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Sit Less Move More – Creating a culture of activity and movement in a care home setting

Summary Report.

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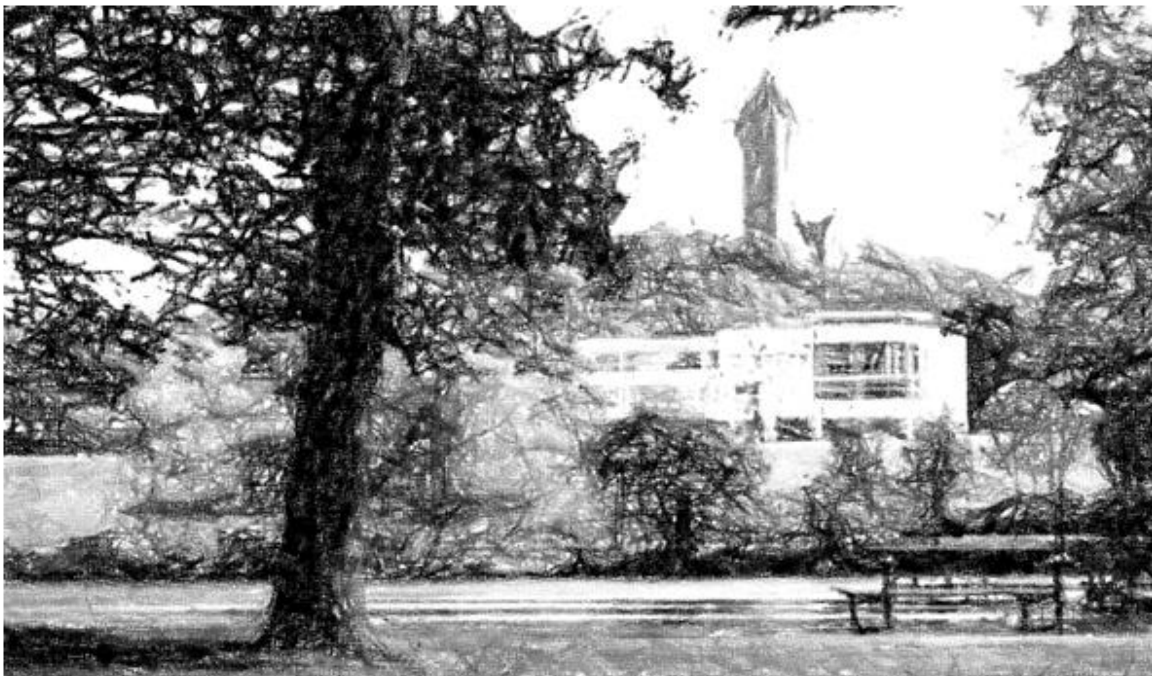

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1. Overview.

This summary report details the findings from 'Sit Less Move More; Creating a culture of activity and movement in a care home setting' (SLMM). The project was funded by Life Changes Trust's Digging Deeper programme. The goal of the project was to explore factors that are in place within care homes that can support and encourage greater levels of physical activity, and to identify factors that can enhance or limit the creation of cultures of increased physical activity among care home residents.

Using a combination of qualitative and quantitative methods, SLMM explores factors which influenced how care home residents were encouraged or restricted from taking part in physical activity, and sought to identify social, cultural and environmental factors which influenced the creation of cultures of increased physical activity. The goal of the project was to influence current and future practice in relation to physical activity in care homes. SLMM took place between January 2020 and September 2022. The project was delivered by a partnership of researchers at the University of Stirling, the Scottish walking charity Paths for All, and Perth and Kinross Health and Social Care Partnership.

Full reports detailing the findings of individual work packages are published alongside this report.

1.1. Background

As of March 2021, 33,353 people were resident in the 1,069 care homes in Scotland, with 91% of those found in care homes for older people (Public Health Scotland, 2021). Although not formally recognised in UK or Scottish Government policy, physical activity has long been recognised as a medium through which significant improvements in the health and wellbeing of people living in care homes can be made. A growing body of studies has also demonstrated that access to the outdoors and physical activity have significant health and wellbeing related benefits for people living in care homes, including older people and people living with dementia, including better physical and mental health, greater engagement in social activities, and greater civic engagement (Mapes 2010; Mapes *et al* 2016; Rappe and Topo 2007; Clark *et al* 2013; NICE 2015; Argyle *et al* 2016). Older residents of care homes have also been shown to value access to outdoor activities, listing effects of exercise, fresh air, emotional wellbeing, appreciation of the outdoors and opportunities to interact with their local communities as key benefits (Duggan *et al* 2008; Mapes *et al* 2016). Outdoor activities with an evidence base include outdoor exercise activities (Mapes 2010); gardens, gardening and horticultural activities (Gibson *et al* 2007; Noone *et al* 2017); green care farms (de Boer *et al* 2017), access to countryside activities such as group walks (Gibson *et al* 2017); personalised outdoor activity programmes (Hendriks *et al* 2016) and dementia friendly parklands (Marshall and Gilliard 2014).

Care home residents are a population that has been systematically under-researched. When looking at traditional models of care, research over decades reports that care home residents spend most of their time inactive, however research exploring the specific opportunities and challenges arising when implementing physical activities for people within care homes is rare (Benjamin, Edwards & Caswell., (2009). Lack of engagement in physical activity (PA), defined as "any bodily movement produced by skeletal muscles that results in energy expenditure" (WHO, 2021), has detrimental effects on physical and psychological health and quality of life and contributes to social isolation (Cunningham and O'Sullivan 2020). A sedentary lifestyle can result in losing the ability to balance, to rise from a chair, and to walk, as well as increasing the likelihood of falls when attempting to move. Yet how to ensure people with dementia in care homes have continuing access to activities that promote physical activity, or what the factors are in care homes that facilitate or present barriers to residents becoming more physically active has seen relatively little research. The benefits of activities such as gardening have been demonstrated, however, such activities may not be suitable or available for all residents (Motealleh *et al* 2019). In addition, resource demands in care homes, the level of structured support to engage in physical activities or environmental factors within and in the spaces surrounding care homes may also pose significant barriers to levels of physical activities. This suggests that the degree to which residents within care homes can be physically active will, at least to some extent, be shaped by the ability of care home environments and care home staff to promote effective cultures of physical activity. A positive culture will mean that people living with dementia and other residents will be able to make walking and other forms of physical activity greater features of their everyday lives.

1.2 Aims and Objectives

The project has the following 3 aims:

1. To understand the culture of those homes where residents are taking part in more physical activity and walking compared to those residents in other homes who are less active and lead very sedentary lives in the care home.
2. To identify factors within a care home setting that facilitate or pose barriers to increased cultures of physical activity, in which residents can be encouraged and supported to be more physically active, to walk and move more.
3. To disseminate evidence regarding what promotes cultures of increased physical activity for older people within care homes.

1.3 Research Methodology and Methods.

SLMM adopted a mixed methods approach to explore the breadth and depth of factors which influence cultures of physical activity within care homes. The methodology and methods were

designed in conjunction with project partners and sought to engage with care home residents, staff and family members. Data collection activities took place between January 2020 and Jun 2022. During the project we employed the following research methods:

1. A scoping review of published literature reporting on factors influencing cultures of physical activity within care homes.
2. A UK national survey of care home staff regarding levels of physical activity and factors influencing physical activities within care homes.
3. Qualitative interviews with a convenience sample of 15 staff members in varying roles from care homes across the UK.
4. 'Deep dive' workshops with staff members and residents in four care homes within the Perth and Kinross areas of Scotland.

Qualitative findings were analysed using thematic analysis techniques, in which the qualitative data were interrogated in order to identify themes which influence cultures of physical activity. Quantitative data was interrogated using descriptive statistics.

Findings from the scoping review, qualitative and quantitative data were combined to create a logic model which identifies inputs, activities, outputs and outcomes related to the promotion of physical activity within care homes. The logic model explains how increased cultures of physical activity are likely to occur as a result of changes within care homes to promote physical activity.

This summary report details the main findings, logic model and recommendations resulting from this piece of research. Summary reports for each work package are published alongside this report and are available from the project authors and from Paths for All.

2. Scoping Review

2.1 Scoping Review Methodology

The scoping review aims to explore the current academic literature regarding the scope, range, and provision of physical activities for residents living with dementia within care homes, and to identify factors that might facilitate or pose barriers to residents becoming more active. We were interested in how the wider culture in care homes can encourage a greater amount of physical activity within the everyday life of residents. This might include specific interventions such as fitness activities but can also include everyday activities within the home, such as encouraging residents to move about more during the day. Our review aims to answer the following questions:

- What is the range of physical activities or interventions that are available to people with dementia living in residential care facilities?
- What evidence is there about how physical activities benefit (or not) people with dementia who are living in residential care facilities?
- What factors can foster increased physical activity among people with dementia living in residential care facilities?

For the academic literature, we searched databases of peer-reviewed research using search terms that reflected the three questions asked above. We included items published in English from 2010-2020. We included studies that had the explicit goal of exploring the effects of physical activity, rather than papers in which benefits based on physical activity might not be the primary focus of the study. Having completed our search, we read the abstracts of papers to filter out publications that were on unrelated topics, or which did not provide useful evidence of the impact of experiences of physical activities. One of the research team members then extracted the key information from each publication, including evidence regarding the type of physical activity, how that activity was implemented, the impact of the physical activities discussed on care home residents, and issues that facilitated or posed barriers to providing physical activities for residents. In any cases of disagreement, a second team member was available to provide a second rating for each paper. We also conducted a test of the quality of each paper for which full data was extracted to assess the quality of the overall research reported here. Key learning points were then extracted from all the reviewed studies.

