

# Communicable Diseases Surveillance

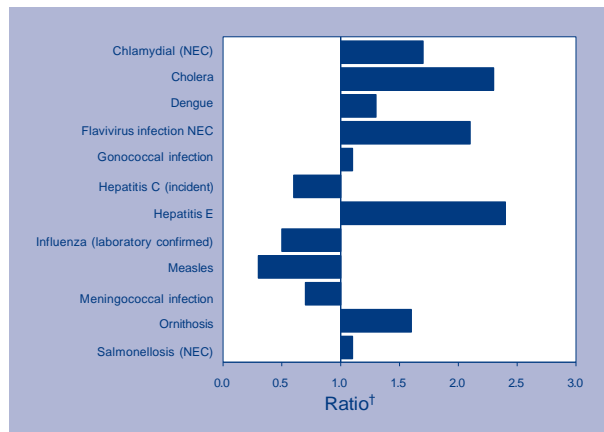
## Highlights for 3rd quarter, 2004

*Communicable Disease Surveillance Highlights report on data from various sources, including the National Notifiable Diseases Surveillance System (NNDSS) and several disease specific surveillance systems that provide regular reports to Communicable Diseases Intelligence. These national data collections are complemented by intelligence provided by State and Territory communicable disease epidemiologists and/or data managers. This additional information has enabled the reporting of more informative highlights each quarter.*

*The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia. NNDSS collates data on notifiable communicable diseases from State or Territory health departments. The Virology and Serology Laboratory Reporting Scheme (LabVISE) is a sentinel surveillance scheme which collates information on laboratory diagnosis of communicable diseases. In this report, data from the NNDSS are referred to as 'notifications' or 'cases', and those from ASPREN are referred to as 'consultations' or 'encounters' while data from the LabVISE scheme are referred to as 'laboratory reports'.*

Figure 1 shows the changes in disease notifications with an onset in third quarter 2004 compared with a 5-year mean for the same period. The number of notifications received in the quarter was above the five year mean for chlamydial infections, cholera, dengue, flavivirus (NEC), gonococcal infections, hepatitis E and ornithosis. The number of notifications received was below the five year mean for hepatitis C (incident), influenza, measles, and meningococcal disease.

**Figure 1. Selected\* diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 July to 30 September 2004 with historical data\***



\* Selected diseases are chosen each quarter according to current activity.

† Ratio of current quarter total to mean of corresponding quarter for the previous five years.

### *Gastrointestinal diseases*

#### **Hepatitis A**

There was a small cluster of five cases of hepatitis A infection in children at a New South Wales primary school in July. One of the cases was a sibling of one of the students. Immunoglobulin prophylaxis was given to students and no further cases were reported. The source of the infection appears to be a confectionary jar.

Later in July, patrons of a city café in Sydney were contacted to receive hepatitis A immunoglobulin therapy after a café employee was diagnosed with hepatitis A. More than 100 people received the prophylaxis and there were no cases reported.

Despite these cases, the number of notifications in the third quarter (n=73) was well below the five year mean for the quarter (172).

### Listeriosis

There were 16 cases of listeriosis reported in the third quarter. These occurred in all states except the Northern Territory and Tasmania (Table 2). Most cases occurred in the elderly (median age 68.5 years).

Two maternal foetal cases of listeriosis were reported at a maternity unit in Victoria. The first baby was very ill and died shortly after birth. *Listeria monocytogenes* was cultured from the placenta and blood culture. A second baby born 27 hours later was well at birth and *Listeria* was cultured only from placenta swabs, while blood cultures were negative. The mother of the second baby had negative cultures of urine and high vaginal swabs. Examination of the *Listeria* isolates indicated that they were the same strain. It was concluded that the placenta of the second baby was contaminated during examination in the delivery suite or in the laboratory and that the second case was not a maternal foetal pair.

### Quarantinable diseases

#### Cholera

Three cases of cholera were reported in the third quarter, one from New South Wales and the other from Victoria. One was a *Vibrio cholerae* 01 El Tor infection and the other two were both *Vibrio cholerae* 01 Ogawa. All three infections were acquired overseas.

### Vaccine preventable disease

#### Measles

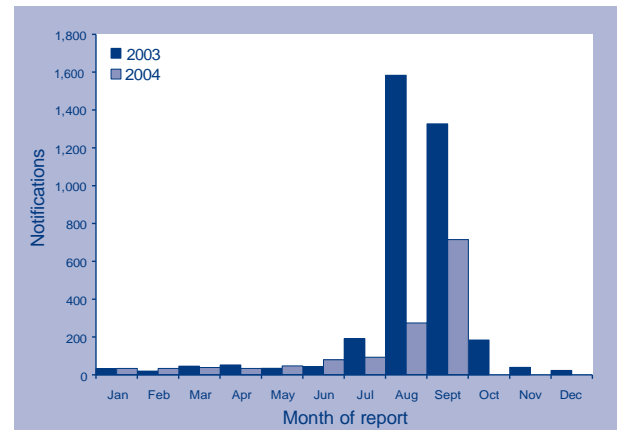
There were 12 cases of measles reported in the third quarter. Notifications were received from New South Wales (2), South Australia (3), Victoria (5) and Western Australia (2). This total is well below the 26 cases reported in the same period last year and the average of 24 cases reported in the period over the past five years.

The reported measles infections were acquired in seven overseas travellers and their contacts and of the remaining five cases, two were an unvaccinated child and its mother; one was a sporadic case in an unvaccinated 21 year-old and the other two cases were partially vaccinated children under two years of age (NSW).

### Influenza

There was a total of 1,082 notifications of laboratory confirmed influenza in the third quarter, which was well below the three year mean for this period (2,233 notifications). In contrast to 2003, the peak in influenza activity appeared later in the year and at a lower level (Figure 2).

**Figure 2. Notifications of laboratory confirmed influenza, Australia 2003 and 2004 (to end September)**



Two outbreaks of influenza-like illness were reported in army barracks, during the quarter. The first in Victoria occurred in new recruits, with a total of 94 cases, eight of which were typed as A/Fujian (H3N2)-like. Although vaccination is not compulsory, influenza vaccine is offered to all new recruits with an uptake rate of 73%. The second outbreak of influenza-like illness occurred during a military exercise in Queensland involving military personnel from around the country.

In September, 13 outbreaks of influenza-like illness were reported from residential institutions in NSW, including 12 aged care facilities (ACFs) and one correctional centre. The outbreaks had high attack rates (up to 76% of residents and 42% of staff) and death rates of up to 20% in residents.

In response to these outbreaks, public health unit staff provided advice to facility managers on control measures. NSW Health developed guidelines to assist ACF managers to minimise the spread of influenza within their institutions. The guidelines document *Controlling influenza outbreaks in aged care facilities* at [http://www.health.nsw.gov.au/living/flucontrol\\_cdfs.html](http://www.health.nsw.gov.au/living/flucontrol_cdfs.html) was distributed to ACFs throughout New South Wales.

In previous years, NSW Health has not actively solicited reports of influenza outbreaks from institutions, or systematically collated information on reported outbreaks. The reasons for the apparent large number (13) reported in NSW in September 2004, and the large proportion of these reported from the Hunter Area, are unclear. One explanation could be improved reporting in 2004 following the release of the *Controlling Influenza Outbreaks in Aged Care Facilities* guidelines. The first outbreak was associated with substantial media interest that may in turn have led to improved reporting by other ACFs.

NSW Health provides Australian Government-funded influenza vaccine annually to residents of ACFs. However, in the investigation of these outbreaks, public health units found that residents' immunisation records did not provide clear evidence of vaccination, perhaps because the turnover of residents in ACFs was sometimes high and the immunisation status of new residents was not always assessed on admission.

