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International Journal of Building Pathology and Adap

The 'fight' for adaptations: Exploring the drivers and barriers to implementing home and environment modifications that support healthy ageing

Journal:	*International Journal of Building Pathology and Adaptation*
Manuscript ID	IJBPA-02-2023-0019.R1
Manuscript Type:	Original Article
Keywords:	housing, housing support, accessibility, ageing, disability, systems thinking

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Manuscripts

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Response to Reviewers

Thank you for your comments and feedback, they are very welcomed and have certainly helped to strengthen the paper. We appreciate the positive comments that note our new findings and the implications for policy and practice in the UK as well as across the world.

We present the reviewer feedback focusing on advised changes and an overview of our response, as well as a tracked changed version of the paper clearly showing the revisions. We have grouped the feedback thematically in the flow of the paper for ease. We have uploaded the full response as a supplementary document for reviewers.

Feedback on structure

The manuscript structure should give a logical flow to the content. Section 2 of Conceptual and cost challenges of adaptations is not the most relevant to the research questions, could be incorporated into the Introduction. However, Sub-section 3.2 The Adaptations Framework is the necessary background to understand the following research results, should be introduced in detail as an important section before methodology.

Thank you for the suggestion in regard to restructuring and aligning the flow. We have taken your advice and suggestions. We have incorporated the conceptual and systems thinking sections into the introduction, and moved the adaptations framework section to come before the methodology and added information about this process and approach.

Feedback on literature

There are have been a number of policy reviews of the adaptations process in Wales and England but the article does not refer to these.

Consider providing a narrative from reviews of the adaptation process in England and Wales.

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Missed out some recently published articles on housing adaptations for healthy ageing.

The movement of the adaptations framework section to be before the methodology resulted in the opportunity to expand the literature. In this section we have added references to multiple reviews, and the wider reports and literature.

Feedback on Theory

there should be a discussion of the relevant theories for conducting this study. You mentioned you took a grounded theory approach; please provide more depth into what this involved and how you ensured rigour/trustworthiness in your approach.

When developing the Adaptations Framework, we had drawn on a figurational (process) sociological lens and then expanded on the systems thinking approach. In moving the adaptations framework section (as suggested above) we have now further added detail in the new section and added relevant references, and then also expanded on the grounded approach taken with the data analysis in the methods.

Feedback on Methods

The methodology is not described of justified in detailed. I have provided feedback on how this could be improved.

this study is based on a series of projects, but lack the detailed explanation of these projects, for example, why, what and how the projects have been carried out, which methods have been employed to analyse the qualitative data collected from the field work?

Rather than discussing all elements of the larger project, is it possible to just reference this work. This will then give you the word count to provide more depth and detail to the methodology of the part of the project the findings are from, which appear to be the stakeholder interviews and focus groups.

There is a lack of discussion on the theory underpinning the importance of housing adaptations. There should be a clearer research structure, and the methods should be introduced in detail to provide a better understanding of this research and its findings.

We have added more detail to the methodology section, and also expanded on the

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motivation and drive behind the projects. It is interesting that the projects were very much developed from the ground-up, developed from an interested network of partners seeing this as an important area and pushing forward a connected programme of work to build the evidence base around adaptations. We have added that background into the methodology section as well.

We have tried to balance the reviewer feedback here by stating that the methods are indeed already detailed in already published reports that we now explicitly reference for people to follow for more detail for methodological expansion. However, we have added more to the process of data analysis in the paper to show how we have brought it all together.

Presentation

Rather than OT I would use occupational therapy/therapists

We have replaced OT in the main text with occupational therapists

Feedback on Findings/Results

There could be more use of quotes from participants to help to strengthen the findings presented by the author(s).

there should be more connections with findings in other relevant articles.

We have added more quotes to the findings (detailed below), especially from service user perspectives and added more links to the literature through the findings.

Include quotes to justify your findings for the following paragraphs:

 Page 8 – paragraph starting on line 24
  - We added some insight from a service user that highlights the importance of adaptations to fundamental day-to-day activities

 Page 9 – paragraph starting on line 53
  - We added a quote from Billy, that highlights his driver from diagnosis

 Page 10 – paragraph starting on line 35
  - Due to word count, we hope the small quote from Max helps to reinforce some of the points in the paragraph.

 Page 14 – paragraph starting on line 17

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- Early housing conversations were particularly advocated for by key stakeholder 'Patricia', who we quote later and have added that reference in.
-

Anonymise quotes – a couple of times in the quotes, you have included the town the participant/stakeholder is referring to; I recommend removing these.

- We have reviewed and removed

Include a reference for the stat provided in line 55 on page 12

- Reference added

For consistency, use term adaptation instead of modification on page 13 line 27

- Amended

On page 16 you have used italics in line 18 is this a quote from a stakeholder/participant

- This was for emphasis, and we have de-italicised it to avoid confusion

Feedback on Discussion

Should be more deeply, in order to expand the topic to have global implication of delivering housing adaptation for healthy ageing.

Thank you to reviewers for the specific leads on where to enhance this depth, and our additions to the discussion are outlined below:

Page 13 paragraph starting at line 36 – this would be better in the discussion section and it needs to be supported by the literature.

- We have added a reference to Zhou et al who outlines the challenges around partnership working and adaptations pathways.
-

Is there any literature that supports the following discussion points

Page 17 – paragraph starting on line 26

- We have added references here in the discussion, especially adding Mackintosh and Heywood

Page 17 – paragraph starting on line 43

- This is a reference back to the earlier discussion about tenure, and we have added a link back to the original report and also cross referred back to the earlier discussion in the paper.

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Page 17 – sentence beginning on line 58

- Have linked to Anderson et al's work on accessible housing allocations, nodding to the wider challenges for the housing sector

Page 18 – paragraph starting on line 8

- We have added some detail here, referring to Gibb and Marsh 2019

Page 18 – paragraph starting on line 22

- Malpass is cited here

Thank you again for your feedback, and we look forward to hearing from you in due course.

Best wishes,

The authors.

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The ‘fight’ for adaptations: Exploring the drivers and barriers to implementing home and environment modifications that support healthy ageing

Abstract

Purpose – The ageing and disabled population is fast growing, which emphasises the need to effectively modify current homes and environments to support healthy ageing and increasingly diverse health needs. This paper brings together findings and analyses from three adaptations-focused projects, drawing on perspectives from key stakeholders alongside the lived experiences of service users acquiring adaptations.

Design/Methodology/Approach ~~– Insights from the international academic evidence base also provide supporting evidence to the paper’s focus on drivers and barriers to adaptations implementation.~~ Following an Adaptation Framework developed from interviews and focus groups with older people and key stakeholders, the paper discusses barriers experienced by older people and front-line workers in receiving and delivering adaptations through all stages of the process.~~Following an Adaptation Framework developed from interviews with key stakeholders, the paper discusses key barriers experienced by older people and front-line workers in receiving and delivering adaptations through all stages of the process.~~

Findings – This paper reveals how experiences around adaptations might diverge with unseen, hidden investment and need among individuals, and how conceptual and cost-focused evidence gaps could impact wider understandings of adaptations delivery. In so doing, this paper highlights how the adaptations process is perceived as a ‘fight’ that does not work smoothly for either those delivering or receiving adaptations services.

Policy Implications – The paper suggests a systematic failure such that the adaptations process needs to be rehauled, reset and prioritised within social and public policy if the housing, health and social care sectors are to support healthy ageing and prepare for the future ageing population.

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3 Originality/Value – The paper brings together insights from key stakeholders alongside service users' experiences of adaptations to highlight key policy drivers and barriers to accessing and delivering adaptations.

Keywords: housing; home improvement; housing support; accessibility; future-proofing; ageing; disability; systems thinking

Paper Type: original research

1. Introduction

As the global population reaches eight billion, one in six people will be aged 65 and over by 2050 (an increase from one in ten in 2022) (United Nations, n.d.). Furthermore, 16% of the global population currently experience significant disability – a number that is increasing due to the ageing population (World Health Organisation, n.d.). The population growing older is to be celebrated, but evidence suggests that these additional years are not necessarily spent in good health (Beard et al., 2016). Health needs change and diversify, resulting in a need to focus on supporting healthy ageing (Wong, 2018). To age healthily, the population must have supportive environments in and outside the home in which to age well in place, with integrated housing, health and social care services providing for increasingly complex health needs (Golant, 2015; Sixsmith & Sixsmith, 2008).

In the UK, most of the population live in a housing stock of everyday, ordinary, mainstream homes. However, much of the UK's current housing stock, especially for older and disabled people, is poor-quality, non-decent and not suitably accessible for changing health needs (Preece et al., 2021; Anderson, Theakstone & Lawrence, 2020). Increasing the accessibility and flexibility of the current housing stock is therefore a pressing need and one of the most tangible ways to future-proof for an ageing population.

One important approach is adapting or upgrading people's current homes ([redacted], 2020a; Preece et al., 2021). Most often, this involves making physical changes to the home, from installing small items/equipment such as a grab rail or stair lift, to wholesale refurbishments such as adding a wet room with a level access shower, widening the doorway, or installing an outdoor ramp. Adaptations can also include the installation of security devices, outside lights and alarms, or heating devices that support healthy ageing. These are known as 'home adaptations' in the

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context of the UK, or home modifications and housing adaptations in the international context.[1] This paper adopts the term 'home adaptations' to refer to all kinds of changes, modifications and assistive devices that can be put into place to support healthy ageing.

Home adaptations are crucial for older people to maintain healthy lives and for local and national governments to prevent health crises. Academic evidence highlights the positive effects of home adaptations in improving older people's functional performance and/or safety (e.g. Golding-Day & Whitehead, 2020; Petersson et al., 2009), reducing fall injuries (e.g. Keall et al., 2015; Keall et al., 2021), increasing social participation (Thordardottir et al., 2019), boosting mental health through increased self-confidence and sense of control (Heywood, 2004), reducing family carers' burden (Heywood, 2004), and supporting people to keep living in their communities (e.g. Hwang et al., 2011; Safran-Norton, 2010). All of these impacts can contribute to savings of monetary and/or labour costs to the health and social care sectors (e.g. Carnemolla & Bridge, 2019; Hollinghurst et al., 2020,2022; Keall et al., 2015; Keall et al., 2017; Salkeld et al., 2000).

