The Perceptions and Rehabilitation Experience of Older People after Falling in Hospital

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EXPERIENCES OF OLDER PEOPLE FALLING IN HOSPITAL

Abstract

Purpose—Falls are a major cause of disability and mortality due to injury. To reduce falls rates and improve health outcomes it is important to design services based on patient experience and engagement. This study aimed to explore the experiences of older patients who fell during their hospital stay.

Design—Five patients from two rehabilitation wards in the UK participated in this qualitative study.

Methods—Semi-structured interviews, incident reports and medical records provided information about each fall. Thematic, discourse and descriptive analysis were used to analyze data.

Findings—The data demonstrated how a fall impacted on patients’ experience of rehabilitation and resulted in changes to mobility, self-confidence, management of falls risk, avoidance of daily activities and increased assistance from others.

Conclusions—Falling in hospital can influence patients’ ability to reach their potential of an optimal level of functioning.

Clinical Relevance—There is a need to place an equal and mutual understanding on the physical, psychological and social impact of falling to reduce falls and improve functional outcomes.

Keywords: falls, rehabilitation, hospital
Active engagement with patients in their rehabilitation, including the development and implementation of falls prevention strategies, is an essential factor underpinning more effective, safer care and positive experiences.

Any short- or long-term changes to a care plan following a fall should be discussed thoroughly between staff and patients, particularly regarding any issues related to the balance of risk, independence and safety.

Other than the physical consequences of falling, patients can experience emotional distress, loss of confidence, increased length of stay, functional decline and an increased likelihood of being discharged to long-term care.

It is important to consider and learn from the psychological and social consequences of falling in equal measure to physical factors.
Despite efforts to prevent falls from occurring in hospitals, falls remain a major cause of disability and mortality due to injury in people over 75 years (Host, Hendriksen, & Borup, 2011). Hospital patients, particularly those in a rehabilitation setting, are at higher risk of falling than those in the general population (Rosario, Kaplan, Khonsari, & Patterson, 2014). Patients can become less independent in hospital due to frailty, co-morbidities or other acute events such as stroke and infections, and therefore require more one-to-one care for safety and to regain independence (National Patient Safety Agency [NPSA], 2007). Hospital falls have significant financial implications and are associated with an increased length of stay, poorer rehabilitation outcomes and a higher risk of institutionalization (Hill et al., 2009).

An individual who falls at least once is at higher risk of experiencing further falls and falls-related injuries (Tariq, Kloseck, Crilly, Gutmanis, & Gibson, 2013). Patients with cognitive deficits are also likely to be recurrent fallers in hospital (Vassallo, Mallela, Williams, Kwan, Allen, & Sharma, 2009). Tariq, Kloseck, Crilly, Gutmanis, & Gibson (2013) suggest that age is significantly associated with an increased risk of repeated falls. Therefore, recurrent fallers form an important group to target more specific preventative interventions within a rehabilitation setting.

Other than the physical consequences of falling, patients can experience emotional distress, loss of confidence and low self-efficacy (Rosario, Kaplan, Khonsari, & Patterson, 2014; Boltz, Resnick, Capezuti, & Shuluk, 2013). Fear of falling is a common psychological consequence following a fall and can result in activity restriction and immobility that is more self-imposed than necessarily due to actual physical capability (Ben Natan, Heyman, & Ben Israel, 2014). A pattern of fear-related avoidance of activities and subsequent functional decline can lead to an increased risk of falls (Delbaere, Crombez, Vanderstraeten, Willems, &
A limiting factor for the effectiveness of fall prevention strategies may be an insufficient understanding of older people’s views, such as the impact of any injuries sustained and their thoughts on methods to prevent falls (Carroll, Dykes, & Hurley, 2010). To reduce falls rates and improve health outcomes it is important to design services based on patient experience and engagement, and to develop an understanding of each patient as an individual (National Institute for Health and Care Excellence [NICE], 2015a; Tzeng & Yin, 2014).

This paper reports on a study, set up in response to the concerns of one National Health Service (NHS) Trust in the United Kingdom (UK) regarding in-patient fall rates. It explored the experience of five patients who had fallen during their stay on two rehabilitation wards in a general hospital in the north-east of England, and the impact of the fall(s) on their individual rehabilitation journeys.