The full search strategy and results for the scoping review can be found in Sit Less Move More Scoping Review report.

2.2 Scoping Review Findings

2.2.1 Effects of Physical Activity interventions

Most of the physical activity interventions had positive effects. Care home residents within the qualitative research including in the review reported positive impacts from the physical activity interventions. Care home residents praised an intervention combining Tai Chi, yoga, and mindfulness Saravanakumar *et al* (2018) as beneficial and worthwhile. Lindelof *et al* (2017) found that residents perceived their tailored exercises as giving pleasure, strength, comfort, joy, and encouragement. Olsen *et al* (2015) found that nursing home residents had positive attitudes about a high-intensity, functional exercise programme. A 20-week, low-threshold intervention introduced by Quehenberger, Cichocki and Krajic (2014) was followed by a significant reduction in pain and perceived health status one year after the beginning of the study.

Quantitative studies found positive social, mental, and physical effects of physical activity. Yen and Lin (2018) found an enhanced ability for personal learning and growth and greater resilience in the face of adverse life events. Structured interventions such as those introduced by Traynor *et al* (2018) were followed by less agitation and wandering in the care home, but no correlation between the level of individual participation and reduced agitation and wandering of individuals. In another study, residents who more frequently completed a 'sit-to-stand' activity were more likely to retain or improve their mobility, once statistics were adjusted for age (Slaughter and Estabrooks, 2013). Residents who played a floor-based board game improved in attributes such as steps per day, energy expenditure, quality of life, balance, gait and ankle strength (Mouton *et al* 2017). The Tai Chi intervention in Lee, Lee and Woo (2010) was accompanied by improvements in physical and mental aspects of quality of life, as well as the composite variable, State Self-Esteem. Jansen *et al* (2018) found that residents with dementia who participated in physical exercise increased their 'Life Space', spending less time in their private rooms and moving further away from their rooms. Matlabi, Shaghaghi and Amiri (2014) found an association between an intervention of moderate aerobic activity and muscle-strengthening, and better sleep, reduced depression and anxiety. In Sondell *et al* (2019), 38.5% of residents with dementia who took part in a high-intensity exercise intervention, improved their ability to balance. Bastami and Azadi (2020) described a multiple component intervention for the prevention of falling which included physical activities, training sessions and extensive modifications of the physical environment. The intervention was followed by fewer falls, less fear of falling, and improved quality of life.

2.2.2 Factors encouraging sedentary behaviours

Mobility loss can be imposed on care home residents against their will either explicitly through polices or as an outcome of poor staff practices and knowledge about the importance of physical activity. Olsen *et al.* (2015) identify the 'undemanding environment' of the care home, writing, '...the decline in functional health status is often mistakenly attributed to the natural biological aging process when, in fact, it is due to physical inactivity. We interpret this undemanding environment as being a barrier to physical activity and exercise.' Some of the mechanisms are poor communication and the inadvertent or intentional actions of staff to take control of physical activity, removing both resident autonomy and the opportunity to gain the health and quality of life benefits inherent in physical activity. Poorly trained or managed staff may even engage in behaviours that fail to meet good practice guidelines and may even harm residents in this assumption of control (Taylor, Sims and Haines, 2014).

An important barrier and contributor to sedentary behaviour is fear, specifically, the fear among staff that residents will fall and injure themselves (Kotlarczyk *et al.,* 2020; Chen, 2010; Wu, Wu and Huang, 2013). This is a reasonable fear both for residents and staff responsible for care home residents that needs to be addressed in any management change in a care home, including a transition to a more physically active care home. Some care homes use physical restraint or chemical restraint such as sedation to prevent falls, even if the evidence does not support the routine use of restraint for this purpose (Wu, Wu and Huang, 2013). Some residents and staff members may fear physical activity because they feel it may make them more likely to fall. The evidence in this review does not support this fear, however. There were no falls during a supported sit-to-stand intervention (Slaughter and Estabrooks, 2013). Physical activity and environmental changes reduced rather than increased the incidence of falls in care homes (Bastami and Azadi, 2020; Lee, Lee and Woo, 2010). There is also an important need to reduce the incidence and fear of falls by modifications in the outdoor environment (Chen, 2010) and to provide the electronic means to summon help outside for those who need it, if an unsupervised fall does occur.

2.2.3 Factors encouraging active behaviours

It is important for staff in care homes to be proactive in encouraging residents to be active and to do this on a regular basis (Jeon, Tudball and Nelson, 2019). Residents who need support and supervision to walk or carry out other activities may hesitate to ask for the help that they need if they think the staff are too busy (Jeon, Tudball and Nelson, 2019). (2018); Lindelof *et al*. (2017); Benjamin *et al*. (2011); and Sondell *et al*. (2018) argued that tailored interventions of physical activity are preferable. In many of the intervention studies of this review, the authors argued for the importance of trained and competent instructors to lead the physical activity or made it clear that they had deployed trained

and competent people to lead the intervention (Jansen et al., 2018; Olsen *et al*., 2015; Saravanakumar *et al* 2018; Mouton *et al*. 2017). The interventions were frequently led by external professionals such as physiotherapists, occupational therapists, or nurses, whose main work was not based in the home. While it is, of course, important for any staff member to have the proper training to support physical activity, it is also important to get the balance right between external and internal staff, and between professional staff, such as nurses, occupational therapists, and physiotherapists, and so on; and care staff, in the promotion of physical activity. In so, physical activity will move from being the responsibility of a single professional to become the responsibility of all involved in care work in a home.

The normalisation of physical activity in care homes is key. Olsen *et al.* (2015) argued for physical activity as a basic human necessity. When physical activity rather than sedentary behaviour is considered the default, all residents are encouraged to engage in physical activity unless physically unable (Hawkins *et al*. 2018; Jeon, Tudball and Nelson, 2019). Jeon, Tudball and Nelson (2019) recommended a flexible and inclusive approach. Residents who are not motivated to engage in physical activity might be encouraged or assisted to do so with physical activities incorporated in the other activities that they enjoy. Care home management can support care home workers to establish a sense of empowerment rather than disempowerment in residents (Sondell *et al.,* 2019; Taylor, Sims and Haines, 2014; Hawkins *et al.,* 2018). In Hawkins *et al*. (2018), the management supported residents to make some decisions. The care workers encouraged, guided, and supported those who needed physical support or walking aids to move, and the whole staff group discussed ways to support residents to move. Care plans were a source of feedback and reflection on the changing physical needs of residents and the proactive management of risks related to physical function.

2.2.4 Supporting and discouraging cultures of physical activity

An interest in the sustainability of physical exercise in care homes, while relatively unusual in the context of this scoping review, is vital. Most of the articles concerning interventions in this review on physical activity relied on residents' mental, physical, or social responses to time-limited interventions, with little information given about what was happening in the way of physical activity in care homes before the research and what, if anything, was likely to happen in the way of physical activity, afterward. An exception was Quehenberger, Cichocki and Krajic (2014) who discussed the sustainability of a 'low-threshold' intervention. While overlooking the sustainability of interventions is understandable in the context of research, sustainable approaches are needed to support all care home managers and staff to shift the entire culture of care homes toward physical activity in care homes (Gine-Garriga *et al.,* 2019). In Benjamin *et al.* (2011) staff were found to be constrained and frequently had to make trade-offs to the detriment of supported physical activity, such as when a care

activity was prioritised over physical activity due to workload, rigid institutional standards and routines, and low staffing levels in the residence. Residents had to balance their desire for autonomy and movement with their dependence on staff.

Benjamin *et al.* (2016) recommended the establishment of coalitions of nurses, care workers, and managers to closely scrutinize, resist and change care home practices that are harmful because they detract from cultures of physical activity. Further, they recommended involving residents in decision making about their own health, engaging residents in household chores, regular reminders to be active, to engage family and friends in support residents to move more and to support residents to access resources in the local community such as shops and parks. Chen (2010) also recommended that managers ensure that residents can take control of their own decision-making to engage in physical activity.

When residents walk to a meeting place or transfer from a bed to a wheelchair, they are already participating in physical activities. As well as these everyday activities, social activities can be adapted to have more of a physical activity component. A bingo game can have arm or leg motions for the different numbers and symbols that the numbers represent. Social gatherings can place refreshments so that going to fetch them or reaching for them is required for those who are able. Yen and Lin (2018) referred to singing as passive and Maltais *et al*. (2019) classed singing as a non-physical, social activity. However, a review by Kang, Scholp and Jiang (2018) indicated that singers undergo physical changes to the respiratory and circulatory systems. They added, 'In addition, singing can also cause changes in neurotransmitters and hormones, including the upregulation of oxytocin, immunoglobulin A, and endorphins, which improves immune function and increases feelings of happiness.' There may be a gap in understanding of how activities such as singing or other social activities may provide a physical activity component.