The potential of adaptations and their role in future proofing for ageing, however, is challenged by the focus on the 'immediate chaos' in day-to-day service delivery (2020b). Studies of adaptations in the UK revealed long average waiting times from the initial application for an adaptation to its completion (Zhou et al., 2019,2020a; Zhou et al., 2020b). This can create detrimental disruptions to people's lives (Sakellariou, 2015a) and undermine the beneficial effects of adaptations (Petersson et al., 2009). Underlying such delays are a series of issues within the system, such as poor publicity of available adaptations funding and services; financial constraints and the shortage of occupational therapists (OTs); ineffective partnership between different sectors and the complex bureaucratic procedures; and funding gaps that lead to 'dropping out' (Zhou et al., 2019,2020a; Zhou et al., 2020b). These issues – some of which are long-standing (e.g. the publicity issue, Awang, 2002) or not unique to the UK (see Alonso-López, 2020 on Spain and Aplin et al., 2020 on Australia) – reflect failures in the wider system that supports adaptations.

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[1] Home adaptations are also called housing adaptations (mainly in Sweden) or home modifications (in Australia, New Zealand, the United States, etc.), or sometimes 'repurposing'.

The complexity around adaptations delivery raises key questions that outline the focus of this paper, namely: What are the drivers and barriers to implementing home and environment modifications? Is there a gap between policy and practice supporting the adaptations process? This paper explores these questions through a focus on the process of delivering and receiving of adaptations.

~~2. Conceptual and cost challenges of adaptations~~

~~2~~1.1. Adaptations and health

The core discipline of adaptations research is occupational therapy, with a focus on how and how much adaptations reduce functional dependency. There is a long list of established functional- and safety-indexes - such as activities of daily living, usability, falls and fear of falling - which measure the efficiency of adaptations. Yet reduced functional dependency does not necessarily mean a better outcome for people's health, wellbeing and life quality (Heywood, 2004; Sakellariou, 2015a, b). Rather, as Heywood (2004) demonstrates, home adaptations may improve people's wellbeing and quality of life through other factors, by relieving pain, enabling increased confidence, self-respect and better mood, and facilitating better relationships with friends and family. People's health matters as much as functional and safety outcomes when developing adaptation services.

Despite the demonstrable importance of health in adaptations outcomes, it is an area that remains underexplored. While the cost of material and labour in adaptations provision (Curtis & Beecham, 2018; Keall et al., 2015) and its effectiveness in reducing hours of care (Carnemolla & Bridge, 2019), care home admissions and emergency falls (Hollinghurst et al., 2020, 2022), or treatment on fall injuries (Keall et al., 2017) can be accurately measured, the health benefits are harder to quantify. The lack of understanding of this theme thus complicates thinking about adaptations in cost-benefit terms and as a system in itself.

~~2~~1.2 Systems thinking

Home adaptations is a system integrating housing, health and care - through both policies and practice - which operates in a mixed economy of provision and consumption. Conceived in this way, adaptations systems can be explored using systems thinking insights. This approach highlights the challenges of delivering such a system, in terms of both partnership processes and outcomes for end-users (Gibb & Marsh, 2019). Here we briefly set out how the

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adaptations system fits together, before considering why this system is failing to different degrees, suggesting avenues of analysis investigated later in the paper.

Following the general framework adopted in local housing systems analysis (LHSA) (O'Sullivan et al., 2004), any housing system can be partitioned into distinct yet interconnected elements and processes. These include external drivers such as economic trends and policy on a local or national scale, as well as internal processes of partners involved. LHSA stresses that interventions should be prioritised towards secular imbalances rather than cyclical or temporary problems and that there should be a clear, agreed vision of what balance and a well-functioning system means to partners.

Systems thinking produces key insights when applied to adaptations systems, which suggest that the system is often failing and therefore requires corrective interventions. For example:

1. Complexity gaps: as noted, home adaptations operate within the context of a large stock of existing housing. Key to making progress will be finding cost-effective ways to retrofit the stock, and reducing the inflow of housing which is not adapted or expensive to adapt. The complexity gap reminds us that complex systems like home adaptations with different actors, motivations, and dwellings, requires an equally complex response. Failure to appreciate what is required to make effective interventions leads to a complexity gap and ultimately to system failure.
2. Archetypes: archetypes are instances where the system, for different reasons, tends towards failure. This is captured both intuitively and through causal loop diagrams using balancing and reinforcing feedback loops. Examples include 'fixes that fail' (symptomatic responses do not get at underlying problem causes), accidental adversaries (erstwhile partners have to compete for funding which leads to zero or even negative sum games) and the tragedy of the commons (a breakdown in ownership and co-ordination leads to over consumptions and degradation of commonly owned resources).
3. Leverage points: these are points within the system where intervention has disproportionate positive effects (Meadows, 1999), though these are not always obvious or straightforward. Effective leverage points are critical to any major shift in the processes and outcomes of home adaptations.

4. Emergent properties: this involves acknowledging that the system as a whole is greater than the sum of its parts, making diagnosis of errors within a system and intervention difficult.
5. Partnership working: these types of problems are related to preventative spending challenges, wherein providers and partners have their own logics, strategies, budget accountabilities and statutory requirements. In such cases, the consortium is unable to work preventatively under common leadership. In the research, we found clear linkages to the systems challenges in process of adaptations.

~~3.~~2. The Adaptations Framework

This paper follows the Adaptations Framework outlined by ███ (2022a) to outline drivers and barriers that occur at each stage of the adaptations process. As shown in Figure 1, an adaptions process often involves ~~seven~~ various ~~different~~ stages starting from need awareness, followed by accessing information and advice, leading to assessment, funding, design, delivery, and evaluation. These essential steps have connected interventions and activities attached to them in delivering and receiving adaptations (for both policy and practice).

It is important to note that there is no typical process for adaptations, even within the official adaptations process, let alone an informal practice leading to different pathways, with national and local divergence of adaptations policies and partnerships (███, 2022a; Zhou et al., 2020b). There have been multiple government-led or commissioned reviews across the UK that highlight key barriers alongside a fragmented service delivery system over the decades (e.g. Bibbings et al., 2015; Heywood & Turner, 2007; Jones, 2005~~XXX~~). Wider partners in the health, housing and social care arenas have also highlighted evidence around the role of adaptations, how it supports healthy ageing for diverse groups and as people grow older (~~XX~~e.g. Adams & Hodges, 2018; Clifford, Kemp & Shah, 2022; Mackintosh & Frondigoun, 2022; Mackintosh et al., 2018; Powell et al., 2017).

The process is not truly linear, and barriers can be experienced at multiple stages. The pathways for both resources, service delivery and policy are very complex (Mackintosh, 2020). Within the delivery process, there is often need for additional assessment, as well as projections around cost and design, leading to a circular process. ~~, as discussed in discussions section of this paper.~~However, for analysis we have drawn from the figurational (process) sociological lens, to develop the adaptations framework and give insight to the network of

interdependent actors and activities, which allow insights between the structure and agency (Elias, 1978, 1987). This helps simplify the adaptations process and apply systems thinking for analytical purposes to try and understand a process that is complex and fragmented in terms of public service delivery.

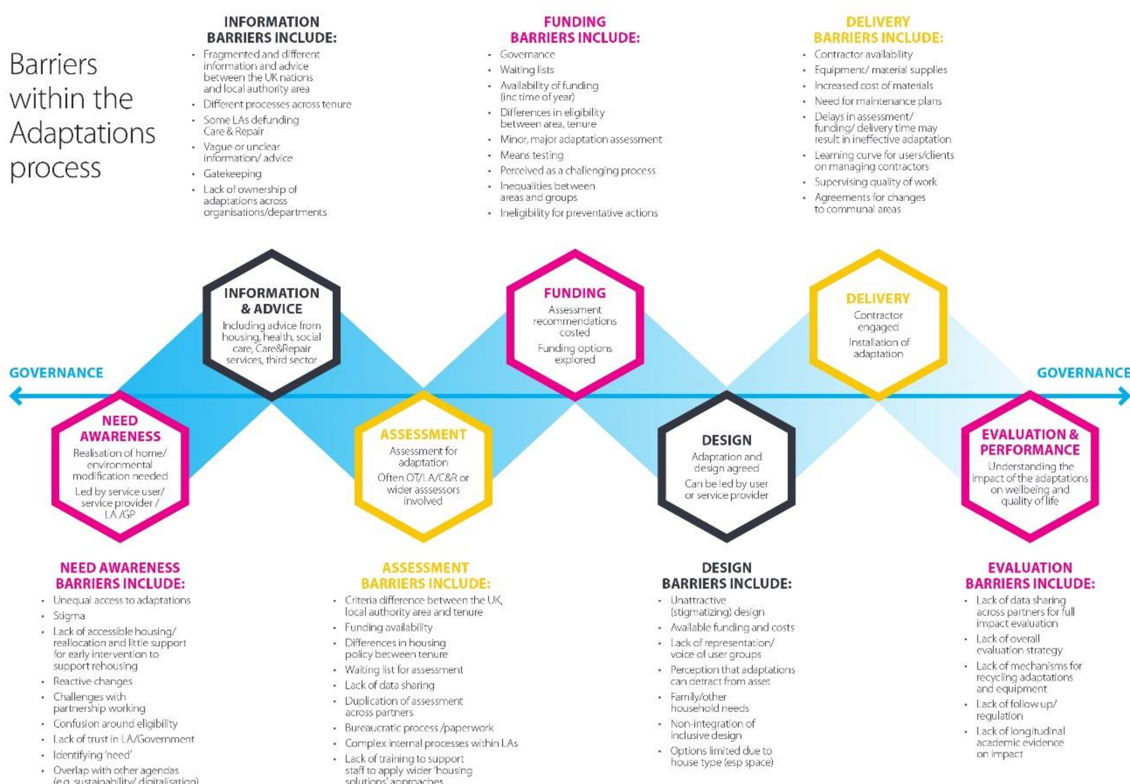

Figure 1: Adaptations Process (XX)

~~The next section discusses the findings following the Adaptations Framework. All participants were given pseudonyms which were considered to be in keeping with their gender, age and positionality in adaptations (i.e. key stakeholders or service users).~~

Figure 1 outlines the barriers within stages throughout the adaptations process, developed from the perspectives and discussions with key stakeholders throughout the UK, detailed in the next section.

