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 2008, 4 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.

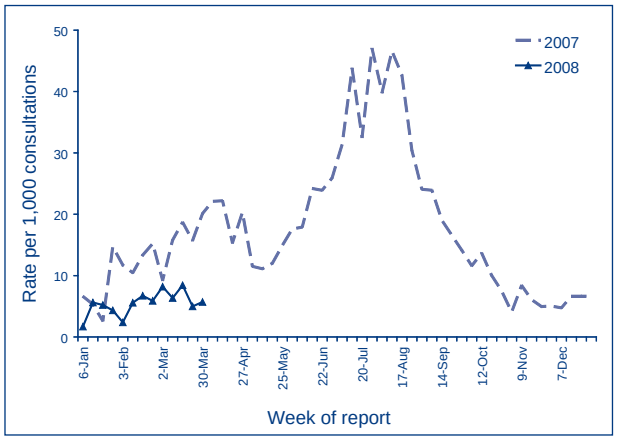
Data on influenza-like illness, gastroenteritis, chickenpox and shingles from 1 January to 31 March 2008 compared with 2007, are shown as the rate per 1,000 consultations in Figures 1, 2, 3 and 4, respectively.

Reporting period 1 January to 31 March 2008

Sentinel practices contributing to ASPREN were located in all jurisdictions other than the Northern Territory. A total of 94 general practitioners contributed data to ASPREN in the first quarter of 2008. Each week an average of 78 general practitioners provided information to ASPREN at an average of 7,013 (range 5,307 to 8,257) consultations per week.

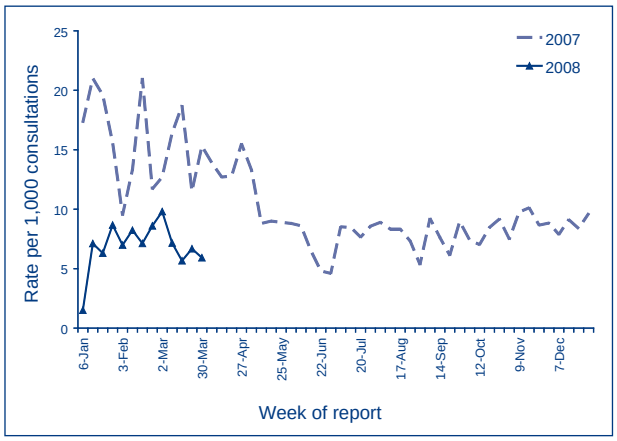
In the first quarter of 2008, influenza like illness (ILI) rates remained low from 1.7 to 8 cases per 1.000 consultations. For the same reporting period in 2007 reported rates were higher at 2 to 20 cases per 1,000 consultations (Figure 1).

Figure 1. Consultation rates for influenza-like illness, ASPREN, 2007 to 31 March 2008, by week of report



Reports of gastroenteritis from 1 January to 31 March 2008 were lower compared with the same period in 2007 (Figure 2). During this reporting period, consultation rates for gastroenteritis ranged from 2 to 10 cases per 1,000.

Figure 2. Consultation rates for gastroenteritis, ASPREN, 2007 to 31 March 2008, by week of report



Reports of varicella infections were reported at a lower rate for the first quarter of 2008 compared with the same period in 2007. From 1 January to 31 March 2008, recorded rates for chickenpox were between 0 to 0.7 case per 1,000 consultations (Figure 3).

In the first quarter of 2008, rates for shingles fluctuated between less than 1 to 1.5 cases per 1,000 consultations (Figure 4).

