among persons from higher socioeconomic areas, with the exception of 0 - 4 year olds, is unknown. It is possible that elevated notification rates among higher socioeconomic groups are related to factors such as a higher rate of travel, greater use of medical services, or different food consumption patterns. Further investigations into the possible association between *Campylobacter* infection and socioeconomic status would be of interest.

In conclusion, this review of *Campylobacter* infection between 1991 and 1995 has shown that: the incidence in Queensland was highest in children aged 12 - 23 months; the distinct summer peak in incidence of the disease that is reported in other developed countries was not seen in Queensland; *Campylobacter* infection was reported more frequently from urban areas and from high socioeconomic areas of Queensland; and that factors which influence notification rates in the general population do not necessarily have the same influence on the 0 - 4 years age group. Case control studies of *Campylobacter* infection in young children are warranted to identify age-specific risk factors. These factors would enable the development of interventions to reduce the incidence of infection.

Acknowledgements

References

1. Herceg A, Oliver G, Myint H *et al.* Annual report of the notifiable diseases surveillance system, 1995. *Comm Dis Intell* 1996;20:440-464.

2. Skirrow MB. Foodborne illness: Campylobacter. *Lancet* 1990;336:921-923.

3. Kapperud G, Aasen S. Descriptive epidemiology of infections due to therotolerant *Campylobacter* spp. in Norway, 1979-1988. *APMIS* 1992;100:883-890.

4. Tauxe RV, Hargrett-Bean N, Patton CM, Wachsmuth IK. *Campylobacter* isolates in the United States, 1982-1986. *MMWR Morb Mort Wkly Rep* 1988;37(SS-2):1-13.

5. Brieseman MA. A further study of the epidemiology of *Campylobacter jejuni* infections. *NZ Med* J 1990;103:207-209.

6. Harris NV, Weiss NS, Nolan CM. The role of poultry and meats in the etiology of *Campylobacter jejuni/coli* enteritis. *Am J Pub Health* 1986;76:407-411.

7. Deming MS, Tauxe RV, Blake PA *et al. Campylobacter* enteritis at a university: transmission from eating chicken and from cats. *Am J Epidemiol* 1987;126:526-534.

8. Saeed AM, Harris NV, Di Giacomo RF. The role of exposure to animals in the etiology of *Campylobacter jejuni/ coli* enteritis. *Am J Epidemiol* 1993;137:108-114.

9. Hopkins RS, Olmsted R, Istre GR. Endemic *Campylobacter jejuni* infection in Colorado: identified risk factors. *Am J Pub Health* 1984;74:249-250.

10. Schmid GP, Schaeffer RE, Plikaytis BD *et al.* A one-year study of endemic campylobacteriosis in a midwestern city: association with consumption of raw milk. *J Inf Dis* 1987;156:218-222.

11. Ikram R, Chambers S, Mitchell P *et al.* A case-control study to determine risk factors for *Campylobacter* infection in Christchurch in the summer of 1992-3. *NZ Med J* 1994;107:430-432.

12. McMahon D J, Mahmood F. Endemic *Campylobacter* in South Auckland. *CDNZ* 1993;93:70-72.

13. Australian Bureau of Statistics. 1991 Census - Census Characteristics of Australia. Canberra: Australian Bureau of Statistics, 1995 (Catalogue Number 2710.0).

14. Australian Bureau of Statistics. Age and sex distribution of the estimated resident population, Queensland. Canberra: Australian Bureau of Statistics, 1995 (Catalogue Number 3224.3).

15. Australian Bureau of Statistics. 1991 Census - Census counts for small areas, Queensland. Canberra: Australian Bureau of Statistics, 1995 (Catalogue Number 2730.3).

16. Teutsch SM, Churchill, RE. eds. Principles and practice of public health surevillance. New York: Oxford University Press, 1994.

17. Australian Bureau of Statistics. 1991 Census - Socio-economic indexes for areas. Canberra: Australian Bureau of Statistics, 1995 (Catalogue Number 2912.0).

18. Department of Primary Industries and Energy, Department of Human Services and Health. Rural, Remote and Metropolitan Areas Classification, 1991 Census edition. Canberra: Australian Government Publishing Service, 1994.

19. Allos BM, Blaser MJ. *Campylobacter jejuni* and the expanding spectrum of related infections. *Clin Infect Dis* 1995;20:1092-1101.

20. Skirrow MB. A demographic survey of *Campylobacter, Salmonella* and *Shigella* infections in England. *Epidem Inf* 1987;99:647-657.

21. National *Salmonella* Surveillance System Annual Report 1994. *Comm Dis Intell* 1995;19:618-626.

22. National Health Strategy. Enough to make you sick: how income and environment affect health. Melbourne: National Health Strategy, 1992 (Research paper no. 1).

