

Boiler on Prescription



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About Gentoo Group

Gentoo's vision is to improve what we call 'the Art of Living' beyond our imagination, enabling our customers and communities to fulfil their potential by living the life they aspire to live.

Nationally, we campaign and influence strategies about safety support and crisis and through our Genie product we aim to help more people into home ownership. Locally, we are one of the biggest employers and landlords in Sunderland.

We focus on three key areas to maximise our impact: people, planet and property. Improving how people live, both now and in the future, means being smart about the resources we use today.

Boiler on Prescription – the idea

We have spent a lot of time and effort in improving homes with simple sustainable technologies. In the beginning, we wanted to test the products out to see if they delivered what the catalogue promised.

We wanted to see if our customers' behaviour changed once their homes had been retrofitted and eventually see if we were able to generate: an increase in EPC and SAP ratings; significant financial savings to the household and at the same time, a reduction in the carbon emission from the home. We ultimately wanted to make people warmer and more comfortable.

Over the last five years, we have retrofitted nearly **3,000 homes** with a wide array of technologies from heat recovery systems, external wall insulations to new boilers and double glazing. As part of the deal, we made it a condition that our customers needed to help us understand the real difference the retrofit had made. To do this we started a conversation that in some cases has lasted two years.



What we were able to demonstrate and our previous reports have shown, is that we reduced emissions from the home **by around 25%** and **saved each home around £125 on average** (based on our previous externally verified retrofit studies Pay as you Save and Energy Saving Bundles reports).



However, we found that something much deeper was happening. Customers were telling us they were feeling better. Families reported being happier and their wellbeing was increasing. Not just in one or two homes, but in home after home, street after street. We were being inundated with huge amounts of anecdotal evidence to suggest the biggest difference we had made since retrofitting the home was to the health of our customers.

We were left with evidence we couldn't ignore yet unusable in any format. It created an almost overwhelming challenge, how could we translate this huge weight of anecdotal evidence into something that would be accepted by health professionals.

This report will detail the learning journey we went on, to not only transform the evidence we had into hard data but how we then got a GP to prescribe a boiler to patients with health conditions exacerbated by living in a cold damp home. We of course still captured all the technical data but this report will look at health too.

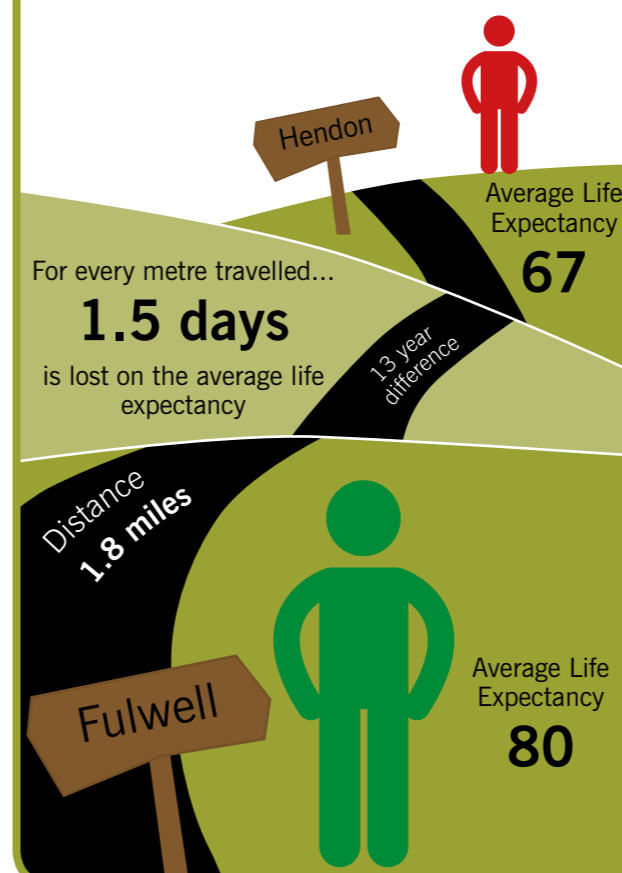
How do you begin to eat an Elephant?

Starting a conversation with the NHS can feel like sitting down to eat an elephant. Where on earth do you start? Naively we thought we could just pick up the phone and speak to a GP. As we would soon realise, the conversation with the GP would be almost the last one we would have in a three year discussion.

After retrofitting over **2,000 homes** as part of our Energy Saving Bundle Scheme, our original intention was to investigate if we had stopped our residents presenting themselves at their GP's as frequently with cold and flu.



Life Expectancy



Working with our local Primary Care Trust, now known as a Clinical Commissioning Group (CCG), we were able to quickly establish that one in three Gentoo residents from the area where we had undertaken the work had presented themselves at A&E in the previous year, compared to one in seven of non-Gentoo residents across the city. Simply, you were twice as likely to seek emergency help as a Gentoo resident.

