Communicable diseases surveillance

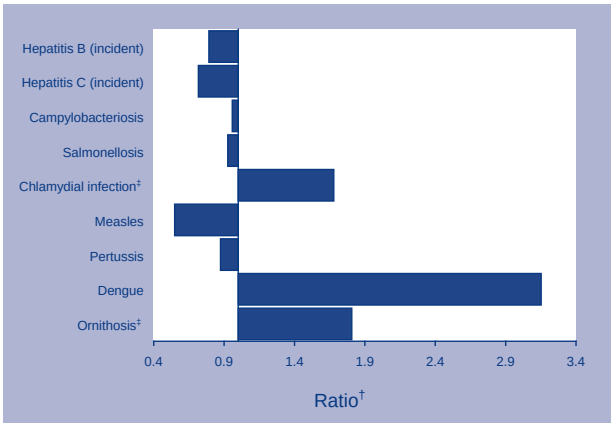
Highlights for 4th quarter, 2003

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 the fourth quarter of 2003, compared with the 5-year mean of the same period. Disease notifications outside the 5-year mean plus or minus two standard deviations are marked. During the fourth quarter of 2003, notifications of chlamydial infection and ornithosis were above the 5-year mean plus two standard deviations. Chlamydial infection notifications have continued to increase for four consecutive quarters in 2003. Notifications for dengue were above the 5-year mean of the fourth quarter but were not significantly above historical levels. Notifications of incident hepatitis B, hepatitis C, campylobacteriosis, salmonellosis, measles and pertussis in the fourth quarter, were below the 5-year average (Figure 1).

Figure 1. Selected* diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 October to 31 December 2003 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.

‡ Notifications above or below the 5-year mean plus or minus two standard deviations for the same period

Gastrointestinal diseases

Salmonellosis

Salmonellosis notifications increased after the seasonal low in the third quarter of 2003. In the fourth quarter there were 1,551 cases of salmonellosis notified, an increase of 46 per cent from the third quarter. However, the number of notified cases was less than for the same quarter of 2002 and the year to date notifications were less than the mean of the last five years (Table 1).

Campylobacteriosis

There were 3,928 notifications of campylobacteriosis cases with onset in the fourth quarter of 2003. This represents a seasonal increase of notifications of 13 per cent during this quarter compared to the third quarter, however, compared to the 5-year mean there was a decrease of four per cent.

Vaccine preventable diseases

Measles

There were 17 cases of measles with onset in the fourth quarter reported to NNDSS. Of these 11 cases were notified in South Australia and two each in New South Wales, Queensland, and Victoria. For the fourth consecutive quarter there were no cases of measles reported from Tasmania, the Australian Capital Territory or Western Australia.

The 11 cases notified in South Australia were linked to an outbreak that started in Adelaide on 31 August 2003. The last case linked to this outbreak which affected 22 persons, was reported in mid-October 2003. The index case in this outbreak had a travel history to New Zealand prior to the onset of illness. Of these 11 cases, two were fully vaccinated, two partially vaccinated one of unknown vaccination status and the remaining six cases were not vaccinated.

There were also two cases linked to this outbreak reported from other jurisdictions—one in Victoria and the other in New South Wales.

Of the two measles cases reported in Queensland, one was linked to an earlier outbreak in the Whitsunday Islands, reported in the third quarter of 2003 and the other was acquired in Bali.

Pertussis

There were 1,629 cases of pertussis notified in the fourth quarter of 2003, a notification rate of 33 cases per 100,000 population. The number of notifications increased by five per cent from the previous quarter, however, compared to the same quarter of 2002 and to the year-to-date mean for last five years, it was lower by 13 per cent and 20 per cent, respectively.

Notifications of pertussis increased in the fourth quarter compared with the third quarter, in Tasmania (102 cases compared with 34) and Western Australia (144 cases compared with 29 cases). Notifications decreased in the fourth quarter compared with the third quarter, in the Australian Capital Territory (108 compared with 180) and South Australia (42 compared with 52 cases). There was no significant change in notifications of pertussis in the remaining jurisdictions.

Vectorborne diseases

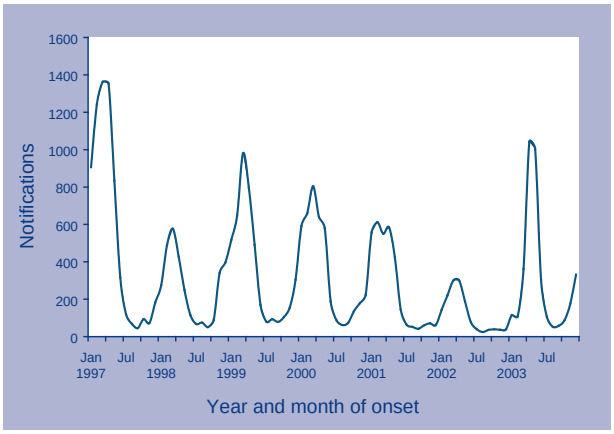
Dengue

There were 203 cases of dengue notified during the fourth quarter, a notification rate of four cases per 100,000 population. This represents a sixfold increase compared to the previous quarter. In Queensland, where 87 per cent (180/203) of notified cases occurred, two outbreaks of Dengue Type 2 were reported. The first outbreak started on Yam Island, Torres Strait, at the end of the third quarter 2003. This outbreak affected 98 persons and is now reported to be under control. The second outbreak on Thursday Island began in November 2003. This outbreak which has so far affected 100 persons is reported to have spread from Yam Island.

