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 2003, 13 conditions are being monitored, five of which are related to communicable diseases. These include influenza, gastroenteritis, antibiotic prescription for acute cough, varicella and shingles. Definitions of these conditions were published in Commun Dis Intell *2003;27:125–126.*

Data from 1 July to 30 September 2003 are shown as the rate per 1,000 consultations in Figures 8, 9 and 10.

Figure 8. Consultation rates for influenza-like illness, ASPREN, 1 July to 30 September 2003, by week of report

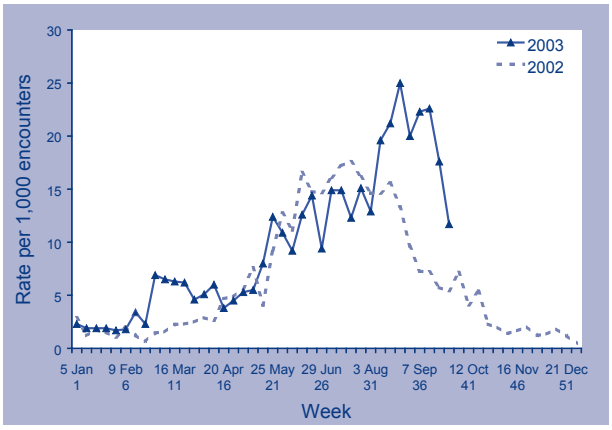


Figure 9. Consultation rates for gastroenteritis, ASPREN, 1 July to 30 September 2003, by week of report

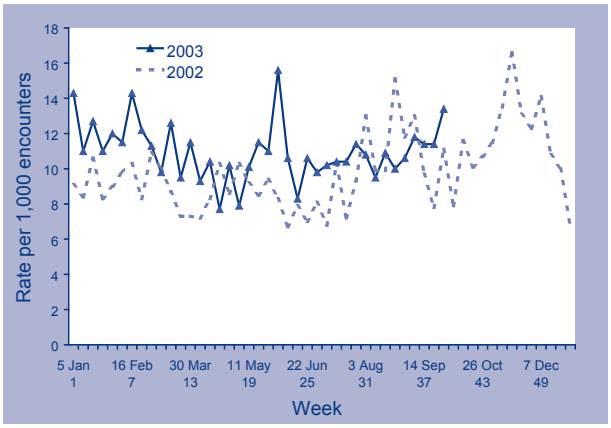
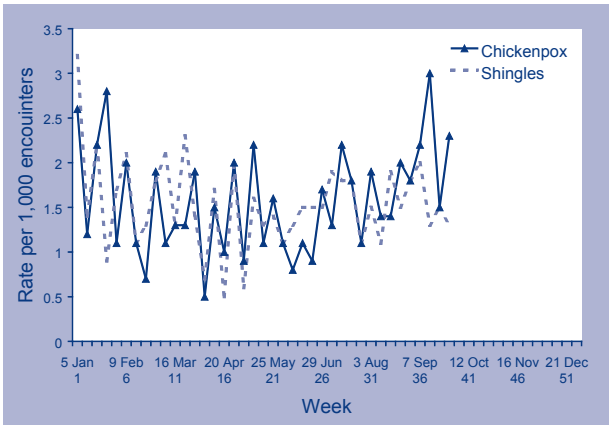


Figure 10. Consultation rates for varicella, ASPREN, 1 July to 30 September 2003, by week of report



