



Exposure to drinking water and health outcomes in New Zealand

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Abstract Only

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Geographic information systems (GIS) are potentially powerful tools for surveillance of waterborne disease, such as giardiasis, but data have not previously been available in a suitable form in New Zealand to permit analysis in GIS. This study presents results from the first analysis of giardiasis and water supply data in New Zealand using GIS methods. Giardiasis cases notified in the 18 months January 1996 to June 1997 were geographically referenced by matching home addresses to mesh blocks, which are subdivisions of census area units. Age-standardised disease rates in census area units were calculated by overlaying the case dataset with 1996 Census population data. Hand-drawn maps of catchments and distribution zones for water supplies were digitised to form a geographically referenced dataset, which was included in the GIS to enable analysis of disease rates in water supply distribution zones. Correlation coefficients between disease rates and water quality indicators (type of supply, supply grading, chlorination status and filtration type) were calculated.