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HOW SOCIAL HOUSING TENANTS RESPOND WHEN THEIR HOMES ARE MADE MORE ENERGY EFFICIENT

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How social housing tenants respond when their homes are made more energy efficient[1]

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INTRODUCTION

Social housing is an important form of support for many vulnerable households. As well as requiring physical accommodation, these households also need heating, lighting and other basic services. The social welfare system provides many people with income supports, but there are also targeted measures to help with particular aspects of housing quality. This study examined the effects of subsidies that are mainly intended to improve household energy efficiency but which confer multiple benefits on vulnerable households. Our aim was to learn more about how social housing tenants react to these measures; in particular, when social housing is made more energy efficient, do the tenants tend to reduce their spending on energy services or do they maintain their spending and enjoy more thermal comfort? Both of these behaviours offer benefits to the households, but the balance between them has implications for the achievement of other public policy objectives. For example, reducing energy use would advance climate policy goals, while taking more thermal comfort should improve public health.

DATA AND METHODS

Respond, a social housing provider, collaborated with the study team in providing information on several of its estates. Within these estates, two samples of households were identified: one that was soon to receive energy efficiency upgrades funded by a grant from the Sustainable Energy Authority of Ireland and a second group that was not (many had previously been upgraded). In total, 260 households in Ireland during 2014-2015 were included.

A first survey was run to gather detailed information on household characteristics, attitudes and expectations towards the effects of energy efficiency upgrades. In

[1] This Bulletin summarises the findings from Coyne, B., S. Lyons and D. McCoy, 2018, The effects of home energy efficiency upgrades on social housing tenants: evidence from Ireland, *Energy Efficiency* 11(8), 2077-2100. https://doi.org/10.1007/s12053-018-9688-7. We are grateful for funding and assistance from Respond and for support from Science Foundation Ireland, the ESRI Energy Policy Research Centre, Gas Networks Ireland through the Gas Innovation Group, the European Investment Bank, the Grantham Research Institute and the ESRC Centre for Climate Change Economics and Policy.
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addition, the residents permitted the study team to have access to information on their energy bills before and after the upgrades were installed. The subset of households using natural gas for heating was given a particular focus in the study due to the ease of measuring their energy use over time. Finally, a second survey was run after the upgrade period to learn how residents felt aspects of their behaviour might have changed. Because the surveys included a "control group" of households that did not receive upgrades in the study period, it was possible to take into account broader trends in behaviour that were not due to the upgrades *per se*.

RESULTS

Households who received energy efficiency upgrades reported significant improvements in their ability to afford sufficient heating, while the control group reported no change. As expected, the benefits of the upgrades seem to have been shared between energy savings and thermal comfort. For the households using natural gas for heating, about one third of the estimated efficiency gain was reflected in lower fuel demand. This result supports some international findings that suggest vulnerable households will tend to take more of their efficiency benefits in the form of thermal comfort than better off households would. This might imply that the greater share of societal benefits from subsidising upgrades to vulnerable groups might be expected to come from thermal comfort and related gains such as health improvements. A secondary, but still important, source of benefits arises from reducing carbon emissions and cutting energy bills.

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