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Preparing patients at high risk of falls for discharge home after rehabilitation: Do we meet the guidelines?

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Aim: To determine whether rehabilitation inpatients at high risk of falls receive adequate falls risk assessment, management and handover on discharge as per Australian Best Practice Guidelines.

Methods: Medical records of 121 people who received inpatient rehabilitation were retrospectively screened; records of 50 people discharged home and at high falls risk (fall in last 12 months, fall preceding/during admission) were audited. Data extracted included falls risk identification during rehabilitation and in discharge documentation; falls risk factors assessed; and fall prevention strategies implemented.

Results: Discharge documentation correctly identified falls risk for just nine of the 50 people. Patients at high falls risk had a median of 8.0 (interquartile range 6–10) of 17 risk factors. There was limited evidence of assessment for osteoporosis (n = 8), footwear (n = 4) and visual assessment in the previous 2 years (n = 1). Patients received a median of 6.5 (interquartile range 5–9) out of 16 possible strategies. Common strategies were mobility (n = 48), strength (n = 44) and Personal Activity of Daily Living training (n = 43). For 12 risk factors, if the factor was present, there was evidence of a strategy in more than 80% of records.

Conclusions: There was little evidence that people at high risk of falls received systematic falls risk assessment during rehabilitation. When a risk was identified, generally a strategy was implemented. However, failure to assess some risk factors might have limited fall prevention strategies offered. Failure to adequately address risks during hospitalization could contribute to falls post-discharge. **Geriatr Gerontol Int 2016; 16: 570–576.**

Keywords: accidental falls, rehabilitation, guideline adherence, clinical audit, hospitalization.

Introduction

Falls are a significant issue for older people, as they often have serious physical and psychological consequences for the individual, and financial costs for the healthcare system.[1,2] Falls are one of the most common harmful incidences that occur in hospitals; a recent randomized controlled trial found that 14% of participants in the control arm fell during their hospital stay.[3] Falls are a significant concern for people after discharge from hospital, with up to 40% of people falling at least once in the subsequent 6 months.[4] Falls might be more common in the first 2 weeks postdischarge,[5,6] although this finding is not consistent across all studies.[4] The risk of a fall-related injury might also be increased post-hospitalization, with over 50% of falls postdischarge resulting in an injury.[4] Given the high rate of falls after discharge home from hospital, it is imperative that falls risk is comprehensively evaluated and strategies to minimize falls are implemented before discharge.

Australian best practice guidelines recommend that people at risk of falls are assessed and that identified risk factors are addressed using a multidisciplinary approach.[7,8] However, it is unclear whether healthcare staff incorporate and adhere to falls prevention guidelines in routine practice. Falls strategies implemented by nursing staff, such as positioning near nursing station and charting of falls risk, were reported to be well adhered to with 94–100% compliance.[9,10] In contrast, other strategies, such as the use of multidisciplinary fall

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plans and patient/family education, have reportedly poor compliance rates with 4% and 11%, respectively.[10,11] To date, compliance with a best practice multidisciplinary approach to falls prevention and management in the subacute setting has not been examined.

The purpose of the present study was to determine whether current fall prevention practices for people who were at high risk of falls and discharged home after rehabilitation met the published Australian Best Practice Guidelines.[7,8] This included determining whether people at high risk of falls were: (i) identified during inpatient rehabilitation; (ii) assessed for falls risk or injury factors; (iii) provided with appropriate falls risk or injury minimization strategies; and (iv) identified as high risk to community care agencies at discharge.

Materials and methods

A retrospective medical record audit of 50 people discharged home from rehabilitation who were identified as having a high risk of falls was carried out using a standardized audit tool and guidelines (see Supporting Information, Appendix 1 and 2). This study was approved by the Austin Health Office for Research as an Audit Activity.

Audit tool development

The audit tool (Supporting Information, Appendix 1) was developed by referring to the "Best Practice Guidelines for Australian Hospitals" and the "Best Practice Guidelines for Australian Community Care."[7,8] The tool was refined with input from a multidisciplinary team including medical, pharmacy, dietetics, physiotherapy and occupational therapy disciplines. The tool comprised four sections. Section one screened records to determine eligibility (discharged home and at risk of falls) and obtain demographic information. High falls risk was defined as history of a fall in the past 12 months, a fall in hospital or classified at a high risk of falls as determined by the Austin Health Falls Risk Assessment Tool (AFRAT). The AFRAT is a screening tool completed by nursing staff for all patients on hospital admission. It is reviewed on transfer to the rehabilitation wards, after a fall or when there is a change in medical or mobility status. Individuals are classified at high risk of falls on the AFRAT if they have fallen in the past 12 months or had both cognitive impairment (as identified by the admitting nurse) and required assistance with mobility.