Method

Study Design and Participants

This exploratory study collected qualitative data to delve more deeply into participants' perceptions and reflective experiences of each fall. Participants had been admitted into hospital for rehabilitation either from home or transferred from an acute ward. They were considered to have potential to improve their current level of functioning and social circumstances following an assessment by a health professional of their personal strengths such as motivation, cognitive function and the ability to make measured functional gains (Bok, Pierce, Gies, & Steiner, 2016; New, 2009).
Patients admitted to the two wards at the time of the study initially formed a convenience sample (Babbie, 2002). Throughout the duration of the study a total of 58 patients were admitted onto the two wards; 27 of these 58 patients agreed to participate but only five fell and therefore became eligible to be interviewed (see Table 1). Participants were also interviewed after any further falls.

Eligibility Criteria

Eligibility criteria were kept to a minimum, with the only criteria being the ability to verbally communicate in English, and a score above 20 on the Mini Mental State Examination [MMSE] (Jensen et al., 2003), as documented in the medical notes, to indicate an appropriate level of cognition to understand the aims of the research and their degree of involvement. This was important as participants in this study were considered to be vulnerable adults due to their varying degrees of disability, frailty, cognition and chronic illness (co-morbidities).

Setting and Duration of Data Collection

The study was performed over a four month summer period on two rehabilitation wards at a large general hospital in England (UK). Both wards were similar in terms of patient demographics, numbers of patients, falls rates, length of stay, staffing levels, interventions provided and workforce planning (see Table 2).

Data Collection

The semi-structured interview schedule questions were developed through a consultation and pilot exercise with three older people who had fallen during their hospital stay. Their feedback added greater clarity and definition to the questions asked, such as ensuring the language was appropriate.
All interviews were conducted by the primary author [NT] within 48 hours of each participant’s fall. A secluded meeting room on the ward was used to minimize distractions and to provide a more private environment for participants to disclose personal and sensitive information. Responses were recorded using written notes. Interviews consisted of twenty questions and were a mix of seven initial and thirteen additional questions (see Table 3). Participants were asked all twenty questions after their first fall (i.e. their first interview). If a participant fell a second time they were interviewed again but only asked the thirteen additional questions.

To improve rigor and consistency in data collection a standardized form was used to collect data from each of the faller’s incident reports. Additional data, such as number of co-morbidities, number of medications and primary reason for admission etc., were also obtained from medical notes and added to the form. The combined data from these two resources formed the basis of Table 1.

Data Analysis

Discourse analysis focused on the content and also the intent of the language used by participants (Robson, 2011). It was used to explore the individual responses of participants and examples are presented in the ‘Results’ section of this paper. Thematic analysis was used to identify themes, concepts and context-specific issues of daily life on the wards from the interview data (Clemson, Cusick, & Fozzard, 1999). Descriptive analysis was used to analyze data obtained from the medical notes and incident report forms, such as time, location and degree of injury (see Table 1). All data were analyzed by the principal investigator, with emerging themes developed and validated during research team meetings.
Ethical Considerations

Following approval from a local Research Ethics Sub-Committee and the NHS research site’s Research Management and Governance Committee, the proposal was submitted through the NHS Integrated Research Application System (IRAS) system and approved by a local research ethics committee.

It was essential that appropriate steps were taken to prevent risk of harm and to protect participants by reinforcing the right to withdraw; the opportunity to access emotional support was offered; and interviews could have been stopped or postponed if required. It was imperative that their identities remained anonymous and the information was treated with the utmost of confidentiality. Participants were required to provide written consent for their involvement and this was only accepted if they demonstrated an understanding of the nature and design of the study. Evidence for this was the completion of a written consent form attached to the information sheet as well as documenting their consent at each interview.

Results

Several over-arching themes emerged from the data: Causes of falling; changes to mobility; changes in confidence, self-efficacy and attitude toward rehabilitation; and the role of staff. These themes were extrapolated from the patient interviews and were supported by data from the incident reports and medical notes. In particular, the documented circumstances surrounding each fall, such as injuries sustained, the location of each fall (e.g. bathroom, bedroom etc.), medications associated with a higher risk of falling and pre-existing co-morbidities, have been used to support any potential patterns related to the above themes. All patients’ names are pseudonyms to maintain anonymity.
Causes of Falling

A loss of balance was reported to be the main reason why participants fell. This loss of balance was experienced during functional activities, such as walking to the dining room (Margaret: “I was walking to the dining room and seemed to lose my balance”), standing up from the toilet (Pat: “I stood up from the toilet…lost my balance…and fell to the floor”) or washing/dressing (Joan: “I was standing up, getting dressed…I lost balance and fell between the two beds”; David: “I was washing myself, standing at the sink despite being told not to, but I waited too long…lost my balance”). These activities were largely performed alone as participants either felt safe enough to perform the task by themselves or they had requested assistance from staff (e.g. by pressing the call-bell) but did not – or could not out of urgency – wait for help to arrive.