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 *2003;27:128.*

Reporting period 1 April to 30 June 2003

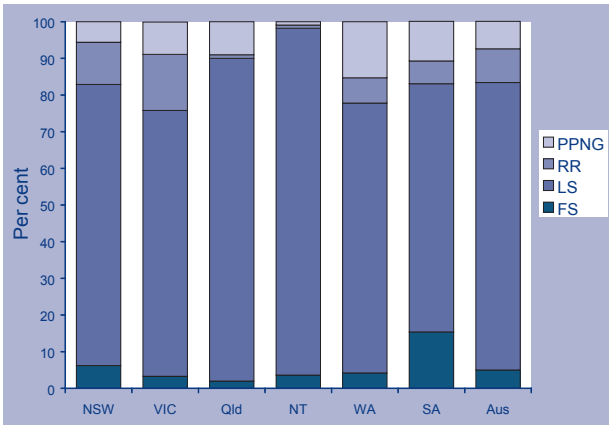
The AGSP laboratories received a total of 980 isolates in the second quarter of 2003 of which 962 remained viable for susceptibility testing. This number approximates the 1,000 strains examined in the same period in 2002. About 32 per cent of this total was from New South Wales, 28 per cent from Victoria, 14 per cent from Queensland, 12 per cent from the Northern Territory and seven per cent from Western Australia and South Australia. Isolates from other centres were few. Numbers examined decreased in New South Wales and Western Australia by about 25 per cent, but increased in Victoria by approximately 50 per cent and substantially in South Australia when compared with data in the same period in 2002. The number of strains from Queensland and Northern Territory examined was similar to last year

Penicillins

In this quarter about 16.6 per cent of all isolates were penicillin resistant by one or more mechanisms—7.5 per cent penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 9.1 per cent by chromosomal mechanisms (CMRNG). The number and proportion of PPNG was little changed from the same period in 2002, but the number of CMRNG decreased from 100 to 88 isolates. The proportion of all strains resistant to the penicillins by any mechanism ranged from 1.8 per cent in the Northern Territory to 24.2 per cent in Victoria.

Figure 11 shows the proportions of gonococci fully sensitive (MIC ≤0.03 mg/L), less sensitive (MIC 0.06–1 mg/L), relatively resistant (MIC ≥1 mg/L) or penicillinase producing aggregated for Australia and by state and territory. The small number of strains from the Australian Capital Territory and Tasmania are aggregated in national data. 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.

Figure 11. Categorisation of gonococci isolated in Australia, 1 April to 30 June 2003, 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.*

The number of PPNG isolated across Australia (n=72) was little different from the corresponding period in 2002 (n=77). The highest proportion of PPNG was found in isolates from Western Australia (15.3 per cent). PPNG were present in all jurisdictions. Slightly more isolates were resistant to the penicillins by separate chromosomal mechanisms (n=88). CMRNG were especially prominent in Victoria (15.3% of isolates) and New South Wales (11.5%). Only a single CMRNG was detected in the Northern Territory.

Ceftriaxone

Three isolates with decreased susceptibility to ceftriaxone were identified in New South Wales and one each in South Australia and Queensland.

Spectinomycin

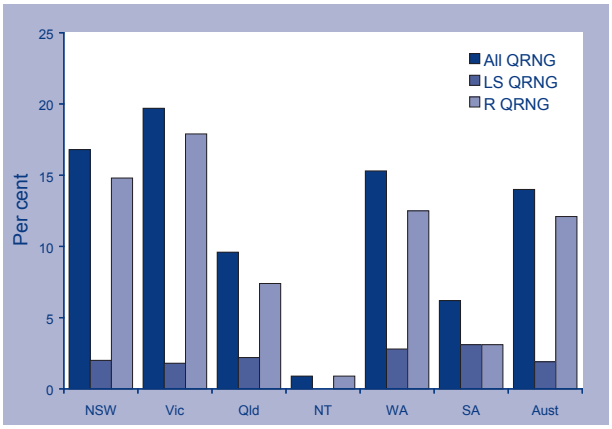
All isolates were susceptible to this injectable agent.

Quinolone antibiotics

The total number (135) and proportion (14%) of all quinolone resistant *N. gonorrhoeae* (QRNG) was slightly higher that seen in the second quarter of 2002 (122 isolates, 12%). The majority of QRNG (117 of 135, 82%) continued to exhibit higher level resistance. Quinolone resistant *N. gonorrhoeae* 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.

