Centre for Ageing Better

Healthy homes

NHS initiatives to improve health by improving homes

November 2024

Key points

- The government has committed to a series of missions that will guide their term in office. Within their mission to build an NHS fit for the future, the government has set out its intention to improve the nation's health and shift to a more preventative healthcare model. Achieving this will be dependent on addressing the causes of ill-health, disability and injury.
- Housing is a key determinant of health. The quality and suitability of the living environment is crucial in preventing the onset of ill-health, supporting recovery and slowing the deterioration of certain conditions. Despite this, nearly eight million people live in a home that does not pass the government's definition of basic decency: 15% of homes (Centre for Ageing Better, 2023; DLUHC, 2023).
- Unsafe homes and their associated health conditions translate into an avoidable burden on public services, with an estimated cost to the NHS of £1.1 billion per year (BRE, 2023), £1.1 billion in formal/paid social care costs, and a further £3.5 billion in unpaid care costs (Brimblecombe et al, 2024).
- As decision-makers at all levels – from the Department of Health and Social Care and NHS England to Integrated Care Systems and local authorities – decide how to deploy scarce capacity and resources to maximum effect, evaluation data indicates that there are benefits to investing in home improvements.
- This report focuses on West Yorkshire Health and Care Partnership's Winter Warmth Programme, an intervention designed to alleviate fuel poverty and improve the health and wellbeing of vulnerable households. NHS funding was invested in fixing boilers, carrying out home repairs, installing energy efficiency measures and appliances, providing information and advice, and providing direct payments of fuel.
- An evaluation of the initiative found improvements to residents' health, wellbeing and financial security. It also led to greater collaboration between the health, care and housing sectors and to the establishment of new referral routes to identify those most at risk (eg those with certain health conditions or wother risk factors living in poor-quality homes). Other evaluations referred to in this report have come to similar conclusions.
- A national cross-departmental housing strategy is needed that: a) commits to improving damp, cold and unsafe homes; b) provides a roadmap for all tenures, including low-income homeowners; c) is reflected in plans across the Department of Health and Social Care, the Department for Energy Security and Net Zero, and the Ministry of Housing, Communities and Local Government; and d) considers local delivery mechanisms, eg the Centre for Ageing Better's Good Home Hub model.
- Integrated Care Systems should be directed by NHS England to involve local authority housing teams when planning services.
- Locally, health, care and housing teams should come together to design cross-sector initiatives that serve their mutual interests. Key lessons from past schemes include the need to provide flexible funding, adapt existing services, set clear objectives, focus on building professional partnerships and provide a combination of long- and short-term interventions.

Introduction

Homes have a vital role to play in our health. Given that most people spend the majority of their day at home, the quality and suitability of their living environment is crucial in preventing the onset of ill-health, supporting recovery and slowing the deterioration of certain conditions. The temperature of the home, the purity of the air, the person's ability to move around or rest as needed, to feel safe and without threat of injury – these are all components of a healthy home.

It is difficult to quantify the exact number of people whose homes negatively affect their health but nearly eight million people live in a property that falls below the nationally set minimum criteria for a decent home. Many more live in homes that sit just above this threshold, homes that could also pose a significant risk to health. Figure 1 sets out the range of health conditions most commonly impacted by poor-quality homes and the housing issues that have been shown to cause or worsen these illnesses and injuries (more details are provided in the following section).

Figure 1: Housing issues and associated health conditions

Issues in the home that affect health	Health conditions caused or exacerbated by poor-quality housing
• Indoor air temperature	• Respiratory conditions
• Indoor air quality (affected by issues such as damp and mould)	• Cardiovascular conditions
• Trip hazards	• Mental health conditions
• Accessibility around the home	• Injuries (eg fractures due to falls)
• Fire and other hazards	• Restricted mobility

These largely avoidable housing issues can have life-changing consequences for residents of any age. From broken bones that leave an older person immobile and in need of carers to get up and dressed in the morning to severe asthma affecting a child's regular attendance at school.

Unsafe homes and the associated health conditions translate into an avoidable burden on the NHS and social care systems in the form of GP appointments, hospitalisation, delayed discharge, rehabilitation provision, medication, etc. It is estimated to cost the NHS £1.1 billion per year to treat the health consequences of living in a poor-quality home (England only; BRE, 2021). More than half of this sum is spent on people aged 55 and over, despite people in this age group only accounting for a third of people living in dangerous homes (Centre for Ageing Better, 2024). Poor-quality homes lived in by older people also cost £1.1 billion in formal social care costs and a further £3.5 billion in unpaid care (Brimblecombe et al, 2024). These homes cause an unnecessary pressure on an already stretched workforce, are a contributor to inflated waiting lists and a barrier to reducing health inequalities.

Policy context

Despite the clear connection between health, care and housing, there are insufficient requirements for cross-sector collaboration and, locally, teams are working towards differing objectives and accountability frameworks. Integrated Care systems are obliged to engage with local partners but the inclusion of housing specifically is not a statutory requirement. The result is that, beyond forums such as Health and Wellbeing boards – whose effectiveness varies significantly across the country (Hunter et al, 2018) – there are limited examples of shared budgets, joint initiatives and cross-team working. Where there is collaboration, this is often focused on hospital discharge schemes which, while providing an important service, support people only once an incident has taken place rather than proactively keeping people well. These examples of collaboration may also only include a partial selection of the key stakeholders: NHS providers and commissioners, local authority social care and housing teams, housing associations, social care providers, and voluntary and private sector home improvement advice and support services.

Herein lies the missed opportunity. Both health and housing services regularly interact with individuals and families who would benefit from support from the other sector, or for whom the effectiveness of the intervention being given to them requires action from the other sector. For example, the effectiveness of asthma medication will be limited while the person is still sleeping in a damp home. Similarly, GPs' knowledge of their patients' ill-health and its possible causes may mean that they have a much clearer idea of households that would benefit from a local authority housing intervention.

At a national level, the Labour government has set out a mission to improve the nation's health and shift to a more preventative healthcare model. To do this successfully, it will need to take concerted action to improve the quality of homes. There are various opportunities to do this within the government's policy programme, including a commitment to develop a national housing strategy, development of an NHS 10-year plan, implementation of the Warm Homes Plan and within the scope of the royal commission on social care.

