ABSTRACT

Context: Managing falls in care homes requires an individualised approach for each resident with involvement of staff from care homes and the wider health and social care system. A large randomised controlled trial evaluating an individualised falls management programme (Action FALLS) demonstrated positive findings. However, the delivery of the key components of such programmes is still unclear. Greater understanding of the core components of falls management programmes is needed to support future implementation research.

Objective: To establish expert consensus on the core components of falls management for older care home residents.

Methods: A modified Nominal Group Technique included the development of a draft set of principles through a scoping review of the grey literature (published elsewhere) and a one-off online nominal group with care home staff and clinicians. Following the group, a single online survey was circulated to gain agreement on the final principles.

Findings: 10 participants (including healthcare professionals, care home managers, and care home staff) took part in the online nominal group. Thirty-five core principles of falls management were developed within the domains of theoretical approach, assessments, interventions, training, time points, wider systems, and governance and reporting.

Limitations: Since a small number of experts took part in this consensus process from a large and diverse care home sector, it is important to consider the principles as providing support for future implementation work.

Implications: These core principles provide a foundation to guide care homes in managing falls in care home residents. Further research is needed to develop implementation strategies and test the feasibility of embedding the principles in routine practice.
INTRODUCTION

Falls are a frightening experience, can cause serious injury and, in the most extreme circumstances, even loss of life. Care home residents are at high risk of falling (Department of Health, 2009), and the management of falls in care homes requires an individualised approach (Montero-Odasso et al., 2022). In addition, there are organisational and contextual factors relating to staff training and the individual care home environment such as the layout of the home which need to be considered. Care home ownership also influences the selection of falls management programmes, with some care homes using approaches that they have developed in-house or that have been dictated through a business chain, not following any published programmes (Logan et al., 2022). Falls management in care homes is therefore complex and variable.

Much of the literature reporting on randomised controlled trials for falls prevention programmes in care homes was of low quality and provided limited conclusions for care homes to draw from (Cameron et al., 2018). A large high-quality randomised controlled trial—the Falls in Care Homes (FinCH)—was conducted in 2018 and provided much-needed robust evidence to demonstrate that an individualised risk assessment and action plan can reduce falls for care home residents by 43% (Logan et al., 2021). The Action Falls programme evaluated in the FinCH trial delivered a whole home approach where all care home staff were offered training and support in delivering the programme; a more detailed intervention description has been published elsewhere (Logan et al., 2021). Implementation of this programme in UK care homes is now considered to be warranted.

The embedded process evaluation in the FinCH trial did however find variability in the practice and delivery of the programme, with care homes using the programme and components in different ways (Leighton et al., 2022). Wider contextual components, such as care home management systems, were independent of the programme but influenced its delivery. To support future implementation of the Action Falls programme, we firstly need to clarify the core components of falls management to help inform future implementation and measurement to establish if the principles of the programme have been embedded into practice. This approach supports ongoing refinement of the Action Falls programme in keeping with best practice for designing and evaluating complex interventions (Skivington et al., 2021).

Consensus methods provide a way to integrate evidence into pragmatic criteria for delivering a falls management programme in care homes. This is achieved by synthesising the best available evidence whilst seeking consensus and validation between key stakeholders or experts involved in falls management (Halcomb, 2008). By drawing together current evidence and expert insights, we hope to further our understanding of the core components needed for falls management in care homes and develop an accessible and engaging set of principles to guide future implementation research.

The aim of this research was to establish an expert consensus on the core components of falls management programmes for older residents living in UK care homes to guide future implementation research.

METHODS

An initial review of grey literature identified eight domains relating to areas that need to be considered in the management of falls (Robinson et al., 2022). These domains formed a set of draft principles which were developed by the research team (Supplementary File 1). Within the eight domains, six areas of conflict were identified relating to: whether falls were preventable; how to balance risk and activity; the specialist skills needed to assess and manage falls; how technology can support falls management; how continual review and assessment can be encouraged; and what is the role of supervision within falls management. These six areas formed the basis for the consensus process presented here.