Not only that, there was a difference in life expectancy of 13 years across the city from the poorest to the most affluent neighbourhoods. All figures were produced by the data team at Sunderland CCG.

These figures really brought into focus the need to act on our evidence. We then began to think, could a GP prescribe thermal improvements to homes? What would we need to do and what data would we need to collect to be able to demonstrate success for the NHS from any futures home improvement programmes we undertook.

In early discussions with the now newly formed CCG's, we were encouraged to learn that as Commissioners, they could commission any service they believed would deliver a health benefit to the patients they were responsible for.

It has to have a strong evidence base, however non-medical interventions could certainly be considered. Encouraged, we set about designing a tenure blind process that we thought would allow GP's to prescribe boilers to poorly patients, to prevent them turning up at the Doctor's surgery as often, along with making them happier in their home. Pleased with the process we had designed and encouraged by the fact non-medical intervention could be prescribed, we began engaging with all the North East based CCG's. Unfortunately, each time we explained the process and our hopes for the trial, we were told that the CCG's could not commission such a trial. Time and time again each CCG we spoke to, ruled themselves out.

Confused, we spoke to a GP who had initially encouraged us to develop our idea. Instantly he recognised that our offer of allowing people to be healthier and happier in their home would not be a recognised benefit to the CCG, we needed to be able to show how we would help them to achieve their non-elective re-admission target.

This one sentence was to change not only our approach but ultimately the success of the scheme. We needed to demonstrate how our scheme could deliver success appropriate to the NHS.

The idea was sound, we were just looking to present results which were of no value. Gentoo was approaching it through a desire to improve the Art of Living - our vision to improve the lives of the people and communities we are responsible for. We then went away and learnt what was important to the CCG. Using their plan on a page we saw how we could weave our project through their stated objectives.

