



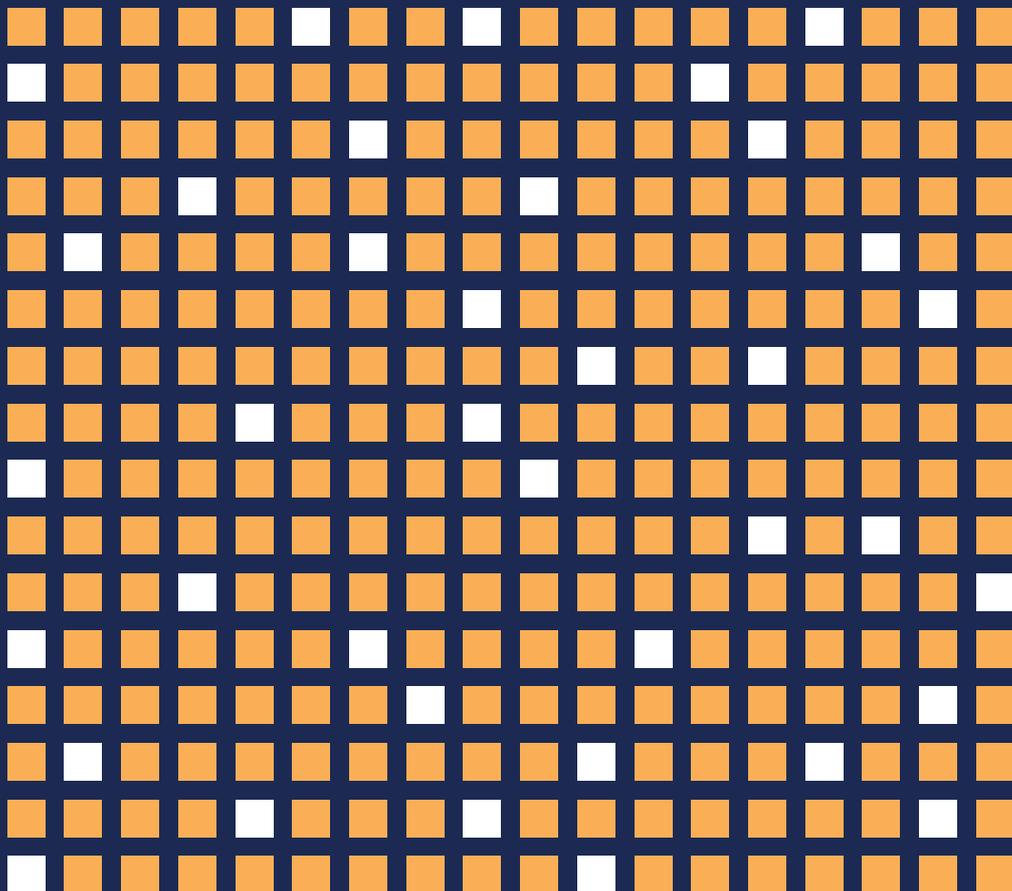
# Changing research in social housing

## The role of RCTs

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March 2020





HACT is an innovation agency that provides futures-oriented solutions, projects and products for UK housing.

We work alongside social housing organisations to drive change within their businesses through our platform of projects, products, research, insight and consultancy.

We help them drive forward their social purpose by generating actionable evidence to inform the development of new, smarter, and more connected ways of working.

We've been doing this for 60 years. Our ambition is to unleash the creativity and potential of social housing in communities across the UK.



The Joseph Rowntree Foundation is an independent social change organisation working to solve UK poverty.

Through research, policy, collaboration and practical solutions, JRF aims to inspire action and change that will create a prosperous UK without poverty, where:

- More people want to solve poverty, understand it and take action.
- More people find a route out of poverty through work.
- More people find a route out of poverty through a better system of social security.
- More people live in a decent, affordable home.

*Changing Research in  
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RCTs,  
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# 1. Introduction

The social housing sector faces numerous challenges. One is how social housing organisations can reconcile commercial efficiencies and ambitious development targets while sustaining their commitment to their social purpose. Another is the growing requirement for social housing organisations to modernise, adapt to, and better understand the needs of their customers<sup>1</sup> and to shape their services accordingly.