Falling was perceived to be ‘mechanical’ in nature, such as tripping, losing balance/control of their body or related to lower limb weakness. There was a belief shared between the participants that the loss of balance formed the basis of their understanding of how a fall was defined as well as being a fundamental cause of the fall itself. This was documented in the incident reports as being the mechanism of each fall and relied upon the personal account of each patient as well as eyewitness reports from staff present during two of the falls.

Contributing factors to participants’ loss of balance were evident in data obtained from their falls risk assessments, co-morbidities and reasons for admission. All participants had pre-existing medical conditions and multiple medications that have been associated with balance impairments. Every participant had also been identified as being unsteady in their falls risk assessment performed at admission.
Changes to Mobility

Patients had already been identified as experiencing difficulties with their mobility in their falls risk assessments (i.e. being unsteady) and reasons for admission. For example, both Margaret and David were admitted with reduced mobility following a urinary tract infection and fall, respectively. The other three participants also demonstrated pre-admission signs of impaired mobility as they struggled to function safely at home.

Each participant reported falling whilst mobilizing or performing a functional activity, as documented in the incident reports. Only one fall resulted in a minor (soft tissue) injury; injurious falls and any clear association with changes in mobility did not feature in participants’ responses.

Other than the reported loss of balance, the most significant impact on mobility occurred after each fall, whereby participants’ mobility status changed in two key ways. The first was advice given to patients from ward staff to mobilize with supervision or physical assistance rather than by themselves (Margaret: “I walk with supervision from the staff, especially when I’m turning around”; David: “I walk…with supervision…and with the help of staff”). Considering four out of the five participants were independently mobile (with aids) prior to admission and before falling, this was a substantial change to their walking and daily function. Patients described feeling discouraged or disempowered to mobilize, as the perceived risk of falling was reduced by the presence of staff (Pat: “I don’t do anything…I’m not allowed to transfer myself. This makes me feel more secure”; Margaret: “I no longer want to take any chances…it’s important to have someone in charge of my actions…I did what I needed to do…despite being told not to”). Only Ron was accompanied by ward staff when he fell as he had been identified early on admission (i.e. pre-fall) to require a walker (walking frame) and assistance due to deterioration in his mobility.
The second major change in participants’ mobility was the provision of alternative walking aids, though sometimes without a perceived adequate explanation as to why a patient had to use an unfamiliar item of equipment (Pat: “staff have changed my usual walking aid and I don’t know why…I was mobile at home with my [cane] but now this has been changed to a [walker]”). The change in mobility aid was accepted by some of the participants, though not all as Ron believed his mobility had deteriorated beyond the use of his walker (“my [walker] is no longer suitable – I need a wheelchair”). However, despite the change in walking aids, balance was still considered to be a significant factor for reduced mobility.

Changes in Confidence, Self-efficacy and Attitude Toward Rehabilitation

Changes to participants’ mobility were closely associated with feelings of reduced confidence, low self-efficacy and less positive attitudes toward their rehabilitation. Participants reported not walking as frequently or as far in comparison to pre-fall levels of mobility. Fear of falling was commonly reported to be a significant factor for changes to participants’ behavior. For example, Pat reported feeling “frightened to go to the toilet in case I fall”, and Margaret altered her evening routine as she felt this was a way of minimizing the risk of falling again (“I don’t stay up late to watch television anymore as I get shaky…I don’t take chances now compared to my previous normal behavior”).

Reduced confidence, fear of falling and low self-efficacy meant that functional activities were usually performed more cautiously following a fall and some activities were no longer pursued if the risk of falling was perceived to be high. This was commonly associated with requiring additional assistance from ward staff to achieve the task safely (Margaret: “I perhaps did more than what I was capable of”; Pat: “I can only walk with my [walker] now and I depend on more people”). Three participants clearly remarked how falling affected their confidence and how they generally felt dissatisfied with their post-fall level of
functioning (Pat: “I feel more unnerved now, more anxious. I try to be more careful”; Joan: “falling has really changed my confidence...I wonder if this is normal for me now”; Margaret: “I was overconfident that nothing would happen...I feel my confidence has been most affected”).