QRNG were again widely distributed. The highest numbers were found in Victoria (54) and New South Wales (52) with the highest rate (20%) in Victoria (Figure 12). QRNG rates above five per cent were maintained in all centres except the Northern Territory (0.9%). Details of geographic acquisition of QRNG were available in only 40 instances. Local contact (26) was twice as common as overseas contact (14) indicating that a substantial degree of domestic transmission continues. MICs ranged up to 16 mg/L.

Figure 12. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 April to 30 June 2003, by jurisdiction



LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.

R QRNG Ciprofloxacin MICs ≥1 mg/L.

High level tetracycline resistance

The number (92) and proportion (9.5%) of high level tetracycline resistance (TRNG) isolates were lower than in the second quarter of 2002. TRNG represented between five per cent (South Australia) and 22.2 per cent (Western Australia) of all isolates. TRNG was not found in isolates from the Northern Territory.

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/nchecr. Telephone: +61 2 9332 4648. Facsimile: +61 2 9332 1837. For more information see Commun Dis Intell 2003;27:57.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 April to 30 June 2003, as reported to 30 September 2003, are included in this issue of Communicable Diseases Intelligence (Tables 6 and 7).

Table 6. New diagnoses of HIV infection, new diagnoses of AIDS, and deaths following AIDS occurring in the period 1 April to 30 June 2003, by sex and state or territory of diagnoses

	Sex	State or territory								Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2003	This period 2002	Year to date 2003	Year to date 2002
HIV diagnoses	Female	0	6	0	4	1	0	6	4	21	17	42	49
	Male	2	88	2	26	11	0	51	12	192	158	388	347
	Sex not reported	0	2	0	0	0	0	0	0	2	0	3	1
	Total[1]	2	96	2	30	12	0	57	16	215	175	433	399
AIDS diagnoses	Female	0	0	0	2	0	0	0	0	2	0	5	7
	Male	0	5	0	0	1	0	2	1	9	41	39	97
	Total[1]	0	5	0	2	1	0	2	1	11	41	45	105
AIDS deaths	Female	0	0	0	0	1	0	0	0	1	0	5	2
	Male	0	2	0	1	0	0	2	0	5	17	21	31
	Total[1]	0	2	0	1	1	0	2	0	6	17	26	33

1. Totals include people whose sex was reported as transgender.

Table 7. Cumulative diagnoses of HIV infection, AIDS, and deaths following AIDS since the introduction of HIV antibody testing to 30 June 2003 and reported, by sex and state or territory

	Sex	State or territory								
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	28	705	14	202	79	7	281	154	1,470
	Male	240	12,145	119	2,325	765	85	4,495	1,039	21,213
	Not reported	0	236	0	0	0	0	24	0	260
	Total[1]	268	13,112	133	2,535	844	92	4,818	1,199	23,001
AIDS diagnoses	Female	9	213	0	56	30	4	87	33	432
	Male	90	4,943	38	932	377	47	1,791	397	8,615
	Total[1]	99	5,170	38	990	407	51	1,887	432	9,074
AIDS deaths	Female	4	125	0	38	20	2	57	22	268
	Male	71	3,402	26	611	252	31	1,334	273	6,000
	Total[1]	75	3,536	26	651	272	33	1,398	296	6,287

1. Totals include people whose sex was reported as transgender.

Childhood immunisation coverage

Tables 8, 9 and 10 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 2002, at 24 months of age for the cohort born between 1 April and 30 June 2001, and at 6 years of age for the cohort born between 1 April and 30 June 1997 according to the Australian Standard Vaccination Schedule.

A full description of the methodology used can be found in 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 1256, Email: brynleyh@chw.edu.au.

Immunisation coverage for 'fully immunised' children at 12 months for Australia has increased from the last quarter by 0.5 percentage points to 91.7 per cent (Table 8). There was very little change in 'fully immunised' coverage by state or territory. The Northern Territory showed the biggest change (–1.8%). Four jurisdictions had changes in coverage greater than 0.8 per cent for individual vaccines: Victoria, with increases in coverage for diphtheria, tetanus, pertussis (DTP) (+1.1%), and poliomyelitis (OPV) (+1.1%); Queensland, with increases in coverage for DTP (+0.9%), and OPV (+0.9%); the Australian Capital Territory (the ACT) with increases in coverage for *Haemophilus influenzae* type b (Hib) (+1.0%) and hepatitis B (hep B) (+1.6%); and the Northern Territory, with decreases in coverage for Hib (–2.0%) and hep B (–0.9%).