3. Methodology

3.1. Data and methods

This paper brings together the findings from a series of projects designed to understand and promote better home adaptations policy and practice in Scotland and throughout the UK. Specifically, these projects include an international evidence review, an investigation of the adaptations' delivery process from key stakeholders' views, and an exploration of older people's (i.e., the service users') lived experiences of adaptations. These projects were developed as linked programme by [Anonymised] to develop and improve the evidence base around adaptations. The motivation was to understand adaptations through a variety of perspectives and lenses to support positive policy change.

firstly led an evidence review that examined academic literature to gain state-of-the-art knowledge about home adaptations. The review followed the 'systematic literature mapping' approach that has been developed from and adopted in a series of review projects undertaken within CaCHE (see, for example, Serin, 2018; White & Serin, 2021). The search was conducted on 15 September 2021 with final core evidence base consisting of 76 scholarly articles about adaptations, which formed the foundations of the discussions in this paper (see , 2022 for more detail).

The then focused on the fragmented policy landscape in Scotland to investigate barriers throughout the adaptations process. It brought together insights from fifteen key stakeholders working with evidence, policy, practice and/or delivery in Scotland (also in England, Wales and Northern Ireland) obtained through semi-structured interviews that were conducted remotely via MS Teams from late 2021 to early 2022. ~~Data were analysed following a grounded theory approach (Braun & Clarke, 2021).~~ The results of this project resulted in the Adaptations Framework (see 2022a for more detail). ~~that is used to structure the findings section of this paper (explained in a later section).~~

The

examines the lived experiences of older people and good practices within the adaptations process in Scotland. The project employed a mixed-method approach, triangulating qualitative findings from focus groups and interviews (also remotely conducted via MS

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TEAMS in early 2022) and quantitative learnings from some secondary analyses of three Age Scotland's National Housing Surveys (2018, 2020 and 2022). The qualitative strand comprised three focus groups and fifteen interviews with older people living across Scotland, and ten interviews with housing and health and social care professionals, predominantly in front-line occupational therapists (OT) and housing support-related staffs within Local Authorities (LA) and Care & Repair services.[2] The sample of older people (service users) was comprised of twenty-five older people aged 55 years old and over. Six of them also had caring experiences. This included owner-occupiers (20), people from social renting (3) and privately renting (2). The experiences of those in the private renting sector (PRS) are paid special attention to, given their underrepresentation in adaptations processes (further argued in a later section). These focus groups and interview data are the main data source for the discussion in this paper (see ███ et al., 2023 for more detail).

The programme of projects resulted in rich, nuanced qualitative data from interviews and focus groups with key stakeholders and older people. The adaptations framework (see Ffigure 1, ███ 2022a) had followed a grounded theory approach (Braun & Clarke, 2006) where barriers and stages of the adaptations process were developed from the data and experiences. To bring these insights together for this paper, we followed a more deductive approach utilising this grounded framework to conduct qualitative secondary analysis of interviews and focus groups to structure insights across the adaptations process from different perspectives. The next section discusses the findings following the Adaptations Framework (Figure 1). All participants were given pseudonyms which were considered to be in keeping with their gender, age and positionality in adaptations (i.e. key stakeholders or service users).

3.2. The Adaptations Framework

[2] There are 32 Local Authorities in Scotland, also known as local councils who support the policy and practice around public services in a defined area. Care & Repair is a service that may be available within a Local Authority that offers advice, assistance and adaptations for older and/or disabled people at home (http://careandrepairscotland.co.uk/).

~~This paper follows the Adaptations Framework outlined by McCall (2022a) to outline drivers and barriers that occur at each stage of the adaptations process. As shown in Figure 1, an adaptions process often involves seven different stages starting from need awareness, followed by accessing information and advice, leading to assessment, funding, design, delivery, and evaluation. These essential steps have connected interventions and activities attached to them in delivering and receiving adaptations (for both policy and practice).~~

~~It is important to note that there is no typical process for adaptations, even within the official adaptations process, let alone an informal practice leading to different pathways, with national and local divergence of adaptations policies and partnerships (McCall, 2022a; Zhou et al., 2020b). The process is not truly linear, and barriers can be experienced at multiple stages. Within the delivery process, there is often need for additional assessment, as well as projections around cost and design, leading to a circular process, as discussed in discussions section of this paper.~~

~~*Figure 1: Adaptations Process,*~~

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~~The next section discusses the findings following the Adaptations Framework. All participants were given pseudonyms which were considered to be in keeping with their gender, age and positionality in adaptations (i.e. key stakeholders or service users).~~

4. Findings

The methods section outlines the various projects that bring together the perspectives of service users and professionals with experience receiving or providing adaptations. The range of qualitative evidence from both provider and user perspectives demonstrates that adaptations are a vital part of negotiating day-to-day activities such as bathing, moving inside and outside the home and eating. The essential need for adaptations to support day-to-day life was the predominant driver for individuals as well as carers and wider household members.

> *"I also put in rails at my outside steps, and they give me reassurance. The shower saves me climbing in/out of the bath and makes me feel safer and more confident" (Adele, service user).*

Grab rails, specially designed bathrooms and outdoor lights were the most common adaptations in 2018, 2020 and 2022. Along with lifts and showers these gave people *'reassurance'* and made them feel *'safer'*.

> *"Once you get the adaptations in, it doesn't just help the person in need of those adaptations. It helps the carer as well and if that carer happens to be, for example, a husband or a wife or partner or whatever, their life is transformed in the same way… by helping with the adaptations for the disabled person, you're also helping the carer, which can be a family member or a friend or whatever. You're also helping the entire family and visitors and so on, who are able to come in and out and visit the house. I think there's a great impact. It really is a win-win situation" (Donald, service user).*

Adaptations support health and wellbeing via such impacts like pain relief and increased mobility (Focus Group 2, multiple service users). Stakeholder interviews highlighted universal agreement around the importance of providing adaptations and the positive outcomes they support around health, wellbeing and quality of life.

> *"What it's really about is making a difference to health and wellbeing outcomes and if you're not assessing that all you're doing is changing someone's home" (Stephen, key stakeholder).*

Interviews also outlined preventative activities such as addressing trip hazards, improving accessibility and widening doors for future wheelchair use. Both service users and providers perceived prevention as an important area for delivery. Therefore, the main drivers around adaptations were seen as: enabling essential day-to-day activities at home, supporting positive health and wellbeing, fulfilling individual and household needs, avoiding risks in the home, and planning for future need.

However, although seen as an essential service, the adaptations process and accessing these services are seen as challenge and always a *'fight'* (Focus Group 2, service user). The policy landscape was described as a *'Cinderella service'* where *'inconsistency is a problem'* (Stephen, key stakeholder). National and local divergence of policies across the UK made participants challenge the idea of a coherent landscape around the adaptations process:

> *"I don't know if you could even call it a landscape and if it's a landscape, then it gets massively potholed and filled with obstacles and just kind of blind alleys, you know, it's confusing. We find it confusing, and we are so called experts."* *(Isabella, key stakeholder).*

> *"I mean we have postcode lotteries, we have services that are not delivered consistently across the piece, but some of that inconsistency is a genuine local response to particular priorities… The challenge is going to be drawing those voices up into a national framework, which is genuinely a framework and not a straight-jacket and allows those kind of local nuances to be properly developed"* *(David, key stakeholder).*

There are key barriers to provision at all stages of the adaptations process - from need awareness, information, assessment, design, funding, delivery and evaluation. The next sections explore these barriers in detail.

4.1 Need awareness

The adaptations process usually starts with identifying the 'need' for adaptations and seeking access to support. In corroboration with evidence in the literature (e.g. Ekstam ~~et al.~~, Fänge & Carlsson, 2016; Kruse et al., 2010), people tended to be reactive rather than preventative when seeking guidance on adaptations. The primary driver that led people to consider adaptations was health crisis events (e.g. a broken leg or hip). Another driver was formal diagnosis of a health condition (e.g. a diagnosis of dementia, for example Billy below), although this was also framed as a barrier in preventing more timely adaptations, as people often had to wait for diagnosis. Difficulty in accessing parts of their homes and facilities (e.g.

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getting in and out of the bath) was a very common driver to seek access for support. There are also wider non-health related drivers such as managing 'clutter' and storage.

"When I was diagnosed I then had to retire from my job. I knew straightaway that I would have to do something to the house and the idea was just to get it adapted there and then, so that it's ready for when things do progress to the worst" (Billy, service user).

Due to the diversity of these drivers, finding consistent language around required adaptations can be challenging, leading to a lack of 'awareness' (Focus group 3, service user)

"Changing the language maybe around what it is, and what's presented would be great. I would be really keen to see that synergy between the concept that we're putting forward as housing solutions so that we're not necessarily all coming up with describing the same thing, describing it in a different way or giving it a different title" (Patricia, key stakeholder).

"I think the division, if you like, between adaptations equipment and technology, it's just all getting blurred. Also, the division between what's mainstream and what's special. Well, that's great because I want everything to be mainstream. Yes, I think, and this is something that really annoys me, is often, tech services are set up very separately from equipment and adaptation services, or from housing services. I think that works much better if it's an integrated service because again, we're putting people in a box" (Kimberley, key stakeholder).

Many participants who self-funded their adaptations were unaware that help was available; others *'stumbled'* onto the information (as noted by Max through his GP, alongside other examples from friends, carer networks, voluntary organisations). The data also highlighted that barriers including stigma attached to ageing made people reluctant to ask for help.

4.2 Information and advice

Participants consistently noted challenges around information and advice around adaptations. This was compounded by the divergence in eligibility between local authorities and different tenures. There were also challenges around categorisation of adaptations (e.g. information being held only under disability pages), description of services, and varying locations of information on Local Authority websites (e.g. housing and/or social work departments)

"I do agree there is a lot of things out there, but it was a bit of a quagmire trying to find it and you don't know exactly what to do" (Focus Group 2, service user).

> *"I think from the client's point of view, one of the key barriers is lack of information. People don't know what they're entitled to. They don't know what's out there" (Isabella, key stakeholder).*

The wording such as 'quagmire' and 'minefield' suggest inconsistency and complexity in understanding and accessing support for adaptations. Older participants consistently looked for people-centred communication options, such as face-to-face and telephone options.

There is further complexity when considering the Private Rented Sector (PRS). Service users and providers working in the PRS noted small – and in some areas non-existent – applications to the Scheme of Assistance[3] from private renters. This was linked to complexity around eligibility and the requirement of permission from private landlords. Modifications to common spaces must also have consent of all people attached to that space.

