

Communicable Diseases Surveillance

Highlights for 3rd quarter, 2002

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 third quarter of 2002, compared with the 5-year third quarter mean. Disease notifications above or below the 5-year mean, plus- or minus- two standard deviations are marked with an asterisk. Diseases where the number of cases reported was two standard deviations above the mean of the same reporting period in the last 5 years in the current quarter were hepatitis E, shiga-like toxin producing *Escherichia coli* and ornithosis. The reports of Ross River virus infection, leptospirosis and tuberculosis were two standard deviations below the 5-year mean in this quarter. These and other disease trends are discussed below with additional commentary provided by State and Territory health authorities.

Due to the difficulties in data transmission in this quarter, Victorian data for sexually transmitted diseases, incident hepatitis B and C diseases, Ross River virus infection, dengue, tuberculosis and Barmah Forest virus infections were not updated and the numbers presented (Table 2) should be interpreted with caution.

Gastrointestinal disease

Campylobacteriosis

In all jurisdictions, there were fewer reports of campylobacteriosis in the third quarter (3,075) compared with the mean for the last five years (3,380, Table 2). Campylobacteriosis notifications are lowest in winter months and show a seasonal peak in spring and summer. Notifications of campylobacteriosis in Australia, which have increased steadily since 1991, may now be stabilising (Figure 2).

Figure 1. Selected¹ diseases from the National Notifiable Diseases Surveillance System, comparison of provisional totals for the period 1 July to 30 September 2002 with historical data²

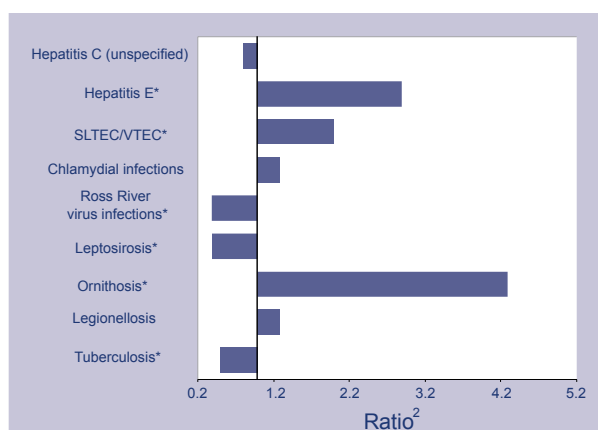
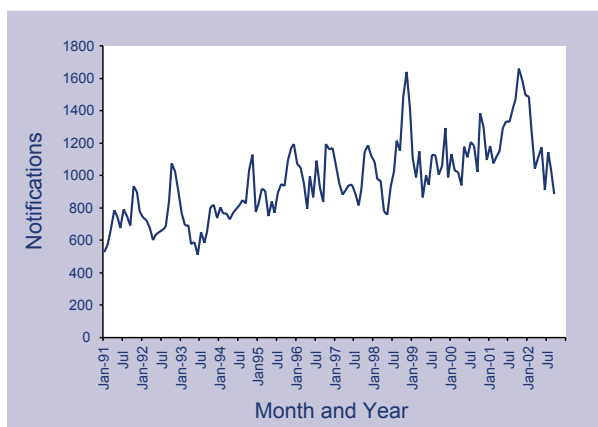


