
‘They will tell me if there is a problem’: limited discussion between health professionals, older adults and their caregivers on falls prevention during and after hospitalization

Den-Ching A. Lee^{1*}, Fiona McDermott^{2,3}, Tammy Hoffmann⁴ and Terry P. Haines^{1,5}

¹Allied Health Research Unit, Kingston Centre, Monash Health, Cnr Heatherton Road and Warrigal Road, Cheltenham, Victoria 3192, Australia, ²Social work Department, Faculty of Medicine, Nursing and Health Sciences, Monash University (Caulfield Campus), 900 Dandenong Road, Caulfield East, Victoria 3145, Australia, ³Social work Department, Monash Medical Centre, Monash Health, 246 Clayton Road, Clayton, Victoria 3168, Australia, ⁴Centre for Research in Evidence-Based Practice, Bond University, 14 University Drive, Robina, Queensland 4226, Australia and ⁵Physiotherapy Department, Faculty of Medicine, Nursing and Health Sciences, Monash University (Peninsula Campus), McMahons Road, Frankston, Victoria 3199, Australia.

*Correspondence to: Den-Ching A. Lee. E-mail: angel.lee@southernhealth.org.au

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Abstract

The objectives of this study were to describe the sources of falls prevention information provided to older adults during and after hospitalization, identify and explore reasons why discussion about falls prevention may not take place. Six participant groups were interviewed using semi-structured interviews or focus groups: (i) older patients ($n = 16$); (ii) caregivers ($n = 8$); (iii) allied health and nursing professionals ($n = 33$); (iv) doctors from acute wards ($n = 8$); (v) doctors from subacute wards ($n = 10$) and (vi) general practitioners ($n = 9$). Participants were recruited from three Australian hospitals that provided acute and subacute in-patient services to the older adults. General practitioners were recruited from the community of Melbourne. Findings showed provision of falls prevention information was dependent on setting of the ward and which health professionals the older adult encountered during and after hospitalization. Medical practitioners were reactive in providing information, whereas older adults and their caregivers were passive in seeking falls prevention information. Several barriers in information provision and information seeking were identified.

There is great potential to improve the consistency of falls prevention information provision to older adults during hospitalization and in preparation for discharge to assist with prevention of falls in this high risk period.

Introduction

Older adults are at increased risk of falls during hospitalization and in the transition period following discharge [1, 2]. Both periods are associated with high rates of falls. Rates of in-patient hospital falls have been reported as between 3 and 20 falls per 1000 occupied bed days and up to 25 falls per 1000 days in the post-hospitalization period [2–4]. However, most falls in the elderly can be prevented. Several strategies have been demonstrated to reduce falls in the community, including individually tailored home exercise programs, group exercise programs, home assessment and modification, multifactorial assessment programs and psychotropic medication withdrawal [5]. In hospitals, multifactorial targeted falls prevention programs that addressed risk factors of individuals have been shown to be effective in reducing rate of falls [6]. In addition, it is demonstrated that by increasing a

patient's awareness of risk factors of falls and teaching them strategies to prevent falls reduce the risk of falls in the hospital setting [6]. A recent study showed only 3% of falls prevention strategies suggested by older hospitalized adults that could be used in the post-discharge period were evidence-based falls prevention strategies [7]. Therefore, it is unlikely that older adults will become involved in evidence-based falls prevention strategies during this high-risk period without active information provision by health professionals or from other information sources.

Information sharing can potentially be used to promote participation in effective falls prevention activities. Theoretical models, such as the Health Belief Model, have previously been used to aid delivery of falls prevention information to older adults in a way that promoted their participation in falls prevention activities [8, 9]. Recent studies have found that patient education can increase awareness and knowledge of fall risks and falls prevention strategies and an educational program based upon the Health Belief Model which prompted behavioral change reduced falls in hospitalized older adults [10–12]. Given that older hospitalized patients have poor awareness of falls prevention strategies, it is important to know how and from whom they and their caregivers receive information about falls risk factors and prevention strategies.

This study aimed to describe the information that is currently being provided to the older adults and their caregivers with regard to falls prevention during hospitalization and post-discharge, to identify and explore reasons for why discussion about falls prevention between health professionals, older adults and their caregivers may not take place.

Methods

Design

This was a qualitative investigation which took a descriptive and exploratory approach. It consisted of semi-structured face-to-face or telephone interviews with scope for open-ended answers and focus groups.

Participants and setting

Six groups of participants: older hospitalized adults, caregivers, allied health and nursing staff, hospital doctors from acute wards, hospital doctors from subacute wards and general practitioners were recruited.

General practitioners were recruited from metropolitan suburbs of Melbourne, Victoria. All other participants were recruited from Kingston Centre, Dandenong Hospital and Casey Hospital within Monash Health in Victoria, Australia. The Kingston Centre is a rehabilitation hospital providing subacute services predominantly to the older adults, whereas Dandenong and Casey Hospitals are tertiary hospitals with acute and subacute services. Patients who were medically stable but deemed unsafe to return home, for example, those with mobility problems were transferred from acute to subacute services where they underwent rehabilitation to maximize their physical and functional capacity before discharge. Participant numbers and their characteristics are shown in Table I.