Annual immunisation of both residents and staff before winter (when the influenza activity usually begins) is essential to limit the extent of such outbreaks. ACF managers should ensure that record systems are in place to document the vaccination status of residents and staff, and flag the records of new residents and staff to ensure that they are offered immunisation. With growing evidence that anti-influenza medicines are effective in slowing outbreaks, ACF managers and clinicians should strongly consider their use to limit the spread of the infection in residential facilities

(A full report is available at: <http://www.health.nsw.gov.au/living/infectreport.html> )

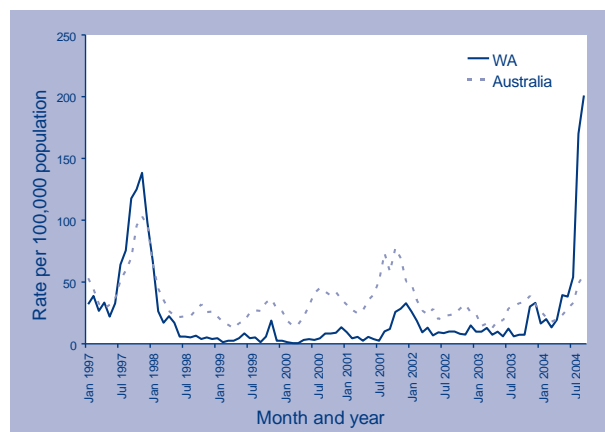
### Pertussis

There were 2,588 notifications of pertussis in the third quarter. One thousand and ninety-seven were from New South Wales and 779 were from Western Australia. Western Australia had the highest rate (159.6 cases per 100,000 population, Table 3).

An increase in notifications of pertussis in Western Australia has been noted since May. Increased notification rates were first observed in the Great Southern region around Albany and Denmark in May, and subsequently in the Goldfields, South-West, Wheatbelt and metropolitan Perth regions. Notifications are at the highest level recorded in the State since 1997 (Figure 3). A relatively high proportion of notifications have been in secondary school aged children (25%) and adults (38% in those aged 25 years and above), compared to primary school aged students (18%) and younger children (12%). Given evidence that secondary school aged

students have been pivotal in propagating transmission, a mass vaccination campaign in WA secondary schools using dTpa (Boostrix™) vaccine was implemented in the 4th school term, in an attempt to limit the extent of the epidemic.

**Figure 3. Notification rates of pertussis, Western Australia and Australia 1997 to September 2004 (per 100,000 population)**



### Other bacterial infections

#### Meningococcal infections

There were 125 notifications of meningococcal infection in Australia in the third quarter. This number is well below the average number of notifications for this period received over the past five years (229 notifications).

There was serogroup data available on 89 of the notified cases in the quarter. Fifty seven (64%) were serogroup B, 26 were serogroups C (29%), five were serogroups W135 and there was a single case of serogroup Y.

A community based outbreak of meningococcal group C involving a rural High School in the North East of Tasmania occurred between 26 July, 2004 and 9 August, 2004. The total number of cases involved in this outbreak was four, all of which were later diagnosed as group C meningococcal infection. Of the four cases, three were fourteen year old students at the High School. The strain that caused the outbreak was later identified as C:P1.7-2.4. During the course of the outbreak, staff from the PEHS Hobart office provided antibiotic clearance to 87% of the students at the High School, and in association with the local Council, assisted in the delivery of meningococcal C conjugate vaccine to 84% of the students at the school. This increased coverage for meningococcal C vaccine in the High School to 95%.

A national immunisation program began in New Zealand during the quarter against the meningococcal serogroup B subtype B4P1.4/1.4(7), which has been responsible for a 14-year epidemic in that country. A review of meningococcal serogroup data in Australia (1995–2003) collected through the National Neisseria Network was conducted by the National Centre for Immunisation Research and Surveillance (NCIRS) to determine trends in the prevalence of the 'New Zealand' strain in Australia. The review found that despite over all increases in the incidence of meningococcal disease in Australia, the overall incidence of the New Zealand strain remained low (0.17 per 100,000 population). There was an overall increase in the number of isolates of the New Zealand stain detected in the period 1999–2003 (n=165) compared with the period 1995 to 1998 (n=56) with most this increase seen in New South Wales and Victoria (Puech and McIntyre, 2004 unpublished).

## *Other diseases*

### ***M. ulcerans***

There was an outbreak of *Mycobacterium ulcerans* infections at Point Lonsdale in Victoria and two cases reported in Darwin in the Northern Territory during the quarter. *M. ulcerans* infections have been recognised in two geographic foci in Australia—one in the Gippsland region of Victoria and the second in the Daintree region of Queensland. The current outbreak which involved 14 people, appears to be a new endemic focus. There is no information as yet as to whether there is a focus in the Northern Territory.

**With thanks to:** Mark Bartlett (NSW Health), Lynne Brown (DHS, Victoria), David Coleman and Avner Misrachi (DHHS, Tasmania).

## Tables

A summary of diseases currently being reported by each jurisdiction is provided in Table 1. There were 27,389 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification date between 1 July and 30 September 2004 (Table 2). The notification rate of diseases per 100,000 population for each State or Territory is presented in Table 3.

There were 7,808 reports received by the Virology and Serology Laboratory Reporting Scheme (LabVISE) in the reporting period, 1 July to 30 September 2004 (Tables 4 and 5).

**Table 1. Reporting of notifiable diseases by jurisdiction**

Disease	Data received from:	Disease	Data received from:
<b>Bloodborne diseases</b>		<b>Vaccine preventable diseases</b>	
Hepatitis B (incident)	All jurisdictions	Congenital Rubella	All jurisdictions
Hepatitis B (unspecified)	All jurisdictions except NT	Diphtheria	All jurisdictions
Hepatitis C (incident)	All jurisdictions except Qld	<i>Haemophilus influenzae</i> type b	All jurisdictions
Hepatitis C (unspecified)	All jurisdictions	Influenza (laboratory confirmed)	All jurisdictions*
Hepatitis D	All jurisdictions	Measles	All jurisdictions
<b>Gastrointestinal diseases</b>		Mumps	All jurisdictions
Botulism	All jurisdictions	Pertussis	All jurisdictions
Campylobacteriosis	All jurisdictions except NSW	Pneumococcal disease (invasive)	All jurisdictions
Cryptosporidiosis	All jurisdictions	Poliomyelitis	All jurisdictions
Haemolytic uraemic syndrome	All jurisdictions	Rubella	All jurisdictions
Hepatitis A	All jurisdictions	Tetanus	All jurisdictions
Hepatitis E	All jurisdictions	<b>Vectorborne diseases</b>	
Listeriosis	All jurisdictions	Barmah Forest virus infection	All jurisdictions
Salmonellosis	All jurisdictions	Flavivirus infection (NEC) <sup>†</sup>	All jurisdictions
Shigellosis	All jurisdictions	Dengue	All jurisdictions
SLTEC, VTEC	All jurisdictions	Japanese encephalitis	All jurisdictions
Typhoid	All jurisdictions	Kunjin	All jurisdictions except ACT <sup>‡</sup>
<b>Quarantinable diseases</b>		Malaria	All jurisdictions
Cholera	All jurisdictions	Murray Valley encephalitis	All jurisdictions except ACT <sup>‡</sup>
Plague	All jurisdictions	Ross River virus infection	All jurisdictions
Rabies	All jurisdictions	<b>Zoonoses</b>	
SARS	All jurisdictions	Anthrax	All jurisdictions
Smallpox	All jurisdictions except ACT, Qld	Australian bat lyssavirus	All jurisdictions
Tularemia	All jurisdictions except ACT, NT, Qld	Brucellosis	All jurisdictions
Viral haemorrhagic fever	All jurisdictions	Leptospirosis	All jurisdictions
Yellow fever	All jurisdictions	Lyssavirus unspecified	All jurisdictions
<b>Sexually transmissible infections</b>		Ornithosis	All jurisdictions
Chlamydial infection	All jurisdictions	Q fever	All jurisdictions
Donovanosis	All jurisdictions	<b>Other bacterial infections</b>	
Gonococcal infection	All jurisdictions	Legionellosis	All jurisdictions
Syphilis (unspecified)	All jurisdictions	Leprosy	All jurisdictions
Syphilis < 2 years duration	All jurisdictions	Meningococcal infection	All jurisdictions
Syphilis > 2 years of unknown duration	All jurisdictions	Tuberculosis	All jurisdictions
Syphilis - congenital	All jurisdictions		

\* Laboratory confirmed influenza is not notifiable in the Australian Capital Territory but reports are forwarded to NNDSS.