Figure 2. Trends in notifications of campylobacteriosis, Australia, 1991 to 2002

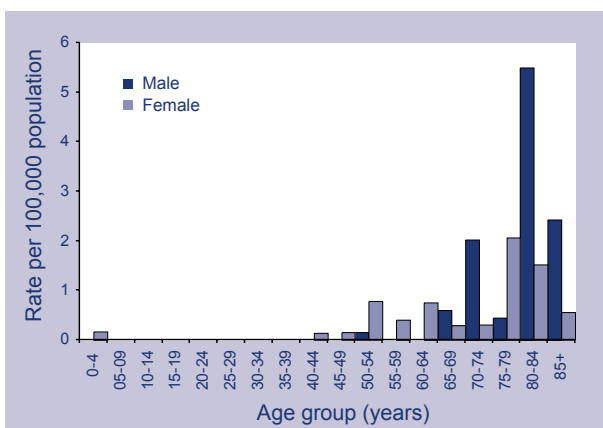


Despite the national totals of campylobacteriosis showing a decrease in this quarter, there was an increase in cases of campylobacteriosis in Far North Queensland. Interviews were conducted with 24 cases who had eaten chicken in the 7 days before onset of illness and 17/24 (71%) had eaten chicken in the 3 days before onset. Sixty-three per cent (15/24) had purchased fresh chicken to take home and cook. No other food, water or environmental exposures were common among cases. The results of quantitative testing of raw chicken samples and comparison of strains to isolates from cases remain to be assessed. Preliminary data suggests that approximately 80 per cent of raw chicken sold at retail outlets are contaminated with *Campylobacter*. The same poultry abattoir in North Queensland, was identified as a common link for cases of *Campylobacter* infection in 2000. This abattoir is the main supplier of chickens to region.

Listeriosis

Listeriosis is a serious bacterial disease caused by consumption of food contaminated with *Listeria monocytogenes*. The elderly and those with reduced immune function are at increased risk of infection and represent the majority of listeriosis cases in Australia (Figure 3).

Figure 3. Notification rates of listeriosis, Australia, 1 January to 30 September 2002, by age and sex



There was an increase in cases of listeriosis in Queensland during the quarter. Two cases reported consuming the same brand of smoked cod from South Africa and Argentina. Food samples tested positive for *Listeria*. As the cod was not marketed as a ready-to-eat food, there was no food recall, however, the importer was asked to clearly mark the food as requiring cooking before consumption.

In Western Australia, there was a recall of a fetta cheese product contaminated with *Listeria*. The Communicable Disease Control Section of the Health Department of Western Australia advised that neither of the 2 cases of listeriosis reported in Western Australia in the quarter were associated with the consumption of this fetta cheese product.

Salmonellosis

The number of notifications of salmonellosis was at a low level (101 cases) which is typical of winter months. There were 14 cases of *Salmonella* Hvittingfoss in Victoria, 11 of which were investigated as a possible cluster. One had a recent history of travel overseas, one was a breast-fed baby, and of the remaining nine, six had consumed cashews. There was, however, no common source or brand of cashews among the cases, no positive microbiology on samples, and no further cases. A case control study was not conducted and the source of the infections remains unknown.

Shiga-like toxin producing *Escherichia coli*

There were 12 cases of shiga-like toxin producing *Escherichia coli* (SLTEC/VTEC) infection notified to the NNDSS in the third quarter. This is twice the five-year mean for third quarter (Figure 1). The Communicable Diseases Control Branch of the South Australian Health Commission reported a cluster of SLTEC infections during the quarter. In South Australia all faeces with microscopic or macroscopic blood sent to microbiology laboratories are routinely screened by PCR for shiga toxin. Positive specimens are further screened using a multiplex PCR for multiple pathogenic genes. A cluster of four children (three females, one male: age range 1–7 years) and one female (aged 47 years) has been identified. Dates of onset ranged from 6 to 16 September 2002; four of the cases were residents of metropolitan Adelaide and one was from rural South Australia. The investigation has established a possible direct link between animal contact at a petting zoo and illness for 3 cases and an indirect link for a fourth. The multiplex PCR has detected the same pattern of genes in faeces from the 5 human cases and from a swab of the coat of one of the animals included in the environmental investigation. Shiga toxin positive *E. coli* O26 has been isolated from three of the human specimens. None of the cases developed haemolytic uraemic syndrome (HUS). Active surveillance of health services did not identify any other recent cases of HUS.

Other foodborne disease outbreaks

An outbreak of foodborne disease at a conference was reported from Western Australia in September 2002. An electronic questionnaire emailed to 533 delegates, of which 350 replied, identified 80 cases (23% attack rate). No pathogen was identified nor was a definitive link to any food established.

