WARM HOME PRESCRIPTION
IMPACT ON HEALTH AND WELLBEING AND ATTITUDES TO HEAT
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This report was authored by Vivien Kizilcec, Tom Furlong, Rebecca Wilkes, Irene Garcia, Rose Chard and Becky Sweeney in September 2023 as part of the Energy Systems Catapult’s Warm Home Prescription programme.

This work would not have been possible without the time and effort of residents that received Warm Home Prescription across England and Scotland, the NHS partners (NHS Grampian, Holgate PCN, Lewisham and Greenwich NHS Trust and NHS Gloucestershire), North and West Gloucestershire Citizens Advice and the energy advice partners (SCARF, NEA, SELCE and Severn Wye Energy Agency). The trial is supported by bp.

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Living in a cold home can raise the risk of a number of health conditions, with an estimated 10,000 people dying each year across the UK as a result¹. The NHS spends over £860 million² treating people living in cold homes in England alone. To address this issue, Energy Systems Catapult invented ‘Warm Home Prescription’ (WHP) in response to the challenge of helping low income and vulnerable individuals stay warm, well, and out of hospital through the winter months. This 2022-23 trial could not have been delivered without the time and expertise of our NHS partners (NHS Grampian, Holgate PCN, Lewisham and Greenwich NHS Trust and NHS Gloucestershire) and local energy advice organisations (SCARF, NEA, SELCE and Severn Wye Energy Agency). The trial was funded by bp.

WHP finds people with health conditions made worse by the cold and gives them immediate, effective support by providing them the help they need to keep their home at a warm, healthy temperature. To enable the large-scale rollout of the service, a digital solution was created by the Catapult.

The service works to deliver rapid, practical help:

- NHS staff (including social prescribers and public health teams) identify eligible recipients
- Recipients are contacted by the NHS and offered a “warm home prescription” to be delivered by local energy advisors

This report outlines the impact of the 2022/23 WHP trial on recipients and delivery staff, as reported by the participants themselves. This service trial delivered what was needed to provide a warm home to over 800 households across 4 areas of England and Scotland through collaboration with 9 organisations working on health and energy.

Overall, WHP had a positive impact on recipients reported mental and physical health and increased their willingness to consider home retrofit measures.

Recipients were able to heat their home more and to a higher temperature, and as a result, their reported mental and physical health, as well as general wellbeing, improved.

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Most WHP recipients heated their home to healthy temperatures throughout winter.

- 79% of recipients reported that WHP had a positive effect on their physical and mental health respectively.
- 81% of recipients reported heating their homes to a higher temperature than in the previous winter.
- 93% of recipients indicated they now place a greater importance on being warm than they did previously.
- 76% of recipients reported that after WHP they were more likely to make improvements to their homes, to make it more energy efficient and easier to heat.
- 98% of recipients would take part in WHP again, mainly to be warm and comfortable, gain health and wellbeing benefits and to be less worried about bills.
- 93% of delivery staff would like to see WHP offered to recipients next winter, mainly as they believe it will reduce NHS pressures and costs through prevention and helps vulnerable people.

- 70%
The current cost of living crisis as well as unprecedented demand for the health service emphasises the importance of exploring possible solutions like WHP. Most recipients reported that WHP was able to help them feel physically and mentally better. This service could help address these challenges in future. The increased willingness shown to consider energy efficiency measures to remain warm highlights WHP could also play a role in the transition to reducing domestic carbon emissions.

Due to the success of the impact of WHP service, ESC is currently designing and testing how a low carbon Warm Home Prescription service could be delivered. In the summer 2023, over 300 WHP recipients were offered significant home energy improvements (e.g. heating controls, insulation, low carbon heating) with the aim of reducing the amount of energy needed for their home to achieve warm, healthy temperatures. This has the potential to reduce the cost of householder’s energy bill, reduce carbon emissions associated with home heating and reduce the risk of damp and mould developing.

Based on what we have learned from the work to date we are exploring ways this service can be expanded across the UK to support more recipients, how we improve the delivery experience and provide support to recipients with a wider range of health conditions.

We are also investigating possible delivery mechanisms that could be used to scale up the service and how energy suppliers and social housing providers could be involved in delivering it in partnership with the NHS.

