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Sustaining health care innovations in care homes: the SUSTAIN-CH study protocol

Barat A[1], Gordon AL[1,2,3,] Gladman J[1,2,3,] Dening T[1], Martin G[4], Banerjee J[5], Devi R[6].

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Address for correspondence: Dr Reena Devi, Baines Wing, School of Healthcare, Faculty of Medicine and Health, University of Leeds LS2 9JT Email: R.Devi@leeds.ac.uk Tel: +44 (0)113 343 1275

[1] University of Nottingham, UK, [2] NIHR Applied Research Collaboration (ARC) East Midlands, UK, [3] NIHR Nottingham Biomedical Research Centre (BRC), UK, [4] University of Cambridge, UK, [5] University Hospitals of Leicester NHS Trust, UK, [6] University of Leeds, UK.

ABSTRACT

Introduction

Sustaining effective interventions that improve quality and safety of care is a key challenge in improving the outcomes of healthcare. In recent years in the UK, there have been innovations to improve healthcare in care homes. They were led by dedicated project teams and had time-limited funding. This study aims to determine whether and how any improvements brought about by these innovations were sustained.

Methods and analysis

This study will examine three care home healthcare improvement projects: Enhanced Health in Care Homes; Proactive Healthcare of Older People in Care Homes (PEACH); and Safer Salford Care Homes. Each of these projects sought to improve the quality of care in care homes. The study will collate administrative documentation from each project, and carry out approximately 32 semi-structured interviews with project managers, health and social care professionals, support staff, quality improvement experts, and clinical/care home experts. Data will be used to create a description of the three interventions, applying the Template for Intervention Description and Replication (TIDieR) framework. Interview data will be analysed thematically by two independent researchers using the Consolidated Framework for Sustainability (CFS) to examine which factors impact on sustainability in the care home setting, and explore why and how these factors influence sustainability. The findings will be used to develop guidance and practical strategies for future teams working on quality improvement in care homes.

INTRODUCTION

Sustaining improved care is a key challenge in the field of healthcare improvement [1]. Sustainability is "the continuation or the integration of new practice within an organisation whereby it has become a routine part of care delivery and continues to deliver desired outcomes"[2]. Quality improvement and service development projects usually run for a fixed period of time, with fixed funding, and project staff move onto different commitments at the end of projects, and so there is a risk that improvements may not be sustained beyond the lifespan of project funding. Unfortunately, 33% to 70% of changes made in healthcare will not be sustained [3, 4]. If projects only have short-lived impacts, then the time, effort, and money spent on projects may be wasted.

People living in care homes are among the most vulnerable and frail older people in society. Currently 433,000 people live in care homes in the UK [5]. Given the rising numbers of older people [6], and that current services often fail to meet their complex health and social care needs [7], there is significant work to do to ensure that the care home sector will be able to meet the needs of older people. In England, recent national and regional scale projects have focused on improving care delivered in care homes. The Enhanced Health in Care Homes (EHCH) Vanguard programme was a national scale improvement project, taking place between 2015-2018, across six areas of England, and was commissioned by NHS England [8]. The EHCH programme worked on implementing a wide range of interventions that aimed to improve access to services, improve quality of life, and reduce unnecessary hospital admissions. One example of an intervention implemented as a result of the EHCH project was the 'Red Bag' scheme. The Red Bag scheme aimed to improve information handover between the care home and hospital when a resident is admitted to hospital, by ensuring residents travel with a distinctive red bag containing key resident personal items, and information about their health conditions and medications [9]. Other projects have focused on improving access to multidisciplinary healthcare services [10], safety of care [11, 12], reducing ambulance conveyances from care homes [13], reducing medication errors, falls with harm, and pressure ulcers [14], and reducing avoidable harm [15].