Section two examined 17 potential fall risk or injury risk factors to determine whether they were assessed and documented. This section included outcome measures with validated cut-off points for increased falls risk where appropriate.[7,8,12–16] Section three identified whether 16 potential fall prevention or injury prevention strategies had been considered or implemented. All strategies could be implemented while the patient was in hospital. A risk factor was classified as present/absent and a strategy was classified as implemented (including new strategy, strategy/ies in place, recommended post discharge or unable to implement a strategy) if documented in the medical record. If no documentation about a risk factor or strategy was found, the risk or strategy was classified as "not documented." The final section considered whether falls risk was correctly identified in discharge paperwork. The tool and guidelines were piloted before data collection. Data were extracted from electronic hospital record systems directly into a secure electronic database (KS). To ensure accuracy and reliability of results, several records were independently audited by two further researchers (CS, JB). If there was conflicting documentation in the medical record as to the presence/absence of a risk factor, the risk factor was considered to be present.

Participants

Medical records of every third admission to three rehabilitation wards between September and December 2012 were screened until 50 people who had a high falls risk and were discharged home were identified.

Data analysis

Data were synthesized and analyzed descriptively using medians, frequencies, and percentages. The number of falls risk/injury risk factors and fall or injury prevention strategies were calculated for each person and then averaged across the group. The number of records in which there was no documentation for a falls risk factor (i.e. it could not be determined whether the risk factor was present or absent) was calculated for each risk factor. Data were then examined to determine whether individual risk factors received appropriate strategies. The number of records in which an appropriate fall prevention strategy was in place (including new strategy, strategy/ies in place, recommended post discharge or unable to implement a strategy) was divided by the number of records in which a risk factor had been identified.

Results

As shown in Figure 1, 12 medical records were screened and 65% of people discharged home were considered to be at high risk of falls. For the 50 included records, the average age of patients was 75.2 years (SD 12.6), 54% were female and the average length of stay in rehabilitation was 20.2 days (SD 12.0). The spread of patients

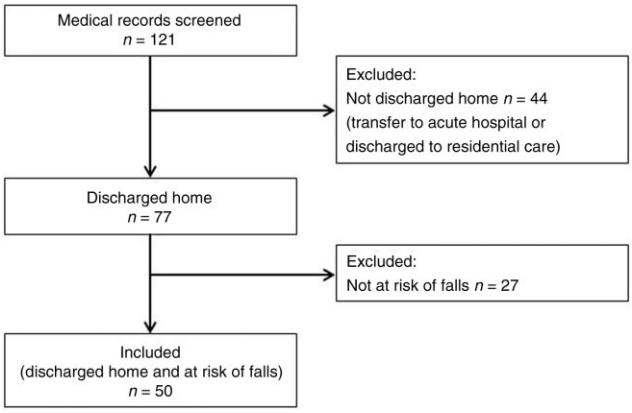

Figure 1 Screening process to identify medical records of people at high risk of falls who were discharged home.

Table 1 Characteristics of people at high falls risk and discharged home

Admission diagnosis	*n*
Orthopedic: fractures/dislocations	11
Reconditioning/restorative	11
Orthopedic: postorthopedic surgery	7
Stroke	7
Cardiac	4
Pulmonary	3
Other disabling impairments	2
Other neurological	4
Amputation of limb (non traumatic)	1

with high falls risk was even across the three wards ($n = 18$, $n = 16$, $n = 16$). Primary admission diagnosis is detailed in Table 1. Comorbidities were common, with an average of three comorbidities associated with increased falls risk per patient (range 0–9).

Identification of people at high fall risk by clinical staff and handover of falls risk at discharge

The AFRAT identified 34 of the 50 people (68%) as having high risk of falls. Despite meeting the audit criteria for high falls risk, the remaining 16 people (32%) were not identified as being at high risk of falls on the AFRAT. Falls history was most commonly recorded in the physiotherapy notes ($n = 37$), on the AFRAT ($n = 36$) and in the occupational therapy notes ($n = 4$). A total of 42 people had a previous history of falls.