In response to these challenges research in social housing is changing. Some social housing organisations have been trialling and using more sophisticated and progressive research methodologies so they can define how their customers interact with and use services. These methodologies shift the analytical focus from what customers say to what customers do. One of the research methodologies that is starting to be used in the social housing sector is Randomised Control Trials (RCTs). This offers the potential to assess service impact and demonstrate value for money.

HACT has been working with partners inside and outside the social housing sector to actively promote and improve the use of research. In 2017, we launched a project with the Joseph Rowntree Foundation (JRF) with the aim of raising the profile of RCTS within

the social housing sector. The project aimed to promote them as a robust and accessible methodology that could be used alongside traditional research approaches to drive evidence-based service design.

This report is the first of two that draw on the learning and insights from that project. Our aim is to encourage researchers within the sector to explore and strengthen the links between research and operational service design.

This first report, entitled *Changing research in social housing: the role of RCTs*, outlines progress so far in the use of RCTs in the social housing sector. It provides guidance on when to use RCTs either as an alternative to, or in conjunction with, other research methodologies.

The second report, entitled *Changing research in the social housing: RCTs in practice*, focuses and draws on insights from RCTs that have already been run by social housing organisations.

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<sup>1</sup> Throughout the report we have used the term customers when referring to the tenants or residents of social housing organisations

## 2. RCTs and the social housing sector

Randomised control trials (RCTs) are a research methodology designed to test the relative effect of treatments on groups or populations, in order to investigate whether there is a cause-effect relationship between any given intervention and an outcome, and to quantify that effect. They are most widely associated with the testing of new medical treatments or drugs and are considered the gold standard of scientific research methodologies.

A key component of an RCT is the element of randomisation, where the sample group is randomly split between two groups: the treatment group and the control group.

- People assigned to the **treatment group** receive the intervention being tested as part of the research;
- People assigned to the **control group** receive no intervention or, in many cases, the business as usual intervention as a comparison.

Randomisation ensures that, if the sample size is large enough, the treatment and control groups will, as far as possible, have similar characteristics. This means that any factors that might affect outcomes, as well as any that we don't know about, are evenly distributed. Consequently, this means that any observed differences between outcomes at the end of the research between the treatment and control groups

can be attributed solely to the intervention. Randomisation is intended to create two groups of people who have the same characteristics, with their only difference being the intervention being tested.

At the end of the research, the outcomes for both groups are compared to determine whether the intervention has had any positive or negative effect on the outcome being tested, as well as quantifying the size of that effect. RCTs are an effective way of determining whether a cause-effect relation exists between the intervention and the outcome.

RCTs are a relatively new methodology within the social housing sector, which has traditionally tended to focus on evaluations and case studies. While this report focuses on RCTs, they should be considered alongside other methodological approaches, including qualitative ones.

### 2.1 RCTs – A brief history

The first reported research trial was conducted in 1747 by James Lind, a Scottish naval surgeon, while he was at sea. In the eighteenth century, scurvy was the single biggest killer of sailors, just as it had been for several centuries. Numerous different treatments were used to try and treat or cure it. Before 1747, however, there had been no systematic attempt to test the effectiveness of any of these treatments.

Lind designed a rudimentary trial to assess the effectiveness of six different scurvy remedies, assigning sailors with scurvy to receive one of these six treatments and then observing their effects. Lind discovered the use of oranges and lemons was particularly effective, cider was somewhat effective, while the remaining four treatments were useless. From this, he was able to demonstrate that the provision of citrus fruits was the best way to tackle scurvy.

Lind was lucky because the treatment effect was much greater than the effect other differences between the men – for example, how sick or old they were – might have had on the outcome. What Lind didn't do, however, was to randomly allocate men to treatments in a way that evenly spread out all the factors that might affect the outcome. Instead, he simply picked men for each treatment.

