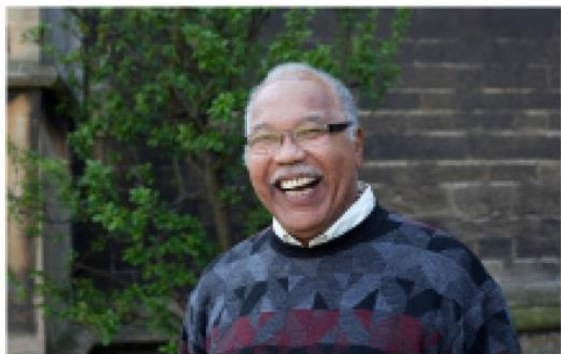


Warm, Safe and Well: The Evaluation of the Warm at Home Programme

November 2016



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The findings presented in the report are however entirely the responsibility of the research authors.

Foundations Independent Living Trust

FILT's Vision

Our vision is a Britain where every vulnerable person can live happily and independently in their own home - warm, safe and secure

FILT's Mission Statement

Our mission is to connect funding partners with local organisations that help vulnerable and disadvantaged households remain in their own homes warm, safe and secure.

FILT's Activities

FILT supports vulnerable householders to help keep their homes warm, safe and suitably adapted. We do this by joining up national and regional funders who want to support our work with local, accredited home improvement agencies and other local partners who see to it that work is completed quickly and to the right standard. We know this can also translate quickly into benefits for health and wellbeing as well as meeting more immediate practical needs.

FILT's Unique Selling Proposition

We help older and vulnerable people live with dignity in their own homes. We do this by distributing Corporate Social Responsibility and charity funds through our network of local home improvement agencies (HIAs) to provide a range of support including repairs and improvements to people's homes.



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Report Headlines

Organisation

- FILT effectively managed the WAH Programme. The structural relationship between Foundations, FILT and HIAs aids delivery of such Programmes.
- The flexible and light touch nature of the funding and administration enabled HIAs to work quickly with vulnerable clients.
- The broad eligibility criteria of the funding meant HIAs could help more people to keep warm, some of whom would not have qualified for other funding schemes.

Delivery

- **HIAs were well placed to reach vulnerable householders whose health was at risk from cold conditions** and who would benefit from the WAH Programme.
- The reach of the WAH Programme in terms of number of contacts and the range of work undertaken was impressive.
- WAH funding helped fill a gap in service provision helping people who were suffering from ill health and enduring cold or unsafe conditions in their homes, but who were just above the income eligibility criteria for other energy efficiency schemes.

Client Experience

- There were high levels of satisfaction with the WAH Programme. Clients were impressed with the quality of the work undertaken and the manner and professional attitude of the HIA assessors, officers and contractors.
- HIAs and handyperson services emerge as accessible and acceptable organisations. Our findings reiterate the importance of having a vouch safe referral scheme for vetted contractors and handyperson services.

Benefits

- The timeliness of the WAH intervention and being able to provide immediate relief to vulnerable clients was seen as a major advantage of the Programme. It provided social contact, emotional security, and wellbeing to vulnerable clients who were in poor health and often socially isolated.
- WAH clients reported considerable improvements in the conditions of their homes, their satisfaction with their homes and warmer temperatures which enhanced comfort considerably.
- Clients also reported being better able to manage energy related finances.
- Benefits were sizeable when compared to the average cost of the intervention (£241). For every £1 of WAH funding provided by FILT an additional minimum £2.42 was levered in from other sources.

Health Impact

- The WAH intervention alleviated stress and had a positive impact on people's quality of life and wellbeing, their feelings of safety and security and their control of the home environment.
- **Improvements in health and wellbeing were reported once work had been completed.** The greatest health and wellbeing improvements were experienced by those who received heating installation or replacement, and for those whom the highest cost work (£1,000 or more) was undertaken.
- Those who reported the worst health related quality of life received higher cost heating measures under the WAH Programme and benefited most from the improvement.

Cost Effectiveness

- Overall the WAH Programme appears to be a cost-effective intervention from a health perspective but there are variations in relation to the type and cost of intervention.
- The cost effectiveness of the intervention needs to be weighed against the fact that health and wellbeing benefits of higher cost interventions are greater than those with a lower cost.
- Although smaller cheaper measures have a negligible effect on health outcome they do result in sizeable improvements in wellbeing.

Value of Benefits

- The WAH Programme is estimated to have led to an additional 121.8 QALYs. If the assumed total QALY gained across the whole Programme is converted into a monetary value using the NHS threshold of £20,000, **then the value of the benefits gained amounts to £2,436,000. For every £1 of the £637,000 funding distributed to vulnerable households, the WAH Programme produced almost £4 of benefits in terms of better health.**

Key messages for Policy and Practice

- **HIAs have an important role in the delivery of policy interventions relating to fuel poverty and health.**
- **As key players in local partnership arrangements HIAs are essential organisations in making policy happen in practice as per the Cold Weather Plan and NICE Guidelines on EWDs.**
- **HIAs are working in a complex environment and there is a strong indication that HIA interventions and Programmes like WAH benefit health and wellbeing.**

Executive Summary

Introduction

This report presents the findings from an evaluation of the Foundations Independent Living Trust Ltd (FILT) SSE Warm at Home (WAH) Programme. Funding for the WAH Programme came via a financial penalty (or redress payment) imposed by the energy regulator Ofgem on the energy company SSE. With the funding FILT managed the WAH grants programme, which provided funds to enable the homes of vulnerable householders to become more energy efficient and/or easier to keep warm.

The evaluation was commissioned by FILT and its main aim was to assess WAH in terms of the impacts on health and wellbeing of householders in receipt of the Programme.

The evaluation team is from the Centre for Regional, Economic and Social Research (CRESR) at Sheffield Hallam University in collaboration with FILT and a number of HIAs. The research was conducted between April 2015 and June 2016 and adopted a mixed methods approach to measure the impact of the FILT SSE WAH Programme.

Context

There is increasing evidence and greater awareness of the negative impact that fuel poverty and cold homes have on the physical and mental health of both adults and children. The costs of cold homes go beyond those incurred by the NHS and are largely made up by losses in the quality of life and wellbeing of those affected. Recent developments in health policy indicate an increased emphasis on preventative measures to tackle cold related ill health. HIAs are well placed to respond to these developments. However, evidence on the effectiveness of interventions is lacking and there are obvious challenges for local organisations such as HIAs that are trying to demonstrate the impact and value of the interventions they are delivering to build a case for continued investment of such schemes.

About the FILT SSE WAH Programme

In March 2015, Ofgem imposed a financial penalty on the SSE energy company following failure to meet its obligations under a previous energy efficiency scheme. FILT managed the WAH grants programme, which provided funds to enable the homes of vulnerable householders to become more energy efficient and/or easier to keep warm. Funds were channelled through HIAs operating across England.

The funding enabled HIAs to provide energy efficiency advice and warm homes-related practical interventions to their clients (new and existing), typically older homeowners with a long-term illness or disability and/or on a low income.

The FILT SSE WAH Programme was targeted at homeowners who fulfilled one or more of the following criteria:

- age 60+
- low income
- disability or long-term illness.

A wide range of measures were eligible for funding - from simple measures such as draught proofing and fitting reflector radiator panels through to replacement of boilers and central heating systems. According to FILT during the WAH Programme:

- 3,678 home energy assessments took place
- £637,000 funding was distributed to vulnerable households
- 71 HIAs acted as local delivery partners
- 183 district councils in England were covered
- 2,647 warm homes measures took place
- average grant £241 per beneficiary
- 434 households were referred to their energy supplier for Warm Homes Discount
- 399 households were found to be eligible to be included on the Priority Service Register of their energy supplier.

Key Messages

Organisation of FILT SSE WAH Programme

- Through the FILT SSE WAH Programme organisations were able to **provide a unique service that combined a timely response with organisational structure and clear processes.**
- **The flexibility and "light touch" approach to the funding and administration allowed HIAs to work quickly with vulnerable households.**
- **The funding's broad eligibility criteria meant that HIAs could help more people to keep warm, some of whom would not have qualified for other funding schemes.**
- **Fewer restrictions on what could and could not be funded enabled HIAs to use their judgement in order to better meet clients' needs.**

Volume of work

- **The reach of the scheme was impressive in terms of numbers of contacts and interventions** particularly within the project timeframe.
- A large number of low cost, high impact measures (for example draught-proofing) were implemented during the Programme. **The volume of work was impressive in terms of the range of interventions.**

Delivery of the FILT SSE WAH Programme

- **HIAs were well placed to reach vulnerable households whose health was at risk from cold conditions** and who would benefit from the WAH Programme.
- **HIAs responded swiftly and in a timely fashion** and were able to intervene with vulnerable clients quickly.

- **WAH funding enabled HIAs to access other sources of funding helping with match funding and as a top up to other grants.** HIAs were exceptionally knowledgeable of other possible sources of funding for their clients.
- **The WAH Programme appeared to be filling a gap in service provision** helping people who were suffering from ill health and enduring cold or unsafe conditions in their homes but who were just above the income eligibility criteria for other energy efficiency schemes.

Clients' experience of the FILT SSE WAH Programme

- There were **high levels of satisfaction with the WAH Programme** and more than 9 in 10 QOL survey respondents were satisfied with the advice, help and support received and the work undertaken. There were a mix of new and existing HIA clients whose source of knowledge about the HIA was often community based. This highlights the importance of HIAs being local, community based organisations in terms of accessibility.
- **Clients were impressed with the quality of the work undertaken and the manner and professional attitude of the HIA assessors and officers and contractors.** HIAs and handyperson services were regarded as safe, trusted organisations.
- **Having a trusted organisation provided vulnerable often older clients with reassurance.** Evidence from the evaluation reaffirms the importance of having a vouch safe referral scheme for vetted contractors and handyperson services.
- Contact with HIAs resulted in some clients being given additional information, advice and support and benefiting from follow up services provided by either the HIA themselves or by other local agencies.

Benefits of the FILT SSE WAH Programme

- **Benefits experienced by WAH clients were sizeable when compared to the average cost of the intervention (£241).**
- **WAH clients reported considerable improvements in the conditions of their homes, their satisfaction with their homes and warmer temperatures which enhanced comfort considerably.** Seven out of 10 respondents reported that it was easier to heat their home to a comfortable temperature once the work had been completed. Such improvements were particularly appreciated by people with health conditions made worse by the cold.
- **Clients also reported being better able to manage energy related finances.** There were reductions in the proportion of households reporting that they: find it difficult to manage fuel bills; worry about not having enough money to pay energy bills; and heat the home less than needed because of the cost of heating.
- CRESR's analysis of works completed across the Programme indicate **an impressive cost leverage, for every £1 of WAH funding provided by FILT an additional minimum £2.42 was levered in from other sources.**
- **The timeliness of the WAH intervention and being able to provide immediate relief to vulnerable clients was seen as a major advantage of the Programme.** HIAs provided numerous examples of cases where they had been able to intervene quickly and it was likely they had prevented further illness or harm (such as hospital admissions, falls, prevented accidents and exacerbations of underlying chronic conditions). However, evidence on the level of Health Service use in the QOL survey is unreliable and it is difficult to demonstrate or quantify any cost saving accrued from health benefits or health episodes avoided.

- An important benefit of the intervention was that it provided social contact, emotional security, and wellbeing to vulnerable clients who were in poor health and often socially isolated.

Health Impact of the SSE WAH Programme

- **Improvements in health and wellbeing were reported once work had been completed.** The greatest health and wellbeing improvements were experienced by those who received a replacement or installation associated with their heating system, and for those whom the highest cost work (£1,000 or more) was undertaken.
- **WAH interventions alleviated stress and had a positive impact on people's quality of life and wellbeing, their feelings of safety and security and their control of the home environment.** Clients were appreciative of the benefits of smaller measures installed in their homes efficiently. Smaller practical improvements often made a big difference to daily lives which enhanced wellbeing and independence.
- **Clients often had complex multiple health problems** and didn't always link the WAH intervention with physical benefits, but felt that the intervention '*relieved*' symptoms. A warmer environment helped people to feel healthier and better able to self-manage long term conditions.
- The data from the QOL survey indicates that those **respondents who reported the worst Health Related Quality of Life scores, as measured by EQ5D, received higher cost heating measures under the WAH Programme and benefited most from the improvement in their scores.**

Cost Effectiveness of the SSE WAH Programme

- **Overall the WAH Programme appears to be a cost-effective intervention from a health perspective.** The apparent cost effectiveness of the WAH Programme is probably enhanced by the preponderance of small measures and **the overall figure masks some substantial variations by intervention type and cost.** Interventions for the fabric of the property (£8,142 per QALY) and efficiency of heating (£8,402) were more than twice as cost-effective as replacements and/or installations associated with the heating system (£17,889).
- **Cost effectiveness reduced as the cost of the intervention increased.** Interventions that cost less than £250 (£8,674 per QALY) were more than four times more cost-effective than interventions that cost more than £1000 (£36,429) and more than one and half times more cost-effective than interventions that cost more than £250 (£13,810). **However, this finding needs to be weighed against the fact that health and wellbeing benefits of higher cost interventions are greater than those with a lower cost.**

Value of benefits

- The WAH Programme is estimated to have led to an additional 121.8 QALYs. If the assumed total QALY gained across the whole Programme is converted into a monetary value using the NHS threshold of £20,000, **then the value of the benefits gained amounts to £2,436,000.** For every £1 of the £637,000 funding distributed to vulnerable households, the WAH Programme produced almost £4 of benefits in terms of better health.

Implications

- **HIAs have an important role in the delivery of policy interventions relating to fuel poverty and health.** This evaluation raises questions about how HIAs can best be supported in the future to carry out such work.

- **As key players in local partnership arrangements HIAs are essential organisations in making policy happen in practice as per the Cold Weather Plan and NICE Guidelines** for example. At a time when HIAs are losing services funding like that of WAH play an important role in making HIAs visible again.
- **HIAs are working in a complex environment and there is a strong indication that HIA interventions and Programmes like WAH benefit health and wellbeing.** The evidence presented in this report suggests that commissioners should look more closely at the benefits that the FILT and HIAs can deliver.

Introduction and Context

1.1. Introduction

This report presents the findings from an evaluation of the Foundations Independent Living Trust Ltd (FILT) SSE Warm at Home (WAH) Programme. FILT is a charity set up to help the clients of home improvement agencies (HIAs). FILT distributes charity funds through its network of local HIAs to provide a range of support including repairs and improvements to people's homes. FILT's vision is a Britain where every vulnerable person can live happily and independently in their own home - warm, safe and secure. FILT connects funding partners with local organisations that help vulnerable and disadvantaged households remain in their own homes. It does this by joining up national and regional funders who want to support FILT's work with local, accredited HIAs and other local partners who see to it that work is completed quickly and to the right standard.

Funding for the WAH Programme came via a financial penalty (or redress payment) imposed by the energy regulator Ofgem on the energy company SSE. With the funding FILT managed the WAH grants programme, which provided funds to enable the homes of vulnerable householders to become more energy efficient and/or easier to keep warm.

The evaluation was commissioned by FILT and aimed to assess WAH in terms of the impacts on health and wellbeing of households in receipt of the Programme. The evaluation also considers the FILT, HIA and Foundations (the national body for HIAs) model for delivery of home-based interventions, to assess whether it is an effective vehicle to combat the impact on health of poorly heated homes occupied by vulnerable householders.

The evaluation team is from the Centre for Regional, Economic and Social Research (CRESR) at Sheffield Hallam University in collaboration with FILT and a number of HIAs.

The research was conducted between April 2015 and June 2016 and adopts a mixed methods approach to measure the impact of the FILT SSE WAH Programme using:

- a before and after Quality of Life (QOL) survey of beneficiaries undertaken by a number of HIAs
- relevant monitoring data and linking it to the QOL survey data as appropriate
- qualitative interviews (telephone and face to face) with HIAs and WAH beneficiaries undertaken by the CRESR research team.

The report is structured as follows:

- This section, **Chapter 1 Introduction and Context** briefly outlines the study and discusses the cold homes, health and fuel poverty evidence and policy context.
- **Chapter 2 The FILT SSE WAH Programme** gives background information on Foundations, FILT and the HIA sector and an overview of the WAH Programme.
- **Chapter 3 Approach and Methods** details the purpose of the study, its aims and methods.
- **Chapter 4 The Delivery of the FILT SSE WAH Programme provides** information on the implementation of the FILT WAH Programme, its benefits and challenges, and the impacts on health and wellbeing of households in receipt of WAH as seen from the perspective of HIAs delivering the Programme.
- **Chapter 5 Clients' Perceptions of the FILT SSE WAH Programme** details results from the QOL survey and qualitative interviews on satisfaction with the WAH Programme and its impact on housing conditions and energy related finances.
- **Chapter 6 The Impact of the FILT SSE WAH Programme on Health and Wellbeing presents findings from the** QOL survey and qualitative interviews on the health and wellbeing impact and cost effectiveness of the WAH Programme.
- **Chapter 7 Key Messages and Conclusions** concludes the report, highlighting key messages and reflecting on the implications of the study findings.

1.2. Context

Fuel Poverty, Cold Homes and Health Impacts

There is increasing evidence and greater awareness of the negative impact that fuel poverty and cold homes have on the physical and mental health of both adults and children. For example, the Marmot Review (2011)¹ acknowledged the link between cold temperatures and respiratory illness and cardiovascular/circulatory diseases and mental health and highlighted the direct effect that energy inefficient homes have on Excess Winter Deaths (EWDs).

It is estimated that between 10 and 25 per cent (Marmot Review 2011) of the 43,900 EWDs which occurred in England and Wales in 2014/15 were attributable to fuel poverty and cold homes. People living in the coldest quarter of homes have a 20 per cent greater risk of dying than those in warm homes (Marmot Review 2011). Older people living on their own with existing illnesses and chronic conditions, poor mobility and in poor quality, harder to heat housing are most vulnerable to dying in winter (Roche 2010).² The majority of EWDs occur amongst people aged 75 and over and there were an estimated 36,300 excess winter deaths in this age group in 2014/15 (ONS, 2016).³

¹ Marmot Review Team (2011) *The Health Impacts of Cold Homes and Fuel Poverty*. London: Friends of the Earth and Marmot Review Team.

² Roche, T. (2010) *How to Reduce the Risk of Seasonal Excess Deaths Systematically in Vulnerable Older People to Impact at Population Level*. London: National Inequalities National Support Team, Department of Health.

³ Office for National Statistics (2016) *Excess winter mortality in England and Wales 2014/15*. Available at: <http://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/excesswintermortalityinenglandandwales/201415provisionaland201314final>

EWDs are only part of the picture. Cold fuel poor homes have a significant effect on the mental health of adults (Green and Gilbertson, 2008⁴; Gilbertson et al, 2012⁵) and of young people, on children's respiratory health, infant weight gain and susceptibility to illness (Liddell and Morris, 2010).⁶ Liddell and Guiney (2015)⁷ identify severe effects on mental wellbeing of living in fuel poverty due to a package of stressors. The effects of cold and thermal discomfort, low income and high energy costs, worry about debt and the associated stress, anxiety and stigma, sets up a cumulative negative cycle which impacts on mental wellbeing and in turn leads to further deterioration of physical health and exacerbation of mental health.

For people with long term conditions and older people cold homes exacerbate existing medical conditions, increase hospital admissions and may slow down recovery following discharge from hospital. Roche (2010) estimates for every EWD there are eight hospital admissions and 100 GP consultations.

A study in Newham ranked hospital admissions for respiratory diagnosis for residents aged 65 and over against the Fuel Poverty Index (FPI) and found it to be a predictor of admissions to hospital. The FPI includes factors like home energy efficiency, low income, householder age and under occupation and the results from this study indicate that a relationship exists between home energy efficiency and winter respiratory symptoms among older people (Rudge and Gilchrist, 2005).⁸ For infants, living in a fuel poor home is associated with a 30 per cent greater risk of admission to hospital or primary care facilities (Liddell, 2008).⁹

The poor health outcomes associated with cold conditions and fuel poverty also impact on longer term health outcomes and contribute to wider social and health inequalities. A wide range of people are documented¹⁰ as being particularly vulnerable to the adverse effects of cold and damp conditions in the home and include:

- people with cardiovascular conditions
- people with respiratory conditions (in particular, chronic obstructive pulmonary disease and childhood asthma)
- people with mental health conditions
- people with disabilities
- older people (65 and older)
- young children (under 5s)
- pregnant women
- people on a low income
- people who move in and out of homelessness

⁴ Green, G. and Gilbertson, J. (2008) *Warm Front: Better Health. The Health Impact Evaluation of the Warm Front Scheme*. Sheffield: CRESR, Sheffield Hallam University.

⁵ Gilbertson, J. et al (2012) Psychosocial Routes from Housing Investment to Health: Evidence from England's Home Energy Efficiency Scheme. *Energy Policy*, 49, pp. 122-133.

⁶ Liddell, C. and Morris, C. (2010) Fuel Poverty and Human Health: A Review of Recent Evidence. *Energy Policy*, 38, pp. 2987-2997.

⁷ Liddell C and Guiney C (2015) Living in a Cold and Damp Home: Frameworks for Understanding Impacts on Mental Wellbeing, *Public Health*, 129, 191-199.

⁸ Rudge, J. and Gilchrist, R. (2005) Excess Winter Morbidity Among Older People at Risk of Cold Homes: A Population Based Study in a London Borough. *Journal of Public Health*, 27, pp. 353-358.

⁹ Liddell, C. (2008) *The Impact of Fuel Poverty on Children, Policy Briefing*. Belfast: Save the Children.

¹⁰ NICE (2015) *Excess Winter Deaths and Illness and the Health Risks Associated with Cold Homes*.