About this report

This report aims to raise awareness of the links between health and homes and provide examples of local systems that have developed cross-sector initiatives to improve residents' health by tackling problems in the home. It brings together evidence from a range of sources including the Centre for Ageing Better and West Yorkshire Integrated Care System's jointly funded evaluation of the area's Winter Warmth Programme, an NHS-funded intervention to improve the health and wellbeing of the local population through home improvement and fuel poverty interventions. The report concludes with a summary of the lessons learnt and provides ideas for local areas interested in exploring similar initiatives.

How people's homes impact their health

This section provides an outline of the most common health conditions linked to damp, cold and unsafe homes. Explanations are also provided as to the barriers people face to changing their living conditions and why this has become such a persistent challenge.

Linking health to homes

Respiratory conditions

Living in a cold home has been shown to cause and exacerbate a number of respiratory conditions. Breathing cold air can inflame the lungs and create challenges for circulation, both of which can cause asthma attacks and worsen chronic obstructive pulmonary disease (World Health Organization, 2018). Low indoor temperatures and homes with poor ventilation can cause damp and mould which, in turn, can also cause asthma. Pre-Covid, respiratory conditions were the leading cause of excess winter deaths, followed by cardiovascular disease (ONS, 2019).

Cardiovascular disease

Cold homes can also lead to a heightened risk and the exacerbation of cardiovascular disease (an umbrella name for conditions that affect the heart and circulatory systems; Sharpe et al, 2019). In lower temperatures, certain blood vessels narrow, which puts additional pressure on the heart to pump blood to the rest of the body (British Heart Foundation, 2024a). When combined with an existing heart condition, this can lead to high blood pressure, strokes and heart attacks, particularly among older people (Communities and Local Government Committee and Betts, 2018).

Equally, homes that are too hot also put additional strain on the circulatory system, as the heart will need to work harder to regulate body temperature (British Heart Foundation, 2024b). This also increases the chance of heart attacks, irregular heartbeats (arrhythmias) and heart failure.

Mental health conditions

A less commonly discussed impact of poor-quality housing is mental health. Depression, anxiety and stress have all been linked to being unable to get warm, persistent anxiety about paying bills, concern about damage to possessions, living with general disrepair, and overcrowding (Liddell and Guiney, 2014; Shankley and Finney, 2020; Reynolds, 2005; Swope and Hernandez, 2019). Living in insecure housing – due to affordability or security of tenure – has also been shown to worsen mental health (Simpson and Henry, 2016).

Injuries

Falls are the most common type of serious hazard in the home and a major cause of death, injury and decline among older adults. Falls can set off a chain of events that in the short term may mean broken bones, surgery, lengthy hospital stays and rehabilitation, and in the longer term can result in reduced mobility and a decline in confidence and general wellbeing (Communities and Local Government Committee and Betts, 2018).

Other injuries related to poor-quality housing arise from fires, electrical problems, carbon monoxide, lead or radon exposure, a lack of sanitation facilities and structural collapse.

Restricted mobility

The physical environment of a person's home is particularly important for those with mobility issues. For people who use wheelchairs or other equipment to move around, or those for whom navigating through narrow spaces or upstairs is difficult, their ability to undertake daily activities such as cooking, washing, leaving/entering the property is dependent on living in a suitable property. What this looks like will depend on the needs of the individual but could include, step-free entry, essential rooms on the same level (bedroom, kitchen, bathroom) or a staircase suitable for a stairlift. Where these features are not available, people can become more immobile which can lead to:

- Muscle deterioration and a reduction in strength and balance, leading to a greater risk of falls
- In cold weather, a worsening of conditions affected by lower temperatures such as rheumatoid arthritis
- An increase in social isolation and loneliness, and a reduction in overall wellbeing
- A greater reliance on carers or equipment

Even the installation of basic aids and adaptations have been shown to reduce the risk of health and care needs increasing or developing (Royal College of Occupational Therapists, 2019).

What are the barriers to repairing unsafe homes?

There are huge differences in how much choice people have about where to live, the type and quality of their home, and whether they are able to repair and maintain it. A key factor is money:

a. Sufficient disposable income to afford to heat the home and make small repairs

b. The ability to save money to pay for larger repairs or the cost of moving home

c. The much wider issue of wealth and inheritance; being able to afford a high-quality home in a suitable location with sufficient space

This last factor is a particular issue in parts of country where there is a growing divergence between incomes, rents and house prices.

Beyond the ability to pay for repairs, some find it difficult to navigate the practicalities of making repairs to the home. This might include finding a trusted trader, having an independent assessment of the work needed, or moving furniture around. For wheelchair users and those with medical equipment, the requirement to temporarily move out or have certain rooms unavailable while works are being done inhibits action. And, in some cases, people aren't fully aware of the connection between housing issues and health conditions and why repairs are necessary (Centre for Ageing Better, 2021a; Centre for Ageing Better 2021b).

The availability of suitable alternative properties is another important consideration. Poor quality homes are clustered regionally owing to national government and business investment decisions, and the ability of local residents to afford to maintain their homes, with levels of unemployment and low-paid jobs higher in certain parts of the country (Hackett, 2018). The result is that there are double the number of non-decent homes in the Midlands and North of England than in London and the South (Centre for Ageing Better, 2023).

West Yorkshire Integrated Care System's Winter Warmth Programme

Across the country, there are pockets of innovation and best practice relating to improving people's health by addressing their living conditions. In this section, one such example is presented: West Yorkshire Health and Care Partnership's (WYHCP) Winter Warmth Programme, an intervention designed to alleviate fuel poverty[1] and improve the health and wellbeing of vulnerable households across West Yorkshire. The results of an evaluation, jointly funded by the Centre for Ageing Better and WYHCP, are outlined here, along with signposting to other relevant initiatives.

WYHCP is an integrated care system based in West Yorkshire, which has the aim of improving the health and wellbeing of local people. WYHCP consists of five local places: Bradford, Calderdale, Kirklees, Leeds and Wakefield. In 2022, WYHCP invested £1 million in a Winter Warmth Programme to address fuel poverty among those with related health conditions. The funding was divided between the five places in proportion to the scale of fuel poverty. The work was led by local authority housing teams and there was significant flexibility around how to spend the funding, as long as it met the following aims:

1. Improve the health and wellbeing of individuals experiencing fuel poverty with certain health conditions
2. Reduce pressures on the healthcare system over the winter period
3. Expand the capacity of existing fuel poverty services
4. Strengthen links between housing, health, social care and VCSE organisations
5. Help support the identification and referral of vulnerable households

1. Within this evaluation of the Winter Warmth Programme, a household is in fuel poverty if, after paying for their housing and energy bills, they are below the poverty line.

