

12. Zoonoses

Surveillance objectives

The objectives of zoonotic disease surveillance are to:

- Monitor the epidemiology of zoonotic diseases in terms of time, person and place;
- Detect outbreaks of zoonotic disease to identify a source, implement appropriate public health interventions and prevent further transmission, particularly in work settings;
- Communicate the patterns, risks and trends about zoonotic diseases to the public, government and other key stakeholders.

Brucellosis

Summary of notifications

One case of brucellosis was notified in 2005 in a 29-year-old female from metropolitan Melbourne. The case presented with an inflamed knee from which an aspirate was taken and *B. melitensis* was isolated.

Risk factors

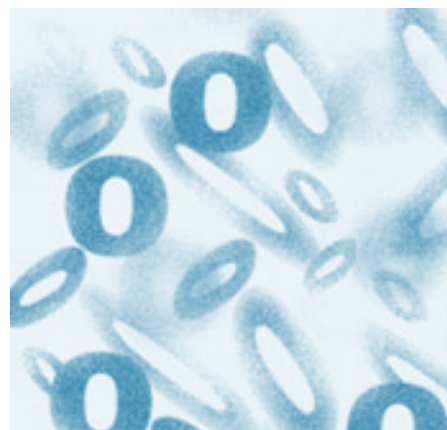
All cases of brucellosis are followed up and asked about travel history, consumption of unpasteurised milk and cheese, and exposures to farms, animals and abattoirs. Although the case had worked for several months in a Melbourne abattoir, the most likely source for the case's infection was considered to be consumption of unpasteurised milk and cheese while at a Kenyan refugee camp in 2004.

Outbreak and other investigations

No outbreaks were identified.

Comment

Brucellosis is an infrequently notified disease in Victoria. Those with occupational exposure, such as farmers and handlers of potentially infected animals such as feral pigs, are most at risk and should be educated about the disease and reducing exposure opportunities by use of appropriate protective equipment. Travellers should also be educated about not consuming unpasteurised milk and products made with unpasteurised milk.



Leptospirosis

Summary of notifications

Nine cases of leptospirosis were notified in 2005, one case more than in 2004. All cases were male aged from 17 to 61 years (median: 35 years) and residents of regional Victoria; five were from the Barwon South-Western region, three from Gippsland region and one from Grampians region. Eight cases worked on dairy farms; of these seven cases were infected with *Leptospira interrogans* serovar *hardjo* and one with *L. interrogans* serovar *arborea*. The other case was a diesel mechanic with *L. interrogans* serovar *copenhageni* infection who reported working on rat-infested harvester machines.

Risk factors

All leptospirosis cases are asked about travel history, or potential exposures from contact with animals, rivers, lakes, swamps or marshy areas, or working on farms or in abattoirs. Eight cases were likely to have acquired their infections from cattle on account of their farm work and one case from exposure to rat urine.

Outbreak and other investigations

No outbreaks or linked cases were identified.

Comment

Farmers, farm workers and meat industry workers in Victoria are the occupational groups most commonly affected by leptospirosis. As transmission is primarily through contact of skin with water, moist soil or vegetation contaminated with the urine of infected animals, the use of appropriate personal protection for people in high-risk occupations should be encouraged.

Psittacosis

Summary of notifications

The department received notifications for 40 cases of confirmed and probable psittacosis in 2005, a 74 per cent decrease on the 155 cases notified in 2004. Twenty-five cases (63 per cent) were male and the remainder were female. The median age of cases notified was 57 years (range: 33–84 years). The largest numbers of cases

were among those aged 50–60 years, although the highest five-year age-specific notification rate was in those aged 80–84 years (figure 51).

The North and West Metropolitan region comprised the highest proportion of cases, although the notification rate was highest in the Hume region (figure 52).

Twenty-four cases (60 per cent) were hospitalised although no deaths were reported.