After Lind's rudimentary trial in 1747, it was another 200 years before randomisation was introduced. In 1948, the UK Medical Research Council published results from what is considered the first true RCT, which examined the treatment of tuberculosis. Those designing the trial randomly assigned the sample population to different interventions. This was not through design, however, as randomisation was only introduced because of budget constraints, which meant not everyone would be able

to receive the treatment intervention. The results of the trial indicated that randomisation had scientific advantage and subsequently this has become a core feature of RCTs.

The use of RCTs is now prevalent in social sciences and operational services like health, education and, more recently, social housing. Its use in public services represents an exciting new phase in its evolution and application.

## **2.2 The use of RCTs in the social housing sector**

HACT has long championed the use of evidence and insight within the social housing sector, actively supporting social housing organisations to measure the impact and effectiveness of their services and interventions. Our work in this area includes the design, development and implementation of RCTs, working with partners to build their capability so they can successfully use the methodology, as appropriate.

In 2014, HACT conducted an initial, in-depth qualitative study into different approaches to tenancy sustainment in the social housing sector and how they operate. The research findings highlighted the sector's lack of understanding about what works and which of these approaches were most effective at delivering actionable insights, in, for example, informing strategies to sustain tenancies.

Following this initial study, HACT convened a group of social housing providers to consider the value of using RCTs that would test the effectiveness of new and existing tenancy sustainment approaches and interventions. The second report will review these research initiatives and outcomes in more detail, but for context they are summarised here:

**Hyde Housing** (2017) hosted two trials, both of which tested the effectiveness of new forms of communications against business-as-usual approaches. One of the trials engaged specifically with residents at risk of eviction, whilst a second parallel trial engaged with residents who had been referred to Hyde Housing services prior to receiving support. The treatment group in both trials received new forms of communication, while the control groups received business-as-usual communications.

**L&Q** (2018) hosted one trial, testing the effectiveness of a new employment support service compared to L&Q's business-as-usual employment support service. This trial focused on L&Q customers who are in partial receipt of housing benefit. The treatment group received the new employment service, whereas the control group received the business-as-usual employment service.

**Family Mosaic** (2016)<sup>2</sup> was one of the first social housing organisations to successfully use an RCT to measure the impact of intensive interventions involving over 540 older people with one or more long-term health conditions. The study involved three groups: a control group; a treatment group receiving signposting services; and another treatment group receiving intensive personalised support from a dedicated health worker and wellbeing support worker. The trial found that the health and wellbeing interventions resulted in reduced NHS usage, particularly in planned hospital appointments.

Insights from these trials and from other trials undertaken in the social housing sector have been used to plan and shape service delivery and strategy.

There are also two RCTs that are ongoing at the time of publication of this report:

**Optivo** (2018) is testing the effectiveness of an employment support approach using a group setting compared to its business-as-usual one-to-one employment support service. The treatment group are receiving the group setting employment support, while the control group are receiving the one-to-one approach.

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<sup>2</sup> Family Mosaic merged with Peabody in 2017

**Town & Country Housing Group and Clarion Group (2018)** are testing the effect of personalised communications on employment outcomes.

To build capacity and support these trials, HACT, supported by JRF, have been running a series of RCT masterclasses and a programme of work.

### **2.3 The RCT programme of work (HACT & JRF)**

HACT has been working with JRF to support social housing organisation partners with these RCT trials, as well as to encourage the wider use of RCTs. As a social change organisation, JRF aims to inspire action and change that will create a prosperous UK without poverty through research, policy, collaboration and practical solutions. It seeks to support the development of an evidence base around what works in the social housing sector, using these insights to recommend credible solutions that result in more people living in a decent, secure and affordable home.

The programme of work included two streams: the first focused on the RCTs with Optivo, Town & Country Housing Group and Clarion Group. The second stream was the RCT Learning and Innovation masterclass series. These were created to address some of the barriers we identified following our work with social housing organisations when we looked at the practicalities of running RCTs.

These barriers included:

- A lack of understanding about the RCT methodology, as well as a lack of confidence about the practicalities of designing and running an RCT;
- Confusion about identifying a suitable intervention to test, as well as sensitivities about randomisation and withholding a potentially better service from the control group of service users;
- Data management issues, including the introduction of new processes, reliability and quality control;
- The costs of running trials, concerns about capacity issues and the challenge of convincing senior colleagues about the benefits of RCTs to the business.