The programme ran between April 2022 and April 2024. In July 2023, WYHCP and the Centre for Ageing Better commissioned RSM UK Consulting LLP to evaluate the Winter Warmth Programme. The evaluation sought to build an understanding of the interventions delivered in each place and determine the effectiveness and impact on service users and the wider system.

Summary of interventions

Below is a summary of the different interventions funded by the Winter Warmth Programme. For more information, please see Appendix 1.

Location	Summary of intervention	Allocated funding	Intervention allocations where known	Beneficiaries supported
Bradford	General service expansion Boiler replacements Home improvement to improve energy efficiency Fuel top-ups	£231,000	£131,000 for general service expansion £80,000 for boiler replacements and heating system repairs £20,000 for fuel top-ups	1,350 households reached through general service Seven boiler replacements Seven boiler/ heating system repairs
Calderdale	Fuel payments Referrals to other support Debt and financial advice Installation of fuel efficiency measures	£93,000	Unknown	Unspecified number of beneficiaries
Kirklees	Direct payment for fuel top-ups Childhood Asthma Pilot	£184,000	£130,000 for direct payments and fuel vouchers £50,000 Childhood Asthma Pilot	Direct payments intervention reached 1,239 beneficiaries 50 households were identified to receive support through the Childhood Asthma Pilot

Leeds	Extending an existing contract Targeting of people most likely to be at risk of living in a cold environment Workforce development of the Health Partnership team	£339,000	£230,000 to improve existing service £72,000 for primary care proactive targeting £34,000 to the Health Partnership team for workforce development	1,116 households were directly assisted 947 households received advice and signposting measures 1,307 measures delivered within the home to improve feeling warm, including receiving vouchers to help towards payment of home fuel costs 53 households received an appliance and a top-up voucher 269 households were supported with energy-efficient cooking appliances
Wakefield	Recruitment of a Warmer Homes Project Coordinator Providing an Energy Debt Fund to provide fuel top-ups Minimum Energy Efficiency Standards regulations for private rented sector projects Wakefield and District Housing Health Wealthier Families Project	£153,000	£63,000 Warmer Homes Coordinator £14,000 Energy Debt Fund £31,000 WDH Healthier Wealthier Wakefield Families £45,000 Minimum Energy Efficiency Standards scheme	398 beneficiaries supported

Benefits to service users

1. Improved mental health

Some of those who received support through the Winter Warmth Programme reported improvements to their mental health. Through the offer of financial support, home improvements and energy efficiency advice, concerns about rising energy costs and inadequate living conditions were reportedly eased. A number of beneficiaries stated how the provision of support not only improved their living environments but also restored a sense of control and stability in their lives.

Case study: 25-year-old woman with asthma, Calderdale

A 25-year-old woman with asthma living in Calderdale experienced severe stress and anxiety after being disconnected from her gas supply due to non-payment. Without access to heat or hot water, both her mental and physical health deteriorated, as cold conditions exacerbated her asthma symptoms and made her unable to manage both her physical health and daily life effectively.

Through the Winter Warmth Programme, she received a £98 fuel voucher to reconnect her gas supply and restore heating to her home. Additionally, the energy advisor identified that she had no working refrigerator, prompting further support through local funding for a new appliance.

The beneficiary stated that the reconnection of her gas supply and the provision of a working refrigerator significantly reduced her anxiety and stress. With access to heat and hot water, she was better able to manage her asthma, and her mental health also improved as she no longer had to worry about living in a cold, uncomfortable environment.

Evidence from other initiatives: The Warm Home Fund

The Warm Home Fund is one of the largest fuel poverty programmes in Great Britain. Funded by private sector investment from the National Grid, the programme ran from 2017 to 2024 and spent over £150 million (Powells et al, 2023). Interventions focused on improving heating systems in homes and insulation measures. The fund also provided energy efficiency and health-related advice. Following the intervention, 69% of beneficiaries said that their mental health had improved and nearly half reported that their physical health was better than before. The evaluation estimated that the initiative had saved the NHS £2.5 million per annum and created wider societal benefits of £42 million per year.

2. Improved physical health

The interventions delivered as part of the Winter Warmth Programme also delivered benefits for the physical health of some vulnerable service users. Through practical interventions such as boiler repairs, draught-proofing and insulation, a number of beneficiaries reported that they were able to better manage chronic health conditions, stay active and felt more likely to prevent further health crises.

Case study: Mother and son with health conditions, Wakefield

A 56-year-old mother with fibromyalgia and her teenage son, who suffers from a rare skin condition, were struggling to maintain a warm home due to poor insulation and high energy costs. The cold and damp conditions worsened their health problems, making day-to-day life difficult.

The family was referred to the Warmer Homes Project in Wakefield, where they received draught-proofing throughout their home and were provided with an electric blanket to help the son manage his skin condition. Additionally, they were offered advice on how to reduce their energy usage effectively while maintaining a warm home.

The home improvements allowed the family to stay warm without excessive heating costs. The mother reported that she experienced fewer fibromyalgia flare-ups, and the son's skin condition was better managed due to the consistent warmth provided by the electric blanket. The beneficiaries stated that the support they received led to a reduction in health-related issues for both of them, and improved the family's overall comfort and wellbeing.

Case study: Child with severe asthma, Kirklees

A family in Kirklees, with a young child suffering from severe asthma, lived in a home that was cold and damp, which worsened the child's respiratory condition. The cold environment triggered frequent asthma attacks, leading to regular GP visits and hospital admissions. The parents struggled to keep the home warm due to a poorly functioning boiler and insufficient insulation, making it difficult to manage their child's health at home.

Through the Kirklees Asthma Programme, the family received a range of home improvements aimed at creating a healthier living environment. These included boiler repairs, draught-proofing, and ventilation upgrades to reduce dampness and improve air quality. The intervention was designed to help the family maintain a consistently warm and dry home, reducing the triggers that worsened their child's asthma.