Several researchers recommended better environments to support cultures of physical activity. Mahrs Traff, Cedersund and Abramsson (2020) recommended planning and appropriate design of environments where residents can be free yet supported to engage in physical activity. 'In some cases, the physical factors can be influenced in order to change from being obstacles to being promoters of physical activity.' Features might include designated exercise rooms or adequate access allowed for physical activity in multiple-purpose rooms or dining rooms, and safe stairs, lifts, corridors and outdoor areas. Benjamin *et al.* (2011) recommended adapting physical environments with doors that are easy to open and corridors and private and public rooms large enough to permit exercise. Outdoor areas need to be accessible, to enable residents to access these independently, and provide places to rest on the way. The research of Mouton *et al.* (2017) suggested the importance of seasonal

adaptation of physical activities to accommodate resident's needs. Chen (2010) recommended a creative approach to the constraints of the physical environment, such as by adapting balconies and gazebos for activities.

2.3 Concluding Comments

The findings in this review suggest that to support physical activity for care home residents in a way that leads to benefits for residents, requires a whole-home approach. A sustainable approach that is embedded in the culture of the care home and that involves people, practices and the built environment can enable physical activity for residents and bring meaningful benefits for residents and staff. Personal care, recreational preferences, social activities, and encouragement to be part of daily tasks in the home can all be part of whole-home approaches to support residents to engage in physical activity as an integral part of the life of the home. Goal setting, monitoring and ongoing evaluation processes are also likely to all play a role. Physical activity should be built into care plans to ensure that an individualised approach is adopted. Sustainability of physical activity practices was rarely evidenced within the literature due to limited time scales of intervention projects but is clearly a need for care homes.

3 Questionnaire Survey

3.1 Questionnaire Survey methodology

The survey collected qualitative and quantitative data. The Qualtrics software platform was selected for the online survey questionnaire to provide a secure platform to collect and store data (Qualtrics, 2022). The first version of the questionnaire launched on 14 December 2020 and a second version was launched in October 2021. The final response to the questionnaire was received on 27th January 2022. The second version of the questionnaire included the original survey and some additional questions to extend the findings from the research. Changes were made to the original survey to reduce the time to completion for respondents. For questions with an open text version in the first version, these were replaced by a list of options with 'other' and an open text box presented at the end of each question. While the second version was still longer than desired it did encourage more respondents to complete it. A final change was to provide rewards for completing the questionnaire, in the second version a list of virtual resources was provided at the end of the survey along with an opportunity to enter a prize draw for a set of Paths for All walking resources for care homes. Resources included sit to stand exercises, and signs which could be posted within the home to provide prompts or encouragement to take part in physical activity.

The questionnaire was publicised by physical and virtual posters, Twitter accounts, emails, and word-of-mouth. Respondents could use a website address, a tiny URL or a QR code to link to the first page of the questionnaire.

Paths for All and University of Stirling researchers from the Faculty of Social Sciences worked with Perth & Kinross Health & Social Care Partnership, NHS Scotland; ENRICH, and individual contacts working for and with care homes to publicise the survey questionnaire. Therefore, the recruitment of questionnaire respondents proceeded through several routes. The direct recruitment through specific networks in Perth and Kinross and ENRICH was more successful, but respondents who might not have been reached in other ways were approached through individuals who were kind enough to distribute the surveys in care homes.

There were 161 respondents to the questionnaire. Qualtrics marked 20 of those responses as spam. The minimum number of responses to any individual question was 50, and the maximum number was 93. Results include number of responses for each question.

3.2 Discussion of Survey Findings

This section provides a summary of the headline findings from the survey of care workers delivered during 2021. Full findings for the survey can be found in the Sit Less Move More Survey Summary Report.

3.2.1 Care home workers and care homes

All age groups from 18+ to 56+ were represented among respondents. Respondents were 91% female and 9% male. Nearly half (47%) of respondents were care workers, 27% were activities, fitness, or well-being workers, and 20% were managers. The survey was skewed toward older and more experienced respondents, with 39% from the 56+ age group and 52% having five or more years of experience. Most, 92%, were from homes with 50 or fewer residents, and 92% were employed directly by the care homes.

More than half of respondents were from Perthshire postcodes and 80% were from Scotland. Paths for All and other organisations have worked to increase physical activity in care homes in Scotland and specifically in Perth and Kinross. The high number of respondents from Perth and Kinross has implications for the potential validity of the survey in the UK beyond Perth and Kinross and Scotland because it is unlikely that all areas of the UK have had the same amount of attention to physical activity in care homes. Some of these areas were involved for example in the Care Inspectorate 'Care About Physical Activity' (CAPA) project, and receive resources through this initiative.

3.2.2 Care home practices around physical activity

Residents are encouraged and supported to move in most care homes, but in some homes, respondents indicated that this encouragement and support seldom or never happens. Likewise, most respondents indicated that there were two or more organised physical activities in their care home per week, but a few respondents indicated there was only one per week or none. Organised physical activities tended to occur at different times per day but most commonly between 10am-1pm. Residents were physically active in a variety of informal and formal activities. The most common examples were chair-based exercise, indoor and outdoor walking, non-chair-based exercise, and activities of daily living such as dressing.

Activities or Wellbeing Co-ordinators most frequently run organised physical activities in the care homes. This suggests that residents in care homes may suffer where there is no Activities Co-ordinator or someone in a similar role. In fewer cases, care workers, managers, and other workers ran physical

activities. A large majority of respondents agreed that indoor activity provision, the presence of an Activity Co-ordinator and training gave them confidence to encourage or support physical activity among residents.

While most activity in care homes takes place during the day, we did include one question to explore physical activity during the night-time. Respondents were broadly in agreement about the importance of good handovers and clear communication to support night-time care as well as allowing residents to move around and access communal areas in the home at night. Other aspects of night-time care appeared to be of less importance.

3.2.3 Care home worker attitudes and beliefs about physical activity

In non-exclusive categories, over 50% of respondents agreed with all factors named (apart from, 'Medical Staff' which only one out of three respondents agreed with), as supporting them to encourage residents to move more. Nearly nine out of ten agreed with indoor activity provision, and training; and three out of four agreed with Activity Co-ordinators, having adequate time to support residents as well as to do other work, and the benefits seen in residents from helping them to move more.

Nearly all respondents were enthusiastic about physical activity for residents, believing in mental, social, and physical benefits. In terms of training, most care home worker respondents preferred their training to be in-person. There was enthusiasm for training in strength, balance, flexibility, and aerobic movement. For three out of four respondents, seeing the benefits of physical activity gave them confidence in encouraging or supporting residents to move, as did having enough time to do the work of supporting and encouraging physical activity.

The top difficulty named in supporting residents to engage in physical activity was simply that some residents do not want to move more. Encouraging these residents is an important skill. Our literature review provided some insights into how other care homes around the world address this problem of disinclination. The authors recommended continuing to encourage people who did not want to exercise, because of findings that potential benefits of physical activity are not restricted to those who are motivated to exercise or who have previously had good experiences with physical exercise (Sondell *et al.,* (2019). They also recommended inviting people who did not want to exercise to join in a variety of engaging activities. Physical activity is naturally incorporated, for example, in sit-to-stand to get into a wheelchair or walk to the activities, in singing and dancing, in reaching for food and drink or art

materials, in walking to collect prizes in a Bingo game, in shopping or going to church, or in wiping tables after lunch or folding napkins before dinner. Activities do not need to be billed as 'good for you', to be pleasurable or helpful.

The second difficulty that respondents named in supporting residents to engage in physical activity was the fear of residents falling. This is a natural and justified fear when working with elderly and frail people. Care homes presumably all have protocols about how to encourage residents to engage in physical exercise, such as in walking to breakfast with or without staff support. The literature also indicated that physical activity participation supported a substantial proportion of residents, including residents with dementia, to balance better (Sondell *et al.,* 2019). Other research has had findings of fewer falls and less fear of falls through incorporating physical activity, education for staff and residents to prevent falling, and environmental changes, in multiple component programmes to prevent falls (Bastami and Azadi, 2020).

The third difficulty that respondents named in supporting residents to engage in physical activity was a lack of time. This is a real barrier and again, the literature provides glimmers of light. Care homes with an ethos to incorporate physical activity coming from the top, and a willingness to work co-operatively with the whole staff to solve problems around barriers to physical activity, can greatly increase the physical activity of residents Hawkins *et al*., 2018), even given the same constraints of staffing and funding that other care homes suffer.

4. Qualitative Interviews

4.1 Qualitative Interview Methodology

Here we present the findings from analysis of a series of semi-structured interviews with staff working in care homes in Scotland. The purpose of the interviews was to explore the scope, range, and provision of physical activities for residents, with and without dementia, within care homes, and to identify factors that might facilitate or pose barriers to residents becoming more physically active within care home environments. To this end, we interviewed people who worked in care homes including care workers, activity co-ordinators, and managers.

We were interested in how staff in care homes can be supported to provide a greater degree of physical activity within the everyday life of residents. This can include specific interventions such as fitness activities, but can also include everyday activities within the home, such as encouraging residents to move about more during the day.

The scoping review clearly evidences the positive impact of physical activity for care home residents. In this part of our project our aim was to discover more about the culture of care homes and how these support or hinder residents from moving more. This culture might include the people, the physical environment and the different working practices and are models adopted in the different care homes. The analysis of the interview data aims to answer the following research questions:

- What is the range of physical activities or interventions that are currently adopted for people living in residential care facilities?
- What factors can foster increased physical activity among people living in residential care facilities?