The 'patient' group were English speaking adults aged 65 years or above, at risk of falls (admission due to falls or had past history of falling) and admitted to in-patient acute or subacute wards. Patients with impaired cognition and whose discharge destination was a residential aged care facility or another hospital were excluded. The Short Portable Mental Status Questionnaire was administered to determine their suitability to be interviewed. A score of $\geq 7/10$ was required for inclusion in the study [13]. The 'caregiver' group was the family or other support people of the participants in the patient group whom the patient identified to be their main support person, either of whom provided physical or emotional support when they were unwell. The 'allied health and nursing' group comprised of health professionals who cared for the target patient group during in-patient stay on acute and subacute wards. Hospital doctors were registrars, hospital medical officers and interns who worked in acute wards or subacute wards where elderly patients were admitted. General practitioners were medical practitioners who practised in the community setting.

Table I. Participant characteristics and recruitment source table

Participant group	<i>N</i>	Female <i>n</i> (%)	Mean age (SD)	Diagnosis (<i>n</i>)
Older patients	Total <i>n</i> = 16	5 (31)	75.4 (6.9)	Fractures relating to fall (10) Falls (3) Stroke (1) Myocardial infarction (1) Ischemic colitis (1)
Caregiver	Total <i>n</i> = 8 Daughters <i>n</i> = 2 Spouse <i>n</i> = 6	5 (63)	72 (10.1)	
Allied health/nursing	Total <i>n</i> = 33 Nurse <i>n</i> = 12 Occupational therapist <i>n</i> = 7 Social worker <i>n</i> = 1 Podiatrist <i>n</i> = 1 Case manager <i>n</i> = 2 Physiotherapist <i>n</i> = 10	30 (91)	34.8 (11.3)	
Hospital doctors (acute wards)	Total <i>n</i> = 8	6 (75)	27.1 (4.1)	
Hospital doctors (subacute wards)	Total <i>n</i> = 10	6 (60)	29.5 (7.5)	
General practitioners	Total <i>n</i> = 9	3 (33)	51.3 (9.9)	

Procedure

Approval was obtained from the relevant human research ethics committee prior to commencement of the research. The recruitment process for patient, caregiver, allied health and nursing participants occurred between March and June 2011. Recruitment for hospital doctor and general practitioner participants took place between March and June 2012.

Purposive sampling was used to guide the recruitment of older patients where an equal number of older adults with and without a caregiver would be recruited. Advertising posters were displayed on wards inviting suitable participants to participate. Nurse unit managers and allied health professionals on the respective wards were also approached for identification of patients and/or caregivers for interviews. Non-purposive sampling was used for all other participant groups. E-mail advertising within Monash Health and snowball sampling whereby clinicians were asked to identify additional colleagues who may be interested in the study. A personal invitation was then made to those clinicians. General practitioners were recruited through the

Victorian government health website and snowballing from participants. Personal contact was later used due to a low participation rate in this group.

Older adults and caregivers were provided with a \$30 gift voucher for participation in the research. Allied health and nursing participants received two movie tickets. General practitioners were paid up to half an hour for their time spent in the interview. Hospital doctors did not receive a reward as it was deemed unnecessary by medical administration. This was approved by a subsequent ethics amendment.

Informed consent to participate was gained before interviews and focus groups were conducted whereby confidentiality of information and de-identification of participants was stipulated. Interviews and focus groups were conducted by researcher (D.-C.A.L.) using interview schedule designed for each participant group and were recorded with audio digital recorder for analysis.

Trustworthiness of data interpretation was assisted through member checking [14]. Thus, interviewees from patient (*n* = 2), caregiver (*n* = 1), hospital doctor (*n* = 1) and general practitioner

($n = 1$) groups were randomly selected, after saturation of data codes and presented with the investigator's coding of their data. Individual participant was asked to discuss whether he or she agreed with the investigator's coding, for example, passive information seeking by the older adults and the reasons. This feedback then became part of the iterative analysis whereby data were coded and reduced.

Data gathering

Each participant in the patient and caregiver group was invited to attend two interviews. The first interview was conducted 1–2 weeks post-hospitalization, so participants would not feel pressured to provide compliant responses as if they had still been in hospital. A second interview was conducted 3 months after hospitalization, which focused on the experience of the transition period post-discharge. A face-to-face interview took place in the patient's/caregiver's home on both occasions unless their residence was geographically remote, in which case a telephone interview was employed. The interviews ranged from 30 to 60 min in duration. A pair of patient and caregiver declined a second interview due to ill health. A single patient and a caregiver refused to participate further due to dissatisfaction with the process.