<https://www.nice.org.uk/guidance/ng>

- people with addictions
- people who have attended hospital due to a fall
- recent immigrants and asylum seekers.

The Cost of Cold Homes

There are estimates of the costs to the NHS of treating illness which are either caused or exacerbated by cold homes. For instance Age UK¹¹ estimated that costs were around £1.36 billion per year. The Building Research Establishment (BRE)¹² has calculated that reducing hazards in housing including cold could deliver £600 million of savings per annum for the NHS. It has also been estimated that for every £1 spent on fuel poverty prevention there is a 42 pence saving in NHS health costs (Liddell, 2008).

Moreover, the costs of cold homes go beyond those incurred by the NHS and are largely made up by losses in the quality of life and wellbeing of those affected. Recent work undertaken by Stafford (2014)¹³ estimates the *social costs* of cold housing in the English city of Sheffield by calculating the loss of wellbeing as measured by the loss of Quality Adjusted Life Years (QALYs) and the costs falling on others, as measured by NHS and Social Care costs and also loss of economic output (GDP). This analysis calculates the cost of the following conditions linked to cold homes: EWDs, cardio-vascular disease; respiratory illness; falls in the home and mental illness and concludes that:

- the social cost of mental illness linked to cold homes dominates social cost of all other harms to health arising from cold homes, including premature death
- this dominance reflects the relatively large number of estimated cases rather than a relatively high social cost per case
- for all harms to health including mental illness social costs are dominated by losses in the quality of life of those afflicted.

According to Stafford (2014) given the significant effect of cold conditions on mental health and wellbeing it is perhaps not so surprising that the greatest social cost of cold homes is associated with mental illness. It is also worth remembering that whilst NHS and Social Care costs are important they do not represent the majority of the costs to society.

Greater Emphasis on Health and Prevention

Given the evidence of the negative health impacts of fuel poverty and cold homes and the associated costs of treating cold related ill health it is hardly surprising that the latest Government Fuel Poverty Strategy¹⁴ places greater emphasis on health as a priority. Focussing support on people with a health condition which is linked to living in a cold home is consistent with the Strategy's main aim of taking account of the needs of the most vulnerable fuel poor households. Because fuel poverty contributes to wider social and health inequalities joining up health and fuel poverty

¹¹ Age UK (2012) *The Cost of Cold: Why We Need to Protect the Health of Older People in Winter*, Age UK: London

¹² Nicol, S. *et al* (2010) *Quantifying the Cost of Poor Housing Information Paper. IP 16/10*. Bracknell: BRE Publications.

¹³ Stafford, B. (2014) *The Social cost of Cold Homes in an English City: Developing a Transferable Policy Tool. Journal of Public Health* doi: 10.1093/pubmed/fdu053

¹⁴ *Cutting the Cost of Keeping Warm: A Fuel Poverty Strategy for England* (2015) London: Crown Copyright.

policy makes absolute sense. The Strategy points out that the health sector has a key role to play in addressing the issue of cold homes and health.

As a way of improving action on health and fuel poverty the current Strategy advocates innovation and working with partners which include the NHS, local authorities, industry, local community energy groups and the third sector. To this end the Government allocated £3 million for new fuel poverty pilot projects including releasing up to £1 million of funding to scale up local 'warmth-on-prescription' projects to help people who face health risks because of the cold and £2 million to support local fuel poverty innovation.

As a result the last few years have seen increasing numbers of such innovative local projects. Recently National Energy Action (NEA) compiled a catalogue of health-related fuel poverty schemes for the former Department of Energy and Climate Change (DECC, 2015)¹⁵ and some 75 unique projects were included. This catalogue collates information on health-related fuel poverty schemes to better understand levels of activity in this area and highlights challenges to implementation as well as successful approaches.

Recent developments in health policy also indicate an increased emphasis on preventative measures to tackle cold related ill health. Under the **Health and Social Care Act (2012)**¹⁶ a revised structure for the NHS was introduced. Public Health departments were relocated from the NHS to Local Authorities and a number of new local agencies were created including Health and Wellbeing Boards (HWBs). HWBs are committees of representatives from local health, housing, environment and social care services tasked with tackling health inequalities in the local population. HWBs must produce Joint Strategic Needs Assessments which set out local health needs, and health and well-being strategies, which outline the plans for tackling these needs, including progress on a series of public health indicators.

Of key importance is the **Public Health Outcomes Framework (PHOF)**¹⁷ which influences the selection of HWBs' local priorities. A number of the outcomes within the PHOF link clearly to the intended impacts of HIAs and the FILT SSE WAH Programme including the following:

- 1.17 Fuel poverty
- 1.18 Social isolation
- 2.23 Self-reported wellbeing
- 2.24 Injuries due to falls in people aged 65 and over
- 4.11 Emergency readmissions within 30 days of discharge from hospital
- 4.13 Health-related quality of life for older people
- 4.15 Excess winter deaths.

Preventative action on fuel poverty and initiatives like the SSE WAH Programme can also support **Adult Social Care Outcomes Framework (ASCOF)**¹⁸ priorities. Keeping those people with care and support needs warm, safe and well in their homes decreases (or delays) hospital admissions and the need for more intensive support, thereby reducing the burden on local authorities by reducing social care costs.

¹⁵ DECC (2015) *Catalogue of Health Related Fuel Poverty Schemes*. London: Crown Copyright.

¹⁶ <http://www.legislation.gov.uk/ukpga/2012/7/contents/enacted>

¹⁷ <https://www.gov.uk/government/collections/public-health-outcomes-framework>

¹⁸ <https://www.gov.uk/government/publications/adult-social-care-outcomes-framework-ascf-2015-to-2016>

HIAs are also well placed to respond to the recent **NICE guideline on EWDs**¹⁹ which recognises the importance of discharging older people from hospital to a warm home in one of its recommendations.²⁰ Delay in the discharge of older people is a growing problem. Longer unnecessary stays in hospital have a negative impact on older patients' health and are an avoidable pressure on the financial sustainability of the NHS and local government. According to the National Audit Office the gross annual cost to the NHS of treating older patients in hospital who no longer need to receive acute clinical care is in the region of £820 million.²¹

Under other recommendations in the NICE Guideline, HWBs should ensure a local single-point-of-contact health and housing referral service is commissioned to help vulnerable people who live in cold homes. The local single-point-of-contact health and housing referral service should provide access to tailored solutions to address identified needs, rather than an off the shelf approach. Given that a number of HIAs across the country already operate as a single point of contact (Bashir et al, 2014),²² provide a range of services and holistic support to their clients, it seems that HIAs could effectively deliver such a commissioned service.

The **Cold Weather Plan**²³ stresses the importance of tackling fuel poverty to reduce excess winter illnesses and deaths and is one the main ways the Nice Guideline recommendations can be implemented. The plan details a series of clear actions for the NHS, local authorities, social care and other public agencies, professionals working with those at risk, local communities and voluntary groups to help minimise the health impact of cold winter weather, which includes action to improve the energy efficiency of homes. Initiatives such as the FILT SSE WAH Programme could provide a key component of the delivery mechanism for the Cold Weather Plan nationally and locally.

Evidence on the effectiveness of interventions to alleviate cold related ill health

There is a growing evidence base linking warmth interventions and energy efficiency improvements to health (Thomson *et al*, 2013²⁴; Maidment *et al*, 2014²⁵). It is widely acknowledged that energy efficiency improvements can reduce cold related illness and associated stress by making it easier for residents to heat their homes. Although a diverse range of positive health impacts resulting from household energy efficiency interventions have been identified, the mechanisms via which health improvements can occur are complex and often poorly understood. The beneficial health impacts of energy efficiency schemes may not always be assumed and there are many factors which influence the likely impact of energy efficiency interventions on health outcomes. These include: the scale of the intervention; the type of study participants and setting; where, when and how studies are conducted, including what

¹⁹ NICE, (2015) *Excess winter deaths and illness and the health risks associated with cold homes* <https://www.nice.org.uk/guidance/ng>

²⁰ The NICE guideline makes 12 recommendations for either preventing ill health arising, or improving the health circumstances for those already suffering ill health, among those groups who are vulnerable to cold conditions.

²¹ National Audit Office (2016) *Discharging Older Patients from Hospital*. <https://www.nao.org.uk/report/discharging-older-patients-from-hospital/>

²² Bashir N et al (2014) *An Evaluation of the FILT Warm Homes Service*. Glossop: Foundations Independent Living Trust. <http://www4.shu.ac.uk/research/cresr/sites/shu.ac.uk/files/eval-filt-warm-homes.pdf>

²³ Department of Health (2011) *Cold Weather Plan for England: protecting health and reducing harm from severe cold*. London: Department of Health.

²⁴ Thomson H *et al* (2013) Housing improvements for Health and Associated Socio-Economic Outcomes, Cochrane Database of Systematic Reviews, Issue 2. Art. No.: CD008657. DOI: 10.1002/14651858.CD008657.pub2

²⁵ Maidment C *et al* (2014) The Impact of Household Energy Efficiency Measures on Health: A Meta-Analysis. *Energy Policy*, 65,pp. 583-593.

features of health are assessed and by what health outcome measure (Maidment *et al*, 2014).

In addition concerns have been raised that affordable warmth interventions are poorly targeted (Liddell and Morris, 2010) and those at most risk and most vulnerable to the adverse effects of the cold struggle to access such interventions (Stockton and Campbell, 2011).²⁶

Overall evidence on the *effectiveness* of different interventions for reducing cold home related ill health is seen to be lacking. One reason for this is that undertaking evaluations of such interventions is often complex and numerous variables exist which effect intervention outcomes.²⁷ Some evidence on the impact of schemes designed to improve the energy efficiency and warmth of homes is ignored because it is not deemed to be robust enough as it is small scale and does not employ a Randomised Control Trial (RCT) design.

There is also a dearth of evidence to demonstrate the cost effectiveness of interventions that address the adverse health outcomes of fuel poverty and cold homes. Although there are estimates of the costs linked to cold homes (see above), the economic analysis of the cost savings to the NHS and beyond from alleviating fuel poverty and cold homes through measures such as energy efficiency improvements is much more difficult to calculate. Much of this difficulty comes down to the complexities of economic modelling and the difficulties associated with data collection.²⁸ Whilst the evidence suggests that interventions such as energy efficiency measures ought to significantly reduce health costs for those in fuel poverty, the NHS and for society as a whole, it is difficult to fully account for these health benefits and measure these health outcomes, not least because the relationship between energy efficiency improvements and health is complicated. In addition, cost benefits may be offset and not captured till some point in the future, but many evaluations do not have long term follow up so don't capture these benefits or cost savings.

Such a situation presents obvious challenges for many local organisations such as HIAs that are trying to demonstrate the impact and value of the interventions they are delivering to build a case for continued investment of such schemes. The former DECC developed a toolkit²⁹ for evaluation of health and fuel poverty schemes. The toolkit was designed to build on guidance already available and to make it easier for local delivery bodies to design and implement effective evaluations that build the case for continued investment.

However, given the paucity of the evidence base on cost effectiveness of interventions and the proliferation of local fuel poverty and health projects, the effective evaluation of such local schemes is likely to play a key role in building the evidence base. The weight of this collective evidence combined with more realist approaches to evaluation and evidence generation, should be recognised by those involved in policy as well as commissioning and provider activity.

²⁶ Stockton, H. and Campbell, R. (2011) *Time to Reconsider UK Energy and Fuel Poverty Policies*. York: Joseph Rowntree Foundation. <https://www.jrf.org.uk/report/time-reconsider-uk-energy-and-fuel-poverty-policies>

²⁷ Public Health England (2014) *Local Action on Health Inequalities: Fuel poverty and cold home related problems*.

²⁸ Fenwick, E. Macdonald, C. and Thomson, H. (2013) Economic analysis of the health impacts of housing improvement studies: a systematic review. *Journal of Epidemiology and Community Health*, 67, pp. 835–845.

²⁹ DECC (2016) *Affordable Warmth and Health Impact Evaluation Toolkit* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/512555/Affordable_Warmth_Health_Impact_Evaluation_Toolkit.pdf

The FILT SSE Warm at Home Programme

2.1. Introduction

This chapter of the report provides some brief background information on Foundations, FILT and the HIA sector and an overview of the FILT SSE WAH Programme. It draws directly on information contained in the FILT WAH Programme Final Report for Ofgem, April 2016.

2.2. Background to Foundations, FILT and the HIA Sector

Foundations is appointed by the Department of Communities and Local Government as the national body for Home Improvement Agencies (HIAs) and handy person services. HIAs and handy person services are local organisations dedicated to helping older people, people with disabilities and vulnerable people to live safely in their own homes. They do this by ensuring existing housing is fit for purpose and offering a range of preventative services that enable older and vulnerable people to live independently in their homes for as long as possible. There are nearly 200 HIAs and handyperson services in England providing services for local authorities across the country. Locally these organisations are sometimes known as ‘Stay Put’ or ‘Care and Repair’ agencies. Most agencies are operated by housing associations, some are provided by local authorities and some are small independent organisations with charitable status.

HIAs are locally commissioned, trusted providers that offer a range of services to enable people to stay safe, secure and warm, and retain independence in their own home. They offer holistic services to their clients, helping to improve a person’s wellbeing as well as offering practical solutions around the home.

The range of services provided by HIAs includes:

- advice and information
- housing options
- disabled adaptations (including Disabled Facilities Grants)
- home repairs
- hospital discharge
- handyperson services
- energy efficiency measures
- welfare and benefits advice.

Foundations Independent Living Trust (FILT) is the charitable arm of Foundations - the national body for home improvement agencies (HIAs) in England. FILT helps older and vulnerable people live with dignity in their own homes by operating and distributing funds through its network of HIAs which enable local HIAs to provide a range of support including repairs, improvements, advice and information to people's homes. Typical works funded vary from a simple repair to a radiator costing a few pounds, to a full replacement of a boiler, and much more in between.

2.3. Overview of the Warm at Home Programme

In March 2015, Ofgem imposed a financial penalty on the SSE energy company following failure to meet its obligations under CESP and, as a result, funding was provided to FILT *“to be used to pursue the following objectives for vulnerable consumers: promotion of carbon emissions reduction in domestic homes; promotion of energy efficiency in domestic homes; and fuel poverty”* (Ofgem Penalty Notice, March 2015).

To comply with the penalty notice, all funding had to be spent by the 5th March 2016.

With the funding FILT managed the WAH grants programme, which provided funds to enable the homes of vulnerable householders to become more energy efficient and/or easier to keep warm.

Funds were channelled through HIAs operating across England.

The funding enabled HIAs to provide energy efficiency advice and warm homes-related practical interventions to their clients (new and existing) typically older homeowners with a long-term illness or disability or on a low income.

2.4. Warm at Home Programme Management

During March 2015 FILT invited HIAs to apply for an allocation of WAH funding. HIAs were encouraged to adopt an innovative approach to how the funding would be spent and were asked to demonstrate how they would target help to those with greatest need and achieve value for money.

Applications were assessed and funding was initially allocated to 33 HIAs throughout England. A central pot was held by FILT so that HIAs that didn't receive an allocation of funding could apply for funding on behalf of their clients on a case by case basis.

In April 2015, HIAs received half of their allocated funding with the remainder set to follow mid-way through the Programme providing satisfactory progress had been made at that point in spending funds.

Funded HIAs were set guidelines in terms of number of home energy assessments and warm homes measures FILT expected them to undertake.

During April and May 2015 FILT worked closely with HIAs, providing funding guidelines and a variety of materials to enable them to promote the Programme amongst their colleagues, clients and stakeholders.

HIAs started to spend funding locally in May/June 2015 and reported into FILT monthly. FILT also maintained regular contact with HIAs to ensure that any issues which impacted on the HIAs' ability to spend the grant funding within the set timescale were picked up quickly.

Mid-way through the Programme, FILT conducted a review to ensure that HIAs were on track to spend their allocated funding. The majority of HIAs were on track at this point and so the second tranche of funding was issued.

The level of allocated funding was adjusted for some HIAs who were unable to spend all of their initial allocation. This allowed funds to be diverted to an additional seven HIAs who had been making good use of the central pot of funding held by FILT. The allocation into the central pot of funding was also increased at the same time as applications continued to flow in. Some HIAs, where demand had been high and spending rapid, were also able to have their overall allocation increased.

2.5. Warm at Home Beneficiary Eligibility

The FILT SSE WAH Programme was targeted at homeowners who fulfilled one or more of the following criteria:

- age 60+
- low income
- disability or long-term illness.

Although 60 was set as the age limit for eligibility under the 'Older' category, many beneficiaries were much older than this and a large number of beneficiaries fell into more than one of the eligibility groups.

2.6. Types of measures

A wide range of measures were eligible for funding - from simple measures such as draught proofing and fitting reflector radiator panels through to replacement of boilers and central heating systems.

2.7. Headline Figures

According to FILT during the WAH Programme:

- 3,678 home energy assessments took place
- the total cost of the programme was £849,000: £637,000 funding was distributed to vulnerable households via HIAs
- 71 HIAs acted as local delivery partners
- 183 district councils in England were covered
- 2,647 warm homes measures took place
- average grant £241 per beneficiary
- 434 households were referred to their energy supplier for Warm Homes Discount
- 399 households were found to be eligible to be included on the Priority Service Register of their energy supplier.

Approach and Methods

3.1. Introduction and aims of the study

The primary purpose of this study is to evaluate the FILT SSE WAH Programme in terms of the impacts on health and wellbeing of households in receipt of the Programme as seen from both the perspective of the HIAs and beneficiaries. The evaluation considers the FILT, HIA and Foundations national body of HIAs model for delivery of home-based interventions, to assess whether it is an effective vehicle to combat the impact on health of poorly heated homes occupied by vulnerable householders. To do this it is important to understand which interventions (systems, processes and interventions) have worked well for whom and why.

The evaluation has a number of broad aims/objectives to:

- demonstrate that the donation from SSE has been put to good use, delivering improvements in health and wellbeing using accepted methodologies for measuring such
- provide credible analysis of the impact of the interventions delivered on the demand for Health and Care services and which might reasonably be attributed to the interventions
- deliver analysis which is to the Standards recognised by NICE and similar professional bodies
- provide credible evidence on the effectiveness of the FILT model which will to be useful for potential funders.

And addresses a number of key research questions:

- What are the impacts on housing conditions and the health and wellbeing of householders in terms of physical health, comfort and mental health and wellbeing?
- What is HIAs' ability to identify and intervene with vulnerable households?
- What is the clients' experience of the WAH Programme they received from their local HIA?
- What are the indications of impacts on health and wellbeing – both for individual beneficiaries of the scheme and wider indicators of reduced use of health services/cost savings to the NHS?
- What are the wider impacts of the WAH Programme in relation to additional advice and information and signposting to partner organisations?
- What is the preliminary evidence of cost effectiveness of the FILT WAH Programme?

3.2. Methods

Our approach to evaluating the FILT WAH Programme is based on our experience of undertaking similar evaluations. The study adopts a mixed methods approach to measure the impact of the Programme using:

- a QOL survey of WAH beneficiaries - administered by HIAs and including questions on housing conditions and satisfaction, thermal comfort, household finances and fuel bill affordability, health and wellbeing
- management Information data - linking relevant monitoring data to the QOL survey data as appropriate
- qualitative interviews (telephone and face to face) undertaken by the CRESR research team with HIAs and WAH beneficiaries.

3.3. Core Outcome Measures

The study incorporates a number of standardised measures for general health and subjective wellbeing. Health related quality of life is measured using the standardised tool EuroQuol five dimensions (EQ5D) questionnaire. This measure is an NHS/NICE recommended tool which enables economic evaluation and the calculation of a Quality Adjusted Life Year (QALY). A QALY is a summary measure of the value of a health outcome, which incorporates the impact on both the quantity and quality of life. Essentially QALYs can be used to compare the benefit and cost of health care programs or interventions like WAH. Other measures such as general wellbeing (life satisfaction) link to the Office for National Statistics (ONS) measuring wellbeing programme.

3.4. Involvement of Home Improvement Agencies in the Evaluation

HIAs were asked whether they would be willing to assist with the FILT WAH evaluation when they applied for Programme funding. FILT then selected a small number of HIAs geographically spread across the country to collect the survey data. FILT's selection was based on their knowledge and experience of the HIAs and performance of delivering other similar schemes. HIAs that had met assessment, intervention and spending targets previously were seen as more likely of completing sufficient numbers of surveys as per the research team requirements. A target for completed surveys was discussed and agreed with each HIA. At the outset of the project it was hoped that around 400 baseline surveys would be collected in total.

The decision to engage HIAs in the data collection was taken for a number of reasons:

- minimising burden and disruption. HIA clients are vulnerable in terms of their age, health, disability and situation and there was concern that having an additional outside and unknown organisation undertake the surveys would feel like an intrusion
- utilising the HIAs enabled the baseline survey to be completed at the same time as the client and/or home assessment and minimised the number of visits that clients would need
- all the clients assessed by the evaluation HIAs could be approached to take part in the evaluation

- HIA caseworkers are experienced at asking questions and administering assessments
- HIAs are locally commissioned trusted organisations familiar to some clients and sensitive to their needs
- engaging HIAs in the evaluation and working in partnership with them helped encourage people to take part in the survey and made it easier to keep track of clients for the follow-up
- HIAs were keen to take part in the evaluation. The QOL survey provided them with a tool to collect data which they could utilise in the future to demonstrate the value of the work they are doing.

The research team liaised regularly with FILT throughout the evaluation, provided ongoing support to HIAs collecting data for the evaluation and worked in partnership with these organisations to achieve a robust evaluation.

3.5. Data Collection

Data collection for the evaluation was carried out in three main phases:

- baseline survey data collection
- follow-up survey data collection
- qualitative data collection.