† Flavivirus (NEC) replaces Arbovirus (NEC) from 1 January 2004.

‡ In the Australian Capital Territory, Murray Valley encephalitis and Kunjin are combined under Murray Valley encephalitis.

**Table 2. Notifications of diseases received by State and Territory health authorities for the period 1 July to 30 September 2004, by date of onset\***

Disease	State or territory								Total 3rd quarter 2004 <sup>1</sup>	Total 2nd quarter 2004	Total 3rd quarter 2003	Last 5 years mean 3rd quarter	Year to date 2004	Last 5 years YTD mean	Ratio <sup>†</sup>
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
<b>Bloodborne diseases</b>															
Hepatitis B (incident)	1	3	2	11	3	6	35	14	75	71	86	97	216	288	0.8
Hepatitis B (unspecified)	15	998	NN	204	74	9	370	92	1,762	2,114	1,440	1,820	5,331	5,278	1.0
Hepatitis C (incident)	1	0	NN	NN	13	1	20	38	73	53	125	115	206	362	0.6
Hepatitis C (unspecified)	46	1,465	54	739	140	91	739	276	3,550	3,453	3,569	4,289	10,558	12,988	0.8
Hepatitis D	0	5	0	4	0	0	1	0	10	8	10	8	22	18	1.2
<b>Gastrointestinal diseases</b>															
Botulism	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Campylobacteriosis <sup>2</sup>	80	NN	56	1,079	532	122	1,436	441	3,746	3,010	3,333	3,493	11,022	10,364	1.1
Cryptosporidiosis <sup>†</sup>	1	21	21	67	23	11	75	21	240	435	190	220	1,190	1,714	0.7
Haemolytic uraemic syndrome	0	2	0	0	1	0	0	0	3	3	3	2	9	9	1.0
Hepatitis A	1	28	0	7	2	0	21	14	73	76	91	172	255	572	0.4
Hepatitis E	0	1	0	1	0	0	0	0	2	8	5	2	21	9	2.4
Listeriosis	1	5	0	1	2	0	4	3	16	21	12	13	53	49	1.1
Salmonellosis (NEC)	15	264	69	365	75	15	230	129	1,162	1,978	1,019	1,062	5,868	5,343	1.1
Shigellosis	0	16	16	11	4	0	22	15	84	147	94	109	384	394	1.0
SLTEC, VTEC <sup>3</sup>	0	0	0	2	8	0	0	0	10	8	9	9	30	36	0.8
Typhoid	0	4	0	3	1	0	8	0	16	15	13	15	59	50	1.2
<b>Quarantinable diseases</b>															
Cholera	0	1	0	0	0	0	2	0	3	2	0	1	6	3	2.3
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Rabies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Tularemia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Viral haemorrhagic fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Yellow fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

**Table 2. Notifications of diseases received by State and Territory health authorities for the period 1 July to 30 September 2004, by date of onset\* *continued***

Disease	State or territory								Total 3rd quarter 2004 <sup>1</sup>	Total 2nd quarter 2004	Total 3rd quarter 2003	Last 5 years mean 3rd quarter	Year to date 2004	Last 5 years YTD mean	Ratio <sup>†</sup>
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
<b>Sexually transmissible diseases</b>															
Chlamydia	147	2,422	356	2,250	516	153	1,818	1,015	8,677	8,899	7,710	5,413	26,678	15,801	1.7
Donovanosis	0	0	2	0	0	0	0	1	3	1	3	4	6	15	0.4
Gonococcal infection <sup>4</sup>	6	254	337	361	48	7	265	318	1,596	1,902	1,607	1,492	5,248	4,682	1.1
Syphilis (unspecified)	0	0	0	0	0	0	0	0	0	57	118	223	123	646	0.2
Syphilis < two years duration	2	60	21	19	4	0	17	8	131	131	129	108	412	311	1.3
Syphilis > two years or unknown duration	0	277	32	47	0	0	91	14	461	397	242	239	1,276	753	1.7
Syphilis - congenital	0	0	1	2	0	0	0	0	3	3	4	3	8	7	1.1
<b>Vaccine preventable disease</b>															
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
<i>Haemophilus influenzae</i> type b	0	1	1	2	1	0	1	0	6	3	6	6	13	22	0.6
Influenza (laboratory confirmed) <sup>‡</sup>	0	423	19	455	3	2	112	68	1,082	161	3,102	2,233	1,350	2,629	0.5
Measles	0	2	0	0	3	0	5	2	12	6	26	24	29	96	0.3
Mumps	1	14	0	3	0	0	1	3	22	21	16	35	67	104	0.6
Pertussis	25	1,097	0	265	250	10	162	779	2,588	1,205	1,517	1,772	4,891	4,045	1.2
Pneumococcal disease (invasive) <sup>‡</sup>	17	341	33	244	48	18	135	85	921	612	796	774	1,861	1,542	1.2
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Rubella	0	4	0	3	0	0	0	0	7	11	6	71	24	177	0.1
Rubella - congenital	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2.5
Tetanus	0	0	0	0	0	0	0	0	0	2	1	0	4	3	1.4
<b>Vectorborne diseases</b>															
Barmah Forest virus infection	1	66	5	95	3	0	3	13	186	324	167	124	829	787	1.1
Dengue	1	7	3	13	1	0	2	2	29	64	34	29	330	257	1.3
Flavivirus infection NEC	0	4	0	10	0	0	1	0	15	12	20	7	83	39	2.1
Japanese encephalitis <sup>‡</sup>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.0
Kunjin virus <sup>‡</sup>	0	0	0	1	0	0	0	0	1	0	0	0	7	7	0.0
Malaria	2	31	4	68	3	2	17	11	138	149	132	162	411	542	0.8
Murray Valley encephalitis <sup>‡</sup>	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0.6
Ross River virus infection	0	39	17	57	3	1	3	19	139	1,382	214	189	3,958	3,001	1.3

**Table 2. Notifications of diseases received by State and Territory health authorities for the period 1 July to 30 September 2004, by date of onset\***  
*continued*

Disease	State or territory								Total 3rd quarter 2004 <sup>1</sup>	Total 2nd quarter 2004	Total 3rd quarter 2003	Last 5 years mean 3rd quarter	Year to date 2004	Last 5 years YTD mean	Ratio <sup>†</sup>
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA							
<b>Zoonoses</b>															
Anthrax <sup>‡</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Australian bat lyssavirus <sup>‡</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Brucellosis	0	0	0	10	0	0	1	0	11	4	4	10	21	22	1.0
Leptospirosis	0	9	0	19	0	0	1	2	31	56	27	32	154	175	0.9
Lyssavirus unspecified <sup>‡</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
Ornithosis	0	25	0	1	0	0	21	0	47	57	67	44	174	106	1.6
Q fever	0	55	0	18	6	0	9	1	89	110	88	133	304	453	0.7
<b>Other bacterial infections</b>															
Creutzfeldt-Jakob disease															
Legionellosis	0	12	1	13	9	0	18	11	64	92	60	62	239	254	0.9
Leprosy	0	1	0	0	0	0	0	0	1	0	0	1	3	3	0.9
Meningococcal infection	4	42	1	28	4	9	21	16	125	117	208	229	335	471	0.7
Tuberculosis	2	70	6	11	0	4	70	16	179	205	246	252	613	726	0.8
<b>Total</b>	369	8,069	1,057	6,489	1,780	461	5,737	3,427	27,389	27,386	26,549	25,099	84,684	75,153	1.1

1. Totals comprise data from all states and territories. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

2. Not reported from New South Wales where it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.

3. Infections with shiga-like toxin (verotoxin) producing *Escherichia coli* (SLTEC/VTEC).

\* Date of onset = the true date of onset. If this is not available, the 'date of onset' is equivalent to the earliest of two dates: (i) specimen collection date or (ii) the date of notification to a public health unit. Hepatitis B and C unspecified were analysed by date of notification.

† Ratio = ratio of current quarter total to the mean of last 5 years for the same quarter.

‡ Notifiable from January 2001. Ratio and mean calculations are based on the last three years.

NN Not notifiable.

NEC Not elsewhere classified.