Patients and caregivers were interviewed separately. They were permitted to be in the same room if requested, but were discouraged from interrupting each other during the interview process. Topics of discussion in the first interview included patient's or caregiver's general impressions of the hospitalization experience and engaging with hospital staff and the hospital environment, patient's or caregiver's recollection of and reaction to involvement in falls prevention and information they received on falls prevention during hospitalization and in planning for transition home. Topics of discussion in the second interview focused on the same issues in the transition to home context.

Participants in the allied health and nursing group attended one focus group that was conducted in a meeting room on the ward. Six focus groups, each consisting of 5–6 participants, were conducted. The

focus groups were purposefully structured to have three different health professional disciplines at each group so that data regarding differing perspectives between health professionals could be discussed. The focus groups ranged from 30 to 60 min in duration. Topics of discussion included health professionals' perceptions of their role in preventing patient falls during and after hospitalization, recollections of what health professionals say to patients and their caregivers for the prevention of falls during hospitalization and in preparation for the transition period. Focus groups comprised of staff that provided care to in-patients and focused their discussion on the hospitalization context, while groups comprised of staff that provided care to older adults once discharged home focused their discussion on the post-hospitalization context.

Hospital doctors from acute wards, subacute wards and general practitioners undertook a face-to-face interview which ranged from 20 to 30 min in duration. The interview was conducted in a meeting room on the ward for hospital doctors or in the general practitioners' rooms. Topics of discussion for hospital doctors included their perception of their role in preventing patient falls during hospitalization, when and to whom they provided falls prevention information, what information and advice they gave to their patients to prevent falls during hospitalization and in preparation for discharge and the barriers they perceived to falls prevention practice. Topic of discussion for general practitioners followed a similar schedule which focused on falls prevention for post-hospitalized older adults. Full interview schedules are available from authors on request.

Analysis

A thematic analysis was carried out [15]. Interviews and focus groups were transcribed verbatim for analysis. It was apparent that in order to interpret the large size of data, one researcher (D.-C.A.L.) would condense the data by summarizing information in the transcripts providing index to parts such that meaning and context can be checked at later stages. Field notes were taken for additional

interviews and focus groups that were conducted at a later stage to confirm saturation of data codes. Individual interviews and focus groups were analyzed separately. No systematic difference was observed among the focus groups and so the data were pooled for the analysis. The indexed, summarized data and field notes were analyzed by the researcher (D.-C.A.L.) in collaboration with T.P.H. An overarching framework was developed to provide structure to the subsequent analysis of data. This framework described the different ways that information could be sought by older adults and/or caregivers, and how information could be provided by health professionals or other stakeholders. There were four pathways of communication that were focused upon (Fig. 1). The interpretation of data took reference to this framework in addition to evidence-based falls prevention strategies which were exercise, home safety assessment and modifications, withdrawal of psychoactive medications and multi-factorial assessment program [5]. Themes emerged

from the data codes were identified for each pathway and organized into categories that the researchers agreed could classify all information. These categories were further divided into subcategories where data can be grouped. A third researcher (F.M.) was involved if the researchers could not reach a consensus after discussion. NVivo 9.2 computer statistical software was used to assist with organizing, indexing and coding of data.

Sample size consideration

Additional interviews and focus groups were conducted to confirm saturation of data codes, the iterative data collection and analysis approach identified that saturation had been reached. A final number of 30 interviews with 16 patients, 14 interviews with 8 caregivers, 6 focus groups of 33 allied health and nursing professionals, 8 interviews with ‘acute’ hospital doctors, 10 interviews with ‘subacute’ hospital doctors and 9 interviews with general practitioners were attained.

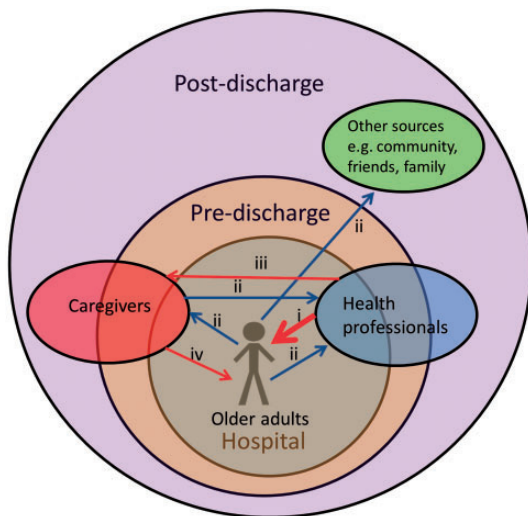


Fig. 1. Pathways of information provision/information seeking on falls prevention between health professionals, older adults, caregivers and other sources across hospitalization to post-discharge time period. (i) Information provision from health professionals to older adults, (ii) Information seeking by older adults and caregivers, (iii) Information provision from health professionals to caregivers, (iv) Information provision from caregivers to older adults.

