# 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 40 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 3,000 and 4,000 consultations are recorded each week.*

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

*In 2006, six conditions are being monitored, four of which are related to communicable diseases. These include influenza, gastroenteritis, varicella and shingles. Definitions of these conditions were published in* Commun Dis Intell *2006;30:158.*

*Data from 1 January to 30 June 2006 compared with 2005 are shown as the rate per 1,000 consultations in Figures 5 and 6.*

**Figure 5. Consultation rates for influenza-like illness, ASPREN, 1 January to 30 June 2006, by week of report**

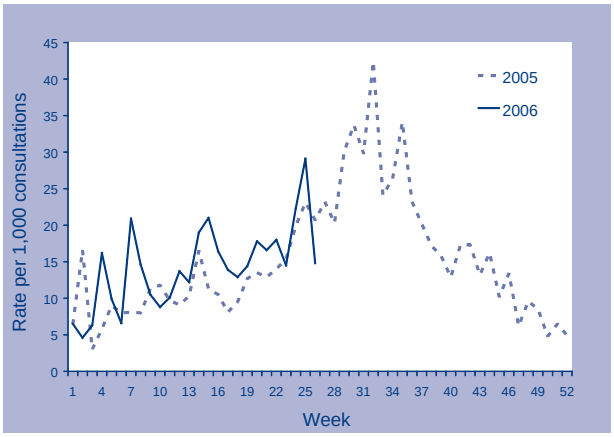
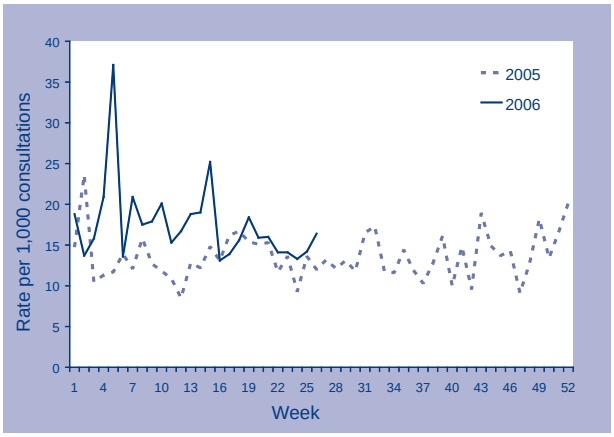



**Figure 6. Consultation rates for gastroenteritis, ASPREN, 1 January to 30 June 2006, by week of report**



# *Childhood immunisation coverage*

*Tables 6, 7 and 8 provide the latest quarterly report on childhood immunisation coverage from the Australian Childhood Immunisation Register (ACIR).*

*The data show the percentage of children fully immunised at 12 months of age for the cohort born between 1 January and 31 March 2005, at 24 months of age for the cohort born between 1 January and 31 March 2004, and at 6 years of age for the cohort born between 1 January and 31 March 2000 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 *2006;30:157 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 0.5 percentage points to 90.7 per cent (Table 6), whilst coverage for all individual vaccines due at 12 months of age also increased by 0.4–0.5 percentage points. The only significant movements in coverage for individual vaccines by jurisdiction was in Tasmania, where coverage for all four vaccines due at 12 months increased by 2.5–2.8 percentage points.

Immunisation coverage for children 'fully immunised' at 24 months of age for Australia also increased marginally from the last quarter by 0.3 percentage points to 92.4 per cent (Table 7). There were no significant changes in coverage in any jurisdiction for 'fully immunised' coverage or for coverage for individual vaccines. It is notable that the estimate for 'fully immunised' at 24 months of age has been higher than the 12 months coverage estimate since the 18 month DTPa booster was no longer required from September 2003.

It is also notable that, for the two vaccines where no further doses are due between 6 months and 24 months of age (DTP and polio), coverage at the national level was 95.2 per cent and 95.2 per cent respectively at 24 months versus 92.2 and 92.1 per cent at 12 months. This suggests that delayed notification or delayed vaccination is making an important contribution to the coverage estimates at 12 months of age and that the 'fully immunised' estimate in particular is likely to be a minimum estimate.

