses	Female	10	252	4	73	32	4	113	41	529
	Male	92	5,438	45	1,046	409	55	2,035	434	9,554
	Total*	102	5,708	49	1,121	442	59	2,161	477	10,119
AIDS deaths	Female	7	136	1	42	20	2	64	28	300
	Male	73	3,589	29	673	280	33	1,418	297	6,392
	Total*	80	3,736	30	717	300	35	1,491	326	6,715

* Totals include people whose sex was reported as transgender.

Childhood immunisation coverage

Tables 5, 6 and 7 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 July and 30 September 2006, at 24 months of age for the cohort born between 1 July and 30 September 2005, and at 6 years of age for the cohort born between 1 July and 30 September 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* 2008;32:133–134 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 91.5% (Table 5). There were no important changes in coverage for any individual vaccines due at 12 months of age or by jurisdiction.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia increased by 0.5 percentage points to 93.0% and is now at its highest recorded level (Table 6). The greatest increase occurred in Western Australia where 'fully immunised' coverage increased by a significant 0.9 percentage points and coverage for individual

Table 5. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 July to 30 September 2006; assessment date 31 December 2007

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,206	24,414	866	14,845	4,848	1,687	18,023	7,581	73,470
Diphtheria, tetanus, pertussis (%)	93.0	92.0	90.9	92.3	92.3	93.8	93.1	89.4	92.1
Poliomyelitis (%)	93.0	92.0	90.9	92.2	92.3	93.7	93.1	89.4	92.1
<i>Haemophilus influenzae</i> type b (%)	95.4	94.8	95.3	93.9	94.6	96.1	94.8	92.7	94.4
Hepatitis B (%)	95.4	94.8	95.4	93.8	94.5	96.0	94.8	92.9	94.4
Fully immunised (%)	92.8	91.7	90.7	91.4	91.6	93.5	92.2	88.8	91.5
Change in fully immunised since last quarter (%)	-1.6	+0.0	+0.0	+0.5	+0.4	+1.9	+0.7	-0.8	+0.2

Table 6. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth cohort 1 July to 30 September 2005; assessment date 31 December 2007

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,106	23,440	945	14,679	4,610	1,571	16,716	6,982	70,049
Diphtheria, tetanus, pertussis (%)	95.5	95.3	95.8	94.6	95.2	96.9	95.9	94.5	95.3
Poliomyelitis (%)	95.4	95.2	95.8	94.5	95.1	96.9	95.9	94.5	95.2
<i>Haemophilus influenzae</i> type b (%)	95.7	95.4	94.8	93.6	94.2	96.8	95.1	94.4	94.8
Measles, mumps, rubella (%)	94.7	94.0	95.6	93.6	94.2	96.1	95.3	93.2	94.3
Hepatitis B (%)	96.2	96.0	97.1	95.5	95.7	97.3	96.6	95.3	96.0
Fully immunised (%)	93.9	92.9	94.1	92.1	92.9	95.7	94.1	91.4	93.0
Change in fully immunised since last quarter (%)	-0.1	+0.6	+0.3	+0.3	+0.3	+0.8	+0.6	+0.9	+0.5

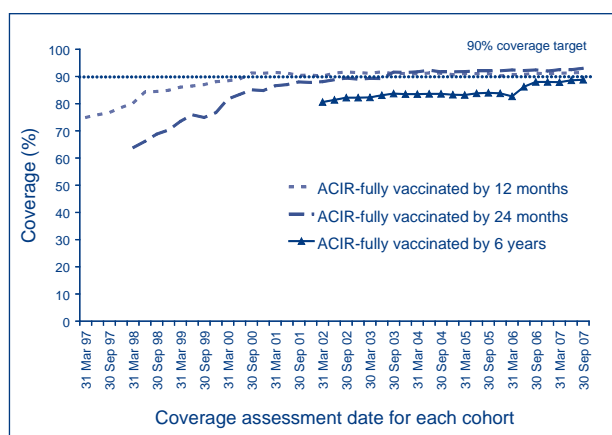
* The 12 months age data for this cohort was published in *Commun Dis Intell* 2007;32:148.

vaccines also increased in similar amounts, up to 1.2 percentage points for *Haemophilus influenzae* type b vaccine.

Immunisation coverage for children 'fully immunised' at six years of age for Australia increased a further 0.2 percentage points from the last quarter's 0.7 percentage points increase to reach 88.8%, its highest recorded level (Table 7). There were no important changes in coverage for any individual vaccines due at six years of age or 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 six 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 NIP since 2003 (varicella at 18 months,

Figure 7. Trends in vaccination coverage, Australia, 1997 to 30 September 2007, by age cohorts



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.

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 five Salmonella typing 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.

