

The impact of retrofit on health

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Inter-regional fuel poverty seminar, 13 June 2017
William Baker, Citizens Advice

GPs' lives matter video

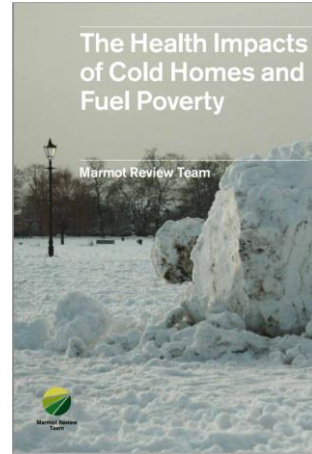
<https://spark.adobe.com/video/SQp1Yg4fFWX4>

About Citizens Advice

- Our charity was founded in 1939; since then, we have given advice, information and support to anyone who needs it
- We help people online, over the phone and face to face through our network of 330 local Citizens Advice offices
- Every year, millions of people turn to us; this gives us a unique insight into their needs and concerns
- We use this knowledge to campaign on big issues, both locally and nationally; so one way or another, we are helping everyone – not just those we support directly
- In 2014, the statutory responsibility for representing energy and post consumers was transferred to Citizens Advice

Introduction

- Substantial evidence: impact of poor energy efficiency on health
 - Cardiovascular & respiratory disease, mental health
 - Minor illnesses & health problems exacerbated
 - Social isolation, children's education
- Less evidence: do energy efficiency interventions improve health?
 - Medical research – high standards of evidence
 - Difficulty in gathering health condition data
 - Difficult to attribute causation
 - Many confounding factors



Presentation summary

- Summarise evidence that does exist on the health impact of energy efficiency retrofit schemes
 - Systematic reviews
 - Individual studies
- Case study
 - Citizens Advice winter resilience pilot
 - Approach taken to assessing health impact (with a very modest budget)

Systematic reviews

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Cochrane review, 2013

'Housing improvements for health & associated socio-economic outcomes'
Thomson H et al

- Identified 39 quantitative & qualitative studies, including 5 random controlled trials. Key conclusion:

"Housing investment which improves thermal comfort in the home can lead to health improvements, especially where targeted at those with chronic respiratory disease"

- Other findings:
 - Improved health: reduced absences from work & education
 - Heat more rooms in house and increase usable space
 - Improved social relationships, improved mental health



**THE COCHRANE
COLLABORATION®**

Milner J & Wilkinson P, 2016

'The effects of home energy efficiency & heating interventions on cold-related ill-health'

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



- Identified 21 intervention studies which reported quantitative associations
 - Review restricted to OECD countries & English language
 - Random controlled trials, before-after comparisons
 - Observational studies of natural experiments, experimental studies
- Impact of energy efficiency & heating - conclusions:
 - Improvements in respiratory symptoms & symptoms of other chronic illnesses
 - Improved mental well-being
 - Reduced contacts with health service
 - Fewer days of absence from school or work
 - For some key target groups, e.g. children with asthma:
housing interventions justified in own right for managing clinical condition

Maidment CD et al, 2013

Energy Policy 65 (2014) 583–593

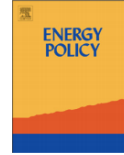


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Contents lists available at ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol



'The impact of household energy efficiency measures on health: a meta-analysis'

- Results from 36 studies brought together: sample size of 33,746 participants
- Key finding:
"A small but significant and positive effect of energy efficiency interventions on health was found": $d_+ = 0.08$
- Particularly significant health benefits for children & people with poor health
- Implications for policy:
 - Health benefits should be central to fuel poverty & energy efficiency strategies
 - Tackling fuel poverty can help reduce health inequalities

Individual studies

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'Warm homes Oldham' evaluation, 2016