> *"We've placed other people's property rights over human rights in terms of access and enjoyment of their homes because you basically have to go and get permission from your neighbours to do an adaptation if it involves a common or shared space" (David, key stakeholder).*

Stakeholders working in the PRS noted that often landlords were unaware of grant schemes or that tenants can request modifications that support their health and wellbeing.

Therefore, key barriers to implementation in the adaptations process include: the diversity of information and advice channels, and differences in eligibility, language and criteria.

4.3 Assessment

Assessment is one of the most important parts of the adaptations process. It is a key driver in itself for adaptations and shapes the experience and later stages of the process. The assessment process relies heavily on occupational therapists~~OT~~ expertise in housing, and best practice examples highlight partnership working across housing, occupational therapists~~OTs~~ and social work, linking to the systems thinking outlined in 2.2 regarding the importance of well-designed partnership processes (Gibb & Marsh, 2019). The complexity of these

[3] the Scottish adaptations grants scheme for homeowners and private renters

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partnerships, as well as varying resources and governance, can impact on waiting lists and capacity.

> *"the access to assessment and recommendations that is a barrier because there's a waiting list with most Occupational Therapy department… there has always been OT waiting lists. It's a sad indictment that it seems to be like it's accepted there will be OT, and it's as though we don't challenge it anymore to say, actually this service has such a massive impact, it's got such a good outcome in terms of benefits overall that there isn't a higher profile" (Jessica, key stakeholder).*

> *"it's a mandatory right, they don't seem to get what mandatory right means, and even when the occupational therapists do if they're doing the assessment, the social services managers who haven't looked at the legislation and haven't been challenged about it, crush it, they sort of think that's optional, but it shouldn't be optional if it's mandatory" (Enid, key stakeholder).*

The personal interaction involved in assessment also gave older participants time to understand the practicalities and possibilities of adaptations:

> *"you need to meet the real person at building control, rather than just either you or your designer log the application at building control, it was well worth the trip to Motherwell because we formed a relationship with somebody at building control, when we got to the stage that we had a design that required approval they turned it around in less than a week" (Focus Group 2, service user).*

This example highlights the importance of clear communication between service users and occupational therapists. ~~OT~~s. This communication shapes experiences of the later stages of adaptations, particularly the design and funding stages, helping people connect these fragmented processes.

4.4 Funding

Funding was a barrier at several levels within the adaptations process. Funding challenges relate not only to access to money, but managing costing, and investing in the correct solutions. Barriers to funding approval were also dependent on time of year, and reapplication for grants if costs had changed (e.g. post-COVID).

> *"Availability of funding is also an issue. People also often need help with the project management element of adaptations" (Susie, service user).*

Funding was also clearly impacted by tenure. For social housing tenants in the UK, there are no means testing requirements. In Scotland, means testing for private renters and

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homeowners can lead to a required 20% contribution (Wane, 2016); this was highlighted as a key barrier. The funding landscape for adaptations is complex, and perceptions of older people highlighted that there is unmet need and informal investment in adapting homes. In Scotland, the formal funding process is particularly complex (see JIT ~~&~~ and Scottish Government, 2010; ~~Wane 2016;~~ Scottish Government, 2022; Wane, 2016) and contributed to barriers such as longer waiting lists:

> *"I think historically an awful lot of the discussions nationally around adaptations have always started with the money, and we've all got caught up in the money and what that looks like, and what causes the problems…. The problem with that is it's the tail wagging the dog" (Patricia, key stakeholder).*

> *"I mean means testing is a big bureaucracy that takes a lot of time and money in my opinion and it's not worth it for adaptations that cost, say, up to a thousand pounds. They can be just really quickly, really effective, and have that preventative impact and I think that a difference is because you've got local authorities able to adapt their own local policies, you've just got differences in approach. In that respect, they're the good ones, I think, with more adaptations without means testing and the ones who maybe aren't as progressive, don't. (Theo, key stakeholder)*

PRS tenants and homeowners often self-funded adaptations; in 2022, 70% of respondents self-financed adaptations, while only 20% received a grant. Yet self-funded ~~modifications~~ adaptations could be problematic. For example, one couple had self-financed a new accessible shower that was later assessed as inadequate (carers were not allowed to use it, as deemed unsafe), and replaced with a wet room. The couple lost thousands of pounds, and had several falls in the initial shower conversion.

From a public finance perspective, ~~governments may welcome widespread self-funding. However, two~~ difficulties remain due to lack of partnership working alongside fragmented and confusing pathways for older people (Zhou et al, 2020b). ~~Firstly, m~~Many adaptations require third party assessments, and households may lack the expertise to determine needs and solutions. Reduced initial public spend can lead to more public spending later. Secondly, self-funding is inherently less progressive than wholly needs-based criteria.

4.5 Design

The design of the adaptations is an important yet often obscured part of the process. Design in existing housing was perceived by stakeholders and service users to be inadequate.

These discussions were dominated by stigma around age or disability which are attached to clinical design, noted earlier as a barrier to accepting adaptations. For example, multiple stakeholders and service users noted the 'ugly white handrail' in several interviews - often placed outside homes - as an indicator of vulnerability. Some in the PRS also perceived adaptations as undesirable, reducing the 'asset' value of the home.

Design, however, is more than aesthetics. It is about finding the right and best solution. For example:

> *"And I looked, you know, she showed me the bathroom, and I thought, oh God that is […], oh I would hate to have that. It's got little half, like a sort of fence and gate arrangement around it, with a little opening door; and the shower seat has legs and arms. And I'd look at it and think, well, not only was I thinking: God, what a nightmare to clean, you know, all those extra surfaces and cracks and corners and everything; but also all those things to bump into and trip over" (Max, service user).*

In some cases, homes simply cannot be adapted, limiting the design options available. As such, several stakeholders called for earlier *'housing conversations'* (Patricia, key stakeholder), adopting a person-led approach to discussing options.

Moreover, many older people have design expectations, tastes and needs that they wish to feed into the process. Design is thus where professionals acted as representatives of a broader system of power and knowledge, as gatekeepers granting or denying needs and desires (Sakellariou, 2015a,b). It is also linked to the narrow application of 'criteria' and 'policy' in practice. We had a telling conversation with Andrew – a service user who previously worked in adaptations. When asked if he saw any difference working across different tenures, Andrew replied:

> *Andrew: Yeah. The difference was probably more in the client's expectations rather than the work itself, like, it sounds horrible, but private clients, people in private housing, a lot of them were quite grateful for what they got, but a lot of them didn't look at adaptations as being a need for the person. The husband and wife (in an example he mentioned before) looked at adaptations for adding value to the house, and a lot of times they would ask for stuff that just was completely inappropriate and not necessary. […]*
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> *Researcher: Okay. So higher expectations sometimes on the owner occupied side.*
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> *Andrew: Yes.*

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Researcher: I see. Very interesting. Did you have much experience of the private rented sector?

Andrew: We did, yes. The only difficulty there was trying to get the owners of the property to agree to us putting adaptations in them. And they also had a higher expectation of the quality of product that was being used. […].

Researcher: Very interesting. And social rented?

Andrew: Council housing, we just went in there and did it, and they were really happy. Definitely, yeah, they were happy with what they got so, simple as that. They had no pre-thoughts about what they wanted because when you live in a council house, I mean the standards are pretty good anyway, and you accept that standard for what it is, and you don't want to adapt that house to make it better because you'd just have to rip it out at the end the day if you moved anyway.

Here Andrew used 'we' in opposition to 'them' – the 'clients' he had served in his work before. People had to 'compromise' what they expected or desired to what they were offered – deemed as what they needed by the 'us'. Indeed, it was noted by multiple participants that advocacy and connections to services were key to managing the process. These findings also reveal the lack of service user representation in the adaptations process and their lack of control over the process. In fact, current design guides are often not co-produced and have limited consultation (██████ 2022b).

4.6 Delivery

The barriers outlined so far all occur before the adaptation is delivered. Following assessment, funding and agreement on design, adaptations must then be installed. Installation firstly requires finding services and contractors to complete the work. This was highlighted as a key challenge, especially post-COVID, as many contractors had decreased availability (particularly in rural areas). There are also large-scale post-Brexit and post-COVID increases in cost and availability of materials, reinforcing ingrained inequalities in the housing sector (██████ et al., 2022).

Care & Repair services are not available within Local Authorities; as a result, people without required skills or confidence sometimes have to self-manage complex adaptations. Some contractors may even lack training on how to best understand people's needs.

"it's just a nightmare, and we've looked in, we've started the process. We got an architect to come. So I've got plans to get a wet room down the stairs, and if I have to, we can just turn the front room into a bedroom, but I'm not sure what

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adaptations are the best things to get for in this wet room. Though I had been going to try to go to the centre at Astley Ainslie, but I'm not very good on the telephone and I'm not very good at organising things. So now we've got the plans drawn up, but we're stuck because we're not sure what to do next" (Janet, Focus Group 2, service user).

"You can't rely on your tradesman to know it. Your tradesman might be six foot tall and you are five foot tall and he'll put it where he thinks it should go and that's not where you want it to go" (Sarah, Focus Group 1, service user).

These extracts point to a lack of service user control over the process. Similarly, adaptations must also take into account perspectives of other household members and carers. Delivering adaptations that overlook the carer's perspective, for example, could result in the sense that *"decisions seemed to be made behind my back"* (Maisie, service user).

LHSA stresses that interventions should be prioritised towards addressing long term or structural~~secular~~ imbalances, and success results from an agreed vision which balances outcomes. In both design and delivery stages, service users seem to be in less powerful, imbalanced positions, linking back to the view of adaptations processes as a 'fight'.

4.7 Evaluation and performance monitoring

LHSA and systems thinking also stresses the importance of 'feedback loops', which, among other things, provide reinforcing or balancing (positive or negative feedbacks) that can, if understood in their context, contribute to more~~in ensuring~~ efficient system developments~~s~~. However, such loops were rarely mentioned or identified explicitly in the data. Generally, it was rare for services to record and feedback on best practices, particularly in relation to self-funded adaptations. This lack of evidence was an important finding, demonstrating how evaluation has been overlooked within the adaptations process.

"There's been very little research done in the topic area to robustly demonstrate the efficacy and cost-effectiveness and practitioners strive for it in Local Authorities, but they haven't got the expertise to do it. Commissioners demand it, it's not available. And so whilst anecdotally people who work in adaptations know what difference it makes, they can't robustly prove it. So until they can prove it, they're struggling" (Stephen, key stakeholder).