Baseline Data Collection Phase

Seven HIAs across the country were involved in the evaluation and were tasked with undertaking the baseline and follow-up surveys of WAH beneficiaries in their area.

The following HIAs conducted the surveys:

- Aster Living Care and Repair
- Homelife Carlisle
- Mears
- Metropolitan
- Vivark Care and Repair
- West of England care and Repair
- Yorkshire Housing (North and South).

The first stage of the study involved a number of workshops to train the HIAs to collect the survey data. These workshops were designed to provide the HIAs with information about the evaluation and the necessary research training and guidance to undertake the surveys in as rigorous a manner as possible. The training covered the following issues:

- evaluation aims and objectives
- measuring outcomes and Quality of Life (QOL)
- data collection and process
- the participant information sheet
- informed consent and ethics

- data confidentiality and anonymity
- data quality
- ongoing support for HIAs during the evaluation
- instructions for uploading the questionnaire and consent forms
- questions and discussion and running through the questionnaire.

Workshops were held with three HIAs during April 2015 before collection of baseline data commenced. Additional workshops ran in autumn 2015 as it was necessary to bring in other HIAs to boost baseline survey collection.

Baseline data was collected between May 2015 and February 2016 and a total of 316 baseline surveys were collected across the HIAs.

Follow up Data Collection Phase

Before HIAs embarked on the data collection for the follow-up survey training workshops were held again. These workshops focussed on the importance of follow-up for measuring the 'distance travelled' by clients post-intervention and for assessing the impact of the WAH Programme. The workshops revisited the aims and objectives of the study, reiterated research training and guidance and addressed any issues or questions the HIAs had.

Follow-up data was collected between March 2016 and end of May/early June 2016. Follow ups were conducted with the same person who had completed the baseline survey and usually took place a minimum of three months post intervention. In the end around two thirds of cases were followed up after a longer period and a small number after a slightly shorter period. Table 3.1 below, details the length of time of the follow-up period.

Table 3.1: Length of Follow-up Period between WAH Intervention and Follow-up Survey

Length of Follow-up	Number of surveys	Percent
3 months or less	21	13.5
4-5 months	27	17.3
6-8 months	57	36.5
9-12 months	46	29.5
Missing cases	5	3.2
Total	156	100

In all, 156 follow up surveys were collected meaning that almost half (49%) of the baseline sample had a follow-up survey.

3.6. Qualitative Interviewing Phase

HIA telephone interviews

Eight telephone interviews were conducted with HIA managers and caseworkers. Interviews were undertaken with two HIAs helping with the evaluation data collection and six other HIAs recruited at random. The evaluation HIAs were asked if they would be willing to take part in the qualitative interviews at the workshops and those willing to participate sent their details directly to researchers. The other HIAs were

contacted by FILT and if they were happy to participate, their contact details passed on to the evaluation team. A member of the team contacted the participant by phone, conducted the interview and audio recorded it. The recordings were selectively transcribed and field notes taken. Notes and selected quotes from the interviews were analysed and key themes identified.

Client interviews

Twenty interviews were conducted with clients of eight HIAs. Clients were interviewed from HIAs involved in the evaluation as well as from other HIAs recruited at random. HIAs contacted clients to ask if they were happy to participate in the research. If they were, their contact details were passed on to the evaluation team. A member of the team contacted the participant to arrange the interview, conducted the interview, either over the phone or face to face, as per the participant's preference, and audio recorded it. The recordings were selectively transcribed and field notes taken. Notes and selected quotes from the interviews were analysed and key themes identified.

3.7. Challenges and limitations

The evaluation encountered a number of challenges and there are some limitations to its approach.

Providing training and ongoing support for local HIAs to collect survey data for the evaluation proved to be more intensive of time and resources than was originally anticipated. The evaluation team planned for workshops and ongoing regular support for a small number of HIAs. However, initial data collection was slow, partly because it coincided with the summer period and HIAs were doing fewer assessments than in the wintertime, but also because referrals to the Programme did not pick up till much later in the year. As a result it was necessary to bring additional HIAs into the evaluation and extend the baseline data collection period in order to ensure a sufficient number of baseline surveys were collected. Such action increased training and support requirements and the demands on the evaluation team.

Collecting the data took longer or was more problematic than expected. Some evaluation HIAs experienced concerns such as internal and financial changes, changes and reductions in staffing, and staff illness, which reduced their capacity to undertake surveys. Homelife Carlisle was hit by floods and unfortunately Mears was closed down (Mears follow-up surveys were undertaken by a member of the evaluation team).

Undertaking the follow up surveys was more challenging for the HIAs as it demanded they schedule an additional client visit. The follow-up phase of the evaluation also extended beyond the WAH Programme funding period which caused some logistical issues for HIAs.

There are some limitations to the evaluation design and approach. To an extent the approach taken was influenced by having to balance the practicalities of the WAH Programme funding period, with the requirements of FILT to report the results within a timely period and within the evaluation budget.

In order to complete the data gathering within or as close as the Programme funding period, the timing of the baseline and follow-up surveys was compromised. Ideally we would have liked to undertake the baseline and follow up surveys at least one year apart and at the same time of year. Having at least a year between the two surveys would have allowed for longer term outcomes to be realised and to account for seasonal differences that influence housing conditions and health and wellbeing

for example. We ensured there was at least three months between the intervention taking place and the follow-up survey and in over 60 per cent of cases the follow up survey was six months or longer after the intervention (see Table 3.1 above).

Our analysis has considered the effect of the seasonal timing of the baseline questionnaire on respondents' perceptions of their energy related finances and health and wellbeing outcomes to identify potential sources of bias in the data. Overall, although there were some variations (across all measures people whose baseline was undertaken in the winter were generally worse off at baseline and slightly more likely to have improved at follow-up) these had no effect on the overall trend.

The study also lacks a control group. In such small scale evaluations it is extremely difficult to configure a truly comparable group of participants to act as a control, and unethical to delay the intervention for such a vulnerable population. The lack of a control means it is not possible to directly attribute changes identified to the WAH intervention. However, the evaluation has compared outcomes for beneficiaries of different types of intervention and interventions with different levels of cost, and undertaken qualitative research, to explore WAH client perceptions of how the interventions have impacted on their health and wellbeing.

It is possible that HIA clients' QOL survey responses could have been influenced by HIAs carrying out the questionnaires. There were good reasons for utilising HIAs in the evaluation (outlined above) and considerable efforts were taken to train the caseworkers who were undertaking the survey. HIAs were aware of the importance of taking a rigorous approach when undertaking the surveys and the use of mixed methods in the study helped to provide validation of the survey results.

Some of the HIAs that collected data for the evaluation were asked about their involvement in the evaluation. Whilst HIAs were happy to help out and recognised the importance of an independent evaluation for collecting evidence of the benefits and value of the SSE WAH Programme, undertaking the QOL survey was an extra challenge. At the training workshops and meetings HIAs appreciated having some input into the survey questionnaire and briefing on administering the survey, but getting to grips with the demands of the evaluation and uploading the evaluation data onto the online system did require additional commitment.

The QOL survey took caseworkers extra time and the personal nature of some of the health questions in the survey was sometimes regarded as intrusive for clients who were already in poor health and difficult circumstances.

People don't always like doing the questionnaires because they're quite personal questions and it takes a bit of cajoling and it's taken up quite a lot of case workers time. (HIA manager, HIA 1).

However, there was some evidence that the QOL survey was identifying issues that might not routinely be picked up by HIA initial assessments.

...identifying when people are depressed and talking to people about depression is possibly one thing that has come out of it as it's not something we'd often ask upfront, we'd usually wait for it to come out. So that and being able to think about referring on for that. (HIA casework, HIA 7).

For HIAs the main benefit of the evaluation was simply having some evidence of the difference made to people's lives. HIAs hoped the evaluation might demonstrate that the SSE WAH Programme had led to cost effective improvements in health, but recognised the difficulties in demonstrating whether it had led to NHS savings.

We know that they make a huge difference to people's lives and save the NHS tonnes of money, but proving that is really difficult. The main benefit will be getting the report and being able to use that. (HIA manager, HIA 1).

In future, to have some evidence that if you put some small amounts of money that we can control and access quickly, that will help. It's very difficult to prove preventative work. And I still don't know how much the evaluation will, but some evidence is helpful. (HIA casework, HIA 7).

The Delivery of the FILT SSE Warm at Home Programme

Key Findings

- HIAs were well placed to identify and reach vulnerable clients to deliver the WAH Programme to.
- The reach of the scheme was impressive in terms of numbers of contacts and interventions particularly within the project timeframe.
- A large number of low cost, high impact measures (for example draught-proofing) were implemented during the Programme. The volume of work was impressive in terms of the range of interventions.
- Across the whole WAH Programme HIAs offered a range of additional advice and referral to clients.
- HIAs were exceptionally knowledgeable of possible sources of funding for their clients and were proficient at putting together a package of funding. The SSE WAH money was useful to top up loans from other sources or as match funding, and was an effective way of raising other funds.
- For every £1 of SSE WAH funding provided by FILT an additional minimum £2.42 was levered in from other sources.
- Few restrictions on the funding criteria and the flexibility of the funding were major benefits, which facilitated HIAs ability to work with more people and respond more speedily and creatively to meet clients' needs.
- The broad eligibility criteria for funding meant HIAs could help more people to keep warm, some of whom would not have qualified for other funding schemes.
- HIAs felt that the SSE WAH Programme worked well, was well set up and easy to use, enabling HIAs to take the initiative and work effectively.
- The timeliness of the intervention and being able to provide immediate relief to clients was a major advantage of the Programme.
- HIAs provided numerous examples where they had intervened and it was likely had prevented further illness or harm.

4.1. Introduction

Eight telephone interviews were conducted with HIA managers and caseworkers. The interviews were designed to gather information on the delivery of the FILT WAH Programme, its benefits and challenges, and the impacts on health and wellbeing of households in receipt of WAH as seen from the perspective of HIAs. Interviews were conducted with a couple of HIAs involved in the collection of evaluation data, as well as other HIAs not directly involved in the study. An interview was also conducted with the FILT WAH Programme coordinator. Interviews were analysed and key themes identified. Evidence is also drawn from FILT's WAH Programme final report to Ofgem and from analysis of the QOL survey and monitoring data.

Details of the key results, issues and themes are presented below under main headings.

4.2. The client journey and assessment

Referrals to the WAH Programme were often existing HIA clients, self-referrals or via local authorities and Adult Social Care. Figures for the whole Programme are presented in the Table 4.1 below.

Table 4.1: Referrals to the WAH Programme

Referred by	Number of beneficiaries	% of beneficiaries
Existing HIA client	1,396	38%
Self-referral	901	24%
Local authority/social care	726	20%
Other	225	6%
Voluntary sector	201	5%
GP/other health service	199	5%
Carer	30	1%

Source: FILT WAH Programme Final Report to Ofgem, April 2016

As with the Programme as a whole, the HIAs interviewed for this evaluation generally received a mixture of referrals, largely made up of existing clients, new self-referrals and through their established networks, although the mix of referrals did vary for different HIAs.

Most referrals would be from self-referrers. They have a problem, they might phone social services and they'll say try us. Or they just phone straight through to us because they're aware of the service. (HIA manager, HIA 5).

People who are already clients. We get people referred from the three borough councils. Through housing. The Energy efficiency officer. (HIA manager, HIA 2).

As HIAs routinely work with and assist households who fall within the eligibility criteria of WAH they were easily able to reach vulnerable households the funding was designed to reach. For instance, much of HIAs core business is delivering Disable Facilities Grants (DFGs) so they are in people's homes doing assessments all the time, and are aware of the range clients' needs.

Mainly people we were seeing for other reasons, or who would be making enquiries to the HIA for support. In the last year we had 15,000 enquiries, so we're not short of people. One of the crucial referral mechanisms was the handyman team, who are visiting 200 people per week. Came across lots of people who could be helped with small things, draught proofing, bleeding radiators and so on. (HIA Executive Director, HIA 6).

HIAs were aware of clients they knew would benefit from the funding and could also help clients they had previously been unable to. For example, the WAH funding allowed some HIAs to contact clients who had used their services in the past and who had been flagged up as requiring warm homes work. In effect some HIAs had a 'waiting list' of clients that they knew would benefit from the WAH funding and energy efficiency measures.

Those HIAs working within the warmth and heating field for some years had an established reputation and existing networks through which referrals to WAH came.

We have our own reputation, people come to us. People who are already clients. (HIA manager, HIA 2).

Because we've been working in the heating field for a long time, most recently the Warm Homes Healthy People working with the council, we did loads of roadshows and things like that in the winter and training with all the voluntary groups, this year we already had our networks built up and also we are already visiting people for our day to day work, so we have a captive audience already. (HIA manager, HIA 1).

HIAs also proactively advertised that they had funding available to clients, partners and the wider community.

I also disseminated information to the 11 local authorities we work with. (HIA manager, HIA 3).

(We) actively went out and promoted in the community. The police always have our leaflets to give to any vulnerable households they meet. They often run community weeks and events and we will always go along to that. We go to a lot of over 60s clubs. Towards the end of the scheme we also did a radio announcement – went on the radio and talked about the service. And then it's word of mouth. And we gave leaflets to food banks. (HIA manger, HIA 4).

It was clear from the interviews conducted that the HIAs were well placed to identify and reach vulnerable clients to deliver the WAH Programme to.

Over 3,500 WAH assessments were undertaken during the life of the Programme. The HIAs interviewed reported undertaking WAH assessments of clients' needs by telephone, through home visits, or by using handy person services which could undertake some jobs there and then.

Whilst assessments for smaller jobs could sometimes be handled over the phone, larger jobs often required a caseworker to undertake a home visit. Home visits usually entailed a thorough assessment of issues including the fabric of the property, health and safety issues, warmth in the home and sometimes but not always health and wellbeing concerns. HIAs reported using (and sometimes adapting), standardised tools or checklists for assessing need, including the FILT assessment tool and a healthy homes check. Thorough assessment often picked up previously unidentified concerns with issues such as frailty, social isolation and safety in the home.

Most likely someone phones in with an issue, and then they either go to Information and Advice who resolve it there, with some small measure put in, but more likely it will be passed on to a caseworker who will go out and conduct a holistic assessment. (HIA casework, HIA 7).

Sometimes it's over the phone, sometimes we go out and do a full healthy homes check. If we think they've got other needs we'll do that. But if the client doesn't want you to, we won't force them. When we go to the home we do all sorts of stuff around safety and health issues. We do a frailty check, a questionnaire that checks different areas where they might be becoming frail. And this particularly picks up social isolation. (HIA manager, HIA 5).

Innovative ways of encouraging assessments and identifying need were reported by HIAs and the FILT WAH Programme Coordinator.

They (Care and Repair Northampton) were hooking people into the scheme by saying if we come and do a home assessment we've got these solar garden lights and we'll give you one when we do the assessment, so that was almost a hook to get people, and then they were picking up any issues and offering advice, so they were picking up people who wouldn't normally go to the HIA for help cos they felt that they didn't need any help and in fact when they got there, there was draught proofing that needed doing, boilers that hadn't been working for years, all sorts. (FILT WAH Programme Coordinator).

Another HIA explained how it can sometimes be difficult to get people to open up about the difficulties they may be facing. This particular HIA used warm packs as a way of starting a conversation around warmth:

...they see it's a free gift, they ask about it and then we can start asking them about keeping warm, and tend to take it from there. (HIA manger, HIA 4).

4.3. Onward referrals

Across the whole WAH Programme HIAs offered a range of advice and referral including checking if the household was eligible to receive the Warm Homes Discount, or was eligible to be included on the Priority Services Register of their energy supplier. Households also benefitted from tariff switching advice and were referred to local ECO schemes. Table 4.2 below provides a breakdown of energy efficiency advice/referrals provided during the WAH Programme.

Table 4.2: Energy Efficiency Advice Referrals

Advice/referral given	Number of beneficiaries offered advice	% of overall beneficiaries
Warm Homes Discount	434	12%
ECO	407	11%
Priority Services Register	399	11%
Tariff switching	324	9%

Source: FILT WAH Programme Final Report to Ofgem, April 2016

During the WAH Programme, HIAs offered, where appropriate, additional information and advice for those beneficiaries who may benefit from follow up services provided by either the HIA themselves, or by local agencies. Table 4.3 provides a summary of the range of wider advice/referral provided across the Programme.

Table 4.3: Additional information and advice offered

Advice/referral given	Number of beneficiaries offered advice	% of overall beneficiaries
Other HIA service	727	20%
Benefit take up check	213	6%
Smoke alarm	162	4%
Voluntary service	143	4%
Referral to Occupational Therapist	102	3%
Home security advice/measure	87	2%
Befriending	24	1%
Hoarding service	10	0.3%

Source: FILT WAH Programme Final Report to Ofgem, April 2016

Our interviews also demonstrated that HIAs made additional referrals and that most of these tended to be to other HIA in-house services, such as handyman services and HIA contractors. There were also examples of referrals to OT services, benefits advice, carer support, and to other energy partnerships or projects. One HIA interviewed for the evaluation gave an example of how some clients in need of a full new boiler or central heating system were referred onto an emergency heating grant scheme funded by the council, and which could be subsidised with the FILT WAH funding.

HIAs undertook holistic assessments which identified a range of additional needs.

We would definitely signpost on. You might find that one spouse has become a principal carer for the other but it's not been formally documented, so you might refer them for carer support, or for other services in the HIA. It's amazing how many people do not understand what's out there and what's available to them. (HIA manager, HIA 3)

4.4. Type of measures undertaken

A wide range of measures were eligible for WAH funding - from simple measures such as draught proofing and fitting reflector radiator panels, through to replacement of boilers and central heating systems.

FILT's initial aim of funding 2,200 warm homes / energy efficiency measures was exceeded by 20 per cent with 2,647 measures being funded. In the main this was a result of the large number of low cost, high impact measures (for example draught-proofing) which took place during the Programme.

Table 4.4 below shows a breakdown of the type of work funded under the WAH Programme.

Table 4.4: Funded WAH measures

Type of measure funded	Number of households	% of overall households where works were identified
Draught proof doors/windows	511	19%
Replace boiler	453	17%
Fit reflective radiator panels	418	16%
Boiler repair	284	11%
Bleed radiators	276	10%
Other heating repair	198	7%
Boiler service	168	6%
Install central heating system	124	5%
Replace door/window	118	4%
Fit thermostatic radiator valves	93	4%
Install additional radiator	76	3%
Replace/repair gas or electric fire	71	3%
Free standing heaters (emergency measure)	60	2%
Other	51	2%
Room thermostat	40	2%
Heating programmer	34	1%
Draught proof floor/ceiling	25	1%
Replace/repair hot water cylinder	22	1%
ECO enabling (e.g. loft clearance)	16	1%
Fix leaking radiator	15	1%
Draught proof flue	14	1%
Loft hatch – new/widen	3	0.1%
Move radiator to external wall	1	0.04%

Source: FILT WAH Programme Final Report to Ofgem, April 2016

The HIAs interviewed similarly reported carrying out lots of small measures often including draught proofing, servicing and repairing boilers, as well as a wide range of other measures like fitting reflective radiator panels, thermostatic radiator valves, upgrading pipework and providing temporary emergency heaters. HIAs typically utilised handyperson services to install draught proofing and smaller measures and their vetted contractors for larger work.

Under the WAH Programme, HIAs were able to install ‘enabling’ measures like carrying out loft clearances which facilitated other work such as ECO measures, and to undertake repairs not usually funded by other energy supplier schemes.

In addition, (we) did some loft clearances. I found the money very useful for doing insulation and boiler jobs that I had no other money for. Topping up grants; repairing boilers; if someone said their immersion heater or thermostat had broken, or loft clearance, or replacing radiators, I found that very useful.

Bleeding radiators. This scheme was a bit of a godsend really. (HIA manager, HIA 8).

The flexibility of funding enabled HIAs to install measures they had no other money for. By funding a wide range of measures HIAs were also able to put together the most appropriate remedial solution for the individual household circumstances.

4.5. Funding Levels and Other Sources of Funding

At the outset of the Programme, FILT set a target for funding 2,200 warm home measures expecting the average grant per household would be in the region of £250-£270. There would be a range of smaller and larger works, i.e. ranging from lower to higher cost. For work over £250 HIAs were encouraged to explore if any match funding was available, either from the local authority, from charities (including other funding schemes which FILT administer) or from the client or their family.

FILT did not set strict rules for the funding and allowed HIAs to make their own judgements on the best use of funding given the particular circumstances their clients were in. Funding of over £500 was exceptional and only 15 per cent of households where work was identified received this level of funding.

Over the course of the programme, the average amount of grant funding per beneficiary was £241.

The FILT WAH funding enabled HIAs to access other sources of funding from a number of places including local authority emergency and hardship funds, money from health and Clinical Commissioning Groups (CCGs) funding pots, other charitable funds on the clients behalf including those administered by FILT, from the client or their family and ECO.

Our interviews with HIAs revealed they were exceptionally knowledgeable of possible sources of funding for their clients and were proficient at putting together a package of funding to carry out necessary work and higher cost jobs. For some beneficiaries a number of pots were used. The SSE WAH money was particularly useful to top up loans from other sources or as match funding, and was an effective way of raising other funds.

Some from Gas Safe, FILT, family contributions, an in-house hardship fund, and a local charity for older people (this charity) will only give you money if you have match-funding, which was really helpful with the FILT money. It does help you raise other funds. (HIA manager, HIA 5).

Sometimes a whole load of funding pots were involved, in (Place name) we use Anchor and the (Name) benevolent institution, you can normally hope for up to £500 for each. It was also used with (Name) Loans, where the maximum loan had been used, but some additional heating works were required so we used the SSE money to help top up on that. As a top up to ECO or a hardship fund. Or occasionally clients could provide some top up. (HIA casework, HIA 7).