Results

The results are presented in the pathways conceptualized from our information provision/information seeking framework between health professionals, older adults and caregivers. Due to pooling of data from interviews and focus groups, we had grouped the allied health and nursing professionals, ‘acute and subacute’ hospital doctors and general practitioners into collectively the ‘health professionals’.

Provision of falls prevention information from health professionals to older adults

Nature of falls prevention information

Within this category, three subcategories were identified and information provided was (i) discipline-specific, (ii) activity-specific and (iii) mixed messages. Discipline-specific information related to the professional background of the health professionals providing the information. Activity-specific information related to a particular activity that the patient was attempting. Mixed messages may not

necessarily require spoken words to be conflicting, but could also arise through implicit instructions of health professionals.

- (i) *Discipline-specific information.* Much of the discipline-specific information was provided to older adults while staying on subacute wards. For example, physiotherapists gave advice for patients to increase their physical activity to minimize functional decline. Occupational therapists provided information in a group education talk which aimed at raising patients' safety awareness in performing daily activities. Nurses on acute and subacute wards provided information related to orientation of ward environment, mobility instructions during walking, transferring and dressing and implementation of continence regime, whereas hospital doctors on both wards reviewed medications if there were medical reasons for falls (Table II).

They (occupational therapist) gave a talk on how to prevent falls and they told us what not to do... (participant 37, older adult)

During the pre-discharge period on the subacute ward, physiotherapists addressed the physical activity of patients after discharge by making referral for on-going exercises. Occupational therapists focused on achieving a safe home environment by providing information during home visits to minimize hazards and provide equipment to assist with safe performance of activities of daily living. Social workers gave information on home help services. Nurses on both wards ensured patients received information about discharge medications. Medical staff on both wards described trying to optimize each patient's medical condition and wrote discharge summaries for the general practitioner to follow-up on with patients.

During the transition period after discharge, general practitioners reported acting on the

recommendations made by hospital doctors and reviewing patients' medications. Community clinicians who were referred by hospital staff to provide services typically provided the same discipline-specific information, for example, occupational therapist discussed home safety both in hospital and the community (Table II). Table III demonstrated the difference in the content of information that was reported by different disciplines. It also contrasted the difference between the messages that was provided and evidence-based strategies as identified in Cochrane review [5].

- (ii) *Activity-specific information.* It was apparent that many messages provided by health professionals were specific to the performance of tasks. Mobility instructions such as 'slow down when you walk', 'use your gait aid for walking', 'ask for help when you need to get out of bed or going to the toilet', 'wear good shoes' and 'watch the environment' were commonly given by allied health and nursing staff. Hospital doctors reported they tended to give advice related to medical conditions, for example, 'get up slowly and sit a while before you stand up' for patients with postural hypotension and with messages focused on the reduction of fall risks in the hospital environment.

How to make graded movements... educate about if they have onset of some symptoms (dizziness), they hold onto an object to steady themselves and minimizing an injury that happens. (participant 51, subacute doctor)

- (iii) *Mixed messages.* Mixed or potentially incorrect message may be conveyed to the patient and their family due to mal-communication that could occur between change of shifts, use of non-regular staff such as agency nurses, difference in professional training backgrounds leading to different clinical considerations or within one's instruction.

Table II. Source of fall prevention information during hospitalization, pre- and post-discharge

Professional involvement	Physiotherapist	Occupational therapist	Nurse	Hospital doctor	Social worker
During hospitalization					
Domain of information provision	Physical activity	Falls education	Ward environment Mobility Continence Orientation Reinforcement of mobility instruction	Medication Identification of medical causes for falls Advise about postural hypotension	
Information through activity	Exercise program Mobility assessment Provision of gait aids Stairs climbing practice Carry out continence regime Subacute ward Acute ward only if referred	Falls discussion Viewing falls video Provision of falls prevention booklet Subacute ward only	Reinforcement of mobility instruction Supervision or assistance with patient's mobility on the ward Acute and subacute ward		
Pre-discharge					
Domain of information provision	Physiotherapist Physical activity	Occupational therapist Home environment	Nurse Mobility Discharge medication	Hospital doctor Medical condition Liaison with general practitioner and family Stabilization of medical condition ^{a,b}	Social worker Discharge service organization Service need assessment ^{a,b}
Information through activity	Referral to community physiotherapist ^a Mobility assessment and recommendations ^b	Home visit ^{a,b} Home hazard reduction ^{a,b} Provision of equipment ^{a,b}	Reinforcement of mobility instruction ^{a,b} Assistance or supervision of mobility ^{a,b} Ensure discharge medication is provided ^{a,b}	Write discharge summary to general practitioners ^{a,b} Contact family about patient's medical progress and discharge ^b Endorse exercise, Vitamin D, Calcium and hip protector ^a a = Subacute ward b = Acute ward	
Location of patients	a = Subacute ward b = Acute ward if referred	a = Subacute ward b = Acute ward if referred	a = Subacute ward b = Acute ward		a = Subacute ward b = Acute ward if referred
Post-discharge					
Domain of information provision	Physiotherapist Physical activity	Occupational therapist Home assessment		General practitioners Medication Follow-up on recommendations from discharge summary	
Information through activity	Exercise program	Home hazard reduction Equipment provision		Advise about exercise, home hazard reduction in high risk patients or if asked by patients Community	
Location of patients	Community	Community			