Lack of evaluation may discourage investment as key decision-makers rely on evidence to determine policy and practice. There is an urgent need to carry out post-adaptation visits, collecting and sharing performance data to inform research as well as operational needs. This

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must be carried out with awareness of how adaptations improve health and quality of life beyond functional performance, something stakeholder Kimberley noted, "*we've been very, very slow to pick up on*".

5. Discussions

The findings present a broadened picture of adaptations, as well as the overlap between adaptations as an outcome and a process. This reinforces the need to re-think adaptations as a way of enabling a better life quality, health and wellbeing beyond living independently. Current approaches tend to put people in boxes, instigating false binaries between costs (major vs minor), types (housing adaptations vs assistive technology), responsibilities (housing vs occupational therapist~~OT~~), or even value-laden criteria ('mainstream vs special', as one stakeholder said). There is limited focus on the health benefits beyond functional performance and safety; Heywood's (2004) study remains the only dedicated discussion of the health benefits of adaptations. It is within this context that many participants experienced the adaptations process as a 'fight'.

Another key barrier is governance. The findings have shown that ~~A~~adaptations are a 'patchy', 'postcode lottery' in a fragmented policy landscape, in line with other studies into the adaptations process (Mackintosh, 2020; Mackintosh & Heywood, 2015; Zhou et al., 2019,2020a). Often service users do not know what available, and key stakeholders even found it difficult to describe the process. Language, particularly around needs, is perceived as important but lacking. These gaps make person-led solutions more difficult to enact.

Funding challenges produce clinical and unpopular design, which was a key barrier to early take-up of adaptations (Bailey et al., 2019; see also Aplin, de Jonge & Gustafsson, 2013; Burns, Pickens & Smith, 2017; Heywood, 2005). Consequently, adaptations are considered reactive, post-health crisis interventions, with their preventative potential largely unrealised.

The findings also highlight a high level of self-funding– particularly from homeowners and private renters – owing to the complexity of the funding system, and as we discussed earlier, one which explicitly differentiates and makes assumptions based on which tenure households happen to be in when need for adaptation arises (Wang, et al, 2022). Self-funding also afforded service users more control over design. However, this often led to later challenges such as adaptations that are inadequate. Self-funding may therefore fail to address complex

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and specific needs. By contrast, holistic interventions are more effective, and can be framed as preventative public investment.

Participants showed interest in early intervention for preventative longer-term support. Key stakeholders, for example, expressed the need for initial 'housing conversations' that explore options. Some homes are simply not adaptable, linking to wider challenges in lack of accessible housing available. This then leads to debates around the importance of allocations, and availability of accessible housing (see Anderson et al., 2020). The findings also highlight that the role of housing professionals is often overlooked, reinforcing the importance of partnership working across housing, health and social care in delivering person-centred provision (Gibb & Marsh, 2019).

In terms of system archetypes, adaptations can fail because symptoms rather than causes are being addressed, particularly where households self-fund without needs assessments. Gibb and Marsh (2019) provide examples from housing of 'fixes that fail', policies aimed at the symptom of unaffordable housing which do not get to the root causes of unaffordability and may in time worsen the underlying problem e.g. the UK's 'Help to Buy' policies. Competing public and private funding providers can also undermine partnership working. Similarly, the fragmented funding landscape could lead to funding cuts, since broader decision-makers may not understand or value the adaptations process. This fragmentation, along with limited longer-term perspectives, can result in short-sighted and siloed budgets, which fail to acknowledge preventative savings.

All of this is linked to the general vulnerability of the housing sector itself, which is uncomfortably positioned between the public and private realms (Malpass, 2003). In the findings, adaptations are linked to the struggle for *'property rights before human rights'* (David, key stakeholder). Indeed, changes to homes and environments are vital in supporting human rights, raising standards of healthy ageing and wellbeing.~~health, wellbeing and living.~~

6. Conclusion

The findings clearly highlight that adaptations are a vital service. Both service users and key stakeholders highlight how adaptations within homes can support positive outcomes such as enhanced wellbeing, quality of life, pain relief, increased mobility and confidence.

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Adaptations are a driver in supporting essential day-to-day activities such as washing, cleaning and eating.

Therefore, the main drivers around adaptations are enabling essential day-to-day activities in the home (most often after a health crisis/event/diagnosis), ensure access to a part of the home, support wider household needs, reduce risks and plan for future need. The assessment process is crucial to change around adaptations, with effective partnership working leading to successful delivery. Advocacy, experience and contact with someone in the adaptations system was also a key driver for successful delivery for service users.

The key barriers to implementation in the adaptations process include the diversity of information and advice channels, differences in eligibility, language and criteria – described as a 'quagmire' or 'minefield'. There is also a reluctance to ask for help, fuelled by a stigma attached to age, disability and unattractive or impractical design. There was uncertainty about the differences between support across home-ownership, private rent and social rent. For ~~the PRS,~~ PRS tenants there were added barriers such as gaining landlord permission for modifications. Staff resources and contractor availability were also clear barriers linked to assessment and delivery around adaptations.

Overall, acquiring adaptations is seen by both key stakeholders and service users as a 'fight'. The process of establishing the right intervention, gaining information, being assessed, finding and applying for grants, designing the right solution and managing installation was seen as overwhelming, bureaucratic, and mired in a difficult-to-understand policy landscape. The positive outcomes of adaptations are clear, even with existing systems failure. If the adaptations process is fully invested in, made consistent, supported and simplified, it will be an effective and tangible way to enable essential day-to-day support while also future proofing housing for an ageing population.

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The 'fight' for adaptations: Exploring the drivers and barriers to implementing home and environment modifications that support healthy ageing

Abstract

Purpose – The ageing and disabled population is fast growing, which emphasises the need to effectively modify current homes and environments to support healthy ageing and increasingly diverse health needs. This paper brings together findings and analyses from three adaptations-focused projects, drawing on perspectives from key stakeholders alongside the lived experiences of service users acquiring adaptations.

Design/Methodology/Approach – Following an Adaptation Framework developed from interviews and focus groups with older people and key stakeholders, the paper discusses barriers experienced by older people and front-line workers in receiving and delivering adaptations through all stages of the process.

Findings – This paper reveals how experiences around adaptations might diverge with unseen, hidden investment and need among individuals, and how conceptual and cost-focused evidence gaps impact wider understandings of adaptations delivery. In so doing, this paper highlights how the adaptations process is perceived as a 'fight' that does not work smoothly for either those delivering or receiving adaptations services.

Policy Implications – The paper suggests a systematic failure such that the adaptations process needs to be rehauled, reset and prioritised within social and public policy if the housing, health and social care sectors are to support healthy ageing and prepare for the future ageing population.

Originality/Value – The paper brings together insights from key stakeholders alongside service users' experiences of adaptations to highlight key policy drivers and barriers to accessing and delivering adaptations.

Keywords: housing; home improvement; housing support; accessibility; future-proofing; ageing; disability; systems thinking

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Paper Type: original research

1. Introduction

As the global population reaches eight billion, one in six people will be aged 65 and over by 2050 (an increase from one in ten in 2022) (United Nations, n.d.). Furthermore, 16% of the global population currently experience significant disability – a number that is increasing due to the ageing population (World Health Organisation, n.d.). The population growing older is to be celebrated, but evidence suggests that these additional years are not necessarily spent in good health (Beard et al., 2016). Health needs change and diversify, resulting in a need to focus on supporting healthy ageing (Wong, 2018). To age healthily, the population must have supportive environments in and outside the home in which to age well in place, with integrated housing, health and social care services providing for increasingly complex health needs (Golant, 2015; Sixsmith & Sixsmith, 2008).

In the UK, most of the population live in a housing stock of everyday, ordinary, mainstream homes. However, much of the UK's current housing stock, especially for older and disabled people, is poor-quality, non-decent and not suitably accessible for changing health needs (Preece et al., 2021; Anderson, Theakstone & Lawrence, 2020). Increasing the accessibility and flexibility of the current housing stock is therefore a pressing need and one of the most tangible ways to future-proof for an ageing population.

One important approach is adapting or upgrading people's current homes ([redacted]; Preece et al., 2021). Most often, this involves making physical changes to the home, from installing small items/equipment such as a grab rail or stair lift, to wholesale refurbishments such as adding a wet room with a level access shower, widening the doorway, or installing an outdoor ramp. Adaptations can also include the installation of security devices, outside lights and alarms, or heating devices that support healthy ageing. These are known as 'home adaptations' in the context of the UK, or home modifications and housing adaptations in the international context.[1] This paper adopts the term 'home adaptations' to refer to all kinds of

[1] Home adaptations are also called housing adaptations (mainly in Sweden) or home modifications (in Australia, New Zealand, the United States, etc.), or sometimes 'repurposing'.

changes, modifications and assistive devices that can be put into place to support healthy ageing.

Home adaptations are crucial for older people to maintain healthy lives and for local and national governments to prevent health crises. Academic evidence highlights the positive effects of home adaptations in improving older people's functional performance and/or safety (e.g. Golding-Day & Whitehead, 2020; Petersson et al., 2009), reducing fall injuries (e.g. Keall et al., 2015; Keall et al., 2021), increasing social participation (Thordardottir et al., 2019), boosting mental health through increased self-confidence and sense of control (Heywood, 2004), reducing family carers' burden (Heywood, 2004), and supporting people to keep living in their communities (e.g. Hwang et al., 2011; Safran-Norton, 2010). All of these impacts can contribute to savings of monetary and/or labour costs to the health and social care sectors (e.g. Carnemolla & Bridge, 2019; Hollinghurst et al., 2020,2022; Keall et al., 2015; Keall et al., 2017; Salkeld et al., 2000).

The potential of adaptations and their role in future proofing for ageing, however, is challenged by the focus on the 'immediate chaos' in day-to-day service delivery ( ). Studies of adaptations in the UK revealed long average waiting times from the initial application for an adaptation to its completion (Zhou et al., 2019,2020a; Zhou et al., 2020b). This can create detrimental disruptions to people's lives (Sakellariou, 2015a) and undermine the beneficial effects of adaptations (Petersson et al., 2009). Underlying such delays are a series of issues within the system, such as poor publicity of available adaptations funding and services; financial constraints and the shortage of occupational therapists (OTs); ineffective partnership between different sectors and the complex bureaucratic procedures; and funding gaps that lead to 'dropping out' (Zhou et al., 2019,2020a; Zhou et al., 2020b). These issues – some of which are long-standing (e.g. the publicity issue, Awang, 2002) or not unique to the UK (see Alonso-López, 2020 on Spain and Aplin et al., 2020 on Australia) – reflect failures in the wider system that supports adaptations.