A modified online Nominal Group Technique (McMillan, King & Tully, 2016) was undertaken involving three stages. Nominal Group Technique was selected over other consensus methods to support participation of busy health and social care stakeholders, as it can be completed over a short time frame. It also enables discussion of variation and practicalities of implementing falls management approaches.

STAGE ONE: ONLINE CONSENSUS GROUP

An online group was convened through a live video conference and lasted two hours. Prior to the group, participants were sent via e-mail an overview of the group process, the draft principles from the scoping review (Supplementary File 1), and the key questions for discussion. This was to allow participants to consider their views and responses before the discussion and maximise the time within the meeting. The key questions discussed at the group meeting were based on the areas of conflict from the scoping review as follows:

1. Are all falls for care home residents preventable?
2. How can falls management programmes balance supporting residents to be active alongside managing potential risks?
3. What specialist skills and training is needed to complete a falls assessment for a care home resident?
4. How can technology help in managing falls for care home residents?
5. How can individualised falls assessments and action plans be continually reviewed?
6. What role does supervision of residents play in the management of falls?

The group discussion was carried out on MS Teams and digitally recorded. It was facilitated by three members of the research team; one led the facilitation of the group, one managed the time and movement between the stages, and one captured the group discussion on a digital flipchart using the Padlet software (www.padlet.com). After the group, the key themes for each of the questions from the flipchart text and audio recording were identified using thematic analysis through discussion with the research team. Principles were amended based on the key themes and new principles generated.

STAGE TWO: ONLINE SURVEY

Due to the time pressures on the participants, the final stage of agreeing the principles was conducted after the online group meeting took place. This was done by a short online survey using JISC Online Surveys (example in Supplementary File 4). Participants were asked to state whether they agreed or disagreed with the principle, and space was provided for free text comments for both responses.

STAGE THREE: DISCUSSION AND AGREEMENT ON THE FINAL PRINCIPLES

Principles were revised based on the free text comments made in the survey and emailed to participants for any final views. An online group discussion meeting with the same participants as the online Nominal group was held through a live video conference to discuss final amendments to the wording of the principles. The agreed final principles were emailed to all participants.

Participants and recruitment

Healthcare professionals, care home managers, and care home staff involved in the management of falls in England were invited to take part through professional bodies (e.g., Chartered Society of Physiotherapy) and existing care home networks (e.g., Enabling Research in Care Homes). A range of networks and professional groups were approached, with the aim of recruiting a multi-disciplinary perspective. To allow for participation from all group members and based on previous Nominal Groups, a sample of 8–12 participants was considered appropriate (Varga-Atkins, 2011).

All participants were provided with a participant information sheet, given the opportunity to ask any questions, and provided verbal consent before the online group process. All participants were asked to provide a short verbal summary of their expertise in falls management in care homes that was recorded by the researcher. Ethical approval was provided by the University of Nottingham Medical School [Reference FMHA-173-0221- 25th February 2021].

RESULTS

STAGE ONE: ONLINE CONSENSUS GROUP DISCUSSION

Ten participants attended the online consensus group. This included four physiotherapists, one occupational therapist, two care home managers, and three care home clinical leads who were registered nurses. Participants were located across England, including London, Derby, Nottingham, and Lincolnshire.

The data captured on the online flipchart generated from the Padlet software during the group discussion within the six key areas of discussion is presented in Supplementary File 2.

The key themes identified from the group discussion and online flipchart are outlined below.