Table III. Falls prevention information provided by health professional(s)

Category of information provided	Supported by Cochrane reviews (2012)	Provided by which professional(s)	Examples of information
Mobility advice	No	General practitioner	'You should walk behind him or beside him. You are scared if he falls over... that's the advice he gives... somebody to be with him' (participant 20, caregiver)
	No	Social worker	'Advise them and the family what the level of supervision they need, what gait aid they need' (participant 30, social worker)
Footwear	No	General practitioner	'To have help from the wheeler' (participant 26, patient)
	No	Occupational therapist	'Reinforcing them with correct footwear...' (participant 6, occupational therapist)
Home safety assessment	Yes	Occupational therapist	'Talk about home modification and how that will be a benefit for them.' (participant 4, occupational therapist)
	Yes	General practitioners	'Enquire them about loose carpet, railing in the shower/toilet, steps whether they have got marking for the steps' (participant 65, general practitioner)
Advice on activities of daily living	No	Nurse	'We tell them to always sit to do things rather than stand to do things and constantly sit if you can, sit in the shower, sit to get undress, sit to get dress...' (participant 9, nurse)
Exercise: Walking	No	Physiotherapist	'Said she just have to keep her walking' (participant 25, caregiver)
	No	Hospital doctor	'Encourage the patient to go taking a walk' (participant 58, hospital doctor)
Exercise: Strength and balance exercise	Yes	General practitioner	'Do Tai Chi classes...' (participant 69, general practitioner)
Medication: Blood pressure medication	No	General practitioner	'He gave me medicine, said take this medicine (blood pressure medication) and after you will be alright' (participant 22, patient)
Medication review	Yes	General practitioner	'Refer to pharmacist in terms of reviewing medications...' (participant 68, general practitioner)
General advice	No	Physiotherapist	'... recommend her to be more careful' (Participant 23, physiotherapist)
	No	Nurse	'Tell them to slow down...' (participant 1, nurse)
Referral to home services	No	Social worker	'Call me if you get home if you need these (home care) services...' (participant 30, social worker)

There are multiple occasions I have seen doctors get patients up and walking in stockings I say you may want to consider wearing slippers or bare feet or something and I come back the next time, they still do the same thing . . . (participant 3, physiotherapist)

Nurse: 'We've just got to keep on reiterating (their mobility prescription)' Physiotherapist 1: 'I think you know when patients aren't doing exactly what you want them to do but it's really, um letting them ummm' Physiotherapist 2: 'An acceptable risk' Physiotherapist 1: 'Yeah, an acceptable risk. And letting them get away with what you actually want them to get away with.' (participants 64, 65, 66)

Reasons for discussion not taking place

Within this category, five sub-subcategories were identified; reasons due to (i) difference in perception of falls prevention responsibility, (ii) perceived barriers to falls information provision, (iii) reactive and selective approach in falls prevention, (iv) inadequate communication between health professionals in hospital setting and trans-settings between hospital and post-discharge and (v) what ward the older adults were located at and which health professionals they saw.

- (i) *Difference in perception of falls prevention responsibility.* Many hospital-based health professionals did not see their role as including falls prevention beyond discharge from hospital.

. . . once they leave here, they are not our responsibility . . . (participant 16, nurse)

Some doctors from subacute wards described feeling that way because many older patients had the intention of improving their mobility; they should assume a bigger role in falls prevention. Therefore, 'subacute' hospital doctors were more likely to endorse on-going

physical rehabilitation as part of the discharge plan of the patient. In contrast, hospital doctors from acute ward did not advise patients to do exercises to reduce falls risks after discharge, commenting that this was not their expertise or they were concerned about the risk of injury for elderly patients. Hospital doctors often deferred falls prevention activities to nursing and allied health staff as they were considered to have a more practical role in falls prevention and they have more time and expertise in this area.

. . . the nursing staff has the greatest education about falls prevention . . . medical staff have less to do with their physical well-being than the physios, so I would expect the physio to have set down exercises for them to do for falls prevention. (participant 52, subacute doctor)

It seemed that allied health staff and nurses were the falls prevention information providers in the hospitals. No one expressed the view that falls prevention was a low priority for them, in contrast to some of the hospital doctors interviewed.

- (ii) *Perceived barriers to falls information provision.* Hospital doctors perceived time limitations as a major barrier to their involvement in falls prevention. They acknowledged that medical priorities were more important for them. Less-experienced medical staff felt they had insufficient fall prevention knowledge to be able to provide patients with information. They expressed that they were unclear of the practical role of hospital doctors in falls prevention and so their involvement was ad hoc. Lack of suitable educational resources was also perceived to be a barrier for not providing information.

