HOMES CAN MEASURE UP

There's plenty of evidence to show that substandard housing can have a negative affect on health. Using a housing quality assessment tool, like the Healthy Housing Index, can change this, informing people's housing choices and influencing policy.

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The poor quality of our housing has been in the news over recent months, with considerable media comment following the TV3 *Inside New Zealand: Inside Child Poverty* programme and the call by structural engineers for a simpler way of classifying the risk of buildings to earthquake damage.

Major health issue

New Zealand lags well behind Australia, England, France and other EU countries in improving and regulating the quality of existing buildings. Substandard existing housing has been identified as a major public health issue in New Zealand with direct effects including:

- injuries in the home
- respiratory symptoms
- coronary events
- infectious diseases.

Housing's impact on health and safety is partly due to the long time people are at home – an average of around 16 hours a day.

Major problem areas

Housing features identified as major concerns include:

- structural defects, which can make a house more prone to earthquake damage
- inadequate insulation leading to dampness and mould
- lack of heating and ventilation
- lead from old paint
- asbestos exposure from deteriorating wall linings and cladding
- volatile organic compounds, such as from new carpeting
- lack of safe drinking water
- ineffective waste disposal
- inadequate facilities for food storage and preparation
- household pests, such as ants, cockroaches, mice and rats
- noise.

The insulation and heating of a house, and the weather, determine how efficiently a house can generate and retain heat, as well as affecting mould growth and other respiratory hazards. Insulating houses is one of the most cost-effective measures to reduce energy use and carbon emissions.

Sustainability and housing

Sustainability is also an important health issue because of the potentially disastrous health effects of climate change, which housing contributes to. In 2003, the US residential sector produced more than 20% of total US energy-related CO_2 emissions. Other issues include water usage, consumption of finite resources and the production of toxic substances.

Assessment tool functions

The assessment of house quality, including health, safety and sustainability, has two broad functions:

- To provide a robust basis for policy development, compliance monitoring and research regarding the quality of housing stock.
- To assist house owners, renters, property managers and agencies to make informed judgements about managing individual properties.

An assessment tool can play a core role in supporting these functions by standardising the measurement of housing quality. Roles of the assessment tool include:

- giving policy agencies robust data on the quality of housing stock and the impact of policies and compliance tools
- giving local authorities data on the quality of housing stock in their area to assess the effectiveness of their compliance tools and processes

Table 1: Levels of the built environment and its influences on health, safety and sustainability. The dwelling level row shows the elements in NZ and UK assessment tools.

Level of built environment	Outcome areas	
	Influences on health and safety	**Influences on sustainability**
Global, national, regional levels	Policy, socio-economic and cultural influences beyond the neighbourhood level.	Policy and economic influences, for example, the Kyoto Protocol.
Neighbourhood	Physical features such as air pollution, road safety, urban design, transportation, amenities.	Urban design, waste and water management, transport infrastructure.
Community	Social, cultural and economic aspects such as social capital, safety from crime, civic capacity.	Willingness to invest in infrastructural and behavioural change.
Dwelling	Physical quality of building such as insulation and safety features.	Ability of the dwelling to use water and energy efficiently to support the daily life of the occupants.
Household	Social, cultural and economic aspects such as affordability, suitability, security of tenure.	Requirements of the household in terms of space, energy, water and transport.
Individual	Demographic, psychological and biological features, including knowledge and attitudes.	Cultural and lifestyle characteristics such as willingness to recycle and use sustainable options in transport.

- supporting research on the relationship between housing conditions and health, safety and sustainability outcomes
- translating research into improved evidence for policy-makers
- on-going validation and improvement of the assessment tool
- helping social housing providers identify houses that need remediation
- helping people choose a house to rent or buy.

Improving demand for quality houses

In theory, quality information for consumers to base choices on should lead to a demand for better-quality housing. In practice, consumers also have other considerations, including resale potential and functionality.

Some countries, such as France, require a certificate when a dwelling is offered for sale or rent to highlight potential hazards including lead and asbestos. In addition, all European countries now require an Energy Performance Certificate on sale or lease.

Research findings led to government action

A health and safety-focused assessment approach can evaluate the cost of reducing or removing potential hazards compared to the cost saving to society. As an example, research about the health effects of uninsulated, unheated, cold houses was incorporated into a New Zealand assessment. The awareness raised about the lack of insulation in most New Zealand houses led to a national economic case being made for a large investment of public money for retrofitted insulation.

In England, a housing quality assessment tool, the Housing Health and Safety Rating System, has been adopted as the statutory prescribed method for assessing conditions to determine whether enforcement action by local councils is required to address potential hazards.

Look at the house, not who lives there

A housing quality assessment tool should only measure features of the dwelling itself, even though many health and safety hazards result from the behaviour of the occupants as well (see Table 1). Only assessing the dwelling means:

- the assessment is relevant to the dwelling, even if occupants change
- if the assessment shows that the dwelling is safe for a member of a vulnerable group, the dwelling is safe for all potential occupants
- an unoccupied dwelling can be assessed.

Healthy Housing Index could improve NZ housing

New Zealand now has a well-tested housing quality assessment tool – The Healthy Housing Index – which was developed by researchers at the University of Otago and BRANZ for measuring common hazards in the home. Although the original focus of the tool was on health outcomes, an increasing awareness of the importance of safety and sustainability has broadened it.

What New Zealand currently lacks is regulation mandating widespread use of tools, like the Healthy Housing Index, in existing housing. This tool could provide an ideal basis for rating the quality of houses for rent and sale, as well as identifying substandard properties that pose a threat to health, safety and sustainability. We require a warrant of fitness for our cars and commercial building, so isn't it time we had something similar for the environment where we spend most of our lives – our homes?

For more information on the Healthy Housing Index, visit www.healthyhousing.org.nz.