The data revealed differences in participants’ attitudes toward how falling impacted on their progress and rehabilitation. Some responses suggested a stoical, enduring outlook that portrayed a sense of wanting to move forward with therapy and to prevent further falls (Joan: “there has been no effect on my rehabilitation...I want to carry on as I was before this happened”; David: “the fall didn’t affect my daily life...I just got on with things”). In contrast, other responses were suggestive of feelings of low self-efficacy and a stronger focus on applying blame to the fall (Pat: “if the nurses were present I wouldn’t have fallen”; Margaret: “this fall was stupid, it was my own fault...if I had more sense”). Participants expressed strong views with regards to blame, low self-efficacy, and increased assistance from staff, particularly if they fell a second time.

Role of Staff

Managing risk and safety were fundamental priorities of the wards, and it was important for patients to feel safe when mobilizing (Margaret: “it’s important to have someone in charge of my actions”). Participants reported being advised by staff to request assistance by pressing the call-bell. Patients were also provided with walking aids and offered physical assistance from staff to support their recovery and on-going rehabilitation. These measures became increasingly important if a patient was deemed to be at a higher risk of falling. However, an issue highlighted by Pat was the alteration to her mobility made by staff (Pat: “I’m not allowed to transfer myself...this makes me feel more secure”) without any reference as to the longevity of this change i.e. if the change was only temporary and
therefore when her care plan would be updated in view of any physical and cognitive
improvements.

Viewing staff in this way caused a subtle shift in the locus of control and sense of
self-reliance (Margaret: “attachment, respect…I now walk with supervision because someone
is in charge”). Staff were considered as having a greater role in assisting patients, particularly
if patients placed self-imposing restrictions to their mobility, such as avoiding physical
activities through lack of confidence or fear of falling again, or indeed if patients
overestimated their own ability to walk safely therefore requiring staff to intervene. Some
examples included Joan not feeling safe to “walk by myself anymore” and Pat depending “on
more people…I need more assistance with getting on and off the toilet”. Even David, who
remained reasonably stoical throughout the study and was the most mobile, accepted changes
to his walking “with the help of staff…I take more care and ask for assistance”. It was
important that any such measures were re-assessed so as to ensure patients regained a sense
of ownership of strategies that promoted a shift toward independence and optimal
functioning.

Discussion

This study captured personal insights into the lives of five older people who had begun a
course of in-patient rehabilitation to improve their level of functioning. Rehabilitation is an
enabling process concerned with improving a person’s well-being, increasing their quality of
life, and optimizing their ability to undertake activities of daily living and social participation
(Meyer et al., 2011). However, having experienced a fall, or for some participants two falls, it
became evident from their responses that their progress had been altered.
The chain of post-fall events and consequences had changed aspects of patients’ care with further emphasis on risk management. This change highlighted the difficulty in balancing the needs of the patients in terms of optimizing function and independence with the responsibility of the staff to minimize the risk of falls and to promote safety within a rehabilitation environment (Bok, Pierce, Gies, & Steiner, 2016; NICE, 2015b & 2013; Haggqvist, Stenvall, Fjellman-Wiklund, Westerberg, & Lundin-Olsson, 2012). The patient interviews often described changes that initially may have seemed to belie the aims of rehabilitation, by promoting a greater dependence on other people and aids (Bok, Pierce, Gies, & Steiner, 2016). However, it is important to acknowledge the broader circumstances surrounding patient care, particularly the effect of acute illness, the protective role of staff and the unfamiliarity of hospital environments (Haggqvist, Stenvall, Fjellman-Wiklund, Westerberg, & Lundin-Olsson, 2012), as it can be these factors that contribute to the balance of risk reduction and optimization of function.