Coverage measured by 'fully immunised' at 24 months of age for Australia decreased marginally from the last quarter by 0.1 percentage point to 89.2 per cent (Table 9). Coverage for individual vaccines for Australia basically remained unchanged with DTP still 3–4 percentage points lower than other vaccines for this age group. This difference was due to the greater number of DTP doses required to be considered up-to-date at 24 months of age. The only important jurisdictional changes in coverage at 24 months of age occurred in the Australian Capital Territory, with a decrease in DTP (–2.0%), MMR (–1.0%) and 'fully immunised' (–1.8%) coverage, and a 1.3 per cent increase in polio coverage.

Table 10 shows immunisation coverage estimates for 'fully immunised' and for individual vaccines at six years of age for Australia and by state or territory. 'Fully immunised' coverage at six years of age for Australia increased by 0.8 percentage points from the previous quarter to 83.1 per cent with significant increases in the Australian Capital Territory (+2.7%) and South Australia (+2.0%). Encouragingly, coverage for all individual vaccines at six years of age increased in all states and territories with some substantial increases in some jurisdictions. There were significant increases in measles, mumps and rubella (MMR) coverage in the Australian Capital Territory (+3.2%), the Northern Territory (+2.4%) and South Australia (+1.7%), and similar increases in coverage for DTP in the same three jurisdictions. Coverage for individual vaccines assessed at six years, is now over 85 per cent in a number of different jurisdictions, and close to 85 per cent in most jurisdictions. Whilst it is still a way off from the coverage target of 90 per cent, it is encouraging to see gains being made in coverage for children in this age group. Assuming there is no differential reporting of immunisations to the ACIR by providers for children of different ages, it seems likely that these increases in coverage are a result of an increase in uptake of immunisation at six years of age.

Table 8. Proportion of children immunised at 1 year of age, preliminary results by disease and State for the birth cohort 1 April to 30 June 2002; assessment date 30 September 2003

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Number of children	1,012	20,945	890	12,409	4,199	1,408	14,991	6,068	61,922
Diphtheria, tetanus, pertussis (%)	92.9	92.9	92.3	92.9	92.8	92.6	93.8	91.1	92.9
Poliomyelitis (%)	92.8	92.9	92.0	92.8	92.7	92.5	93.7	90.9	92.8
Haemophilus influenzae type b (%)	94.8	94.5	94.8	94.9	95.1	95.2	95.4	93.9	94.8
Hepatitis B (%)	95.9	95.6	96.4	95.3	95.6	95.2	95.2	93.7	95.3
Fully immunised (%)	91.6	91.5	89.9	92.1	91.6	92.1	92.6	89.7	91.7
Change in fully immunised since last quarter (%)	+0.1	+0.5	-1.8	+1.0	+0.2	+0.2	+0.9	-0.2	+0.5

Figure 13 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, especially for children in the 12 and 24 month age groups.

Acknowledgment: These figures were provided by the Health Insurance Commission (HIC), to specifications provided by the Commonwealth 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 the HIC: Telephone: +61 2 6124 6607.

Figure 13. Trends in vaccination coverage, Australia, 1997 to 2003, by age cohorts