- Clear, non-judgemental terminology with a preference for falls management rather than falls prevention, and a need for clarity about what constitutes a falls risk assessment
- Promoting movement and independence through a balanced approach to managing both the risk of inactivity and the risk of falls
- Utilising and co-ordinating available skills, including those within the care home and specialist services external to the care home
- Analysis skills are required to manage falls in care homes, and tools that grade individuals as low, medium, or high risk of falls should not be relied upon
- Technology and supervision as an adjunct should be used to support falls management, but should not be the only measure and must be person-centred
- Regular review if any changes and monthly using auditing, moving away from a focus on hospital admissions triggering review due to recent changes to healthcare delivery/policy focus on admission avoidance focus

Seven new principles were developed through discussion by the research team following the online discussion group based on the key themes identified above (Supplementary File 3). These new principles were added to the original draft principles for further participant feedback.

STAGE TWO: ONLINE SURVEY

Thirty-eight principles were presented in an online survey. Nine out of the ten participants completed the survey.
Fourteen principles had 100% agreement with no open text comments, eleven principles had 100% agreement with open text comments suggesting minor wording changes, ten principles had 89% agreement with open text comments suggesting wording changes, and three principles had 78% agreement with open text comment suggesting wording changes (Supplementary file 5).

STAGE THREE: FINAL PRINCIPLES
The 38 principles were revised into 35 principles based on the open text wording suggestions and emailed to all participants. Some principles were combined based on participant feedback. “A falls action plan should be agreed in collaboration with the resident” was combined with “The approach to minimising falls risks should be based on the individual preferences and wishes of the resident”, as both statements related to a shared decision-making approach. “A falls assessment should be reviewed monthly after a fall, after a hospital admission, or when anything changes” was merged with “a falls assessment and action plan should be completed after a hospital admission” due to their similarity. “A clear post fall guideline should be in place to identify who should carry out the clinical assessment and action plan” was combined with “A clear policy outlining when to call an ambulance” into one statement about accessing urgent clinical support. The domains of reporting and governance were combined based on participant feedback. An online discussion group was held where principles were revised by participants and re-circulated by email for any final comments. A summary of the amendments, additional principles, and removed principles undertaken throughout the process is presented in Supplementary Information File 5. The final principles aligned to the domains are presented in Table 1.

DISCUSSION
Through the completion of a scoping review and an expert consensus group process, 35 principles of falls management were developed. These were grouped into the domains of overarching approach (7 principles), assessments (4 principles), interventions (8 principles), training (5 principles), time points (2 principles), involvement of the wider system (2 principles), and governance and reporting (7 principles).

STRENGTHS AND LIMITATIONS
The insights of care home staff and health care professionals facilitated the development of principles that may be applicable to care homes. The expert group’s suggestions ensured that the language used was acceptable and accessible to care home staff.

Due to Covid-19 restrictions, a modified technique was necessitated, preventing face-to-face meetings. Despite the extreme pressures faced by care homes and services during the Covid-19 pandemic, most participants attended the workshop and completed the survey. The ease of participating in the study using online methods may have contributed to this. The researcher also invested time in building relationships with the participants prior to the online consensus group meeting, which may have facilitated engagement in the research process.

Facilitating discussion and interaction between participants online was difficult and may have limited the depth of discussion about key principles. However, this may have enabled participants to feel more confident to voice their opinion without fear of being challenged by others and may have prevented more vocal participants having greater influence over the development of the principles. The consensus process was modified to run over one session to support the participation of busy care home staff; however, this may have limited the depth of discussions held.

Another limitation was that care home representation in the sample was mainly through individuals in management roles, with only one member of direct care staff taking part in the online group consensus process. Thus, the principles may not reflect the perspectives of care staff involved in the day-to-day delivery of falls management programmes. The scope of the sample included in the consensus process was also small and may not reflect the views of the large and diverse care home sector. It is therefore important to consider the principles as providing support for future implementation work, and not as a definitive list of principles.