Further insights will be available in winter 2023 and spring 2024. More information will be available at Warm Home Prescription - Energy Systems Catapult.

Contact Energy Systems Catapult if you are interested in learning more about WHP and how you could get involved in future.
Energy Systems Catapult
whp@es.catapult.org.uk
Warm Home Prescription works to find people with health conditions made worse by the cold and gives them immediate, effective support to keep their home at a healthy, warm temperature.

The 2022/23 service was run through partnerships with NHS and energy advice organisations across 4 areas in England and Scotland and supported 823 recipients in total. Health professionals identified recipients at risk of being admitted to hospital if they are living in a cold home. An energy advice organisation then gathered information about the property and heating system. Following the results of the assessment tool within the ESC’s Warm Home Prescription Digital Platform, the energy advisor credited the amount needed to keep their homes warm to their energy account and offered any improvements needed to their heating controls and heating system. A smaller trial piloting this concept was conducted in Gloucestershire³ during the 2021/22 winter, which this larger scale trial learnt from.

During summer and autumn of 2023, over 300 Warm Home Prescription recipients have been offered home energy improvements to reduce the energy consumption needed to achieve healthy temperatures. These improvements include heating controls, insulation and low carbon heating. Characteristics of the property and householder choice determine what is offered and installed in the homes.

Objectives & Methodology

Energy Systems Catapult conducted research during the winter trial of WHP in 2022/2023, in order to understand:

- The impact of WHP on heating behaviour and health and wellbeing, as reported by recipients
- The impact of WHP on recipients’ willingness to undertake home retrofit changes
- Recipients’ and delivery staff experience of WHP.

Research included qualitative interviews (n=30) and two postal/online surveys (n=496, n=513) with WHP recipients. Delivery staff were invited to take part in an online survey (n=30) and interviews (n=4) were conducted with those leading the delivery teams.

Recipients were able to get warm, improving their reported health and wellbeing.

“This was a god send. I suffer from chest infections and this was the first winter that I did not get one in a lot of years.”
- WHP recipient
More recipients were able to get warm with Warm Home Prescription

Most recipients that participated in WHP reported heating their home more often and to a higher temperature and were able to keep comfortably warm during WHP.

Living in cold homes, below 18 degrees, raises the risk of strokes, heart attacks and respiratory diseases, in particular for older people and those with pre-existing health conditions⁴. WHP aimed to support recipients to enable them to heat to healthy temperatures and reduce these risks.

As a result of WHP, around 4 out of 5 recipients reported heating their homes to a higher temperature than in the previous winter. Moreover, 51% indicated heating to a much warmer temperature than before, by 2 degrees or more.

Nearly all recipients (90%) reported using their heating as much as they wanted to whilst on WHP. These recipients fit into three groups based on how often they had their heating on before and during WHP: new heaters, continual heaters and infrequent heaters (Figure 1). Overall, 76% usually or always had their heating on during WHP. It should be noted that continual heaters group were heating before WHP, regardless of whether they could afford it, with a few interviewees citing health reasons.

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Figure 1 Three heating groups based on recipients reported usual heating use before and after WHP. This includes recipients who heated as much as they wanted to and completed both surveys (Recipient survey, n=377)

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Several recipients indicated that prior to WHP they manually turned their heating on for only a few hours during the day, when they were cold, due to the high cost of bills. During WHP many highlighted how much more comfortable they felt being able to have the heating on for longer and not wear as many extra layers.

Recipients’ health and way of life improved during Warm Home Prescription

Recipients indicated an improvement to both their mental wellbeing, and their physical wellbeing since receiving WHP. They said they felt less burdened and could comfortably spend time at home and invite others to join them.

As intended, given recipients’ changing heating behaviour, WHP led to improvements in recipients’ reported health. Overall, 68% of recipients felt healthier since receiving WHP. Both the new heaters and continual heaters groups were significantly more likely to report feeling healthier compared to the infrequent heaters group (Figure 2).

Recipients highlighted that they could see improvements in their health, such as needing to take less medication or having fewer chest infections compared to previous winters.

