

Evidence supports nationwide roll-out of home safety measures

March 21 2017

New evidence from the University of Otago, Wellington shows that government social investment in safer housing would be justified to prevent falls.

The Kainga Oranga/the Housing and Health Research Programme at the University of Otago, Wellington tested the [safety](#) benefits of [home](#) modifications, including handrails for outside steps and internal stairs, grab rails for bathrooms, outside lighting, edging for outside steps, and slip-resistant surfacing for outside areas such as decks and porches.

Study lead author Associate Professor Michael Keall says that the social benefits of preventing injuries through home modifications were at least six times the costs of the intervention.

"Moreover, this benefit-cost ratio was doubled for older people and increased by 60 per cent for those with a prior history of fall injuries," Associate Professor Keall says.

The new study found that nationally there were more than 300,000 medically treated injuries from falls in the home each year, with an additional 150 deaths.

The research was funded by the Health Research Council of New Zealand, with assistance from the Accident Compensation Corporation (ACC), and published in the international journal *Injury Prevention*.

The results add to the Home Injury Prevention Intervention study, done by the He Kainga Oranga researchers and published earlier in *The Lancet*, which showed that injuries from falls in the home were reduced by just over a quarter (26 per cent) after the intervention. In that study, an average of \$564 was spent per home.

Associate Professor Keall says that a national roll-out of home safety measures is supported by robust evidence and has sound economic justification.

"We think it could be implemented in a similar way to the 'Warm Up New Zealand' programme. Although only 20 per cent of New Zealand homes have been insulated, EECA-funded schemes (including the 'Warm Up New Zealand' programme) have been highly successful in insulating over 300,000 homes, clearly improving the health of New Zealanders in these homes," he says.

"Although the safety modifications carried out for the homes we studied needed to be tailored to the house in a much more specific way than retrofitted insulation, we have carried out these safety modifications successfully in around 1,000 homes. The impressive reductions in fall injuries are a testament to the effectiveness of these measures.

"There is great demand for builders at the moment to address New Zealand's housing supply crisis. However, the community trust Better Homes in Taranaki, who carried out home safety modifications recently, employed semi-retired builders whose experience was ideal for the work they were doing. This work is less physically demanding than housing construction, and would suit many skilled tradesmen who are not currently building houses," Associate Professor Keall says.

More information: Keall MD, Pierse N, Howden-Chapman P, Cunningham C, Cunningham M, Guria J, Baker MG (2015) Home

modifications to reduce injuries from falls in the Home Injury Prevention Intervention (HIPI) study: a cluster-randomised controlled trial, *The Lancet* 385:pp. 231–38.

Keall MD, Pierse N, Howden-Chapman P, Guria J, Cunningham CW, Baker MG (2017) Cost–benefit analysis of fall injuries prevented by a programme of home modifications: a cluster randomised controlled trial, *Injury Prevention* 23:pp. 22-26.

Provided by University of Otago

Citation: Evidence supports nationwide roll-out of home safety measures (2017, March 21)
retrieved 6 May 2024 from

<https://medicalxpress.com/news/2017-03-evidence-nationwide-roll-out-home-safety.html>

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