



centre for
sustainable
energy

**Supporting vulnerable consumers to
benefit from their smart meters**



Partners

- Centre for Sustainable Energy
- British Gas
- Joseph Rowntree Foundation
 - With support from Arthritis Care (now Versus Arthritis)



Trial with two groups of vulnerable customers

- People with arthritis
- Low income families with children

Tested effect of enhanced advice to vulnerable customers at two key points in smart meter installation journey:

- At installation visit +
- Follow-up advice - either
 - Home visit by CSE adviser
 - Phone advice by BG adviser





Research Aims

To understand the effect of additional support during the smart meter journey for target vulnerable households to realise benefits of smart metering.

Research Questions

- What **benefits** are achieved by vulnerable customers whose smart meter journey involves an enhanced installation visit and follow up support?
Changes to their **energy usage** and **heating patterns**.
- What is the specific contribution of the **enhanced installation visit** to the achievement of benefits?
- What is the difference in benefits for customers who receive **follow-up support** in the form of a **home visit** or over the **phone**?



Trial groups recruitment

Target groups of 'vulnerable' customers

- People with arthritis
- Low income families with children
- Recruited from British Gas PSR & WHD customers in York and Bristol
- **25** recruited (target of 90) from **2,743** outbound calls by British Gas
- 2 homes where smart meter installations did not proceed

Trial groups (n=23)

- Home visit trial group (n=12)
- Phone advice trial group (n=11)



Hoped-for benefits for consumers

- Consumer **confidence** and **understanding** of how to use their in-home display as an aid to monitor their energy usage and **feel more in control** of their household energy costs
- Appropriate adjustments to **energy usage** using IHD as aid
- **Optimise their heating patterns** in accordance with their needs (within healthy ranges of 18-21C / up to 25C for those with health conditions).
- Improved **comfort** and **wellbeing** associated with **reduced worry** and increased confidence to manage bills
- **Access further support** to address issues related to their energy usage



Enhanced smart meter journey

Installation visit

- Installers trained by CSE and Arthritis Care
- Vulnerability checklist & energy advice 'prompt sheet'
- Leave behind materials for customer (CSE smart energy guide, Energy Saving Trust factsheets in addition to British Gas booklet)



Follow up advice

- Support (and demo) how to use different functions
- Connect info on IHD with people's own energy practices
- Build energy literacy, make optimal energy choices
- Wider energy advice – especially thermostat / heating settings



Research methodology

Data Collection

- Pre-trial household interview
- Post-trial interview
- Post installation survey (self-complete – postal return)
- Temperature logger



Analysis

- Qualitative analysis of interviews
- Quantitative comparison of reported attitudes and behaviours
- Analysis of changes in heating patterns



Findings: the installation visit

I do remember that he did say to me what everything was. He didn't go [speaking more quickly] this is that, that's that, that's that, that's that...[speaking at usual speed] He was careful and slow ...he didn't bombard me ... and he did check that I understood before he moved on to the next thing

Couple with five children / high electricity usage

To be honest with you, I don't think we had much time because she was there an hour doing the fiddling with the box, then she came, and she plugged that in, she just said a few things, this, this, this and that, she said 'There's a booklet, if any problem just ring' and that was it really

Single mum with multiple health conditions – prepayment user



Advice from installer and follow up

“Maybe the lad in the office doesn’t go out and about and see what people are like and see what heat they need, you know what I mean? So maybe he’s just reading from a script, whereas the lads who are out and about doing the installations have a better idea of the properties they’re going into, don’t they?”

Woman with arthritis – comparing advice from installer and follow-up phone call

“The woman on the phone, she couldn’t have helped me more. She was amazing. The guy who came ... it was like he just wanted to get here and get out ...But yeah the woman on the phone was miles more helpful.”

Woman with arthritis – comparing advice from installer and follow-up phone call

What she was saying, I understood, but I kind of knew a lot of it because I’d already been told by the British Gas guy, so some of it I didn’t really need. But she would have been helpful for somebody that didn’t know, because she explained it thoroughly

Mum in her twenties with young children - talking about home visit advisor



Using the IHD

- Most consumers used IHD to check their use and costs
- Those who received a home visit appreciated further demonstration of IHD to improve confidence using wider range of functions
- This contributed to improved energy literacy



Functions used	Home visit (n=12)	Phone call (n=11)
See their costs over a day or over a week	10	10
Check their real time use	9	9
Find out the costs of specific activities	6	3
Monitor their use over time	5	2
Top up balance / alerts	4	1
Set personal budget	3	2
Work out baseline usage	2	2



Follow-up IHD demo builds confidence

"She went through things a little bit more thoroughly with me, 'cause I think with something like that you're a bit frightened that you're gonna press the wrong button and erase everything somehow... And Mister Gas'll be coming knocking on the door, "what've you done with my thing?"