We examine some of the suggested ways of alleviating these concerns, as well as outlining some lessons about running RCTs, in the next chapter.

## 3. What to think about before running an RCT

RCTs are one research methodology that can be used by social housing organisations to enhance the evidence base around what works, inform strategy and shape service design. Before deciding to run an RCT, however, there are several questions to consider, as it might not be the most appropriate research methodology.

### 3.1 What difference would you like to see?

Before starting the RCT, you might like to think about what outcomes will result in the intervention being continued. Consider how much the intervention costs, as well as its alternative. If the costs of the intervention are very expensive, you might want to see more significant outcomes, impact or returns at the end of the RCT. These can be measured using the statistical size of effect in the results, as well as in conjunction with any existing organisations objectives or key performance indicators (KPIs).

### 3.2 How will you convert results into action?

What plans do you have in place to convert any findings from the research into actionable insights or operational actions? This part of the process is something that the social housing sector has struggled with in the past. RCTs will help you to identify evidence-based outcomes that can then be used within the operational context as actionable insights.

### 3.3 What will you do if there are unexpected results?

RCTs can sometimes return insignificant or unexpected results, and it's critical that all stakeholders involved in the RCT are prepared for this and recognise that all results are useful. If the RCT finds no effect, then this can help the business to decide which services to continue and which to suspend. The use of RCTs can help to change existing mindsets about research methodologies, as well as to minimise confirmation bias, where, for example, research has been used to confirm an intuition or to prove a desired outcome.

### 3.4 Have you discussed funding arrangements?

Consider how much the intervention costs to deliver and whether the insights gained from the trial will have an impact upon future funding decisions. This may have an impact on getting buy-in from stakeholders, including front-line delivery staff.

### 3.5 Can you define your intervention and its components?

It's important to ensure you have a detailed understanding of the intervention being tested before you start your research. You might, for example, want to test the effect of a newly designed employment intervention on a client group. If it is an existing intervention, it is important to

define how that service or support has been historically provided and to whom. What are the current numbers of customers accessing the intervention? This can distort the results of a trial if participants are not starting from the same point.

If you have an intervention with multiple strands, think about how they interact and affect each other. For example, if you have an intervention that has an employment element and a health element, any positive employment outcomes may be dependent on the health element. In RCT terms, these are called confounding variables. In other words, your RCT may statistically show one intervention to be effective, when in fact the change in what you are measuring – known as your dependent variable – is also affected by a separate second intervention. While there will always be confounding variables, RCT models can adjust for this. Where possible, isolating a single intervention for testing will yield a cleaner result.

It's critical that any internal staff working on the project, as well as any external delivery partners, are clear about the intervention and their role in delivering it.

### **3.6 What does the sample population look like?**

The target population of the intervention you want to test should form the sample population. This might be people of a

certain age, gender, ethnicity or other characteristics. It could be people living in a specific geographic location or with a certain employment status. It is important to recognise that by focusing on a specific target group, this might result in recruitment challenges for your RCT.

Another key consideration when thinking about running an RCT is about numbers: will you be able to recruit and maintain enough participants for the trial? For many social housing organisations this might not be an issue because their scale or the place-based nature of their work provides them with a ready-made and suitably sized group of potential research participants.

Smaller social housing organisations, however, might need to consider working with other smaller organisations with similar business models, so they can increase the number of potential research participants. Working with another smaller organisation or across a peer network will also enable them to reduce the costs involved in running an RCT.

Another issue to consider when running an RCT is the challenge in sustaining the engagement of the research participants for the duration of the trial. One technique for overcoming this is with financial payments for those participants who engage with the research from start to finish. Another, similar, challenge is in sustaining the employment

of staff who have been involved with the research project from conception to completion. Employment retention strategies will play one part in resolving this issue. More important, perhaps, is ensuring that business intelligence about the RCT that is accessible to, and understood by, all staff working on the project.