Loads! A little bit of British Gas money and Gas Safe funding, as well as Healthy Warmth funding, hardship fund - quite a lot of additional funds. Sometimes it's quite simple, if we're just doing draught proofing we can just use the SSE, but if it's a more major thing we need to bring in from elsewhere. The majority of the stuff we did for SSE was match-funded. Normally some from SSE, some from Gas Safe, possibly Warmth through Health, and maybe the client can put a bit in too, and then maybe our internal hardship fund. (HIA manager, HIA 1).

This qualitative evidence is backed up by CRESR's analysis of works completed. Across the Programme for every £1 of SSE WAH funding provided by FILT an additional minimum £2.42 was levered in from other sources³⁰. This figure compares favourably with a similar scheme, FILT's Warm Homes Service, which for every pound of funding levered in an additional £2.10. It should be noted that both these figures are cautious estimates and do not include for example, extra benefits that may have been claimed after referral.

4.6. Benefits of the WAH Programme for HIAs

HIA managers and case workers were asked what the benefits of the FILT SSE WAH Programme were for their HIA. For most HIAs, having few restrictions on the funding criteria and the flexibility of the funding were seen as the main benefits which facilitated their ability to work with more people and to respond more speedily and creatively to meet clients' needs.

HIAs could access the SSE funding easily, its *light-touch* nature and clear criteria enabled HIAs to work quickly with vulnerable clients.

A lot of these people are not very well, they're not very mobile, they feel the cold, they can't be without heating, so we have to move pretty quickly. (HIA manager, HIA 2).

... It was really great to have the money where I didn't have to fill a form in, or get permission. It was quite effective and quick. Quick's the word! (HIA manager, HIA 8).

The broad eligibility criteria for funding meant that HIAs could help more people to keep warm, some of whom would not have qualified for other funding schemes.

One of the really, really good things about the SSE fund was the criteria. For Gas Safe you had to be over 60, or on benefits, and lots of other schemes you have to be on specific benefits or meet specific criteria. With this it was people over 60 or on benefits or had a disability, so it was a lot broader and we were able to apply it to most people. The lady with depression, she had all sorts of problems with the house, but she's not over 60, not on benefits but we could help her because she was in the disability and illness box. (HIA manager, HIA 1).

Fewer restrictions on what could and could not be funded enabled HIAs to use their judgement in order to better meet clients' needs. HIAs were able to sort out problems that were contributing to cold home conditions, such as a leaking roof, or a broken window, that previously under other funding schemes they might have been unable to help with.

I think the flexibility of it's been good cos we weren't restricted, it wasn't a tick box, yes we do boilers, no we don't do windows, it was if an agency could demonstrate that a window was the thing that was needed to keep the house warm that was fine. (FILT WAH Programme Coordinator).

..that's one thing that's come across loud and clear, when people say have you got any funding for roof repairs ... it was tiles that were causing damp so we were able to justify the fact that the damp was coming through into the bedroom

³⁰ For the sample of clients included in the QOL survey for every £1 of SSE WAH funding provided by FILT an additional minimum of £3.10 was levered in from other services

so we took a practical approach to it and said for the sake of some scaffolding and some tiles yeah you can use the funding for that. (FILT WAH Programme Coordinator).

Having the SSE WAH funding also helped cut down on the time and resource HIAs needed to make charitable applications, particularly for smaller jobs.

Just really, as I said, it was helpful because it meant I could use £100 or £200 without having to apply for another charity. It just eased the burden, especially for the small cases, it was very good. (HIA manager, HIA 2).

Being able to access the funding easily. Charitable funding takes us a huge amount of caseworker time – filling in forms for each one, not just a standard form, you have to put in the full details for each household, and an individual letter, then send it off, chase it, receive a cheque, pay it in, write a thank you letter and so on. So just having the money there makes a big difference. (HIA manager, HIA 1).

Knowledge that there's money there to just do stuff with. The speed that gives you as a caseworker and you can just get small stuff done. (HIA casework, HIA 7).

As already outlined the funding helped HIAs obtain match funding more easily and it was seen an extra option that could be offered to clients.

...its really helped us to get match-funding as well. And being able to offer extra things to our clients to be able to say we've got this as well. (HIA manager, HIA 1).

It also helps with the part-funding. Very often we can find match-funding but it's having that other bit there. The flexibility helped. (HIA casework, HIA 7).

Another advantage of the SSE WAH funding for some HIAs was it enabled them to reinvigorate existing partnerships.

We carried out promotional activities to other organisations, like the CAB. They are a key one, because they're a free service and they get footfall. They like to be able to refer on. Also, volunteering bureaux, Age UK. The impact was great, we were really able to reaffirm who we are and what we've got. And it's good for us to keep that contact and be aware of new services that they are offering too. (HIA manager, HIA 3).

The three local councils, we're working very closely with them, I've got to know the (Place name) energy officer really well. We already knew them but now we're working much more closely with them. (HIA manager, HIA 2).

Whilst the funding did not help HIAs to develop new referral systems, as most commented they already had good established systems in place, there was some evidence that being able to fund works more easily did encourage referrals to HIAs.

(It) strengthened existing partnership with CAB. I was able to fund measures for them through the scheme. They felt more confident in referring because they knew that we had a scheme for every household. And the same for Age UK, we're getting a lot more referrals from Social Workers too. In the past, (we) had specific pots for specific things so were often disappointing people whereas this was flexible enough to help most people. (HIA manager, HIA 8).

In a sector where services are being lost all the time, the funding also helped to make some HIAs more visible again.

It's good to be able to get to these people and signpost them on to other organisations, which keeps our name fresh with those organisations. So it works in different ways... You're in a sector where services are disappearing all the time. You've got to be proactive in telling people all the time that you are still here, not just potential clients but the other organisations around. (HIA manager, HIA 3).

4.7. HIA Experience of the WAH Programme

Overall the HIAs' representatives interviewed felt that the SSE WAH Programme worked well, was well set up and easy to use, enabling HIAs to take the initiative and work effectively.

I would struggle to find a criticism. Money upfront, with a lot of local decision-making. Flexibility... It was ticking so many more boxes than other schemes we've worked with. It's certainly the best one we've delivered in terms of getting work done on the ground. (HIA Executive Director, HIA 6).

It worked really well, very easy to use. (HIA manager, HIA 5).

No major limitations. It worked very well. I can't think of any problems with the scheme. It seemed to cover all the areas I wanted it to. (HIA manager, HIA 8).

It was very well set up. I liked that they allocated the money upfront. I liked the checklist that they gave us. The reporting was easy and straightforward. (HIA manager, HIA 4).

Some HIAs expressed a degree of concern that the average spend was constraining at times, but recognised that this enabled a large number of measures to be funded.

Limitations... when we saw the average spend, we thought oh crikey quite low really; if you're putting in a central heating system you've got a long way to go! (HIA manager, HIA 5).

The financial limit was at times limiting about what you could undertake in a satisfactory timeframe. We had some discretion but we wanted to stretch the money as far as possible. (HIA manager, HIA 3).

And one or two felt that there were instances when the money could usefully have been spent on relieving energy debt and the associated stress experienced by clients.

I do have a few clients in fuel debt, that if they could [help them]. I've been to a couple of them and I've phoned the utilities companies for them and they've not been very helpful, and they want paying now. Even if we make an application for British Gas Energy Trust (BGET) or somewhere they still want payment until this comes through. And for some people this is very distressing and they're struggling to eat. So if we could use a couple of hundred pounds for this. (HIA manager, HIA 2).

4.8. Benefits of the WAH Programme for HIA clients

Finally HIA managers and caseworkers were asked about what were the benefits of the SSE WAH Programme for their clients. The most obvious benefit cited was a warmer home that was cheaper to heat, along with accompanying relief of stress and greater peace of mind that such improvement brings.

The principle answer is that people were able to stay warm, have peace of mind in their home. It brings about a degree of mental health improvement too. (HIA manager, HIA 3).

Smaller measures like fitting radiator thermostatic controls or servicing a boiler could often provide peace of mind, particularly for vulnerable clients, and give them reassurance that something would be done. Such measures were also effective in helping people feel better immediately.

So getting the small things done can go quite a long way to making people feel better on the way to getting bigger things done. (HIA casework, HIA 7).

Whilst larger measures like boiler replacements or new heating systems obviously had a much more profound effect on people's lives.

It's pretty massive (going) from a cold home with no hot water to a warm one with hot water. (HIA Executive Director, HIA 6).

The timeliness of the intervention and being able to provide immediate relief to clients was also seen as a major advantage of the SSE WAH Programme.

It's just good to get things sorted. And it's good to be able to get small things sorted quickly before they get worse, like a leak. Or a boiler fault, you can get them warm quickly. (HIA casework, HIA 7).

It was marvellous being able to spend straight away. If we had an urgent job and the contractor rang us up and said we need to get this done, I could say yes, and they got on with it there and then. (HIA manager, HIA 2).

Another key benefit of the FILT SSE WAH Programme was the prevention of further harm and illness. Clients were already vulnerable in terms of their health and disability and were at risk of becoming ill due to cold conditions. (Many clients had chronic health problems, COPD, mental health issues, arthritis and other health concerns made worse by cold and damp conditions).

Having a Programme like WAH was seen as a route to talk about prevention.

If the visit has been done right to start with you are giving them a lot of preventative stuff in other areas: befriending, or meals, or whatever. They don't always need to see a GP. Having this scheme gives us a route in to talk about those other things. (HIA manager, HIA 3).

A common issue identified by HIAs was the problem of un-serviced, faulty, unsafe or condemned boilers and people not being able to afford to get them fixed or serviced properly. One HIA reported instances of boilers leaking carbon monoxide so the SSE WAH intervention may well have saved lives.

In one case the HIA manager described a situation of a 92 year old woman who needed a boiler repair. The woman's neighbour found her on the floor at home suffering from hypothermia. The woman went to hospital and the HIA was able to

use FILT SSE WAH funding to fit a new pump to get the boiler working so that the woman could come back home.

Other examples provided by HIAs included:

- While the HIA was visiting properties they identified other issues, for example, that a property doesn't have smoke alarms. The HIA was able to deal with that through other schemes, but the problem wouldn't have identified if the HIA hadn't been at the property for the SSE scheme.
- At number of cases where an older person couldn't be discharged from hospital because there was no heating and they would have had to stay in hospital longer without the FILT SSE WAH intervention.
- An old man who didn't have any heating but was on oxygen. His heating had broken down and he was on oxygen 24 hours a day. The HIA mended his heating. After that he didn't need to use his oxygen all of the time, he was able to start getting out again.
- A client who had been going to bed to keep warm and was very isolated and suffered from panic attacks. The FILT SSE WAH funding (along with other work) made life much easier.
- Providing funding towards a boiler replacement for a family with a new born grandson who was visiting most days. The family had money difficulties but are now benefiting from a more efficient boiler.
- Improving the heating for someone with chronic depression and a disabled child.
- One person now able to sleep at night without cold and noise from a faulty window.
- Two heaters to a client whose fire wasn't working and who is caring for her husband who had a stroke. Husband is very happy to be warmer.
- A woman aged 92, who suffered from dementia and was deaf received a £500 grant to help put heating in, otherwise would probably have had to go into care.
- A World War II Polish refugee, aged 89, serviced gas fire, and checked gas boiler –didn't know how to use it – was shown how to use it.
- Tackling properties with mould – being able to clean and stop the mould being in the atmosphere makes a much safer, cleaner living environment. Also properties with broken glass have been made safer.
- An elderly person living alone and suffering with bowel cancer, had no hot water and was taking boiling hot water upstairs to have strip wash. This person failed council eligibility but was able to get help through FILT SSE WAH Programme.

Client Perceptions of the FILT SSE Warm at Home Programme

Key Findings

High levels of satisfaction with the programme:

- More than 9 in 10 survey respondents were satisfied with the advice help and support received and the work undertaken.
- Clients were impressed with the speed of response, the quality of the work undertaken and the manner and professional attitude of the HIA assessors, officers and contractors. HIAs were regarded as safe, trusted organisations.
- Our findings reaffirm the worth of having a vouch safe referral scheme for vetted contractors and handyperson services.

Improvements in the conditions of people's homes:

- WAH clients reported considerable improvements in the conditions of their homes, their satisfaction with their homes and warmer temperatures which enhanced comfort considerably.
- There was a reduction in the proportion of households reporting problems with condensation, damp, mould and draughts once the work had been completed.
- Satisfaction with the standard of people's homes increased considerably.
- There was an increase in the proportion of households reporting 'comfortable' home temperatures once the work had been completed. Seven out of 10 respondents reported that it was easier to heat their home to a comfortable temperature once the work had been completed.

Households were better able to manage energy related finances:

- There were reductions in the proportion of households reporting that they: find it difficult to manage fuel bills; worry about not having enough money to pay energy bills, and heat the home less than needed because of the cost of heating.

5.1. Introduction

This chapter discusses key evaluation findings around WAH clients' perceptions of the WAH Programme and the impact it had on their lives. It draws on data from the quantitative QOL surveys and the qualitative interviews to explore overall satisfaction with the programme, clients' views about its impact on the condition of their homes and energy related finances.

5.2. Key Characteristics of WAH Clients in the Evaluation

The WAH clients that participated in the evaluation were generally older people who were on a low income and struggling to meet the costs of heating their homes. Many were in poor health and/or disabled with longstanding conditions adversely affected by the cold and who reported much lower wellbeing than the general population.

- 72 per cent of all participants were aged over 60. Over 20 per cent were aged 80+
- Low income: more than 90 per cent had annual income below the nation median household income of £31,000.
- Were owner occupiers in older (pre-1970) terraced or semi-detached properties.
- Exhibit many of the characteristics of energy poverty: many struggle to meet the costs of heating their home.
- In much poorer health and have far lower wellbeing than the general population.

The characteristics of our sample were broadly similar to that of the WAH Programme beneficiaries as a whole. Although 60 was the age limit for eligibility under the 'Older' category, many beneficiaries were much older than this. Overall a large number of WAH beneficiaries fell into more than one of the eligibility groups of age 60 +, low income, long term illness and disability.

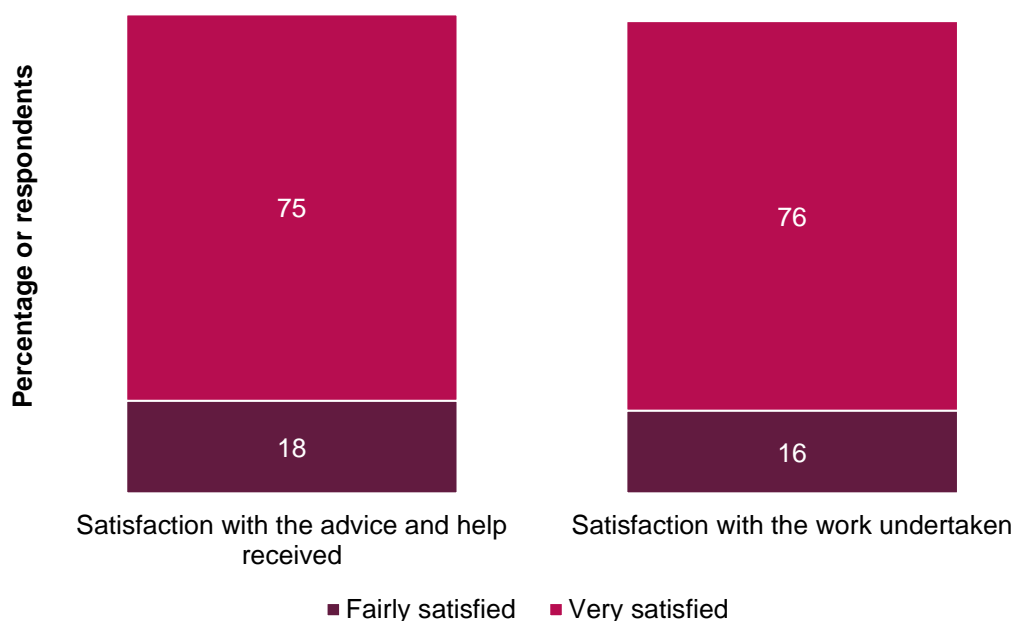
The majority of the clients who took part in the qualitative component of the evaluation were of pensionable age, and all were vulnerable to the negative impact of a cold home because of age, illness, lack of mobility, social isolation or low income. In some households there were compounded risks because of the multiple needs of different members of the household. Participants had conditions that would be exacerbated by cold such as diabetes, cardiovascular disease, respiratory problems, mental ill health, cancer and arthritis.

5.3. Satisfaction with the Warm at Home programme

Figure 5.1 provides an overview of FILT SSE WAH Programme clients' satisfaction with the Programme once the work had been completed. It shows that **overall satisfaction with the Programme was very high**:

- 93 per cent of respondents were satisfied with the **advice and help** received from HIAs delivering the Programme. This included 75 per cent who were very satisfied and 18 per cent who were fairly satisfied.
- 92 per cent of respondents were satisfied with the **work undertaken** by HIAs. This included 76 per cent who were very satisfied and 16 per cent who were fairly satisfied.

Figure 5.1: Overview of satisfaction with support received through Warm at Home



Source: WAH QOL Survey
Base: 156

Qualitative interviews with WAH clients similarly revealed a high degree of satisfaction with the WAH Programme. Participants were extremely positive about the process from accessing help and advice to having the work done and beyond. Participants were a mix of new and existing HIA clients, some were approached by their local HIA because the HIA was already aware they needed help and could benefit from WAH funding, or the HIA simply knocked on their door out of the blue. Other participants were referred by a health professional like a community nurse, occupational therapist or by a third sector organisation such as Mind, Macmillan, Age UK, or a local voluntary neighbourhood group (one participant found about the HIA through her women’s group in the neighbourhood where the HIA had given a talk). One participant rang the council for help and one couple were unclear about how they had made the link with the HIA. Discussions revealed that some participants had been coping with a challenging home environment for a considerable time and it was only through a chance encounter with a neighbour, family member or friend that they found out about the HIA.

Once HIAs got involved with clients things moved very quickly. The HIAs were responsive, assessments were usually completed within a couple of days of first contact and work was often undertaken soon afterwards.

First of all an assessment visit, then a few days later someone else came out to look at what needs to be done and the best place for the boiler. He just came in and did the work. It was all done in a week. (Dennis).

Participants described the process as “very quick and efficient” (Emma).

In particular participants were impressed with the quality of the work undertaken³¹ and the manner and professional attitude of the HIA assessors, officers and contractors.

They were very good. No mess. It was a reasonable wait – they came when they said they would. (Harry).

They were cracking people, very quick and cheap. (Christopher and Jenny).

They're very helpful people. If I could win the lottery they'd be the first people I'd donate to. They're lovely to talk to too. (Clive).

The workmen were marvellous, sorted it straight away and were so nice and helpful and said if we ever had a problem – ever – he was there for us. (David and Caroline).

I was very happy when the work was done. The workers who did it were very good, I was very, very pleased with the job, and the fire looks very nice. (Peter).

The professional nature of the HIAs and the reliability of HIA contractors were important in terms of the level of trust and confidence participants had and also helped to minimise disruption and reduce any stress related to the work being done. Participants felt they were in 'safe hands' and had implicit trust in their HIA. HIA officers were 'helpful and supportive' and checked to see if everything was okay after work was completed. Having a trusted organisation gave reassurance and a number of participants commented they now knew the HIA was there for them and that they could contact them if they had any problems.

I know if I've got any problem it can help me out. It creates relief. Peace of mind. (Clive).

I was encouraged to call if there are any problems and they'd come straight out to repair. (Harry).

Our interviews reaffirm the worth of having a vouch safe referral scheme for vetted contractors and handyperson services, and the difficulties many pensioners experience in finding people to work on small jobs that can be trusted. Overall HIAs and handyperson services emerge from the evaluation as accessible and acceptable organisations.

The FILT SSE WAH Programme was an opportunity for HIAs to undertake a thorough assessment of clients' needs and uncover other issues. Contact with HIAs resulted in some participants being given additional information, advice and support and benefiting from follow up services provided by either the HIA themselves or by local agencies. There were examples of HIAs linking with their Stay Put teams to install accessibility rails to a front door, fit handrails on stairs and in a bathroom, provide a shower and wet room along with other aids and adaptations, as well as signposting to additional health services for preventative measures. This seemed to work particularly well for those participants with certain 'critical' problems – health and heating wise - and was also helped because the referral agency would often stay in the loop with both the HIA and recipient, and a more holistic approach was developed (see for example James and Joyce pen portrait below). In another case the HIA was contacted via an armed forces support service for ex-servicemen and

³¹ Work included new central heating systems, new radiators, replacement boilers, a boiler repair, a new fire, a new roof, replacement windows, loft clearance and insulation.

their families. After an initial HIA assessment both agencies teamed up to provide a re-wire and a new boiler with additional radiators to each of the rooms upstairs.