"Not surprised me, but things that I'd never thought of doing, like being able to see what I used, like, last week and being able to look like that, because obviously with a normal meter you don't have that option, and you have no idea what the numbers on the normal meter mean anyway".

Full-time worker in her early sixties (long term health condition)

"I'm not very good at things like that and I don't really like referring to manuals, so it was nice actually she could show me a little bit more. I pick things up more if someone shows it to me."

Single mum on PPM



IHD may trigger anxiety

"I am that type of person to worry anyway, and if something is constantly showing me something and I can't figure out a way to rectify it, it makes you go I don't know what to do."

Woman with existing mental health condition

"She was obsessed with it because she sits there, and it was right in front of her and that's why I've laid it on its back now, just looking upwards. I said to her we're using the same amount of gas and electric as we were before, it's just that now you can actually see exactly what it was, you know?"

Husband /older couple – both with long term health conditions – declined advice



Energy literacy

Change in self-reported knowledge of daily spend	Home visit (n=12)	Phone call (n=11)
Improved knowledge	10	7
No change / reduced knowledge	2	4

- Most reported improved knowledge of their daily energy spend
- Nearly all who received home advice visit improved their knowledge
- Impact on knowledge of the energy usage and costs of specific activities was inconclusive



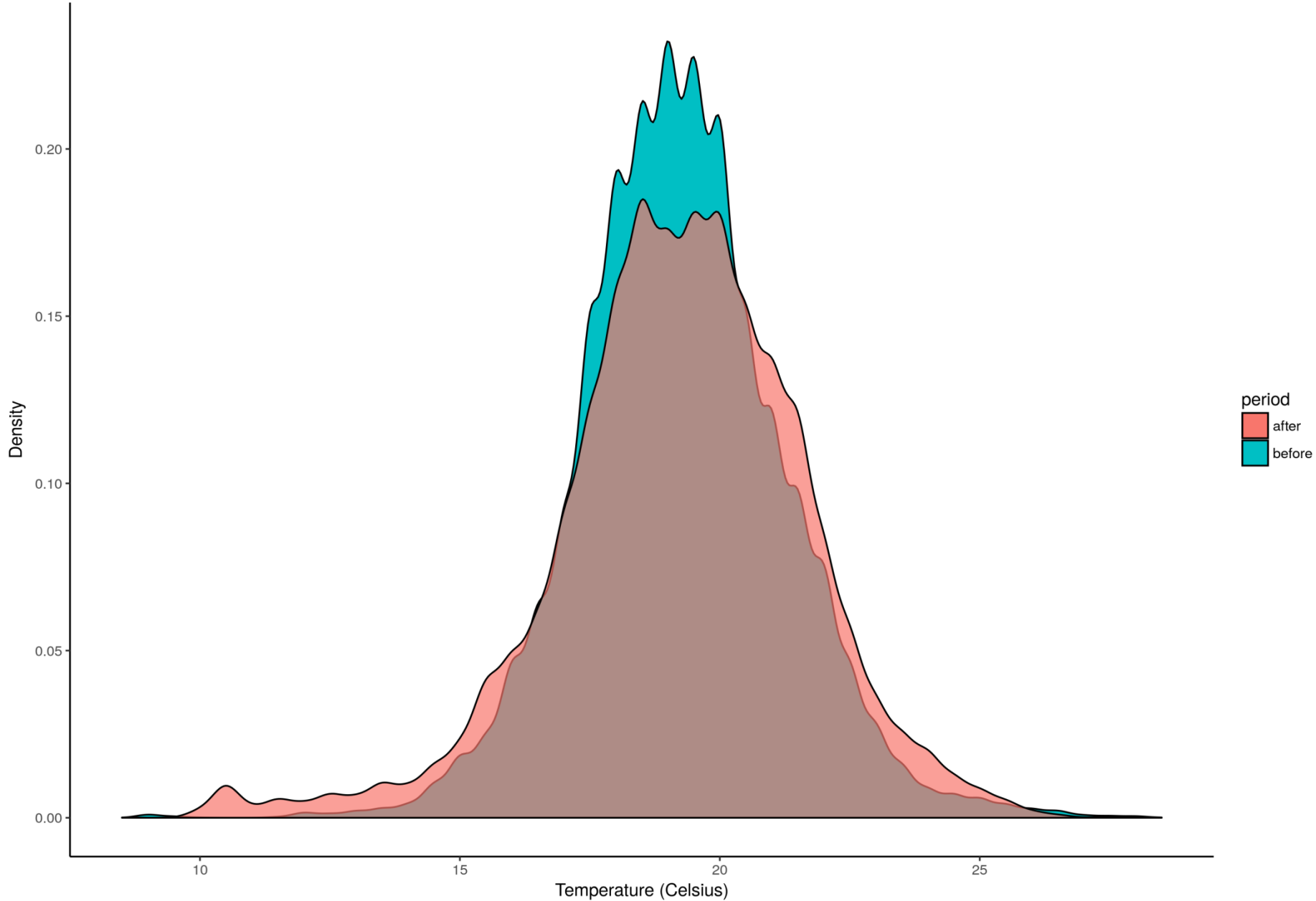
Heating patterns after enhanced installation and follow-up advice