**Table 3. Notification rates of diseases by state or territory, 1 July to 30 September 2004  
(Rate per 100,000 population)**

Disease <sup>1</sup>	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
<b>Bloodborne diseases</b>									
Hepatitis B (incident)	1.2	0.2	4.0	1.2	0.8	5.0	2.9	2.9	1.5
Hepatitis B (unspecified)	18.6	59.7	NN	21.5	19.4	7.5	30.2	18.8	35.8
Hepatitis C (incident)	1.2	0.0	NN	NN	3.4	0.8	1.6	7.8	1.8
Hepatitis C (unspecified)	57.0	87.6	108.9	77.9	36.7	76.3	60.3	56.5	71.5
Hepatitis D	0.0	0.3	0.0	0.4	0.0	0.0	0.1	0.0	0.2
<b>Gastrointestinal diseases</b>									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Campylobacteriosis <sup>2</sup>	99.1	NN	112.9	113.7	139.3	102.3	117.1	90.4	113.7
Cryptosporidiosis	1.2	1.3	42.3	7.1	6.0	9.2	6.1	4.3	4.8
Haemolytic uraemic syndrome	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Hepatitis A	1.2	1.7	0.0	0.7	0.5	0.0	1.7	2.9	1.5
Hepatitis E	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Listeriosis	1.2	0.3	0.0	0.1	0.5	0.0	0.3	0.6	0.3
Salmonellosis (NEC)	18.6	15.8	139.1	38.5	19.6	12.6	18.8	26.4	23.4
Shigellosis	0.0	1.0	32.3	1.2	1.0	0.0	1.8	3.1	1.7
SLTEC, VTEC <sup>3</sup>	0.0	0.0	0.0	0.2	2.1	0.0	0.0	0.0	0.2
Typhoid	0.0	0.2	0.0	0.3	0.3	0.0	0.7	0.0	0.3
<b>Quarantinable diseases</b>									
Cholera	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.1
Plague	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rabies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Smallpox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tularemia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viral haemorrhagic fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Sexually transmissible diseases</b>									
Chlamydia	182.1	144.9	717.9	237.0	135.1	128.3	148.2	208.0	174.7
Donovanosis	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.2	0.1
Gonococcal infection	7.4	15.2	679.6	38.0	12.6	5.9	21.6	65.2	32.1
Syphilis (unspecified)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Syphilis < 2 years duration	2.5	3.6	42.3	2.0	1.0	0.0	1.4	1.6	2.6
Syphilis > 2 years or unknown duration	0.0	16.6	64.5	5.0	0.0	0.0	7.4	2.9	9.3
Syphilis - congenital	0.0	0.0	2.0	0.2	0.0	0.0	0.0	0.0	0.1

**Table 3. Notification rates of diseases by state or territory, 1 July to 30 September 2004. (Rate per 100,000 population) *continued***

Disease <sup>1</sup>	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
<b>Vaccine preventable diseases</b>									
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Haemophilus influenzae</i> type b	0.0	0.1	2.0	0.0	0.3	1.7	0.0	0.0	0.1
Influenza (laboratory confirmed)	0.0	2.8	2.0	2.3	2.6	0.0	1.3	2.0	2.1
Measles	0.0	0.4	0.0	0.0	0.3	0.0	0.3	0.0	0.2
Mumps	2.5	0.9	0.0	0.1	0.0	0.0	0.2	0.8	0.5
Pertussis	53.3	28.0	2.0	16.4	11.0	10.9	17.0	14.8	20.2
Pneumococcal disease (invasive)	11.2	6.0	34.3	6.3	10.5	1.7	5.7	3.5	6.3
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Rubella - congenital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tetanus	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
<b>Vectorborne diseases</b>									
Barmah Forest virus infection	0.0	5.7	10.1	20.2	0.0	0.0	0.2	4.5	6.4
Dengue	3.7	0.5	20.2	21.5	0.8	0.8	0.2	0.2	4.7
Flavivirus infection (NEC)	0.0	0.2	2.0	5.7	0.0	0.0	0.3	0.0	1.3
Japanese encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kunjin virus	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.1
Malaria	6.2	1.2	10.1	5.9	0.5	2.5	1.1	1.0	2.2
Murray Valley encephalitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ross River virus infection	2.5	14.1	367.0	106.1	5.0	10.9	4.1	172.9	47.4
<b>Zoonoses</b>									
Anthrax	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Australian bat lyssavirus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brucellosis	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.1
Leptospirosis	0.0	0.6	0.0	5.7	0.0	0.0	0.0	0.0	1.3
Lyssavirus unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	0.5	0.0	0.0	0.5	0.0	4.0	0.0	1.2
Q fever	1.2	2.8	4.0	4.3	0.8	0.0	0.2	0.2	2.0
<b>Other bacterial infections</b>									
Legionellosis	0.0	1.3	0.0	0.9	2.4	0.8	1.6	3.1	1.5
Leprosy	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Meningococcal infection	6.2	1.7	8.1	2.1	1.0	1.7	1.7	1.0	1.8
Tuberculosis	3.7	3.3	12.1	2.0	4.7	0.8	5.2	2.0	3.6

1. Rates are subject to retrospective revision.
  2. Not reported from New South Wales where it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.
  3. Infections with Shiga-like toxin (verotoxin) producing *Escherichia coli* (SLTEC/VTEC).
- NN Not Notifiable.  
NEC Not Elsewhere Classified.

**Table 4. Virology and serology laboratory reports by state or territory<sup>1</sup> for the reporting period 1 July to 30 September 2004, and total reports for the year<sup>2</sup>**

	State or territory								This period 2004	This period 2003	Year to date 2004 <sup>3</sup>	Year to date 2003
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
<b>Measles, mumps, rubella</b>												
Measles virus	0	1	0	1	2	0	3	1	8	10	21	50
Mumps virus	0	0	0	0	0	0	0	2	2	–	5	7
Rubella virus	0	1	0	1	0	0	0	1	3	7	11	19
<b>Hepatitis virus</b>												
Hepatitis A virus	0	1	0	7	1	0	2	6	17	28	36	64
Hepatitis D virus	0	0	0	0	0	0	1	2	3	7	6	15
Hepatitis E virus	0	0	0	0	0	0	0	2	2	–	13	
<b>Arboviruses</b>												
Ross River virus	0	0	1	9	4	0	0	10	24	71	705	1,183
Barmah Forest virus	0	2	0	32	5	0	0	3	42	34	168	375
Dengue type 2	0	0	0	0	1	0	0	0	1	1	1	2
Dengue not typed	0	0	3	0	0	0	0	3	6	5	7	27
Flavivirus (unspecified)	0	0	0	13	0	0	2	0	15	4	93	108
<b>Adenoviruses</b>												
Adenovirus typed 40	0	0	0	0	0	0	0	11	11	8	16	28
Adenovirus not typed/pending	1	92	2	22	117	0	13	60	307	299	753	754
<b>Herpesviruses</b>												
Herpes virus type 6	0	0	0	0	0	0	2	0	2	2	4	5
Cytomegalovirus	3	87	0	29	68	4	13	0	204	194	603	705
Varicella-zoster virus	1	35	6	283	122	3	18	182	650	469	1,502	1,264
Epstein-Barr virus	0	22	3	177	440	0	11	31	684	469	1,852	1,308
<b>Other DNA viruses</b>												
Molluscum contagiosum	0	0	0	0	0	0	0	2	2	1	3	11
Contagious pustular dermatitis (Orf virus)	0	0	0	0	0	0	0	2	2	1	2	3
Parvovirus	0	3	0	40	15	0	19	88	165	62	283	168
<b>Picornavirus family</b>												
Echovirus type 9	0	2	0	0	0	0	0	0	2	2	4	11
Echovirus type 11	0	8	0	0	0	0	0	0	8	2	14	4
Echovirus type 30	0	2	0	0	0	0	0	0	2	–	6	1
Poliovirus type 1 (uncharacterised)	0	9	0	0	0	0	0	0	9	6	15	32
Poliovirus type 2 (uncharacterised)	0	5	0	0	0	0	0	0	5	5	13	9
Poliovirus type 3 (uncharacterised)	0	5	0	0	0	0	0	0	5	3	6	4
Rhinovirus (all types)	0	79	0	0	22	0	1	106	208	138	395	389
Enterovirus type 71 (BCR)	0	1	0	0	0	0	0	0	1	–	3	–
Enterovirus not typed/pending	1	5	2	3	4	0	1	20	36	37	123	126