A semi-structured interview schedule was adopted to collect in-depth data about practice in the care homes alongside some descriptive demographic data about the interviewees and the care homes they work in. Participants included care workers, activity co-ordinators and managers. The interview schedule covered the following topics:

- Information about the respondents as care home workers, and about the care homes where the respondents worked.
- Care home practices around physical activity.
- Care home worker attitudes and beliefs about physical activity.

The interviews took place from June 2021 to May 2022. Most were done remotely on Zoom or Teams. One interview was a written response to the interview questions. Two interviews were conducted in-person, once COVID-19 restrictions had lifted and the team were able to visit care homes.

Participants for the interviews were recruited in two ways. The project team circulated information through their professional networks about the project, this included a poster that could be displayed in care homes or public spaces inviting participants to contact the project team directly. Secondly, the survey conducted as part of this project included a request to respondents to email us if they wished to take part in the interviews, and some interviewees were recruited in that way.

Due to the challenge of recruiting during the COVID-19 pandemic the sample was a convenience sample, drawing on the project team's professional networks to support recruitment. The recruitment was likely biased towards care homes and individuals who were already interested in promoting physical activity in care homes. This was because recruitment took place through organisations and networks that were already involved in promoting physical activity in care homes and due to self-selection, it is likely that participants who were already engaged in promoting physical activity would come forward.

The table below contains information about 14 interviews and seventeen interviewees. The interviewee job roles were Activities Co-ordinator (8), Manager (5), Care Worker (2), Senior Care Worker (1) and Nurse (1). The 'P' in the code stands for interview participant or participants.

Table 1: The fourteen interviews with care home workers

Interview Code	Person Interviewed	Method
P1	Activities Co-ordinator	Remote
P2	Activities Co-ordinator	Remote
P3	Care Home Manager	Remote
P4	Care Worker	Remote
P5	Activities Co-ordinator	Remote
P6	Care Home Manager	Remote
P7 and P8*	Activities Co-ordinator	Remote
P9	Activities Co-ordinator and Manager	Remote
P10	Nurse	Written
P11	Activities Co-ordinator	In-person

P12	Activities Co-ordinator and Manager	In-person
P13	Activities Co-ordinator	In-person
P14	Care Worker and Senior Care Worker	In-person
P15	Care Home Manager	In-person

*Two recordings for a single interview

The codes from this table are used to identify participants for the illustrative quotes presenting throughout the findings section of this report.

A thematic qualitative analysis was undertaken, using both deductive and inductive approaches. The research questions framed the deductive approach while open coding allowed for new themes to be identified in the data. NVivo version 12 supported the coding and subsequent identification and analysis of themes.

4.2 Qualitative Interview Findings

Interviewees strongly believed in the benefits of physical activity in care homes. They believed that movement supported physical health, mental health, and general well-being.

> *I think that's it. Yes, and the final thought is what I said before, even a person with severe dementia, for example, if they don't remember that they went for a walk, it's very nice for them to see how their body does remember, maybe they…remember the mood, or they eat better, their appetite has been stimulated.* (P5)

> *Some of them, if they used to be more mobile in life, then it's really important for their mental health to just go for a walk and to get out of being indoors, just to breathe fresh air, you know, if they have their Zimmer, to get them to the back garden and to just get some sun rays on their skin, you can see them more relaxed, more smiley when they're having dinner and so on and so forth.* (P4)

They believed that it reduced the incidence and fear of falls and that it supported sleep and improved mood. Physical activity was also noted as a good way to promote social interaction for residents.

> *Then it becomes actually they realise that while you are there maybe walking with them you are talking, getting a bit of one-to-one conversation which if you were*

put straight in a wheelchair and taken somewhere that might not happen. Yes, it is an opportunity for interaction, isn't it? (P11)

There were two main barriers to physical activity identified: issues relating to the residents themselves and staff issues. Residents' own abilities might make it more difficult for them to take part in physical activity, this might be due to poor mobility, hearing loss, sight loss or cognitive impairment such as dementia.

Hearing is always a big issue. Continence issues, people worrying about what if something happens when I am in a group? I think I will just stay in my room. There are always toilets nearby. But you need to give them that confidence that if they say, I need to go and I need to go now, that somebody will be there to take them. It is that reassurance and not allowing a bad experience to happen…You hear people say it all the time, oh I can't do anything. Like Mary who was sitting...she was absolutely fine. Finding ways round it. We do actually have a ramp for the bowls, I didn't bring it today. There is a ramp that you can use from the wheelchairs and just roll it down. (P11)

Clients with dementia do tend to change their mind on a…Some of them can present with a UTI as well…which, you know, often that increases their confusion. So, sort of, their background health states, whether that's dementia or other conditions is obviously going to have a big impact. (P15)

These could lead to a reluctance to take part in activities and some staff reported that residents expected to be looked after and have things done for them in the care home setting. When combined with low staffing levels and high staff turnover staff frequently described facing further challenges.

Even, as you have seen today, it can be very difficult. I have got bowling and you are running the session. You are often bringing cups of tea out. Staff can help with that at times but it is not consistent. So quite often you are stopping to go and get all that yourself. But there are residents who need to leave urgently and if there is only one of you here you just have to drop the whole session, excuse me. (P11)

R1: *Definitely staffing levels. Staffing levels just now are not the greatest.*

R2: *It's the same in every care home*.

R1: *It's just been throughout COVID and things. I think we're still trying to, kind of, replace a lot of staff that left due to...* (P14)

Even with new staff coming on board there was an investment of time and effort needed to ensure they were properly trained and skilled in supporting residents to take part in physical activity.

> *And if you do have people applying, they've not really got the right skill set, or they wouldn't really, like, they've never done care before. We've got a new girl started. She's lovely. But like that, she's taken a long time to train. So, you're taking about four, five weeks to get them on to the floor. So, it's… although there's people starting it, it's a long time till they're up to speed and know the job, so…* (P14 R1)

Staff also balanced a task-focused approach to their work with one that was more enabling for residents but that needed a more flexible approach to their care practice.

COVID-19 had been both a challenge and an opportunity for supporting residents to be more active. On the negative side the pandemic restrictions meant that residents could not go out and about and as families were not able to visit, they missed out on lots of opportunities for movement.

> *Yes. Well, that's nearly two years that we've not really been out, the residents.* (P7)

There were, however, more positive accounts where the pandemic has led to more engagement with physical activity using online exercise classes and other activities.

> *With COVID we weren't able to go out on the bus to garden centres, go out for lunch, so we would just drive somewhere in the middle of nowhere and just throw open the doors…If there was nobody there we could but we'd just let the fresh air in and one of our favourite places to go was [place name] and when they were closed, they would let us go in and we would just sit at the top of the hill right by the llamas, have a cup of tea and coffee, have a biscuit, and just watch the animals.* (P13)

In terms of encouraging physical activity in care homes staff played a key role. Enthusiastic staff could support and encourage others to get involved in promoting movement for the residents.

> *Yeah. Both [name] and [name], you know, credit where credit's due, they do, you know, they do…they take a heavy… I mean, they search a lot of stuff as well to keep the residents on the move. I mean, even if it's, for example, throwing a beach ball, you know, 'cause they're still exercising…their imagination has been second to none.* (P15R1)

Staff reported benefits from training in physical activity and from getting involved in wider networks and working with external organisations to develop new ideas and approaches for supporting physical activity.

Staff were also more likely to support residents with an activity that they enjoyed themselves. Supporting and educating family and friends was another way staff increased activity for the residents. Training was important in giving staff the creative resources needed to develop programmes of activities that encouraged physical activity.

> *I find refresher training, training on actual strength and balance basics is always good. And then you can always build down to a little dance and a wee Zumba thing. You do a little dance that they'll know, it's very simple, you know, that kind of thing. So, it's just really given us the tools for it, you know? Maybe they can do an online thing where they do a different kind of exercise, online Tai Chi or something.* (P1)

Flexibility and imagination were important when designing and delivering physical activities in the home. Staff talked about a wide range of ways to support and encourage residents to get involved, these included using music, focusing on the social aspect of an activity, playing games, doing something in a group, setting a challenge for everyone in the care home or simply coming back later to see if the resident was more interested to engage at a different time. Challenge events were used in one home as a means of encouraging people to engage in activity. This became a competition between residents, which could be rewarded by the awarding of medals, giving residents a further impetus to take part.

> *I have a square wall just along at the top of the corridor, so I have a map of the North Coast 500. Then I have just a wee description of the residents taking part in*

this challenge, we're walking 500 miles, blah blah blah. But then I've got this sheet here. That's on my main wall. So that tells you 7.9 miles, the date we walked or cycled it. So that's on the main wall. But the other one is the actual name of the residents and what they've actually done, so the date and the time they walked. I put that on this sheet, and I put the actual...I put what the total was for that day. I don't know if you can see that, so it was 7.9 miles. And then I put what we're at altogether because it tells you on the map and I put in the steps or the cycle, so this is in a folder up at that area. But then I have another book and another step book, so when I'm doing my walking or cycling, I'm marking it there and then, if you know what I mean. (P12)

The physical environment was highlighted as important by some participants. Staff noted the potential for the physical environment to improve the mood of residents and stressed the important of moving furniture around to maximise movement and minimise risk.