"WHP made a big difference being able to keep warm. I had no hospital admissions this winter but 3 or 4 in previous years."
- WHP recipient
The new heaters group were significantly more likely to report a positive effect on their physical and mental health compared to the infrequent heaters group (87% vs 67%; 81% vs 59%).

Looking more specifically at the mental health improvement, the majority of recipients (82%) felt more positive since receiving WHP, almost half of them significantly more so. Compared to before WHP, 7% fewer recipients reported feeling anxious or depressed since receiving WHP.

Part of the reason, WHP may have had a positive impact on recipients' mental health was that for many (60%), WHP enabled them to worry less about their finances. It also meant that the majority of recipients (71%) were able spend more on other essentials, such as bills and food. The new heaters group were significantly more likely to report this compared to the infrequent heaters group (Figure 4).

Many described the peace of mind they got from knowing that they were receiving help for their energy bills. The cost-of-living crisis and the energy price hikes were also mentioned by several recipients.

"It helps you get along, to do more things in the house. But if you are cold, you lie under the covers and get nothing done."
- WHP recipient

![78% Positive effect on physical health due to WHP](image)

![70% Positive effect on mental health due to WHP](image)

Figure 3 Recipient’s agreement that since receiving WHP, the temperature of their home had positively affected their mental and physical health (Recipient survey, n=513)
Recipients were able to spend more money on other essentials during Warm Home Prescription

Figure 4 The proportion of each heating group who felt WHP enabled them to spend more money on other essentials. (Recipient survey, n=329)

**New Heaters**

£ + 81%

**Continual Heaters**

£ = 73%

**Infrequent Heaters**

£ × 57%

"My husband came downstairs a lot more because I was heating in the living room also."
- WHP recipient

Recipients’ overall wellbeing improved

WHP improved many recipients’ overall wellbeing. This includes over half of recipients reporting that they were less likely to spend time in bed or under blankets. Recipients were able to be more active in the home and not remain in one place with hot water bottles. WHP also led to many recipients being more likely to use additional rooms within their home compared to beforehand. A few recipients mentioned that before WHP, they had limited themselves to staying in one room during the day, as they struggled to afford to heat more rooms.

Having their heating on for longer or at a higher temperature may also explain why recipients (64%) said they were more likely to spend time at home since receiving WHP. Moreover, the new heaters group reported being significantly more likely to invite guests to visit compared to the infrequent heaters group (84% vs 76%).

"There’s no way we’d have been able to heat the home and pay everything else like council tax, water and heat and our food. [...] Even my partner said the other day we wouldn’t have got through without this."
- WHP recipient
WARM HOME PRESCRIPTION DELIVERS A POSITIVE EXPERIENCE FOR RECIPIENTS AND THE HEALTH AND ENERGY PROFESSIONALS DELIVERING IT

“I believe the scheme is a proactive approach which is benefiting recipients and keeping people out of hospital potentially, reducing costs and helping the economy.”
- Health professional
Recipients were satisfied with Warm Home Prescription and would take part again

Recipients had a positive experience of WHP overall. Coupled with the impact described in this report, this meant 98% of recipients would take part in WHP again.

Recipients and delivery staff highlighted that recipients had recommended WHP to friends and relatives, with some of them even calling up to ask whether they could also take part themselves.

Recipients particularly valued the level of communication and found taking part in service straightforward and quick. In interviews, recipients highlighted that they had few questions or concerns about WHP, particularly after their account was credited, and struggled to identify any future improvements of WHP.

The interviews also highlighted that WHP helped support people in a range of circumstances and took people’s specific needs and requirements into account. Home visits were arranged where necessary and relatives could easily speak on behalf of recipients to make the experience easier. WHP also included people without gas central heating and those with prepayment meters.

### Figure 5

Key Warm Home Prescription benefits according to recipients (Recipient survey, n=462)

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To be warm and comfortable</td>
<td>&quot;I was so much more comfortable in a warm house, and it definitely helped with my mental health problems&quot;</td>
</tr>
<tr>
<td>2. Gain health &amp; wellbeing benefits</td>
<td>&quot;This is the first winter I haven't been admitted to hospital with breathing problems. I was warm and cosy for the first time in the last 4 years&quot;</td>
</tr>
<tr>
<td>3. To feel less worried, particularly about bills</td>
<td>&quot;I simply could not afford to heat my home [...] I would have to choose between heating or eating. No way I could have done both.&quot;</td>
</tr>
</tbody>
</table>

98% recipients would take part in WHP again
Delivery staff found it easy to deliver Warm Home Prescription and want it to scale up

Both health professionals and energy advisors were satisfied with their WHP experience, highlighting in the interviews that they found the process quite straightforward from start to finish (Figure 6).