**Table 4. Virology and serology laboratory reports by state or territory<sup>1</sup> for the reporting period 1 July to 30 September 2004, and total reports for the year,<sup>2</sup> continued**

	State or territory								This period 2004	This period 2003	Year to date 2004 <sup>3</sup>	Year to date 2003
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA				
<b>Ortho/paramyxoviruses</b>												
Influenza A virus	0	108	0	33	55	1	7	37	241	1,542	312	1,746
Influenza B virus	0	7	0	6	33	0	0	36	82	38	119	97
Parainfluenza virus type 1	0	4	0	0	17	0	0	12	33	9	130	35
Parainfluenza virus type 2	0	1	0	1	0	0	1	2	5	17	11	66
Parainfluenza virus type 3	0	13	2	1	85	0	2	109	212	208	409	405
Respiratory syncytial virus	3	338	2	80	316	46	60	197	1,042	900	2,435	1,579
<b>Other RNA viruses</b>												
HTLV-1	0	0	0	0	3	0	0	3	6	2	12	10
Rotavirus	0	124	8	1	64	75	36	62	370	433	539	576
Calicivirus	0	3	12	0	0	0	0	214	229	23	256	103
Norwalk agent	0	2	0	0	0	4	99	0	105	87	294	130
<b>Other</b>												
<i>Chlamydia trachomatis</i> not typed	9	188	5	539	392	10	7	400	1,550	1,082	3,977	3,400
<i>Chlamydia pneumoniae</i>	0	0	0	0	1	0	0	1	2	1	6	11
<i>Chlamydia psittaci</i>	0	1	0	0	0	0	26	1	28	45	136	87
<i>Chlamydia</i> species	0	0	0	0	0	0	1	0	1	1	3	1
<i>Mycoplasma pneumoniae</i>	0	13	3	134	121	9	82	13	375	471	1,035	904
<i>Mycoplasma hominis</i>	0	2	0	0	1	0	0	0	3	4	4	9
<i>Coxiella burnetii</i> (Q fever)	0	0	2	6	25	0	6	1	40	48	120	141
<i>Rickettsia prowazekii</i>	0	0	0	0	29	0	0	1	30	–	30	2
<i>Rickettsia tsutsugamushi</i>	0	0	0	0	18	0	1	1	20	1	21	2
<i>Rickettsia</i> - spotted fever group	0	0	0	0	43	1	0	0	44	–	44	–
<i>Streptococcus</i> group A	0	2	1	106	0	0	28	0	137	91	360	362
<i>Yersinia enterocolitica</i>	0	3	0	0	0	0	0	0	3	5	5	9
<i>Brucella abortus</i>	0	0	0	0	0	0	1	0	1	–	5	2
<i>Brucella</i> species	0	0	0	2	0	0	0	0	2	3	5	5
<i>Bordetella pertussis</i>	0	15	0	56	170	2	46	175	464	108	732	364
<i>Legionella pneumophila</i>	0	1	0	0	1	0	9	1	12	60	65	113
<i>Legionella longbeachae</i>	0	0	0	0	4	0	6	9	19	26	57	54
<i>Legionella</i> species	0	1	0	0	0	0	3	0	4	6	14	10
<i>Cryptococcus</i> species	0	2	0	1	6	0	0	0	9	8	32	20
<i>Leptospira</i> species	0	0	0	3	0	0	0	0	3	10	19	21
<i>Borrelia burgdorferi</i>	0	0	0	0	0	0	0	1	1	–	1	–
<i>Treponema pallidum</i>	0	39	0	154	96	0	0	4	293	284	908	958
<i>Entamoeba histolytica</i>	0	0	0	2	0	0	2	0	4	4	9	10
<i>Toxoplasma gondii</i>	0	1	0	0	4	0	3	1	9	11	26	32
<i>Echinococcus granulosus</i>	0	0	0	0	2	0	1	0	3	3	10	14
<b>Total</b>	<b>18</b>	<b>1,228</b>	<b>52</b>	<b>1,742</b>	<b>2,287</b>	<b>155</b>	<b>513</b>	<b>1,813</b>	<b>7,808</b>	<b>7,396</b>	<b>18,804</b>	<b>17,950</b>

1. State or territory of postcode, if reported, otherwise state or territory of reporting laboratory.
  2. Data presented are for reports with report dates in the current period.
- No data received this period.

**Table 5. Virology and serology reports by laboratories for the reporting period 1 July to 30 September 2004\***

State or territory	Laboratory	July 2004	August 2004	September 2004	Total this period
Australian Capital Territory	The Canberra Hospital	–	–	–	–
New South Wales	Institute of Clinical Pathology and Medical Research, Westmead	151	125	130	406
	New Children's Hospital, Westmead	102	116	100	318
	Repatriation General Hospital, Concord	–	–	–	–
	Royal Prince Alfred Hospital, Camperdown	42	33	31	106
	South West Area Pathology Service, Liverpool	136	129	99	364
Queensland	Queensland Medical Laboratory, West End	733	582	502	1,817
	Townsville General Hospital	–	–	–	–
South Australia	Institute of Medical and Veterinary Science, Adelaide	749	742	785	2,276
Tasmania	Northern Tasmanian Pathology Service, Launceston	45	60	44	149
	Royal Hobart Hospital, Hobart	–	–	–	–
Victoria	Monash Medical Centre, Melbourne	50	18	–	68
	Royal Children's Hospital, Melbourne	102	35	23	160
	Victorian Infectious Diseases Reference Laboratory, Fairfield	96	127	54	277
Western Australia	PathCentre Virology, Perth	543	567	720	1,830
	Princess Margaret Hospital, Perth	–	–	–	–
	Western Diagnostic Pathology	–	–	37	37
Total		2,749	2,534	2,525	7,808

\* The complete list of laboratories reporting for the 12 months, January to December 2004, will appear in every report regardless of whether reports were received in this reporting period. Reports are not always received from all laboratories.

– No data received this period.

## 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 national 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 care setting and to detect trends in consultation rates.

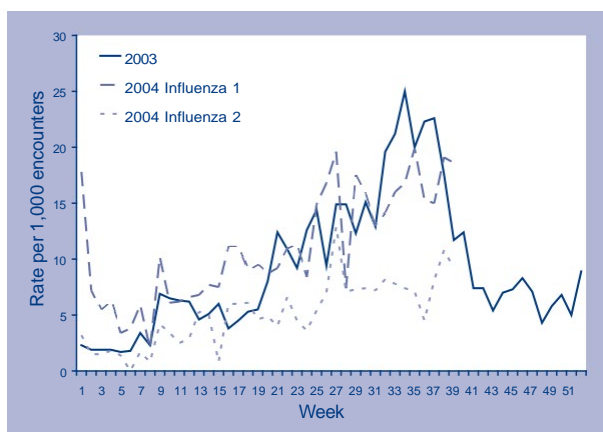
There are currently about 50 general practitioners participating in the network from all states. Seventy-five per cent of these are in metropolitan areas and the remainder are rural based. Between 4,000 and 6,000 consultations are recorded each week.

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

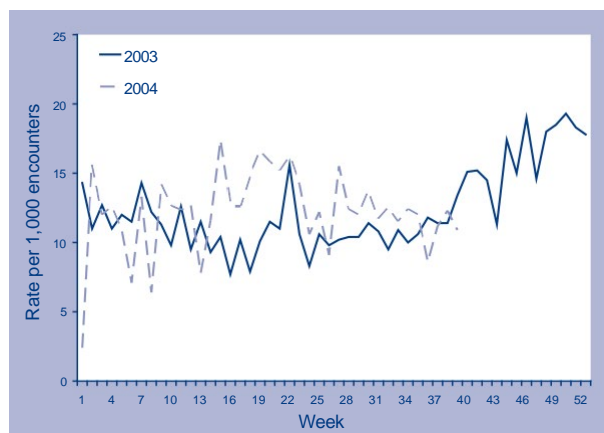
In 2004, nine conditions are being monitored, five of which are related to communicable diseases. These include influenza, gastroenteritis, varicella and shingles. Definitions of these conditions are described in *Surveillance systems reported in CDI*, published in *Commun Dis Intell* 2004;28:99. Note that in 2004, two case definitions for influenza are being recorded in parallel.