- Energy improvements & advice to people at risk of fuel poverty and poor health
 - Before & after surveys of 427 residents & in-depth interviews with 25 residents
- Findings:
 - 60% with physical health problem: project had a positive impact on their health
 - 48 out of 50 with 'high risk' of mental illness moved to 'low risk' following project
 - 96% reported their home was easier to heat; 85% spent less on heating
 - 33% said that project made a big difference to their ability to socialise
- Valuing the project benefits on health costs:
 - Quality Adjusted Life Years: £400,000-£793,000 (£250,000 investment=cost effective)
 - NHS savings for 128 with mental health problems = £45,000:
 - reduced visits to GPs & hospitals
 - reduced medication & counselling



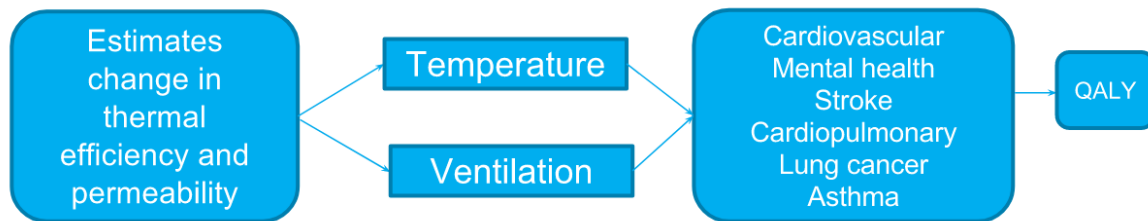
Impact of Warm Homes Nest scheme on health

- Welsh government Nest scheme: grants to improve energy efficiency standards
 - Nest data anonymously linked to NHS health records (*Fuel poverty data linking project, 2017*)
 - Comparison of health service use (GP events, prescriptions, hospital admissions):
 - 16,353 Nest recipients
 - 24,895 people eligible for Nest but yet to receive measures
 - Measured for winter before & winter after measures installed
 - Health of both groups likely to deteriorate due to effect of increased age
- Key findings:
 - Significant positive impact on respiratory health of Nest recipients
 - 3.9% decrease in respiratory events versus 9.8% increase for control group
 - Statistically significant difference also found for asthma & 'protective effect' for infection
 - Positive impact: hospital emergency admissions for cardiovascular & respiratory conditions



Health impacts of domestic energy efficiency measures (HIDEEM) model

- DECC project: University College London & London School of Tropical Medicine, 2014
 - Monetise the health impact associated with energy efficiency improvements
 - Quality Adjusted Life Years (QALY) & Net Present Value



- Used for government Impact Assessments of new policies:
 - Health benefits of Energy Company Obligation: £125m
 - Health benefits of Private Rented Sector regulations: £400m
 - Both represent about 15% of total value of benefits of policies

Citizens Advice Winter resilience project



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National Institute of Health and Care Excellence (NICE)

Guideline, NG6, 2015:

Excess winter deaths and morbidity and the health risks associated with cold homes

Recommendation 2: Ensure there is a single point of contact health and housing referral service for people living in cold homes

Recommendation 3: Provide tailored solutions via the single point of contact health and housing referral service for people living in cold homes

Citizens Advice winter resilience project

Pilot 'health and housing referral service' at 7 local Citizens Advice offices

If successful, seek funding to roll pilot out to local offices throughout country

Winter resilience project: vision & objectives

Design and deliver a single-point-of-contact health and housing referral service to help vulnerable people who live in cold homes

Co-design with 7
local Citizens Advice

User focused

Simple and clear
client journeys

Health sector
involvement

Cross - agency
referrals

Senior Advisory
group

Evaluation of
services

Develop a service
toolkit

Local offices taking part in the project

Liverpool North,
South & East 

Stockton 

Wealden 

Uttlesford 

Manchester 

Southwark 

Gloucester & District 

Evaluating the winter resilience pilot

- Internal evaluation of processes adopted by pilot offices
- Centre for Sustainable Energy (CSE) commissioned to carry out an evaluation of the health impact of pilot offices
- Context
 - Each pilot targeted 1 or 2 client groups with high needs in their area, i.e. not able to offer comprehensive referral service recommended by NICE
 - 6 months to design and set up service
 - Implementation of referral service started October/November 2016
 - Gathering data in 'live service' environment: considerable challenges

