

An evaluation of the preventing falls and harm from falls in older people best practice guidelines for Australian hospitals

*Insights into quality, implementability, awareness and uptake of
key recommendations in Australian acute hospitals*

2012



The CRE in patient safety

The Centre of Research Excellence in Patient Safety (CRE-PS), within the School of Public Health and Preventive Medicine, Monash University, was established in 2005 with the objective of developing national research capability and capacity that in turn improves patient safety. It has close working links with the Australian Commission on Safety and Quality in Health Care. The CRE-PS research group has gained a national and international profile in patient safety research and has extensive clinical and research collaborations both nationally and internationally.

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Executive summary

This report presents the findings of an evaluation of the 'Preventing Falls and Harm from Falls in Older People: Best Practice Guidelines for Australian Hospitals', herein referred to as 'the guidelines', commissioned by the Australian Commission on Safety and Quality in Health Care. The objective was to undertake a comprehensive evaluation of the guidelines to inform the planned review in 2013-2014. The target audience for this document is therefore the guideline review panel, policy-makers who are responsible for their implementation across systems and clinicians responsible for implementing falls prevention programs in the hospital setting.

The guidelines were designed to assist hospitals to implement practices that reduce patient falls and subsequent harm. We found that although hospitals have implemented policies reflective of best practice, substantial practice gaps still remain. This may reflect an implementation failure of the guidelines. The usability of some of the guideline recommendations in the acute hospital environment is also questionable.

This evaluation includes information about the effectiveness of the implementation of the guidelines that was obtained from 12,778 patients and 546 staff members from seven Australian hospitals, collected between September 2011 and June 2012. Interviews, focus groups, surveys, document reviews, audits and structured observations were used. The overall quality of the guidelines and implementability of key recommendations were assessed by 18 clinicians, researchers and policy leaders from Victoria, South Australia, Western Australia, New South Wales and Queensland, using standardised tools.

It is important to note that this evaluation only included information from a sample of Australian acute hospitals that volunteered to participate in the 6-PACK trial. Therefore, the findings cannot be assumed to be representative of all Australian hospitals. Caution should be taken in interpreting data collected from only a minority of hospitals. However, the challenges experienced by the participating hospitals with respect to falls prevention are unlikely to be unique.

The problem of falls in acute hospitals still remains unresolved. Only 57% of nurses believe their current falls prevention program is effective at reducing falls and almost 30% think falls are inevitable in older patients and cannot be prevented. Key findings include:

Awareness of the guidelines was limited to senior staff.

- 58% of nurses believed guidelines were a useful resource, yet the majority of ward nurses were not familiar with the guideline document or key recommendations.

The content of future guidelines should be more concise and 'tool' focused.

- Staff identified that guidelines should be brief and should include evidence summary tables, validated risk screening and assessment tools and decision tools for care processes presented as flow charts.

'I'm sure they have wonderful information in them. But, coming from a practical clinical area, they're always too long.'

The guidelines were assessed as being of moderate quality.

- The AGREE II assessment found the guidelines were of moderate overall quality (total quality score 5 out of 7).

Reasons cited by the assessors for lower quality scores include:

- Omission of evidence relating to patient/consumer preferences.
- Omission of key professional groups from the guideline development.
- A focus on general falls prevention information that appeared to be more relevant to the community rather than the hospital setting. Risk factors unique to the hospital setting were not extensively discussed nor was there sufficient discussion of special patient populations at increased risk; for example, stroke, amputee or oncology patients.
- It appears that relevant evidence may have been omitted from the guidelines; for example, fear of falling, patient education, behavioral services for inpatients with confusion, environmental solutions and staff training particularly on nursing attitudes and behaviors.

Future guidelines should aim to have a more even contribution from each of the states and territories.

- Several of the guideline developers and reviewers were from New South Wales, with the other states appearing to be underrepresented.

Several barriers to the implementability of key recommendations were identified.

- A lack of clarity around the executability (exactly what to do), decidability (when to do something) and flexibility (interpretation and alternatives for execution) of key recommendations was identified.

Deficits exist in the delivery of guideline care relating to use of risk assessment and screening tools.

- Only two of the seven hospitals use tools that have proven good predictive accuracy and which have been validated across different hospital settings.
- 64% of patients had a risk tool completed within the first day of admission to hospital.
- Only 13% had their score updated during their admission and only 24% of fallers had their risk score updated within the day following the fall.

Guidelines should only include simple validated risk tools and education and audit tools to ensure their effective use.

- Limitations of currently used tools include length, scoring that was not intuitive, and inaccuracy in identifying patients most at risk of falling.
- Increased education, audit and use of reminders were identified as key drivers for improving practice.

'We all just go tick, tick, tick, tick...'

'The thing about risk assessment is that if I've identified someone who is a high-falls risk, I've got to then show that I've put an intervention in place; I don't have 30 high-low beds'.

Individual surveillance and observation for high risk patients is acceptable and has been integrated into standard care practice.

- 61% of high falls risk patients received individual surveillance and observation during their admission; for example:
 - signs at the bed head (29%);
 - hourly checks (16%);
 - constant patient observer (3%); and
 - positioning in a high visibility area (12%).
- 1 in 5 falls occurred in the bathroom and of these more than 70% were unwitnessed.

Nurses stated that they were uncomfortable staying in the bathroom with some patients as they felt it compromised their privacy. Nurses also indicated that they believed a constant patient observer was the most effective strategy for preventing falls.

Management programs for patients with delirium and confusion are infrequently used.

Managing patients with delirium and confusion was consistently identified by nurses as the biggest challenge they face with falls prevention.