Data from 1 July to 30 September 2004 are shown as the rate per 1,000 consultations in Figures 4, 5, 6 and 7.

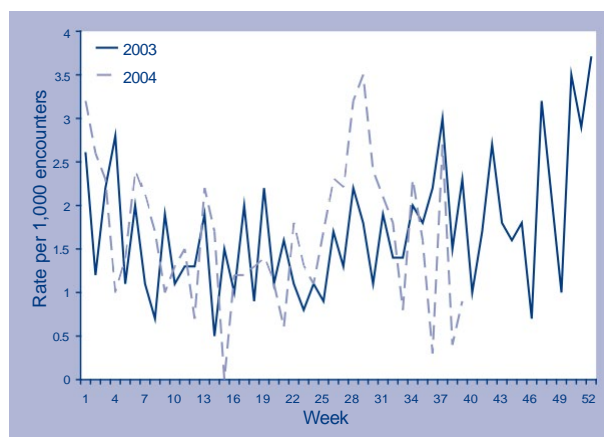
**Figure 4. Consultation rates for influenza-like illness, ASPREN, 1 July to 30 September 2004, by week of report**



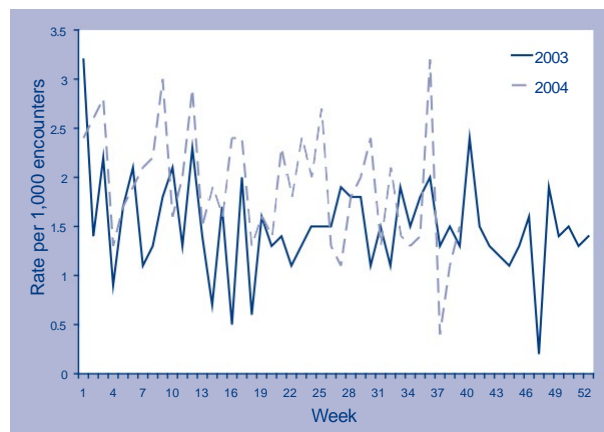
**Figure 5. Consultation rates for gastroenteritis, ASPREN, 1 July to 30 September 2004, by week of report**



**Figure 6. Consultation rates for chickenpox, ASPREN, 1 July to 30 September 2004, by week of report**



**Figure 7. Consultation rates for shingles, ASPREN, 1 July to 30 September 2004, 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 age 12 months for the cohort born between 1 April and 30 June 2003; at 24 months of age for the cohort born between 1 April and 30 June 2002; and at 6 years of age for the cohort born between 1 April and 30 June 1998, 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* 2004;28:102 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). Telephone: +61 2 9845 1256. Email: brynleyh@chw.edu.au.

Immunisation coverage for 'fully immunised' at 12 months of age for Australia increased marginally from the last quarter by 0.4 percentage points to 91.3 per cent (Table 6). There was a substantial increase in 'fully immunised' coverage by State and Territory in one jurisdiction, the Northern Territory, with an increase of 5.3 percentage points, whilst all other jurisdictions experienced very little change in coverage. As expected, the Northern Territory also had increases in coverage for individual vaccines. Apparently large changes in coverage in jurisdictions like the Northern Territory and the Australian Capital Territory, who have relatively small populations, can result from small absolute numbers of unimmunised children and should be treated with caution.

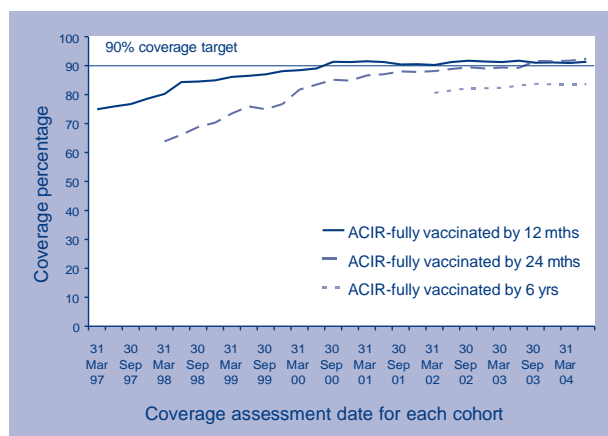
Coverage for 'fully immunised' at 24 months of age for Australia increased marginally from the last quarter by 0.6 percentage points to 92.3 per cent (Table 7). Coverage for individual vaccines increased marginally in most jurisdictions with coverage greater than 95 per cent in almost all jurisdictions for all vaccines except Hib. HepB coverage at 24 months of age is now greater than 98 per cent in the Northern Territory.

Table 8 shows immunisation coverage estimates for 'fully immunised' and for individual vaccines at six years of age for Australia and by state/territory.

'Fully immunised' coverage at six years of age for Australia was unchanged overall, apart from increases in Tasmania (+3.1%) and in the Northern Territory (+4.1%), also reflected in individual vaccines. Coverage for vaccines assessed at six years is at or near 85 per cent in the most jurisdictions, but Western Australia remains well below the average.

Figure 8 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 year for all age groups. The figure shows that there have now been four 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.

**Figure 8. Trends in vaccination coverage, Australia, 1997 to 2004, by age cohorts**



**Acknowledgement:** These figures were provided by the Health Insurance Commission (HIC), 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 the HIC: Telephone: +61 2 6124 6607.

**Table 6. Percentage of children immunised at 1 year of age, preliminary results by vaccine and state or territory for the birth cohort 1 April and 30 June 2003; assessment date 30 September 2004**

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Number of children	959	21,653	921	12,711	4,371	1,347	15,155	6,124	63,241
Diphtheria, tetanus, pertussis (%)	94.3	92.7	91.9	92.7	92.8	93.7	93.2	90.7	92.7
Poliomyelitis (%)	94.3	92.6	91.4	92.6	92.6	93.5	93.1	90.7	92.6
<i>Haemophilus influenzae</i> type b (%)	95.6	94.6	95.7	94.8	95.7	95.7	95.1	93.8	94.8
Hepatitis B (%)	95.3	95.3	96.3	94.8	95.8	95.6	94.7	93.3	94.9
Fully immunised (%)	93.4	91.3	90.5	91.7	91.7	92.4	91.7	88.8	91.3
Change in fully immunised since last quarter (%)	+2.7	+0.8	+5.3	+0.1	+0.3	-1.0	+0.0	-0.5	+0.4

**Table 7. Percentage of children immunised at 2 years of age, preliminary results by vaccine and state or territory for the birth cohort 1 April and 30 June 2002, assessment date 30 September 2004\***

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas.	Vic.	WA	
Number of children	1,003	21,222	873	12,724	4,274	1,444	15,217	6,184	62,941
Diphtheria, tetanus, pertussis (%)	95.7	95.4	96.9	95.0	95.4	96.3	95.7	94.4	95.3
Poliomyelitis (%)	95.6	95.2	97.1	94.9	95.4	96.2	95.7	94.2	95.2
<i>Haemophilus influenzae</i> type b (%)	94.7	93.4	95.5	94.0	94.1	94.5	94.2	92.6	93.8
Measles, mumps, rubella (%)	95.0	93.5	95.5	93.9	94.5	94.7	94.6	92.8	93.9
Hepatitis B(%)	96.1	95.7	98.2	95.6	96.2	96.4	96.3	95.4	95.9
Fully immunised (%)	92.7	91.8	93.8	92.3	93.0	93.8	93.1	90.6	92.3
Change in fully immunised since last quarter (%)	+2.7	+0.8	-0.7	+0.4	+0.3	-1.0	+0.8	-0.0	+0.5

**Table 8. Percentage of children immunised at 6 years of age, preliminary results by vaccine and state or territory for the birth cohort 1 April and 30 June 1998; assessment date 30 September 2004**

Vaccine	State or territory								Australia
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Number of children	1,049	21,810	892	13,394	4,674	1,496	15,498	6,733	65,546
Diphtheria, tetanus, pertussis (%)	85.9	85.3	83.7	85.1	85.3	85.2	87.4	81.6	85.4
Poliomyelitis (%)	86.0	85.2	85.3	85.2	85.4	85.2	86.9	82.0	85.3
Measles, mumps, rubella (%)	84.9	84.3	85.2	84.9	85.0	84.3	87.1	81.4	84.8
Fully immunised (%)	83.8	83.1	82.7	83.7	83.9	83.4	85.7	80.1	83.6
Change in fully immunised since last quarter (%)	-1.1	-0.0	+4.1	+0.0	+0.6	+3.1	+0.2	-1.0	+0.1

\* The 12 months age data for this cohort was published in *Commun Dis Intell* 2003;27:569.