The complexity around adaptations delivery raises key questions that outline the focus of this paper, namely: What are the drivers and barriers to implementing home and environment modifications? Is there a gap between policy and practice supporting the adaptations process? This paper explores these questions through a focus on the process of delivering and receiving of adaptations.

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1.1. Adaptations and health

The core discipline of adaptations research is occupational therapy, with a focus on how and how much adaptations reduce functional dependency. There is a long list of established functional- and safety-indexes - such as activities of daily living, usability, falls and fear of falling - which measure the efficiency of adaptations. Yet reduced functional dependency does not necessarily mean a better outcome for people's health, wellbeing and life quality (Heywood, 2004; Sakellariou, 2015a,b). Rather, as Heywood (2004) demonstrates, home adaptations may improve people's wellbeing and quality of life through other factors, by relieving pain, enabling increased confidence, self-respect and better mood, and facilitating better relationships with friends and family. People's health matters as much as functional and safety outcomes when developing adaptation services.

Despite the demonstrable importance of health in adaptations outcomes, it is an area that remains underexplored. While the cost of material and labour in adaptations provision (Curtis & Beecham, 2018; Keall et al., 2015) and its effectiveness in reducing hours of care (Carnemolla & Bridge, 2019), care home admissions and emergency falls (Hollinghurst et al., 2020, 2022), or treatment on fall injuries (Keall et al., 2017) can be accurately measured, the health benefits are harder to quantify. The lack of understanding of this theme thus complicates thinking about adaptations in cost-benefit terms and as a system in itself.

1.2 Systems thinking

Home adaptations is a system integrating housing, health and care - through both policies and practice - which operates in a mixed economy of provision and consumption. Conceived in this way, adaptations systems can be explored using systems thinking insights. This approach highlights the challenges of delivering such a system, in terms of both partnership processes and outcomes for end-users (Gibb & Marsh, 2019). Here we briefly set out how the adaptations system fits together, before considering why this system is failing to different degrees, suggesting avenues of analysis investigated later in the paper.

Following the general framework adopted in local housing systems analysis (LHSA) (O'Sullivan et al., 2004), any housing system can be partitioned into distinct yet interconnected elements and processes. These include external drivers such as economic trends and policy on a local or national scale, as well as internal processes of partners involved. LHSA stresses that interventions should be prioritised towards secular imbalances

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rather than cyclical or temporary problems and that there should be a clear, agreed vision of what balance and a well-functioning system means to partners.

Systems thinking produces key insights when applied to adaptations systems, which suggest that the system is often failing and therefore requires corrective interventions. For example:

1. Complexity gaps: as noted, home adaptations operate within the context of a large stock of existing housing. Key to making progress will be finding cost-effective ways to retrofit the stock, and reducing the inflow of housing which is not adapted or expensive to adapt. The complexity gap reminds us that complex systems like home adaptations with different actors, motivations, and dwellings, requires an equally complex response. Failure to appreciate what is required to make effective interventions leads to a complexity gap and ultimately to system failure.
2. Archetypes: archetypes are instances where the system, for different reasons, tends towards failure. This is captured both intuitively and through causal loop diagrams using balancing and reinforcing feedback loops. Examples include ‘fixes that fail’ (symptomatic responses do not get at underlying problem causes), accidental adversaries (erstwhile partners have to compete for funding which leads to zero or even negative sum games) and the tragedy of the commons (a breakdown in ownership and co-ordination leads to over consumptions and degradation of commonly owned resources).
3. Leverage points: these are points within the system where intervention has disproportionate positive effects (Meadows, 1999), though these are not always obvious or straightforward. Effective leverage points are critical to any major shift in the processes and outcomes of home adaptations.
4. Emergent properties: this involves acknowledging that the system as a whole is greater than the sum of its parts, making diagnosis of errors within a system and intervention difficult.
5. Partnership working: these types of problems are related to preventative spending challenges, wherein providers and partners have their own logics, strategies, budget accountabilities and statutory requirements. In such cases, the consortium is unable to work preventatively under common leadership. In the research, we found clear linkages to the systems challenges in process of adaptations.

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2. The Adaptations Framework

This paper follows the Adaptations Framework outlined by [redacted]) to outline drivers and barriers that occur at each stage of the adaptations process. As shown in Figure 1, an adaptions process often involves various stages starting from need awareness, followed by accessing information and advice, leading to assessment, funding, design, delivery, and evaluation. These essential steps have connected interventions and activities attached to them in delivering and receiving adaptations (for both policy and practice).

It is important to note that there is no typical process for adaptations, even within the official adaptations process, let alone an informal practice leading to different pathways, with national and local divergence of adaptations policies and partnerships ([redacted] Zhou et al., 2020b). There have been multiple government-led or commissioned reviews across the UK that highlight key barriers alongside a fragmented service delivery system over the decades (e.g. Bibbings et al., 2015; Heywood & Turner, 2007; Jones, 2005). Wider partners in the health, housing and social care arenas have also highlighted evidence around the role of adaptations, how it supports healthy ageing for diverse groups and as people grow older (e.g. Adams & Hodges, 2018; Clifford, Kemp & Shah, 2022; Mackintosh & Frondigoun, 2022; Mackintosh et al., 2018; Powell et al., 2017).

The process is not truly linear, and barriers can be experienced at multiple stages. The pathways for both resources, service delivery and policy are very complex (Mackintosh, 2020). Within the delivery process, there is often need for additional assessment, as well as projections around cost and design, leading to a circular process. However, for analysis we have drawn from the figurational (process) sociological lens, to develop the adaptations framework and give insight to the network of interdependent actors and activities, which allow insights between the structure and agency (Elias, 1978,1987). This helps simplify the adaptations process and apply systems thinking for analytical purposes to try and understand a process that is complex and fragmented in terms of public service delivery.

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Figure 1: Adaptations Process (█████

Figure 1 outlines the barriers within stages throughout the adaptations process, developed from the perspectives and discussions with key stakeholders throughout the UK, detailed in the next section.

3. Methodology

3.1. Data and methods

This paper brings together the findings from a series of projects designed to understand and promote better home adaptations policy and practice in Scotland and throughout the UK. Specifically, these projects include an international evidence review, an investigation of the adaptations' delivery process from key stakeholders' views, and an exploration of older people's (i.e., the service users') lived experiences of adaptations. These projects were developed as linked programme by █████ █████ █████ to develop and improve the evidence base around adaptations. The motivation

was to understand adaptations through a variety of perspectives and lenses to support positive policy change.

[redacted] firstly led an evidence review that examined academic literature to gain state-of-the-art knowledge about home adaptations. The review followed the 'systematic literature mapping' approach that has been developed from and adopted in a series of review projects undertaken within [redacted] (see, for example, Serin, 2018; White & Serin, 2021). The search was conducted on 15 September 2021 with final core evidence base consisting of 76 scholarly articles about adaptations, which formed the foundations of the discussions in this paper (see [redacted] 2022 for more detail).

The [redacted] project then focused on the fragmented policy landscape in Scotland to investigate barriers throughout the adaptations process. It brought together insights from fifteen key stakeholders working with evidence, policy, practice and/or delivery in Scotland (also in England, Wales and Northern Ireland) obtained through semi-structured interviews that were conducted remotely via MS Teams from late 2021 to early 2022. The results of this project resulted in the Adaptations Framework (see [redacted] 2022a for more detail).

The [redacted] examines the lived experiences of older people and good practices within the adaptations process in Scotland. The project employed a mixed-method approach, triangulating qualitative findings from focus groups and interviews (also remotely conducted via MS TEAMS in early 2022) and quantitative learnings from some secondary analyses of three [redacted] National Housing Surveys (2018, 2020 and 2022). The qualitative strand comprised three focus groups and fifteen interviews with older people living across Scotland, and ten interviews with housing and health and social care professionals, predominantly in front-line occupational therapists and housing support-related staffs within Local Authorities (LA) and Care & Repair services.[2] The sample of older people (service users) was comprised

[2] There are 32 Local Authorities in Scotland, also known as local councils who support the policy and practice around public services in a defined area. Care & Repair is a service that may be available within a Local Authority that offers advice, assistance and adaptations for older and/or disabled people at home (http://careandrepairscotland.co.uk/).

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of twenty-five older people aged 55 years old and over. Six of them also had caring experiences. This included owner-occupiers (20), people from social renting (3) and privately renting (2). The experiences of those in the private renting sector (PRS) are paid special attention to, given their underrepresentation in adaptations processes (further argued in a later section). These focus groups and interview data are the main data source for the discussion in this paper ([redacted]., 2023 for more detail).

The programme of projects resulted in rich, nuanced qualitative data from interviews and focus groups with key stakeholders and older people. The adaptations framework (see Figure 1, [redacted], 2022a) had followed a grounded theory approach (Braun & Clarke, 2006) where barriers and stages of the adaptations process were developed from the data and experiences. To bring these insights together for this paper, we followed a more deductive approach utilising this grounded framework to conduct qualitative secondary analysis of interviews and focus groups to structure insights across the adaptations process from different perspectives. The next section discusses the findings following the Adaptations Framework. All participants were given pseudonyms which were considered to be in keeping with their gender, age and positionality in adaptations (i.e. key stakeholders or service users).

4. Findings

The methods section outlines the various projects that bring together the perspectives of service users and professionals with experience receiving or providing adaptations. The range of qualitative evidence from both provider and user perspectives demonstrates that adaptations are a vital part of negotiating day-to-day activities such as bathing, moving inside and outside the home and eating. The essential need for adaptations to support day-to-day life was the predominant driver for individuals as well as carers and wider household members.

> *"I also put in rails at my outside steps, and they give me reassurance. The shower saves me climbing in/out of the bath and makes me feel safer and more confident" (Adele, service user).*

Grab rails, specially designed bathrooms and outdoor lights were the most common adaptations in 2018, 2020 and 2022. Along with lifts and showers these gave people *'reassurance'* and made them feel *'safer'*.