Figure 3. Consultation rates for chickenpox, ASPREN, 2007 to 31 March 2008, by week of report

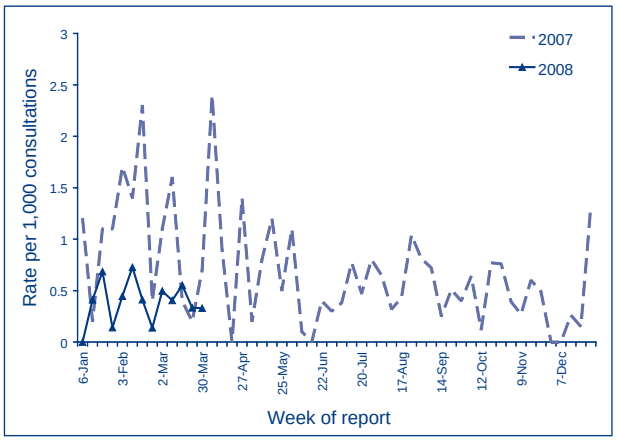
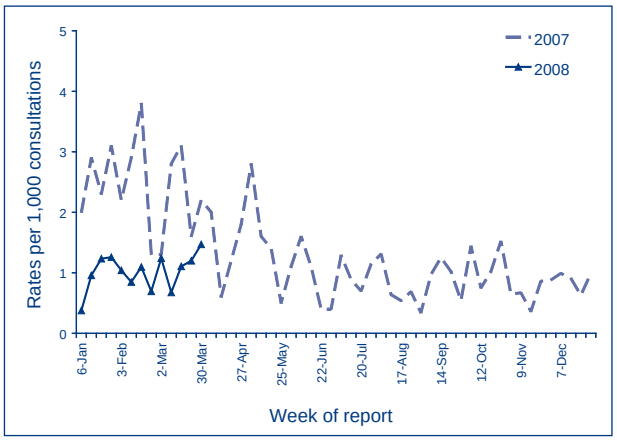


Figure 4. Consultation rates for shingles, ASPREN, 2007 to 31 March 2008, by week of report



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 October and 31 December 2006, at 24 months of age for the cohort born between 1 October and 31 December 2005, and at 6 years of age for the cohort born between 1 October and 31 December 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;32:134–135 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 marginally by 0.2 percentage points to 91.3% (Table 1). There were no important changes in coverage for any individual vaccines due at 12 months or by jurisdiction.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia also decreased marginally by 0.2 percentage points to 92.8% (Table 2). There were also no important changes in coverage for any individual vaccines due at 24 months or by jurisdiction.

Table 1. 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 2006; assessment date 31 March 2008

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,114	23,355	906	14,103	4,600	1,589	17,310	7,036	70,013
Diphtheria, tetanus, pertussis (%)	94.1	92.0	91.0	92.0	91.1	92.9	92.8	89.7	91.9
Poliomyelitis (%)	94.2	91.9	91.0	92.0	91.0	92.8	92.8	89.7	91.9
Haemophilus influenzae type b (%)	96.3	94.9	94.4	94.0	93.9	95.2	95.0	93.5	94.5
Hepatitis B (%)	96.3	94.9	95.3	93.8	93.9	95.2	94.8	93.3	94.4
Fully immunised (%)	93.9	91.6	90.1	91.2	90.4	92.7	91.9	88.9	91.3
Change in fully immunised since last quarter (%)	+1.1	-0.1	-0.6	-0.2	-1.2	-0.8	-0.3	+0.1	-0.2

Table 2. 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 2005;* assessment date 31 March 2008

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,156	22,580	868	13,916	4,357	1,576	16,715	6,697	67,865
Diphtheria, tetanus, pertussis (%)	95.6	94.8	95.9	94.6	95.0	95.8	95.7	94.4	95.0
Poliomyelitis (%)	95.6	94.8	95.9	94.6	95.0	95.8	95.7	94.4	95.0
Haemophilus influenzae type b (%)	95.6	95.1	94.2	93.7	93.6	95.7	94.5	94.1	94.5
Measles, mumps, rubella (%)	95.1	93.9	95.7	94.1	93.9	94.7	94.8	93.4	94.2
Hepatitis B (%)	96.8	95.5	96.9	95.4	95.5	96.4	96.3	95.3	95.7
Fully immunised (%)	93.9	92.6	93.9	92.5	92.7	94.1	93.6	91.6	92.8
Change in fully immunised since last quarter (%)	+0.1	-0.3	-0.2	+0.4	-0.2	-1.6	-0.5	+0.2	-0.1

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2007;31:252.