Table 7. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 July to 30 September 2001; assessment date 31 December 2007

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,061	22,548	877	14,350	4,721	1,511	16,472	6,878	68,418
Diphtheria, tetanus, pertussis (%)	89.6	89.8	88.8	88.2	88.0	89.0	91.7	86.0	89.4
Poliomyelitis (%)	90.1	89.8	88.9	88.3	88.2	88.9	91.9	86.3	89.5
Measles, mumps, rubella (%)	89.3	89.8	88.7	88.3	88.1	89.7	91.9	86.2	89.5
Fully immunised (%)	88.8	89.1	88.4	87.6	87.6	88.2	91.4	85.2	88.8
Change in fully immunised since last quarter (%)	-0.3	+0.9	+1.1	-0.9	-0.2	-2.1	+0.3	+0.5	+0.2

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2002;26:88

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 October to 31 December 2007 are included in Tables 8 and 9. Data include cases reported and entered by 23 January 2008. 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* 2008;32:136.

Reporting period 1 October to 31 December 2007

There were 1,815 reports to NEPSS of human *Salmonella* infection in the fourth quarter of 2007, approximately 40% more than in the third quarter of 2007. Although this count is fairly typical of the incidence of salmonellosis at this time of year, final inclusion of all data will probably see a count around 10% more than the recent historical average.

During the fourth quarter of 2007, the 25 most common *Salmonella* types in Australia accounted for 1,121 cases, 62% of all reported human *Salmonella* infections. Twenty-one of the 25 most common *Salmonella* infections in the fourth quarter of 2007 were also among those most commonly reported in the preceding quarter.

The most notable feature of the current data is a large outbreak of *S. Typhimurium* phage type 44, with cases reported predominantly from Victoria and New South Wales, but also South Australia, Queensland, the Northern Territory and Tasmania. Cases of *S. Typhimurium* (not phage typed), apparently reflecting one or more outbreaks in Western Australia during the third quarter of 2007, have declined considerably.

Other increases above the historical average for the period include *S. Aberdeen* (in the eastern states), *S. Stanley* (widespread, but typically acquired overseas), *S. Typhimurium* phage type 12 (widespread), *S. Newport* (particularly Victoria), and *S. Singapore* (Victoria, with cases in several other states).

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 8. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 October to 31 December 2007, as reported to 23 January 2008

	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total all <i>Salmonella</i> for quarter	25	455	97	458	88	38	478	176	1,815
Total contributing <i>Salmonella</i> types	17	117	43	95	39	13	115	46	218

Table 9. Top 25 *Salmonella* types identified in Australia, 1 October to 31 December 2007, by state or territory

National rank	<i>Salmonella</i> type	State or territory								Total 4th quarter 2007	Last 10 years mean 4th quarter	Year to date 2007	Year to date 2006
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	<i>S. Typhimurium</i> PT 135	0	34	0	21	3	7	79	0	144	169	669	668
2	<i>S. Typhimurium</i> PT 44	0	30	3	7	14	1	82	0	137	47	470	241
3	<i>S. Saintpaul</i>	0	10	9	61	1	0	3	7	91	95	371	569
4	<i>S. Birkenhead</i>	1	35	1	31	0	0	1	0	69	62	232	271
5	<i>S. Typhimurium</i> PT 9	4	22	0	4	5	1	30	0	66	114	677	355
6	<i>S. Typhimurium</i> (not phage typed)	0	0	0	0	0	0	0	58	58	0	190	0
7	<i>S. Virchow</i> PT 8	1	8	3	32	3	0	4	0	51	54	235	272
8	<i>S. Typhimurium</i> PT 170	0	19	0	7	0	1	22	0	49	73	275	412
9	<i>S. Infantis</i>	1	23	5	0	2	1	11	5	48	30	193	176
10	<i>S. Aberdeen</i>	0	5	3	26	0	2	1	0	37	22	145	152
11	<i>S. Typhimurium</i> PT 197	2	18	0	8	0	0	5	0	33	30	194	147
12	<i>S. Stanley</i>	0	11	0	5	2	2	7	6	33	17	134	104
13	<i>S. Chester</i>	1	10	3	12	0	0	2	3	31	38	158	158
14	<i>S. Muenchen</i>	1	8	4	14	0	1	1	1	30	29	137	156
15	<i>S. Typhimurium</i> PT 12	2	9	0	5	3	0	7	3	29	18	108	117
16	<i>S. Enteritidis</i> (not phage typed)	0	0	0	0	0	0	0	28	28	0	48	0
17	<i>S. Waycross</i>	0	12	0	11	0	0	0	1	24	19	101	142
18	<i>S. Newport</i>	0	5	1	5	1	1	9	2	24	10	74	51
19	<i>S. Hvitittingfoss</i>	0	1	0	20	0	0	1	1	23	20	115	137
20	<i>S. Typhimurium</i> PT RDNC	0	5	1	3	1	0	11	0	21	18	117	103
21	<i>S. Mississippi</i>	0	0	0	1	0	18	1	0	20	17	135	91
22	<i>S. Singapore</i>	0	4	0	3	3	0	10	0	20	13	75	54
23	<i>S. Typhimurium</i> (PT pending)	0	0	0	0	0	0	20	0	20	0	23	0
24	<i>S. Typhimurium</i> untypable	1	7	1	3	1	0	6	0	19	15	90	69
25	<i>S. Montevideo</i>	0	6	1	4	1	0	2	2	16	13	113	65