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"Once you get the adaptations in, it doesn't just help the person in need of those adaptations. It helps the carer as well and if that carer happens to be, for example, a husband or a wife or partner or whatever, their life is transformed in the same way… by helping with the adaptations for the disabled person, you're also helping the carer, which can be a family member or a friend or whatever. You're also helping the entire family and visitors and so on, who are able to come in and out and visit the house. I think there's a great impact. It really is a win-win situation" (Donald, service user).

Adaptations support health and wellbeing via such impacts like pain relief and increased mobility (Focus Group 2, multiple service users). Stakeholder interviews highlighted universal agreement around the importance of providing adaptations and the positive outcomes they support around health, wellbeing and quality of life.

"What it's really about is making a difference to health and wellbeing outcomes and if you're not assessing that all you're doing is changing someone's home" (Stephen, key stakeholder).

Interviews also outlined preventative activities such as addressing trip hazards, improving accessibility and widening doors for future wheelchair use. Both service users and providers perceived prevention as an important area for delivery. Therefore, the main drivers around adaptations were seen as: enabling essential day-to-day activities at home, supporting positive health and wellbeing, fulfilling individual and household needs, avoiding risks in the home, and planning for future need.

However, although seen as an essential service, the adaptations process and accessing these services are seen as challenge and always a *'fight'* (Focus Group 2, service user). The policy landscape was described as a *'Cinderella service'* where *'inconsistency is a problem'* (Stephen, key stakeholder). National and local divergence of policies across the UK made participants challenge the idea of a coherent landscape around the adaptations process:

"I don't know if you could even call it a landscape and if it's a landscape, then it gets massively potholed and filled with obstacles and just kind of blind alleys, you know, it's confusing. We find it confusing, and we are so called experts." (Isabella, key stakeholder).

"I mean we have postcode lotteries, we have services that are not delivered consistently across the piece, but some of that inconsistency is a genuine local response to particular priorities… The challenge is going to be drawing those voices up into a national framework, which is genuinely a framework and not a

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straight-jacket and allows those kind of local nuances to be properly developed" (David, key stakeholder).

There are key barriers to provision at all stages of the adaptations process - from need awareness, information, assessment, design, funding, delivery and evaluation. The next sections explore these barriers in detail.

4.1 Need awareness

The adaptations process usually starts with identifying the 'need' for adaptations and seeking access to support. In corroboration with evidence in the literature (e.g. Ekstam, Fänge & Carlsson, 2016; Kruse et al., 2010), people tended to be reactive rather than preventative when seeking guidance on adaptations. The primary driver that led people to consider adaptations was health crisis events (e.g. a broken leg or hip). Another driver was formal diagnosis of a health condition (e.g. a diagnosis of dementia, for example Billy below), although this was also framed as a barrier in preventing more timely adaptations, as people often had to wait for diagnosis. Difficulty in accessing parts of their homes and facilities (e.g. getting in and out of the bath) was a very common driver to seek access for support. There are also wider non-health related drivers such as managing 'clutter' and storage.

"When I was diagnosed I then had to retire from my job. I knew straightaway that I would have to do something to the house and the idea was just to get it adapted there and then, so that it's ready for when things do progress to the worst" (Billy, service user).

Due to the diversity of these drivers, finding consistent language around required adaptations can be challenging, leading to a lack of *'awareness'* (Focus group 3, service user)

"Changing the language maybe around what it is, and what's presented would be great. I would be really keen to see that synergy between the concept that we're putting forward as housing solutions so that we're not necessarily all coming up with describing the same thing, describing it in a different way or giving it a different title" (Patricia, key stakeholder).

"I think the division, if you like, between adaptations equipment and technology, it's just all getting blurred. Also, the division between what's mainstream and what's special. Well, that's great because I want everything to be mainstream. Yes, I think, and this is something that really annoys me, is often, tech services are set up very separately from equipment and adaptation services, or from housing services. I think that works much better if it's an integrated service because again, we're putting people in a box" (Kimberley, key stakeholder).

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Many participants who self-funded their adaptations were unaware that help was available; others *'stumbled'* onto the information, as noted by service user Max through his GP. Other examples included information from friends, carer networks, voluntary organisations. The data also highlighted that barriers including stigma attached to ageing made people reluctant to ask for help.

4.2 Information and advice

Participants consistently noted challenges around information and advice around adaptations. This was compounded by the divergence in eligibility between local authorities and different tenures. There were also challenges around categorisation of adaptations (e.g. information being held only under disability pages), description of services, and varying locations of information on Local Authority websites (e.g. housing and/or social work departments)

> *"I do agree there is a lot of things out there, but it was a bit of a quagmire trying to find it and you don't know exactly what to do" (Focus Group 2, service user).*

> *"I think from the client's point of view, one of the key barriers is lack of information. People don't know what they're entitled to. They don't know what's out there" (Isabella, key stakeholder).*

The wording such as *'quagmire'* and *'minefield'* suggest inconsistency and complexity in understanding and accessing support for adaptations. Older participants consistently looked for people-centred communication options, such as face-to-face and telephone options.

There is further complexity when considering the Private Rented Sector (PRS). Service users and providers working in the PRS noted small – and in some areas non-existent – applications to the Scheme of Assistance[3] from private renters. This was linked to complexity around eligibility and the requirement of permission from private landlords. Modifications to common spaces must also have consent of all people attached to that space.

> *"We've placed other people's property rights over human rights in terms of access and enjoyment of their homes because you basically have to go and get permission from your neighbours to do an adaptation if it involves a common or shared space" (David, key stakeholder).*

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[3] the Scottish adaptations grants scheme for homeowners and private renters

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Stakeholders working in the PRS noted that often landlords were unaware of grant schemes or that tenants can request modifications that support their health and wellbeing. Therefore, key barriers to implementation in the adaptations process include: the diversity of information and advice channels, and differences in eligibility, language and criteria.

4.3 Assessment

Assessment is one of the most important parts of the adaptations process. It is a key driver in itself for adaptations and shapes the experience and later stages of the process. The assessment process relies heavily on occupational therapists' expertise in housing, and best practice examples highlight partnership working across housing, occupational therapists and social work, linking to the systems thinking outlined in 2.2 regarding the importance of well-designed partnership processes (Gibb & Marsh, 2019). The complexity of these partnerships, as well as varying resources and governance, can impact on waiting lists and capacity.

> *"the access to assessment and recommendations that is a barrier because there's a waiting list with most Occupational Therapy department… there has always been OT waiting lists. It's a sad indictment that it seems to be like it's accepted there will be OT, and it's as though we don't challenge it anymore to say, actually this service has such a massive impact, it's got such a good outcome in terms of benefits overall that there isn't a higher profile" (Jessica, key stakeholder).*

> *"it's a mandatory right, they don't seem to get what mandatory right means, and even when the occupational therapists do if they're doing the assessment, the social services managers who haven't looked at the legislation and haven't been challenged about it, crush it, they sort of think that's optional, but it shouldn't be optional if it's mandatory" (Enid, key stakeholder).*

The personal interaction involved in assessment also gave older participants time to understand the practicalities and possibilities of adaptations:

> *"you need to meet the real person at building control, rather than just either you or your designer log the application at building control, it was well worth the trip to Motherwell because we formed a relationship with somebody at building control, when we got to the stage that we had a design that required approval they turned it around in less than a week" (Focus Group 2, service user).*

This example highlights the importance of clear communication between service users and occupational therapists. This communication shapes experiences of the later stages of adaptations, particularly the design and funding stages, helping people connect these fragmented processes.

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4.4 Funding

Funding was a barrier at several levels within the adaptations process. Funding challenges relate not only to access to money, but managing costing, and investing in the correct solutions. Barriers to funding approval were also dependent on time of year, and reapplication for grants if costs had changed (e.g. post-COVID).

> *"Availability of funding is also an issue. People also often need help with the project management element of adaptations" (Susie, service user).*

Funding was also clearly impacted by tenure. For social housing tenants in the UK, there are no means testing requirements. In Scotland, means testing for private renters and homeowners can lead to a required 20% contribution (Wane, 2016); this was highlighted as a key barrier. The funding landscape for adaptations is complex, and perceptions of older people highlighted that there is unmet need and informal investment in adapting homes. In Scotland, the formal funding process is particularly complex (see JIT and Scottish Government, 2010; Scottish Government, 2022; Wane, 2016) and contributed to barriers such as longer waiting lists:

> *"I think historically an awful lot of the discussions nationally around adaptations have always started with the money, and we've all got caught up in the money and what that looks like, and what causes the problems…. The problem with that is it's the tail wagging the dog" (Patricia, key stakeholder).*

> *"I mean means testing is a big bureaucracy that takes a lot of time and money in my opinion and it's not worth it for adaptations that cost, say, up to a thousand pounds. They can be just really quickly, really effective, and have that preventative impact and I think that a difference is because you've got local authorities able to adapt their own local policies, you've just got differences in approach. In that respect, they're the good ones, I think, with more adaptations without means testing and the ones who maybe aren't as progressive, don't. (Theo, key stakeholder)*

PRS tenants and homeowners often self-funded adaptations; in 2022, 70% of respondents self-financed adaptations, while only 20% received a grant. Yet self-funded adaptations could be problematic. For example, one couple had self-financed a new accessible shower that was later assessed as inadequate (carers were not allowed to use it, as deemed unsafe), and replaced with a wet room. The couple lost thousands of pounds, and had several falls in the initial shower conversion.

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From a public finance perspective, difficulties remain due to lack of partnership working alongside fragmented and confusing pathways for older people (Zhou et al, 2020b). Many adaptations require third party assessments, and households may lack the expertise to determine needs and solutions. Reduced initial public spend can lead to more public spending later. Secondly, self-funding is inherently less progressive than wholly needs-based criteria.

4.5 Design

The design of the adaptations is an important yet often obscured part of the process. Design in existing housing was perceived by stakeholders and service users to be inadequate.

These discussions were dominated by stigma around age or disability which are attached to clinical design, noted earlier as a barrier to accepting adaptations. For example, multiple stakeholders and service users noted the 'ugly white handrail' in several interviews - often placed outside homes - as an indicator of vulnerability. Some in the PRS also perceived adaptations as undesirable, reducing the 'asset' value of the home.

