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Housing as a public health investment

Improving energy efficiency pays dividends in both human and planetary health

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In many developed countries, the time when housing was viewed by governments and citizens as an investment in, and protector of, public health seems past. Health experts and academics continue to explain the links between housing and health,[1 2] but these arguments do not penetrate the public or policy consciousness. Rather, housing is seen as the "wobbly pillar" of the welfare state subject to a residual role and minimal intervention,[3] or a private asset, where investment is justified by financial return.[4] When the state acts to improve conditions such as home energy efficiency, the outcomes are evaluated predominantly in financial terms, such as impacts on fuel poverty and the economy,[5 6] rather than in health terms. A new study of a national home insulation programme[7] by Fyfe and colleagues (doi:10.1136/bmj.m4571) could help to change this perspective.

The New Zealand study used a quasi-experimental design to examine the impact of ceiling and floor insulation on hospital admissions for occupants of all ages in dwellings. The study overcomes many weaknesses of previous studies in this area, identified by a Cochrane review.[8] It was large, including more than 100 000 dwellings and nearly half a million people, and of medium term duration, with baseline and follow-up periods of three years.

Fyfe and colleagues used data linkage as recommended for non-health interventions but rarely used in housing,[9] and they focused on acute cold associated hospital admissions considered to be linked to housing conditions.[10] Their analysis compared hospital admission rates before and after the insulation works and between the intervention group and a waiting list control group. The key findings were that hospital admission rates were significantly reduced in the intervention group compared with control group by 11%, with larger differences for respiratory conditions (15% lower admission rates), asthma (20% lower), and ischaemic heart disease in the those older than 65 years (25% lower). One of the few comparable studies, conducted in Wales, reported larger effects from wall insulations (not studied by Fyfe and colleagues) with reductions in hospital admissions of 25% in all ages and 20% in people older than 60 years.[11]

These findings have implications for policy debates about health services, climate change, and housing. Health services and hospitals are under pressure in the UK and elsewhere: an analysis over 13 years to 2016 showed that hospital admissions in England were increasing at three times the predicted rate, outstripping real term increases in funding after 2010.[12] At the same time, numbers of hospital beds have been dropping for three decades, with the UK having fewer acute beds per population compared with similar countries. Occupancy rates have been above safe levels in recent years.[13]

A comparison of the UK with nine other Organisation for Economic Co-operation and Development countries concluded that "most health service outcomes were below average" and pointed to difficulties of structural capacity and sustainability of care.[14] In this context, housing interventions that can lower hospital admissions, particularly for respiratory conditions, could contribute to the worldwide challenge of increasing health service capacity in the face of future pandemics like coronavirus disease 2019.[15] Housing investment might partly pay for itself too. For example, the estimated cost per dwelling of improving the energy efficiency of social housing, at about £21 000 ($28 100; €23 200)[16] and the Climate Change Committee's estimated cost for the average home (semidetached) of about £20 000[17] would be offset by cost savings of up to £400 for each emergency visit averted and £590 for a short hospital stay.[18]

Alongside health service capacity, climate change is the other major challenge facing governments where housing investment can assist. Currently, housing is one of 10 areas of action under the UK government's "green industrial revolution" to reach carbon neutrality by 2050.[19] However, many are unconvinced by the government's plans and commitment. Environmental campaign groups argue that the national targets for domestic energy efficiency are not ambitious enough. Housing observers claim the government's decarbonisation fund will only cover a small proportion of the costs in the social housing sector and that many landlords have no targets.[16] The Royal Institution of Chartered Surveyors considers that "the pace of retrofitting is lagging" and that housing energy efficiency should be made a national infrastructure priority to scale-up the efforts, including sustained funding, fiscal incentives to owners, and stronger regulation.[20]

If housing is going to compete with energy, agriculture, manufacturing, and transport as a major area of transformation to tackle climate change, then more research such as that by Fyfe and colleagues is required. If realistic evaluation using linked data and mixed methods[21] was integrated into future home energy efficiency programmes, along with a value for money study, this could restore the view of housing as an investment worthy of sustained public expenditure, for both health and climate reasons.

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