It was, you know, one resident in particular who used to be out a lot, out of the home a lot, a very busy life, out with family, out in the community and she started to have more and more falls and we've been working with external professionals to support her with that and very recently I spent some time with her and I moved her bedroom around to try and see if it would support her a bit. One thing that used to upset her was she used to get a lot of letters in from her family and friends and she would try and write back to them. So, I spoke with her, and I suggested, I said, why don't we put a writing desk and a chair in your bedroom so that you can sit down, write your letters, take time to read them and really appreciate them. So that was on the same day that I slightly moved her chair, where she was sitting most of the day around as well and touch wood, gosh, I don't want to say this, but she's not had a fall since. (P3)

Access to outdoor spaces was important in encouraging physical activity.

I used to go out in the morning to feed the hens and things and then I took somebody with me, and then two people came with me and then three people came with me, and then a walking group started. You know, and it's a great way of keeping people fit and active and I think it helps start the day. (P1)

There is also a need to have spaces such as conservatories that enable the outside to come inside in the event of poor weather, or during the winter months.

4.3 Concluding comments

This report has highlighted a range of barriers and facilitators to promoting care home residents to move more, it has demonstrated and commitment and imagination of staff who are working to improve the lives of the residents that live in the care homes where they work, encouraging them to sit less and move more. Factors influencing the adoption of physical activity were multi-faceted, including resident health and wellbeing, social relationships between residents and between residents and staff, care approaches across the home and the physical and social environment of the care home. While a reluctance to participate in physical activity was highlighted by staff, well trained and enthusiastic staff could find methods to encourage activity but required support from other staff members and from senior management, both practically and in terms of the ethos adopted in the home. An openness to staff flexibility and autonomy, as well as enthusiasm about activity were key drivers. Activities coordinators, a role that is increasingly common but not yet universal within the care home sector, play a vital role in providing physical activities in care homes in organising space and resources to support physical activity, and in maintaining the momentum required to make physical activity gains. This research suggests that this role should be rolled out across the care home sector, and that resources to support them in their work are made available.

5. Deep Dive Care Homes

5.1 Deep Dive Care Homes Methodology

The purpose of the Deep Dive Care Home workshops was to collect data from care home residents and add to the existing data from staff working in these care homes about the role and impact of physical activities, and factors influencing the presence of a culture that promoted physical activity. We were also interested in observing examples of physical activity, and the factors within the physical and social environments of the home which facilitated or limited participation in physical activities among care home residents. Deep dive workshops took place over a single day in each care home and involved a facilitated interview between residents and staff members and two members of the project team to discuss factors influencing the degree to which residents and staff were involved in both movement and physical activity and what physical activity meant to residents and to staff. Between one and two residents or staff members were interviewed together, where they were taken through the posters and asked to contribute to each point of discussion in the posters. Photographs were taken of exemplar features of care homes which promoted physical activity.

The four care homes participating in the deep dive workshops were all located within Perth and Kinross NHS Health and Social Care Partnership (H&SCP) and were working with Paths for All to enhance their physical activity offers. This did mean that the four sites were currently engaged in physical activity programmes, but as such would provide exemplars of good practice in relation to physical activity, as well as give insights regarding the role that supportive resources could play in supporting physical activity interventions. All four care homes were in small towns or suburbs of larger towns within Perth and Kinross. A total of 14 residents and 18 care home staff members took part in the deep dive workshops across four care homes. Staff members participating came from across the home and included activities and wellbeing coordinators, general care home staff and care home managers in more senior roles.

5.2 Deep Dive Care Home Findings

5.2.1 Findings from care home residents

Care home residents in the deep dive care homes described taking part in a wide range of physical activities within care homes. Most examples discussed were typically specific physical activity interventions organised by staff within the home, with these duties being usually arranged by an activities coordinator. All the homes taking part in the deep dive provided at least some physical activity classes in the home. These included exercise classes such as chair aerobics or tai chi. In addition to arranged sessions, residents were encouraged to be physically active during their everyday activities. When questioned, most included a range of other activities in the home that included some

degree of physical activity or exertion. Such activities included singing groups, dancing activities or games such as indoor bowls or indoor golf.

Residents were encouraged to take part in physical activity outside, usually within the immediate physical environment of the home. One home, located in a former stately home had extensive private gardens, which many residents were able to make use of. Several residents had formed an informal walking group and walked around the grounds daily when they could. Other homes were more limited in their outdoor spaces, but all had at least some outdoor space and made use of it. Gardens frequently had installed various activities residents could look at or take part in. These included signs provided by Paths for All. Several homes had included specific activities that residents could do in their garden areas, which included various points of stimulation or exercises that residents could engage with. During summer months activities coordinators also held creative activities or classes involving some of these points of interest.

Residents who spoke to us had generally positive attitudes towards physical activity. Several noted the importance of keeping moving as much as possible, both due to the general health effects but also in order to preserve their mobility. Some noted the negative effects on mobility that periods of poor health could cause, and the need to continue to move if they could. Continuing to take part in activities also played important social roles in maintaining their relationships with other residents. Having access to outdoor spaces also appeared particularly important, although such spaces needed to be designed well so that older people could navigate them easily. Several of the homes had tried to make allowances through use of ramps and paths, although some grounds had limitations that were difficult to overcome without significant investment and landscaping – for example to remove sloped banks.

5.2.2 Findings from care home staff

Care home staff almost universally acknowledged the importance of maintaining physical activity among residents. As a result, an important part of their role was encouraging residents to be as physically active as possible. In contrast to staff members in the interviews, staff who participated in deep dive workshops noted that a significant minority could be unwilling to engage, but that they could encourage many residents to take part when that they felt the benefits from taking part. Some staff noted residents becoming frustrated as their abilities declined, or as their confidence declined.

In all the deep dive care homes, encouraging physical activity was driven from senior management downwards, with all members of care staff seeking to encourage activity to some extent. The degree to which care staff encouraged residents to be active varied both across individual residents, and across care staff members. Those staff most involved in promoting physical activity were activities coordinators, who subsumed many physical activities or exercises as part of their role profile.

Activities coordinators typically built a comprehensive knowledge of their residents and used this knowledge to create personalised activities for many residents, based on their knowledge of what would work for that person. General care staff also supported activities coordinators with physical activities, as well as seeking to give general support and encouragement to residents, with most of those staff members spoken to identifying the importance of residents remaining active.

During deep dive visits there were some tensions highlighted between staff members regarding their responsibilities to support residents to be active. In one home the activities coordinator noted that some of the general care staff did not consider the time or effort required in developing personalised activities for individual residents, organising external activities to come to the home, or managing or sourcing equipment for their activities. In contrast some members of general care staff stated that they frequently did not have the time available to support residents to be as active as they could be. Building relationships with external organisations involved in physical activity, such as local authorities or leisure trusts also appeared to enhance cultures of physical activity.

5.2.3 Factors which promote or hinder physical activity

Participants in deep dive workshops were also asked to identify factors that influenced the culture of physical activity within their respective homes. We asked participants to identify social factors associated with people in the home (staff and residents); cultural factors, including ways of working or organisational values; and environmental factors concerned with spaces or objects connected to the home.

5.2.4 Social factors

Residents taking part in the deep dive sessions were generally engaged in physical activity and were willing to do so because of both the perceived benefits to their physical and mental health and overall wellbeing, as well as opportunities to socialise with other residents. For staff, having knowledge of individual residents and what would work for them worked well in encouraging activity, as did a sense of enjoyment and fun regarding activity; "*I put the hokey cokey on and we can have a dance and a laugh" (staff member).* Having support from senior management to promote activity was also important, with deep dive homes noting that having senior managers that recognised and supported physical activity interventions fostered greater provision and engagement.

Activities coordinators were seen by several residents as crucial to life in the home; "*Couldn't live in the home without the activities coordinator'(resident).* Activities coordinators generally worked well with the wider staff in the home but highlighted that working more closely with the wider care staff, such as seconding general care staff to work directly with them would further reinforce the importance of giving residents opportunities to take part in physical activity. Providing activities

coordinators with specific resources to support them in their role, for example physical activity programmes was particularly valued.

The most significant hindrance to physical activity among staff members generally was the lack of time to devote to physical activity given the wider demands that they faced in their role; "*as a carer you're thinking breakfast, baths, there's so much to be done on the care side" (care staff member)*. Well known shortages in care staff, alongside high staff turnovers, meant that not only were staff stretched, but also did not have enough time to get to know their residents well. As a result, physical activity predominantly fell on activities coordinators.

For residents, physical health states formed the greatest barrier, with cognitive impairment limiting participation of residents living with dementia. Frailty also eroded confidence given its potentially sudden onset, often resulting from events such as falls; *"(I) had a fall going out up a hill" (resident);* or as people came to realise that they could not be as active as their would like; "*I'm usually puffed out after doing exercises (…) Inhaler used if I run out of puff" (resident).*

5.2.5 Cultural Factors

Regarding cultural factors which fostered physical activities, recognition of physical activity as being an everyday part of life in the home and therefore part of the ethos of care in a home was a significant driver. For many staff members this was driven by senior management, and by the enthusiasm and initiative of activities coordinators. Providing support for physical activity within staff induction and ongoing training, through providing resources to support activities and providing positive feedback from management to staff played an important role; "*activities are a strong point in feedback, (and) part of induction training" (care home manager).* Having an approach which sought to encourage residents to move and participate in activities which required movement, rather than 'doing things for' residents was also seen as important.