WIDER CONTEXT
The principles developed in this consensus line up with current national guidance within England on the prevention and management of falls for older people, which outlines the need for a multifactorial risk assessment and intervention (NICE, 2013). This guidance includes all adults 65 years and over with limited evidence to support delivery in care home settings. However, the guidance is currently being updated, and future guidance will hopefully be underpinned by evidence derived directly from care home settings. The principles align with the World Guidelines for Falls Prevention and Management for Older Adults in their advocacy for person-centred, multidisciplinary falls prevention and post-falls management (Montero-Odasso et al., 2022). A notable difference is that these international guidelines recommend that all older adults living in care homes be considered at high risk of falls. Although this approach was not explicitly suggested during the consensus process, there is congruence with consensus group
## Domain (Number of Principles) | Statement
---|---
**Approach (7)** | The approach should focus on management of risk and measures to mitigate risk for falls and falls-related injuries. Minimising the risk of falls requires a shared decision-making approach with the wishes of the resident central, and involvement of family and carers is key, especially if a best interest decision is required. Falling and the risk of falling is an emotive subject and staff, residents and family members should be supported in managing falls. The approach to learning from falls in a care home setting should be based on a learning culture. A proactive approach should be adopted that encourages action to mitigate a falls event before it has occurred. Supporting falls management should be done in collaboration with health and social services and professionals as required. Falls management programmes should be based on the best available evidence and updated accordingly.

### Assessment (4)

A falls assessment should be multifactorial and include an assessment of the following risk factors:  
- Fear of falling  
- Mood  
- Lighting  
- Nutrition and fluid intake  
- Medication  
- Footwear and footcare  
- Medical History  
- Sensory needs (vision and hearing)  
- Mobility and balance  
- History of falls and fractures  
- Bone health  
- Continence  
- Cognition  
- Environment (including technology)  

A falls assessment should clearly link with other care plans such as moving and handling. Positive risk assessments should be taken, where the balance of risk of falls is considered against the risk of inactivity, losing independence and poorer quality of life. Falls assessments should be completed with the resident and someone who knows them well.

### Interventions (8)

Falls interventions should be multifactorial based on individual needs and address the following:  
- Fear of falling  
- Mood  
- Lighting  
- Nutrition and fluid intake  
- Medication  
- Footwear and footcare  
- Medical History  
- Sensory needs (vision and hearing)  
- Mobility and balance  
- History of falls and fractures  
- Bone health  
- Continence  
- Cognition  
- Environment (including technology)  

Actions to reduce falls should be put in place as soon as practicably possible after they are identified. In collaboration with the resident, an individualised and targeted action plan should be developed following the multifactorial assessment, supporting the resident and their family to participate as much as possible. For every relevant risk factor identified, there should be a targeted intervention which aims to reduce or manage the risk. Falls management should consider how the residents mental well-being is supported. A falls programme should promote activity and support residents to move. Supervision may be appropriate alongside other measures, if agreed with residents. Technology, such as sensor mats, may be appropriate based on individual resident need but shouldn’t be used to replace care home staff roles.

(Contd.)
discussions regarding the dangers of reliance on tools that grade falls risk when completing assessments.

The FinCH trial (Logan et al., 2021) demonstrated that a proactive falls management programme that included training care staff in delivering an individualised assessment with targeted intervention reduced falls for care home residents. The programme meets the majority of the principles developed in this consensus process. However, principles in the Governance and Reporting domain in this consensus relate to organisational policies and practices to support prevention, post-falls management, and quality improvement. These principles do not wholly sit within the core components of the Action Falls programme, and provide further guidance to support care home organisations with managing falls. Further exploration of governance and reporting practices for managing falls is warranted to support future implementation and evaluation efforts in care home settings. Further work is needed to support homes to record, describe, and measure their falls management to ensure continual improvement and delivery of this best practice. Care homes support residents with complex health and social care needs; however, they do not have the same support as NHS staff with developing skills in evidence-based practice, service improvement, and reviewing and understanding data. The National Audit of Inpatient Falls (NAIF) (Royal College of Physicians) provides a national mechanism for reporting and audit of falls in inpatient settings; however, care homes are not inpatient settings and are therefore not included in this. Approaches to developing quality improvement and assurance processes are less well-established within the care home sector (Chadborn et al., 2020). A recent feasibility exercise by the NAIF identified that further work is needed to agreed standards and metrics relevant to the care home sector, in addition to developing appropriate learning resource to support service improvement and training in improvement methods. It is recognised that the approaches used in inpatient settings cannot simply be transferred to the care home settings due to the different organisational structures, staff skills and knowledge and the complexity of the number of interactions with multiple healthcare providers (NHS England, 2023). There is a growing understanding of factors influencing the implementation and collaboration with care homes, which include care home-specific approaches to context assessment (Bunn et al., 2020), recognising the expertise needed to lead