Immunisation coverage for children 'fully immunised' at 6 years of age for Australia decreased by 0.6 percentage points from the previous quarter to 88.2% (Table 3). For 'fully immunised' and all individual vaccines, there were important decreases of greater than 1 percentage point in South Australia, Tasmania, Victoria and Western Australia.

Figure 5 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 12 or 24 months coverage data.

Figure 5. Trends in vaccination coverage, Australia, 1997 to 31 December 2007, by age cohorts

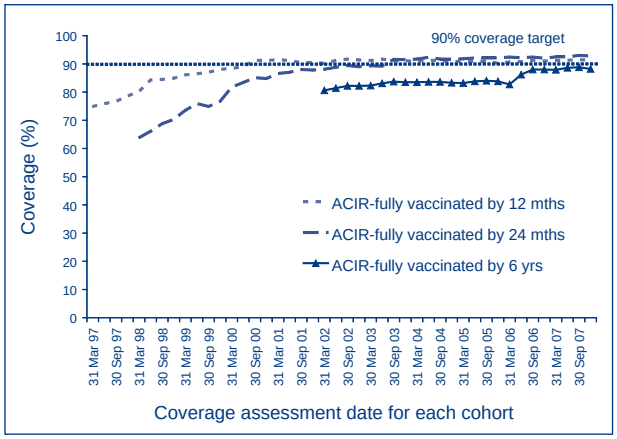


Table 3. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 October to 31 December 2001;* assessment date 31 March 2008

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,061	22,048	872	13,095	4,352	1,483	16,088	6,552	65,551
Diphtheria, tetanus, pertussis (%)	91.5	89.2	88.8	89.2	86.6	87.4	91.0	84.9	89.0
Poliomyelitis (%)	91.3	88.9	88.8	89.0	86.3	87.1	90.9	84.6	88.8
Measles, mumps, rubella (%)	91.0	88.9	89.3	89.0	86.2	87.0	90.8	84.7	88.8
Fully immunised (%)	90.6	88.3	88.3	88.4	85.7	86.4	90.3	83.9	88.2
Change in fully immunised since last quarter (%)	+1.8	-0.8	-0.1	+0.8	-1.9	-1.8	-1.0	-1.3	-0.6

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2003;27:302.

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 5* 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 6 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 2008 are included in Tables 4 and 5. Data include cases reported and entered by 29 April 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.*

There were 2,258 reports to NEPSS of human *Salmonella* infection in the first quarter of 2008, approximately 25% more than in the fourth quarter of 2007. Limited first quarter data from Western Australia were available at the time of preparing this report. We anticipate these data will be included in NEPSS in time for the next quarterly report. Taking into account the limited Western Australia data, the overall count of cases for the remainder of Australia was similar to the recent historical mean incidence of salmonellosis at this time of each year. However, the incidence in 3 states (South Australia, Victoria and Tasmania) was at least 20% higher than the recent historical mean for the period.

During the first quarter of 2008, the 25 most common *Salmonella* types in Australia accounted for 1,478 cases, 65% of all reported human *Salmonella* infections. Eighteen of the 25 most common *Salmonella* infections in the first quarter of 2008 were also among those most commonly reported in the preceding quarter.

The most prominent feature of the current data is an increase in *S.* Typhimurium phage type 135, particularly in Victoria and Tasmania. *S.* Typhimurium phage types 44, 170 and 8 were also increased in Victoria, while *S.* Typhimurium phage type 126 was increased in New South Wales and Victoria. *S.* Montevideo and *S.* Singapore were moderately increased in New South Wales. An increase in *S.* Infantis involved New South Wales, South Australia and Victoria.

S. Virchow phage type 8 has historically been largely confined to Queensland. The recent Australia-wide count of *S.* Virchow phage type 8 is less than the historical average. However, during the first quarter of 2008 there was an increase in reports of *S.* Virchow phage type 8 outside its usual range, involving New South Wales, South Australia, the Northern Territory, Tasmania, Victoria and the Australian Capital Territory.