Planned analysis

- Who is using the service: characteristics of those surveyed
- Referral pathways used
- Advice services and onward referrals provided
- Energy-related outcomes:
 - improved housing conditions
 - income maximisation
 - reduced energy spend
 - referrals to other advice
- Subjective improvement in ability to keep warm and afford bills
- Impact on health & wellbeing: before and after comparison
 - by Office, by referral method, by selected vulnerability characteristic
 - relation between health outcomes and energy-related outcomes

Information collected

- Referral types by office and location
- Health status before & after using validated health impact tools
 - ONS well-being survey
 - EQ-5D-5L physical health survey
- Fuel poverty status before & after intervention; also
 - ability to keep warm & manage energy bills
 - changes in energy costs, numbers switching tariffs
- Housing condition before & after intervention; including
 - energy efficiency measures and changes to SAP rating
- Benefits received before & after intervention
- Demographics

Office for National Statistics well-being survey

Standardised rating of people's wellbeing (scale of 1-10)

- Overall, how satisfied with your life are you nowadays?
- Overall, to what extent do you feel the things you do in your life are worthwhile?
- Overall, how happy did you feel yesterday
- How anxious did you feel yesterday?

EQ-5D-5L analysis Euroquol group

- Standardised measure of health status, for clinical and economic appraisal
- Expresses a combined value of 5 dimensions
- Value at baseline and follow up can be directly compared
- Can generate Quality of Life Adjusted Life Years (QALY) statistics
- Also collecting before & after data on use of health services



Initial results

- ‘Before’ surveys:
 - Higher than average level of visits to General Practitioners (GPs)
 - Much lower than average levels of satisfaction, sense of worth & happiness
 - Higher than average level of anxiety
 - Lower than average levels of self-rated general health
 - Higher than average levels of moderate, severe and extreme pain
- ‘After’ surveys:
 - Will be carried out in 6 months time; potentially also in 12 months time
 - Hope to see big improvements on above findings

Case study 1: widow, 78, owner occupier

- Poor health
 - Coronary heart disease, arthritis, osteoarthritis, high blood pressure, deep vein thrombosis, anxiety and depression
 - About to go to hospital for hip operation
- Broken boiler - no heating or hot water
- Impact of advice
 - Warm Home Discount: £140
 - New boiler
 - Trust fund, worth £3,000
 - £350pa saving on old boiler (when worked)
 - Heating & hot water: helped recovery & well-being on return from hospital
 - Now on supplier's Priority Services Register



Case study 2: single man, 63, private rented flat

- Home circumstances
 - Central heating not working; heated whole flat with 1 fan heater
 - Electric & gas prepayment meters
 - Stopped topping up gas prepayment meter 3 years ago
- Poor health
 - Chronic Obstructive Pulmonary Disease (COPD), relies on electric nebuliser
 - Self disconnection during night: tried to go to shop to top up prepayment meter but unable to breathe properly so ambulance called
- Impact of advice
 - Warm Home Discount: £140
 - Both prepayment meters changed to credit meter to avoid self-disconnection in future
 - Standing charge debt on gas prepayment meter written off
 - New energy efficient cooker (Trust fund) & new boiler (Energy Company Obligation): £400 per week fuel bill savings
 - Now on both suppliers' Priority Services Registers
 - Now in receipt of PIP & ESA severe disability premium: extra £100 per week
 - Big reduction in hospital visits

Client quote:
"CAB help has saved my life"

For more information, contact

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The logo for Citizens Advice, featuring the words "citizens" and "advice" stacked vertically in white lowercase letters inside a dark blue speech bubble shape.

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