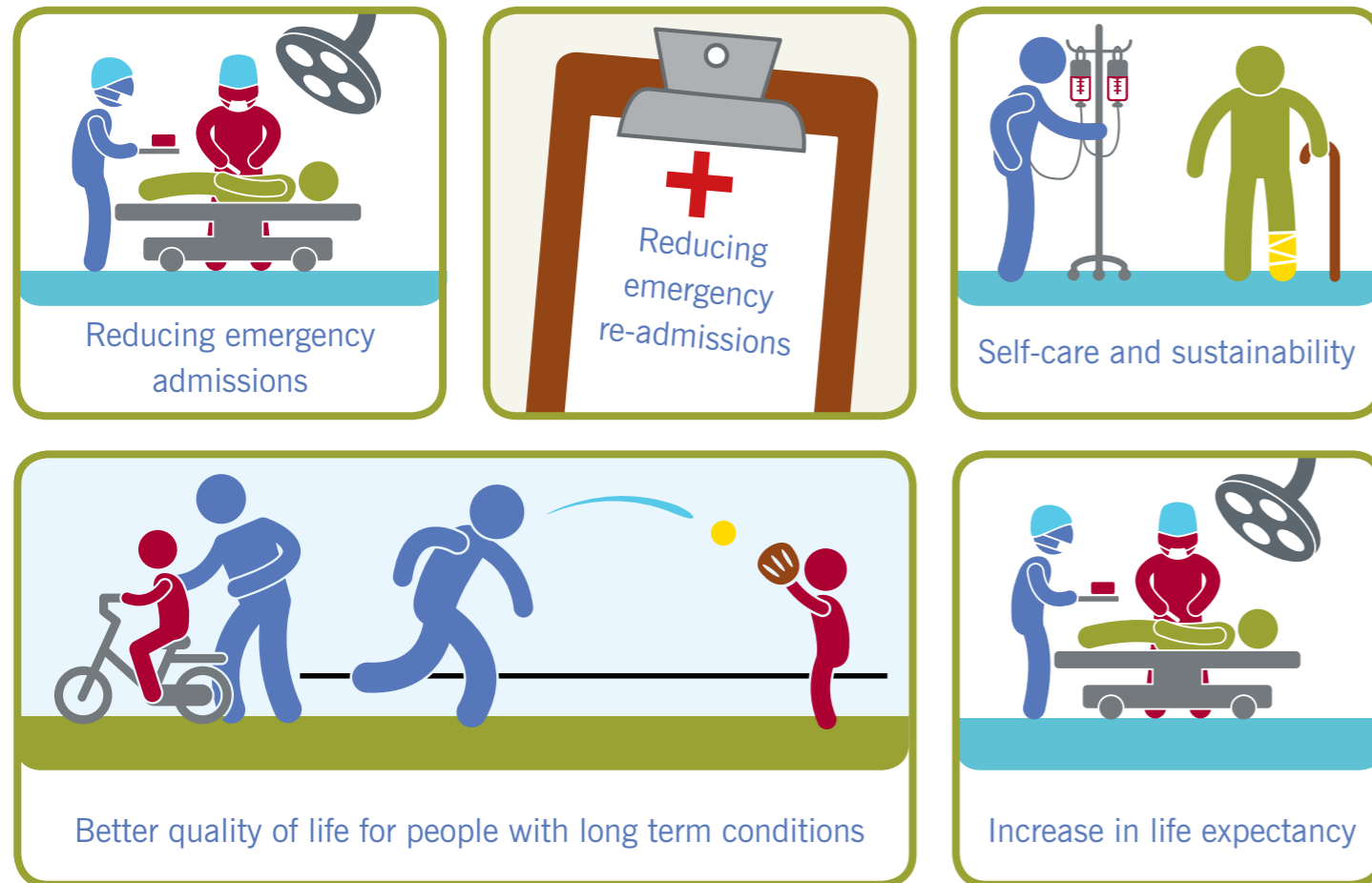


NHS - Plan on a page:

Better Health for Sunderland

Transforming out of hospital care (through integration and 7 day working)	Transforming in hospital care, specifically urgent & emergency care (7 day working)	Self Care and Sustainability	
Reduce emergency Admissions by 15%	Improve patient experience of out of hospital care above England average	Improve health related quality of life for people with LTC by 11%	Improve diagnoses of dementia to from 62% to 68%
Reduce emergency re-admissions by 14%	Increase number of people receiving treatment for IAPT from 12% to 16%	Reduce years of life lost by 7%	
Transformational Changes 2014 – 2016			
7 day access			
Community integrated locality teams			
Extension of intermediate care hub			
Improving healthcare in care homes in all localities			
Implement end of life deciding right initiatives in practices			
Mobilise GP led UCC's and A&E Hub / Out of Hours integration			
Improved community mental health pathways, access and waiting times for all mental health conditions			
Development of dementia friendly communities			
Procure and mobilise the integrated musculoskeletal service			
Reduce procedures of limited clinical value			
Enabled by Contract Management (CQUIN)	Governed by System Wide Transformation Board	Measured by Achievement of outcome ambitions	Values and Principles
Joint Commissioning Localities	CCG Governing Body Health & Wellbeing Board	Delivery of QIPR cost reduction plan 2016/17 – 2018/19 of £12m	One system for Health and Social Care across Sunderland
Medicines Optimisation			Development of team based working
Evidence based approach			Mental and Physical health
Research & Development			

It became clear the Boiler on Prescription project was not just about improving the Art of Living by allowing people to be healthier and happier in their home, it was also about:



Coupled with a desire to improve the quality of life for our customers we gained interest from Public Health in our Quality Adjusted Life Year (QALY) study. In partnership with Nottingham City Homes and Bangor University, we are undertaking a three year study which is attempting to identify that for every £1 we spend retrofitting a home, we improve the quality of life by 'X' for the customer.

Following our respective investment plans we are interviewing every household to see what difference a warm home makes to their lives, regardless of whether they are young or old, healthy or poorly. The QALY score is used as a key indicator for community health by Public Health and we believe the study will generate a clear picture on the impact of a community's quality of life, of which health is a key factor.

Now success had been defined in both languages we could really begin to engage and investigate the possibility of working together.

Excitingly, Sunderland Primary Care Trust (PCT) /CCG felt there was enough merit in our idea they commissioned a £50k trial.

The elephant just got a whole lot bigger

Understanding the NHS was tough. Being commissioned to deliver a service whilst understanding the intricacies of patient identification, patient confidentiality, what could be shared, what couldn't, and how the data needed to be anonymised, meant a whole new level of learning had to be undertaken.

It took almost a year to work through the practicalities of identifying the patients and then ensuring their data would not be compromised. It should be noted that all future trials will not have the same teething problems as we have now learnt how to design this part of the project accordingly.

The cohort of patients was also shrunk by the fact that when surveyed, some of their homes were already reasonably energy efficient as we used an EPC rating of D or below as a selection criteria. We felt that the home would not be contributing to the medical condition if it was an EPC band C or above.

People may not be turning the heating on due to financial constraints but that is a different issue and we worked with those patients to ensure they were on the best tariffs to assist with those constraints.

Some homes that were in the private rented sector where the landlord was not part of the Local Authority approved landlord scheme and that again ruled people out as this funding could not be used to allow a private landlord to fulfil their legal obligations.