Table 8 shows immunisation coverage estimates for 'fully immunised' and for individual vaccines at 6 years of age for Australia and by state or territory. Surprisingly, 'fully immunised' coverage for Australia decreased 1.1 percentage points and is the lowest it's been since early 2003. Coverage decreased in almost all jurisdictions except in the Northern Territory where it increased by 2.6 percentage points. Victoria and Western Australia experienced the most significant decreases, 2 and 1.8 percentage points respectively. It appears that the driver of this decrease is a drop in coverage for polio vaccine, which mirrored the decrease in 'fully immunised' coverage. A change in the immunisation schedule occurred in November 2005, with oral polio vaccine replaced with the injectable inactivated poliovirus vaccine, together with DTPa. It is possible that this change may have been associated with problems in completing encounter forms.

Figure 7 shows the trends in vaccination coverage from the first ACIR-derived published coverage estimates in 1997 to the current estimates. There is a clear trend of increasing vaccination coverage over time for children aged 12 months, 24 months and 6 years, although the rate of increase has slowed over the past two years for all age groups. The Figure shows that there have now been 11 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 18 month DTPa vaccine. However, both measures have been above 90 per cent for this 30-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 2, 4, and 6 months, are not included in the 12 or 24 months coverage data respectively.

**Figure 7. Trends in vaccination coverage, Australia, 1997 to 2005, by age cohorts**

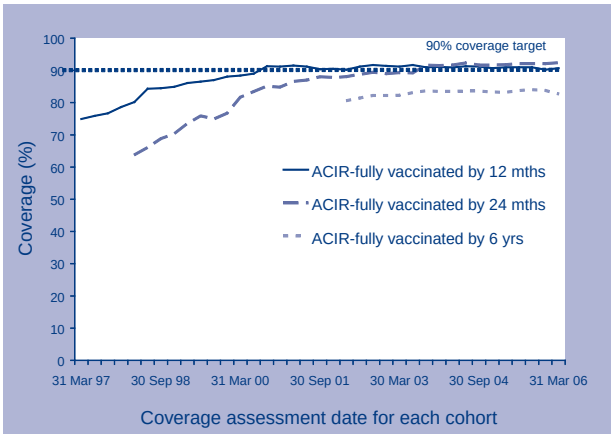


**Table 6. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 2005; assessment date 30 June 2006**

| Vaccine | State or territory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | Australia |
| Total number of children | 1,058 | 22,163 | 863 | 13,601 | 4,474 | 1,376 | 15,462 | 6,612 | 65,609 |
| Diphtheria, tetanus, pertussis (%) | 91.4 | 91.8 | 91.4 | 92.1 | 92.2 | 95.6 | 93.4 | 90.6 | 92.2 |
| Poliomyelitis (%) | 91.4 | 91.7 | 91.1 | 92.0 | 91.9 | 95.4 | 93.3 | 90.5 | 92.1 |
| *Haemophilus influenzae* type b (%) | 93.7 | 93.5 | 94.9 | 94.2 | 94.8 | 96.1 | 94.9 | 93.7 | 94.2 |
| Hepatitis B (%) | 93.8 | 94.8 | 95.5 | 94.6 | 95.3 | 96.0 | 94.8 | 93.5 | 94.7 |
| Fully immunised (%) | 90.7 | 90.1 | 90.6 | 90.8 | 91.0 | 93.8 | 91.8 | 89.1 | 90.7 |
| Change in fully immunised since last quarter (%) | -1.4 | +0.1 | -0.9 | +0.5 | +0.4 | +2.6 | +1.5 | -0.2 | +0.5 |

**Table 7. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 2004; assessment date 30 June 2006***

| Vaccine | State or territory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | Australia |
| Total number of children | 1,053 | 21,756 | 900 | 13,417 | 4,513 | 1,367 | 15,813 | 6,600 | 65,419 |
| Diphtheria, tetanus, pertussis (%) | 96.8 | 95.0 | 97.3 | 94.9 | 94.7 | 96.3 | 96.0 | 94.4 | 95.2 |
| Poliomyelitis (%) | 96.8 | 94.9 | 97.3 | 94.9 | 94.8 | 96.4 | 95.9 | 94.4 | 95.2 |
| *Haemophilus influenzae* type b (%) | 95.2 | 93.3 | 95.0 | 93.9 | 93.5 | 95.3 | 94.6 | 92.7 | 93.8 |
| Measles, mumps, rubella (%) | 95.3 | 93.4 | 95.7 | 93.8 | 94.1 | 95.0 | 95.0 | 93.1 | 94.0 |
| Hepatitis B(%) | 97.3 | 95.7 | 97.8 | 95.5 | 95.5 | 97.0 | 96.4 | 95.2 | 95.8 |
| Fully immunised (%) | 94.2 | 91.7 | 94.4 | 92.2 | 92.2 | 93.6 | 93.5 | 91.3 | 92.4 |
| Change in fully immunised since last quarter (%) | +2.1 | +0.1 | +0.1 | +0.4 | +1.4 | -0.8 | +0.3 | +1.2 | +0.3 |

* The 12 months age data for this cohort was published in *Commun Dis Intell* 2005;29:329.