<table>
<thead>
<tr>
<th>DOMAIN (NUMBER OF PRINCIPLES)</th>
<th>STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training (5)</td>
<td>Being aware of how and why a resident may fall should involve everyone in the care home</td>
</tr>
<tr>
<td></td>
<td>Falls management competencies should be in place for all members of staff and be relevant to their role</td>
</tr>
<tr>
<td></td>
<td>All falls related training accessed or provided by the care home should be based on the best available evidence and should be recorded</td>
</tr>
<tr>
<td></td>
<td>Training approaches should be tailored to individual needs of staff and include practical tips and examples</td>
</tr>
<tr>
<td></td>
<td>Information about falls management should be available to residents and relatives.</td>
</tr>
<tr>
<td>Time Points (2)</td>
<td>A falls assessment and action plan should be completed on admission to the care home</td>
</tr>
<tr>
<td></td>
<td>A falls assessment and action plan should be reviewed monthly and after a fall, after a hospital admission or when anything changes</td>
</tr>
<tr>
<td>Involvement of wider system (2)</td>
<td>All care homes should have access to specialist falls services or expertise and refer on as required.</td>
</tr>
<tr>
<td></td>
<td>An analysis of the cause of the fall should be carried out and any potential risk identified, and strategies put in place to minimise future risk and injury</td>
</tr>
<tr>
<td>Governance and reporting (7)</td>
<td>All falls (witness and unwitnessed) should be reported and recorded</td>
</tr>
<tr>
<td></td>
<td>All staff should be aware of the definition of a fall, for example the WHO definition: “A fall is defined as an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.”</td>
</tr>
<tr>
<td></td>
<td>There should be a process for continual quality improvement relating to falls management</td>
</tr>
<tr>
<td></td>
<td>A clear policy outlining the process for assessing a resident following a fall and how to safely move a resident from the floor</td>
</tr>
<tr>
<td></td>
<td>There should be a clear policy outlining when to seek urgent clinical support, such as an ambulance or a rapid response team</td>
</tr>
<tr>
<td></td>
<td>A clear instruction on the process for reporting and recording falls should be in place for each care home role</td>
</tr>
<tr>
<td></td>
<td>A policy on falls management should be in place in every care home outlining fall prevention individual action plans, what to do when a resident falls and the role and responsibilities of each staffing role</td>
</tr>
</tbody>
</table>

Table 1 Final principles.
collaboration (Devi et al., 2021), supporting collaborative networks between healthcare and care home staff (Devi et al., 2020), and taking account of other commitments of the care home (Bunn et al., 2020). The approach, resources, and implementation of any agreed metrics and standards need to be developed in collaboration with care homes, commissioners, and the Care Quality Commission to ensure it is appropriate to this social care setting.

The importance of promoting movement and supporting resident choice in the management of falls was highlighted by the consensus group participants with the need to adopt a positive approach to risk assessment. This is supported in literature exploring the views of residents who considered a “good care home life” to include being able to maintain their values, as well as having autonomy and choice (Rijnaard et al., 2016). Developing a positive risk culture is however complex and health and social care staff can fear negative perceptions and implications from the public and media (Croft, 2017). Developing a positive risk culture that encourages learning with a shift away from the blame culture aligns to the consensus group discussion around using non-judgemental terminology. This was particularly highlighted with using the term “falls management” instead of “falls prevention” to reflect participant views of the need to manage expectations that all falls cannot be prevented. However, the risk and potential for injury can be reduced. Proactively identifying risks and doing something to reduce these risks was strongly advocated by participants reflecting the need to not wait until a fall has occurred to act. This reflects a fine balance in using appropriate terminology to support a positive risk-taking learning culture that still emphasises the need to be proactive in considering the risk of falls before they happen.