Table 4. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 January to 31 March 2008, as reported to 29 April 2008

	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA*	Australia
Total all *Salmonella* for quarter	31	573	109	640	174	122	592	17	2,258
Total contributing *Salmonella* types	20	115	45	118	56	14	118	10	218

* Limited first quarter data from Western Australia were available at the time of preparing this report.

Table 5. Top 25 *Salmonella* types identified in Australia, 1 January to 31 March 2008, by state or territory

National rank	*Salmonella* type	State or territory								Total 1st quarter 2008	Last 10 years mean 1st quarter	Year to date 2008	Year to date 2007
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA*				
1	*S.* Typhimurium PT 135	4	60	0	40	8	52	143	6	313	246	313	250
2	*S.* Typhimurium PT 9	3	20	0	7	20	3	57	2	112	199	112	336
3	*S.* Typhimurium PT 44	1	5	0	7	4	7	71	0	95	41	95	183
4	*S.* Typhimurium PT 170	3	40	0	9	0	0	40	0	92	105	92	124
5	*S.* Saintpaul	0	15	12	59	3	0	2	0	91	136	91	137
6	*S.* Virchow PT 8	2	24	7	36	12	5	3	0	89	113	89	87
7	*S.* Birkenhead	0	35	0	45	0	0	3	0	83	101	83	93
8	*S.* Infantis	4	30	3	3	13	0	13	0	66	50	66	60
9	*S.* Mississippi	0	2	0	6	0	43	7	0	58	47	58	76
10	*S.* Chester	1	7	3	26	8	0	3	0	48	70	48	71
11	*S.* Typhimurium PT 197	0	18	0	21	2	0	5	1	47	69	47	93
12	*S.* Typhimurium PT 126	0	25	0	3	3	0	14	0	45	30	45	9
13	*S.* Muenchen	0	10	1	19	2	0	3	0	35	54	35	58
14	*S.* Waycross	1	14	0	19	0	0	1	0	35	46	35	36
15	*S.* Singapore	0	16	0	9	2	0	5	0	32	21	32	24
16	*S.* Hvittingfoss	0	3	3	25	0	0	0	0	31	43	31	41
17	*S.* Montevideo	1	18	0	5	0	0	5	0	29	16	29	42
18	*S.* Aberdeen	1	2	0	21	0	0	1	0	25	47	25	50
19	*S.* Typhimurium PT 8	1	3	0	3	1	0	16	0	24	12	24	13
20	*S.* Weltevreden	0	4	7	11	1	0	0	0	23	16	23	26
21	*S.* Stanley	0	4	0	6	2	0	10	0	22	17	22	37
22	*S.* Typhimurium PT 29	0	4	0	3	11	0	4	0	22	11	22	49
23	*S.* Zanzibar	0	4	2	14	1	0	0	0	21	12	21	12
24	*S.* Potsdam	0	4	0	12	1	0	2	1	20	23	20	26
25	*S.* Reading	0	2	3	14	0	0	1	0	20	12	20	18

* Limited first quarter data from Western Australia were available at the time of preparing this report.

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.

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 *2008;32:135.*

Laboratory confirmed cases of invasive meningococcal disease for the period 1 January to 31 March 2008, 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 2008, by serogroup and state or territory

State or territory	Year	Serogroup													
		A		B		C		Y		W-135		ND		All	
		Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD	Q1	YTD
Australian Capital Territory	08													0	0
	07			1	1					1	1			2	2
New South Wales	08			4	4	1	1	1	1					6	6
	07			12	12	3	1			1		2	2	17	17
Northern Territory	08					1	1							1	1
	07			1	1									1	1
Queensland	08			16	16	2	2							18	18
	07			11	11									11	11
South Australia	08			2	2									2	2
	07			1	1									1	1
Tasmania	08													0	0
	07									1	1			1	1
Victoria	08			4	4									4	4
	07			6	6									6	6
Western Australia	08			3	3							1	1	4	4
	07			3	3									3	3
Total	08			30	30	4	4	1	1			1	1	36	36
	07			35	35	3	3	0	0		1	2	2	41	41

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