**Table 8. Percentage of children immunised at 6 years of age, preliminary results by disease and state or territory for the birth cohort 1 January to 31 March 2000; assessment date 30 June 2006**

| Vaccine | State or territory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | Australia |
| Total number of children | 1,014 | 22,676 | 879 | 13,812 | 4,682 | 1,561 | 16,007 | 6,800 | 67,431 |
| Diphtheria, tetanus, pertussis (%) | 85.9 | 85.5 | 86.3 | 84.4 | 83.5 | 84.2 | 87.5 | 79.9 | 85.0 |
| Poliomyelitis (%) | 85.1 | 84.1 | 86.2 | 83.2 | 83.1 | 83.8 | 85.9 | 78.7 | 83.8 |
| Measles, mumps, rubella (%) | 84.8 | 85.2 | 86.2 | 84.5 | 83.6 | 84.1 | 87.6 | 79.9 | 85.0 |
| Fully immunised (%)[1] | 83.2 | 83.0 | 84.6 | 81.8 | 82.4 | 82.6 | 85.1 | 77.3 | 82.7 |
| Change in fully immunised since last quarter (%) | -3.8 | -1.0 | +2.6 | -0.0 | -0.2 | -1.0 | -2.0 | -1.7 | -1.1 |

# *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 *2006;30:157.*

### Reporting period 1 January to 31 March 2006

The AGSP laboratories received a total of 1,110 isolates in this quarter of which 1,089 underwent susceptibility testing. This is slightly more than the 985 reported in the first quarter of 2005. A total of 1,001 isolates were received for the same period in 2004 and 1,051 in 2003. About 31 per cent of this total was from New South Wales, 26 per cent from Victoria, 13 per cent from each of Queensland and the Northern Territory, 9 per cent from Western Australia and 5 per cent from South Australia. Small numbers of isolates were also received from Tasmania and the Australian Capital Territory.

### Penicillins

In this quarter 366 (33.6%) of all isolates examined were penicillin resistant by one or more mechanisms. Ninety (8.3%) were penicillinase producing (PPNG) and 276 (25.3%) resistant by chromosomal mechanisms, (CMRNG). The proportion of all strains resistant to the penicillins by any mechanism ranged from 3.4 per cent in the Northern Territory to 51 per cent in New South Wales.

Figure 8 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 penicillinase producing 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.

The highest number of PPNG was found in Victoria where the 32 PPNG were 10.9 per cent of all isolates. Thirteen PPNG representing 13.5 per cent of all isolates were found in Western Australia, 18 (12.5%) in Queensland and 20 (5.8%) in New South Wales. Five PPNG were found in the Northern Territory. South Australia was the only jurisdiction with no PPNG. More isolates were resistant to the penicillins by separate chromosomal mechanisms and CMRNG notably increased in both New South Wales (156 isolates, 45.5% of all gonococci tested, double the 2005 number and proportion) and Victoria (86 isolates, 29.4%, twice the number in 2005). Increases in CMRNG were also noted in Queensland over the equivalent period in 2005 (to 13 from 5 and 10.4% from 2.8% of isolates) and Western Australia (10, 10.4%) and eight (14%) in South Australia. CMRNG were reported from Tasmania and the Australian Capital Territory, but not the Northern Territory.

**Figure 8. Categorisation of gonococci isolated in Australia, 1 January to 31 March 2006, by penicillin susceptibility and region**


FS Fully sensitive to penicillin, MIC ≤0.03 mg/L.

LS Less sensitive to penicillin, MIC 0.06–0.5 mg/L.

RR Relatively resistant to penicillin, MIC ≥1 mg/L.

PPNG Penicillinase producing *Neisseria gonorrhoeae.*

### Ceftriaxone

Seven isolates with decreased susceptibility to ceftriaxone (MIC range 0.06–0.12 mg/L) were detected; five in New South Wales and two in Queensland. Fifteen strains of this type were found in this period in 2005.