Quarantinable disease

Cholera

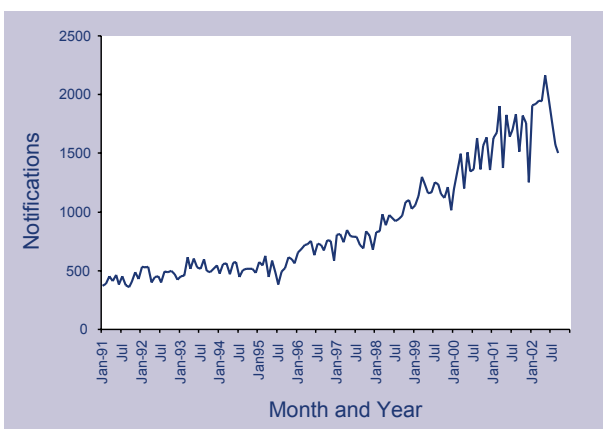
There were 3 cases of cholera reported to the NNDSS in the third quarter of 2002. One case, from South Australia, was subsequently identified as an infection with non-cholera *Vibrio* acquired in China. The other 2 cases were confirmed as *V. cholerae* O1, both acquired overseas (one in Pakistan and one in Vietnam).

Sexually transmitted infections

Chlamydial infection

There were 4,844 notifications of chlamydial infection in the third quarter of 2002, which was 30 per cent higher than the five-year mean (Figure 1). Chlamydial infections have been increasing in Australia since 1991 (Figure 4).

Figure 4. Trends in notifications of chlamydial infections, Australia, 1991 to 2002



Vaccine preventable diseases

Measles

There was a small outbreak of measles in North Queensland and New South Wales in July–August 2002. The outbreak was initiated by a 16-year-old visitor from Europe, who had travelled through

Thailand and resulted in 7 cases. The outbreak is described in more detail in a short report in this (Hanna).¹

One of the 7 cases was an unimmunised child from northern New South Wales, who subsequently infected two unimmunised siblings. The measles viral genotype in all cases in both States was identified as D5. This genotype has previously been identified as circulating in Thailand (Victorian Infectious Diseases Reference Laboratory annual report, 2001).

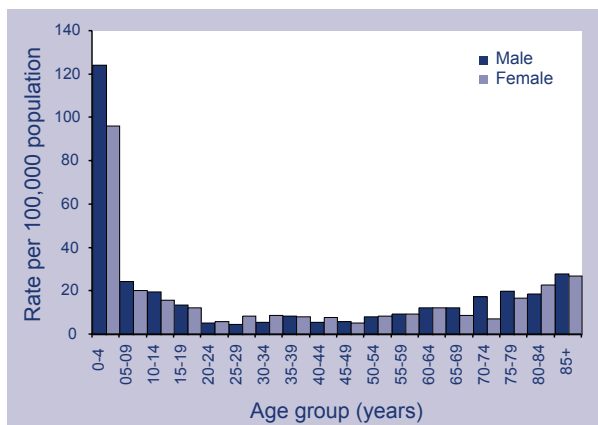
In August, a sailor from South-East Asia developed laboratory-confirmed measles within a few days of flying into Sydney. The public health unit assessed the risk to coworkers on the ship and among dock workers and recommended immunoglobulin to those who were susceptible. No further transmission was identified.

Two linked cases of measles occurred in Victoria in August in young adults without a history of travel. The first case, a nurse, may have been infected through contact with two other measles cases, neither of whom had a history of travel. Both cases were identified as measles genotype H1.

Influenza

There were 2,564 notifications of laboratory-confirmed influenza in the third quarter of 2002. The largest number of cases (944) and the highest rate (103.9 cases per 100,000 population) was in Queensland. The majority of notifications in the third quarter were influenza A; LabVISE data (Table 4) shows the ratio of influenza A:B isolations of 4.8:1. The majority of cases of laboratory-confirmed influenza cases were in children aged less than 5 years and in the elderly aged 65 years or more (Figure 5).