“If you feel warm, comfortable, you’re alright. If I get cold, I’m irritable and really uncomfortable”

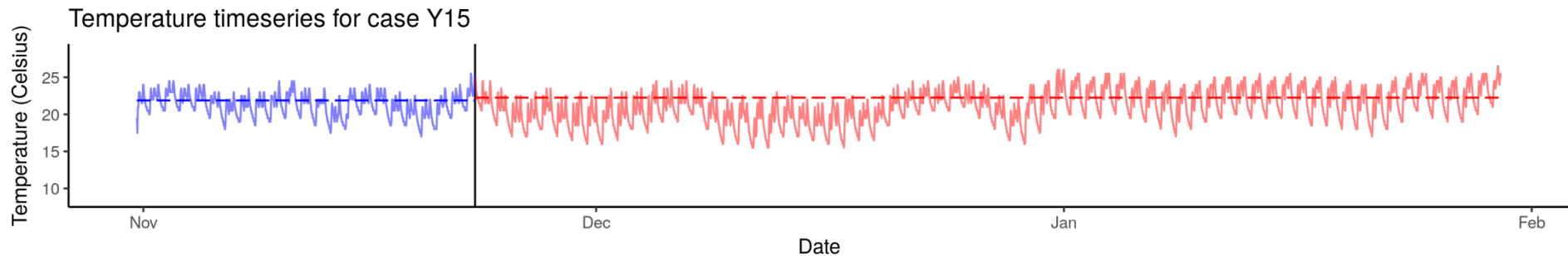
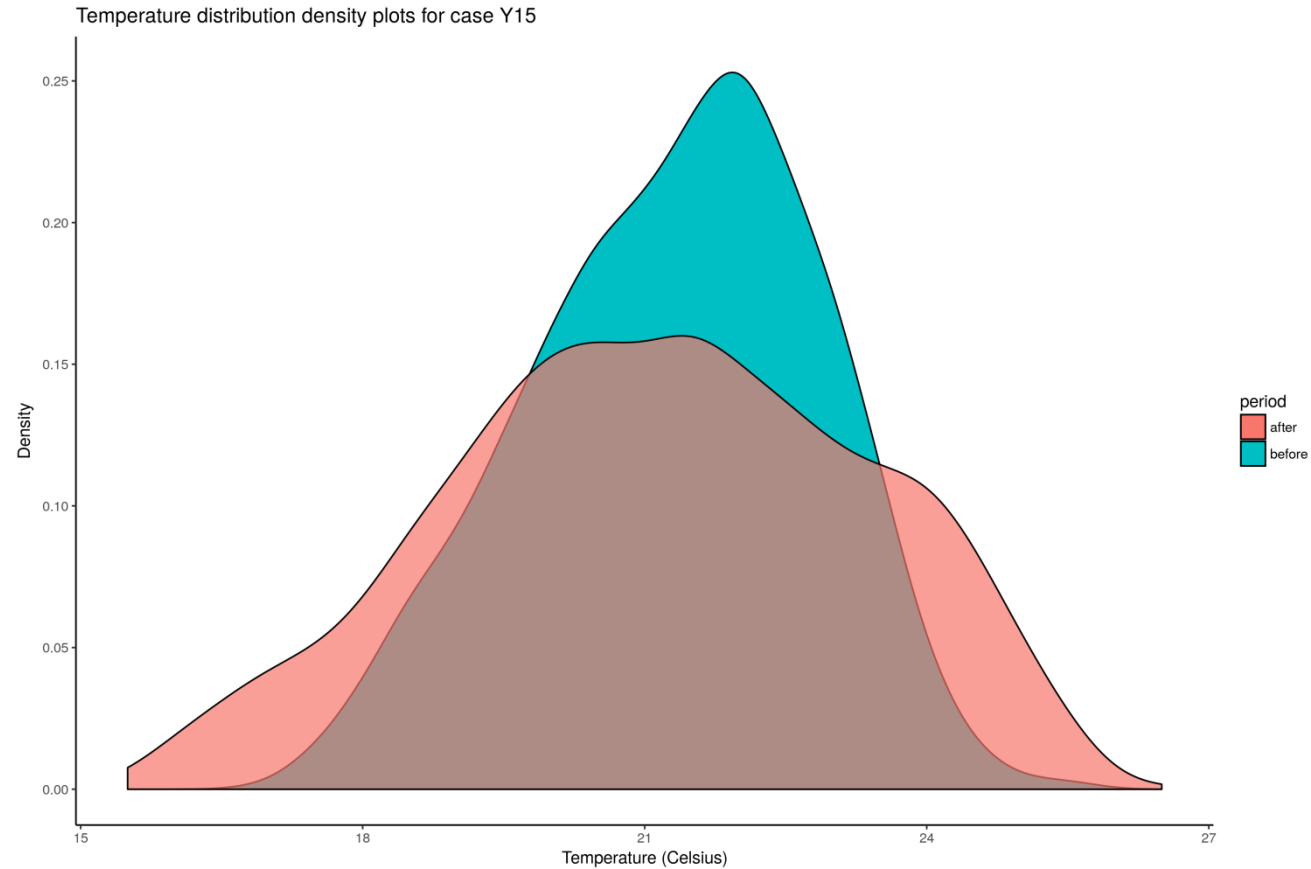
Single mother with multiple health conditions