### Spectinomycin

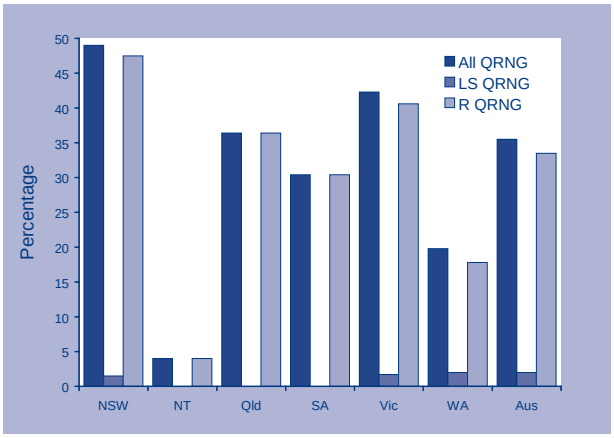
All isolates susceptible to this injectable agent.

### Quinolone antibiotics

The total number (387) and proportion (35.5%) of quinolone resistant *N. gonorrhoeae* (QRNG) were both substantially higher than the corresponding figures in the first quarter of 2005 (283 QRNG, 29.7%), 2004 (188 QRNG, 20.5%) and 2003 (108 isolates, 11.5%). The majority of QRNG (375 of 387, 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 ≥1 mg/L) groups.

QRNG were again widely distributed and were detected in all jurisdictions (Figure 9). The highest number and proportion of QRNG was found in New South Wales where 168 QRNG represented 49 per cent of isolates. In Victoria there were 124 QRNG (42.3% of isolates), in Queensland 52 (36.4%), in South Australia 17 (30.4%) and in Western Australia 19 (19.6%). Six QRNG were detected in the Northern Territory and two each in Tasmania and in the Australian Capital Territory. These numbers represent increases, sometimes considerable, in all states and territories, except for Victoria where numbers decreased.

**Figure 9. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 January to 31 March 2006 , by jurisdiction**




LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.

R QRNG Ciprofloxacin MICs ≥1 mg/L.

### High level tetracycline resistance

Nationally the number (115) and proportion (10.6%) of high level tetracycline resistant *Neisseria gonorrhoeae* (TRNG) detected decreased when compared with 2005 data (145 QRNG, 15.5%) but approximated the 2004 (107, 11.7%) figures. TRNG were found in all states and territories.

### Reference

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

# *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 *2006;30:157.*

*Laboratory confirmed cases of invasive meningococcal disease for the period 1 April to 30 June 2006, are included in this issue of* Communicable Diseases Intelligence *(Table 9).*