OVERSEAS BRIEFS

Source: World Health Organization

Ebola haemorrhagic fever, Gabon

The government of Gabon and the World Health Organization (WHO) have confirmed that a virus of Ebola type is responsible for the outbreak of haemorrhagic fever in the Booué region of north-eastern Gabon. As at 19 October, the total number of cases was 19, of which 11 were fatal; 86 contacts remained under surveillance. According to the Ministry of Health of Gabon, the first case would have occurred on July 24 in a hunter who probably became infected in the forest and who later died.

An isolation ward has been prepared in Booué Hospital. Samples for laboratory investigation have been collected from patients and close contacts. The first analysis, done with locally available reagents, confirmed that an Ebola-like virus is responsible for the outbreak, but further tests on blood and tissue samples collected from patients are underway at the WHO Collaborating Centre for Haemorrhagic Fevers, the Centers for Disease Control and Prevention in Atlanta, United States of America. An education and information campaign for health workers has been undertaken in regions where the epidemic has occurred and in bordering areas where there have been no reports of suspected cases.

An International Committee for Technical and Scientific Coordination was established in Gabon with the collabo-

ration of the WHO. It includes experts from the Gabonese Ministry of Health, the International Medical Research Centre in Franceville, Gabon, Coopération Française and WHO.

The Ebola virus is one of the most pathogenic viral agents known to man, causing death in 80% or more of infected cases, but its natural host is still unknown. Scientific investigations have just begun in Côte d'Ivoire, in the Tai forest, to identify the natural reservoir of the virus. This research, which is coordinated by WHO, is being undertaken by scientific teams from Belgium, Canada, France and the United States of America, with the collaboration of scientists from the United Kingdom.

The primary mode of transmission of the virus is contact with contaminated blood and secretions of body fluids. Contaminated needles and syringes were the cause of transmission in previous cases in Zaire. The virus is not easily transmitted however, and requires intimate contact with an infected person, such as close nursing without protective clothing, or with contaminated injection equipment.

Last February, an outbreak of Ebola haemorrhagic fever killed 21 persons, from a total of 37 cases, in the same province of Gabon (Ogooué-Ivindo).

Cholera, Africa

Guinea-Bissau reported 143 cases with 7 deaths from 6 to 14 October in the districts of Bissau and Gabu. Senegal and Togo also reported cholera cases in the past week.

Dengue, India

The National Institute of Communicable Diseases, Delhi reported 5,930 cases of dengue and dengue haemorrhagic fever up to 22 October 1996. There were 251 deaths. Reports came from hospitals in Delhi. Dengue virus type 2 has been isolated.

COMMUNICABLE DISEASES SURVEILLANCE

National Notifiable Diseases Surveillance System

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of more than 40 communicable diseases or disease groups endorsed by the National Health and Medical Research Council (NHMRC). Notifications of these diseases are made to State and Territory health authorities under the provisions of their respective public health legislations. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see CDI 1996;20:9-10.

Figure 1.   Selected National Notifiable Diseases Surveillance System reports, and historical data[1]
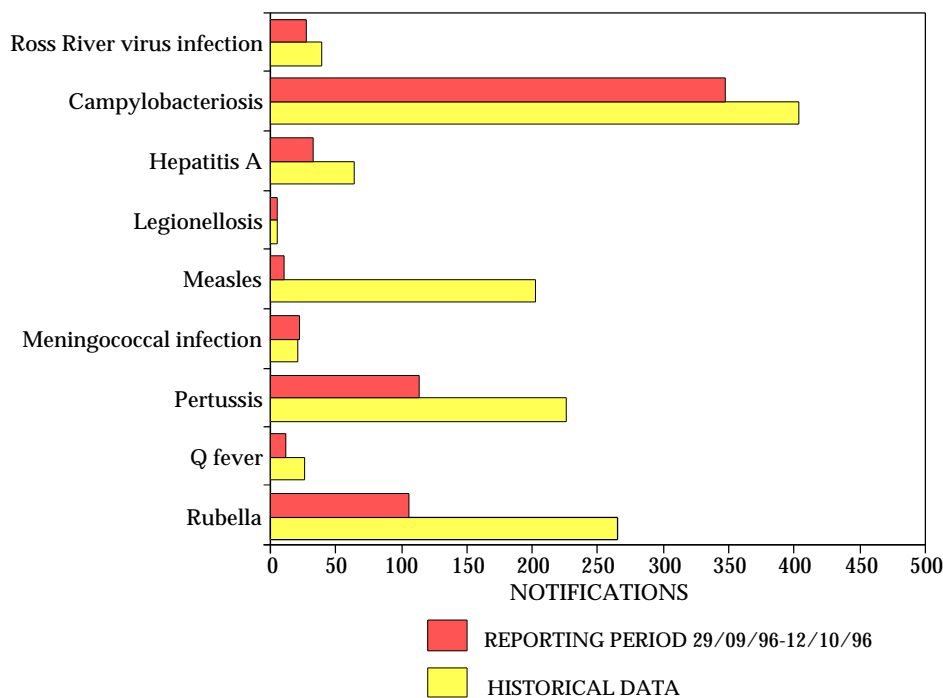
1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods: the corresponding periods of the last 3 years and the periods immediately preceding and following those.