James and Joyce had had their boiler condemned and the gas had been cut off. They "**couldn't afford to buy a new one because of ill health**" which had reduced their income before they had reached retirement age. "**We were in 'queer street' and didn't know where to turn. We got to hear about the scheme through Age UK, they were very good. The women from the HIA came out more or less straight away, it was freezing in here and she got us three electric heaters for the rooms (as a stop gap) because we are both in bad health, our chests and everything. And she got in touch with the doctors and asked if our health was worsening because of lack of heat and once he (the doctor) said that it was that was it – 'all systems go'. It wasn't long from them getting it started to getting (a new boiler) fitted.**"

The FILT SSE WAH intervention probably prevented serious health implications for Joyce in particular "**I mean this house is so cold and with us being that old – you get cold and then you get miserable. If we hadn't had it, I don't know what we would have done. I've been in hospital a few times with pneumonia and I have had to have oxygen for quite a while now, so I don't know what would have happened.**"

The HIA linked with its Stay Put team to pool resources and identify the couples' need for a wet room in their home and for sign posting to additional health services for preventative measures. Joyce emphasises this aspect of the intervention in terms of effective assessment by the HIA "**They have done us some right, they didn't just fit the boiler and leave us; they sat us down and went through what they could help us with... they got me into that place for help with breathing, a course for breathability which I found to be very excellent**". James was grateful for this co-ordination "**if we hadn't had the boiler we shan't have known about the shower and the wet room, and they assessed my wife properly and they also got her some (equipment) to help with getting up on the bed and into the bath... I can't thank them enough, I really can't. I say from start to finish I've got no complaint, none whatsoever.**"

There was also evidence that the FILT SSE WAH Programme was filling gaps in service provision. Some participants had been refused help from other schemes because their income was just above qualifying thresholds and they were not on means tested benefit, yet it was apparent that their health and low income made them vulnerable to the effects of cold (see James and Joyce above who had a new boiler fitted). In David and Caroline's case, below, the HIA was able to step in and fix the boiler and get the heating going again whilst David was poorly.

David and Caroline live in a 3 bed semi-detached property. David is epileptic, has suffered a stroke, has a liver condition and is in remission from cancer. Caroline works one day a week and the rest of her time is spent as a full time care giver for David. Their contact with the HIA was triggered by an emergency "***The problem we were having was with the boiler – these are ex- council houses that we had a right to buy, so the boilers never been replaced in 33 years. It was the pilot light that went out so we didn't have any heating or hot water.***"

MacMillan Cancer Support had identified the HIA as a possible source of help for the couple after an initial application to a government scheme for a boiler replacement had been unsuccessful; "***cos we were not on anything means tested, we would have had to pay for the new boiler***". Without heating and hot water for over a week, and with David in a very poor state of health the HIA intervention was seen as a "***Godsend***". "***They were really helpful, really nice. I explained what was wrong and a gentleman came out the day after and he managed to recouple the boiler pilot light and got our heating back. I could have kissed him, I said to him when he came, when I saw the light on the boiler and the heating came back on, I could kiss you!***"

"I don't know what we would have done. I knew it would have took us savings, and there would have been so much upset with Dave being so poorly. I didn't want all the upheaval of having the boiler taken out while he was so poorly, I just wanted it fixed to tidy us over".

5.4. The condition of people's homes

In the main, participants who took part in the qualitative interviews were living in extreme circumstances (see Margaret below) with no central heating, condemned, broken or faulty boilers and heating systems, broken windows and doors, broken fires, leaking roofs, poorly fitted insulation causing damp and mould.

Margaret is in her eighties and lives on her own in a 4 bedroomed semi-detached property which she owns outright. Her husband died four years ago. Her sons visit, but only occasionally – last time at Christmas. "***The house had got so cold, it became difficult for me because we had no radiators upstairs because when my husband was alive he wouldn't stand for heating up there so we only had heating down here. It used to be so cold going upstairs, one recent winter it was terrible and I thought I can't stand this anymore.***"

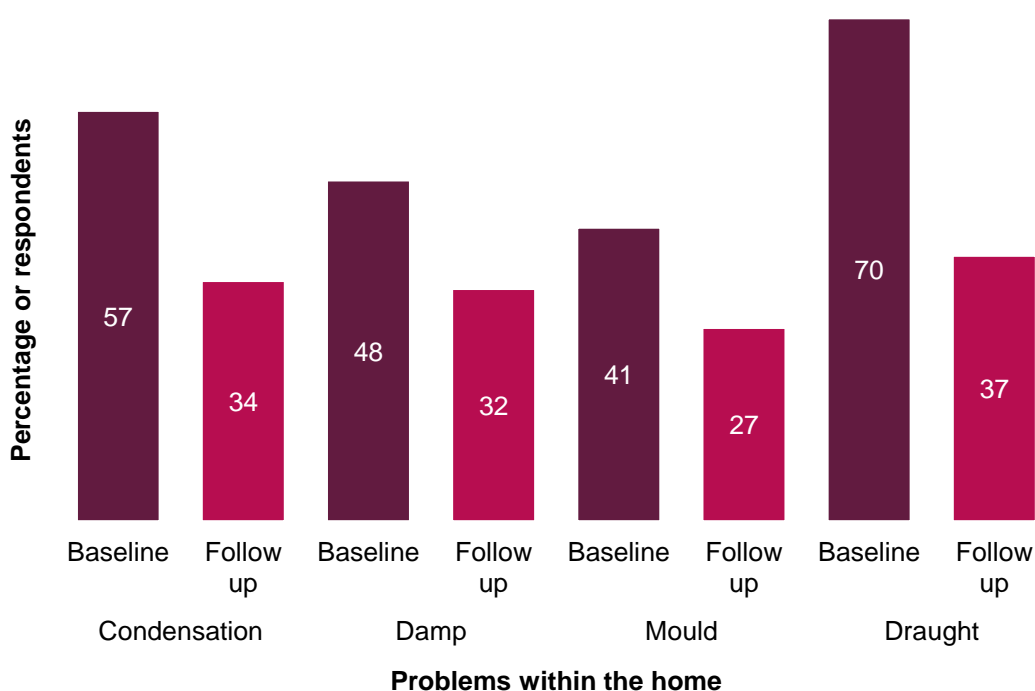
Poor housing conditions were also reported in the baseline QOL survey. The survey results presented below show that the FILT SSE WAH intervention led to significant improvement in reported problems, increased satisfaction with the home environment and improved thermal comfort. Figures 5.2-5.4 provide the QOL survey responses for a range of questions about the condition of people's homes. They cover problems within the home, satisfaction with the home environment, and thermal comfort. For each question data is provided for baseline and follow-up questionnaires so that changes following the completion of the work can be identified.

Problems in the home

Figure 5.2 provides data for the proportion of survey respondents identifying four types of problem with the condition of their home for the baseline and follow-up QOL surveys: condensation, damp, mould and draughts. It shows **sizeable reductions for each type of problem**:

- **Condensation:** 57 per cent of respondents identified it as a problem at baseline compared to 34 per cent at follow-up. A reduction of 24 percentage points.
- **Damp:** 48 per cent of respondents identified it as a problem at baseline compared to 32 per cent at follow-up. A reduction of 15 percentage points.
- **Mould:** 41 per cent of respondents identified it as a problem at baseline compared to 27 per cent at follow-up. A reduction of 14 percentage points.
- **Draughts:** 70 per cent of respondents identified it as a problem at baseline compared to 37 per cent at follow-up. A reduction of 33 percentage points.

Figure 5.2: Problems within the home identified by Warm at Home clients



Source: WAH QOL Survey
Base: 145-152

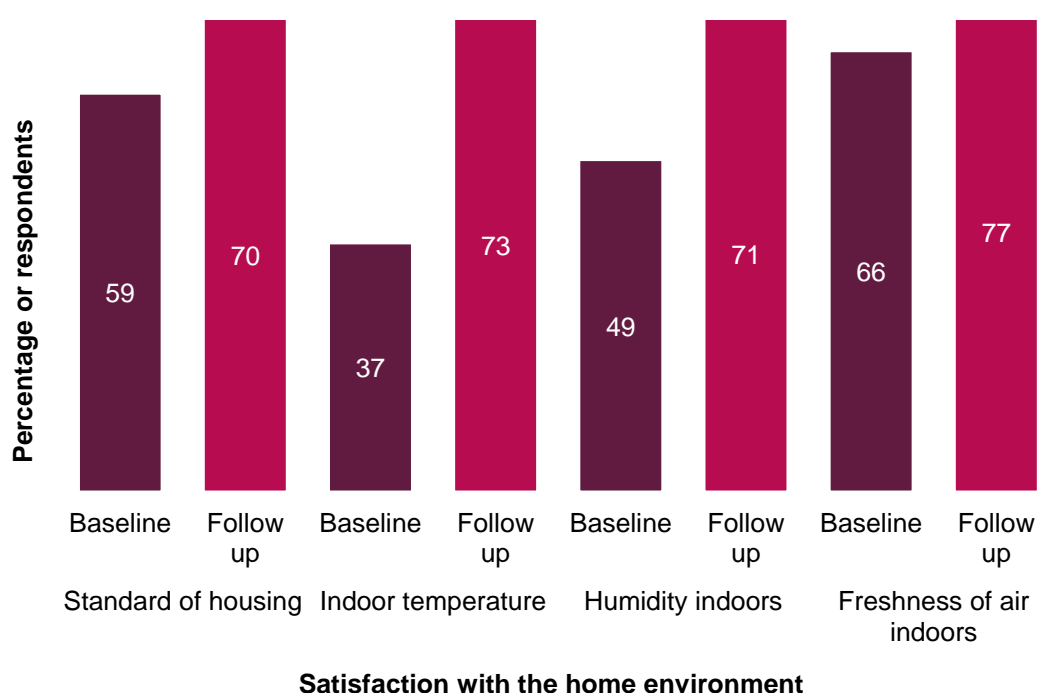
Given that draught proofing and boiler replacements were the most common measures installed under the WAH Programme, the sizeable reductions in reported problems with draughts and condensation are particularly gratifying.

Satisfaction with the home environment

Figure 5.3 provides data for the proportion of survey respondents satisfied with four aspects of their home environment for the baseline and follow-up surveys: the standard of housing; the indoor temperature; humidity indoors; and the freshness of air indoors. It shows **improvements in all four areas**:

- **Housing standards:** 59 per cent of respondents were satisfied at baseline compared to 70 per cent at follow-up. An improvement of 11 percentage points.
- **Indoor temperature:** 37 per cent of respondents were satisfied at baseline compared to 73 per cent at follow-up. An improvement of 36 percentage points.
- **Humidity:** 49 per cent of respondents were satisfied at baseline compared to 71 per cent at follow-up. An improvement of 21 percentage points.
- **Freshness of air:** 66 per cent of respondents were satisfied at baseline compared to 77 per cent at follow-up. An improvement of 12 percentage points.

Figure 5.3: Levels of satisfaction with the home environment amongst Warm at Home clients



Source: WAH QOL Survey
Base: 143-152

Improvements in reported indoor temperatures and draughts were emphasised in the qualitative data. Once work was completed participants reported much warmer conditions, *'it's lovely and warm' 'the radiators feel hotter'*, repaired windows were *'less draughty'*. For Margaret a new boiler and radiators upstairs meant:

I'm not cold anymore, and I know I can keep the house warm, a lot warmer than with just the fire on. And I can go to bed and I am warm, and when I get up in the morning I am warm. Everything has been wonderful, to have it done. (Margaret).

For a participant whose boiler was replaced and a new window fitted at the front of the house:

The new boiler gets much hotter than (the) old one and the radiators are hotter It's warmer. The windows were old and it's less draughty. There are times now it's too warm so I can turn the heating off. (Harry).

For another participant with a new central heating system:

It's a lot warmer. I can open the doors between the kitchen and the living room it lets in more light. You don't ever feel cold in there in the winter time. (Dennis).

Participants were much more satisfied with their home environment as a result of the WAH intervention and the warmer conditions.

It also makes the house more welcoming... It makes me happier in my home. It's put some value on my house. It looks alright (Dennis).

It's (living room) lovely and snug. (Bill and Francis).

I've noticed the difference, that it makes it warmer. There's no crack in the glass now and it makes it much better. (Fiona).

Probably because the radiators were hotter, you know, you can keep an ambient temperature quite easily. The house is therefore dryer than it was, it must have been quite damp. (Bethany).

Such benefits were particularly appreciated when a participant had endured health conditions made worse by the cold.

As well as the ME I have asthma, hypertension, arthritis, all of which are affected by cold. You are recommended to stay in a nice sort of regular heated home, so that was a massive issue for me. So the difference in that was, you know, from the moment sort of the men put the boiler in, and put the radiators on, and they came on hotter than I'd ever known them... I've lived here for 16 years. (Bethany).

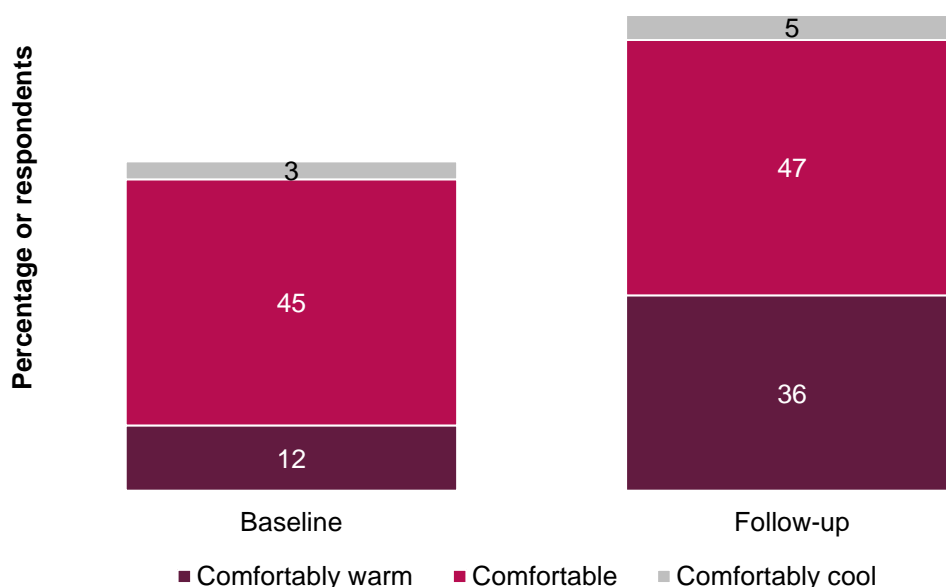
It's made me feel more comfortable. I have a weak heart, kidney problems, damaged nerves in my legs.... I'm happier and more comfortable. (Harry).

Sizeable improvements in thermal comfort levels as a result of the WAH intervention were reported in the QOL survey.

Thermal comfort

Figure 5.4 provides data for the proportion of survey respondents reporting that the temperature of their home was 'comfortable' for the baseline and follow-up surveys. It shows that there was a large **improvement in the proportion of respondents reporting 'comfortable' temperatures**. 60 per cent of respondents reported that the temperature of their home was 'comfortable' at baseline compared to 87 per cent at follow-up: an improvement of 27 percentage points. This was predominantly due to an increase in the proportion of respondents reporting that they were 'comfortably warm', which increased from 12 per cent at baseline to 36 per cent at follow-up (24 percentage points difference).

Figure 5.4: Levels of thermal comfort with the home reported by Warm at Home clients



Source: WAH QOL Survey
Base: 154

5.5. Energy related finances

The FILT SSE WAH grant Programme was designed to provide funds to enable the homes of vulnerable householders to become more energy efficient and/or easier to keep warm. Improving energy efficiency may lead to cheaper energy bills and financial savings for householders, although evidence suggests that low income households often ‘take back’ the benefit in improved warmth and comfort rather than in energy savings (Hong et al, 2009).³² The QOL survey asked respondents about their energy related finances.

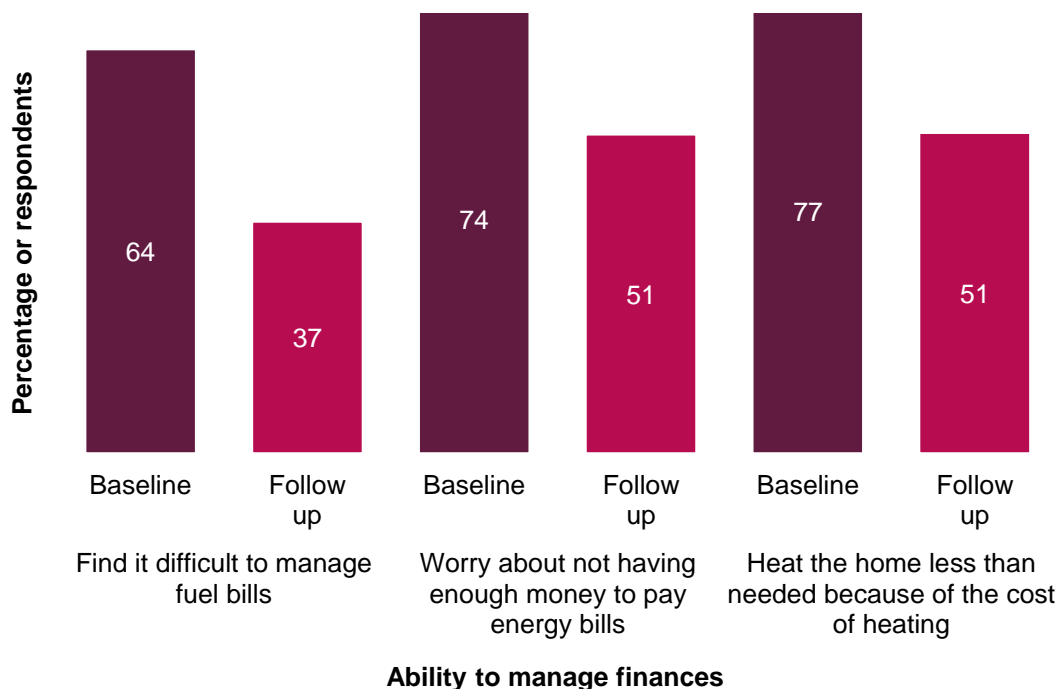
Figure 5.5 provides data for the proportion of survey respondents struggling with three aspects of their energy related household finances for the baseline and follow-up surveys: finding it difficult to manage fuel bills; worrying about not having enough money to pay energy bills; and heating the home less than needed due to the cost of heating. It shows **reductions for each type of problem**:

- **Finding it difficult to manage fuel bills:** 64 per cent of respondents were finding it difficult at baseline compared to 37 per cent at follow-up. A reduction of 27 percentage points.
- **Worrying about not having enough money to pay energy bills:** 74 per cent of respondents were worrying about not having enough money at baseline compared to 51 per cent at follow-up. A reduction of 23 percentage points.

³² Hong, S. H., Gilbertson, J., Oreszczyn, T., Green, G. and Ridley, I. (the Warm Front Study Group) (2009) A field study of thermal comfort in low-income dwellings in England before and after energy efficient refurbishment. *Building and Environment*, 44, 1228-1236.

- **Heating the home less than needed due to the cost of heating:** 77 per cent of respondents were heating the home less than needed at baseline compared to 51 per cent at follow-up. A reduction of 26 percentage points.

Figure 5.5: Warm at Home beneficiaries' ability to manage energy related finances



Source: WAH QOL Survey
Base: 150-154

The analysis explored the effect of the seasonal timing of the baseline questionnaire on respondents' perceptions of their energy related finances and health and wellbeing outcomes to identify potential sources of bias in the data. It found that overall, although there were some variations (across all measures people whose baseline was undertaken in the winter were generally worse off at baseline and slightly more likely to have improved at follow-up) these had no effect on the overall trend.

Qualitative interviews indicated that most participants assumed or anticipated that they would make some cost saving on energy use after the WAH intervention. Having a more efficient boiler or new heating system that could be controlled was more economical and would reduce fuel bills. It is possible that the assumption of cost savings may be some of what the QOL survey is detecting in the responses to questions about financial wellbeing.

For many participants it was too early to tell whether this expectation would be realised because they had yet to experience a full winter with their new heating.

Don't know yet. It's been summer - will know when we get to winter. (Harry).

However, there was a suggestion that the WAH intervention would reduce household costs and a few qualitative participants reported cheaper bills:

Recently my bills have been reduced, so I can only assume, I realise that the boiler was very old, it was 19-20 years old, so I realise it was quite inefficient,

but I think that just goes to show really what a difference an efficient boiler can make. (Bethany).

It must have because I was quite pleased the other day my fuel bill was down a little and I thought that's wonderful. I noticed that it's gone down a bit. (Fiona).

The WAH intervention also resulted in a direct financial benefit for recipients. A particular benefit of the WAH Programme was that it often helped people who were suffering from ill health and enduring cold conditions but who were just above the income eligibility criteria for other energy efficiency schemes. A number of participants commented that the intervention would have been costly and they didn't know what they would have done, or were unsure about how they would have covered the cost. Others would have had to draw on dwindling savings in order to fund the work. It is uncertain whether these participants would have received any assistance elsewhere.

6

The Impact of the FILT SSE Warm at Home Programme on Health and Wellbeing

Key Findings

Improvements in health and wellbeing:

- WAH alleviated stress and had a positive impact on people's lives (particularly for those who received heating replacement or installation) helping to substantially improve participants' quality of life and wellbeing and ease health conditions exacerbated by the cold.
- However, the proportion of respondents reporting poor health and low wellbeing was still considerably higher than in the general population.

Variations in health and wellbeing outcomes:

- The greatest health and wellbeing improvements were experienced by beneficiaries who had received heating replacement or installation, and for those whom the highest cost work (£1,000 or more) was undertaken.
- Respondents who reported the worst Health Related Quality of Life scores as measured by EQ5D received higher cost heating measures under the WAH Programme and benefited most from the improvement in their scores.

Cost-effectiveness:

- The WAH programme was relatively cost-effective from a health perspective, with a cost per QALY £13,353, but there are variations by type and cost of intervention.
- Interventions for the fabric of the property (£8,142 per QALY), efficiency of heating (£8,402) were more than twice as cost-effective as replacements and/or installations associated with the heating system (£17,889).
- Interventions less than £250 (£8,674 per QALY) were more than four times more cost-effective than interventions that cost more than £1000 (£36,429) and more than one and half times more cost-effective than interventions that cost more than £250 (£13,810).
- However, this finding needs to be weighed against the fact that health and wellbeing benefits of higher cost interventions are greater than those with a lower cost.
- The WAH Programme is estimated to have led to an additional 121.8 QALYs. **If the assumed total QALY gained across the whole Programme is converted into a monetary value using the NHS threshold of £20,000, then the value of the benefits gained amounts to £2,436,000.**

6.1. Introduction

This chapter discusses key evaluation findings about the impact of the FILT SSE WAH Programme on beneficiaries' health and wellbeing. It draws on data from the quantitative QOL survey of WAH clients to identify overall changes in health and wellbeing following the completion of home improvements and to identify variations in health and wellbeing outcomes according to the type and cost of the intervention. The analysis is supplemented with findings from the qualitative interviews.