Of the 50 people with high falls risk, just nine (18%) were correctly identified in discharge documentation. A total of 24 patients (48%) were incorrectly identified as having low risk of falls in their multidisciplinary discharge report. Falls risk was not identified for the remaining 17 patients in discharge paperwork.

Assessment of fall risk and injury risk factors

The median number of falls/injury risk factors documented per person were 8.0 (interquartile range 6–10) out of a possible 17 risk factors. The documentation of risk factors (present, absent or not documented) is presented in Table 2. Common risk factors included mobility impairment (100%), personal activities of daily living (PADL) impairment (88%) and lower limb strength deficits (84%). The frequency of a risk factor being classified as "not documented" varied substantially, ranging from 92% for inappropriate footwear to 0% for psychoactive medication, continence issues, mobility and impairment with PADL.

Visual deficits were identified in 52% of patients; however, formal assessment of vision in the preceding 2 years was documented for only one patient. A further two patients were identified as seeing an ophthalmologist, but the date of their last review was not documented. Although the use of glasses was documented in many people ($n = 39$), the type of corrective lenses was recorded in just 19 cases. Of these, the use of bifocal or multifocal lenses was identified in four people.

The documented use of validated tools to identify and evaluate cognitive, balance, mobility, and strength impairments was inconsistent. Mobility deficits were identified in all 50 people, but validated clinical tools were used in just 26 cases. The presence of balance impairment could not be determined for 21 patients, as there was no documented balance assessment. Although there was evidence that balance testing might have been contraindicated for three people (e.g. weight-bearing restriction), no contraindications to testing were evident for the remaining 18 patients. Cognitive deficits were identified in 26 patients, with 19 having a documented outcome measure indicating cognitive deficit.

Implementation of fall or injury prevention strategies

Rehabilitation patients had a median of 6.5 (interquartile range 5–9) out of 16 fall or injury prevention strategies actively implemented during their inpatient stay. However, there was substantial variation between individuals; ranging from three to 11 strategies. As shown in Table 3, the most commonly implemented strategies were mobility retraining ($n = 48$), strength training ($n = 44$) and PADL retraining ($n = 43$).

Table 4 presents the frequency of strategy implementation when a given risk factor was present. When a risk factor was identified, it was generally addressed; all patients with identified mobility impairment, postural hypotension or osteoporosis had a strategy implemented or in place. However, some risk factors were poorly addressed, with visual deficits being formally

Table 2 Risk factors for falls

Risk factor	Present (*n*)	Absent (*n*)	Not documented (*n*)
Prescription of psychoactive drugs	23	27	0
Vision deficit	26	14	10
Cognitive deficit	27	22	1
Impulsivity/behavioral problems	21	4	25
Foot problems	16	1	33
Inappropriate footwear	2	2	46
Lower limb somatosensory loss	8	24	18
Continence issues	32	18	0
Weight loss	21	20	9
LOA/Poor oral intake	19	19	12
Balance impairment[†]	29	0	18
Mobility impairment (indoor)	50	0	0
Lower limb strength deficit	42	5	3
PADL impairment	44	6	0
Home environment hazards	22	13	15
Postural hypotension	1	12	37
Osteoporosis	8	0	42

[†]Balance assessment was classified as contraindicated for three participants as weight-bearing restrictions prevented assessment. LOA, loss of appetite; PADL, personal activities of daily living.

Table 3 Falls prevention strategies

Strategies (*n*)	N/A	Implemented	Adequate strategies in place	Unable	Recommended after discharge	Not documented
Psychoactive drug reduction	27	9	0	7	0	7
Vision assessment	0	2	2	1	0	45
Cognition assessment	18	25	2	0	1	4
Footwear advice	0	7	0	0	0	43
Continence assessment	17	17	4	0	2	10
Continence aids	8	30	9	0	0	3
Dietician review	5	27	0	0	0	18
Balance training	0	31	0	3	0	16
Strength training	0	44	1	1	0	4
Mobility retraining	0	48	0	2	0	0
PADL retraining	0	43	2	1	0	4
Home assessment	1	19	15	1	2	12
Falls education	0	17	0	0	0	33
Postural hypotension management	2	11	0	0	0	37
Osteoporosis management	0	8	24	0	0	18
Hip protectors	0	1	0	0	0	49

Not applicable (N/A): strategy not indicated as falls risk/injury risk factor absent; Implemented: strategy implemented; Adequate strategies in place: strategy in place at time of admission; Unable: documented rationale for non-implementation of strategy; Recommended after discharge: strategy not implemented during hospital stay but recommended in discharge documentation; Not Documented: no documentation regarding strategy. PADL, personal activities of daily living.

addressed in just 15% of patients ($n = 4$). Some strategies implemented (or already in place) did not have an associated documented risk factor. In particular, osteoporosis was not documented as a risk factor for 24 patients receiving medications to optimize bone health.