Time constraints, we are always very busy and knowledge as well . . . it is not something that's really taught at medical school . . . we do feel under

equipped to provide that information . . .
(participant 61, acute ward doctor)

Challenges such as resistance of the older adult and caregiver to accept advice, cognitive impairment, lack of insight, language barriers and perception of their disinterest in hearing about falls prevention advice were impediments to providing falls prevention information and it being understood.

Because he (patient) feels alright, he can do it by himself . . . But he said no, I am fine, don't put the handrail on. It is up to him. (participant 20, caregiver)

- (iii) *Reactive and selective approach to falls prevention.* Hospital doctors and general practitioners use their intuition rather than a systematic approach to identify patient at risk of falls.

If this is a person that is in the hospital because of a fall or I know has many falls in the past, then it will come in mind to think of that . . . (participant 70, general practitioner)

They did not generally consider hospitalization or post-hospitalization period to be one for high risk of falls. Nonetheless, they only typically discussed falls with the patient after they had fallen on the ward or if the patient asks about it. Hospital doctors from acute wards reported considering falls prevention only at the time of discharge when considering if the patient was safe to return home.

Probably, (discuss falls) normally only after they have a fall (laugh) . . . (participant 57, acute ward doctor)

- (iv) *Inadequate communication in hospital setting and trans-setting between hospital and post-discharge.* Health professional disciplines in hospital operated like independent silos with limited interaction with each other. It appeared that hospital doctors making a referral to an allied health professional was the predominant

means of interdisciplinary interaction, with little interdisciplinary practice in falls prevention beyond this. Health professionals described a lack of communication between disciplines in falls prevention matters.

. . . I assess things from a nursing point of view . . . And then the physio might come in and see things different . . . we are trying to tell the patient what to do and what not to do. The goals where we are meeting are a bit different . . . (participant 27, nurse)

Inadequate communication between the hospital and the general practitioners may be an impediment for prompting follow-up of falls prevention for the older adults in the community. Hospital doctors did not usually include falls prevention information in their discharge summary to the general practitioners.

The GP (general practitioner) gets a written summary but matter of falls prevention is probably not something I notify them about. (participant 59, acute ward doctor)

General practitioners reported that they may not receive a discharge summary from the hospital.

. . . what they do is giving the discharge summary to the patient and we don't get a copy and they get two copies. They say you go and give one to your doctor . . . we don't even know what happened to them. (participant 64, general practitioner)

- (v) *Ward and health professional dependent.* Information provision was dependent on whether the older adult was located on a sub-acute ward and which health professionals they saw that provided discipline-specific information. Hospital doctors from acute wards reported that they did not do or think 'much' about falls prevention.

I probably don't do it as much as I should be (falls prevention), to be honest. (participant 61, acute ward doctor)

Physiotherapists and occupational therapists on acute wards may not provide any information if no referral was received. There was no indication that hospital staff had discussed personal risk factors for falls or evidence-based strategies that older adults can use after discharge to prevent falls, other than some referrals for on-going therapy made by allied health staff from the subacute wards before a patient was discharged. General practitioners reported that falls prevention was not generally a topic they would discuss with the older adults after hospitalization.

... you know as I said many times unless there are some special reasons or they initiate this (falls prevention), I don't ask as a routine of question in the consultation.... (participant 66, general practitioner)

Information seeking by older adults and caregivers on falls prevention

Initiation of discussion by older adults and caregivers with their health professionals

Beliefs, perceptions and attitudes. Patients and caregivers had beliefs, perceptions and attitudes toward falls risk and falls prevention that they described as reasons of not asking about or seeking information on falls prevention (Table IV). Most of the older adults thought that their health professionals would tell them if there was something they needed to know. Many did not think that other sources such as their family or friends could tell them useful information.

I don't see what they (family and friend) can tell me to help. You can't give advice if you haven't had a fall yourself... (participant 44, older adult)

Provision of falls prevention information by health professionals to caregivers

Nature of falls prevention information

Reporting of falls. Hospital doctors or nurses would contact family or caregiver if the patient had fallen on the ward but not generally on falls prevention matters.

Reasons for discussion not taking place

Within this category, three subcategories were identified; (i) inconvenience, (ii) assumption of responsibility by other disciplines, and (iii) perception of low importance of falls prevention information.

- (i) *Inconvenience.* Health professionals in hospitals would only involve caregivers or family if they were present and convenient to do so.

... it depends on whether the caregivers are actually present...if their family don't visit that often, you know you don't actually get the opportunity... (participant 60, acute ward doctor)

- (ii) *Assumption of responsibility by other disciplines.* Hospital doctors thought that allied health staff would have more contact with the patient's family and would discuss falls prevention with the family if needed. However, this assumption was typically not verified by allied health professionals in this study.