As a result of the home improvements, the child's parents reported a significant difference in the child's physical health. With a warmer, drier home, the child experienced fewer asthma flare-ups and reduced the frequency of severe attacks. The parents reported that the intervention allowed their child to be more active and comfortable at home, with fewer disruptions caused by asthma symptoms.

Evidence from other initiatives: Boilers on Prescription

The Boilers on Prescription pilot, funded by Gentoo in collaboration with Sunderland and Durham, Darlington, Easington and Sedgefield clinical commissioning groups (CCGs), provided new heating systems and insulation to six households identified by their GP as living with certain health conditions (Burns and Coxon, 2016). Eighteen months after the intervention, research showed a reduction in GP and outpatient appointments, as well as fewer A&E attendances.

3. Improved thermal comfort and energy efficiency of the property

The Winter Warmth Programme enhanced the energy efficiency and improved the thermal comfort of a number of beneficiaries' homes. Measures such as boiler replacements, installing insulation and radiator panels led to higher Energy Performance Certificate (EPC) ratings[2] and lowered energy consumption. In Wakefield, data collected through the Housing Pathway intervention demonstrated that energy efficiency improvements to 199 households had resulted in 70% of these homes having an improved EPC rating and a cumulative carbon reduction of 113.28 tonnes per annum. In addition, energy-efficient upgrades allowed beneficiaries to maintain comfortable temperatures in the home, especially through the winter months.

Case study: Resident with chronic health conditions, Wakefield

In Wakefield, a resident with chronic health conditions was struggling to maintain a warm home due to inefficient heating. The Warmer Homes Housing Pathway provided several interventions, including insulation top-ups, radiator panels and boiler replacement, which dramatically improved the home's EPC rating from E to C.

As a result, the household's carbon emissions dropped by over 50%, and energy consumption decreased by an estimated 30%. The resident reported that these improvements "lifted a great weight off my shoulders", as the home became more comfortable, and they could focus on other important life issues without worrying about constant cold. These upgrades not only enhanced thermal comfort but also reduced energy usage, leading to more affordable heating costs and improved mental and physical wellbeing.

Evidence from other initiatives: Warm East Sussex

Across East Sussex, a partnership between local councils and the NHS has created a service to keep residents warm and healthy during cold weather. Warm East Sussex provides residents with access to advice, minor home improvements and in-person home assessments delivered by RetrofitWorks and Citizens Advice East Sussex. They also provide free training to frontline staff and volunteers. An evaluation of the pilot, undertaken in one of the participating Clinical Commissioning Groups, reported improvements to residents' physical health – fewer chest infections, reduced pain and less anxiety (Sawyer et al, 2019). Residents also reported feeling more socially connected, with an increased sense of control. Many also reported a reduction in their energy bills.

2. Energy performance certificates (EPCs) tell us how energy efficient a building is. EPCs rate a home from A (very efficient) to G (inefficient). The lower the EPC rating and therefore the less efficient the home is, the more costly it will be to heat the home and the more likely it is to emit higher CO_2 emissions.

4. Reduced energy consumption and improved affordability

Through promoting sustainable energy habits and equipping residents with practical support and tools, the Winter Warmth Programme helped beneficiaries to reduce energy consumption and improve financial stability. Fuel vouchers and top-up payments provided short-term financial relief and helped several households avoid being disconnected from energy services. Timely assistance also prevented a number of beneficiaries falling into debt, especially during the winter months when households use more energy to heat their home.

In addition, several interventions distributed energy-efficient appliances (eg air-fryers and LED bulbs) to reduce beneficiaries' energy usage and enable households to lower their utility bills. In Wakefield, one property reported a reduction of over £500 per annum due to the use of more energy-efficient appliances.

A number of beneficiaries were also provided with practical support and advice, on improving their understanding of fuel usage and how to avoid fuel poverty. Those who received this advice stated that they felt more empowered to make smarter energy decisions, which should translate into better long-term management of energy costs.

Case study: Family struggling with energy bills, Bradford

A single mother in Bradford with two young children was struggling with high energy bills and a poorly insulated home. The cold environment was affecting her children's health, and she couldn't afford to keep up with rising utility costs. The combination of having a limited income, high bills and a cold home placed financial strain on the family and left them at risk of falling into fuel poverty.

Through the Green Doctor Service, the family received several home energy improvements aimed at reducing their energy consumption and improving the overall efficiency of their home. The interventions included draft-proofing, installation of radiator reflectors and energy-efficient LED light bulbs. The mother also received advice on how to reduce energy consumption and therefore better manage her heating costs.

As a result of the intervention, the family's energy bills were reduced, providing financial relief. The mother also reported that having a warmer home had a positive impact on her children's day-to-day life and physical health.

Evidence from other initiatives: Affordable Warmth Access Referral Mechanism (AWARM) programme

In Greater Manchester, the UK Public Health Association piloted a schemed aimed at improving the homes of people with certain health conditions, the Affordable Warmth Access Referral Mechanism (AWARM) programme. The programme took referrals from GPs, and residents were subsequently visited at home for an in-person assessment of the property's energy efficiency, safety, repairs and security, and of any issues residents were having with fuel debt or their health and wellbeing. Households in need were referred to the relevant service. An economic evaluation found the programme to be cost-effective and a good use of public funds, particularly in improving mental health and wellbeing (Threlfall, 2011).

Benefits to local systems

The following benefits to local systems – commissioners and providers – were noted by the evaluation of the West Yorkshire Winter Warmth Programme.

1. Reduced pressure on healthcare services

The combination of financial support, home improvements and energy-saving advice enabled beneficiaries to maintain better health at home, reducing the need for some beneficiaries to use healthcare services and optimising resource allocation during winter. Specifically, the interventions:

- Reduced GP visits and hospital admissions: In Kirklees, the Childhood Asthma Pilot targeted families with children suffering from asthma made worse by cold and damp conditions. Following boiler repairs and draught-proofing, families reported a decrease in asthma flare-ups, which reduced GP visits and hospital admissions for these children.
- Supported independent chronic disease management: The Heat on Prescription programme in Leeds proactively provided fuel payments and home energy assessments for individuals with chronic conditions. As a result, beneficiaries reported they were able to manage their illnesses more effectively at home, reducing the need for visiting the GP or using other healthcare services outside regular check-ups.