### **3.7 Are you ready for randomisation?**

Before you start randomisation, create a list of all the research participants and give each one a unique identifier, as this will enable you to track outcomes.

One issue that might arise after you've established your two research groups is participants either interacting with each other or becoming aware of the support or service that the other is receiving. This can be difficult to prevent as it's often impossible to stop participants talking to each other. One way to deal with this is to agree an approach with service staff about how they can deal with questions from people from either group about why they are getting a different service to others.

Another way, if there is a lot of interaction, is to consider the practicalities of randomising by group rather than by individual, for example, by building, estate or social club. This is known as cluster randomisation. Whilst you cannot remove interaction completely, this

can ensure that those most likely to interact are in the same trial group.

### **3.8 Are there any sensitivities in withholding an intervention?**

A number of social housing organisations who've run an RCT have had to deal with the sensitivities involved in withholding the new intervention from their customers, especially if this intervention is perceived as being a better or improved version of the existing service. One common issue is staff expressing concerns that it's unfair for the control group in such a scenario continue to receive the existing intervention. There are two responses to this: first, to highlight that funding for the new intervention is restricted to the duration of the trial; and secondly, that the continuation of all these types of services are dependent on evidence demonstrating their value and impact.

We would recommend you consider withholding the intervention from service users, staggering and sequencing the intervention, so that those who have been randomly assigned to the control group know that, at some stage, they will also receive the new intervention. This will also allow for comparative data analysis between the outcomes of those in the treatment group and those in the control group.

Alternatively, you could consider testing a new intervention against your business-as-

usual service, which would then constitute the control group intervention.

### **3.9 Do you have capacity to run an RCT?**

HACT has worked with social housing organisations to help them plan the resource and financial commitments required to run an RCT from design through to fieldwork and final analysis. Typically, RCTs will be run over several months or, in some cases, years. There will need to be capacity to design, set up and run a trial, as well as resources for analysis, data management and possible intervention actions. This might be provided internally, or it could be bought in from external consultants. To reduce initial costs, it is best to keep trials simple, testing services with small, non-controversial changes, and accept that existing measurement mechanisms might not be perfect.

Ensuring the staff responsible for delivering the service are on board is critical, and the RCT should be delayed until the key service and research personnel are in place. This might cause delays, especially during mergers or internal restructures caused by business change. If RCTs are designed properly they can provide significant insights that help businesses going through a merger or restructuring to reconfigure more effective and efficient services, with consequential cost savings.

When it comes to research capacity, some larger social housing organisations have dedicated research teams and are building their in-house capacity so they can run RCTs themselves. Others, however, will be looking externally for expertise. There are several research consultancies that can conduct RCTs, although this can be prohibitively expensive. HACT can provide research services, including running RCTs, at a lower cost and have the experience of, and expertise about, the social housing sector.

### **3.10 Are you able to manage and monitor the data?**

Running an RCT requires an understanding of technical aspects such as sample sizes, capturing baseline data and running data analyses, as well as expertise with using statistical research methods. Where you have the internal expertise, it is also important to consider the capacity of staff and their ability to dedicate their time to the trial. Where organisations do not have these skills or resources in house, HACT can provide support to this part of the process.

It is very important to monitor data quality throughout the research so you can spot something not going as intended and correct it before the end of the trial. You need a plan for monitoring the data, a plan for collecting the data, as well as a process to react to adverse interim findings, and adequate resources to deliver all of these.

### 3.11 Have you planned for other events?

Develop a contingency plan, so you can react to any issues that might arise during a trial. So, for example, if a staff member leaves, will you be able to fill this gap with someone internally, will they need additional training, or will you have to recruit someone externally? Or, if it's taking you time to recruit research participants, are there other tactics you could use?

The key here is to engage early with staff members who are running the trial, as well as those staff involved in providing the intervention, and discuss with them what potential issues or barriers might arise during the RCT.

### 3.12 Is time an issue?

The traditional perception of RCTs is that they require long testing periods, as they offer invaluable insights into how services change outputs over time.