Nearly all delivery staff would like to see WHP offered to recipients again. The key reasons behind this were believing it could help reduce NHS pressures and costs, whilst also helping vulnerable people (Table 1).

Key benefits of Warm Home Prescription

Reduce NHS pressures and costs through prevention (e.g. freeing up beds in hospitals)

Helps vulnerable people (i.e. chronic health conditions exacerbated by cold weather, low income)

Reduced financial pressures for recipients, so they do not need to worry about their bills and becoming unwell

Allows recipients to adequately heat their home and feel comfortable

Table 1 Delivery staff’s key benefits of offering WHP to recipients (Delivery staff survey, n=30)

"We are surprised at how really, really positive these calls were. The team felt as though they were really making a difference to the people they were calling."
- Health professional

Satisfied with overall WHP experience

94% Health professionals

77% Energy advisors

Figure 6 Delivery staff’s satisfaction with overall WHP experience (Delivery staff survey, n=30)

The vast majority of delivery staff believe scaling up WHP will help reduce NHS costs overall. Health professionals particularly highlighted the benefit to secondary care, although they thought it could also reduce costs the primary, social and personalised care sectors respectively (Figure 7).

Almost all the delivery staff agreed that prescribing or delivering WHP was quick, enabling them to support many households in a short time. Moreover, all health professionals reported finding it easy to prescribe WHP, with more than half reporting they could easily fit WHP into their usual workload.

The health professional team leads highlighted that the team found the calls with recipients positive and were delighted to see how many people they were able to support. They also used the opportunity to signpost recipients to other support services where needed, for instance housing or family concerns.

"The links between poor health and cold homes is well documented and bringing these two agendas together (and securing long-term buy in from the NHS) will lead to tangible outcomes for the most vulnerable recipients."
- Energy advisor
OPPORTUNITY FOR WARM HOME PRESCRIPTION TO SUPPORT HOME ENERGY IMPROVEMENTS
Providing energy bill assistance is one way to better enable people to maintain a healthy home temperature. Another approach to deliver a warm healthy home is to reduce the energy it takes to heat a home to healthy temperatures. This approach could also reduce carbon emissions. After receiving WHP, recipients’ attitudes towards implementing energy efficiency measures were explored.

Recipients value heat more and are more willing to consider energy efficiency measures. Designing energy efficiency measures as a way to maintain a healthy temperature at home may increase their appeal.

Since receiving WHP, almost all (93%) recipients indicated they now place a greater importance on being warm than they did previously, with 94% indicating they would choose to heat their home to a healthy temperature all of the time if they could afford to do so. At the end of the prescription period, 76% of recipient’s indicated they were more likely to make improvements to their homes, to make it more energy efficient and easier to warm (Figure 8). A common reason cited for this during the closing interviews, was their positive heat experience this past winter.

"I’m old and ill and don’t have too many years left so I should make sure to keep myself warm and healthy."

More likely to make improvements to home to make it more energy efficient

<table>
<thead>
<tr>
<th>Agree</th>
<th>Neither</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>76%</td>
<td>20%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Figure 8  How likely recipients felt they were to consider making energy improvement measures to their home after receiving WHP (Recipient survey, n=484)

A low carbon Warm Home Prescription service may be able to help address some of the barriers to retrofit.

Positioning energy efficiency measures as a means to help maintain a healthy temperature at home may appeal to some groups more than the benefits that are currently being promoted, such as reduced carbon emissions or lower energy bills. A low-carbon WHP service will need to be able to address the key barriers that people currently face when considering installing retrofit measures.

Factors which impact health were the most important driver to implementing energy efficiency measures for WHP recipients.