Before and after temperature – all participants



“Obviously, keep doors shut, windows shut, try an extra cardigan or something like that, if you’re really cold and then, obviously, if that doesn’t work, then you’ve got to turn the heating up a bit, but try to control it as much as I can.”





Heating behaviours and health

- Participants with arthritis say they already avoid waste
- Most already heated home to 18-21°C when at home in the daytime and early evening – and continued to do so after
- No pattern identified of turning thermostat up higher or keeping heating on for longer after
- Continue to balance concern to keep warm for health reasons with concern to be able to afford heating bills



Mental health

- More participants than not reported reduced levels of worry about their energy bills following enhanced installation and follow-up advice delivery
- Individuals who were already particularly anxious about the costs of heating reported heightened anxieties in response to the increased visibility of their energy usage from their new IHD

Follow-up advice group	AT BASELINE – some level of worry about energy bills	AFTER - Reduced level of worry	AFTER - Increased level of worry
Home visit	10	6	2
Phone call	6	3	2



Other benefits appreciated in relation to health

- Not needing to take meter readings - appreciated by participants with health conditions and associated impairments (visual, mobility, memory, poor mental health)
- Not needing to go out to shops to top-up – appreciated by participants with mobility issues & social anxiety



Conclusions

- Value of unrushed, step-by-step and face-to-face demonstration of IHD demonstration.
 - By installer. By home visit adviser. Preferably by both.
- Home visit follow-up advice may help overcome fear / reluctance to use in-home display and build confidence
- Qualitative evidence in support of value of follow-up home advice visit to low income household with cold-related health condition
- Tensions between promise of increased control and limited energy-saving options available to low income households
- IHD as potential anxiety trigger for those with existing mental health conditions - implications for take-up of follow-up support



Implications for policy makers

- BEIS to work with Smart Energy GB and energy suppliers to consider how to make smart meter offer feel relevant to vulnerable households
- BEIS need to consider how to guarantee that low income households will be protected financially beyond the lifetime of price caps – automated switching
- SMICOP remains crucial in requiring IHD demo and *tailored* energy efficiency advice – to circumstances, not ‘interest’



For installers

- Checklist of vulnerability risk factors and circumstances.
- Set of prompts to help installer offer appropriate advice messages.
- Tailored advice to customers with cold-related health conditions / complex circumstances may require a longer installation appointment to allow for customer-led pacing of IHD demo and more time to offer energy advice.
- Deliver an unrushed IHD demonstration - check that the customer understands each function before moving on. Don't just leave guide.
- Encourage regular but not excessive usage of the IHD as a monitoring tool. Follow IHD demo with tailored energy advice that consumers can act on.
- Advice to those at risk of under-heating should cover use of heating controls / measures to keep warm affordably.
- Installers should be wary of advice to turn down thermostat as a way to save money.



Follow-up advice

- People in complex circumstances are likely to need a home visit for advice to be sufficiently tailored.
- ‘Triage’ based approach to follow-up advice, with face-to-face demonstration available.
- Pre-booking of follow-up advice strongly preferable.
- Develop effective onward referral routes to funded measures / advice.
- Visit length, structure and behavioural messaging require further tailoring to the different circumstances of vulnerable consumers.
- Social housing providers should seek to link smart meter / advice on using IHD to more general energy advice.
- Social housing providers investment in housing stock heating system performance and energy efficiency key way to support health of tenants.



Thank you

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Report available at: cse.org.uk/projects/view/1353