Current status and future trends in Cryptosporidium and Giardia epidemiology in Malaysia

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ABSTRACT

Cryptosporidium and Giardia are major causes of diarrhoeal diseases of humans worldwide, and are included in the World Health Organization’s ‘Neglected Diseases Initiative’. Cryptosporidium and Giardia occur commonly in Malayan human and non-human populations, but their exact incidence, morbidity and cost of illness is not known. The commonness of diarrhoeal diseases from Cryptosporidium, Giardia hominis and other human enteric parasites, and non-human origin, ingestion, ingestion, meat, and milk, indicate that many Malayan environments, particularly water and soil, are sufficiently contaminated to act as potential vehicles for the transmission of disease. To gain insight into the morbidity and mortality caused by human cryptosporidiosis and giardiasis, close study should be included into differential diagnoses, and routine laboratory testing should be performed and as many infectious diseases reported to a centralized public health agency. To understand transmission routes and the significance of environmental contamination better will require further multidisciplinary approaches and shared resources, including raising national perceptions of the potential quality of drinking water. Here, the detection of Cryptosporidium and Giardia should be an integral part of the water quality requirement. A multidisciplinary approach among public health professionals in the water industry and other relevant health- and environment-associated agencies is also required in order to determine the significance of Cryptosporidium and Giardia contamination of Malaysian drinking water. Lastly, adoption of validated methods to determine the species, genotype and subgenotype of Cryptosporidium and Giardia present in Malaysia will assist in developing effective risk assessment, management and communication models.

Key words | Cryptosporidium, genotype, Giardia, public health, species, waterborne