Figure 51: Notified cases and notification rates of psittacosis by age group, Victoria, 2005

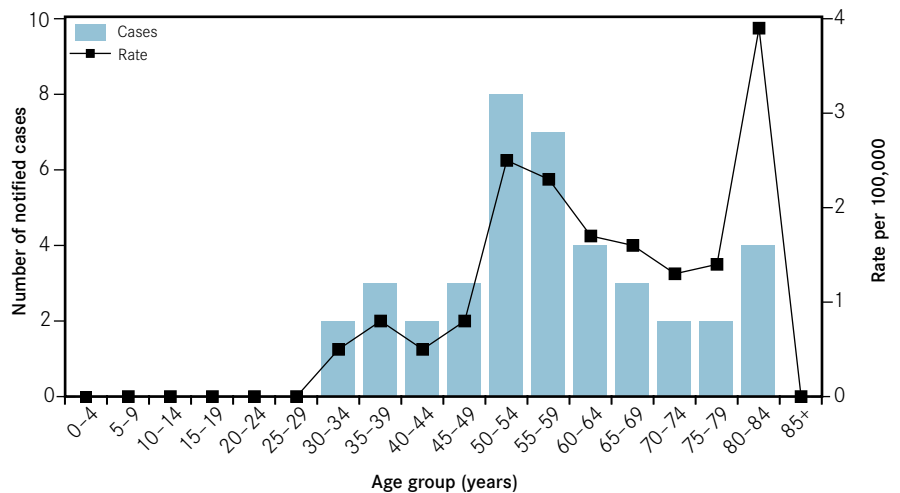
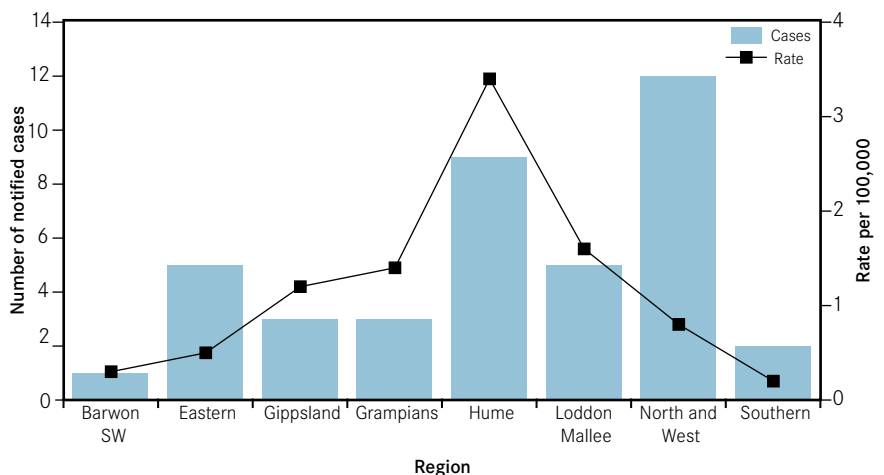


Figure 52: Notified cases and notification rates of psittacosis by region, Victoria, 2005



Risk factors

Twenty-two cases had a domestic bird (of which 21 were psittacines and 16 had been purchased in the 12 months prior to illness), 16 cases reported contact with wild birds, and five cases had an occupation involving bird contact (three poultry industry workers and two people with gardening-related occupations). Five cases reported no risk factors and data were not available for two cases.

Outbreak and other investigations

No outbreaks or linked cases were identified.

Comment

Birds of all types serve as a reservoir for *Chlamydia psittaci*, although it is most common in psittacine varieties, which include parrots, cockatiels and budgerigars, both domestic and wild. Humans generally become infected after inhaling dust from dried faeces or secretions from infected birds. Prevention measures include wearing gloves and dust masks when cleaning cages, aviaries, bird feeders or areas frequented by birds. In instances where a case is thought to have acquired psittacosis from birds that have been purchased within the last 12 months, the Communicable Disease Control Unit liaises with the Department of Primary Industries for an investigation of the premises from which the implicated bird(s) was purchased. This involves a veterinary inspection of the premises and discussion of a psittacosis management plan with the proprietor to further reduce the spread of psittacosis.

Q fever

Summary of notifications

There were 31 cases of Q fever notified in 2005, an increase of 15 per cent on the 27 cases in 2004. Twenty-five cases (81 per cent) were male and the remainder were female. The median age of persons notified was 45 years (range 19–71 years). Notification rates were higher in rural compared to metropolitan regions, particularly the Barwon South-Western, Hume and Loddon Mallee regions (figure 53).