There have also been small clusters of cases of Dengue Type 2 cases in Cairns and Townsville. In Cairns, one recent case appeared to be locally acquired, although all others were imported cases. In Townsville, there was evidence of local transmission which was limited to two suburbs.

Overall, dengue notifications for 2003 peaked in the second quarter (Figure 2). Whether the increase in the number of notifications in the fourth quarter signals an early start for the dengue season remains to be seen. In the meantime, mosquito control and community education continues in the affected areas.

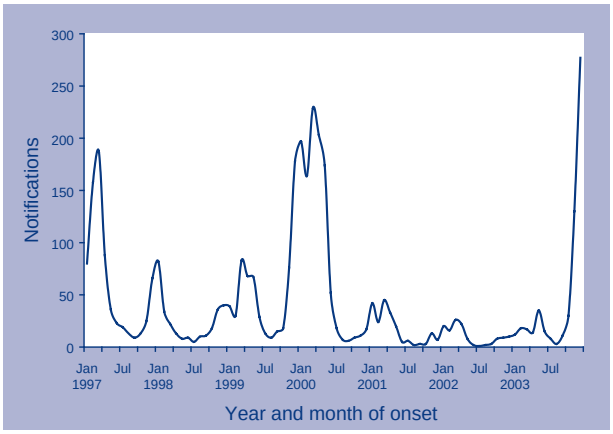
Figure 2. Notifications of dengue Australia, 1997 to 2003, by month of onset



Ross River virus

There were 478 cases of Ross River virus infection notified in the fourth quarter of 2003, a notification rate of 10 cases per 100,000 population. The number of notifications represents a 120 per cent increase on the previous quarter. This increase was accounted for by a large number of notifications (n=327) of Ross River virus infection in Western Australia (68% of all notified cases). Most of these notifications were from the south-west of the state. This area also experienced a large outbreak in the summer of 1998–99 with 650 cases notified.[1] Western Australia has also reported higher than usual notifications of Ross River virus in 1997 and 2000 (Figure 3). Notifications usually increase from the end of the fourth quarter well into the first quarter of the following year, depending on the breeding conditions for the vector mosquitoes. In 2003, notifications in Western Australia have already exceeded the number in the peak of notifications in 2000 and may continue to increase during the first quarter of 2004.

Figure 3. Notifications of Ross River virus infections. Western Australia, 1997 to 2003, by month of onset



Zoonoses

Ornithosis

There were 66 notifications of ornithosis in the fourth quarter 2003, which was a significant increase compared with historical data for this quarter (Figure 1). Most cases were reported from Victoria (33 cases) or New South Wales (24 cases).

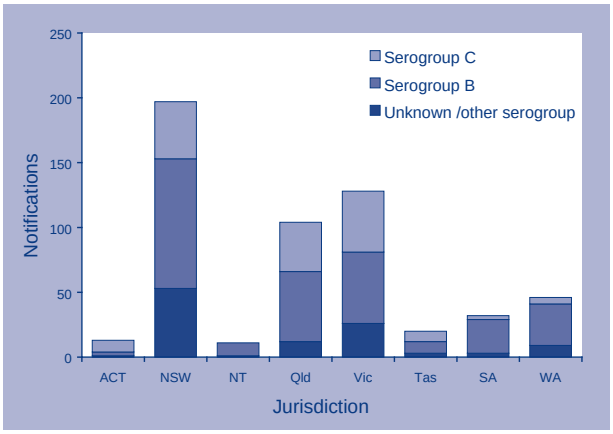
Other bacterial infections

Meningococcal infections

There were 144 cases of meningococcal infection notified in the fourth quarter of 2003, a notification rate of 2.9 cases per 100,000 population. This was a 30 per cent decrease on the previous quarter (206 cases). This decrease was expected as the disease activity traditionally peaks in spring. For the year to date, 545 cases of meningococcal disease have been reported overall: a decrease of 20 per cent compared with 2002 and 10 per cent lower than the 5-year average.

In 2003, serogroup B was the predominant meningococcal serogroup in all jurisdictions except in the Australian Capital Territory, where serogroup C was three times more common than serogroup B (Figure 4). In Victoria and Tasmania, in contrast to previous years, there were more reports of serogroup B disease than serogroup C. Nationally, the serogroup C to B ratio increased from 1:1.3 in 2002 to 1:2 in 2003. The proportion of serogroup B within the total notifications, increased from 39 per cent in 2002 to 53 per cent in 2003. Serogroup C notifications decreased from 30 per cent of total notified cases in 2002 to 28 per cent in 2003.

Figure 4. Notifications of meningococcal infections, Australia, 2002 and 2003, by jurisdiction and serogroup



* Notifications and deaths from unknown or other serogroups are not included.

There was also a decrease in the number of 'other' or 'unknown' serogroups from 33 per cent in 2002 to 19 per cent in 2003.

In 2003, serogroup C infections accounted for 56 per cent of meningococcal deaths (n=18) and serogroup B infections for 28 per cent of deaths (n=9).

References

1. Condon R. Epidemiology and acute symptomatology of epidemic polyarthritis in Western Australia, 1988–89. *Commun Dis Intell* 1991;15:442-446.