



The Housing, Insulation and Health Study

Preliminary Results October 2003

What We Did

Fourteen hundred households and almost five thousand people agreed to take part in a study, funded by eleven organisations, to test whether putting insulation into uninsulated houses had any impact on the occupants' health or the energy they used. The research was carried out by the Housing and Health Research Programme, at the Wellington School of Medicine, who work in partnership with seven locally-based organisations in Otara, Eastern Bay of Plenty, Nuhaka and Mahia, Taranaki, Porirua, Hokitika and Christchurch.

How We Did It

Households were selected in 2001 and baseline interviews were carried out after the winter of 2001. Community interviewers interviewed everyone in the households to record their health, wellbeing and power usage. The researchers then randomly assigned half the houses, in each community, to be insulated. Community retrofit teams insulated these 700 homes over the summer and then, after the winter of 2002, everyone was interviewed again. All the household information was then entered into computers and analysed. At the end of the study, the remaining 700 houses were also insulated.

Preliminary Results

- Overall, there has been a small, but significant* drop in energy usage when houses are insulated.
- Overall, once the houses were insulated, they were drier and slightly warmer.
- People in the insulated houses reported that their houses were significantly warmer.
- There was a significant improvement in the self-reported health of adults and children living in the houses that were insulated, compared to those whose houses were not yet insulated.
- Adults and children in the insulated houses reported visiting the GP less. The decrease in the number of visits was significant for the adults.
- Adults and children in the insulated houses reported that they were admitted to hospital less often for respiratory conditions.
- Adults, who were in the workforce and in insulated houses, were significantly less likely to report sick days off work, and children in these houses were less likely to have had days off school.
- Samples of normal household dust were collected in three of the communities and examined for allergens and mould. All houses had mould, but the amount and species varied a lot. Insulating the houses did not seem to change the amount of mould, but householders in the insulated houses reported less visible mould.

These are the first results from the study. We are still analysing the data from the GPs and hospitals.

* Results described as significant are statistically significant.

MANY thanks to all the people who agreed to take part in the study and generously gave us their time as participants, community coordinators, interviewers and retrofitters. Thanks also to the energy companies and GPs who, with the permission of the participants, sent us back data.

This research was carried out by researchers in He Kainga Oranga working together with Te Pumanawa Hauora at Massey University, BRANZ, CRESA, Landcare Research, and Smartpower.