Discussion

There was little evidence that people undergoing rehabilitation who had a high risk of falls received a structured and comprehensive fall risk assessment. This is

Table 4 Frequency of strategies implemented in the presence of a risk factor

Risk factor	Risk factor present (*n*)	Strategy implemented, *n* (%)
Prescription of psychoactive drugs	23	16 (70%)
Vision deficit	26	4 (15%)
Cognitive deficit/impulsivity/behavioral problems†	31	25 (81%)
Foot problems/inappropriate footwear lower limb/somatosensory loss†	21	5 (24%)
Continence issues	32	31 (97%)‡
Weight loss/LOA/poor oral intake†	23	22 (96%)
Balance impairment‡	29	25 (86%)
Lower limb strength deficit	42	39 (93%)
Mobility impairment (indoor)	50	50 (100%)
PADL impairment	44	41 (93%)
Home environment hazards	22	19 (87%)
Postural hypotension	1	1 (100%)
Osteoporosis	8	8 (100%)

†Risk factors combined for this analysis. ‡Strategies Continence Assessment and Continence Aids combined for this analysis. LOA, loss of appetite; PADL, personal activities of daily living.

concerning given that patients might be at increased risk of falling in the weeks immediately after discharge.[6] Current guidelines report that a previous history of falls is the greatest predictor of future falls.[8] Over half of the people discharged home from rehabilitation had a previous history of falls, indicating they are a high risk group. The rehabilitation setting is an ideal opportunity to implement a comprehensive, multidisciplinary falls management program. The lack of systematic assessment and strategy implementation indicates these patients might not receive adequate management of their falls risk while in hospital.

Just 68% of people were identified as having a high risk of falls based on the AFRAT. The remaining patients were identified as "at risk" from the medical records, either because of a history of falls pre-admission or because of a fall while in hospital. This shows that the AFRAT was incorrectly completed for 32% ($n = 16$) of patients. The AFRAT might be incorrectly completed if there was incorrect or incomplete information about falls history on patient admission, or if the tool was not reviewed after a fall in hospital. Additional information about falls history was documented by various health professionals; however, this information might not have disseminated to the whole team. Failure to identify people at high risk of falls could result in inadequate assessment of falls risk factors. This finding highlights the importance of reviewing a patient's falls risk as additional information is obtained or a patient's clinical condition changes.

The lack of accurate handover of falls risk at discharge was also a major concern. The discharge multidisciplinary report, the primary tool for communication between inpatient staff and follow-up services, either did not document or incorrectly documented falls risk for 82% ($n = 41$) of patients. Just two of the three wards had a specific question on falls, which could partly explain the absence of documentation. Practice on these wards was for a designated team member to complete the item on falls risk; however, the whole team had input into the report. One issue identified post-audit was there were no guidelines as to what constituted "high falls risk" on discharge. Absent or inaccurate handover of falls risk could impact on falls risk management at discharge and lead to inadequate follow up, particularly in the early stages after discharge when falls risk is high.

The audit showed that people at high risk of falls had many risk factors that could predispose them to future falls or falls injury. Patients had a median of 8.0 documented fall risk or injury factors, comparable with the 7.6 fall risk factors identified in patients attending an outpatient falls clinic.[17] This is another indication that these people are at high risk of falling and should receive interventions comparable with those provided by specialist outpatient falls clinics. However, as not all risk factors were documented in all of the records, the number of risk factors per person might be even higher. Falls or injury risk factors that were poorly documented were osteoporosis, visual deficits and foot/footwear problems. Failure to assess a risk factor limits the ability to implement strategies to address the risk. Although some fall risk factors, such as age and previous history of falls, are unmodifiable, many risk factors considered in the present study had the potential to be addressed.[18,19] These results raise the possibility that key fall risk factors were not being adequately identified and addressed during the rehabilitation stay.