The development of these core principles has provided a foundation to support care home staff in considering how to manage falls with care home residents. Further research is needed to develop implementation strategies and test the feasibility of embedding the principles in routine practice. The contextual challenges of delivering falls management in line with these principles need to be explored from the care home perspective to help develop appropriate implementation strategies.

**CONCLUSIONS**

This consensus process has developed a core set of principles that care home staff can use as the basis for which to consider the management of falls. The principles provide a basis for which to explore future implementation of falls management programmes in care homes.

**ADDITIONAL FILES**

The additional files for this article can be found as follows:

- **Supplementary File 1.** Draft principles from the scoping review. DOI: https://doi.org/10.31389/jltc.170.s1
- **Supplementary File 2.** Sample of online survey questions. DOI: https://doi.org/10.31389/jltc.170.s2
- **Supplementary File 3.** Online flipchart results managed through Padlet. DOI: https://doi.org/10.31389/jltc.170.s3
- **Supplementary File 4.** New principles developed from consensus discussion. DOI: https://doi.org/10.31389/jltc.170.s4
- **Supplementary File 5.** Summary of the amendments, new and removed principles through the process. DOI: https://doi.org/10.31389/jltc.170.s5

**ETHICS AND CONSENT**

The University of Nottingham Medical School approved this study [Reference FMHA-173-0221- 25th February 2021].

Data accessibility statement The data captured from the online flipchart padlet are presented in Supplementary File Two.

**ACKNOWLEDGEMENTS**

Thank you to the care home staff and clinicians who took part in the consensus process. Thank you to the Enabling Research in Care Home Network East Midlands and the professional bodies who supported recruitment.

**FUNDING INFORMATION**

This report is independent research supported by the National Institute for Health Research NIHR Advanced Fellowship, Dr Katharine Robinson, NIHR300115. The views expressed in this publication are those of the author(s) and not necessarily those of the NHS, the National Institute for Health Research or the Department of Health and Social Care.

**COMPETING INTERESTS**

PL was the Chief Investigator of the Falls in Care Homes Research study; ALG was a co-applicant; and KR, FA, JG, and JD were researchers.
AUTHOR CONTRIBUTIONS

All authors supported the development of the study scope and purpose; KR, PL, ALG, and ST contributed significantly to writing of the study protocol; KR, FHB, and AK facilitated the online consensus group; all authors contributed to the analysis, data synthesis, and writing of this manuscript; all authors approved the final version of the manuscript.

AUTHOR AFFILIATIONS

Katie R. Robinson  
Research and Innovation, Nottingham University Hospitals NHS Trust, UK; Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK

Frances Hallam  
Research and Innovation, Nottingham University Hospitals NHS Trust, UK; Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK

Jane C. Horne  
Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK

Frances Allen  
Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK

Janet Darby  
Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK

Alice Kilby  
Nottinghamshire Healthcare NHS Foundation Trust, UK

Stephen Timmons  
Centre for Health Innovation, Leadership and Learning (CHILL), Nottingham University Business School, University of Nottingham, UK

Adam Gordon  
Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK; NIHR Applied Research Collaboration-East Midlands (ARC-EM), Nottingham, UK

Philippa Logan  
Academic Unit of Injury Recovery and Inflammation Sciences (IRIS), School of Medicine, University of Nottingham, Nottingham, UK; Nottingham CityCare Partnership, UK

REFERENCES


Cameron, ID, et al. 2018. Interventions for preventing falls in older people in care facilities and hospitals. Cochrane Database of Systematic Reviews, 7(9): CD005465. DOI: https://doi.org/10.1002/14651858.CD005465.pub4