Activities coordinators in two homes noted that supporting cultures where physical activity was seen as the priority of all staff could be difficult. For example, it was difficult to co-opt general care staff to support activities with one noting that "*care staff don't have time to go beyond their role, (or) care staff having a defined role and not going beyond it".* For one activities coordinator this led to a feeling that general care staff did not sufficiently support them; "*sometimes it feels like their day (carers) and our day (activities)" Activities coordinator.* On a similar theme, staff also recognised that some residents could be reluctant or simply refuse to engage willingly, which could be frustrating for staff members who sought to encourage them. This experience reinforced the need to develop personalised and individualised approaches which could engage each resident; what worked for one resident may not work for others.

5.2.6 Environmental Factors

The four deep dive care homes occupied a range of buildings, from purpose-built facilities to converted large homes. In addition, their locations varied, from one on top of a steep hill to others with extensive grounds. The biggest facilitator was simply having rooms that were large enough to facilitate activities. Most rooms were multi-purpose and had to host numerous activities at once but generally there was sufficient space in the form of large rooms that enabled activities to take place. Generally, there was a sense that rooms needed to be large; "*this is the right environment – a big room to do things" (activities coordinator)*; "*room for dancing" (resident)*. Not only was space for the activity required, but sufficient space for walkers, or for staff to support a person was needed. Where such spaces weren't available, it became more difficult to facilitate activities. In addition to space, presence of both adaptations in the form of handrails, and aids in the form of walkers was useful in facilitating activity. Several homes also had ample seating areas within corridors so residents could rest when needed. One of the homes had placed exercise panels provided by Paths for all in several corridors, with carers encouraging some residents to do the exercises as they walked by.

In all four homes specific attention had been paid to making outdoor spaces accessible and interesting, with numerous activities that could take place within. Most homes had limited ability to landscape their outdoor spaces so often had to work with what spaces they had available but demonstrated creativity in creating interesting spaces for people to engage in, either spontaneously with each other or as part of activities.

In terms of environmental factors that hindered physical activity, all the homes mentioned difficulties in adapting the spaces they had available. Space was frequently described as being at a premium, while the various walkers, hoists and other aids and adaptations could further reduce the available space. Spaces and staff therefore had to be flexible in their use of spaces available. One particular concern was with the need to ensure corridors and through spaces were clear, with little 'clutter' that could impede either residents, or wheelchairs, hoists or beds that may need to be moved in the facility.

Topographical features of the home or its grounds, as well as ease of navigating around the local community could also pose environmental barriers. One home in a medium sized town could be found on top of a steep hill, as noted by two residents; "*town is steep" (resident); "terrain (the steep slope to the care home) holds me back" (resident).* Although experiencing beautiful views the residents were largely marooned in a location they could not easily leave without assistance. Several noted a lack of confidence or concern over leaving the boundaries of the home to walk in the local community, for example noting features like uneven pavements, lack of toilets or closure of facilities (particularly

during lockdown) as being limiting, leaving some to feel like they were unable to leave the home; "*I don't know what 'town' looks like. Who could get hurt (walking on pavements)" (resident).*

5.3 Concluding comments

Deep dive care homes identified a range of factors that influence cultures of physical activity within the four homes we visited and provided lessons which are generalisable across care homes. A significant number of residents clearly valued the support and effort provided to support them to be more active and enjoyed the activities that were provided. Activities were framed as games or social activities as much as exercise and this positioning of activity did make a difference to engagement.

The findings also reveal the importance of having an enthusiastic, engaged workforce who recognise the importance of physical activity and feel confident to support their residents to be more active. This engagement is strongly facilitated by the presence of activities coordinators. Activities coordinators adopted creative and highly individualised approaches to engaging with residents that had clear advantages in supporting residents to be more active. Such approaches were also supported by care home management, with activities coordinators being given autonomy and trust to develop the activities they provided. However, more support could be made available in terms of what are effective forms of activity and what resources they may need to support them to provide activities.

Environments are also important – while most care homes do not have the option for purpose-built facilities, all showed signs of making changes to indoor and outdoor spaces to make them more conducive to physical activity. We saw local elements of good practice, such as the use of resources created by Paths for All to support physical activity. More could be done in this area, with particular focus on both what care homes currently do locally to make environments more accessible, and better sharing this knowledge across the care home sector.

6. Conclusions and Recommendations

The Sit Less Move More project sought to identify factors which promote and/or hinder the development of cultures of physical activity. The project adopted a mixed methods approach, including a scoping review, UK national questionnaire survey, qualitative interviews with care home staff and deep dive care home workshops with care home staff and residents. Findings highlight several factors, organised around personal and social factors, cultural and organisational factors and factors in the physical/social environments that influence the development of cultures of physical activity; we summarise our main conclusions in turn.

6.1.1 Personal and Social Factors: We found evidence to suggest that residents could be reluctant to engage in physical activity, but when supported by enthusiastic and motivated staff, residents of care homes frequently became enthusiastic and engaged. While the population of care homes will vary, we found that when supported residents were willing to engage with physical activities if they led to appreciable improvements in their health and wellbeing, and if they enhanced opportunities for residents to meaningfully engage and interact with each other. While offering programmes such as exercise classes works well, we also found that there are numerous opportunities for movement to be more integrated throughout the life of the home. Movement works well when it is integrated into residents' daily routines, including small, habitual acts that can be used to encourage greater degrees of movement. Integrating movement into games or creative activities are also effective, alongside more traditional exercise-based interventions.

It is important to note that there are barriers and limitations to how far such approaches can and should be adopted. Each resident is different and will have different preferences for activity, as well as their own specific limits to activity, as determined both by their individual health state and their general wellbeing. Expecting residents to move where this conflicts with their health, for example by leading to increased pain would be inappropriate. Working with residents as individuals and taking a person-centred approach which seeks to identify and define what a resident is willing and able to do is required for such approaches to be effective. Some encouragement may be required for some residents, however where movements become part of peer-based activities, this frequently can provide the social support, and social expectations needed to encourage residents to engage. This will include providing different opportunities for people according to their preferences, providing a regular array of novel activities that will attract attention, as well as being cognisant of what individuals can and cannot manage in terms of their physical health.

The evidence from this project suggests that well trained, well resourced, well supported, enthusiastic and autonomous care staff are required in order to successfully foster cultures of physical activity.

Care staff generally are enthusiastic to support residents to be more active based both on the health and social benefits for residents and because it complements their ethos for person-centred approaches to care. However, care workers faced significant challenges to their ability to support residents to be more active, which were increasingly difficult to overcome given the intractable challenges facing the care home sector. These problems have also been exacerbated by the covid-19 pandemic, which stopped opportunities for physical activity outside the boundaries of the home during lockdown, and restricted them at other times. The pandemic has also has accelerated the well-established problems of poor staff recruitment and retention and poor pay across the social care workforce. Unsurprisingly, low staffing levels and high staff turnover lead to deteriorating workplace cultures that care staff found it increasingly difficult to compensate for. Such challenges will also impact on the degree of autonomy that care staff are willing or able to adopt.

Key to physical activities provision were activities coordinators, who were present in a care home held responsibility for developing and implementing physical activities. A key feature of the duties of activities coordinators was working with residents in individualised and person-centred ways to create personally meaningful activities for a person. This work often involved close work with residents to develop individualised activity schedules which drew on their personal biographies, life histories and personal preferences, which influenced their perceptions of how far activities were successful. In addition, they held responsibility for developing activity programmes, researching and developing activities often using creative means to do so, and recording what works, for whom and in what circumstances.

We also noted potential barriers which could hinder activities coordinators in their roles. Differences between the role profiles and duties of activities coordinators could mean that they were at risk of feeling isolated from wider care staff, particularly if their workloads meant that it was harder for activities co-ordinators to co-opt general care staff into the activities they ran. When this happened, activities coordinators described themselves as being at risk of being overwhelmed. This could also be exacerbated by a sense that they, while supported by their management, had to find resources to support their activities themselves. Where such resources existed, such as in the resources provided by Paths for All to all the deep dive care homes, then activities coordinators valued these resources. However, if such resources were not available, some found difficulty in finding tools and resources for their residents, and in some cases had to fundraise themselves for the resources they needed.

In general, activities coordinators were viewed as an essential element of the homes they were present within; activities coordinators were present in all four deep dive care homes, but they are not necessarily a feature of all care homes. Activities coordinators perform arguably the most important

role in influencing cultures of physical activity in care homes, however it is important that the development of such cultures do not fall solely on their shoulders. Just as one person cannot define a culture alone, placing sole responsibility for physical activity on this single staff member is unlikely to lead to success. Co-operation rather than conflict between activities coordinators and the wider social care workforce is required if they are to successfully introduce and grow physical activity in a care home space. Activities coordinator roles should therefore become a mainstream feature of all care homes. Specifically, we also recommend that resources and networks should be developed to support them in their role. Such networks should provide staff in these roles with resources about what works in care home activities (including physical activity), as well as enable staff in these roles to share knowledge and learning about these activities. Such a model may include the creation of local professional networks or a national representative body or sub group for activities co-ordinators,. Such a model should also include communities of practice where staff in these roles can share knowledge, resources and learning with each other.

