

Is community water fluoridation cost effective?

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New Zealand was one of the first countries to adopt community water fluoridation. Results from early trials found children born and raised in fluoridated areas had, on average, 50 per cent less dental decay than children from non-fluoridated areas.

New research from Massey University shows community water

fluoridation remains cost effective, despite an overall reduction in the average number of decayed teeth in both fluoridated and non-fluoridated communities.

The paper, A [cost effectiveness](#) analysis of community water fluoridation in New Zealand, recently published in the *New Zealand Medical Journal*, was written by senior analyst Caroline Fyfe and Professor Barry Borman from Massey's Centre for Public Health Research, with co-authors Dr Guy Scott and Dr Stuart Birks from the School of Economics and Finance.

The study updates the last economic analysis of community water fluoridation, (The cost-effectiveness of fluoridating water supplies in New Zealand published by Janice Wright, Michael Bates, Terry Cutress and Martin Lee in the *Australian and New Zealand Journal of Public Health* in 2001) and used national data on difference in tooth decay between fluoridated and non-fluoridated [communities](#). It found community water fluoridation (CWF) was most cost effective in larger communities but also that the intervention remained cost effective even in smaller communities (of under 5,000 people).

New Zealand was one of the first countries to adopt community water fluoridation to lower rates of dental decay. Results from early trials found children born and raised in fluoridated areas had, on average, 50 per cent less dental decay than children from non-fluoridated areas. Today approximately 56 per cent of New Zealanders have access to fluoridated water.

In Massey's latest study, researchers found communities with a higher risk of [dental decay](#) - for example, those with a high level of economic deprivation or those with a higher proportion of Māori ethnicity – benefited most from community water fluoridation.

Mrs Fyfe says the team gathered information on the costs of installing and running community water fluoridation by sending out questionnaires to local authorities fluoridating their water supplies. "We used data from the 2009 New Zealand Oral Health Survey to calculate cost savings from reduced demand for dental treatments. The cost effectiveness of CWF per decayed tooth prevented was compared to an alternative of treating a decayed tooth. Cost effectiveness was also compared between communities of different population sizes."

Overall, community [water fluoridation](#) was deemed a cost effective [public health](#) intervention despite a reduction in the average number of decayed teeth in all communities over time.

More information: A cost effectiveness analysis of community water fluoridation in New Zealand. [www.nzma.org.nz/journal/read-t ... 8-december-2015/6766](http://www.nzma.org.nz/journal/read-t...8-december-2015/6766)

Provided by Massey University

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