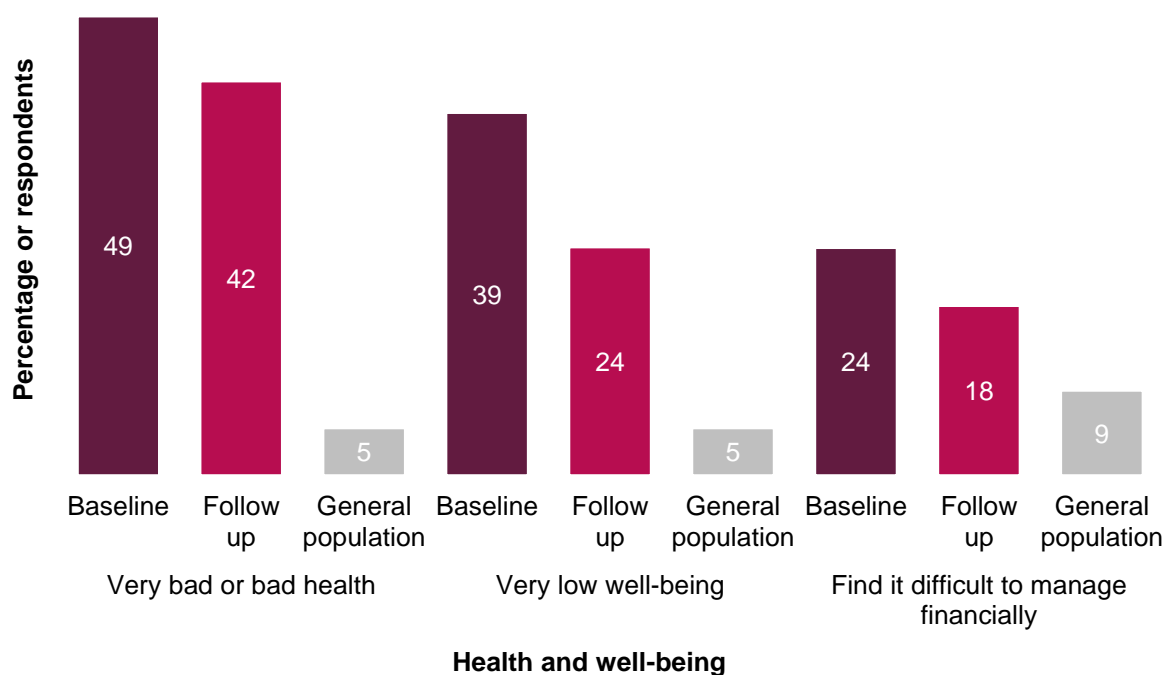
Data on the cost of WAH interventions and health related quality of life (HRQL) outcomes is used to provide an assessment of the cost-effectiveness of the Programme from a health perspective by calculating the cost per QALY (Quality Adjusted Life Year) for survey participants.

6.2. Overall changes in health and wellbeing

Respondents to the survey answered questions about their general health, their overall wellbeing (life satisfaction) and their financial wellbeing. All three questions can be benchmarked against national data sources. Figure 6.1 provides an overview of beneficiaries' responses to these questions at baseline and follow-up along with an appropriate national comparison. It shows that **levels of health and wellbeing amongst WAH beneficiaries were generally very low but that they did improve once the work had been completed:**

- **Health:** 49 per cent of respondents report 'very bad' or 'bad' health at baseline compared to 42 per cent at follow-up. A reduction of seven percentage points.
- **General wellbeing:** 39 per cent of respondents had 'very low' or 'low' wellbeing (life satisfaction) at baseline compared to 24 per cent at follow-up. A reduction of 15 percentage points.
- **Financial wellbeing:** 24 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 18 per cent at follow-up. A reduction of nine percentage points.
- The prevalence of **poor self-reported health and low wellbeing was considerably greater amongst WAH beneficiaries** than the wider UK population.

Figure 6.1: Changes in Warm at Home beneficiaries' health and wellbeing



Source: WAH QOL Survey, Census 2011, ONS Measuring National Wellbeing Programme Base: 136-154

6.3. Understanding changes in health and wellbeing

Additional data analysis explored variations in WAH beneficiaries' health and wellbeing according to the type and cost of work undertaken by HIAs, including where this involved matching FILT's SSE funding with other sources:

- **Type of work:** whether it involved changes to the fabric of property, such as replacing or draught proofing doors and windows (n=67); efficiency of the heating system, such as boiler servicing or repair (n=85); or replacement or installation of equipment, such as boilers or radiators (n=56).
- **Cost of work:** less than £250 (low cost; n=57); more than £250 (high cost; n=90); and more than £1000 (very high cost; n=35).

The outcome of this analysis is summarised in figures 6.2-6.7, with the main findings discussed in accompanying sections.

Type of work

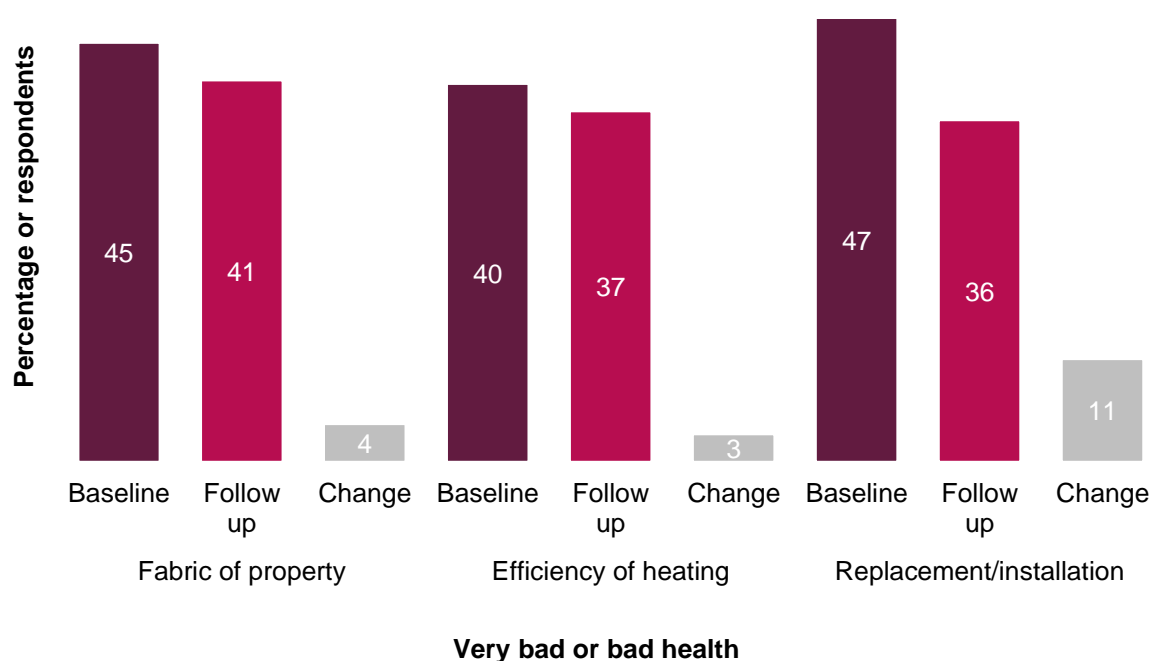
Figures 6.2-6.4 provide an overview of outcome variance according to the type of work undertaken. Collectively the data suggests that **the greatest health and wellbeing improvements were experienced by beneficiaries who had received a replacement or installation** which was associated with their heating system, with smaller improvements for beneficiaries of improvements associated with the fabric of their property or the efficiency of their heating.

Health

Figure 6.2 provides an overview of changes in self-reported health according to the type of work undertaken. It shows that:

- **Fabric of the property:** 45 per cent of respondents reported 'very bad' or 'bad' health at baseline compared to 41 per cent at follow-up. A reduction of four percentage points.
- **Efficiency of heating:** 40 per cent of respondents reported 'very bad' or 'bad' health at baseline compared to 37 per cent at follow-up. A reduction of three percentage points.
- **Replacement/installation:** 47 per cent of respondents reported 'very bad' or 'bad' health at baseline compared to 36 per cent at follow-up. A reduction of 11 percentage points.

Figure 6.2: Changes in Warm at Home beneficiaries' self-reported health according to the type of work undertaken



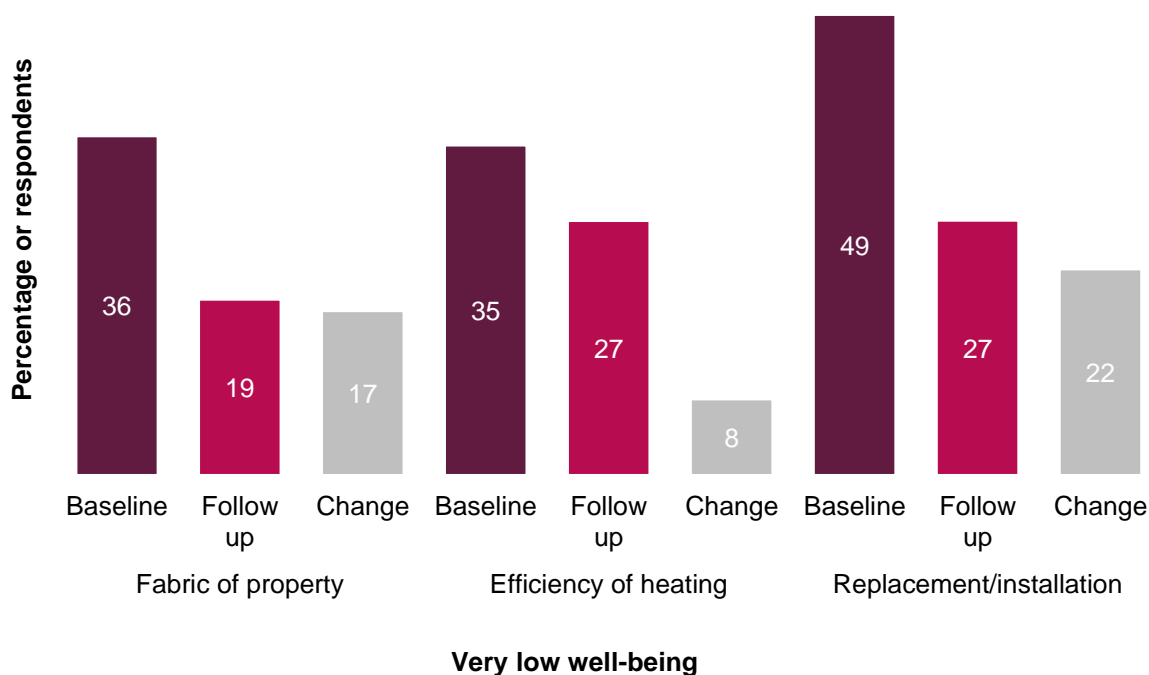
Source: WAH QOL Survey
Base: 136-154

General wellbeing

Figure 6.3 provides an overview of changes in general wellbeing (life satisfaction) according to the type of work undertaken. It shows that:

- **Fabric of the property:** 36 per cent of respondents had 'very low' or 'low' wellbeing at baseline compared to 19 per cent at follow-up. A reduction of 17 percentage points.
- **Efficiency of heating:** 35 per cent of respondents had 'very low' or 'low' wellbeing at baseline compared to 27 per cent at follow-up. A reduction of eight percentage points.
- **Replacement/installation:** 49 per cent of respondents had 'very low' or 'low' wellbeing at baseline compared to 27 per cent at follow-up. A reduction of 22 percentage points.

Figure 6.3: Changes in Warm at Home beneficiaries' general wellbeing (life satisfaction) according to the type of work undertaken



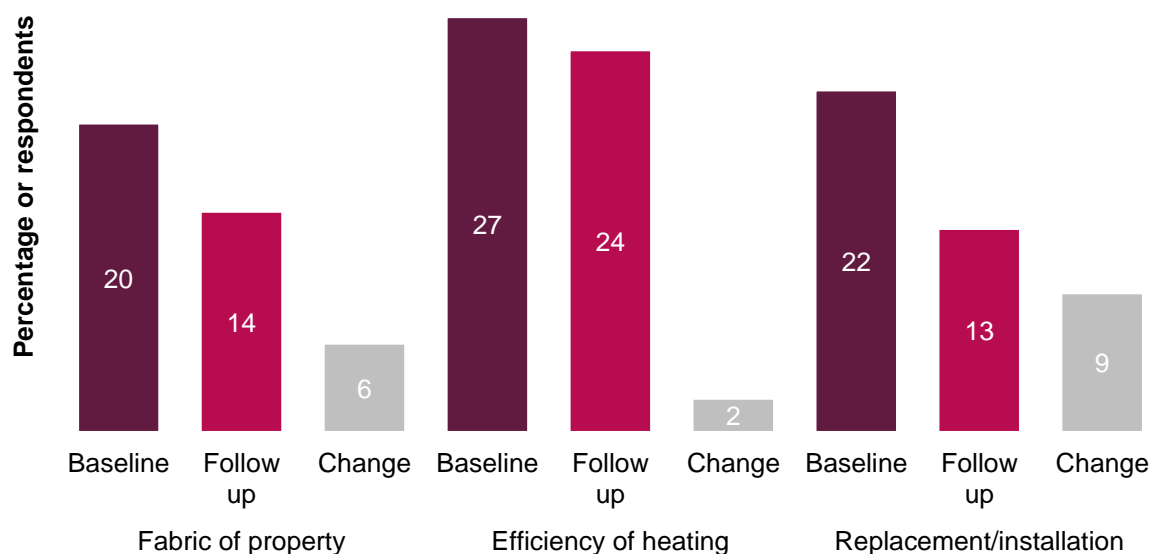
Source: WAH QOL Survey
Base: 136-154

Financial wellbeing

Figure 6.4 provides an overview of changes in financial wellbeing according to the type of work undertaken. It shows that:

- **Fabric of the property:** 20 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 14 per cent at follow-up. A reduction of six percentage points.
- **Efficiency of heating:** 27 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 24 per cent at follow-up. A reduction of three percentage points.
- **Replacement/installation:** 22 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 13 per cent at follow-up. A reduction of nine percentage points.

Figure 6.4: Changes in Warm at Home beneficiaries' financial wellbeing according to the type of work undertaken



Find it difficult to manage financially

Source: WAH QOL Survey
Base: 136-154

The QOL survey respondents reported small improvements in their self-reported health levels after the intervention which tended to be associated with larger work such as boiler replacement and central heating. There were greater improvements in general wellbeing, life satisfaction and financial management which were again related to heating installation and replacement but also to work related to the fabric of the building, often smaller measures such as draught proofing. These improvements in self-reported health and wellbeing recorded in the QOL survey are verified by evidence from the qualitative interviews. Enhanced warmth and comfort and the expectation of being better able to manage fuel bills reduced feelings of stress and resulted in participants reporting that they felt *'much happier'*, *'more comfortable'*, *'much better'*.

Often participants had endured cold draughty conditions and/or problems with their home such as a leaking roof, broken window etc. for a prolonged period. Typically heating systems and boilers were old, unreliable and faulty and in some instances boilers had been condemned. The accumulated stress and worry associated with living in such circumstances, struggling financially and having limited finances to deal with problems had taken its toll on participants' quality of life and wellbeing (see Bethany's case below).

Bethany is a pensioner who lives on her own in a 2 bed Victorian terraced property. She owns her home, but the house was fairly damp and cold, due to an old, inefficient boiler. Bethany has a range of serious health conditions, including ME, asthma, hypertension and arthritis, and as she explains, "**all of which are affected by cold. You are recommended to stay in a nice sort of regular heated home, so that was a massive issue for me**".

Bethany first sought out support with her home when her boiler was condemned. The loss of her boiler meant that she had no heating or hot water, and she felt that her health conditions were exacerbated by the deteriorating conditions in her home, particularly as it was winter. As she explains, the impact of the loss of the boiler really affected her, "**It was absolutely massive, in terms of how it affected both my stress levels, and obviously my day-to-day comfort and living experience**". She was also worried about suddenly having to find money to replace the boiler, "**As you can imagine, from going, as I say, with no heating and hot water, and no money to fund a boiler, I was in fact in debt rather than, you know, having money to pay for it, so it was a very, very stressful time.**"

Bethany already had links with MIND, so she made contact with them as the first port-of-call, and they in turn put her in contact with a home support organisation. As well as providing immediate support, such as an oil heater and warm clothes, the home support organisation put her in touch with the local HIA. Following the initial contact, a member of staff from the HIA carried out an assessment in order to secure a grant for a replacement boiler. Although there was a short wait for a decision to be made about the grant, when the work was carried out, the staff member from the HIA visited the property again to check how the work was progressing, and everything went very smoothly, and Bethany felt well supported during the process.

As well as finding the support of the HIA reassuring, Bethany describes how relieved she is now that she has a new boiler which in addition to being more efficient and effective, is also covered financially, "**just the sheer comfort of it all, and knowing it's new and under guarantee and things like that, is a massive thing**". Bethany also commented on the reduction in her bills, which she assumes is due to now having a more efficient boiler.

Bethany praised the work of the HIA, and was extremely grateful for the help she received, as she explains, "**It's something I'm grateful for daily, you know. Yes, it's that important**".

Cold conditions and the struggle to keep warm were associated with worry, feeling miserable and depressed. The WAH work often had a massive impact on people's lives (particularly for those who received heating replacement or installation) helping to substantially improve participants' quality of life and wellbeing and easing health conditions exacerbated by the cold.

I had terrible trouble with breathing problems and that was the main thing; since we got the work done I seem to be quite fit and well ... it was very depressing sitting in the cold, definitely improved my life – the house is lovely and warm and I really feel a lot better with it. (Christopher and Jenny).

I mean this house is so cold and with us being that old – you get cold and then you get miserable. If we hadn't had it, I don't know what we would have done. I've been in hospital a few times with pneumonia and I have had to have oxygen for quite a while now, so I don't know what would have happened. (James and Joyce).

When the house is cold it affects you badly. The work (secondary glazing) has made it feel warmer; it's improved my breathing (she has COPD) because I don't get so cold. (Emma).

It had been a worry, the coldness, you could feel the draught. And I go to the kitchen and its freezing. I was thinking oh dear. It has made it warmer. (Fiona).

Participants often had complex multiple health problems and didn't always link the WAH intervention with physical benefits, but felt that the intervention helped to 'relieve' symptoms. Improvements in participants' self-reported health were largely due to less worry 'a weight being lifted' and a warmer environment making them feel healthier and better able to self-manage long term conditions.

Yes – if I could go from 1 to 10, it's certainly gone up 1 or 2 per cent. (Dennis).

I have diabetes. And have problems with my heart. I can be mobile. At the moment I'm being monitored because my pressure hasn't been too good. But I do try to help myself. I try to get about. In my opinion I didn't think I was obese or overweight but it doesn't (help that)... I feel more comfortable now, I don't worry so much. (Fiona).

Having a modern reliable boiler or heating system that was guaranteed (see Bethany's case above), a serviced gas fire, new handrails, fitted carbon monoxide detectors, new roof or window etc. also made people feel safer, more comfortable and secure and in greater control of their home environment.

In terms of, you know the difference it made, I then had obviously the heating which with the efficiency of the modern boiler and everything it's easier to keep it at a nice regular level, it's easier to manage. (Bethany).

The house is secure now. No leaks. (Clive).

I walk round a bit more, I use the house more. (Dennis).

Participants were appreciative of the benefits of smaller measures installed in their homes efficiently. Small practical improvements (such as lowering a front step) and additional advice often made a sizeable difference to participants' daily lives.

Yes – I can get up the step; I couldn't before. (Emma).

Jobs such as having a gas fire or boiler serviced improved reliability and brought peace of mind about the health and safety of their homes.

I'm glad because it kept going off and on and he serviced it and it's really good. It's made a difference. (Grace).

The timely nature of the WAH interventions and the professionalism of HIAs and their contractors engendered trust and gave vulnerable clients peace of mind and a relief from the worry, stress and anxiety they had been experiencing.

I really appreciated that help because it came at a time when I was feeling a bit low. (Fiona).

It was absolutely massive, in terms of how it affected both my stress levels, and obviously my day to day comfort and living experience. (Bethany).

An important benefit of the intervention was that it provided social contact, emotional security, and wellbeing to vulnerable clients who were in poor health and often socially isolated (see Peter's case below). Without the intervention it is likely the health of some of the participants we spoke to would have become worse. With the intervention it is possible to see how negative health events would have been avoided and further harm prevented. This is especially true for participants where there was a history of deteriorating or unstable respiratory or cardiovascular health, or diabetes. The ability of HIAs to use the WAH Programme to link with their Stay Put teams ensured that participants received the necessary aid and adaptations or improvements to their home which enabled them to maintain their independence (see James and Joyce's story in the previous chapter of the report, for example).

Peter is in his eighties, in receipt of a serviceman's pension and lives in a 3 bed end terrace house on his own. Although financially independent, Peter was physically and emotionally vulnerable due to both the social problems surrounding his housing location (repeated break-ins) and his poor physical health. He had lived in the house for all of its 63 years, and he was very happy with his home, it was well maintained but like him, as he said, it was beginning to show its age. The HIA was accessed through his community nurse who had noticed that he did not have his fire on in the winter time and that the cold was making his chest condition and arthritis worse. When the HIA visited they replaced an obsolete and dangerous back boiler in his front room with an electric fire. They also provided him with carbon monoxide detectors and linked him in to their Stay Put team so that he could have some accessibility rails installed at the front door of his home. Peter highlighted both health and financial impacts to the HIA intervention ***"It's improved the quality of my life, there is an improvement in me; in the winter (the fire) was excellent – it helped me with my health, my chest is much better, it has improved, a big difference."***

Peter emphasised social contact and the trust element of the HIA involvement. The workers were friendly and could be trusted.

