# 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 50 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 4,000 and 6,000 consultations are recorded each week.

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

In 2005, eight 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 2005. 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 2005;29:91.

Data from 1 January to 30 September 2005 compared with 2004 are shown as the rate per 1,000 consultations in Figures 5 and 6.

Figure 5. Consultation rates for influenzalike illness, ASPREN, 1 January to 30 September 2005, by week of report

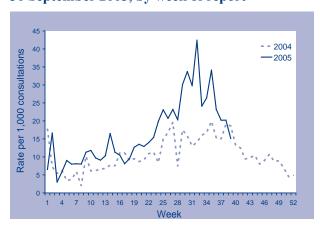
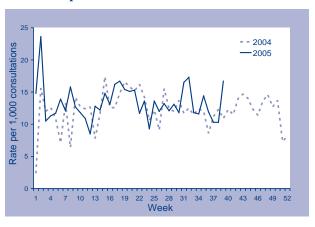


Figure 6. Consultation rates for gastroenteritis, ASPREN, 1 January to 30 September 2005, by week of report



# Meningococcal surveillance

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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 July to 30 September 2005, are included in this issue of Communicable Diseases Intelligence (Table 6).

Table 6. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 July to 30 September 2005, by jurisdiction and serogroup\*

Jurisdiction	Year							Sero	group						
			A	E	3		С	,	Y	W <sup>2</sup>	135	N	D	Α	AII
		Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd
Australian Capital Territory	05			2	3	1	3			0	1			3	7
	04			0	3	3	7							3	10
	03			2	3	2	2							4	5
New South Wales	05			27	60	4	13	0	3	4	7	2	3	37	86
	04			22	60	6	15	1	3	2	4	3	14	34	96
	03			38	75	19	32	1	4	0	1	3	15	61	127
Northern Territory	05			2	5	0	2			0				2	7
	04			0	5	0	0			0	1			0	6
	03			3	9	0	0			1	1			4	10
Queensland	05	0	0	13	34	5	7	0	0	0	0	0	0	18	45
	04	0	1	13	36	8	20	0	1	1	2	0	2	22	62
	03	1	1	17	34	16	31	1	1	0	0	0	8	35	75
South Australia	05			9	13	1	3							10	16
	04			2	11	1	1							3	12
	03			7	15	1	2	1	1	1	1			10	19
Tasmania	05			4	6	0	0							4	6
	04			3	6	5	5			0	1	1	3	9	15
	03			3	3	4	5							7	8
Victoria	05			26	41	3	6	1	1	1	3	2	3	33	55
	04			17	45	3	12	0	3	2	2	1	3	23	65
	03			22	35	17	39	2	2	0	1	1	6	42	83
Western Australia	05			20	29	0	0	0	2		0			20	31
	04			11	23	2	4			1	1			14	28
	03			11	22	2	5	0	1					13	28
Total	05	0	1	103	191	14	38	1	6	5	11	4	6	127	253
	04	0	1	68	189	28	64	1	7	6	11	5	22	108	294
	03	1	1	103	196	61	116	5	9	2	4	4	29	176	355

<sup>\*</sup> Numbers of laboratory-confirmed diagnoses of invasive meningococcal disease made in the same period in 2004 and 2003 are also shown.

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Q3 3rd quarter.

ytd Year to 30 September 2005.

## 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 guarterly. 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. 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 2005;29:92-93.

## Reporting period 1 April to 30 June 2005

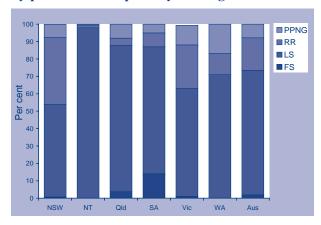
The AGSP laboratories received a total of 1,028 isolates in this quarter of which 1,008 underwent susceptibility testing. This was about 15 per cent more than the 873 gonococci reported for the same period in 2004 and approximates the 980 seen in 2003. Approximately 28 per cent of this total was from New South Wales, 19 per cent each from Victoria and the Northern Territory, 16 per cent from Queensland, 11 per cent from Western Australia and six per cent from South Australia. Small numbers of isolates were also received from Tasmania and the Australian Capital Territory.