Seventeen cases (55 per cent) were reported as hospitalised; no deaths were reported.

Risk factors

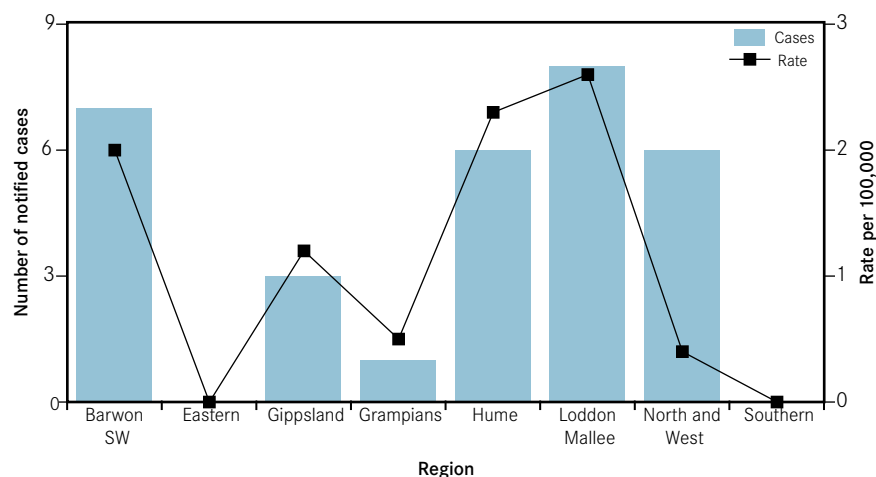
Twenty-seven cases (87 per cent) had occupations involving direct contact with high-risk animals (such as goats, cattle, sheep and other farm animals) or their processing (table 43). Among the remaining four cases, three reported animal contact or visiting an abattoir and the other was an immunocompromised person who lived near an abattoir.

Four cases reported being vaccinated against Q fever although one commenced work prior to developing protective immunity (see below).

Outbreak and other investigations

The Communicable Disease Control Unit investigated four outbreaks of Q fever that occurred between February and July 2005 in three abattoirs and a cosmetics and health products manufacturer. The three outbreaks associated with abattoirs involved a total of ten cases; two occurred in the Loddon Mallee region (three and four cases respectively) and one in metropolitan Melbourne (three cases). All cases were in abattoir employees (including three cleaners and an electrician) and all except one were not vaccinated. One case had been vaccinated four days prior to commencing work; however, 15 days is required for Q fever immunity to develop. As part of the follow up for these outbreak investigations, company representatives were advised of action required to reduce the risk to

Figure 53: Notified cases and notification rates of Q fever by region, Victoria, 2005



other workers from Q fever, including informing workers of the situation, keeping written vaccination records and ensuring that workers do not commence employment until 15 days after vaccination.

A fourth outbreak involved four cases who worked directly with animal birth products in the production of cosmetics and health supplements. The investigation revealed that the manufacturing process of boiling the animal birth products from a frozen state had changed several weeks before the outbreak to include a thawing step in which products were handled by workers. A vaccination program was also not in place at the premises. Various improvement measures were undertaken at the workplace following the investigation including institution of a vaccination program, changes to the manufacturing process, completion of a risk assessment, requiring workers to change clothes after leaving the factory and discussion of testing options.

Comment

Q fever is not endemic in Victoria, but many of the cattle, sheep and feral goats handled in abattoirs or on farms are from interstate, and several outbreaks are notified and investigated in Victoria each year. Q fever vaccine for people working with animals or animal products) is no longer funded as part of the National Q fever Management Program; however vaccination is still recommended for those in occupational risk groups. The outbreak among people working with animal birth products highlights the need for ongoing education about Q fever and vaccination in workplaces that process animal by-products.

Table 43: Notified cases of Q fever by occupation, Victoria, 2005

Occupation	Cases (per cent)
Meat tradesperson/labourer	14 (45)
Farmer	6 (19)
Cleaner	3 (10)
Butcher	2 (6)
Other labourers and related workers	1 (3)
Electrician	1 (3)
Sales worker	1 (3)
Home duties	1 (3)
Retired/pensioner	1 (3)
Unknown	1 (3)
Total	31 (100)