At the same time, however, RCTs can also be used for shorter timeframes. This can be useful for social housing organisations that are under pressure to deliver changes to services quickly. While these studies with shorter timeframes might have less statistical certainty, they are effective in providing strong indications about whether an intervention is effective or not, as well as being a significant improvement on

guess work, intuition or the influence of the HiPPO.<sup>3</sup>

If you have time, before you commit to your full RCT, consider using the methodology on a smaller scale over a shorter time period. This will help develop internal capability and provide you with proof as to whether the methodology meets your requirements. It will also build internal confidence about using the methodology and help to convince internal decision-makers about the use of RCTs to inform business planning.

If the results of this initial trial don't provide conclusive results, this can be an important learning by itself. The results can then be used to improve the design of a service or allow for changes to a model or service prior to testing.

In their 2015 report about the benefits of running RCTs, Family Mosaic proposed a three-stage model: test; learn; adapt.<sup>4</sup> Testing helps you to robustly evaluate your service. Learning helps you to find out what works, and what doesn't. Adapting helps you to use this learning to refine the service.

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3 Short for Highest Paid Person's Opinion, where a decision is made on the say so of the highest paid person in the room, as explained in this article from Housemark: <https://www.housemark.co.uk/hm-news/all-articles/blog/building-a-data-driven-organisation-the-value-chain-maturity-model-and-hippos>

4 How to Take Control, 2015, Family Mosaic (merged with Peabody in 2017)

## 4 Complementary research – using qualitative evidence

RCTs can tell you if something is working, but not necessarily why. Combining an RCT with qualitative research can be invaluable for several reasons.

### 4.1 Ahead of your trial to inform intervention design

Conducting some qualitative research before starting the RCT can help test your assumptions. For example, is the proposed intervention acceptable to your proposed research participants? Insights from this qualitative research can be used to refine your intervention. Similarly, qualitative research with staff is also useful at this stage, as it enables you to test whether they feel able to deliver an RCT. This is particularly important if they will have to change the way they work or adapt their schedule because of the intervention being tested. If staff are not on board, the RCT may fail. Qualitative research can help uncover any staff concerns, help you get staff buy-in and help you adapt the RCT, so it has more chance of succeeding.

### 4.2 Post-hoc analysis after the RCT to inform future study and/or roll-out of intervention

Qualitative research can also be invaluable at the end of your research. The quantitative research results from the RCT will provide a very robust idea of what has happened, but not why or how. Qualitative work adds richness to the results, helping you understand the processes that led to them. It

is also helpful in reviewing internal processes, to understand what worked well and what didn't, so you can do an even better RCT in future. It's not unusual during an RCT for one element not to be working as planned: if you don't react, this might negatively affect the end results. At times, however, it can be difficult to understand why something isn't working; this is where qualitative research can help. Talking to staff and participants who are involved in the RCT can reveal why it didn't work as expected, and help you think about how to adapt the service in the future.

## 5. Continuing the conversation

This report is the first of two that has been informed by the programme of work undertaken by HACT and JRF and our social housing organisation partners. Our aim has been to promote and improve the use of RCTs by the social housing sector, so they can be used to inform and improve service design.

This first report has introduced and explored the use of RCTs, setting out the origins of the RCT methodology, its current application in the social housing sector, as well as some of the key issues for social housing organisations to consider before running an RCT.

The second report will take a more detailed look at RCTs in practice, including case studies and some interim findings. It will include thoughts and reflections about design challenges and learning outcomes.

A key opportunity that has emerged from these two reports is how we can effectively combine RCTs with complementary qualitative research methods so it can be better integrated with existing research and performance analysis. While thinking in the sector is changing, there is still a pre-occupation with operational performance data, which is unsurprising bearing in mind the pace and complexity of housing services.

We hope this report helps social housing organisations to use RCTs as a complementary methodology to their existing research methods, so they can develop a more comprehensive profile and understanding of their services, their customers and their needs.

We welcome comments and reactions from sector peers to help continue to build capacity in the sector, to develop the wider research portfolio and to assist partners in meeting the multiple challenges in the social housing sector.



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