### **Penicillins**

In this quarter 267 (26.5%) of all isolates examined were penicillin resistant by one or more mechanisms. Seventy-nine (7.8%) were penicillinase producing *Neisseria gonorrhoea* (PPNG) and 188 (18.7%) resistant by chromosomal mechanisms, (CMRNG). The proportion of all strains resistant to the penicillins by any mechanism ranged from two per cent in the Northern Territory to 46 per cent in New South Wales. High rates of penicillin resistance were also found in Victoria (36%) and Western Australia (29%).

Figure 7 shows the proportions of gonococci fully sensitive (MIC ≤0.03 mg/L), less sensitive (MIC 0.06–0.5 mg/L), relatively resistant (MIC ≥1 mg/L) or else PPNG, aggregated for Australia and by state or territory. A high proportion of those strains classified as PPNG or else resistant by chromosomal mechanisms fail to respond to treatment with penicillins (penicillin, amoxycillin, ampicillin) and early generation cephalosporins.

Figure 7. Categorisation of gonococci isolated in Australia, 1 April to 30 June 2005, 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.

In New South Wales most of the penicillin resistance was due to CMRNG (111, 38.5%) with 22 PPNG (7.6%). The proportion of CMRNG in Victoria (25%) was less than in New South Wales and that of PPNG higher (11.3%) and in Western Australia PPNG were more prominent (17% of all isolates) with 12 per cent CMRNG. The proportion of PPNG in Queensland was eight per cent and in South Australia five per cent. CMRNG were present in Queensland (4.3% of isolates there), South Australia (5%) and in three (1.5%) gonococci from Darwin. No PPNG or CMRNG were reported from Tasmania or the Australian Capital Territory.

## Ceftriaxone

Fifteen isolates with decreased susceptibility to ceftriaxone (MIC range 0.06–0.12 mg/L) were detected. Fourteen were found in New South Wales and one in Queensland. All 15 isolates were penicillin resistant, 14 by chromosomal mechanisms (CMRNG) and one was a PPNG. All 15 were also quinolone resistant (ciprofloxacin MICs 16 mg/L or more). It is emphasised that no treatment failures have been documented locally when a 250 mg IM dose of ceftriaxone has been used.

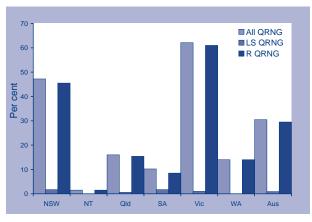
### **Spectinomycin**

All isolates were susceptible to this injectable agent.

#### Quinolone antibiotics

The total number (307) and proportion (30%) of quinolone resistant *N. gonorrhoeae* (QRNG) were both substantially higher than the corresponding figures in the second quarter of 2004 (172 QRNG, 20%) and 2003 (135 isolates, 14%) (Figure 8). The majority of QRNG (298 of 307, 97%) exhibited higher-level resistance. QRNG are defined as those isolates with an MIC to ciprofloxacin equal to or greater than 0.06 mg/L. QRNG are further subdivided into less sensitive (ciprofloxacin MICs 0.06-0.5 mg/L) or resistant (MIC  $\geq$  1 mg/L) groups.

Figure 8. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 April to 30 June 2005, by jurisdiction



LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.
R QRNG Ciprofloxacin MICs ≥1 mg/L.

QRNG were again widely distributed and were detected in all states and territories with the exception of Tasmania and the Australian Capital Territory. The highest proportion of QRNG was found in Victoria where 121 QRNG represented 62 per cent of isolates. In New South Wales there were 136 QRNG (47%), in Queensland 26 (16%), in Western Australia 15 (14%) and in South Australia 6 (10%). Three QRNG were detected in the Northern Territory.

### High level tetracycline resistance

The number (131) and proportion (13%) of gonococci showing high level plasmid mediated tetracycline resistance (TRNG) detected were similar to the 2004 (121, 14%) figures. TRNG were found in most states and territories and represented between 0.5 per cent (Northern Territory) and 38 per cent of isolates (Victoria).

#### Reference

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

## Childhood immunisation coverage

Tables 7, 8 and 9 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 April and 30 June 2004, at 24 months of age for the cohort born between 1 April and 30 June 2003, and at 6 years of age for the cohort born between 1 April and 30 June 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 2005;29:94 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 did not change from the last quarter, remaining at 91.0 per cent (Table 7). There was a substantial decrease in 'fully immunised' coverage by state and territory in only one jurisdiction, the Australian Capital Territory, but despite this decrease of 2.1 per cent, the Australian Capital Territory had coverage of 93.6 per cent.