Examples from other areas: partnership working to improve health

- The Healthy London Partnership: a recent collaboration between five Integrated Care Boards, regional partners and third-sector organisations to improve health outcomes for people experiencing homelessness
- Sussex Partnership NHS Trust: working with nearby local authorities, the ICS has developed a strategy to integrate action on mental health and housing
- Tees, Esk and Wear Valley NHS Foundation Trust: a collaboration with Home Group to improve hospital discharge for those with severe mental health issues by finding appropriate accommodation and providing support throughout the process

2. Enhanced collaboration across health and housing

Recognising that housing quality and health outcomes are deeply intertwined, the programme promoted cross-sector partnerships to identify and assist individuals at risk of fuel poverty. These partnerships led to increased referrals, resource-sharing and holistic care that improved both housing conditions and health outcomes. Specifically, the interventions:

- Created stronger links between health and housing systems: The programme connected primary care networks with housing services and voluntary sector partners. This enabled referrals of vulnerable residents, such as those with chronic illnesses, from healthcare providers to energy efficiency services. For example, Leeds "Heat on Prescription" programme identified patients with cold-related illnesses and provided them with targeted support.
- Strengthened cross-sector partnerships with voluntary organisations: Partnerships with organisations like Citizens Advice, Together Housing and StepChange provided wrap-around support for beneficiaries by combining financial advice, housing interventions and mental health referrals. This cross-sector collaboration expanded the reach of the programme and ensured residents had access to multiple forms of assistance.

Examples from other areas: building greater collaboration between sectors

- Greater Manchester Health and Social Care Partnership: Better Homes, Better Neighbourhoods and Better Health is a collaboration between the combined authority and housing providers.
- Hampshire and Isle of Wight Integrated Care System funded the Keep Well Collaborative, a collaboration between housing, health, social care, statutory and voluntary organisations, to support people with mental health challenges through a focus on the home. A collaboration between housing, health, social care, and statutory and voluntary agencies.

3. Improved service delivery of existing programmes and referral pathways

By streamlining the referral pathways across health, housing and the voluntary sector, the programme significantly improved the service delivery of existing interventions. Integrating existing interventions with new ones enabled quicker, more efficient support for vulnerable households, ensuring that individuals facing fuel poverty received the right interventions at the right time. Specifically, the interventions:

- Integrated referral pathways: Each place that was part of the Winter Warmth Programme had increased referral numbers due to improved referral systems. This enabled housing providers to refer tenants with health risks to local healthcare teams and vice versa. For example, the Green Doctor Service, active across multiple areas, provided home visits to assess housing needs and referred beneficiaries to primary care or community support services as necessary.
- Increased the coordination of existing service delivery: As part of an improved service, Wakefield's Warmer Homes Project Coordinator served as a single point of contact between various partners, including children's services, housing and community organisations. This role streamlined referrals, enhanced interagency communication, and ensured that residents accessed comprehensive support tailored to their specific needs.

Examples from other areas: jointly designing new services

- Norfolk and Waveney Integrated Care System jointly developed two new services to support people's health in their homes: INTERACT and Safe Habitable Homes Service. These were developed with input from local public health teams.
- Greater Manchester Combined Authority piloted and rolled out GM Housing First: an evidence-based approach to support people with multiple and complex needs to move away from homelessness. This initiative was a collaboration between health, housing, criminal justice services, housing providers, and the community and voluntary sector.

4. Increased capacity of practitioners

As a result of developing new training programmes, expanding services and building partnerships, the programme empowered some health, housing, and voluntary sector practitioners to better identify, support and refer people in need. This approach led to more coordinated service delivery and improved practitioners' ability to address complex housing and health-related challenges. Specifically, the interventions:

- Improved training opportunities for the workforce: In Leeds, a key element of capacity-building was through the development of the Health Partnership Team. Funding was allocated to train primary care professionals, including nurses and community workers, to better identify and support residents at risk of fuel poverty. This training equipped practitioners with knowledge of energy efficiency measures, referral pathways, and how to spot signs of fuel poverty, improving the overall care provided to vulnerable residents.
- Allowed services to expand: In Wakefield, the expansion of the Green Doctor Service included recruiting additional staff to support the growing demand for home energy assessments. These new staff members received training in energy efficiency advice and how to carry out assessments in a sensitive and effective manner. As a result, the team's capacity to deliver services expanded, allowing them to reach more households and provide more personalised support.

Example from another area: building staff understanding and awareness

- Derby City Council developed a Healthy Home Hub, which aims to improve people's health and reduce longer-term demand on health and social care services. The service is a collaboration with health and care professionals and other public, community, charity and volunteer services, who are all able to make referrals.

Key lessons

The Winter Warmth Programme in West Yorkshire demonstrated a number of benefits for local residents and the Health and Care Partnership. This section outlines the lessons learnt from the delivery of the programme's initiatives and design.

Funding and sustainability

Flexible funding is crucial

As part of the Winter Warmth Programme there was a large degree of flexibility given to each area in how it spent the funding allocated. This flexibility allowed local decision-makers to determine spending based on their specific needs and ensured resources were deployed where they could be most effective. Similarly, allowing service providers to reallocate funding between initiatives meant they could adjust interventions in real time and ensured funding was always available where most impact could be achieved.

Plan for success and sustainability

The evaluation of the Winter Warmth Programme identified benefits for both beneficiaries and existing services and systems. However, the relatively short length of the pilot meant its true potential could not be achieved or, in reality, evidenced. Short pilots mean that interventions are often not given enough time to become functional in the long term; it also means that it is difficult to evidence the impact of the intervention and, therefore, secure future funding. Interventions should be funded for a sustained amount of time to ensure their impact can be robustly measured.

Discussions around long-term funding should also begin as early as possible. Leaving these discussions until the end of the pilot means there is little time to secure funding before the initiative ends. Interventions are only likely to become sustainable if ongoing funding is secured or they are integrated into existing service frameworks. Ideally, long-term funding mechanisms to maintain initiatives beyond the project's initial scope should be explored from the beginning of the pilot.