The results also identified that validated tools were not always used to objectively document cognitive impairment, balance or mobility impairment. This is concerning given that outcome measures are essential to accurately assess function and evaluate interventions. For example, poor balance is a major risk factor for falls; however, there was no evidence of an objective assessment for 36% of our high risk sample. These results indicate there is a need to explore the barriers to the use of validated outcome measures by clinical staff.

Patients at risk of falling had in place a median of 6.5 out of 16 potential fall prevention strategies during their inpatient stay. This is comparable with findings from an outpatient falls clinic where patients received six new management strategies.[17] Generally, when a risk factor was identified, an appropriate strategy was implemented. It is also acknowledged that some strategies might have been implemented, but not documented. This could partly account for the low rate of strategies, such as falls education and footwear review. Interestingly, several strategies, such as continence aids, PADL retraining and drug management of osteoporosis, were implemented in the absence of a given risk factor or where the risk factor was not documented. This could indicate that risk factors were not accurately documented or that rehabilitation patients routinely receive a set of core interventions as part of a standard rehabilitation program. It was beyond the scope of this audit to determine whether the strategy was specifically targeted to minimize falls. However, as the focus of many interventions in rehabilitation is to maximize functional independence and safety for discharge home, it is reasonable to expect that falls risk would be reduced through use of these strategies.

One challenge of this audit was that data were dispersed throughout the medical record and none of the wards used a comprehensive falls risk assessment tool. In addition, some data were in discipline specific records that might not have been readily available to the treating team during the admission. Management of falls requires a multidisciplinary approach. However, a risk of this approach is that no single team member takes responsibility for a patient's overall falls management plan. In addition, falls risks or strategies that can be assessed or implemented by more than one discipline (e.g. falls education) might not be undertaken by any member of the team. This highlights the need for a systematic approach to falls management, and a clear understanding from team members as to who is responsible for various tasks.

There were several limitations to the present study. This study was carried out across three wards within a single tertiary level organization, and might not reflect general clinical practice. It would be of interest to explore compliance with guidelines in other centers and countries. It is also acknowledged that that the medical record might not always reflect clinical practice. Risk factors that are absent or strategies seen as "routine," such as ensuring appropriate footwear is worn, might not be documented. Thus, consideration of risk factors and strategies could be higher than evident in this audit. However, given this was a high-risk population, the systematic documentation of risk factors and strategies should be considered a critical component of the individual patient's management. This highlights the need to explore more efficient and comprehensive methods of documenting fall risk factors and management.

Another limitation of the study was that it was not possible to determine whether the interventions were delivered in the most appropriate format for an individual's risk factor. For example, exercise intensity and dosage are important in achieving a reduction in fall risk; however, we did not collect this level of data in the audit.[20] Implemented interventions might not have been adequate to have meaningful effects on a given risk factor. Adherence to the interventions provided was also not explored. Many fall prevention studies have identified poor adherence as a significant confounding variable.[17,2122] Further investigation is required into how people at risk of falls comply with a comprehensive fall prevention programs in the subacute setting.

There was little evidence that people at high risk of falls received systematic and comprehensive assessment and management of their falls risk during rehabilitation. This is a concern, as rehabilitation patients have significantly higher falls rates on discharge than the general community, and inadequate management might contribute to the high falls rates and falls-related readmissions to hospital noted after discharge.

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Disclosure statement

No potential conflicts of interest were disclosed.

References

1 Lord S, Delbaere K, Tiedemann A, Smith S, Sturnieks D. Implementing falls prevention research into policy and practice: an overview of a new National Health and Medical Research Council Partnership Grant. *N S W Public Health Bull* 2011; **22**: 84–87.
2 Mackintosh SF, Hill K, Dodd KJ, Goldie P, Culham E. Falls and injury prevention should be part of every stroke rehabilitation plan. *Clin Rehabil* 2005; **19**: 441–451.
3 Haines TP, Hill AM, Hill KD *et al*. Patient education to prevent falls among older hospital inpatients: a randomized controlled trial. *Arch Intern Med* 2011; **171**: 516–524.