... as medical practitioner, you assume it (falls prevention discussion) has been done by the allied health staff. I assume it has been done by the allied health staff anyway. (participant 53, subacute ward doctor)

- (iii) *Perception of low importance of falls prevention information.* It appeared that little information was provided by health professionals to caregivers. Hospital doctors described contacting a patient's family to explain the patient's progress from a medical perspective but seldom discussed falls prevention.

Table IV. Beliefs and perceptions amongst older adults and caregivers towards falls risk and falls prevention

Beliefs	Examples
Did not think they would fall in hospital	Caregiver: 'It wasn't brought up... I don't anticipate she will fall in the hospital.' (participant 42)
Falls were accident	Older adult: 'No I don't see any reason... I had a fall, that's it. It's happened and it's finished... It shouldn't happen... that's why it is an accident.' (participant 18)
Falls were not preventable	Older adult: '... If you can look in front, you say you have an accident, you better stay at home, nothing right.' (participant 18)
Falls were natural consequences of ageing	Caregiver: 'I don't think anyone can stop her from falling if she is going to fall... They are old and their balance is gone, all her old friends and also their balance is not good.' (participant 25)
They knew what to do to prevent falls	Older adult: 'I tried myself not to fall. I hold onto my wife... if she is not next to me, I hold onto the wall.' (participant 22)
Perceptions	Examples
Think staff will tell them	Caregiver: 'we needed to know all these things, the nursing staff had to tell us.' (participant 32)
Think staff were too busy to talk about falls prevention	Older adult: 'Not enough nurse... there is no time for them.' (participant 31)
They think existing falls prevention would work	Older adult: 'No, I don't think I need to... As I got everything, what they tell me to use, follow those instructions. To have help from the wheeler, equipments...' (participant 26)
Disinterest	Examples
Not interested in falls	Older adult: 'Briefly... My thing is to forget about falls and don't let it happen again.' (participant 13)

... We don't call the family member... just to be involved in falls prevention. (participant 57, acute ward doctor)

Provision of falls prevention information by caregivers to older adults

Nature of falls prevention information

Activity-specific information. The information that caregivers received and reinforced to the older adults was often related to the amount of assistance required when the older adult was mobilizing.

He (my son) is always discussing with me... to get into the car. (participant 35, older adult)

Reasons for discussion not taking place

Importance of caregiver's presence. Little information was described as being provided by caregivers to patients. This was influenced by how much caregivers were present on the ward and available to receive information from the

hospital staff in order that they may reinforce the information to the patient.

We don't seek them (caregivers) out, but if they are in the room whilst we are talking... (participant 54, subacute ward doctor)

After discharge, a caregiver would only receive information if they were present at medical consultation or at follow-up therapy sessions.

Discussion

This is the first study, to our knowledge, that has sought to describe the provision of falls prevention information to older adults from hospitalization to discharge, and to explore the reasons of why such a discussion does not take place. We identified that many opportunities for information and education provision were not being taken up by health professionals. Information was typically provided by a related discipline, for example, exercise by physiotherapist. A problem with this structure of

information provision is that not all patients are seen by relevant discipline groups. It highlighted the importance of having a coordinated approach and appropriate referral to other health professionals for intervention.

Our findings indicated that information provided by health professionals was rarely evidence based. Strategies that have a strong evidence base of effectiveness (e.g. strength and balance exercise) were infrequently promoted. Strategies without an evidence base that focused on performance of activities to reduce falls risk 'here and now' were frequently promoted (Table III). Strategies that may be harmful (i.e. walking among people who may be at high risk of falls) were also promoted [16], though this particular example may be a special case as walking may have other benefits outside of falls prevention. It is possible that not all health professionals who cared for older adults are familiar with evidence-based falls prevention information; however, we did not collect data to ascertain this.

It was uncommon for older adults to receive additional information after they were discharged from the hospital unless they had referral for on-going therapy from allied health. This indicates that there may be scope to improve health outcomes as previous studies have found that providing information on personal risk factors for falls and strategies to prevent falls increases the likelihood for uptake of falls prevention behaviors and activities during hospitalization and post-discharge [8, 12, 17, 18].

It seemed that doctors' reactive practice in falls prevention was driven by necessity, for example, when discharging patients from hospitals unless falls was a part of the patient's presenting condition. This finding concurred with other studies that indicated doctors relied on other health professionals to provide falls prevention services [19]. It is possible that the resistance of some older adults to accept that they are at risk of falls makes it a sensitive and potentially confrontational subject for discussion, creating a disincentive for medical practitioners to have this discussion without the older adult initiating it. However, there appears potentially high value in doing so as previous studies have shown that older adults readily receive falls prevention advice

from health professionals, especially medical practitioners and that this can positively influence participation in falls prevention programs [20, 21]. To enable medical practitioners to have a more active role, a number of other barriers may also have to be addressed. Barriers that we identified included time limitations, lack of educational resources and knowledge and low prioritization of falls prevention. This is consistent with those identified in related research [22]. Modifiable barriers such as developing and providing education resources and training may be a viable means for enhancing practice.