Figure 5. Notification rates of influenza, Australia, 1 January to 30 September 2002, by age and sex

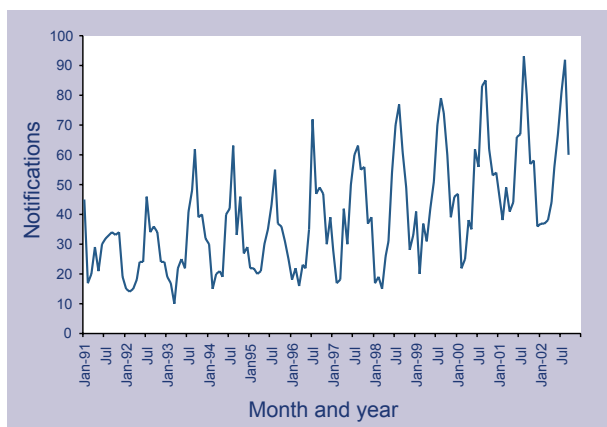


Other bacterial diseases

Meningococcal disease

There were 233 notifications of meningococcal disease in third quarter of 2002. The largest number of reports was from New South Wales (76 cases) and the highest rate was in Victoria (5.4 cases per 100,000 population). An analysis of meningococcal notification by month of onset, indicates a continuing increase since 1991 (Figure 6).

Figure 6. Trends in notifications of meningococcal infections, Australia, 1991 to 2002



There were three confirmed and one unconfirmed linked cases of meningococcal disease in a small Queensland rural community of 5,000 people. Two cases were identified as meningococcal group C and the third as a group Y. The group Y isolate did, however, show evidence of similarity with the group C cases on the basis of genetic typing. The cases were aged between 19 and 40 years. Tetravalent polysaccharide vaccine was offered to all people aged 18–40 years who lived or worked in the community and surrounds. In all, 2,300 vaccines were given. There were no further cases in the community and all the identified cases recovered.

A small cluster of meningococcal disease occurred in a child-care group in Victoria in July 2002. There were two confirmed cases of meningococcal serogroup C in children aged 4 and 5 years, both of whom attended the same day care centre. One child also attended a second child-care centre and conjugate meningococcal serogroup C vaccine was offered to children and staff at both centres.

Legionellosis

Public health authorities warned people to take care handling potting mix after a second death due to legionellosis disease in New South Wales in 2002. The death of a 77-year-old Sydney man in July 2002 follows that of a 78-year-old man in

January 2002. Other people infected with the illness in New South Wales this year have recovered. There were no deaths following *legionella* infection associated with potting mix in New South Wales last year, one case in 2000 and another single case in 1999. There were four deaths in 1998. *Legionella longbeachae* has been associated with lower respiratory infection in immunocompetent and immunocompromised individuals. The organism, especially in Australia, appears to be unique in being associated with pneumonia associated with exposure to soil. It has been found in soil and potting mixes from Australia but not from potting mix made in Europe. Importantly, the *legionellae* from the soil and the patient appeared to be closely related. Cases of *L. longbeachae* associated with potting mix have been described in the United States of America and Japan.

LabVISE

During the period July to September 2002, 12 participating laboratories (3 each in New South Wales, Western Australia and Victoria and one each in South Australia, Queensland and Tasmania), contributed 6,212 reports to LabVISE. Although there were no contributing laboratories in the Northern Territory, samples from this jurisdiction were included in reports from participating reference laboratories.

Of the 6,212 reports received, 4,532 (73%) were of viral infections and the remainder (1,680) were bacterial, spirochaete, fungal, protozoan or helminthic infections. Of the viral infections, reports of respiratory syncytial virus (1,302 reports) represented 28 per cent of all viral identifications and influenza virus (1,175 reports) represented a further 26 per cent of the viral pathogen total. This pattern of increased respiratory viral infections is typical of winter months. Among reports of non-viral pathogens, *Chlamydia trachomatis* (706 reports) represented 42 per cent of the total.

With thanks to:

Craig Davis, Queensland Health

Rod Givney, South Australian Health Commission

Jeremy McAnulty, New South Wales Health Department

Minda Sarna, Health Department of Western Australia

Graham Tallis, Department of Human Services, Victoria

References

1. Hanna JN, Symons DJ, Lyon MJ. A measles outbreak in the Whitsundays, Queensland: the shape of things to come? *Commun Dis Intell* 2002;26:589–592.