6.1.2 Cultural factors: A range of cultural factors, associated with the values attached to care home practice have the potential to influence cultures of physical activity. An ethos in care practice which prioritised physical activity as a goal for residents and encouraged throughout the organisation but particularly when passed down from senior management within the home or the host organisation had significant impacts for staff in their roles. Adopting a 'whole home' approach to physical activity appeared to be key. In such approaches, physical activity was associated more with 'movement' than with 'exercise'. While exercise is an important feature, movement can and should be encouraged where possible throughout all staff's encounters with residents. Simple changes such as placing cups in a place where residents must reach to pick them up are examples of small acts that, when adopted throughout a home and its activities can encourage greater levels of movement. Importantly, such activities should come with the consent of residents and their families, and should not limit those residents who for whatever reason cannot be more active. However, such an approach requires engagement throughout the home from all staff members. Demonstrating autonomy and trust in care staff from senior management provided staff with a greater degree of empowerment, enabling them to use their own knowledge and skills more effectively. Providing such autonomy could also improve the confidence of staff to engage with their residents, which was particularly important in retaining staff, and in preparing new staff for care home life.

For residents, creating a culture of person-centredness, with residents treated as individuals and staff working with them to find activities that connected with their past biographies, hobbies or interests encouraged greater participation in movement. Giving residents time, listening to them and valuing them as a person, being flexible, and developing activities that connected to their interests were all

highlighted by residents as means to encourage and support movement and activity. Treating people as autonomous individuals able to exert their own agency was also important, by recognising what a person may or may not be able (or want) to do at any given time.

The largest challenge to developing a culture of movement and physical activity was unsurprisingly linked to the workforce pressures currently faced within the residential care sector. The cumulative impacts of a low paid, overworked workforce included low morale and a general lack of time to devote to activities that were not essential duties. The kind of institutional support detailed above can help in this regard, but we found evidence that these challenges were widespread, manifesting not least in our difficulties in recruiting care workers to participate in this research. Providing the leadership required to encourage a whole home approach will be more difficult when demotivated staff are left with little time to go beyond their main roles. In such cases promoting activity fell upon activities coordinators, however, commonly homes only had a single member of staff in this role, which limited what they could do, particularly in larger homes. In the face of such challenges, it was easy for physical activity to slip down the agenda. There were also rare cases where overworked staff could blame residents for not being active enough or being disinterested in their attempts to encourage them to engage in physical activity.

6.1.3 Environmental Factors. The environment encompasses the care home, spaces within it, its outdoor spaces (gardens or grounds) and the ability of residents and staff to access the local community surrounding the home. Care homes include a range of building types, and these building types have significant impact on the degree of physical activity that residents can engage in. Homes taking part in the study included both purpose-built facilities and converted or retrofitted buildings, often within what were unsuitable spaces that could not be easily changed. Most homes had undergone processes of equipping their homes to support physical activity but given the constraints in buildings the amount they could do was limited. Principles that emerged which positively influenced physical activity included having large spaces with enough room for multiple uses, which could also accommodate the various paraphernalia of care work (e.g., walkers, hoists, extra chairs or mobility scooters). Clear sight lines, with uncluttered corridors were also important – such corridors could also include frequent chairs or rest spots. Several homes, including all the deep dive homes, had included extra adaptations to support physical activity – in the deep dive homes these included physical activity signs provided by Paths for All. When accompanied by encouragement from staff members these signs worked well, but it was clear that staff also needed to continually support their use – e.g., prompting residents to do the exercises. Such changes therefore need to be ‘sold’ effectively to care staff so that they can provide the background work needed to support people to engage.

Having accessible outdoor spaces that included a range of stimulating activities was also an important trigger for activity, including a variety of activities and providing activities within the gardens gave people a reason to visit these spaces and spend time in them. Enabling residents to see and easily access the gardens through patio doors or large windows helped trigger interest in the environments. Several homes created specific spaces for activity, such as a vegetable plot, a chicken coop or a 'men's shed' which several male residents congregated in during the summer. However, the limitations of the local environment can have limiting factors, for example a slope or bank can deny access to grounds for many residents. Indeed, this was seen in two of the homes visited, which had extensive grounds or gardens, but many residents could not access without help. In these spaces the grounds could be a tantalising but largely inaccessible space. Having resources to spend on landscaping can be useful but are unlikely to be a priority in many homes, meaning that many residents could be denied access to outdoor space.

Finally, we saw strong evidence from two of the care homes of the beneficial impacts that homes having relationships with local community organisations can have in enabling physical activity beyond the home. One deep dive home had developed close relationships with the local authority and leisure trust, meaning residents could go to both swimming pools and cycling groups, providing a popular and stimulating activity for those residents. COVID-19 had impacted these activities, but at the time of fieldwork the care home was trying to re-establish these activities. Building such relationships requires work and creativity from the organisations involved but can lead to great benefits for residents. Furthermore, relationships between care homes and their local authorities should go beyond simply the care provided within the confines of the home. We saw evidence that failures to engage with the local infrastructure around a home – cracks or potholes in pavements, lack of adequate seating, cluttered street furniture or lack of community toilets all posed barriers which had significant limiting effects for care home residents that were greater than their impacts on the local community. Maintaining street infrastructures around care homes will be an important pre-requisite to enable residents to move beyond the home. Stereotypes may suggest that most residents wish to stay within the safety of the home, which can act as a brake on improving street infrastructure, however findings from this project suggest that where such stereotypes exist, they should be challenged.

6.2 Logic Model of Factors Influencing Cultures of Physical Activity in Care Homes

To summarise factors that influence physical activity within care homes, we have created the following logic model to map factors that are associated with promoting positive cultures of physical activity in care homes. The logic model maps out inputs for each project, their activities and short-, medium- and long-term outcomes associated with successful development of cultures of physical activity. The

logic model provides a framework for care homes to examine inputs and activities within the system, along potential expected outcomes against which performance within a care home can be evaluated.

LOGIC MODEL – Factors influencing Cultures of Physical Activity (PA) in Care Homes.

INPUTS	ACTIVITIES		OUTPUTS AND INDICATORS	OUTCOMES/GOALS		
What did we get?	***What do we do?***	***Who did we reach?***	***What indicators/outputs influence the activity***	***Short Term***	***Medium Term***	***Long Term***
Staffing Care Ethos/Models Staff knowledge & skills Management support Care policies Resources Local Infrastructure (e.g., local authorities, H&SCPs) Support networks	Activities of Daily Living Opportunities for movement Aerobic exercises Strength and balance exercises Physical activities in the home Physical activities outside the home Social Activities	Care home staff Activities Coordinators Managers Residents Family/friends Health and Social Care Organisations Local Authorities Social Organisations	***To identify what enables greater levels of PA***	***Improve resident health wellbeing & QoL***	***Improve resident health wellbeing & QoL***	***Improve resident health wellbeing & QoL***
			• Time, staffing, budget • Resources for staff • Defining roles and expectations of staff • Resources for activities • Activities coordinators appointed	Residents are moving more. More social contact between residents/staff	Better general health Increased mobility Improvements in Activities of Daily Living Increased social Engagement	Improved physical health Improved mental health Improved wellbeing/quality of life Reduced need for care
			To identify supports for cultural factors that enable PAS	***embedding cultures of PA in care homes***	***embedding cultures of PA in care homes***	***embedding cultures of PA in care homes***
			• Expectations of activity • Creativity • Range of activities • Support to normalise PA • Personalised activities • Resources for Activities Coordinators	Regular activities are available Staff are confident to support PA Residents spontaneously take part in PA	Better trained care staff Residents regularly engaged in PA in the home Residents regularly engaged in PA outside the home	Improved staffing/staff Improved staff retention Greater culture of movement/PA
			To identify environmental factors that enable PA	***Create PA enabling environments***	***Create PA enabling environments***	***Create PA enabling environments***
			• Suitable interior spaces • Suitable outdoor spaces • Own transport • Aids and adaptations • Appropriate design features • Clear wayfinding	Supports are available in the environment Mobility aids and adaptations are available	Better access to internal spaces Better access to external spaces Better access to communities around the home.	Greater use of indoor environments Greater use of outdoor environments Greater use of community spaces & facilities

ASSUMPTIONS AND GAPS	EXTERNAL FACTORS
Assumption that PA is focused on interventions rather than everyday movement; Focus on 'care' (protection, risk reduction) over autonomy/independence; Assumption that residents want to move	Reliance on external providers; resources/funding sources available to support staff with PA; Statutory bodies
FACILITATORS	**BARRIERS**
Ensuring choice of activities. Access to internal and external providers of activities; Staff training re PA. Resources & networks available to support PA; Focus on PA is a goal of home management; Person centred and personalised approaches to care are present in the home.; Resources – physical space, access to outdoors	Workforce shortages, high staff turnovers, lack of resources available in homes; General care home staff don't support PA; Poorly designed indoor spaces/retrofitted indoor space; Lack of access to external & community spaces; Lack of person-centred approach to PA

Resident outcomes, cultures of physical activity, and development of environments which can promote physical activity are used to organise our outcomes. Our logic model also maps some of the assumptions adopted when developing this model, external factors which may influence cultures of physical activity, and facilitators and barriers that are likely to influence the achievement of positive outcomes.