The sustainability of healthcare interventions has been increasingly studied in recent years, generating a plethora of models, checklists, tools, processes, strategies, conceptualisations, and frameworks. These were systematically reviewed Lennox et al [19], generating the Consolidated Framework for Sustainability (CFS). The CSF included 40 items organised under six themes: initiative, design and delivery; negotiating

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initiative process; people involved; resources; external environment; and organisational setting (Table 1).

Sustaining healthcare innovation in care homes poses some additional challenges. These include the way health and long-term care are funded, and cultural differences between healthcare and care home sectors in management, staffing, training, quality assurance processes, and governance. There is a small amount of research into the sustainability of quality improvement efforts in care homes. A Canadian study [16] used questionnaires and interviews to examine the sustainability and spread of quality improvement activities in long-term care. Ongoing staff and leadership engagement, and involving and empowering care staff, were important factors affecting whether change was continued [16]. The importance of leadership support was also reported by Colon-Emeric et al [17], and Fossey et al [18]. Fossey and colleagues [18] followed up care homes 9-12 months after having used a psychosocial intervention, and found that the value staff placed on the intervention, staff building the skills and confidence to carry out the intervention, and staff ownership influenced whether the intervention was sustained. Colon-Emeric et al [17] described how a lack of trust between direct care staff and managers can also hinder sustainability of changes. These care home sustainability studies do not yet provide sufficient evidence to give theoretically-based guidance to assure the sustainability of future effective care home innovations.

Recent quality improvement activity in English care homes presents an opportunity to follow up recent initiatives, and examine whether interventions are continued after projects complete, and examine the factors affecting this. The current study will use the Consolidated Framework for Sustainability to organise evidence around the most important aspects of it are important for sustainability in care homes.

Table 1- Consolidated framework for sustainability (CFS) (19)

The initiative design and delivery	Negotiating initiative processes	The people involved	Resources	The organisational setting	The external environment
Demonstrating effectiveness Monitoring progress over time Training and capacity building Evidence base for the initiative Expertise The problem Project duration Improvement methods Project type	Belief in the initiative Accountability of roles and responsibilities Defining aims and shared vision Incentives Workload Complexity Job requirements	Stakeholder participation Leadership and champions Relationships and collaboration and networks Community participation Staff involvement Ownership Power Patient involvement Satisfaction	General resources Funding Infrastructure Resource - staff Resource - time	Integration with existing programs and policies Intervention adaptation and receptivity Organisational values and culture Organisational readiness and capacity Support available Opposition	Socioeconomic and political considerations Awareness and raising the profile Urgency Spread to other organisations

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Aim and objectives

The overall aim of this study is to produce evidence that will provide the basis for theoretically informed guidance on how to achieve sustainability of future effective care home improvement innovations. It will involve following up three English national and regional quality improvement projects that took place in care homes: the EHCH project [8], the Proactive HEAlthcare of Older People in Care Homes (PEACH) project [10], and the Safer Salford Care Homes project [14]. The EHCH project took place from March 2015 to March 2018, the PEACH project from September 2016 to February 2018, and the Safer Salford project from November 2016 to January 2018. There are three research objectives:

1. Examine the extent to which improved changes to care resulting from previous care home quality improvement projects have been sustained
2. Explore the factors that impact on sustainability in the care home setting, and understand why and how these factors influence sustainability
3. Develop guidance and practical strategies for future teams working on quality improvement initiatives in care homes.

METHODS AND ANALYSIS

Study setting

This study will take place over a 12-month period (April 2019 – March 2020), across two locations in England: Nottinghamshire (in the East Midlands) and Salford (an area of Greater Manchester).

Data collection and analysis

Data sources include project-related documentation (to be collected and analysed in phase one) and semi-structured interviews (to be collected and analysed in phase two).

Phase one: documentary analysis

Searching for and gathering information from relevant project documentation will form the study ground work. Scoping searches will be conducted to collate documentation related to previous quality improvement projects: the EHCH project, the PEACH project,

and the Safer Salford Care Homes project. Relevant documents include project reports, newsletters, project briefings, project protocols, policy documents, and relevant publications. These documents will be gathered through project webpages, Google searches, NHS Clinical Commissioning Group websites, other relevant commissioning organisations, and the study team's networks and contacts.

