

Communicable Diseases Surveillance

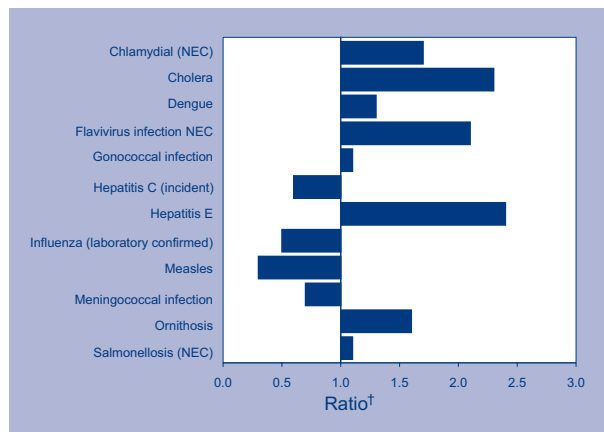
Highlights for 3rd quarter, 2004

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

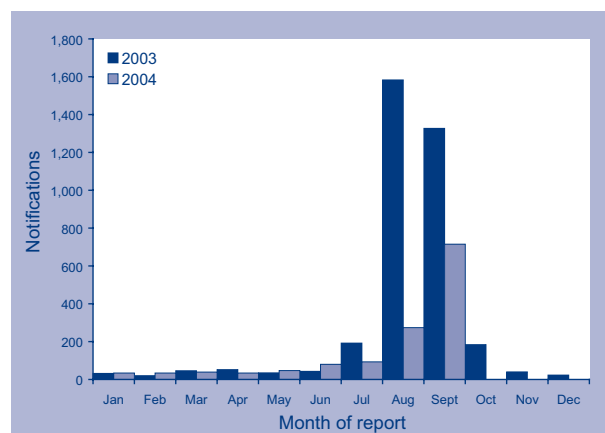
There were 12 cases of measles reported in the third quarter. Notifications were received from New South Wales (2), South Australia (3), Victoria (5) and Western Australia (2). This total is well below the 26 cases reported in the same period last year and the average of 24 cases reported in the period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

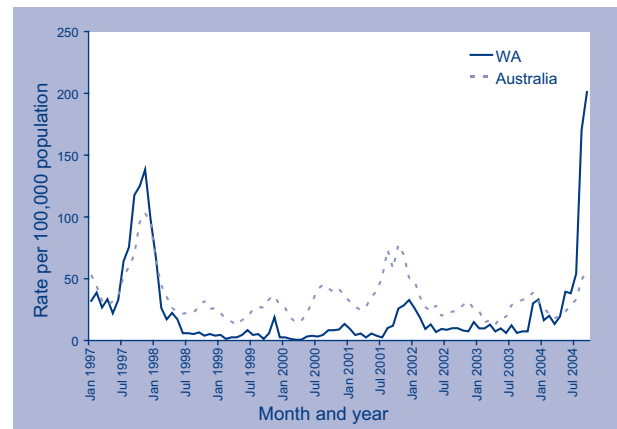
Pertussis

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.

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