**Table 9. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 April to 30 June 2006, by jurisdiction and serogroup**

| Jurisdiction | Year | Serogroup | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | | B | | C | | Y | | W135 | | ND | | All | |
| | | Q2 | YTD | Q2 | YTD | Q2 | YTD | Q2 | YTD | Q2 | YTD | Q2 | YTD | Q2 | YTD |
| Australian Capital Territory | 06 | | | | | 1 | 1 | | | | | | | 1 | 1 |
| | 05 | | | 1 | 2 | 1 | 2 | | | | | | | 2 | 4 |
| | 04 | | | 0 | 4 | 2 | 4 | | | | | | | 2 | 8 |
| New South Wales | 06 | | | 13 | 22 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 15 | 29 |
| | 05 | | | 17 | 33 | 2 | 9 | 2 | 3 | 3 | 3 | 0 | 1 | 24 | 49 |
| | 04 | | | 22 | 37 | 5 | 9 | 1 | 2 | 2 | 2 | 5 | 11 | 37 | 61 |
| Northern Territory | 06 | | | 1 | 2 | | | | | | | | | 1 | 2 |
| | 05 | | | 2 | 3 | 2 | 2 | | | | | | | 4 | 5 |
| | 04 | | | 1 | 6 | 1 | 1 | | | 1 | 1 | | | 3 | 8 |
| Queensland | 06 | 2 | 2 | 10 | 25 | 3 | 4 | | | | | | | 15 | 31 |
| | 05 | | | 12 | 21 | 2 | 6 | | | | | | | 14 | 27 |
| | 04 | 1 | 1 | 11 | 23 | 5 | 12 | 1 | 1 | 1 | 1 | 6 | 8 | 19 | 40 |
| South Australia | 06 | | | 3 | 6 | | | 1 | 1 | | | | | 4 | 7 |
| | 05 | | | 4 | 4 | 0 | 2 | | | | | | | 4 | 6 |
| | 04 | | | 5 | 9 | | | | | | | | | 5 | 9 |
| Tasmania | 06 | | | 2 | 3 | 0 | 1 | | | | | | | 2 | 4 |
| | 05 | | | 2 | 2 | | | | | | | | | 2 | 2 |
| | 04 | | | 0 | 2 | | | | | 1 | 1 | 1 | 3 | 2 | 6 |
| Victoria | 06 | | | 19 | 29 | 0 | 2 | 0 | 1 | 0 | 2 | | | 19 | 34 |
| | 05 | 1 | 1 | 8 | 15 | 2 | 3 | | | 0 | 2 | 0 | 1 | 11 | 22 |
| | 04 | | | 18 | 28 | 9 | 9 | 1 | 3 | | | 1 | 2 | 25 | 42 |
| Western Australia | 06 | | | 4 | 9 | | | | | | | | | 4 | 9 |
| | 05 | | | 4 | 9 | | | 1 | 2 | | | | | 5 | 11 |
| | 04 | | | 8 | 12 | 1 | 3 | | | | | | | 9 | 14 |
| Total | 06 | 2 | 2 | 52 | 96 | 5 | 10 | 2 | 3 | 0 | 3 | 0 | 3 | 61 | 117 |
| | 05 | 1 | 1 | 50 | 89 | 9 | 24 | 3 | 5 | 3 | 5 | 0 | 2 | 66 | 126 |
| | 04 | 1 | 1 | 65 | 121 | 19 | 37 | 4 | 6 | 5 | 5 | 8 | 18 | 102 | 188 |

Q2 = 2nd quarter.

YTD = Year to 30 June 2006.

## *HIV and AIDS surveillance*

*National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (Australian Capital Territory, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the State and Territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.*

*Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, and annually in 'HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia, annual surveillance report'. The reports are available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Internet: http://www.med.unsw.edu.au/nchecr. Telephone: +61 2 9332 4648. Facsimile: +61 2 9332 1837. For more information see* Commun Dis Intell *2005;29:91–92.*

*HIV and AIDS diagnoses and deaths following AIDS reported for 1 January to 31 March 2006, as reported to 30 June 2006, 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 January to 31 March 2006, 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 2005 | This period 2004 | YTD 2005 | YTD 2004 |
| HIV diagnoses | Female | 2 | 17 | 0 | 3 | 3 | 0 | 4 | 7 | 36 | 26 | 36 | 26 |
| | Male | 2 | 94 | 3 | 24 | 13 | 1 | 64 | 6 | 207 | 204 | 207 | 204 |
| | Not reported | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | Total* | 4 | 112 | 3 | 27 | 16 | 1 | 68 | 13 | 244 | 230 | 244 | 230 |
| AIDS diagnoses | Female | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 8 | 2 | 8 |
| | Male | 0 | 19 | 1 | 0 | 1 | 0 | 13 | 0 | 34 | 43 | 34 | 43 |
| | Total* | 0 | 20 | 1 | 0 | 1 | 0 | 13 | 1 | 36 | 51 | 36 | 51 |
| AIDS deaths | Female | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 4 | 2 | 4 | 2 |
| | Male | 0 | 4 | 0 | 2 | 1 | 0 | 2 | 0 | 9 | 14 | 9 | 14 |
| | Total* | 0 | 5 | 0 | 4 | 1 | 0 | 3 | 0 | 13 | 16 | 13 | 16 |

* 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 31 March 2005, and reported by 30 June 2006, by sex and state or territory**

| | Sex | State or territory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | Australia |
| HIV diagnoses | Female | 32 | 834 | 18 | 247 | 94 | 8 | 344 | 189 | 1,766 |
| | Male | 257 | 13,194 | 128 | 2,613 | 896 | 96 | 5,058 | 1,167 | 23,409 |
| | Not reported | 0 | 231 | 0 | 0 | 0 | 0 | 22 | 0 | 253 |
| | Total* | 289 | 14,288 | 146 | 2,869 | 991 | 104 | 5,444 | 1,363 | 25,494 |
| AIDS diagnoses | Female | 10 | 245 | 3 | 68 | 31 | 4 | 105 | 37 | 503 |
| | Male | 93 | 5,324 | 42 | 1,010 | 394 | 50 | 1,939 | 419 | 9,271 |
| | Total* | 103 | 5,586 | 45 | 1,080 | 426 | 54 | 2,054 | 458 | 9,806 |
| AIDS deaths | Female | 7 | 135 | 1 | 41 | 20 | 2 | 60 | 24 | 290 |
| | Male | 73 | 3,560 | 26 | 654 | 274 | 32 | 1,387 | 292 | 6,298 |
| | Total* | 80 | 3,705 | 27 | 697 | 294 | 34 | 1,455 | 317 | 6,609 |

* Totals include people whose sex was reported as transgender.