There was a small increase of 0.4 per cent in coverage for children 'fully immunised' at 24 months of age for Australia, bringing the coverage to 93.7 per cent (Table 8). Coverage for individual vaccines remained largely unchanged in most jurisdictions and was greater than 95 per cent in almost all jurisdictions for all vaccines, except Hib and MMR.

Table 9 shows immunisation coverage estimates for children 'fully immunised' and for individual vaccines at six years of age for Australia and by state or territory. This was unchanged in most jurisdictions, apart from increases in Tasmania and the Australian Capital Territory. Coverage for vaccines assessed at six years is at or near 85 per cent in most jurisdictions, but Western Australia and Queensland still remain below this.

Table 7. Percentage of children immunised at 1 year of age, preliminary results by vaccine and state or territory for the birth cohort 1 April to 30 June 2004; assessment date 30 September 2005

Vaccine				State or	territory	,			
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	952	20,807	900	12,736	4,229	1,305	14,930	6,321	62,180
Diphtheria, tetanus, pertussis (%)	94.0	92.2	92.3	92.0	92.2	93.1	93.6	90.9	92.4
Poliomyelitis (%)	94.0	92.2	91.9	91.9	92.1	93.0	93.5	90.6	92.3
Haemophilus influenzae type b (%)	96.1	93.9	95.2	93.9	94.7	94.9	95.1	93.5	94.3
Hepatitis B (%)	95.8	95.0	95.6	94.6	94.7	94.8	94.9	93.2	94.7
Fully immunised (%)	93.6	90.6	91.7	90.8	91.2	92.0	92.1	89.2	91.0
Change in fully immunised since last quarter (%)	-2.1	+0.0	-0.3	-0.0	+0.1	+0.8	+0.3	-0.8	-0.0

Table 8. Percentage of children immunised at 2 years of age, preliminary results by vaccine and state or territory for the birth cohort 1 April to 30 June 2003, assessment date 30 September 2005

Vaccine				State or	territory				
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	983	21,749	926	13,035	4,442	1,372	15,394	6,261	64,162
Diphtheria, tetanus, pertussis (%)	97.5	95.1	97.0	94.9	95.8	96.9	95.7	94.6	95.3
Poliomyelitis (%)	97.6	95.1	96.8	94.8	95.7	96.8	95.7	94.5	95.2
Haemophilus influenzae type b (%)	95.5	93.0	95.9	93.7	94.4	94.2	94.1	92.2	93.5
Measles, mumps, rubella (%)	95.7	93.1	96.8	93.6	94.5	94.2	94.3	92.8	93.7
Hepatitis B(%)	96.6	95.9	98.4	95.4	96.4	97.0	96.2	95.4	95.9
Fully immunised (%)	94.2	91.6	95.0	92.0	93.0	93.2	92.9	90.7	92.1
Change in fully immunised since last quarter (%)	+2.6	+0.4	+1.4	+0.3	+2.4	-1.4	+0.1	+0.7	+0.4

<sup>\*</sup> The 12 months age data for this cohort was published in Commun Dis Intell 2004;28:546.

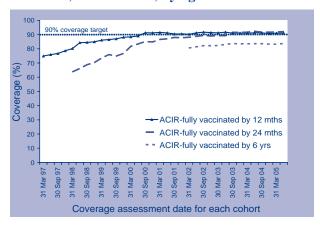
Table 9. Percentage of children immunised at 6 years of age, preliminary results by vaccine and state or territory for the birth cohort 1 April to 30 June 1999; assessment date 30 September 2005

Vaccine				State or t	erritory				
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,091	22,073	846	13,502	4,777	1,598	15,596	6,884	66,367
Diphtheria, tetanus, pertussis (%)	90.7	85.4	83.6	81.7	84.2	86.1	87.7	82.1	84.8
Poliomyelitis (%)	90.8	85.5	84.9	82.0	84.6	86.5	87.9	82.4	85.1
Measles, mumps, rubella (%)	90.9	85.3	84.5	81.9	84.5	86.1	87.9	82.3	84.9
Fully immunised (%)1	90.5	84.3	82.7	80.5	83.3	85.2	86.9	80.5	83.8
Change in fully immunised since last quarter (%)	+2.6	+0.5	-1.5	+0.6	+0.5	+3.3	+0.7	-0.3	+0.5

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Figure 9 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 two years for all age groups. The Figure shows that there have now been eight 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 24-month period and show levels of high coverage for the vaccines included maintained over a significant period of time. Currently, coverage for the more recent vaccines, meningococcal C conjugate at 12 months and pneumococcal conjugate at two, four, and six months, are not included in the 12 or 24 months coverage data.