"I was very happy when the work was done, if I had had to have done it would have cost me a lot. The workers who did it were very good, I was very, very pleased with the job, and the fire looks very nice."

Cost of work

The impact of the WAH intervention on health and wellbeing is also examined by cost. Figures 6.5-6.7 below provide an overview of the outcome variance according to the cost of work undertaken. Collectively the data suggests that **the greatest health and wellbeing improvements were experienced by beneficiaries for whom the highest cost work (£1,000 or more) was undertaken**, with smaller improvements for beneficiaries whose work was less expensive.

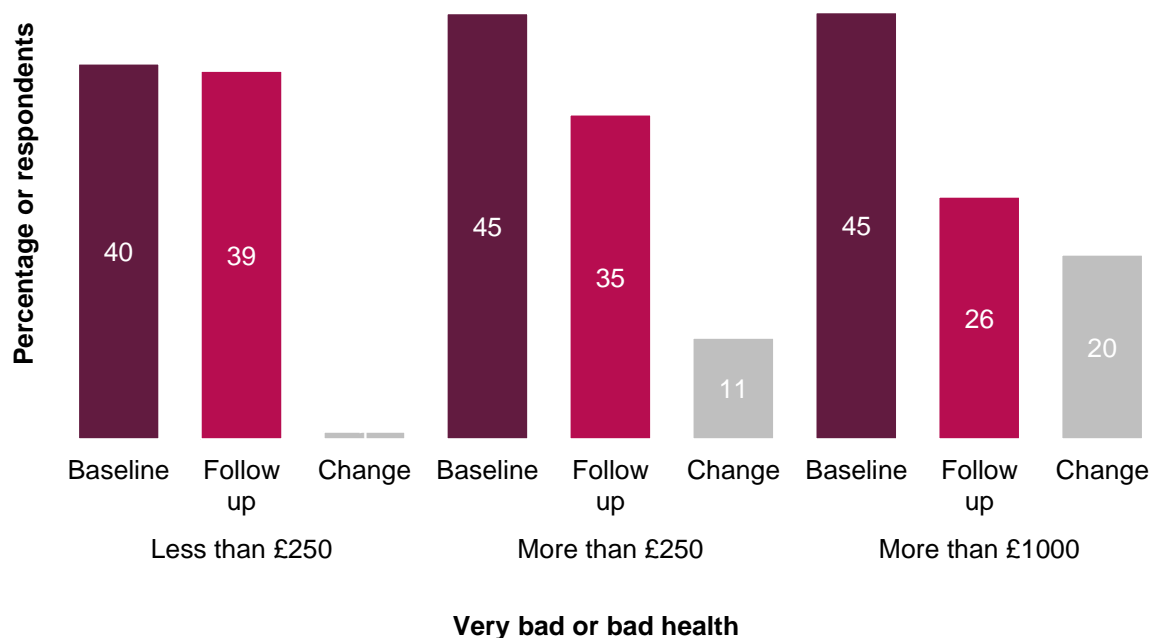
Health

Figure 6.5 provides an overview of changes in self-reported health according to the cost of work undertaken. It shows that:

- **Less than £250:** 40 per cent of respondents reported 'very bad' or 'bad' health at baseline compared to 39 per cent at follow-up. A reduction of one percentage point.
- **More than £250:** 45 per cent of respondents reported 'very bad' or 'bad' health at baseline compared to 35 per cent at follow-up. A reduction of 11 percentage points.

- **More than £1000:** 45 per cent of respondents reported 'very bad' or 'bad' health at baseline compared to 26 per cent at follow-up. A reduction of 20 percentage points.

Figure 6.5: Changes in Warm at Home beneficiaries' self-reported health according to the cost of work undertaken



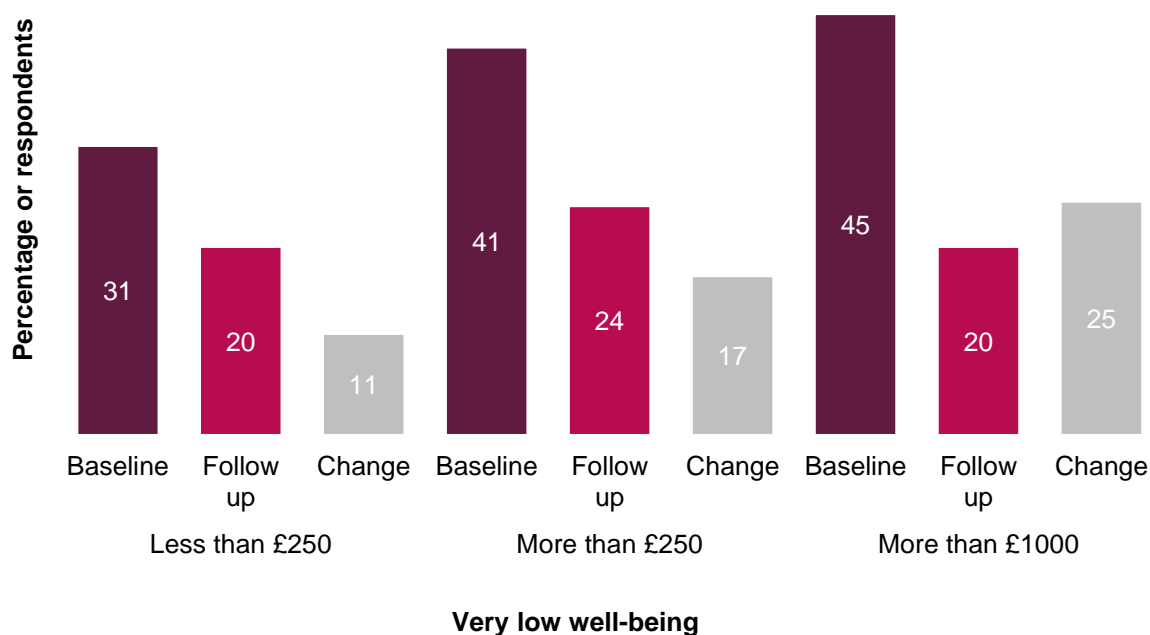
Source: WAH QOL Survey
Base: 136-154

General wellbeing

Figure 6.6 provides an overview of changes in general wellbeing (life satisfaction) according to the cost of work undertaken. It shows that:

- **Less than £250:** 31 per cent of respondents had 'very low' or 'low' wellbeing at baseline compared to 20 per cent at follow-up. A reduction of 11 percentage points.
- **More than £250:** 41 per cent of respondents had 'very low' or 'low' wellbeing at baseline compared to 24 per cent at follow-up. A reduction of 17 percentage points.
- **More than £1000:** 45 per cent of respondents had 'very low' or 'low' wellbeing at baseline compared to 20 per cent at follow-up. A reduction of 25 percentage points.

Figure 6.6: Changes in Warm at Home beneficiaries' general wellbeing (life satisfaction) according to the cost of work undertaken



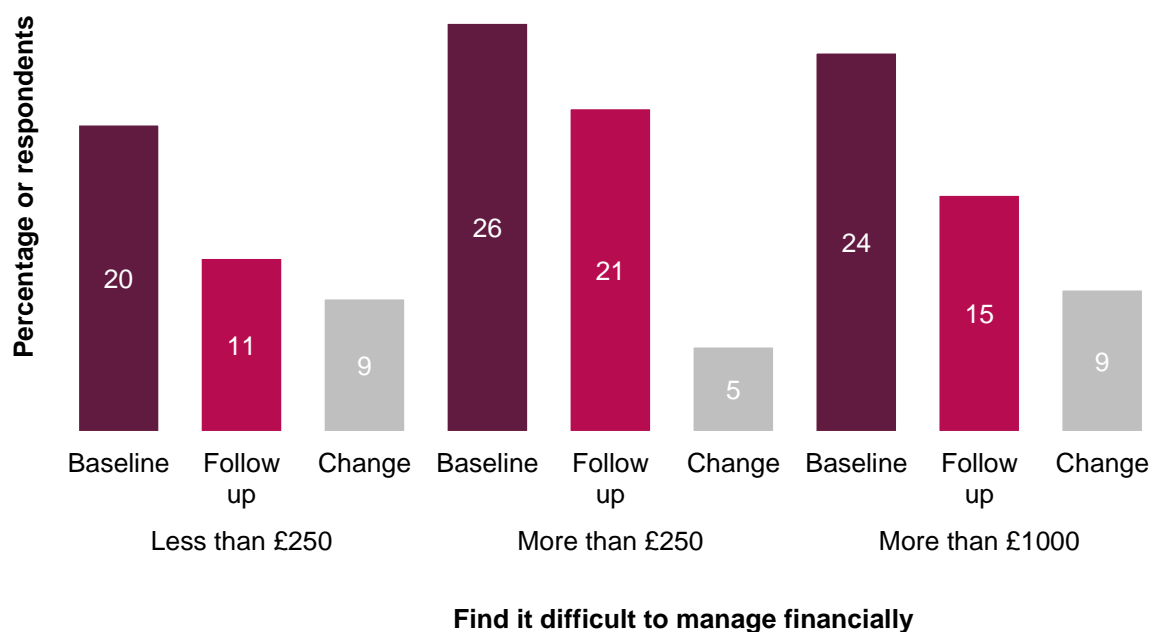
Source: WAH QOL Survey
Base: 136-154

Financial wellbeing

Figure 6.7 provides an overview of changes in financial wellbeing according to the cost of work undertaken. It shows that:

- **Less than £250:** 20 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 11 per cent at follow-up. A reduction of nine percentage points.
- **More than £250:** 26 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 21 per cent at follow-up. A reduction of five percentage points.
- **More than £1000:** 24 per cent of respondents were 'finding it difficult to manage financially' at baseline compared to 15 per cent at follow-up. A reduction of nine percentage points.

Figure 6.7: Changes in Warm at Home beneficiaries' financial wellbeing according to the cost of work undertaken



Source: WAH QOL Survey
Base: 136-154

6.4. Understanding the cost-effectiveness of the Warm at Home programme

The National Institute for Health and Care Excellence (NICE) guidelines on the methods to be used in the economic evaluation of health interventions preference cost utility analyses (CUAs). In CUA, the consequences of interventions are measured in Quality Adjusted Life Years (QALYs) which combine length of life with a utility value for health related quality of life (HRQL).

The WAH QOL survey captured data on respondent's health related quality of life (HRQL) using the EQ5D tool to enable an assessment of the cost-effectiveness (CUA) of the programme from a health perspective. The following sections present analysis of the HRQL of survey respondents and use this to produce a CUA for the WAH Programme.

An overview of the HRQL of Warm at Home Beneficiaries

Table 6.1 provides an overview of the HRQL of WAH beneficiaries. Mean HRQL scores are provided for the full sample and each quartile. It shows that there was a **small overall improvement in HRQL** between baseline and follow-up in the average (mean) HRQL score from 0.409 to 0.455. The percentile scores show that the mean HRQL score change was very similar for the most and least healthy participants. The national average (mean) HRQL score is 0.856, meaning that **WAH beneficiaries had considerably lower HRQL than the general population.**

Table 6.1: An overview of the HRQL of Warm at Home beneficiaries

	Baseline	Follow-up	Change
Sample mean	0.409	0.455	0.046
25th Percentile	0.055	0.089	0.034
50th Percentile	0.516	0.552	0.036
75th Percentile	0.700	0.727	0.028

Source: WAH QOL Survey
Base: 144-146

The HRQL of Warm at Home Beneficiaries by type and cost of work undertaken

Table 6.2 provides an overview of the HRQL of WAH beneficiaries by type and cost of work undertaken. It shows that for type of work the change in mean HRQL between baseline and follow-up was very similar for all three categories. However, there were some clear differences according to cost of work:

- **Less than £250:** mean HRQL changed from 0.431 at baseline to 0.432 at follow-up. An increase of only 0.001.
- **More than £250:** mean HRQL changed from 0.405 at baseline to 0.476 at follow-up. An increase of 0.071.
- **More than £1000:** mean HRQL changed from 0.399 at baseline to 0.494 at follow-up. An increase of 0.094.

This suggests that there were greater health benefits (in utility terms) associated with higher cost WAH interventions and that for lower cost interventions the health impacts were minimal. Importantly Table 6.2 shows **those with the worst HRQL scores are receiving higher cost heating measures under the WAH Programme and are benefiting from the most improvement in their scores.**

Table 6.2: An overview of the HRQL of Warm at Home beneficiaries by type and cost of work

	Baseline	Follow-up	Change
Type of work:			
Fabric of the property	0.438	0.472	0.034
Efficiency of heating	0.427	0.453	0.026
Replacement/installation	0.393	0.442	0.049
Cost of work:			
Less than £250	0.431	0.432	0.001
More than £250	0.405	0.476	0.071
More than £1000	0.399	0.494	0.094

Source: WAH QOL Survey
Base: 144-146

A cost utility analysis of the Warm at Home programme

The NHS values a QALY at between £20,000 and £30,000. This is the threshold for cost-effectiveness recommended by NICE. Taking the lower threshold value, this means that a £100,000 intervention can be considered cost-effective if it generates five additional QALYs.

Table 6.3 provides a cost utility analysis for the WAH Programme utilising HRQL survey data. Analysis is presented for all WAH beneficiaries according to the type and cost of work undertaken. As a key feature of the WAH Programme was its ability to lever additional funds to undertake higher cost work, the analysis considers intervention costs attributed to WAH and the total intervention costs.

Overall the **WAH Programme appears to be a cost-effective intervention.**

The cost per additional QALY for respondents to the QOL survey was £13,353³³. However, this overall figure masks some substantial variations by intervention type and cost and the apparent cost effectiveness of the WAH Programme is probably enhanced by the preponderance of small measures:

- Interventions for the fabric of the property (£8,142 per QALY) and efficiency of heating (£8,402) were more than twice as cost-effective as replacements and/or installations associated with the heating system (£17,889).
- Cost effectiveness reduced as the cost of the intervention increased. Interventions that cost less than £250 (£8,674 per QALY) were more than four times more cost-effective than interventions that cost more than £1000 (£36,429) and more than one and half times more cost-effective than interventions that cost more than £250 (£13,810). However, this finding needs to be weighed against the fact that **health and wellbeing benefits of higher cost interventions are greater than those with a lower cost.**

Table 6.3: An overview of the cost utility (cost per QALY) of Warm at Home

	Cost of WAH interventions		Total additional QALYs	Cost per QALY	
	WAH funds	Total funds		WAH funds	Total funds
All WAH beneficiaries	£36,717	£100,083	7.50	£4,899	£13,353
Type of work:					
Fabric of the property	£13,232	£23,431	2.88	£4,598	£8,142
Efficiency of heating	£20,425	£32,198	3.83	£5,330	£8,402
Replacement/ installation	£19,414	£69,338	3.88	£5,009	£17,889
Cost of work:					
Less than £250	£6,091	£5,786	0.67	£9,132	£8,674
More than £250	£30,626	£94,297	6.83	£4,485	£13,810
More than £1000	£14,932	£70,527	1.94	£7,713	£36,429

Source: Warm at Home QOL Survey
Base: 127

³³ Only one member of each household completed the questionnaire but we have not attempted to model QALY gains for additional household members due to the limitations of the data collected. This means the cost per QALY is likely to underestimate the true cost-effectiveness of the WAH Programme.

These findings are in line with an earlier cost utility analysis undertaken for the Evaluation of Warm Front³⁴ which estimated the cost per QALY of three different types of home improvement intervention: insulation cost £12,905 per QALY; heating cost £26,629; and insulation and heating together cost £30,449. As with Warm Front this evaluation demonstrates that measures such as upgrades to boilers and central heating systems are not as cost effective in terms of health related wellbeing when compared to cheaper measures such as insulation. It should be stressed that the WAH analysis does not take into account the likely greater and longer term health benefits of higher cost heating interventions that will accrue over time. Also it does not include the wider social benefits such as reductions in NHS and social care costs.

Impact on Health Service Use

The most accurate method for observing changes in health service use is analysis of primary and secondary care data captured on clinical IT systems. This evaluation did not have access to that level of data. The QOL survey did ask respondents to report on their use of primary and secondary care over the preceding 3 months so that the evaluation could assess any impacts of WAH on health service use. However, the survey questions had high levels of none and nil responses, meaning the analysis was affected by high levels of variance and unreliability. As such, we have decided not to include the data in this evaluation report.

Estimating the overall cost utility of the Warm at Home programme

The cost utility data from the survey can be used to estimate the overall cost utility of the WAH Programme if it is assumed that the changes in HRQL identified through the survey can be generalised across the whole population of Programme beneficiaries. This is summarised in table 6.4 below which indicates that the Programme is estimated to have led to an additional 121.8 QALYs: a cost per QALY of £6,970 based on central WAH funding; and £14,984 if additional levered funds are included.

Table 6.4: An overall estimate of the cost utility of Warm at Home

	<i>Central funding</i>	£849,000
Total cost of WAH interventions	<i>Additional funding</i>	£976,000
	<i>Total funds</i>	£1,825,000
Total no of interventions		2,647
Mean HRQL change		0.046
Est total additional QALYs		121.8
Est cost per QALY	<i>Central funding only</i>	£6,970
	<i>Total funds</i>	£14,984

Source: Warm at Home QOL Survey, Warm at Home programme monitoring data

If the assumed total QALY gained across the whole Programme is converted into a monetary value using the NHS threshold of £20,000, then **the value of the benefits gained amounts to £2,436,000.**³⁵ This means that **for every £1 of the £637,000 funding distributed to vulnerable households, the WAH Programme produced almost £4 of benefits in terms of better health.** Evidence indicates that much of

³⁴ Green, G. and Gilbertson, J. (2008) *Warm Front: Better Health. Health Impact Evaluation of the Warm Front Scheme*. CRESR, Sheffield Hallam University.

³⁵ see Threlfall A (2011) Understanding the costs and benefits of fuel poverty interventions: A pragmatic economic evaluation from Greater Manchester

the benefit of warm housing interventions accrues to adults because of an improvement in wellbeing brought about by reductions in stress and anxiety.³⁶

³⁶ Green, G. and Gilbertson, J. (2008) *Warm Front: Better Health. Health Impact Evaluation of the Warm Front Scheme*. CRESR, Sheffield Hallam University.

Key Messages and Conclusions

This evaluation of the FILT SSE WAH Programme draws on a range of different data. These include the HIA monitoring data from the FILT SSE WAH Programme, a QOL survey of the FILT WAH beneficiaries, telephone interviews with HIA staff, and telephone and face-to-face interviews with the FILT SSE WAH clients. Data was analysed using standard statistical analysis, qualitative analysis and cost-effectiveness / cost utility analysis techniques. Detail of the findings from the various components of the evaluation is presented in preceding chapters. The purpose of this section is to provide a summary of the key findings and messages that emerge from integrating the different data and to outline some implications of the study findings for policy and practice.

7.1. Key Findings and Messages

Organisation of FILT SSE WAH Programme

- Through the FILT SSE WAH Programme organisations were able to provide a unique service that combined a timely response with organisational structure and clear processes. The evaluation shows that the FILT has the ability to effectively manage a large funding Programme like WAH within time and to exceed its targets. The structural relationship that exists between Foundations, FILT and HIAs aids the delivery of such Programmes with:
 - Foundations - the national body for HIAs - providing organisational rigour systems and structure.
 - FILT - providing a national charitable network, access to hardship funds and the ability to manage funding programmes.
 - HIAs - delivering local service provision working through community knowledge, local partnerships and access.
- Funding was channelled from FILT to HIAs. Flexible allocation of funding to HIAs, regular reviewing of funding, the release of a second tranche of funding half way through the Programme, and FILT holding a central pot of money for non-funded HIAs to apply to, ensured effective management of the funding Programme and speedy relief to a number of vulnerable people.
- The flexibility and "light touch" approach to the funding and administration allowed HIAs to work quickly with vulnerable households.
- The funding's broad eligibility criteria meant that HIAs could help more people to keep warm, some of whom would not have qualified for other funding schemes.

- Fewer restrictions on what could and could not be funded enabled HIAs to use their judgement in order to better meet clients' needs. For example WAH funded 'enabling' measures like loft clearances which facilitated other work such as ECO measures to go ahead. WAH money was also used to undertake necessary housing repairs not usually funded by other energy supplier schemes.

Volume of work

- According to FILT over 3,500 WAH assessments were undertaken during the life of the Programme and 2,647 measures funded, exceeding FILT's initial aim of funding 2,200 warm homes / energy efficiency measures by 20 per cent. The reach of the scheme was impressive in terms of numbers of contacts and interventions particularly within the project timeframe.
- A large number of low cost, high impact measures (for example draught-proofing) were implemented during the Programme. The volume of work was impressive in terms of the range of interventions.

Delivery of the FILT SSE WAH Programme

- HIAs were well placed to reach vulnerable households whose health was at risk from cold conditions and who would benefit from the WAH Programme, through for example, their handyperson teams and core business delivery of Disabled Facilities Grants (DFGs). They were often aware of people who they had previously been unable to help but who could benefit from WAH funding.
- HIAs responded swiftly and in a timely fashion and were able to intervene with vulnerable clients quickly. Assessments were often completed within a few days of initial contact. Minor interventions could sometimes be done 'on the spot' by handyperson teams and were usually completed within a month. More substantial work (boiler replacement) took longer whilst other funding sources were assembled and approved but there were reports of boilers being replaced within a month.
- Although the average spend level could be constraining at times, the FILT WAH funding enabled HIAs to access other sources of funding, helping with match funding and as a top up to other grants. HIAs were exceptionally knowledgeable of other possible sources of funding for their clients and were proficient at putting together a package of funding to carry out necessary work and higher cost jobs.
- The WAH Programme appeared to be filling a gap in service provision helping people who were suffering from ill health and enduring cold or unsafe conditions in their homes, but who were just above the income eligibility criteria for other energy efficiency schemes.