Design, however, is more than aesthetics. It is about finding the right and best solution. For example:

> *"And I looked, you know, she showed me the bathroom, and I thought, oh God that is [...], oh I would hate to have that. It's got little half, like a sort of fence and gate arrangement around it, with a little opening door; and the shower seat has legs and arms. And I'd look at it and think, well, not only was I thinking: God, what a nightmare to clean, you know, all those extra surfaces and cracks and corners and everything; but also all those things to bump into and trip over" (Max, service user).*

In some cases, homes simply cannot be adapted, limiting the design options available. As such, several stakeholders called for earlier *'housing conversations'* (Patricia, key stakeholder), adopting a person-led approach to discussing options.

Moreover, many older people have design expectations, tastes and needs that they wish to feed into the process. Design is thus where professionals acted as representatives of a broader system of power and knowledge, as gatekeepers granting or denying needs and desires (Sakellariou, 2015a,b). It is also linked to the narrow application of criteria and policy in practice. This was clear in an interview with Andrew – a service user who previously worked

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in adaptations. When asked if he saw any difference working across different tenures, Andrew replied:

Andrew: Yeah. The difference was probably more in the client's expectations rather than the work itself, like, it sounds horrible, but private clients, people in private housing, a lot of them were quite grateful for what they got, but a lot of them didn't look at adaptations as being a need for the person. The husband and wife (in an example he mentioned before) looked at adaptations for adding value to the house, and a lot of times they would ask for stuff that just was completely inappropriate and not necessary. […]

Researcher: Okay. So higher expectations sometimes on the owner occupied side.

Andrew: Yes.

Researcher: I see. Very interesting. Did you have much experience of the private rented sector?

Andrew: We did, yes. The only difficulty there was trying to get the owners of the property to agree to us putting adaptations in them. And they also had a higher expectation of the quality of product that was being used. […].

Researcher: Very interesting. And social rented?

Andrew: Council housing, we just went in there and did it, and they were really happy. Definitely, yeah, they were happy with what they got so, simple as that. They had no pre-thoughts about what they wanted because when you live in a council house, I mean the standards are pretty good anyway, and you accept that standard for what it is, and you don't want to adapt that house to make it better because you'd just have to rip it out at the end the day if you moved anyway.

Here Andrew used *'we'* in opposition to *'them'* – the *'clients'* he had served in his work before. People had to *'compromise'* what they expected or desired to what they were offered – deemed as what they needed by the *'us'*. Indeed, it was noted by multiple participants that advocacy and connections to services were key to managing the process. These findings also reveal the lack of service user representation in the adaptations process and their lack of control over the process. In fact, current design guides are often not co-produced and have limited consultation (█████, 2022b).

4.6 Delivery

The barriers outlined so far all occur before the adaptation is delivered. Following assessment, funding and agreement on design, adaptations must then be installed. Installation

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firstly requires finding services and contractors to complete the work. This was highlighted as a key challenge, especially post-COVID, as many contractors had decreased availability (particularly in rural areas). There are also large-scale post-Brexit and post-COVID increases in cost and availability of materials, reinforcing ingrained inequalities in the housing sector ([redacted] 2022).

Care & Repair services are not available within Local Authorities; as a result, people without required skills or confidence sometimes have to self-manage complex adaptations. Some contractors may even lack training on how to best understand people's needs.

> *"it's just a nightmare, and we've looked in, we've started the process. We got an architect to come. So I've got plans to get a wet room down the stairs, and if I have to, we can just turn the front room into a bedroom, but I'm not sure what adaptations are the best things to get for in this wet room. Though I had been going to try to go to the centre at Astley Ainslie, but I'm not very good on the telephone and I'm not very good at organising things. So now we've got the plans drawn up, but we're stuck because we're not sure what to do next" (Janet, Focus Group 2, service user).*

> *"You can't rely on your tradesman to know it. Your tradesman might be six foot tall, and you are five foot tall and he'll put it where he thinks it should go and that's not where you want it to go" (Sarah, Focus Group 1, service user).*

These extracts point to a lack of service user control over the process. Similarly, adaptations must also take into account perspectives of other household members and carers. Delivering adaptations that overlook the carer's perspective, for example, could result in the sense that *"decisions seemed to be made behind my back"* (Maisie, service user).

LHSA stresses that interventions should be prioritised towards addressing long term or structural imbalances, and success results from an agreed vision which balances outcomes. In both design and delivery stages, service users seem to be in less powerful, imbalanced positions, linking back to the view of adaptations processes as a 'fight'.

4.7 Evaluation and performance monitoring

LHSA and systems thinking also stresses the importance of 'feedback loops', which, among other things, provide reinforcing or balancing (positive or negative feedbacks) that can, if understood in their context, contribute to more efficient system development. However, such loops were rarely mentioned or identified explicitly in the data. Generally, it was rare for

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services to record and feedback on best practices, particularly in relation to self-funded adaptations. This lack of evidence was an important finding, demonstrating how evaluation has been overlooked within the adaptations process.

> *"There's been very little research done in the topic area to robustly demonstrate the efficacy and cost-effectiveness and practitioners strive for it in Local Authorities, but they haven't got the expertise to do it. Commissioners demand it, it's not available. And so whilst anecdotally people who work in adaptations know what difference it makes, they can't robustly prove it. So until they can prove it, they're struggling"* (Stephen, key stakeholder).

Lack of evaluation may discourage investment as key decision-makers rely on evidence to determine policy and practice. There is an urgent need to carry out post-adaptation visits, collecting and sharing performance data to inform research as well as operational needs. This must be carried out with awareness of how adaptations improve health and quality of life beyond functional performance, something stakeholder Kimberley noted, "*we've been very, very slow to pick up on*".

5. Discussions

The findings present a broadened picture of adaptations, as well as the overlap between adaptations as an outcome and a process. This reinforces the need to re-think adaptations as a way of enabling a better life quality, health and wellbeing beyond living independently. Current approaches tend to put people in boxes, instigating false binaries between costs (major vs minor), types (housing adaptations vs assistive technology), responsibilities (housing vs occupational therapist), or even value-laden criteria ('mainstream vs special', as one stakeholder said). There is limited focus on the health benefits beyond functional performance and safety; Heywood's (2004) study remains the only dedicated discussion of the health benefits of adaptations. It is within this context that many participants experienced the adaptations process as a 'fight'.

Another key barrier is governance. The findings have shown that adaptations are a 'patchy', 'postcode lottery' in a fragmented policy landscape, in line with other studies into the adaptations process (Mackintosh, 2020; Mackintosh & Heywood, 2015; Zhou et al., 2019,2020a). Often service users do not know what available, and key stakeholders even found it difficult to describe the process. Language, particularly around needs, is perceived as important but lacking. These gaps make person-led solutions more difficult to enact.

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Funding challenges produce clinical and unpopular design, which was a key barrier to early take-up of adaptations (Bailey et al., 2019; see also Aplin, de Jonge & Gustafsson, 2013; Burns, Pickens & Smith, 2017; Heywood, 2005). Consequently, adaptations are considered reactive, post-health crisis interventions, with their preventative potential largely unrealised.

The findings also highlight a high level of self-funding– particularly from homeowners and private renters – owing to the complexity of the funding system, and as we discussed earlier, one which explicitly differentiates and makes assumptions based on which tenure households happen to be in when need for adaptation arises (Wang, et al, 2022). Self-funding also afforded service users more control over design. However, this often led to later challenges such as adaptations that are inadequate. Self-funding may therefore fail to address complex and specific needs. By contrast, holistic interventions are more effective, and can be framed as preventative public investment.

Participants showed interest in early intervention for preventative longer-term support. Key stakeholders, for example, expressed the need for initial 'housing conversations' that explore options. Some homes are simply not adaptable, linking to wider challenges in lack of accessible housing available. This then leads to debates around the importance of allocations, and availability of accessible housing (see Anderson et al., 2020). The findings also highlight that the role of housing professionals is often overlooked, reinforcing the importance of partnership working across housing, health and social care in delivering person-centred provision (Gibb & Marsh, 2019).

In terms of system archetypes, adaptations can fail because symptoms rather than causes are being addressed, particularly where households self-fund without needs assessments. Gibb and Marsh (2019) provide examples from housing of 'fixes that fail', policies aimed at the symptom of unaffordable housing which do not get to the root causes of unaffordability and may in time worsen the underlying problem e.g. the UK's 'Help to Buy' policies. Competing public and private funding providers can also undermine partnership working. Similarly, the fragmented funding landscape could lead to funding cuts, since broader decision-makers may not understand or value the adaptations process. This fragmentation, along with limited longer-term perspectives, can result in short-sighted and siloed budgets, which fail to acknowledge preventative savings.

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All of this is linked to the general vulnerability of the housing sector itself, which is uncomfortably positioned between the public and private realms (Malpass, 2003). In the findings, adaptations are linked to the struggle for *'property rights before human rights'* (David, key stakeholder). Indeed, changes to homes and environments are vital in supporting human rights, raising standards of healthy ageing and wellbeing.

6. Conclusion

The findings clearly highlight that adaptations are a vital service. Both service users and key stakeholders highlight how adaptations within homes can support positive outcomes such as enhanced wellbeing, quality of life, pain relief, increased mobility and confidence. Adaptations are a driver in supporting essential day-to-day activities such as washing, cleaning and eating.

Therefore, the main drivers around adaptations are enabling essential day-to-day activities in the home (most often after a health crisis/event/diagnosis), ensure access to a part of the home, support wider household needs, reduce risks and plan for future need. The assessment process is crucial to change around adaptations, with effective partnership working leading to successful delivery. Advocacy, experience and contact with someone in the adaptations system was also a key driver for successful delivery for service users.

The key barriers to implementation in the adaptations process include the diversity of information and advice channels, differences in eligibility, language and criteria – described as a *'quagmire'* or *'minefield'*. There is also a reluctance to ask for help, fuelled by a stigma attached to age, disability and unattractive or impractical design. There was uncertainty about the differences between support across home-ownership, private rent and social rent. For PRS tenants there were added barriers such as gaining landlord permission for modifications. Staff resources and contractor availability were also clear barriers linked to assessment and delivery around adaptations.

Overall, acquiring adaptations is seen by both key stakeholders and service users as a 'fight'. The process of establishing the right intervention, gaining information, being assessed, finding and applying for grants, designing the right solution and managing installation was seen as overwhelming, bureaucratic, and mired in a difficult-to-understand policy landscape. The positive outcomes of adaptations are clear, even with existing systems failure. If the

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adaptations process is fully invested in, made consistent, supported and simplified, it will be an effective and tangible way to enable essential day-to-day support while also future proofing housing for an ageing population.

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Figure 1: Adaptations Process

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