

Notifications of Vector-borne Disease in New Zealand

BACKGROUND

Vector-borne disease is an important environmental health issue, and is inherently linked to the environment. Vector-borne zoonotic diseases, which can pass from animals to humans, involve four agents: the human victim, the pathogen, the vector and the (wildlife) reservoir (Ostfeld et al 2006). For example, West Nile fever is caused by the West Nile virus pathogen, transmitted by mosquito vector from a reservoir of wild birds (Heymann 2004; Stürchler 2006). Pathogens causing particular diseases can be carried by different vector species and be hosted by different wildlife reservoirs.

Pathogens coexist parasitically with wildlife reservoirs, and vectors act as obliging modes of transport helping pathogen dispersal (Holt and Dobson 2006). The opportunity for human–wildlife interaction continues to increase, as human environmental activity expands and encroaches into native forest and previously undeveloped land. Increased human exposure to wildlife results in the opportunistic emergence of new human diseases and a greater likelihood of transmission of known disease pathogens (Moore 2007; Goldberg et al 2008). As a result, newly emerging and pre-existing vector-borne diseases will continue to be an important environmental health issue.

Data for the notifications of the main vector-borne diseases for 1997–2009 were sourced from EpiSurv (ESR). Data have also been presented for two travel-related exposure risk factors for these diseases. The first is having been overseas during the incubation period of the disease. The second is having undertaken previous overseas travel that may have been related to the disease. For some notifications, one or both of these risk factors were recorded as ‘unknown’.

The quality of these data cannot be independently verified. Given the legal status of notifiable disease data, it is expected that the number of notified cases will be an accurate reflection of laboratory-confirmed and EpiSurv-recorded data. However, there may be a greater degree of variability in the completeness and accuracy of the associated data on risk factors. This variability can in part be the result of the individual (the case) failing to provide full or accurate information

References

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