Figure 9. Trends in vaccination coverage, Australia, 1997 to 2005, by age cohorts



**Acknowledgement:** These figures were provided by Medicare Australia, to specifications provided by the Australian Government Department of Health and Ageing. For further information on these figures or data on the Australian Childhood Immunisation Register please contact the Immunisation Section of Medicare Australia: Telephone: +61 2 6124 6607.

## 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 April to 30 June 2005, as reported to 30 September 2005, are included in this issue of Communicable Diseases Intelligence (Tables 10 and 11).

Table 10. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 April to 30 June 2005, by sex and state or territory of diagnosis

	Sex			Sta	te or t	errito	ry			Т	otals for A	Australia	
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2005	This period 2004	YTD 2005	YTD 2004
HIV diagnoses	Female	0	6	0	0	2	0	8	3	19	33	45	71
	Male	0	106	0	41	16	0	56	12	231	175	430	390
	Not reported	0	0	0	1	0	0	0	0	1	1	1	1
	Total*	0	112	0	42	18	0	64	15	251	209	476	463
AIDS diagnoses	Female	0	1	0	0	0	0	3	0	4	7	12	11
	Male	0	11	0	7	3	0	10	1	32	37	62	82
	Total*	0	12	0	7	3	0	13	1	36	44	74	94
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	2	2	4
	Male	0	4	0	3	1	0	3	1	12	23	24	38
	Total*	0	4	0	3	1	0	3	1	12	25	26	42

<sup>\*</sup> Totals include people whose sex was reported as transgender.

Table 11. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 June 2005, by sex and state or territory

	Sex				State or	territory				
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	30	800	18	238	87	8	326	174	1,681
	Male	248	12,911	123	2,513	863	89	4,859	1,124	22,730
	Not reported	0	234	0	1	0	0	22	0	257
	Total*	278	13,972	141	2,761	951	97	5,226	1,305	24,731
AIDS diagnoses	Female	9	234	2	66	31	4	102	35	483
	Male	92	5,205	42	991	392	48	1,895	415	9,080
	Total*	101	5,455	44	1,059	424	52	2,007	452	9,594
AIDS deaths	Female	6	131	1	41	20	2	59	24	284
	Male	71	3,529	26	645	270	32	1,376	290	6,239
	Total*	77	3,670	27	688	290	34	1,443	315	6,544

<sup>\*</sup> Totals include people whose sex was reported as transgender.

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# 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. These pathogens include Salmonella, E. coli, Vibrio, Yersinia, Plesiomonas, Aeromonas and Campylobacter. Communicable Diseases Intelligence NEPSS quarterly reports include only Salmonella.

Data are based on reports to NEPSS from Australian laboratories of laboratory-confirmed human infection with Salmonella. Salmonella are identified to the level of serovar and, if applicable, phage-type. Infections apparently acquired overseas are included. Multiple isolations of a single Salmonella serovar/phage-type from one or more body sites during the same episode of illness are counted once only. The date of the case is the date the primary diagnostic laboratory isolated a Salmonella from the clinical sample.

Note that the historical quarterly mean counts should be interpreted with caution, and are affected by surveillance artefacts such as newly recognised and incompletely typed Salmonella.

NEPSS is operated by the Microbiological Diagnostic Unit, Public Health Laboratory, Department of Microbiology and Immunology, University of Melbourne; and is overseen by a Steering Committee of state, territory and commonwealth stakeholders. NEPSS can be contacted at the above address or by telephone: +61 3 8344 5701, facsimile: +613 8344 7833 or email joanp@unimelb.edu.au

Reports to the National Enteric Pathogens Surveillance System of Salmonella infection for the period 1 July to 30 September 2005 are included in Tables 12 and 13. Data include cases reported and entered by 25 October 2005. 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 2005;29:93–94.