As part of this dichotomy was the notion of control (Clemson, Cusick, & Fozzard, 1999). The implementation of fall prevention strategies that could have resulted in placing restrictions on patients’ mobility and discouraging any behaviors that could compromise their safety suggests a degree of control exerted over activities, particularly if there was conflict between what patients believed they could manage safely and the duties and responsibilities of staff to manage these risks. This resonated with another study investigating licensed practical nurses’ experiences of falls and fall prevention (Haggqvist, Stenvall, Fjellman-Wiklund, Westerberg, & Lundin-Olsson, 2012), whereby changes in support during mobility and patient transfers were carefully graded by staff in fear of misjudgment or error, even if they considered their assistance to be overprotective or more than what was essentially required (Bok, Pierce, Gies, & Steiner, 2016). It was unclear from the data in this study the extent to which staff had explained to patients the duration of which changes should be
adhered to, and therefore the longevity of the shift in control over aspects of patient choice
and behavior. However, it is reasonable given the responsibilities of the staff and the
rehabilitation ethos of the two wards that care plans would have been reviewed and modified
on a regular basis.

As a means of learning from fall experiences it has been suggested that post-fall
investigations provide an open opportunity to explore the means to change current practice
(Bok, Pierce, Gies, & Steiner, 2016) while understanding the perception of risk within the
context of patients’ past experiences. This can be particularly important if patients are
overconfident or unrealistic when evaluating the degree of risk associated with specific
activities and circumstances (Clemson, Cusick, & Fozzard, 1999). To gain a deeper
understanding of the impact of a fall as well as to enhance adherence to interventions it is
necessary to consider factors that are predictable and familiar to patients. These form a
fundamental aspect of a patient’s sense of control and behavior whereby past experience, fear
of falling, self-efficacy and freedom of choice can influence risk perception and therefore
management strategies (Host, Hendriksen, & Borup, 2011; Clemson, Cusick, & Fozzard,
1999).

Participants in this study described an overall shift in their pre-fall rehabilitation, such
as levels of physical activity and mobility status, to a post-fall trajectory beset with feelings
of low self-efficacy, fear of falling and a loss of independence. This resonates with similar
research exploring older people’s experiences of falling (Bok, Pierce, Gies, & Steiner, 2016;
Rosario, Kaplan, Khonsari, & Patterson, 2014; Ben Natan, Heyman, & Ben Israel, 2014;
Boltz, Resnick, Capezuti, & Shuluk, 2013). Participants also gave examples of choosing to
limit or avoid certain activities altogether. Being more cautious when they mobilized or
performed functional tasks was a common coping strategy to enhance their feelings of safety
and security (Ben Natan, Heyman, & Ben Israel, 2014; Host, Hendriksen, & Borup, 2011).
If patients believed they were unable to handle the situation using their own knowledge of past experiences and cognitive/physical abilities (i.e. internal control) it was likely the shift in decision-making reinforced activity-avoidance and changes in behavior (Mazumber, Lambert, Nguyen, Bourdette, & Cameron, 2015; Tzeng & Yin, 2014; Boltz, Resnick, Capezuti, & Shuluk, 2013; Host, Hendriksen, & Borup, 2011; Delbaere, Crombez, Vanderstraeten, Willems, & Cambier, 2004). Control was exerted by patients who favored an adherence to interventions recommended by staff (i.e. an external locus of control) rather than devising their own strategies to prevent a fall (Clemson, Cusick and Fozzard, 1999). This could perhaps be explained by patients already being unwell or frail hence their admission into hospital, as well as the unfamiliar and at times stressful hospital environment itself (Host, Hendriksen, & Borup, 2011).

Recurrent falls was another important issue contributing to changes in patients’ rehabilitation and hospital experience (Mazumber, Lambert, Nguyen, Bourdette, & Cameron, 2015). In this study two out of the five participants fell more than once during the research period. Perceptions of low self-efficacy, reduced motivation to strive for independence (or perhaps, less dependence), and a stronger sense of blaming staff for falling – in parallel to an increasing expectation of staff to keep them safe – were more apparent in data associated with recurrent fallers than single fallers. This demonstrated the potential for each subsequent fall to act as a catalyst for further deterioration in function and patient experience (Rosario, Kaplan, Khonsari, & Patterson, 2014; Ben Natan, Heyman, & Ben Israel, 2014; Boltz, Resnick, Capezuti, & Shuluk, 2013).

Limitations of the Study

A larger sample size would have been more beneficial to potentially reveal new ideas or concepts (Bok, Pierce, Gies, & Steiner, 2016) and to yield a wider data set of patients’
voices to support transferability (Krefting, 1991). Unfortunately, the duration of the study and
the flow of patients admitted and discharged through the two wards only produced a small
sample.