# *National Enteric Pathogens Surveillance System*

*The National Enteric Pathogens Surveillance System (NEPSS) collects, analyses and disseminates data on human enteric bacterial infections diagnosed in Australia.* Communicable Diseases Intelligence *NEPSS quarterly reports include only* Salmonella*. NEPSS receives reports of* Salmonella *isolates that have been serotyped and phage typed by the six* Salmonella *laboratories in Australia.* Salmonella *isolates are submitted to these laboratories for typing by primary diagnostic laboratories throughout Australia.*

*A case is defined as the isolation of a* Salmonella *from an Australian resident, either acquired locally or as a result of overseas travel, including isolates detected during immigrant and refugee screening. Second and subsequent identical isolates from an individual within six months are excluded, as are isolates from overseas visitors to Australia. The date of the case is the date the primary diagnostic laboratory isolated* Salmonella *from the clinical sample.*

*Quarterly reports include historical quarterly mean counts. These should be interpreted cautiously as they may be affected by outbreaks and by surveillance artefacts such as newly recognised and incompletely typed* Salmonella*.*

*NEPSS may be contacted at the Microbiological Diagnostic Unit, Public Health Laboratory, Department of Microbiology and Immunology, The University of Melbourne; by telephone: +61 3 8344 5701, facsimile: +61 3 8344 7833 or email joanp@unimelb.edu.au*

*Scientists, diagnostic and reference laboratories contribute data to NEPSS, which is supported by state and territory health departments and the Australian Government Department of Health and Ageing.*

*Reports to the National Enteric Pathogens Surveillance System of* Salmonella *infection for the period 1 April to 30 June 2006 are included in Tables 12 and 13. Data include cases reported and entered by 20 July 2006. 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 *2006;30:159–160.*

**Second quarter 2006**

There were 1,663 reports to NEPSS of human *Salmonella* infection in the second quarter of 2006, 43 per cent less than in first quarter of 2006. This decline after the summer peak is typical of seasonal trends in the incidence of salmonellosis in Australia. The second quarter count was nine per cent less than the comparable second quarter of 2005 and close to the 10-year historical mean for this period.

During the second quarter of 2006, the 25 most common *Salmonella* types in Australia accounted for 1,057 cases, 64 per cent of all reported human *Salmonella* infections. Twenty-two of the 25 most common *Salmonella* infections in the second quarter of 2006 were also among the 25 most commonly reported in preceding quarter.

The recent occurrence of particular *Salmonella* serovars and phage types reflects the established distribution and incidence of various common endemic strains, and the abatement of various local and widespread outbreaks of the last Australian summer.

The most common *Salmonella* was *S.* Typhimurium phage type 135. This historically common phage type caused widespread outbreaks in late 2005 and early 2006. *S.* Saintpaul was typically common in Queensland with an increase in cases reported from Western Australia and Victoria. A moderate increase in cases of *S.* Birkenhead, concentrated in southern Queensland and northern New South Wales, contributed to the prominence of this serovar. *S.* Typhimurium phage type 170 remains common, albeit somewhat less so than in 2004 and 2005.

*S.* Waycross, *S.* Weltevreden and *S.* Javiana were reported more frequently than expected (all mostly in Queensland), as were *S.* Typhimurium 44 and *S.* Oranienburg (both in Victoria).