Relevant documentation will be reviewed to understand the activities carried out during previous projects. This is an essential step needed prior to following up and collecting data to understand whether or not improved care has been sustained. The Template for Intervention Description and Replication (TIDieR) standardised checklist [20] will be used to describe:

1   The quality improvement projects: the implementation strategies used in each quality improvement project (EHCH, PEACH, and Safer Salford Care Homes projects) to create change.

2   The resident-facing interventions: each quality improvement project aimed to improve care for care home residents in one or more ways. For example, one intervention implemented by the EHCH was the Red Bag scheme [21], and the PEACH project worked on implementing multidisciplinary working between healthcare professionals [10]. The study will describe the specific resident-facing interventions carried out as a result of the quality improvement projects.

When following up previous projects, only interventions successfully implemented during the initial quality improvement project will be considered. When reviewing relevant documentation, evidence indicating successful and effective implementation of resident-facing interventions will be identified, and this evidence will be discussed in the course of the semi-structured interviews. When reviewing project documents, information providing insights into the factors influencing whether or not the intervention is sustained will be extracted and incorporated into the semi-structured interview schedules. Reviewing project documents will also help to identify potential participants (names and contact details) to invite to participate in the semi-structured interviews.

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Phase two: semi-structured interviews

Sampling and Recruitment

A purposive sampling approach will be used to recruit approximately 32 participants to take part in semi structured interviews, recruiting:

1 Key project delivery staff: staff who had a key role in planning, coordinating, and leading the quality improvement initiatives. These staff include project managers, support staff, quality improvement experts, and clinical/care home experts. It is anticipated that approximately 8 key project delivery staff who worked on either the EHCH, PEACH, or Safer Salford projects will be recruited.

2 Health and social care professionals who took part in either the EHCH, PEACH, or Safer Salford projects, and/or were involved in implementing resident-facing interventions. These staff will have direct experience of implementing the resident-facing interventions that resulted from initial quality improvement projects, and therefore will be able to provide valuable insights on whether, how, and why changes have been sustained. Participants will include NHS staff working in care home relevant roles, and care home staff. It is anticipated that approximately 24 such participants will be recruited.

Data Collection

Semi-structured interviews will be carried out at a location convenient to the participant, by the study researcher (AB), who is experienced in qualitative research methods. Interviews will be audio-recorded, and will last approximately 30-60 minutes.

The questions asked during the semi-structured interviews will be structured around:

1 Examining to what extent changes have been sustained. The interviews will begin with asking participants whether changes have been maintained, whether the intervention has evolved/adapted, and whether the change is continuing to produce benefits to the care home organisation/residents. These

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questions have been shaped using a definition of sustainability described by
Moore et al (22).

2   Exploring which constructs from the Lennox et al (19) Consolidated
Framework for Sustainability (see Table 1) impact on sustainability in the care
home setting and explore why and how these factors influence sustainability.

3   Exploring whether there are other constructs not currently presented in the
consolidated framework for sustainability that are important in predicting
sustainability in the care home setting.

Throughout data collection the interview guide will be regularly and iteratively updated.
The interview questions will be refined as we start to develop an understanding of the
factors influencing sustainability. For instance, if topics arise during data collection that
were not previously considered, they will be explored in subsequent interviews, and
therefore as more interviews are carried out the interview schedules may start to include
more direct questions to test ideas described in previous interviews. Each participant will
take part in one interview, with the possibility of a follow-up interview with the purpose
of exploring issues that may raise during data analysis.

