

Case-study 8.5.2

Targeting housing improvement grants

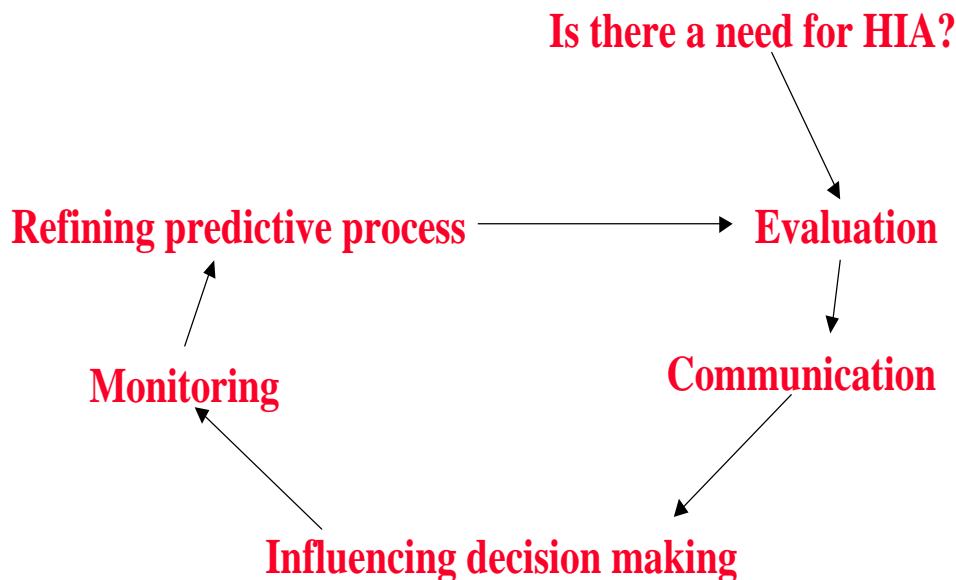
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Description

In Derbyshire Dales, as in most Local Authorities, House Renovation Grants are provided in order to bring privately owned properties up to the fitness rating standard. Other grants are given for energy efficiency and minor repairs. This health impact assessment looked at the effects on health of targeting such benefits and whether such an approach may result in greater health gain for the same financial investment. The subject was chosen because the budget for improvement grants was underspent and it was felt that it could be utilised more effectively.

This health impact assessment (HIA) was conducted as a rapid prospective appraisal. It has now developed to be a concurrent appraisal. The approach was based on that described in the New Zealand Ministry of Health's "Guide to Health Impact Assessment"¹, although we took the view that HIA should be a cyclical process, with assessment of the actual effects of the intervention informing future HIAs.

Figure 1: Cycle of HIA



The prospective phase of the HIA has been completed and changes are being implemented. We are now starting a concurrent impact assessment to refine our future decision-making.

Stakeholders

- Derbyshire Dales District Council
- Southern Derbyshire Health Authority
- Community Health Services Trust
- Primary Care Group

No public consultation was conducted.
A broad definition of health was used.

Outcome indicators

A variety of outcome indicators were examined, including mortality, morbidity for specific diseases, and self-reported symptoms. For the concurrent phase of the HIA, short form 36 (SF-36) scores will be used as outcome measures.

Evidence base

The evidence base was predominantly quantitative, but limited by the fact that most studies simply demonstrated associations between poor housing and ill-health: there were few studies which demonstrated improvements in health when housing improvements were carried out. Some relevant evidence was unpublished and some authors were reluctant for their results to be cited in case this prejudiced future publication. *See Appendix 1* for the evidence base.

Outcomes

As a result of the HIA the District Council has changed its policy on allocation of grants. A referral system has been developed whereby primary and community health staff can refer patients who they feel would benefit from housing improvements. A referral pack is currently being designed for health workers. Joint training sessions between health, social services, housing and environmental health staff are planned for April 2000. Other district councils are now being actively involved in the project.

We are also about to start on a concurrent HIA which will assess the health benefit of housing improvement grants using SF-36 scores as outcome measures.

Learning points

Major barrier

The lack of published evidence, particularly about the effects of housing improvements. Some evidence was from unpublished sources and some was in the "grey literature". Evidence which is not published in peer reviewed journals is more difficult to find as it is not accessible through electronic databases.

Major benefit

The degree of interagency working that followed the HIA. The networking between the Health Authority, District Council, Primary Care Group and Community Health Services Trust has resulted in the setting up of the referral scheme, referral pack and joint training sessions.

Major limitation

Lack of public participation

Hot tips !

- Keep it simple
- Work with local enthusiasts
- The HIA must influence decision-making
- Evaluation of projects is essential to provide data for future HIAs
- Publish results of evaluations in peer reviewed journals

Resources

Personnel involved:

- Specialist Registrar in Public Health Medicine
- Environmental Health Manager

Financial Resources

- No additional financial resources were used for the prospective HIA.
- £1000 has been allocated for design of questionnaires, data entry and analysis for the concurrent HIA.
- £2000 was allocated for the referral pack.
- Training costs are additional.