The multi-silo approach of falls prevention practice was an impediment to consistent provision of falls prevention information to older adults. Although health professionals described it as a team approach, without one group taking a leadership role, many viewed it as not being their responsibility or that others were doing it. This finding was concurrent with another study of older hospitalized patients that found a need for a coordinated approach to education to ensure all patients receive appropriate information [23]. The case management model of care could be applied to falls prevention to enhance interdisciplinary communication, communication in transfer of care with the next health care service and collaboration between health professionals [24, 25].

There was limited seeking of information on falls prevention by patients and caregivers, as they perceived that a health professional would initiate this discussion if it was a problem for them. When combined with little discussion of this issue with medical practitioners without initiation from the older adult and sporadic input from other health professionals, a situation is created where discussion of this subject may be neglected. Older adults' views on falls prevention showed that they did not see the problem of fall as being relevant for them personally. Other researchers had shown that many older adults hold the same view [26]. Unlike these authors, we suggest that it may be useful for health professionals to raise the problem of falls with older adults to enhance the likelihood that they will discuss this issue with different health professionals. Education interventions aimed at encouraging patients to initiate discussions

on falls prevention with health professionals may therefore be of value. Caregivers may also be important in this process as they are in a position to negotiate or reinforce methods of falls prevention and older adults were more likely to take up interventions if they felt that their doctor or family 'approved' of it [20, 27].

We recommend the following ways to aid provision of falls prevention information during and after hospitalization:

- Use of a patient education program for falls prevention in hospital setting.
With research being limited in this area, clinicians may take reference to designing an education program using face-to-face professional contact with multimedia materials based on behavioral change model. This method of education had recently been proven in a large randomized trial to reduce falls in hospitalized older adults that were cognitively intact [12].
- Use of assessment procedures may assist health professionals to routinely assess which falls prevention intervention(s) is likely to be beneficial for an individual patient [28].
- Send discharge summaries to general practitioners directly, along with relevant falls prevention information.
- Use of a case management model and designation of a case manager on the ward as coordinator to ensure that all disciplines contribute to falls prevention [24, 25], including referrals to other health professionals in the community [29].
- Invitation for caregivers to attend the ward and at consultation with health professionals to raise concerns that they may have regarding falls.
- Development of interdisciplinary, health professional education programs to train health professionals in how to manage patients at risk of falls.

Online and face-to-face models of interdisciplinary health professional training in exercise prescription for falls prevention have previously been developed and evaluated for

effectiveness [30] and cost-effectiveness [31], though education programs for other falls prevention strategies are also needed.

Research had demonstrated that motivational factors such as health anxiety was associated with increased information seeking behavior and reassurance sought from medical resources [32]. We did not investigate this relationship in this study, however, given the finding of the general lack of information seeking by the participants, it was unlikely this factor played an important role in this context.

Our study investigated falls prevention information provision in general. A case study design would enable a more in-depth investigation into the perspectives of stakeholders with a particular patient. This research was conducted across multiple hospitals within one geographic region and one health service. Hence, it is possible that some of the factors identified may be relevant only to this context. Recruitment of participants whose only language was English may have limited the insights potentially gained from older adults from culturally and linguistically diverse backgrounds. The first and second patient and caregiver interviews were conducted 1–2 weeks and 3 months post-discharge; this may have led to some recall bias and reprioritization of the importance of some issues as they were perceived at that point in time. Older adults and their caregivers were allowed to remain in the same room during the interview, which may influence the response interviewees gave to the questions. However, it created an opportunity for clarification if there was great disparity in responses. The interviewer is a clinician from the organization, this may cause some staff participants to give compliant response in favor of the organization as well as what they perceived the organization expected them to do for falls prevention.

Conclusion and implications

Provision of falls prevention information to the older adults during and after hospitalization is suboptimal. There is a great potential to improve

information provision in falls prevention to assist older hospitalized adults and their caregivers with management of their falls risk in this high risk period. Future research is required to investigate how such information can be better delivered and knowledge into the motivating factors behind falls prevention information seeking behavior would be useful. Also, the effectiveness of education intervention in reduction of falls in this high-risk period should be explored.

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T.P.H. is director of Hospital Falls Prevention Solutions Pty Ltd which provides training to hospital staff in the provision of the Safe Recovery program and has provided expert witness testimony for Minter Ellison Law Firm on the subject of the prevention of falls in hospitals.

Participants gave consent by signing 'Patient Information and Consent form'. Risk relating to participation in this research and risk of identification of data is low. Participants were given the instruction if they were distressed in the process of interview, they could pause or withdraw from the interview. No participant had required post-interview follow-up due to undesirable effect.

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Conflict of interest statement

None declared.

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