Clients' experience of the FILT SSE WAH Programme

- There were high levels of satisfaction with the WAH Programme and more than 9 in 10 QOL survey respondents were satisfied with the advice, help and support received and the work undertaken. Qualitative participants were also extremely positive. There were a mix of new and existing HIA clients whose source of knowledge about the HIA was often community based. Some were approached by their local HIA; others were referred by a health professional such as a community nurse or occupational therapist, or by third sector organisations, or a local voluntary neighbourhood group. Others found out about the HIA through a family contact or a chance encounter with a friend or neighbour. This highlights the importance of HIAs being local, community based organisations in terms of accessibility.

- Those we spoke to often had been coping with a challenging home environment for some time with no central heating, condemned, broken or faulty boilers and heating systems, broken windows and doors, broken fires, leaking roofs, poorly fitted insulation which was causing damp and mould. Many would not have known where to access this sort of help and would have struggled to pay for the required solution, or were not eligible for other energy efficiency schemes.
- Clients were impressed with the quality of the work undertaken and the manner and professional attitude of the HIA assessors, officers and contractors. HIAs were regarded as safe, trusted organisations that went the 'extra mile' and checked to see if everything was okay after work was completed. Having a trusted organisation provided vulnerable, often older clients, with reassurance. Evidence from the evaluation reaffirms the importance of having a vouch safe referral scheme for vetted contractors and handyperson services. HIAs and handyperson services emerge from the evaluation as accessible and acceptable organisations.
- Contact with HIAs resulted in some clients being given additional information, advice and support and benefiting from follow up services provided either by the HIA themselves or by other local agencies. There were examples of HIAs linking clients to their Stay Put teams to install accessibility rails to a front door, fit handrails on stairs and in a bathroom, provide a shower and wet room along with other aids and adaptations, as well as signposting to additional health services for preventative measures.

Benefits of the FILT SSE WAH Programme

- WAH clients responding to the QOL survey reported considerable improvements in the conditions of their homes with fewer problems such as draughts and condensation. WAH improvements resulted in improved satisfaction with the standard of people's homes and warmer temperatures enhanced comfort considerably (seven out of 10 respondents reported that it was easier to heat their home to a comfortable temperature once the work had been completed). Such improvements were particularly appreciated by people with health conditions made worse by the cold.
- After the WAH intervention respondents of the QOL survey also reported being better able to manage energy related finances. There were reductions in the proportion of households reporting that they: find it difficult to manage fuel bills; worry about not having enough money to pay energy bills; and heat the home less than needed because of the cost of heating. Almost all the clients who took part in the qualitative interviews expected to see a benefit in terms of energy bills, but for many it was too early to tell whether this expectation would be realised because they had yet to experience a full winter with their new heating. There were a few examples of clients reporting cheaper bills.
- Despite anticipating lower bills evidence from elsewhere suggests it is likely that for the majority of WAH clients, benefits would be realised in terms of increased warmth and comfort, rather than much cheaper energy bills. However, 12 per cent of WAH beneficiaries received referrals for the Warm Homes Discount, 9 per cent for energy supplier and tariff switching advice and 399 households were found to be eligible to be included on the Priority Service Register of their energy supplier.³⁷ Although we don't know the outcome of these referrals, it is feasible that such advice and any subsequent additional income could have

³⁷ The Priority Services Register for older and disabled people gives extra help and support with energy supply including: free advice on being more energy efficient; annual gas safety checks; protection from cold callers; free of charge meter move if it is difficult to access and/or read as well as other support.

contributed to householders reporting that they were more in control of their energy related finances.

- CRESR's analysis of works completed across the Programme indicate there was an impressive cost leverage, for every £1 of WAH funding provided by FILT an additional minimum £2.42 was levered in from other sources. This figure compares favourably with a similar scheme, FILT's Warm Homes Service, which for every pound of funding levered in an additional £2.10. It should be noted that both these figures are cautious estimates and do not include, for example, extra benefits that may have been claimed after referral.
- The timeliness of the WAH intervention and being able to provide immediate relief to vulnerable clients was seen as a major advantage of the Programme. HIAs provided numerous examples of cases where they had been able to intervene quickly and it was likely they had prevented further illness or harm (such as hospital admissions, falls, prevented accidents and exacerbations of underlying chronic conditions). The qualitative interviews with clients also provide clear narratives of where health benefits were realised and it is possible to see how negative health events would have been avoided, particularly if there was a history of falls, deteriorating or unstable respiratory or cardiovascular health, or diabetes.
- An important benefit of the intervention was that it provided social contact, emotional security, and wellbeing to vulnerable clients who were in poor health and often socially isolated.
- However, evidence on the level of Health Service use in the QOL survey is unreliable and it is difficult to demonstrate or quantify any cost saving accrued from health benefits or health episodes avoided. A common problem identified by HIAs was that of un-serviced, faulty, unsafe or condemned boilers and people not being able to afford to get them fixed or serviced properly. Instances of boilers leaking carbon monoxide were reported, so the SSE WAH intervention may well have saved lives.

Health Impact of the SSE WAH Programme

- Improvements in health and wellbeing were reported once work had been completed. The greatest health and wellbeing improvements were experienced by those who received a replacement or installation associated with their heating system, and for those whom the highest cost work (£1,000 or more) was undertaken. There were greater improvements to general wellbeing, life satisfaction and financial wellbeing which were again related to heating installation and replacement and cost, but also to work to the fabric of the building which was often smaller measures like draught proofing.
- These findings were corroborated by the qualitative data which showed that the WAH intervention alleviated stress. Improved conditions and warmth had a positive impact on people's quality of life and wellbeing, their feelings of safety and security and their control of the home environment. Clients were appreciative of the benefits of smaller measures installed in their homes efficiently. Smaller practical improvements often made a big difference to daily lives which enhanced wellbeing and independence.
- Clients often had complex multiple health problems and didn't always link the WAH intervention with physical benefits, but felt that the intervention '*relieved*' symptoms. Improvements in self-reported health were largely due to less worry '*a weight being lifted*' making clients feel healthier and better able to self-manage long term conditions.

- The data from the QOL survey indicates that those respondents that reported the worst Health Related Quality of Life scores, as measured by EQ5D, received higher cost heating measures under the WAH Programme and benefited most from the improvement in their scores.

Cost Effectiveness of the SSE WAH Programme

- Overall the WAH Programme appears to be a cost-effective intervention from a health perspective. The apparent cost effectiveness of the WAH Programme is probably enhanced by the preponderance of small measures and the overall figure masks some substantial variations by intervention type and cost.
- Interventions for the fabric of the property (£8,142 per QALY) and efficiency of heating (£8,402) were more than twice as cost-effective as replacements and/or installations associated with the heating system (£17,889).
- Cost effectiveness reduced as the cost of the intervention increased. Interventions that cost less than £250 (£8,674 per QALY) were more than four times more cost-effective than interventions that cost more than £1000 (£36,429) and more than one and half times more cost-effective than interventions that cost more than £250 (£13,810). However, this finding needs to be weighed against the fact that health and wellbeing benefits of higher cost interventions are greater than those with a lower cost.

Value of benefits

- The WAH Programme is estimated to have led to an additional 121.8 QALYs. If the assumed total QALY gained across the whole Programme is converted into a monetary value using the NHS threshold of £20,000, **then the value of the benefits gained amounts to £2,436,000. For every £1 of the £637,000 funding distributed to vulnerable households, the WAH Programme produced almost £4 of benefits in terms of better health.**

Implications

This evaluation demonstrates that HIAs have an important role in the delivery of policy interventions relating to fuel poverty and health. Their contribution needs to be recognised in terms of impact, and involvement as a key partner. However, the ability of HIAs to respond is constrained by resources and a number have closed down. This evaluation raises questions about how HIAs can best be supported in the future to carry out such work.

Programmes like WAH are important sources of funding for HIAs and provide an extra option of funding warmth initiatives and other home improvements for vulnerable clients. HIAs are seen as accessible and acceptable organisations by vulnerable households and they can effectively utilise such funding to link to other services to enable people to stay safe, secure and warm, and retain independence in their own homes. Previous research³⁸ has shown that HIAs often act as a single point of contact and are able to make the most of referral partnerships. (Some of the HIAs in this study had also been active in the heating and affordable warmth field for some years and have excellent established links). Programmes like WAH can help to reinvestigate these existing partnerships. As key players in local partnership arrangements HIAs are essential organisations in making policy happen in practice as per the Cold Weather Plan and NICE Guidelines on EWDs for example. At a time

³⁸ Bashir N et al (2014) An Evaluation of the FILT Warm Homes Service, Foundations Independent Living Trust: Glossop <http://www4.shu.ac.uk/research/cresr/sites/shu.ac.uk/files/eval-filt-warm-homes.pdf>

when HIAs are losing services funding like that of WAH plays an important role in making HIAs visible again.

HIAs are working in a complex environment and there is a strong indication that HIA interventions and Programmes like WAH benefit health and wellbeing. The evidence presented in this report suggests that commissioners should look more closely at the benefits that the FILT and HIAs can deliver.

7.2. Conclusions

This evaluation of the SSE WAH Programme builds on a previous evaluation undertaken by CRESR of the FILT Warm Homes Service, as well as other similar evaluations that CRESR has undertaken. The combined evidence of these evaluations points to pathways from such interventions to improvements in health and particularly in wellbeing for vulnerable people. WAH improvements are accompanied by reduced stress and appreciable benefits in terms of housing condition and satisfaction, warmth and comfort, quality of life, physical and mental wellbeing.

The benefits experienced by WAH clients are sizeable when compared to the average cost of the intervention (£241). Overall the WAH Programme appears to be a cost-effective intervention from a health perspective but this finding masks some substantial variations by intervention type and cost. All intervention types fall within the NICE cost effectiveness threshold of £20,000 per QALY apart from when the total replacement or installation costs exceed £1,000. This finding needs to be weighed against the fact that health and wellbeing benefits of higher cost interventions are greater than those with a lower cost i.e. the most cost effective interventions are not the ones that result in the greatest health and wellbeing gain. Although smaller cheaper measures have a negligible effect on health outcome, they do result in sizeable improvements in wellbeing.

Reassuringly, the data indicates that those who reported the worst health related quality of life received higher cost heating measures under the WAH Programme and benefited most from the improvement.

It is likely that the analysis in this report underestimates some of the benefits of the WAH Programme as it only models benefits for one member of the household. Additional gains for other household members in terms of their own perceptions of wellbeing and comfort etc. are not accounted for, and longer term benefits that will accrue over time, are not included. Benefits and cost savings of WAH could also potentially be realised across health, housing and social care. Qualitative evidence illustrates how the FILT WAH intervention probably helped clients avoid further harm and illness and maintained vulnerable clients in their homes, thus helping to prevent the costs associated with residential care and possibly hospital admissions.

Assuming that the changes in health related quality of life identified in the QOL survey can be generalised across the whole of the Programme then it is estimated that it has led to an additional 121.8 QALYs. If the assumed total QALY gained across the whole Programme is converted into a monetary value using the NHS threshold of £20,000, **then the value of the benefits gained amounts to £2,436,000.** This means that for **every £1 of the £637,000 funding distributed to vulnerable households, the WAH Programme produced almost £4 of benefits in terms of better health.**

There are limitations to the study design which are outlined in the report, but the consistent message that emerges across all the data adds strength to the evaluation findings.

Appendix 1: QOL Survey Questionnaire

Wave 2 Warm at Home Health and Wellbeing Questionnaire

Now you have consented to take part in the study we will go through some questions with you. As you know the aim of the project is to examine how any home improvements or any advice you receive may or may not benefit you.

This questionnaire asks you some questions about you, your home and also about your health and quality of life. **You will also be asked to complete the questionnaire again sometime after you have received help and/or any work is completed in your home.**

It's all strictly confidential of course, and no individual's data will be passed on to any other organisation.

If I come to any questions that you don't want to answer, just let me know and we'll go onto the next one. **Interviewer - please insert today's date:**

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d	d	m	m	y	y	y	y

ABOUT YOU

1. Can I just check that it was you that took part in this survey a few months ago?

Yes

No

Don't know/can't remember

INTERVIEWER: If no try and arrange a time to come back to speak to the person who completed the first survey. If yes continue.

2. Your sex

Male

Female

Prefer not to say

3. Your date of birth

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d	d	m	m	y	y	y	y

4. Your postcode

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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ABOUT YOUR HOME

5. How many people live in your household now?

Adults - Age 16-59

Adults - Age 60+

Children (under 16)

6. Have there been any significant changes in your circumstances since the work in your home that was carried out which may impact on your health or energy use or anything else that you think has affected you or anyone in your household? (E.g. job loss, retirement, new baby, illness or change in longstanding conditions etc.)

Yes

No

Don't know

7. If yes, what has been the change?

.....

.....

.....

8. Has the total income or your household changed much since we last spoke to you? (If yes go to question 9, if No then go to question 10)

Yes

No

Don't know

9. IF YES what is the total income of your household from all sources before tax and national insurance contributions. Please include all income from employment and benefits. (Interviewer read out either weekly, monthly or yearly values depending on what is easiest for the respondent to calculate).

(Please tick one only)

WEEKLY

MONTHLY

YEARLY

Up to £99

Up to £432

Up to £5,199

£100 up to £199

£433 up to £866

£5,200 up to £10,399

£200 up to £299

£867 up to £1,299

£10,400 up to £15,599

£300 up to £399

£1,300 up to £1,732

£15,600 up to £20,799

£400 up to £499

£1,733 up to £2,166

£20,800 up to £25,999

£500 up to £599

£2,167 up to £2,599

£26,000 up to £31,199

£600 up to £699

£2,600 up to £3,032

£31,200 up to £36,399

£700 up to £799

£3,033 up to £3,466

£36,400 up to £41,599

£800 or more

£3,500 or more

£41,600 or more

Don't know

Refused

10. In your opinion does your home now have any problems with the following?

	Not at all	Slight problems	Moderate problems	Large problems	Extreme problems
Condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mould	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Draughts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Thinking back to before the work was undertaken in your home has the amount of condensation, damp, mould or draughts now reduced?

(Tick one box only)

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Don't know	<input type="checkbox"/>
Other	<input type="checkbox"/>
Not applicable	<input type="checkbox"/>

12. If yes, no or other please state why:

.....

.....

.....

13. What fuel do you mainly use for heating now? *(whether central heating or not)*

(Tick one box only)

Mains Gas	<input type="checkbox"/>
Electricity	<input type="checkbox"/>
Oil	<input type="checkbox"/>
Solid Fuel	<input type="checkbox"/>
LPG	<input type="checkbox"/>
No heating	<input type="checkbox"/>

14. How satisfied are *you* with your home now regarding...

	Not at all	Slightly	Somewhat	Very	Extremely
...the standard of housing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...the indoor temperature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...the humidity indoors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...the freshness of air indoors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. How easy or difficult is it to meet your fuel bills now?

(Tick one box only)

Very easy	<input type="checkbox"/>
Fairly easy	<input type="checkbox"/>
Neither easy or difficult	<input type="checkbox"/>
Fairly difficult	<input type="checkbox"/>
Very difficult	<input type="checkbox"/>
Not answered	<input type="checkbox"/>

16. To what extent do you agree with the following statement now: I/we worry about not having enough money to pay my/our energy bills?

(Tick one box only)

Strongly agree	<input type="checkbox"/>
Agree	<input type="checkbox"/>
Neither agree nor disagree	<input type="checkbox"/>
Disagree	<input type="checkbox"/>
Strongly disagree	<input type="checkbox"/>

17. In winter would you say your home is now ...

(Tick one box only)

Much too warm	<input type="checkbox"/>
Too warm	<input type="checkbox"/>
Comfortably warm	<input type="checkbox"/>
Comfortable	<input type="checkbox"/>
Comfortably cool	<input type="checkbox"/>
Too cool	<input type="checkbox"/>
Much too cool	<input type="checkbox"/>

18. Thinking about heating your home now do you think it is easier to heat your home to a comfortable temperature than it was before the work was completed?

(Tick one box only)

- Yes
- No
- Don't know
- Other

19. For any response above please state why:

.....

.....

.....

20. To what extent do you agree with the following statement now: I/we heat the home less than I/we need to because of the cost of heating?

(Tick one box only)

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

21. At the moment are you behind or in debts with your payments to your electricity or gas company (or both)?

(Tick one box only)

- Yes
- No
- Don't know

22. Do you think the improvements in your home have affected the health and wellbeing of anyone in your household?

(Tick one box only)

- Yes
- No

23. If yes, can you tell me a bit about how your/their health is affected? *If No, could you tell me why you think your health has not been affected (Interviewer please detail any negative and/or positive effects)*

INTERVENTION

24. Overall how satisfied are you with the advice and help you received?

(Tick one box only)

- Very satisfied
- Fairly satisfied
- Neither satisfied or dissatisfied
- Fairly dissatisfied
- Very dissatisfied

25. Overall how satisfied are you with the work that was undertaken in your home?

(Tick one box only)

- Very satisfied
- Fairly satisfied
- Neither satisfied or dissatisfied
- Fairly dissatisfied
- Very dissatisfied

26. Were you given any advice on how to heat your home and control your heating?

(Tick one box only)

- Yes
- No
- Don't know
- Can't remember

27. Were you given any advice on switching your energy supplier and/or energy tariff?

(Tick one box only)

- Yes
- No
- Don't know
- Can't remember

28. Were you given any financial advice or advice about benefits?

(Tick one box only)

- Yes
- No
- Don't know
- Can't remember

29. Were you referred on to any other help?

(Tick one box only)

- Yes
- No
- Don't know
- Can't remember

30. Have you acted on this advice or taken up any of the help you were offered?

(Tick one box only)

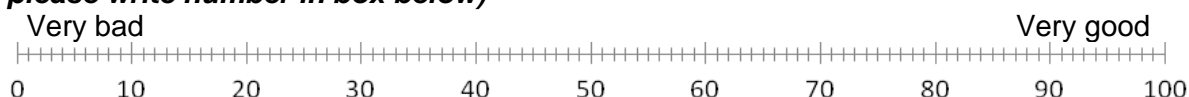
- Yes
- No
- Not yet but intend to
- Don't want to
- Not applicable

HEALTH

31. In general, would you say your health is...? (tick one box only)

- | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very
bad | Bad | Fair | Good | Very
good |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

32. To help people say how good or bad a health state is we have drawn a scale (rather like a thermometer) on which the best state you can imagine is 100 and the worst state you can imagine is 0. Please rate how your health is TODAY out of 100: (Interviewer please write number in box below)



Write number here:

Here are a few questions about your health. Please indicate which statement best describes your own health TODAY.

33. Mobility:

(Tick one box only)

- I have no problems in walking about
- I have some problems walking about
- I am confined to bed

Note for interviewer:
**Tick here if
wheelchair user**

34. Self-care:

(Tick one box only)

- I have no problems washing or dressing myself
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

35. Usual Activities:

(Tick one box only)

- I have no problems with performing my usual activities (e.g. work, study, housework, family or leisure activities)
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

36. Pain/Discomfort:

(Tick one box only)

- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain and discomfort

37. Anxiety/Depression:

(Tick one box only)

- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed

38. Your wellbeing: Thinking about your own life and personal circumstances, how satisfied are you with your life as a whole on a scale of 0 to 10?

Completely Dissatisfied					Completely Satisfied					
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

39. Your social contacts: Thinking about how much contact you've had with people you like, which of the following statements best describes your social situation?

(Tick one box only)

- I have as much social contact as I want with people I like
- I have adequate social contact with people
- I have some social contact with people, but not enough
- I have little social contact with people and feel socially isolated

40. Financial wellbeing: How well would you say you yourself are managing financially these days?

(Tick one box only)

- Living comfortably
- Doing alright
- Just about getting by
- Finding it quite difficult
- Finding it very difficult

41. Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months? (include problems related to old age)

(Tick one box only)

- Yes limited a lot
- Yes limited a little
- No

42. If answered either of the yes options above please tick all the following health conditions or illnesses that apply.

(Please tick those that apply)

- Tiredness and fatigue
- Pain
- Insomnia
- Anxiety / nerves
- Depression
- Diabetes
- Breathing problems
- High blood pressure
- Heart disease
- Osteoarthritis
- Stroke
- Cancer
- Memory problems
- Dementia
- Other (please tick)

Other (please describe)

43. In the last 3 months, how many times have you visited the following:

	Number of times
Accident and emergency (A+E)	<input type="text"/>
Hospital - day case	<input type="text"/>
Hospital - outpatients	<input type="text"/>
Hospital - in-patients (total number of nights)	<input type="text"/>

	Number of times
GP	<input type="text"/>
Nurse	<input type="text"/>
Mental health worker	<input type="text"/>
Physiotherapist	<input type="text"/>
Social worker	<input type="text"/>
Occupational Therapist	<input type="text"/>

44. Would you say your use of these services over the last three months is:

(Tick one box only)

Much more than usual	<input type="checkbox"/>
More than usual	<input type="checkbox"/>
About the same as usual	<input type="checkbox"/>
Less than usual	<input type="checkbox"/>
Much less than usual	<input type="checkbox"/>

Thank You

Thank you for your answers. These will be combined with many others.

Sheffield Hallam University

Warm safe and well: the evaluation of the Warm at Home Programme

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