Data were fed back to participants to clarify statements and viewpoints at the time of
each interview only, with no feedback of findings possible (Mays & Pope, 1995). However,
regular meetings were held between the primary author and the experienced research
supervision team to discuss findings, personal reflections, any concerns regarding the
research process and to compare understanding between each other about developing
themes (Host, Hendriksen, & Borup, 2011; Mays & Pope, 1995).

Despite feedback from a consultation and pilot exercise prior to the main study, the
phrasing of the questions in the interviews could have affected participant responses, as some
were written for “yes/no” answers. Having more open-ended questions could have
encouraged greater description in their answers and the generation of further fall-related
concepts.

Implications for Practice

The value of subjective data from patients’ experiences cannot be underestimated as a
source of information to help support and guide decision-making (NICE, 2015a & 2013;
Tzeng & Yin, 2014; NPSA, 2007). Utilizing the free text in incident reports and staff to be
allowed more time to interface with patients after a fall can facilitate this enhanced learning
(Tzeng & Yin, 2015; NPSA, 2007). It would be worthwhile for future studies to explore
conversations and the physical interaction between patients and ward staff with regard to the
perception of falling and appraisal of risk and safety. In particular, further research is needed
to understand how the evaluation of risk and safety may vary between individuals and in
different daily situations or activities, and how this can impact on goal-setting and adherence

The active involvement of patients is integral to exploring and learning from falls, and patients should continue to be placed at the center of the rehabilitation process (NICE, 2015a & 2013; Tzeng & Yin, 2014). This becomes even more important for recurrent fallers given the detrimental effects of experiencing multiple falls (Mazumber, Lambert, Nguyen, Bourdette, & Cameron, 2015). Therefore, future research could explore the additional support required to prevent exacerbation of fear-avoidance behaviors and risk of injuries in this sub-group of fallers (Tariq, Kloseck, Crilly, Gutmanis, & Gibson, 2013; Delbaere, Crombez, Vanderstraeten, Willems, & Cambier, 2004).

Information obtained from each fall should be freely accessible to all ward staff and discussed as part of an interdisciplinary team-based approach to individualized fall prevention (Bok, Pierce, Gies, & Steiner, 2016; NPSA, 2011). It has been suggested that a regular team forum could form a useful means for staff to share information and discuss falls events including falls risk assessments (Haggqvist, Stenvall, Fjellman-Wiklund, Westerberg, & Lundin-Olsson, 2012). Staff education on the range of risk factors for different patterns of fallers could form a part of these forums (Clemson, Cusick and Fozzard, 1999).

Regular updates of patients’ movement patterns and behavior should be included in staff communication with each other, such as oral and written handovers at the start and end of working shifts and following therapy sessions (Haggqvist, Stenvall, Fjellman-Wiklund, Westerberg, & Lundin-Olsson, 2012). If changes are made to care plans, such as mobility status or the number of staff required to assist with transfers, this information should be shared between team members on an efficient and continuous basis, with rehabilitation goals updated accordingly. Future research should address the effectiveness of inter-professional
communication on patient outcomes. The rehabilitation process is inherently dynamic, seeking to promote positive change in patients' cognitive and physical status. Communication of these changes and their implications to all involved – patients, carers and professionals – is key to optimizing a patient's functioning at each stage of the rehabilitation process (Bok, Pierce, Gies, & Steiner, 2016; NPSA, 2011).

Conclusion

This study demonstrated the extent to which a fall impacted on the lives of five older patients within a rehabilitation setting. Patients who had fallen during their time in hospital were invited to describe their experience of falling, with a particular focus on the perceived causes, circumstances and consequences of each incident. Findings from this study contribute to a growing body of qualitative work exploring the impact of hospital-based falls, with a particular highlight on psychological and social issues.

Themes demonstrated similarities in experience – namely, impaired balance being a common perceived cause of falling; changes to mobility including an increased need for assistance from staff and walking aids for safety; reduced confidence, fear of falling and restrictions to physical activity; and the difficulties in balancing risk with safety, which impacted on decision-making and the degree of control exerted by patients and staff during the rehabilitation process. The experience of a second fall exacerbated these factors further by making it more difficult for patients to reach an optimal level of functioning.

