

Social deprivation and the public health risks of community drinking-water supplies in New Zealand.

Simon Hales¹, Wendy Black², Chris Skelly³, Clare Salmond¹, Phil Weinstein¹

¹University of Otago, Department of Public Health,
Wellington School of Medicine and Health Sciences,
Wellington, New Zealand.
Phone +64 4-9021404 or 4-9185071; fax +644 3895319
Email shales@wnmeds.ac.nz

²Waikato District Health Board,
Hamilton, New Zealand.

³Ministry of Health,
Wellington, New Zealand.

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ABSTRACT

Study objective: Quantitative evidence linking environmental exposures and social status at sub-national scales is surprisingly limited. Here we investigate the public health risks associated with community water supplies in relation to social status in New Zealand.

Design: An ecological study using a Geographic Information System (GIS) to compare the grade of community drinking water supplies with an index of social deprivation for small areas.

Participants: The New Zealand population usually resident in meshblocks (Census areas) with a community drinking-water supply (70% of the 1996 population of 3.6 million people).

Main results: People living in deprived areas are exposed to greater public health risks from drinking-water supplies.

Conclusions: It is likely that deprived communities in New Zealand are experiencing a disproportionate burden of adverse health effects as a result of poor water quality.

Keywords: water quality; water supply; social deprivation; gastrointestinal disease; GIS; New Zealand