Recipients indicated the importance of different drivers and barriers for installing energy efficiency measures in their home. Those that had a direct impact on health and wellbeing were most commonly cited as being very important (Figure 9). An increased ability to keep warm at home was the most important outcome, followed by measures that enabled occupants to feel healthier and reduced damp and mould. Drivers and barriers relating to cost were also important e.g. a reduction in energy bills, any upfront costs and seeing a return on any investment.
A customer proposition that focusses on the ability to warm the home to a healthy temperature, whilst addressing cost concerns is likely to be attractive to people with health conditions made worse by the cold.

A future low-carbon Warm Home Prescription service will need to rely on strong partnerships with health professionals

Many recipients indicated that they had not investigated implementing energy efficiency measures in any detail. A prompt from a trusted health professional to explore this for the sake of their wellbeing, might be one way to change to this. 68% of recipients indicated they would trust this type of advice on energy efficiency measures if it was to come from the National Health Service. This was only slightly behind the most trusted type of organisation, a local advice organisation (e.g. Citizens Advice), which 75% of recipients indicated they trust. Energy Suppliers were felt to be the least trusted, with 55% of recipients indicated they’d consider advice from them.

Most recipients would trust advice from the NHS if they suggested looking at ways to improve the energy efficiency of their home, to promote wellbeing.

"I kind of got to the stage where literally and metaphorically I’m comfortable with being uncomfortable. If there were not a repeat of the Warm Home Prescription I kind of need to think about how do I address that to try and maintain those kind of temperatures without necessarily bankrupting myself." – WHP Recipient

Figure 9 Drivers and barriers recipients consider very important if considering implementing energy efficiency measures at their home (Recipient survey, n=513). Note the graph does not include where recipients have indicated the measure is only somewhat important

"[Heat is] so important and until you actually live with the heat you don't realise. I haven't realised that I was freezing cold."
APPENDIX 1: METHODOLOGY

Research explored the impact of WHP on recipient health and wellbeing, and the experience of WHP service for recipients and those working to deliver it.

To understand recipients’ experience, the following research was conducted:

• Telephone interviews with recipients:
  - A 10- to 20-minute-long telephone interview with 9 recipients shortly after their energy account had been credited by WHP team
  - A 30- 45-minute-long interview with 21 recipients after the service closed at the end of the winter

• Two quantitative postal & online surveys sent to recipients after being prescribed and again as the service closed

  Sample:
  - Survey 1: 496 recipients
  - Survey 2: 513 recipients
  - Both surveys: 388 recipients

• Salesforce data analysis of all WHP recipients (n=823) to understand who WHP supported

To understand the experience of those delivering WHP, the research included:

• A 10-minute-long online survey completed by 17 health professionals and 13 energy advisors delivering WHP

• A 15-minute-long telephone interview undertaken with 3 health professional team leads and 1 energy advisor leading the delivery
APPENDIX 2: OVERVIEW OF WARM HOME PRESCRIPTION RECIPIENTS

A good spread of vulnerable customers was supported by WHP.

There was a broadly even split in the gender of those supported by WHP and the majority of recipients (75%) were aged 65 or above with few under the age of 45.

Most recipients (85%) reported an income of £20,000 or less before WHP (Figure 6). This highlights that WHP generally reached its target population of people that may struggle to afford heating their home to healthy temperatures. Many recipients (38%) reported they were ‘just about getting by’ financially and a quarter were finding it quite or very difficult.

Most WHP recipients were either owner/occupiers (48%) or lived in social housing (45%). There was a mix of property type, with the majority living in semi-detached or terraced homes. The housing stock was generally old with only 5% of the buildings recipients live in built after 1999.

A total of 823 recipients received WHP across Aberdeen, Tees Valley, Gloucestershire and London (Figure 10).

Figure 10  WHP recipients by area (Salesforce, n=823)

Figure 11  WHP participants by area (Salesforce, n=823)

Most WHP included households regardless of their heating system, with the trial including 9% of recipients with no-working gas central heating. A range of meter types were also supported, with smart meters (38%) and standard meters (37%) being the most common and around a quarter having prepayment meters.

A total of 823 recipients received WHP across Aberdeen, Tees Valley, Gloucestershire and London (Figure 10).

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