Cross-sector collaboration

Develop objectives and reporting systems as a requirement of funding

In some areas, delays in setting up data-sharing agreements between health and housing sectors hampered efficient service delivery. This meant that referrals from healthcare providers to housing support services were delayed or incomplete, reducing the effectiveness of interventions aimed at addressing health issues. Areas looking to develop a similar programme of work should ensure from the beginning that specific, measurable and achievable objectives are created to help monitor progress of the services and allow stakeholders to understand the impact they are having. Without specific objectives, often, the impact of interventions cannot be measured or compared and, as a result, continued funding may be lost. The creation of standard reporting templates should create a common dataset and allow for the tracking of outputs and outcomes across a programme.

Build strong partnerships with primary care providers

The level of engagement from partners varied across regions and interventions. For example, while Wakefield had strong collaboration between health, housing and voluntary sectors, other areas experienced lower engagement from key partners, resulting in unequal service delivery and less effective support for vulnerable residents. Engagement with primary care providers ensures that health professionals identify and refer vulnerable individuals. Without strengthening these relationships, there is a risk of a lack of promotion of the intervention and fewer referrals from key partners. This can be mitigated by developing an engagement strategy early in the process, including the offer of early training for healthcare workers and opportunities to highlight the positive impact collaboration will have on their role and service.

Benefits to service users

Combine short- and long-term interventions to achieve longterm change

While across many of the places involved in the Winter Warmth Programme fuel vouchers helped households manage short-term energy costs, the intervention did not provide a sustainable solution to fuel poverty. In some cases, beneficiaries faced recurring financial difficulties in subsequent winters, highlighting the need for longer-term interventions such as home energy efficiency upgrades.

Alongside addressing the immediate needs of service users, programmes should look to provide longer-term interventions such as undertaking repairs to the home, eg boiler replacements and insulation upgrades. The Winter Warmth Programme also saw the benefits of providing energy-saving advice to service users as it equipped them with practical tools and knowledge that could help them reduce energy usage and avoid fuel poverty in the future.

Conclusion

The Winter Warmth Programme in West Yorkshire and other initiatives highlighted in this report demonstrate the positive impact improvements to homes can have on people's health and wellbeing. Reduced stress and anxiety were reported in many of the studies as a result of service users feeling more in control of their household bills. Others reported improvements to their physical health, particularly where this was an explicit aim of the initiative and users were targeted based on having certain health conditions. The expectation is that these improvements should translate into reduced need and demand for the NHS.

The examples showcased in this report demonstrate the multiple and varied ways in which a collaboration between housing, health and care services can achieve improvements to people's health. From direct improvements to people's homes, in the form of new boilers or insulation, to helping people out of debt and paying their energy bills. In West Yorkshire, much attention was paid to improving collaboration between the sectors in order to identify those most in need or at risk of deteriorating health as a result of cold, damp homes. This investment resulted in higher referrals across all local areas and the ability to identify specific high-risk population groups, such as children with acute asthma.

Among the studies, there is a distinction between initiatives that deliver ongoing benefits to service users and those that provide short-term relief. Improvements to the fabric of the home or the removal of damp or other hazards are likely to have repeated benefits for residents. While this clearly provides an attractive investment, one-off payments for energy bills are incredibly important for those struggling to afford to keep their homes warm. In West Yorkshire, the flexibility of the funding offered by the Integrated Care System meant that Places could decide what approach would best suit their residents' needs.

If the government is committed to its mission to build an NHS fit for the future by improving the nation's health and moving towards a preventative model of care, taking a critical view of the place where older people spend the majority of their time would be a good starting point. The creation of Integrated Care Systems offers an opportunity to bring together housing, health and care providers and commissioners to support each other's aims. However, further direction is needed.

In order to scale up the positive impact demonstrated in this report, **national government should develop cross-departmental housing strategy** that:

- Commits to improving damp, cold, unsafe homes
- Provides a roadmap for all tenures, including low-income homeowners
- Is reflected in plans across the Department for Health and Social Care, the Department for Energy Security and Net Zero, and the Ministry of Housing, Communities and Local Government
- Considers local delivery mechanisms, eg the Centre for Ageing Better's Good Home Hub model

Integrated Care Systems should be directed by NHS England to involve local authority housing teams when planning services.

Locally, health, care and housing teams should come together to design cross-sector initiatives that serve their mutual interests. Key lessons from past schemes include the need for flexible funding, adapt existing services, set clear objectives, focus on building professional partnerships and provide a combination of long and short-term interventions.

Millions of homes are putting people's health at risk. Without repairs to homes and initiatives to help people stay warm during winter, cold and damp-related health conditions will continue to flare up this winter. GP appointments will be taken up with avoidable illness or injuries, waiting lists will lengthen and people who are medically fit for discharge will remain in hospital as they wait for their homes to be made suitable. Creating healthy homes makes sense from an economic and moral perspective.

References

BRE (2023). Cost of poor housing in England. Available at: https://files.bregroup.com/corporate/BRE_the_Cost_of_ignoring_Poor_Housing_Report_Web.pdf

Brimblecombe, N et al (2024). Care and Place (CAPE): The relationship between older people's housing characteristics and social care needs, care use and care costs'. Care and Policy Evaluation Centre. London School of Economics.

British Heart Foundation (2024a). Will cold weather affect my heart condition? Available at: https://www.bhf.org.uk/informationsupport/support/practical-support/will-cold-weather-affect-my-heart-condition

British Heart Foundation (2024b) Hot weather and your heart. Available online at: https://www.bhf.org.uk/informationsupport/support/practical-support/weather-and-your-heart

Burns, P and Coxon J (2016). Boiler on prescription trial: Closing report. Available online at: https://www.housinglin.org.uk/_assets/Resources/Housing/Research_evaluation/boiler-on-prescription-closing-report.pdf

Centre for Ageing Better (2021a). The Good Home Dialogue. Available online at: https://ageing-better.org.uk/sites/default/files/2021-08/Good-Home-Dialogue-Executive-Summary.pdf

Centre for Ageing Better (2021b). Getting our homes in order: How England's homes are failing us. Available online at: https://ageing-better.org.uk/sites/default/files/2021-02/Getting-our-homes-in-order.pdf

Centre for Ageing Better (2023). The State of Ageing. Available online at: https://ageing-better.org.uk/the-state-of-ageing-2023-4?gad_source=1&gclid=EAIaIQobChMIprHp2ur9hQMVFZhQBh05wwFgEAAYASAAEgIePfD_BwE

Centre for Ageing Better (2024). Counting the cost: The case for making older people's homes safe. Available online at: https://ageing-better.org.uk/sites/default/files/2024-05/Counting-the-cost-report.pdf

Communities and Local Government Committee, Betts, C (eds.) (2018). Housing for older people: Second report of session 2017–19. Report, together with formal minutes relating to the report. House of Commons papers. Session 2017–2019. House of Commons. London.