References


Hill, A.M., Hill, K., Brauer, S., Oliver, D., Hoffmann, T., Beer, C., McPhail, S. & Haines,


## Table 1 Patient Characteristics

<table>
<thead>
<tr>
<th>Participant Pseudonym</th>
<th>Data Source</th>
<th>Margaret</th>
<th>David</th>
<th>Joan</th>
<th>Pat</th>
<th>Ron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>IR/MN</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Age</td>
<td>IR/MN</td>
<td>77</td>
<td>82</td>
<td>78</td>
<td>88</td>
<td>81</td>
</tr>
<tr>
<td>No. of comorbidities</td>
<td>MN</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Past medical history</td>
<td>MN</td>
<td>Bilateral total knee replacements, left hip replacement, subluxation of metatarsals, bipolar disease, previous falls, ankle fracture</td>
<td>Polio, previous falls, abdominal pain, hip fracture, atrial fibrillation, depression, malaria</td>
<td>Osteoarthritis, cataracts, anaemia, thrombocytopenia, CVA, right hemicolecotmy, renal failure, previous falls</td>
<td>High blood pressure, transient ischaemic attack, diverticulosis, previous falls, gastrointestinal bleed, chronic kidney disease, osteoporosis</td>
<td>High blood pressure, hyponatraemia, type 2 diabetes (with bilateral foot drop and peripheral neuropathy), glaucoma, osteopenia, bowel cancer, previous falls</td>
</tr>
<tr>
<td>Primary reason for admission</td>
<td>MN</td>
<td>Reduced mobility (“off legs”), likely urinary tract infection. Admitted from home</td>
<td>Fell outdoors - reduced mobility and balance. Admitted via emergency department</td>
<td>Fell indoors, not managing at home. Admitted after short-stay on acute medical ward</td>
<td>Urinary tract infection (currently unsafe at home). Admitted from home</td>
<td>Not coping at home - unwell and recent deterioration in health. Admitted from home</td>
</tr>
<tr>
<td>Number of falls risk factors* identified</td>
<td>MN</td>
<td>5/9</td>
<td>5/9</td>
<td>3/9</td>
<td>4/9</td>
<td>7/9</td>
</tr>
<tr>
<td>No. of falls during study</td>
<td>IR</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Day, time and location of fall(s)</td>
<td>IR</td>
<td>Sunday, 07:45, ward corridor</td>
<td>Tuesday, 07:55, bedroom</td>
<td>Monday, 09:20, bedroom</td>
<td>Wednesday, 18:35, toilet corridor, Friday, 11:30, bedroom</td>
<td>Monday, 12:10, day/dining room Thursday, 16:30, dining room</td>
</tr>
</tbody>
</table>

Table 1 continued overleaf
### EXPERIENCES OF OLDER PEOPLE FALLING IN HOSPITAL

<table>
<thead>
<tr>
<th>Injuries sustained from fall(s)</th>
<th>IR</th>
<th>Documented cause of fall (from incident reports)</th>
<th>Number of medications (associated with falls risk in parentheses)</th>
<th>Types of medications</th>
<th>Mobility pre-fall</th>
<th>Mobility post-fall</th>
<th>Length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IR</td>
<td>Walking along ward corridor, lost balance, unwitnessed, found lying on left side</td>
<td>Walking around room, fell whilst walking and carrying newspaper from one side of bedroom to other</td>
<td>Walking with healthcare assistant across dining room, tripped over room-partition on floor; staff unable to save patient Lost balance when sitting down. Ron miscalculated his position in relation to chair. Staff unable to stop patient from falling, fell to floor</td>
<td>MN</td>
<td>Antidepressant, anticoagulant, laxative, antipsychotic, bone mineral, antifungal</td>
<td>Antidepressant, anticoagulant, laxative, antipsychotic, bone mineral, antifungal</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Found by side of bed - patient had been standing at sink washing herself when lost balance and fell to floor</td>
<td>Hypertensive drug, analgesic, bone minerals, laxative, anticoagulant, nutritional supplement</td>
<td>Anticoagulant, antidiabetic drugs, bone minerals, hypertensive drugs, analgesic</td>
<td>MN</td>
<td>Independent with four-wheeled walker (rollator) Independent with walker (frame) + supervision</td>
<td>Assistance of 1 person + walker (frame) + supervision for distances &gt;10m</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Fell whilst getting off toilet, unwitnessed, lost balance</td>
<td>Analgesics, laxative, bone minerals, lipid-regulating drug, anticoagulant, diuretic, proton-pump inhibitor</td>
<td>Anticoagulant, antidiabetic drugs, bone minerals, hypertensive drugs, analgesic</td>
<td>MN</td>
<td>Independent with cane (stick) Independent with walker (frame) Assistance of 1 person + walker (frame)</td>
<td>Assistance of 1 person + walker (frame) + supervision for distances &gt;10m</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Fell when walking from bedroom to ward corridor, lost balance, possible trip</td>
<td></td>
<td></td>
<td>MN</td>
<td>&gt;6 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
<td>MN</td>
<td>&gt;5 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
<td>MN</td>
<td>&gt;6 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
<td>MN</td>
<td>&gt;5 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
<td>MN</td>
<td>&gt;6 weeks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
<td>MN</td>
<td>&gt;5 weeks</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Falls Risk Factors: History of falls (<2), history of falls (>3), history of dizziness or blackouts, mental state, vision, medications, eliminations, environmental hazards, and unsteadiness. IR = Incident Report. MN = Medical Notes.
### Table 2