The logic model reflects the diverse range of inputs into the system. Our findings demonstrate that success will be determined not just by local factors within the home or its host organisation but are also related to external stakeholders providing local support (e.g., local authorities) as well as local and national policies which determine extent of resources available, and local knowledge, skills and ethos among staff. A 'whole home' approach in which all staff can support physical activity, and have the resources (time, aids and adaptions, knowledge) to do so is needed.

Physical activity itself encompasses a range of activities, and importantly involves both exercise and general movement within the home. Framing physical activity as exercise will lead to improvements in health, but homes should also move beyond set exercise interventions (e.g., strength and balance exercises) and seek to incorporate movement throughout the day-to-day life of the home. Reflecting a whole home focus, we identify stakeholders involved in promoting physical activity, which include both internal resources, community actors and wider organisations which will influence delivery of care within care homes.

Drawing on our qualitative and quantitative analysis, we identify a series of mechanisms and indicators which support positive change in terms of delivery of physical activity and development of cultures which promote greater physical activity. As noted, staffing, both in terms of providing sufficient resource (staffing levels, time) and appointment and support of staff in the specific role of activities coordinators. Indicators of cultures of increased activity include expectations of movement from residents among both residents and staff members themselves, with staff working to support the normalization of expectations of movement among residents. Giving staff autonomy, flexibility and creativity in relation to introducing greater levels of movement is also an important indicator. Professional resources and networks to support physical activity at local and national level would be useful in supporting activities coordinators in their roles. For example, knowledge banks of evidence-based activities, accessible resources to support staff to introduce physical activities, and methods of knowledge exchange would prove invaluable in supporting care homes to introduce physical activity. Targeting activities coordinators is likely to lead to most success.

Outcomes are associated with health benefits of physical activity, increased cultures of physical activity, and creation or adaptation of care home environments which enable greater levels of physical

activity. Improvements to resident health are likely to be gained through initial gains in aerobic and anaerobic fitness, improvements in balance and lower propensity for falls. Wider health gains are also expected, associated with improvements both in functional activities such as activities of daily living, as well as increased socialisation among residents through shared activities. When promoting cultures of physical activity, our outcomes predominantly focus on staff and improvements to staffing levels and retention. This is based on the idea that indicators of increased engagement in physical activity will arise from better staffing, allocation of resources to and increased morale among care home staff. In such cases care home staff in all roles are likely to be able to play a greater role in enhancing physical activity, with beneficial outcomes for residents. Finally environmental outcomes relate to improvements in the physical infrastructure and design of care home environments, which may involve both small- and large-scale changes. Physical activity should be considered throughout care home renovation or adaptation projects. While the care home housing stock will unavoidably constrain the ability of homes to completely adapt their environments, smaller changes will be useful. In addition, we also consider making external and local community environment more accessible as key outcomes, based on the assumption that care homes should be integrated into their communities rather than being isolated from them.

6.3 Recommendations

Based on the findings of this report, we make the following recommendations in relation to promoting cultures of increased physical activity in care homes.

Recommendations	Responsible partners
Ensure a 'whole home' approach is adopted, which includes both physical activity and general movement, including support for care home staff at all levels to be better placed and skilled to support care home residents to be physically active. This may require increased resources in relation to staff time and workloads. (Which may be difficult to achieve within the current social care climate)	Care home providers. Care home managers. Care home staff. Local Authorities. National Government
Appoint care home staff in a specific activities coordinator role, with responsibility regarding physical activity. The focus of staff in this role should involve creation of group and individual activity plans, coordinating with wider staff to engage residents with physical activity and movement. Existing activity coordinator roles should be expanded and provided with bespoke support for their role.	Care home providers

Create effective resources and knowledge exchange networks for care home staff regarding physical activity. Such resources should provide evidence bases for physical activity interventions where available, should create and pool resources about what is required to implement physical activity interventions effectively, and provide opportunities for staff involved in physical activity to engage in networking, information sharing and knowledge exchange. Creating such a network that is centred on activities coordinators may lead to greatest impact. Such networks should be co-produced and led by staff in this role.	Care home providers. Local authorities. Third sector bodies & professional associations (e.g., Scottish Care).
Promote personalised and person-centred approaches to physical activity, which tailors activities to needs, aspirations and abilities of individual residents. This includes working to develop individual activity plans, or simply ensuring staff know what works for each of their residents, and that they can support them to do this.	Care home staff. Care home providers.
Ensure training in person-centred approaches to physical activity which include the importance of movement and physical activity in induction and continuing professional development for care home staff. Such training should include information about the health benefits of physical activity and approaches regarding how to integrate physical activity throughout the life of the home.	Care home providers. Training organisations/providers
Ensure the importance of physical activity is included in strategic plans for care home providers, including specific targets, benchmarks and results to support their inclusion in care homes. This will include plans at the level of individual care homes, as well as in planning for care homes at local authority and national levels. This will also include partnership working across organisations involved in the delivery of social care services via care homes.	Care home providers Local authorities National Governments.
Engage with wider sectors involved in physical activity interventions, including partnership working to engage with physical activity in care homes. Evidence from our research suggested that partnerships with wider organisations involved in physical activities, including local authorities, leisure trusts or schools can lead to physical activity gains, and such collaborations should be encouraged.	Care home providers. Statutory sector bodies (e.g., local authorities, leisure trusts). Third sector organisations.

Ensure resources are available, including funding and effective knowledge exchange, to give care homes opportunities to enhance their outdoor spaces. Accessible outdoor spaces should be the norm within the care home sector, but local budgets combined with features of the existing environment can limit access. Creating funds to support large scale and landscaping work to enable access may be needed. Smaller interventions can also have powerful effects; creating funds through which care homes can secure funding for adaptations to gardens and grounds could be created. This may also involve working with the local authority to ensure access to and from care homes is accessible for residents.	Care home providers. Local Authorities, Charities. National Government
Create and share resources to support physical activity in outdoor environments which are easily accessible and widely available. Providing amenities, adaptations or resources to support engaging forms of movement within outdoor spaces can be a particularly useful tool in promoting increased physical activity.	Care home providers, local authorities. Third sector organisations

6.4 Limitations & Impact of COVID-19

It is important to note the limitations of this project. It is fair to say that the project was significantly impacted by the COVID-19 pandemic. The project began in January 2020, just before the commencement of the pandemic, and the pandemic caused significant delays in data collection activities, culminating with a wholesale re-design of the project. COVID-19 continues to pose huge challenges for the care home sector. As noted, many care homes continue to face periods of social distancing restrictions, including home closures, while perennial difficulties in recruiting and retaining staff have all been exacerbated by the pandemic, and before that by Brexit. During the initial stages of our fieldwork, all care homes were closed to visitors, meaning face to face fieldwork was impossible. We moved to online data collection activities, but this required significant project redesign. Even as lockdowns ceased and fieldwork became easier to arrange, many care homes were experiencing repeated closures and re-openings due to COVID-19 outbreaks, which caused delays in our ability to access care homes, particularly in relation to our deep dive workshops which had to be postponed until 2022.

Many of these challenges had significant impacts on the project. As a result, we had to significantly redesign both data collection activities and the original aims of the project. Our initial attempts to

contact staff within care homes to take part in interviews involved use of our professional networks, the support of NIHR ENRICH, who provide support for care homes, however this, as well as distribution of a national questionnaire survey, took a significantly greater amount of time than initially expected. Practically, this involved changing the project timetable and organisation of work packages, as well as a six-month project pause in early 2021 which coincided with the second period of lockdown. It also resulted in a reduction in our recruitment of participants for interview and in the questionnaire survey.

While we attempted to ensure that our evaluation reached a representative sample, including variations in geographical location (including Highlands and Islands communities), deprivation and types of care home, the wide variation of care home types means that we are unable to claim that our findings represent the entire care home sector. In addition, our deep dive care homes focused on care homes within Perth and Kinross Health and Social Care Partnership, who were involved in a project partnership with our partners in Paths for All. This meant that the deep dive care homes had all integrated physical activity into their care homes as part of their programme. These homes could be viewed as exemplars of good practice and our focus on these sites enabled us to gain powerful insights regarding factors that facilitate physical activity. For example, all four homes had well established activities coordinators working in the homes. While our research identified challenges to the integration of physical activity, this does mean that we may not have gained insights into the challenges that homes that were not able to integrate physical activity into their activities. Future deep dive workshops in care homes which struggled to implement physical activity would be useful in further elucidated the barriers present in the sector. The wider recruitment of care home staff was also a challenge which was exacerbated by COVID-19. Recruitment of care home staff is a well-established problem which can be attributed to the profile of research in these organisations, as well as the nature of the care home sector as highly fractured, with many small operators who can be difficult to reach.

6.5 Concluding comments

In investigating factors that influence the adoption of cultures of physical activity within care homes the results of the Sit Less Move More project will hopefully influence care homes in both providing more opportunities for physical activity, and in overcoming practical and systemic barriers that limit physical activity provision in their practice. Many of the recommendations highlighted in this report require significant changes in care home services, not least increasing resources from their current level. But many elements are achievable with relatively minor changes. Most importantly, many of our recommendations will give care homes the opportunity to build on their staff as their greatest resource available and will ultimately help them to provide care that is best for their residents.

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