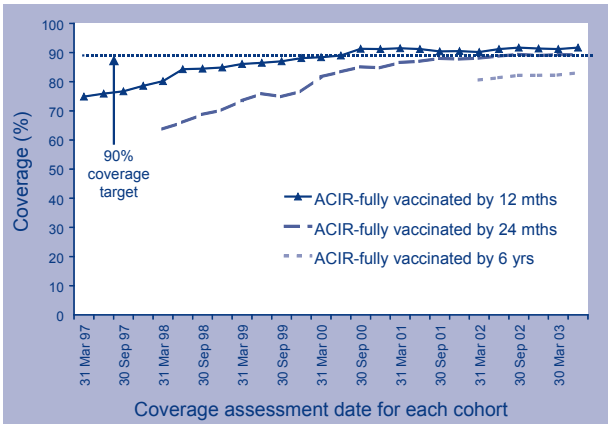


Table 9. Proportion of children immunised at 2 years of age, preliminary results by disease and State for the birth cohort 1 April to 30 June 2001; assessment date 30 September 2003[1]

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	960	21,152	900	13,029	4,348	1,414	14,822	6,107	62,732
Diphtheria, tetanus, pertussis (%)	88.4	90.8	90.1	92.1	91.9	93.9	91.8	89.6	91.3
Poliomyelitis (%)	94.7	95.0	96.7	95.0	95.8	96.5	95.2	94.5	95.1
Haemophilus influenzae type b (%)	93.1	93.6	95.1	94.2	94.6	95.7	94.3	92.8	94.0
Measles, mumps, rubella (%)	92.4	93.7	95.4	94.5	94.7	95.3	94.5	93.2	94.1
Hepatitis B(%)	94.8	95.7	98.0	95.6	96.0	97.2	96.1	95.2	95.8
Fully immunised (%)[2]	85.1	88.5	89.4	90.0	90.2	93.1	89.9	87.4	89.2
Change in fully immunised since last quarter (%)	-1.8	+0.0	+0.5	+0.1	-0.3	-0.5	-0.6	+0.4	-0.1

1. The 12 months age data for this cohort was published in *Commun Dis Intell* 2002;26:627.
2. These data relating to 2-year-old children should be considered as preliminary. The proportions shown as 'fully immunised' appear low when compared with the proportions for individual vaccines. This is at least partly due to poor identification of children on immunisation encounter forms.

Table 10. Proportion of children immunised at 6 years of age, preliminary results by disease and State for the birth cohort 1 April to 30 June 1997; assessment date 30 September 2003

Vaccine	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total number of children	1,044	21,975	809	13,391	4,686	1,557	15,832	6,443	65,737
Diphtheria, tetanus, pertussis (%)	84.7	84.7	84.3	84.1	85.0	84.3	87.1	82.8	85.0
Poliomyelitis (%)	84.7	84.7	85.3	84.1	85.3	84.5	87.3	82.9	85.1
Measles, mumps, rubella (%)	85.0	83.4	85.4	83.9	84.4	83.2	87.0	82.7	84.4
Fully immunised (%)[1]	83.1	82.1	81.6	82.4	83.3	82.3	85.8	81.1	83.1
Change in fully immunised since last quarter (%)	+2.8	+0.9	+0.5	+0.4	+2.0	+0.1	+0.5	+0.5	+0.8

1. These data relating to 6-year-old children should be considered as preliminary. The proportions shown as 'fully immunised' appear low when compared with the proportions for individual vaccines. This is at least partly due to poor identification of children on immunisation encounter forms.

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 *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 (such as S. *Typhimurium 197 and* S. *Typhimurium U290) and incompletely typed* Salmonella.

Reported by Joan Powling (NEPSS Co-ordinator) and Mark Veitch (Public Health Physician), Microbiological Diagnostic Unit — Public Health Laboratory, Department of Microbiology and Immunology, University of Melbourne. NEPSS can be contacted at the above address or by telephone: +61 3 8344 5701, facsimile: +61 3 9625 2689. For more information see Commun Dis Intell *2003;27:129.*

Reports to the National Enteric Pathogens Surveillance System of Salmonella infection for the period 1 July to 30 September 2003 are included in Tables 11 and 12. Data include cases reported and entered by 14 October 2003. Counts are preliminary, and subject to adjustment after completion of typing and reporting of further cases to NEPSS.

Third quarter 2003

The total number of reports to NEPSS of human *Salmonella* infection declined to 879 in the third quarter of 2003, 42 per cent less than the second quarter of 2003. The incidence of human salmonellosis is lowest in the third quarter of each year. Case counts to 14 October 2003 are approximately 90 per cent of the expected final counts for the quarter.