**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 April to 30 June 2006, as reported to 20 July 2006**

| | State or territory | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | Australia |
| Total all *Salmonella* for quarter | 20 | 366 | 48 | 618 | 60 | 49 | 335 | 167 | 1,663 |
| Total contributing *Salmonella* types | 17 | 106 | 25 | 111 | 36 | 14 | 90 | 68 | 211 |

**Table 13. Top 25 *Salmonella* types identified in Australia, 1 April to 30 June 2006, by state or territory**

| National rank | *Salmonella* type | State or territory | | | | | | | | Total 2nd quarter 2006 | Last 10 years mean 2nd quarter | Year to date 2006 | Year to date 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ACT | NSW | NT | Qld | SA | Tas | Vic | WA | | | | |
| 1 | *S.* Typhimurium PT 135 | 1 | 42 | 0 | 46 | 2 | 19 | 29 | 10 | 149 | 133 | 412 | 240 |
| 2 | *S.* Saintpaul | 1 | 3 | 2 | 49 | 2 | 0 | 14 | 24 | 95 | 90 | 261 | 265 |
| 3 | *S.* Birkenhead | 0 | 28 | 0 | 52 | 0 | 0 | 0 | 1 | 81 | 59 | 192 | 130 |
| 4 | *S.* Typhimurium PT 170 | 2 | 41 | 0 | 7 | 0 | 2 | 24 | 2 | 78 | 65 | 244 | 352 |
| 5 | *S.* Virchow PT 8 | 0 | 4 | 1 | 62 | 0 | 1 | 2 | 1 | 71 | 56 | 182 | 164 |
| 6 | *S.* Typhimurium PT 9 | 1 | 19 | 0 | 8 | 2 | 3 | 23 | 1 | 57 | 118 | 215 | 274 |
| 7 | *S.* Waycross | 0 | 9 | 1 | 38 | 0 | 0 | 0 | 0 | 48 | 30 | 108 | 78 |
| 8 | *S.* Muenchen | 0 | 9 | 4 | 19 | 3 | 0 | 3 | 7 | 45 | 35 | 100 | 102 |
| 9 | *S.* Aberdeen | 0 | 3 | 0 | 40 | 0 | 1 | 0 | 0 | 44 | 33 | 111 | 111 |
| 10 | *S.* Infantis | 0 | 13 | 2 | 2 | 10 | 0 | 9 | 4 | 40 | 32 | 108 | 94 |
| 11 | *S.* Typhimurium PT 44 | 0 | 3 | 0 | 2 | 3 | 0 | 28 | 2 | 38 | 12 | 115 | 6 |
| 12 | *S.* Hvittingfoss | 1 | 3 | 1 | 17 | 0 | 0 | 6 | 4 | 32 | 31 | 97 | 135 |
| 13 | *S.* Typhimurium PT 12 | 0 | 15 | 0 | 2 | 1 | 0 | 4 | 8 | 30 | 20 | 70 | 77 |
| 14 | *S.* Chester | 0 | 5 | 2 | 9 | 3 | 1 | 2 | 7 | 29 | 41 | 92 | 119 |
| 15 | *S.* Oranienburg | 1 | 2 | 1 | 3 | 1 | 1 | 16 | 4 | 29 | 18 | 112 | 26 |
| 16 | *S.* Weltevreden | 0 | 3 | 3 | 20 | 0 | 0 | 1 | 0 | 27 | 10 | 57 | 29 |
| 17 | *S.* Anatum | 0 | 1 | 0 | 10 | 1 | 0 | 2 | 10 | 24 | 24 | 75 | 37 |
| 18 | *S.* Typhimurium PT RDNC | 0 | 8 | 1 | 7 | 1 | 2 | 4 | 1 | 24 | 19 | 63 | 57 |
| 19 | *S.* Typhimurium PT 197 | 0 | 4 | 0 | 8 | 0 | 0 | 7 | 1 | 20 | 18 | 61 | 455 |
| 20 | *S.* Typhimurium untypable | 1 | 4 | 0 | 3 | 0 | 0 | 4 | 6 | 18 | 17 | 47 | 38 |
| 21 | *S.* Stanley | 0 | 10 | 0 | 2 | 0 | 0 | 4 | 1 | 17 | 11 | 42 | 36 |
| 22 | *S.* Virchow PT 25 var 1 | 0 | 2 | 0 | 15 | 0 | 0 | 0 | 0 | 17 | 1.6 | 44 | 22 |
| 23 | *S.* Javiana | 0 | 5 | 0 | 11 | 0 | 0 | 0 | 0 | 16 | 7 | 25 | 22 |
| 24 | *S.* Mississippi | 0 | 0 | 0 | 0 | 0 | 9 | 4 | 1 | 14 | 18 | 69 | 49 |
| 25 | *S.* Bovismorbificans PT 11 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 0.2 | 21 | 2 |