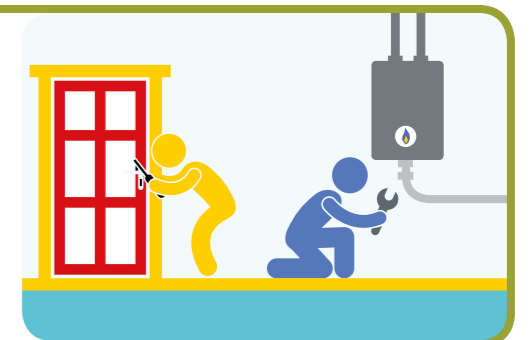
From the very beginning we were very conscious of the customer journey. We visited the customers several times before the work commenced to ensure we knew that they were comfortable about the improvements which were going to be undertaken. We knew the patients we would be dealing with would be poorly.

What we didn't expect was that some of the patients would have very special needs which would require special attention and that can't be underestimated.

We were fortunate in the first trial that Gentoo Construction were able to carry out the installation work for us. However, working with such a small number of patients over a wide area is difficult for a main contractor. In future we will look to use smaller local companies to do this work.

Finally a boiler was prescribed... thankfully not three times a day after meals

In fact, in January 2014 six homes were improved with a combination of measures including new boilers, double glazing and insulation, to homes of patients with Chronic Obstructive Pulmonary Disease (COPD). COPD is a condition known to be exacerbated by living in cold damp conditions.

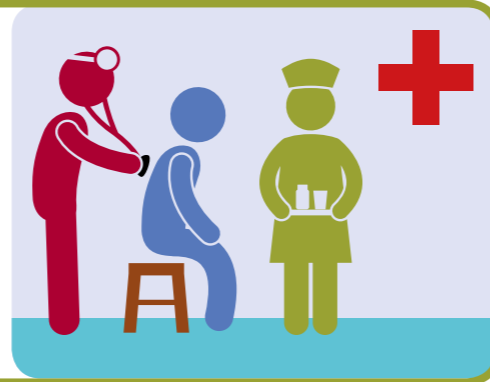


We would now be in a position to monitor patient interactions with the NHS now their homes had been improved. A control group had been created which again had six patients who suffered from COPD and were frequent attendees to their GP and hospital but their homes were not being improved. It is our hope one-day to go back and improve their homes.

Once the homes were improved we returned to gathering the technical data, whilst the CCG monitored the patients interactions with the NHS. There is a three month lag on the NHS reporting data so to get the first six months set of results we in fact have to wait nine.

The first six months

It must be remembered that these results are from a very small data set over a relatively short period of time, however they are encouraging. **GP appointments have been reduced by 28% and outpatient appointments by 33%.** Patients are also telling us that they feel so much better. In all the points measured we achieved a change of direction, except in prescription costs.



This was skewed by one individual with an unrelated medical condition that required prescription of high cost items. Once this is taken into account, the number of items prescribed to the other patients was reduced however the cost of those items increased. Price increases for prescriptions are dependent on market forces and as such are beyond our control.

	Pilot Group	Control Group
A&E attendances	Decreased	Static
Outpatient attendances	Decreased	Increased
Emergency admissions	?*	?*
GP attendances	Decreased	Increased
Items prescribed	Decreased	Decreased
Prescribing costs	Increased	Increased

*Due to the limited period of time it is not possible to apply any significance to this data set.

The technical bit

As explained, we are looking to gather the technical data too, and again this shows the pilot is improving the resilience to fuel poverty, improving the thermal efficiency of the home and consequently reducing the amount of CO₂ generated.

Initial results show:

Up to **35.6% reduction** in gas consumption each month

Up to **£29.91 saving** on gas bill each month

Generally an **increase between 2 and 7 SAP points** however a maximum increase of 47 points (moving the property from EPC G to EPC D).

Up to a **42% increase** in living room temperature

Up to **14% increase** in bedroom temperature.

What next?

These results are really encouraging. In April next year (2015) we'll be able to present a full year of data which will include a winter season.

What is exciting is that other CCG's are starting to recognise the work we are doing and are funding trials within their locality. We have two CCGs interested to date and others wanting to find out more. Increasing the statistical significance is really important for the study so finding new partners still remains our challenge, however, these results are allowing others to see the potential the pilot holds.

We believe passionately in the ability of this pilot to not only improve the lives of people who are currently struggling to keep warm and comfortable and pay their fuel bills but also to manage their long term health conditions.

However, this will only happen if we are able to firstly demonstrate the difference we are making and then use this information to influence the decision makers. We are now looking to speak to organisations and individuals who we believe can help us take the next step to take this from a small regional pilot to a national study.

If you are interested in either learning more about the trial or replicating it in your part of the world, get in touch. We'd love to see if we can work with you and your customers or patients. What this study shows more than anything else is that it can be done.

We can engage with our CCG's and look to challenge both health inequalities and environmental sustainability at the same time, they no longer need to be viewed as mutually exclusive problems and that's exciting.

Get in touch!

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Notes