During the third quarter of 2003, the 25 most common *Salmonella* types in Australia accounted for 504 (57%) of all reported human *Salmonella* infections.

Seventeen of the 25 most common *Salmonella* infections in the second quarter of 2003 were amongst the 25 most commonly reported in the previous quarter.

Although counts of *S*. Typhimurium phage types 135, 9 and 170 and *S*. Infantis declined compared with the previous quarter, they remained among the six most common salmonellae in the nation and were mostly reported from the eastern mainland states.

S. Typhimurium phage type 170 was the fourth most commonly reported *Salmonella* in Australia in the third quarter of 2003. Reports of this phage type continue to exceed historical averages. There were a further five reports of the similar phage type, *S*. Typhimurium phage type 108.

Reports of *S*. Typhimurium phage type U290 have increased progressively since 2001.

Acknowledgement

We thank scientists, diagnostic and reference laboratories, State and Territory health departments, and the Australian Government Department of Health and Ageing for their contributions to NEPSS.

Table 11. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 July to 30 September 2003, as reported to 14 October 2003

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all *Salmonella* for quarter	14	216	62	240	58	24	177	88	879
Total contributing *Salmonella* types	12	78	31	90	36	14	76	48	183

Table 12. Top 25 *Salmonella* types identified in Australian States and Territories, 1 July to 30 September 2003

National rank	*Salmonella* type	State or territory								Total 3rd quarter 2003	Last 10 years mean 3rd quarter	Year to date 2003	Year to date 2002
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
1	*S.* Typhimurium 135	0	23	2	7	1	1	11	8	53	75	558	526
2	*S.* Typhimurium 9	2	14	2	4	2	2	14	3	43	74	337	503
3	*S.* Saintpaul	2	8	4	21	2	0	3	3	43	43	231	313
4	*S.* Typhimurium 170	1	23	0	4	1	4	6	0	39	16	338	320
5	*S.* Typhimurium U290	1	11	0	1	0	1	19	1	34	3	111	80
6	*S.* Infantis	1	16	1	2	3	0	7	0	30	19	163	85
7	*S.* Typhimurium 197	0	6	0	12	0	0	3	0	21	3	130	48
8	*S.* Typhimurium RDNC	0	6	0	2	3	0	4	5	20	17	51	49
9	*S.* Muenchen	0	1	5	4	0	1	3	6	20	16	108	101
10	*S.* Chester	0	1	5	6	1	0	0	6	19	20	173	133
11	*S.* Birkenhead	0	5	0	12	0	0	0	1	18	21	142	194
12	*S.* Virchow 8	0	1	1	14	0	0	1	0	17	16	127	253
13	*S.* Hvittingfoss	0	1	1	10	0	0	3	0	15	8	74	131
14	*S.* Adelaide	0	2	4	1	4	0	0	2	13	8	26	29
15	*S.* Oranienburg	0	3	0	0	0	0	0	9	12	7	42	24
16	*S.* Typhimurium 126	0	1	0	2	0	3	2	3	11	18	53	172
17	*S.* Agona	0	1	0	6	1	0	1	2	11	13	53	65
18	*S.* Stanley	0	1	0	4	0	0	6	0	11	12	34	42
19	*S.* Aberdeen	0	0	1	10	0	0	0	0	11	12	66	114
20	*S.* Typhimurium 12	0	2	0	3	3	0	3	0	11	3	73	53
21	*S.* Bovismorbificans 32	0	3	0	2	0	0	6	0	11	2	16	4
22	*S.* Typhimurium 6 var 1	1	6	0	2	1	0	1	0	11	1	21	6
23	*S.* Typhimurium 4	0	3	0	0	6	0	1	0	10	6	54	49
24	*S.* Ball	0	0	10	0	0	0	0	0	10	5	39	47
25	*S.* Zanzibar	0	0	0	6	1	0	3	0	10	5	34	17