## Third quarter 2005

The total number of reports to NEPSS of human *Salmonella* infection fell to 1,206 in the third quarter of 2005, 33 per cent less than in second quarter of 2005, consistent with the usual seasonal nadir of salmonellosis in Australia. However, the third quarter count was four per cent more than the comparable third quarter of 2004 and 17 per cent greater than the ten-year historical mean for this period. Much of this increase is accounted for by reports of common salmonellae, in particular *Salmonella* Typhimurium phage types 135, 170 and 197, and the typically overseas-acquired *S.* Enteritidis phage types 1b and 6a.

During the third quarter of 2005, the 25 most common *Salmonella* types in Australia accounted for 724 cases, 60 per cent of all reported human *Salmonella* infections. Twenty of the 25 most common *Salmonella* infections in the third quarter of 2005 were among the 25 most commonly reported in the second guarter of 2005.

S. Typhimurium PT 135 was the most common serovar/phage type. Reports of S. Typhimurium PT 170 declined, manifesting a pattern seen over several years of more marked seasonal variation than most of the other common salmonellae.

Reports of other salmonellae with counts well above historical averages include *S.* Infantis, *S.* Hvittingfoss, and *S.* Typhimurium phage types 12 and U307, and (usually overseas-acquired) *S.* Corvallis.

**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 July to 30 September 2005, as reported to 25 October 2005

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all Salmonella for quarter	24	290	61	312	133	20	214	152	1,206
Total contributing Salmonella types	16	99	32	87	48	10	78	69	212

Table 13. Top 25 Salmonella types identified in Australia, 1 July to 30 September 2005, by state or territory

National	Salmonella type				State or territory	erritory				Total 3rd	Last 10	Year to date	Year to
4		ACT	NSM	Ā	Old	SA	Tas	Vic	WA	2005	3rd quarter	8	date
1	S. Typhimurium PT 135	9	33	0	39	2	7	35	6	134	81	374	449
2	S. Saintpaul	0	7	7	29	2	0	က	2	53	44	317	288
3	S. Typhimurium PT 170	0	28	0	6	0	2	12	~	52	21	403	414
4	S. Typhimurium PT 64	_	0	0	0	44	0	0	0	45	48	52	œ
5	S. Typhimurium PT 9	2	19	0	က	2	0	13	~	43	75	341	286
9	S. Infantis	0	7	4	4	12	2	2	2	36	21	132	111
7	S. Typhimurium PT 197	0	12	0	15	_	0	9	2	36	12	489	205
8	S. Enteritidis PT 1b	0	10	0	0	0	0	œ	00	26	2	35	26
6	S. Chester	0	က	4	7	2	0	_	2	25	22	145	155
10	S. Typhimurium RDNC	0	တ	_	က	က	0	6	0	25	15	84	81
11	S. Enteritidis PT 6a	0	22	0	2	2	0	4	12	25	9	72	20
12	S. Virchow PT 8	_	_	_	17	_	_	_	0	23	22	187	270
13	S. Birkenhead	0	2	0	18	0	0	0	0	23	22	154	200
14	S. Agona	_	9	0	က	2	_	4	4	21	12	52	63
15	S. Hvittingfoss	0	9	2	12	0	0	_	0	21	10	156	116
16	S. Typhimurium PT 12	0	9	0	_	0	0	0	က	19	9	26	203
17	S. Stanley	က	7	0	0	2	0	_	2	15	15	51	09
18	S. Anatum	0	0	_	4	2	0	2	2	14	11	52	70
19	S. Weltevreden	0	4	4	_	0	0	က	2	14	∞	43	58
20	S. Corvallis	0	က	0	2	2	0	0	7	14	_	63	28
21	S. Newport	0	7	0	0	_	0	7	က	13	∞	26	24
22	S. Typhimurium PT U307	0	2	0	2	0	0	9	0	13	7	18	#
23	S. Aberdeen	0	7	0	10	0	0	0	0	12	12	124	91
24	S. Waycross	0	2	0	0	0	0	_	0	12	O	06	66
25	S. Ball	0	0	10	0	0	0	0	0	10	7	14	49

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