## 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 which are currently routinely surveyed are penicillin, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens and currently used in Australia to treat gonorrhoea. When in vitro resistance to a recommended agent is demonstrated in 5% or more of isolates from a general population, it is usual to remove that agent from the list of recommended treatments<sup>1</sup>. 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 programme-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* 2004;28:100.

### Reporting period 1 July to 30 September 2004

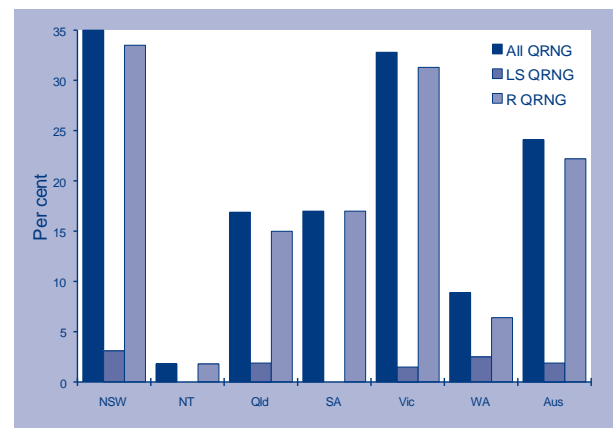
The AGSP laboratories examined a total of 829 isolates in this quarter. The total is slightly less than the 857 isolated or referred in 2003. About 31% of the current total was from New South Wales, 24% from Victoria, 19% from Queensland, 13% from the Northern Territory, 10% from Western Australia and 3% from South Australia. Isolates from Tasmania (6) and the Australian Capital Territory (4) were few.

### Quinolone antibiotics

The total number (200) and proportion (24%) of all quinolone resistant *N. gonorrhoeae* (QRNG) is at an historical high. In the first quarter of 2004 there were 188 QRNG (20.5%), and in the second quarter 172 (20.2%). The numbers here are substantially higher than the corresponding figures in the third quarter of 2003 (136 isolates, 16%). The majority of the QRNG (184 of 200, 92%) 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. The highest number, 93, was found in New South Wales (36.6% of isolates in that State) while 64 QRNG were 33% of gonococci in Victoria. In Queensland there were 27 QRNG (17%), seven in Western Australia (9%), four in South Australia (17%), two in both the Northern Territory and Tasmania and one in the Australian Capital Territory.

**Figure 9. The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia by jurisdiction, 1 July to 30 September 2004**



LS QRNG

Ciprofloxacin MICs 0.06 – 0.5 mg/L.

R QRNG

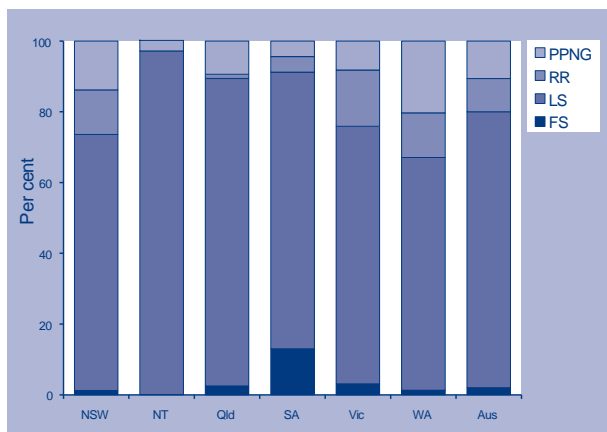
Ciprofloxacin MICs => 1 mg/L.

### Penicillins

In this quarter 20% of all isolates examined were penicillin resistant by one or more mechanisms—10.6% penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 9.4% by chromosomal mechanisms (CMRNG). The proportion of all penicillin resistant strains is little changed from the previous quarter and a slight increase from the 18% detected in the third quarter of 2003. The number of PPNG increased to 88 from the 77 seen in the same period in 2003, but the number of CMRNG was essentially unchanged (77 for this period in 2004, 76 in 2003). The proportion of all strains resistant to the penicillins by any mechanism ranged from 3.8% in the Northern Territory to 33% in Western Australia.

Figure 10 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 and Territory. A high proportion those strains classified as PPNG or else resistant by chromosomal mechanisms fail to respond to treatment with penicillins (penicillin, amoxicillin, ampicillin) and early generation cephalosporins.

**Figure 10. Categorisation of gonococci isolated in Australia by penicillin susceptibility and by region, 1 July to 30 September 2004**



FS fully sensitive to penicillin, MIC  $\leq$  0.03 mg/L.  
 LS less sensitive to penicillin, MIC 0.06 – 0.5 mg/L.  
 RR relatively resistant to penicillin, MIC  $\geq$  1 mg/L.  
 PPNG penicillinase producing *Neisseria gonorrhoeae*.

The highest proportion of PPNG was found in Western Australia where the 16 PPNG were 20.3% of all isolates. Thirty-five PPNG representing 13.8% of all isolates were found in New South Wales, 15 (9.4%) in Queensland and 16 (8.2%) in Victoria. There was a single PPNG in South Australia, Tasmania and the Australian Capital Territory and three in the Northern Territory. The number of CMRNG was highest in Victoria (31, 16%) and New South Wales (32, 13%) and in Western Australia 10 CMRNG isolates were 12.6% of the total. Elsewhere CMRNG were in low numbers (Queensland, Tasmania, South Australia) or absent (Northern Territory, Australian Capital Territory).

#### Ceftriaxone.

An increased number of isolates (12, 4.7%) with decreased susceptibility to ceftriaxone were detected in New South Wales in this quarter, but none were seen elsewhere. Small numbers of these strains have been present for a number of years, mostly in New South Wales, but only occasionally in other jurisdictions.

#### Spectinomycin

All isolates susceptible to this injectable agent.

#### High level tetracycline resistance (TRNG)

Both the number (121) and proportion (14.6%) of TRNG continued to increase from the 2003 figures (92, 11.5%). TRNG were found in all jurisdictions

with 22 (28%) in Western Australia, 56 (22%) in New South Wales, 18 (11%) in Queensland and 19 (10%) in Victoria.

#### Reference

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

### *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.*

*Laboratory confirmed cases of invasive meningococcal disease for the period 1 July to 30 September 2004, are included in this issue of Communicable Diseases Intelligence (Table 9).*

#### Reporting period 1 July to 30 September 2004

**Table 9. Number of laboratory confirmed cases of invasive meningococcal disease, Australia, 1 July to 30 September 2004, by jurisdiction and serogroup**

Jurisdiction	Year	Serogroup													
		A		B		C		Y		W135		ND		All	
		Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd	Q3	ytd
Australian Capital Territory	2004			0	3	3	7							3	10
	2003			(2)	(3)	(2)	(2)							(4)	(5)
New South Wales	2004			22	60	6	15	1	3	2	4	2	12	33	94
	2003			(38)	(75)	(19)	(32)	(1)	(4)	(0)	(1)	(3)	(15)	(61)	(127)
Northern Territory	2004			0	5	0	0			0	1			0	6
	2003			(3)	(9)	(0)	(0)			(1)	(1)			(4)	(10)
Queensland	2004	0	1	13	36	8	20	0	1	1	2	0	2	22	62
	2003	(1)	(1)	(17)	(34)	(16)	(31)	(1)	(1)	(0)	(0)	(0)	(8)	(35)	(75)
South Australia	2004			2	11	1	1							3	12
	2003			(7)	(15)	(1)	(2)	(1)	(1)	(1)	(1)			(10)	(19)
Tasmania	2004			3	6	5	5			0	1	1	3	9	15
	2003			(3)	(3)	(4)	(5)							(7)	(8)
Victoria	2004			17	45	3	12	0	3	2	2	1	3	23	65
	2003			(22)	(35)	(17)	(39)	(2)	(2)	(0)	(1)	(1)	(6)	(42)	(83)
Western Australia	2004			11	23	2	4			1	1			14	28
	2003			(11)	(22)	(2)	(5)	(0)	(1)					(13)	(28)
Australia	2004	0	1	68	189	28	64	1	7	6	11	4	20	107	292
	2003	(1)	(1)	(103)	(196)	(61)	(116)	(5)	(9)	(2)	(4)	(4)	(29)	(176)	(355)

Numbers of laboratory confirmed diagnoses of IMD made in the same periods in 2003 are also shown in parenthesis.