Data Analysis

All interview audio recordings will be transcribed verbatim, and interview transcripts
analysed using thematic analysis (23), using NVivo software.
Data collection and data analysis will take place concurrently to enable the interview
schedule to be iteratively developed.
Data describing the sustainability of change across the three projects will be presented in
a table, describing whether changes have been maintained, whether the intervention has
evolved/adapted, and whether the change is continuing to produce benefits to the care
home organisation/residents.
The findings describing the factors that impact on sustainability will be organised using
the CFS (19). The framework will be populated, indicating which factors impact on
sustainability, how, and in what ways.

When analysing and coding transcripts, an inductive and deductive approach will be
taken to identify important insights related to the research objectives. All transcripts will
be analysed and coded by two researchers (AB and other members of the research
team). As transcripts are analysed, the nodes/coding structure will be iteratively
developed, and new themes that appear important will be added to both the coding

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structure, and to the interview question structure for further exploration in subsequent interviews. The coding structure will then be applied to the remaining transcripts, and the structure continually developed throughout the data collection/analysis process.

Phase three: developing sustainability guidance

The study findings will be used to develop a guidance providing practical suggestions on how to sustain improved care in care homes. The recommendations will outline the factors affecting sustainability of innovation in care homes, and provide practical solutions for care homes and quality improvement teams on actions needed to ensure changes are embedded into routine care in care homes. The guidance will be developed using the study findings, and in collaboration with key stakeholders with working or personal experience of the care home sector.

Patient and public involvement

The University of Nottingham Division of Rehabilitation, Ageing and Wellbeing Patient and Public Involvement Group were consulted when developing the study. Members of the group are experienced in providing input into research, and all have lived experience of caring for family members with dementia, and experience of relatives living in care homes. The group reviewed, and commented on the initial research ideas, and the proposal was modified in response to their comments. The members of the group advised that the project should focus more on frontline care home and NHS staff in order to understand whether, how, and why initiatives were sustained. The group will be consulted with regularly whilst undergoing the study.

In addition, the recommendations will be developed in collaboration with care home sector stakeholders. Early drafts will be presented to care home staff (managers, and direct care staff), NHS staff delivering care into care homes, NHS commissioning staff, and quality improvement experts, and their input will be key to developing a tool that is useful and useable by those in the sector.

Ethics and dissemination

The University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee (Ref: 19040) and the Health Research Authority and Health and Care Research Wales (IRAS project ID: 264342) (REC reference: 19/HRA/3813) have provided ethical approval for this study. Findings will be shared nationally and internationally through conference presentations, and through a publication in a peer-reviewed journal.

DISCUSSION

This study aims to address a pressing implementation challenge that could potentially improve the outcome of thousands of care home residents and ensure that the rewards of innovatory health care investment are achieved. To this end, the study team includes people with expertise and experience in improvement research, and in the application of quality improvement methods in the care home setting. Their perspectives and experiences will enable rich interpretation when carrying out data analysis. The use of the TIDieR and CFS frameworks will facilitate the production of generalizable recommendations, and guidance on how to sustain improved care in care homes.

However, the study team are aware that, being an observational rather than experimental study, there will be limits to the reliability of the findings. Reliance on interviews and other publicly-oriented accounts, such as those to be found in documents, bring risks such as recall bias and social desirability bias. Another limitation is the timescale over which we will observe sustainability, and we will not be able to examine long-term sustainability. Finally, the generalisability of our findings may be limited affected by the local and temporal context of the English health and social care system in the period of study, which we intend to mitigate by reference to and development of a theoretical framework (the CFS).

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AUTHORS' CONTRIBUTIONS

RD is the principal investigator of the SUSTAIN-CH study. AB is the main researcher carrying out data collection and data analysis. RD and ALG will act as second independent coders carrying out data coding and analysis tasks. JG, TD, JB, and GM are co-investigators, and part of the SUSTAIN-CH team. All authors contributed to the writing/editing of this protocol, and read and approved the final manuscript.

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COMPETING INTERESTS

ALG, RD, JG, TD, and JB were part of the team who delivered the PEACH study. The PEACH study is one of the studies being followed up in the SUSTAIN-CH study.

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