**Characteristics of Rehabilitation Wards**

<table>
<thead>
<tr>
<th></th>
<th>Ward ‘A’</th>
<th>Ward ‘B’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average number of</strong></td>
<td>Days: 12-14</td>
<td>Days: 12-14</td>
</tr>
<tr>
<td><strong>staff on duty</strong></td>
<td>Nights: 3-4</td>
<td>Nights: 3-4</td>
</tr>
<tr>
<td><strong>Types of professions involved</strong></td>
<td>Physiotherapists</td>
<td>Physiotherapists</td>
</tr>
<tr>
<td></td>
<td>Rehabilitation assistants</td>
<td>Rehabilitation assistants</td>
</tr>
<tr>
<td></td>
<td>Ward sisters</td>
<td>Ward sisters</td>
</tr>
<tr>
<td></td>
<td>Nurses</td>
<td>Nurses</td>
</tr>
<tr>
<td></td>
<td>Nurse practitioner</td>
<td>Doctor</td>
</tr>
<tr>
<td></td>
<td>Support workers</td>
<td>Support workers</td>
</tr>
<tr>
<td></td>
<td>Medical consultant</td>
<td>Medical consultant</td>
</tr>
<tr>
<td></td>
<td>Occupational therapists</td>
<td>Occupational therapists</td>
</tr>
<tr>
<td></td>
<td>Admin staff</td>
<td>Admin staff</td>
</tr>
<tr>
<td><strong>Layout</strong></td>
<td>22 patient beds (including 9 allocated stroke beds), day room, therapy room, 3 toilets, 2 bathrooms, dining room, staff room, 2 administrative offices, conservatory</td>
<td>22 patient beds, day room and dining room, therapy room, 2 toilets, 2 bathrooms, team meeting room, 1 administrative office</td>
</tr>
<tr>
<td><strong>Average number of patients occupying beds</strong></td>
<td>22 (full capacity)</td>
<td>22 (full capacity)</td>
</tr>
<tr>
<td><strong>Number of falls</strong></td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td><strong>Number of fallers</strong></td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

*Note.* *Data collected from Health and Safety statistics, dated January to June 2006.*
### Interview Questions

| 1) How would you define a fall? |
| 2) Before coming onto the ward, did you expect to fall during your hospital stay? |
| 4) Do you regard having a fall/ falling in hospital as being a problem to you? |
| 5) What do you think could be the consequences of falling in hospital? |
| 6) Did you have/ do you now have a fear of falling in hospital? |
| 7) Do you think falling in hospital can be prevented? |
| 1) Which number fall is this? |
| 2) What day did you fall? |
| 3) Do you know the time of your fall (approximately)? |
| 4) Where on the ward did you fall? |
| 5) What were you doing at the moment of falling? (movement/ activity) |
| 6) Did you get any warning that you were going to fall? |
| 7) What happened after you fell? |
| 8) Why do you think you fell? |
| 9) If you were to do the same movement/ activity again, is there anything you would do differently? |
| 10) Did you injure yourself when you fell? If so, how were these injuries treated/ investigations e.g. X-rays, bone scans? |
| 11) Who or what do you think was responsible for your fall? And who or what would be responsible if you fell again? |
| 12) What impact has this fall had on you? How did the fall make you feel? |
| 13) Is there anything else you wish to say about your fall? |