Q3 = third quarter; ytd = year to 30 September 2004; ND = not determined.

## HIV and AIDS surveillance

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

Tabulations of diagnoses of HIV infection and AIDS are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, and annually in

'HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia, annual surveillance report'. The reports are available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Internet: <http://www.med.unsw.edu.au/nchechr>. Telephone: +61 2 9332 4648. Facsimile: +61 2 9332 1837. For more information see Surveillance systems reported in CDI, published in Commun Dis Intell 2004;28:99.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 April to 30 June 2004, as reported to 30 September 2004, 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 2004, by sex and state or territory of diagnosis**

	Sex	State or territory								Total for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2004	This period 2003	Year to date 2004	Year to date 2003
HIV diagnoses	Female	0	10	0	7	1	1	10	0	29	23	67	43
	Male	0	82	0	28	4	3	41	0	158	208	359	410
	Not reported	0	1	0	0	0	0	0	0	1	1	2	2
	Total <sup>1</sup>	0	93	0	35	5	4	51	0	188	232	429	455
AIDS diagnoses	Female	0	2	0	1	0	0	1	0	4	3	7	7
	Male	0	11	0	7	2	1	3	0	24	52	62	87
	Total <sup>1</sup>	0	13	0	8	2	1	4	0	28	55	70	95
AIDS deaths	Female	0	1	0	0	0	0	0	0	1	1	2	5
	Male	0	7	0	3	5	0	0	0	15	14	27	31
	Total <sup>1</sup>	0	8	0	3	5	0	0	0	16	15	29	36

1. Persons whose sex was reported as transgender are included in the totals.

**Table 11. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 June 2004, by sex and state or territory**

	Sex	State or territory								Australia
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses		30	759	17	222	82	8	303	159	1,580
		247	12,507	121	2,373	805	88	4,664	1,049	21,854
		0	238	0	0	0	0	22	0	260
		277	13,532	138	2,604	888	96	5,008	1,215	23,758
AIDS diagnoses	Female	9	220	1	61	30	4	91	34	450
	Male	92	5,094	41	964	385	48	1,844	407	8,875
	Total <sup>1</sup>	101	5,329	42	1,027	416	52	1,945	443	9,355
AIDS deaths	Female	6	127	0	40	20	2	58	22	275
	Male	71	3,442	26	625	262	32	1,353	277	6,088
	Total <sup>1</sup>	77	3,578	26	667	282	34	1,419	300	6,383

1. Persons whose sex was reported as transgender are included in the totals.

## 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*.

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Reports to the National Enteric Pathogens Surveillance System of *Salmonella* infection for the period 1 July to 30 September 2004 are included in Tables 12 and 13. Data include cases reported and entered by 28 October 2004. Counts are preliminary, and subject to adjustment after completion of typing and reporting of further cases to NEPSS. For more information about NEPSS see Surveillance systems reported in CDI, published in Commun Dis Intell 2004;28:101.

#### Reporting period 1 July to 30 September 2004

The total number of reports to NEPSS of human *Salmonella* infection declined to 1,156 in the third quarter of 2004, 42 per cent fewer than in second quarter of 2004 (Table 12) but 19 per cent more than the final count for the third quarter of 2004.

Case counts to 28 October 2004 are expected to comprise more than 95 per cent of the final counts for the quarter.

During the third quarter of 2004, the 25 most common *Salmonella* types in Australia accounted for 669 cases, 58 per cent of all reported human *Salmonella* infections (Table 13).

Eighteen of the 25 most common *Salmonella* infections in the third quarter of 2004 were among the 25 most commonly reported in the previous quarter.

Reports of common salmonellae with counts well above historical averages include *S. Typhimurium* phage type 197 (in the eastern mainland states), *S. Virchow* phage type 8 (particularly in Queensland and New South Wales), and *S. Stanley* (particularly in Victoria). Counts of several typically overseas-acquired phage types of *S. Enteritidis* were also elevated. While still among the more common salmonellae, reports of *S. Typhimurium* phage type 170/108 declined in number and relative prominence.

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.

**Acknowledgement:** Thanks to contributing laboratories and scientists.

**Table 12. Reports to the National Enteric Pathogens Surveillance System of *Salmonella* isolated from humans during the period 1 July to 30 September 2004, as reported to 28 October 2004**

	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
Total all <i>Salmonella</i> for quarter	17	263	68	355	69	11	238	135	1,156
Total contributing <i>Salmonella</i> types	12	91	29	102	33	10	88	65	209

**Table 13. Top 25 *Salmonella* types identified in Australia, by state or territories, 1 July to 30 September 2004**

National rank	<i>Salmonella</i> type	State or territory								Total 3rd quarter 2004	Last 10 years mean 3rd quarter	Year to date 2004	Year to date 2003
		ACT	NSW	NT	QLD	SA	Tas	Vic	WA				
1	<i>S</i> Typhimurium 135	0	20	0	31	4	0	20	26	101	77	450	559
2	<i>S</i> Typhimurium 197	2	8	0	39	0	0	14	0	63	5	203	134
3	<i>S</i> Saintpaul	0	8	7	24	1	0	5	9	54	41	290	230
4	<i>S</i> Typhimurium 9	1	5	0	4	9	1	18	2	40	74	287	338
5	<i>S</i> Virchow 8	2	12	0	22	1	0	2	0	39	18	269	130
6	<i>S</i> Typhimurium 170	4	13	0	7	0	1	10	0	35	19	413	340
7	<i>S</i> Birkenhead	0	8	1	18	0	0	0	0	27	20	198	140
8	<i>S</i> Chester	0	7	4	8	5	0	0	3	27	20	156	174
9	<i>S</i> Stanley	1	4	1	4	1	0	11	4	26	13	59	35
10	<i>S</i> Enteritidis 6a	0	3	0	3	1	1	8	10	26	3.2	50	15
11	<i>S</i> Typhimurium RDNC	0	13	0	3	3	0	5	0	24	15	84	54
12	<i>S</i> Infantis	0	5	2	1	1	0	10	3	22	21	113	165
13	<i>S</i> Aberdeen	0	2	1	13	0	1	2	0	19	11	91	67
14	<i>S</i> Weltevreden	0	3	2	8	0	0	5	1	19	7	59	34
15	<i>S</i> Muenchen	0	4	2	5	2	0	1	4	18	16	90	109
16	<i>S</i> Enteritidis 4b	0	1	0	0	0	1	14	2	18	4.4	29	11
17	<i>S</i> Typhimurium 126	0	5	0	1	1	0	6	1	14	19	58	55
18	<i>S</i> Ball	0	0	14	0	0	0	0	0	14	6	49	39
19	<i>S</i> Typhimurium 12	0	9	0	1	0	0	3	0	13	4.3	202	74
20	<i>S</i> Litchfield	0	5	4	4	0	0	0	0	13	3.6	34	30
21	<i>S</i> Enteritidis 1	0	3	0	2	3	0	3	1	12	6	32	12
22	<i>S</i> Enteritidis 1b	0	6	0	1	0	0	2	3	12	1.2	26	10
23	<i>S</i> Agona	1	1	1	4	1	0	1	2	11	13	63	53
24	<i>S</i> Typhimurium untypable	0	4	0	2	0	0	4	1	11	11	22	18
25	<i>S</i> Hvitvingfoss	0	2	0	7	1	0	1	0	11	9	117	73