4 Hill AM, Hoffmann T, McPhail S *et al*. Evaluation of the sustained effect of inpatient falls prevention education and predictors of falls after hospital discharge–follow-up to a randomized controlled trial. *J Gerontol A Biol Sci Med Sci* 2011; **66**: 1001–1012.
5 Batchelor FA, Hill KD, Mackintosh SF, Said CM, Whitehead C. Effects of a multi-factorial falls prevention program for people with stroke returning home after rehabilitation: a randomized controlled trial. *Arch Phys Med Rehabil* 2012; **93**: 1648–1655.
6 Mahoney J, Palta M, Johnson J *et al*. Temporal association between hospitalization and rate of falls after discharge. *Arch Intern Med* 2000; **160**: 2788–2795.
7 Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Hospitals. Australian Commission on Safety and Quality in Health Care Canberra Commonwealth of Australia; 2009. [cited 16 Feb 2015] Available from http://www.safetyandquality.gov.au/wp-content/uploads/2012/01/Guidelines-COMM.pdf.
8 Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Community Care. Australian Commission on Safety and Quality in Health Care Canberra Commonwealth of Australia; 2009. [cited 16 Feb 2015] Available from http://www.safetyandquality.gov.au/wp-content/uploads/2012/01/Guidelines-HOSP1.pdf.
9 Nyman SR, Victor CR. Older people's recruitment, sustained participation, and adherence to falls prevention interventions in institutional settings: a supplement to the Cochrane systematic review. *Age Ageing* 2011; **40**: 430–436.
10 Yates KM, Creech Tart R. Acute care patient falls: evaluation of a revised fall prevention program following comparative analysis of psychiatric and medical patient falls. *Appl Nurs Res* 2012; **25**: 68–74.
11 van Gaal BG, Schoonhoven L, Mintjes JA, Borm GF, Koopmans RT, van Achterberg T. The SAFE or SORRY? programme. part II: effect on preventive care. *Int J Nurs Stud* 2011; **48**: 1049–1057.
12 Dite W, Temple VA. A clinical test of stepping and change of direction to identify multiple falling older adults. *Arch Phys Med Rehabil* 2002; **83**: 1566–1571.
13 Hill K, Denisenko S, Miller K, Clements T, Batchelor F. *Clinical Outcome Measurement in Adult Neurological Physiotherapy*, 3rd edn, Camberwell: Australian Physiotherapy Association, 2005.
14 Isles RC, Low Choy NL, Steer M, Nitz JC. Normal values of balance tests in women aged 20–80. *J Am Geriatr Soc* 2004; **52**: 1367–1372.
15 Nasreddine ZS, Phillips NA, Bédirian V *et al*. The montreal cognitive assessment (MoCA): a brief screening tool for mild cognitive impairment. *J Am Geriatr Soc* 2005; **53**: 695–699.
16 National Ageing Research Institute. Falls Risk for Older People – Community setting (FROP-Com): Guidelines. *Victorian Government Department of Human Services, 2005*. [cited 16 Feb 2015] Available from http://www.nari.unimelb.edu.au/nari_tools/nari_tools_falls.html.
17 Hill KD, Moore KJ, Dorevitch MI, Day LM. Effectiveness of falls clinics: an evaluation of outcomes and client adherence to recommended interventions. *J Am Geriatr Soc* 2008; **56**: 600–608.
18 Cameron I, Gillespie L, Robertson M *et al*. Interventions for preventing falls in older people in care facilities and hospitals (Review). *Cochrane Database Syst Rev* 2012; **12**.
19 Gillespie Lesley D, Robertson MC, Gillespie William J *et al*. Interventions for preventing falls in older people living in the community. *Cochrane Database Syst Rev* 2012; **9**.
20 Sherrington C, Tiedemann A, Fairhall N, Close JCT, Lord SR. Exercise to prevent falls in older adults: an updated meta-analysis and best practice recommendations. *N S W Public Health Bull* 2011; **22**: 78–83.
21 Nyman SR, Victor CR. Older people's participation in and engagement with falls prevention interventions in community settings: an augment to the Cochrane systematic review. *Age Ageing* 2012; **41**: 16–23.
22 Di Monaco M, Vallero F, De Toma E *et al*. Adherence to recommendations for fall prevention significantly affects the risk of falling after hip fracture: post-hoc analyses of a quasi-randomized controlled trial. *Eur J Phys Rehabil Med* 2012; **48**: 9–15.

Supporting information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Appendix S1 Do people who are at risk of falls during subacute rehabilitation have appropriate strategies implemented during their stay and at discharge? Audit Tool.

Appendix S2 Do people who are at risk of falls during subacute rehabilitation have appropriate strategies implemented during their stay and at discharge? Guidelines for Completing Audit Tool.