Skills required

- Literature searching
- Evaluating and interpreting literature
- Report writing
- Influencing decision-makers

Time taken

- It is difficult to assess the time taken to perform the prospective HIA.

Appendix 1: The Evidence Base

Damp, mouldy or condensation prone houses have been shown to be associated with asthma, wheezing, coughs, colds, diarrhoea, joint pains, fever, stress, depression and reduced well being. Cold housing is associated with hypothermia, stroke, heart attacks and respiratory disorders.

Asthma

Williamson et alⁱⁱ demonstrated an association between the severity of asthma and dampness in the home. They showed a dose-response relationship between the degree of surveyor-confirmed dampness and objective measures of airway obstruction (i.e. the damper the house, the more severe the asthma was).

Ambroseⁱⁱⁱ compared well housed families in Paddington with poorly housed families in Stepney and demonstrated that those in self reported damp houses suffered 1.5 times as many episodes of asthma as those who were well housed and those in cold homes suffered 1.6 times the number of episodes. Evans et al^{iv} found an association between asthma and damp housing and between asthma and being unable to keep the house warm. Inability to keep the house warm was the more significant factor when multivariate analysis was used.

Asthma symptoms may be exacerbated by house dust mites (HDMs) in the environment. Mites thrive in damp atmospheres and a variety of filtration systems and heat exchange ventilation systems have been developed which reduce the number of house dust mites in the environment. In one study^v filtration systems removed HDMs and 55% of asthmatics self reported an improvement in asthmatic symptoms.

Deaths due to cold

Each year in Southern Derbyshire there are almost 400 excess deaths in the winter months^{vi}. Respiratory disease accounts for 38% of these excess deaths, with ischaemic heart disease (IHD) and cerebrovascular disease (CVD) accounting for 25% and 13% respectively. These excess deaths are more marked in the UK than in countries such as Norway where homes are better heated^{vii}. The Eurowinter Group have shown that high levels of excess winter deaths are associated, amongst other things, with low living room temperatures and limited bedroom heating^{viii}. Within countries there is an association between mortality from ischaemic heart disease and cold climate^{ix x}. It is, however, necessary to exercise caution about the results of ecological studies such as these because the results may not be applicable at the level of individual households. Although the associations have been consistently demonstrated, little evidence has been produced that reductions in mortality occur when housing conditions have been improved.

Mental health

Ambrose in his study in Paddington and Stepneyⁱⁱⁱ showed that people living in damp housing had 2.8 times as many episodes of stress and depression as those who were well housed and those living in cold housing had 4.3 times as many episodes.

Hopton and Hunt^{xi} demonstrated that self-reporting of a problem of dampness was significantly associated with higher scores for mental health problems after controlling for confounding factors such as employment status and chronic illness.

Other health problems

Ambrose's studyⁱⁱⁱ showed 7 times more episodes of self-reported illness in the poorly housed. Those people living in damp households had 2.3 times as many illness days as those with no damp and those

in cold households had 1.6 times as many illness days as those in warm households. Those living in damp condition experienced 3.1 times as many episodes of coughs and colds and 4.8 time as many episodes of digestive disorders as those who were well housed. The comparable figures for those living in cold houses were 3.9 and 4.3 respectively.

Platt et al^{xiii} showed that adults living in damp and mouldy houses suffered an increase in a wide range of symptoms and children had an even greater increase in symptoms, particularly respiratory symptoms, headaches and fever. This study also showed a dose-response with increasing levels of symptoms with increasing amounts of damp. Martin et al^{xiii} also found that children in damp households had higher levels of respiratory symptoms although they found no conclusive effects on adult health.

Packer et al^{xiv} found that people who lived in damp housing were more likely to report long standing illness, disability or infirmity than those in dry housing and that the prevalence of ill health increased as the severity of dampness increased. Evan et al^v showed that both damp and cold housing were associated with a number of measures of ill-health and that cold housing was more strongly associated than damp housing.

Table 1.
Ratio of episodes of illness for families in damp or cold households compared to non-damp and warm households.

	Coughs/colds	Asthma/bronchitis	Digestive disorders	Stress depression
Damp	3.1	1.5	4.8	2.8
Cold	3.9	1.6	3.7	4.3

Source: "I mustn't laugh too much" (Ambrose P, 1999)

Table 2.
Changes in measures of asthma after housing improvements

Measure	Change after improvement
Self reported symptoms ⁺	55% reduction

Source: ⁺Filtration of airborne particles in various households. Fischer et al 1994

Key points

- Damp housing conditions are associated with higher levels of various symptoms, especially:
 - Asthma
 - Other respiratory problems
 - Joint pains
 - Stress/depression
 - Reduced well being
- Cold housing conditions are associated with higher levels of various conditions, especially:
 - Hypothermia
 - Stroke
 - Heart attack
 - Respiratory disease
- Children are particularly vulnerable to the adverse health effects of damp.
- The greater the amount of damp in the accommodation, the greater the health problems.
- Housing improvements that reduce damp and mouldy conditions have been shown to improve asthma symptoms.

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