Department for Levelling Up, Housing and Communities (2023). English Housing Survey 2022 to 2023: Headline report. Available online at: https://www.gov.uk/government/collections/english-housing-survey-2022-to-2023-headline-report

Hackett, P (2018). The hidden costs of poor-quality housing in the North. Available online at: https://www.northern-consortium.org.uk/wp-content/uploads/2018/10/The-Hidden-Costs-of-Poor-Quality-Housing-in-the-North.pdf

Hunter, DJ et al (2018). Evaluating the leadership role of Health and Wellbeing Boards as drivers of health improvement and integrated care across England. Available online at: https://research.ncl.ac.uk/media/sites/researchwebsites/davidhunter/Evaluating%20HWBs%20FINAL%20REPORT%20-%20April%202018%20Final.pdf

Liddell, C and Guiney, C (2014). Living in a cold and damp home: Frameworks for understanding impacts on mental well-being. Public Health 1–4.

Office for National Statistics (2019a). Excess winter mortality in England and Wales: 2018 to 2019 (provisional) and 2017 to 2018 (final). Available online at: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/excesswintermortalityinenglandandwales/2018to2019provisional and2017to2018final

Powells, G et al (2023). Warm Homes Fund Programme evaluation: Final report. Available online at: https://www.nea.org.uk/wp-content/uploads/2022/08/3.-Full-Report-FINAL.pdf

Reynolds, L (2005). Full house? How overcrowded housing affects families. Shelter, England.

Royal College of Occupational Therapists (2019). Home adaptations without delay: A guide to planning and delivering home adaptions differently. Royal College of Occupational Therapists. Housing LIN, London.

Shankley, W and Finney, N (2020). Ethnic minorities and housing in Britain. In: Ethnicity, Race and Inequality in the UK: State of the Nation. Bristol University Press, Bristol.

Sharpe, R et al (2019). Household energy efficiency and health: Area level analysis of hospital admissions in England. Environ. Int. 133, 105164. https://doi.org/10.1016/j.envint.2019.105164

Simpson, M and Henry, H (2016). Closing the health gap – A gap worth closing. How housing can play its part in reducing health inequalities. Practice briefing. Housing LIN, London.

Sawyer, A et al (2019). Fuel poverty reduction evaluation (FuelPRE) – Final report. Available online at: https://www.sussex.ics.nhs.uk/wp-content/uploads/sites/9/2023/08/FuelPRE-final-report.pdf

Swope, CB and Hernández, D (2019). Housing as a determinant of health equity: A conceptual model. Soc. Sci. Med. 243, 112571. https://doi.org/10.1016/j.socscimed.2019.112571

Threlfall, A (2011). Understanding the costs and benefits of fuel poverty interventions: A pragmatic economic evaluation from Greater Manchester. Available online at: https://beatcold.org.uk/wp-content/uploads/2011/09/Awarm-evaluation-final-report.pdf

World Health Organization (2018). WHO Housing and Health Guidelines. Available online at: https://www.ncbi.nlm.nih.gov/books/NBK535294/#:~:text=4Low%20indoor%20temperatures%20and,(COPD)%2C%20and%20infection

Appendix 1: West Yorkshire case studies

Bradford

The local context

- The population of Bradford is approximately 547,000.
- The population life expectancy is slightly lower than the English average, with men expected to live to 77.9 years and women to 81.9 years, compared to 79.5 and 83.2 years respectively.
- 25.7% of the population is under 18, higher than the English average of 20.8%, while the proportion of over-65s is lower, at 15.3% compared to 18.5% nationally.
- Income deprivation affects 17.9% of Bradford's population, disproportionately impacting vulnerable groups such as children and the elderly.
- 21.6% of children and 19% of over-65s experience poverty, figures surpassing the English averages of 17.1% and 14.2% respectively.[3]
- 13.5% of households in the Bradford district live in fuel poverty, exceeding rates for Yorkshire and the Humber region (10.6%) and England overall (10.9%). Bradford ranks 29th highest for fuel poverty among local authority districts in England.
- Fuel poverty in Bradford is associated with adverse health outcomes and can lead to excess winter deaths, with 430 recorded in 2017/18.[4]

Approach to the Winter Warmth Programme

As part of the Winter Warmth Programme, Bradford deployed three interventions: general service expansion; boiler replacements and home improvement; and fuel top-ups. Bradford received £231,000 in funding: £131,000 for general service expansion, £80,000 for boiler replacements and heating system repairs, and £20,000 for fuel top-ups.

3. Poverty in Bradford District | Understanding Bradford District
4. poverty-and-deprivation-jan-2020-update.pdf (bradford.gov.uk)

To address service demand, Bradford recruited two additional staff members: a full-time Green Doctor and an administrator working three days a week. The Green Doctor Service provides free, impartial advice from trained energy efficiency experts. It also offers information on ways of saving energy in the home and referrals to other services and initiatives available. The programme in Bradford aimed to help beneficiaries stay warm and well and to save money on bills.

The Green Doctor Service targeted those referred to them by partner organisations and those who had self-referred with issues around affording to pay for their energy use. There were a number of delivery partners which supported the delivery of fuel poverty interventions alongside Green Doctors. Beneficiaries were signposted to these partners for further support, which included servicing boilers, delivering food packages, and providing necessities, such as bedding. Partners included Inn Churches, Health Improvement and Age UK.

Calderdale

The local context

- The population of Calderdale is approximately 206,600.
- The population life expectancy is slightly lower than the English average, with a male life expectancy of 78.5 years, compared with the English average of 79.5 years, and a female life expectancy of 82.3 years, compared with 83.2 years.
- Calderdale's income deprivation score is higher than the English average, at 14.9% compared with 12.9%.
- 19.6% of children are considered to be in poverty in Calderdale, which is marginally higher than the English average of 17.1%. However, the deprivation of older beneficiaries is comparable with the English average: 14% of older beneficiaries are in poverty, compared with 14.2% of the English average.[5]
- 17.3% of households in Calderdale live in fuel poverty, compared with 13.2% in England. By 1 October 2022, this had increased to 29.23%, with numbers estimated to increase further by April 2023 to 32.42%.[6]

5. Calderdale Health and Wellbeing Strategy 2022-2027
6. Anti Poverty Annual Report 2023 (calderdale.gov.uk)

Approach to the Winter Warmth Programme

Calderdale received £93,000 of funding through the Winter Warmth Programme, which was used to fund the partners and their activities. These partners intended to provide wrap-around support to all beneficiaries accessing the service, with delivery partners signposting those accessing services to different partners for support.

As part of the Winter Warmth Programme, Calderdale deployed:

- Fuel vouchers
- Fuel payments for direct payment methods
- Referral to specialist service for welfare and benefits review
- Budgeting help
- Financial support and advice
- Energy-saving advice
- Telephone advice
- Offer of home visits for more vulnerable residents

These activities were delivered by multiple partners, including:

- Newground Together
- Citizens Advice Bureau
- Together Housing
- StepChange
- Noah's Ark
- Newground Together Energy Advisor
- Calderdale Council
- Halifax Opportunities Trust

Kirklees

The local context

- The population of the Kirklees area is approximately 440,000.
- Life expectancy within Kirklees for a male is 78.5 years and for a female 82.3 years.
- The population of under-18-year-olds in Kirklees is higher than the English average, at 22.6%[7]. However, the population over 65 is lower than the English average, at 17.8%.
- Kirklees's deprivation score of 25.2 is higher than the English average of 21.7.
- 14.3% of the population experience income deprivation in Kirklees.
- Kirklees has a fuel poverty rate of 11.6% (over 20,300 households).

Approach to the Winter Warmth Programme

Kirklees was allocated £184,000 as part of the Winter Warmth Funding, with £130,000 allocated for direct payments and £50,000 allocated for the Childhood Asthma Pilot.

As part of the Winter Warmth funding, Kirklees delivered two projects as part of the Winter Pressures Safe Home Project:

- Direct payment: this was split into direct payments of up to £100 per eligible household via Kirklees Council Local Welfare Provision (LWP.
- Childhood Asthma Pilot (KAHIP): this project supported children aged 0–19 and their families, where the child's housing conditions (cold, damp, mould, etc) had been noted as exacerbating their health condition.

These interventions were open to any housing tenure (council, private, social, homeowner, etc) as long as the criteria were met. These were: Greenwood area, 0–19, and severe asthma condition, where housing condition exacerbated the health condition.

Kirklees aimed to connect with the following local partners:

- Social prescribing link workers
- Kirklees homes and neighbourhoods
- Private sector housing (via Kirklees council housing options)
- Local community and grassroots organisations

7. How life has changed in Kirklees: Census 2021 (ons.gov.uk)

Leeds

The local context

- Leeds has a population of approximately 810,000.
- The life expectancy for males is 78 years, and the life expectancy for females is 82 years.[8]
- 21.1% of Leeds' population is under 18, with 15.7% being over 65.
- Leeds' income deprivation is 14.3%.
- 20.3% of children in Leeds are living in poverty, with 15.6% of older people also living in poverty.
- Fuel poverty in Leeds is estimated to affect 57,492 households.

Approach to the Winter Warmth Programme

In Leeds the allocated funding was £339,000: £230,000 to an existing contract with Leeds Care and Repair, £72,000 for primary care-based proactive targeting, and £34,000 to the Health Partnership team for workforce development.

The intended outcomes of the projects included:

- beneficiaries would report feeling warmer in their homes
- beneficiaries would feel more supported to manage their health at home
- beneficiaries would report an improved sense of wellbeing (captured via SWEMWBS)
- beneficiaries would report more energy-efficient behaviours

To achieve these goals, a number of interventions were undertaken, including:

- extending an existing contract with Leeds Care and Repair (Home Plus Leeds) to increase capacity and provide additional measures to combat fuel poverty
- introduction of the Heating on Prescription programme to provide fuel payments and top-ups
- supporting a primary care based proactive targeting of beneficiaries most likely to be at risk of living in a cold environment
- workforce development of the health partnership team

8. How life has changed in Leeds: Census 2021 (ons.gov.uk)

Wakefield

The local context

- The population of Wakefield is approximately 353,000.
- The life expectancy of men is 77.7 years and of women 81.6 years.
- Wakefield has an income deprivation score of 14.7%.
- In 2020, 17.3% of the population experienced fuel poverty.

Within Wakefield, the highest levels of fuel poverty are in:

- Airedale: 36% of the population in fuel poverty
- Lupset: 36% of the population in fuel poverty
- Peacock: 33% of the population in fuel poverty

Approach to the Winter Warmth Programme

The allocated funding in Wakefield was £153,000. However, Wakefield secured further funding through Core20Plus5 for three years for a Warmer Homes Project Coordinator. This led to the reallocation of £63,000 to recruit an additional temporary fuel poverty/cold homes worker to liaise with residents and deliver energy efficiency interventions.

The objectives of the Winter Warmth Programme in Wakefield included:

- Supporting families, including home visits, telephone support, online/ digital support, drop-in events, website and social media
- Providing single point of contact where professionals working with families could obtain advice and support on financial issues and make a referral to HWF as required
- Offering training for all key agencies working with children and families in the Wakefield district to improve partnership, skills in spotting the signs of financial difficulty, opening up conversations with families about finances, and making appropriate referrals
- Working closely with existing local advice services, avoiding duplication and maximising capacity in the system

Four projects were delivered to meet these objectives, including:

- Warmer Homes Project Coordinator
- Energy Debt Fund
- Minimum Energy Efficiency Standards regulations for private rented sector projects
- Wakefield District Housing's Healthier Wealthier Wakefield Families initiative

The projects mainly targeted:

- Poorly maintained housing, which can lead to other health problems such as trips and falls, dampness and mould
- Low-income households
- Private rented properties with poor conditions

Centre for Ageing Better

Let's take action today for all our tomorrows.
Let's make ageing better.

The Centre for Ageing Better is pioneering ways to make ageing better a reality for everyone, including challenging ageism and building an age-friendly movement, creating age-friendly employment and age-friendly homes. It is a charitable foundation funded by The National Lottery Community Fund and part of the government's What Works Network.