- 1 in 3 falls occurred in patients recorded as being confused, agitated or disorientated.
- Only 50% of patients with documented delirium or dementia had a risk tool completed within one day of being admitted to a ward.
- Less than 6% of patients with documented delirium or dementia received a medication or geriatrician review or a delirium management program.
- 49% of patients with documented delirium or dementia were taking psychoactive medications.

Nurses indicated that they would like more education and strategies for managing patients with delirium. Diversion therapy activities similar to those offered in residential aged care settings were highlighted as being potentially useful.

Medication reviews with an emphasis on avoidance of psychoactive medications are rarely completed.

- Only 6% of high falls risk patients had a documented medication review for falls prevention.

It should be noted that there did not seem to be a standardised process for recording when a medication review was undertaken for the purpose of falls prevention as opposed to other purposes such as pain management.

- 37% of high falls risk patients were taking psychoactive medications.

Nurses felt that, whilst geriatricians were vigilant in reviewing medications to decrease falls risk, other medical staff were less aware and therefore reviews for this purpose were rarely undertaken. To improve the use of medication reviews a structured process should be implemented to trigger reviews.

'They are very demented and sick and delirious when they come in. So what do we give them, sedation, and what happens – bang.'

'It's a balancing act.'

Post-falls management procedures are in place to facilitate identification of injuries resulting from a fall but many falls are not reported.

- 60% of nurses reported their ward had a post-fall procedure in place (that they were aware of) to ensure prompt identification of fall injuries.
- 64% of all falls and 75% of falls with injury were documented in the incident reporting database.

This suggests that research, benchmarking activities and temporal trend analysis based on incident reporting data alone may lead to inaccurate and misleading conclusions.

Where to from here?

There remains much opportunity to improve falls prevention practice in acute hospitals. Only one recommendation—individual surveillance and observation for high risk patients—could be considered to be acceptable and moderately well implemented into current practices in acute hospital wards. The remaining studied recommendations were found to have varying levels of acceptability, feasibility and uptake in the hospitals included in this evaluation.

Facilitators of effective falls prevention practice were identified by hospital staff as being:

- access to constant patient observers;
- presence of an active falls prevention leader;
- NUM leadership in falls prevention;
- regular on-ward face-to-face training; and
- use of audit and feedback on performance outcomes.

Barriers to effective falls prevention practice were identified by hospital staff as being:

- the physical ward environment;
- difficulty in accessing resources; e.g. low-low beds;
- inaccurate and lengthy falls risk assessments;
- health status of patients; e.g. delirium; and
- a lack of time.

The barriers and enablers identified by this evaluation can be used by hospitals to support policy and practice review. Implementation strategies include executive and ward leadership, on-ward face-to-face training, access to falls prevention resources and feedback of audit and outcome data to ward nurses.

The information contained within this report can be used to inform future guidelines and knowledge translation activities. Key recommendations relating to the development of future guidelines are listed below.

1. A guideline working group should be established that is nationally representative and includes:
 - experts in the development of clinical practice guidelines or knowledge translation tools;
 - hospital falls prevention research leaders;
 - hospital falls prevention practice and policy stakeholders;
 - consumer groups; and
 - key clinical groups including general medical staff, geriatricians, pharmacists, psychiatric liaison nurses/consultants, nursing staff; physiotherapists, occupational therapists, podiatrists and hospital quality and safety leaders.
2. The content of future guidelines should be developed in keeping with the evidence base. Systematic methods should be used to ensure all relevant literature is identified and literature presented should be critically appraised using standard tools and methods.
3. Future guidelines should focus on a brief number of direct recommendations that are easy to implement within current hospital resources. Included recommendations should be supported by the evidence base and assessed using the GLIA tool by the guideline working group to optimise their quality and implementability.
4. Strategies for improving knowledge and skills in the area of managing high falls risk patients with delirium and cognitive impairment should be a priority target for future projects and initiatives.
5. The content of future guidelines should be more 'tool' focused. To facilitate use in the busy ward environment, content should be less text dense and include more visual aids such as decision tools for care processes presented as flow charts.

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1 Project scope and purpose

The '*Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Hospitals*', herein referred to as 'the guidelines', were developed by the Australian Commission on Safety and Quality in Health Care and endorsed by Australian Health Ministers in November 2009. They are designed to inform clinical practice and assist hospitals to develop and implement practices that reduce both patient falls and the harm sustained from falls. The guidelines are due to be reviewed in 2013-2014. Despite considerable focus on falls prevention in Australian hospitals, there still remains little information on the degree to which knowledge about falls prevention and management has been translated into practice; in particular, knowledge about the effectiveness of the implementation of the guidelines.

This evaluation provides comprehensive information about the quality, implementability and uptake of the guidelines in a sample of Australian acute hospitals. It attempts to answer the question '*Are these guidelines being put into practice with patients at risk of falling in the acute hospital setting?*'.

In addition, key recommendations are made based on the findings of this evaluation that can be used to inform the planned guideline review. The target audience for this document is therefore the guideline review panel, policy-makers who are responsible for their implementation across systems and clinicians responsible for implementing falls prevention programs in the hospital setting.

2 Background

2.1 *Best practice guidelines*

Best practice guidelines are increasingly being used throughout the world to improve the quality of patient care in many clinical settings. Guidelines aim to facilitate the implementation of evidence into practice, support clinical decision making, and influence public policy¹. They also aim to organise large amounts of relevant information into formats that are easy to navigate and understand in the target clinical setting. They contain summaries of the current evidence and systematically developed statements or 'recommendations' that aim to facilitate *evidence based best practice*. These summaries are essential in an environment where the evidence is rapidly expanding and changing.

Guidelines alert clinicians to practices that are well supported by evidence and expert opinion and should therefore be consistently applied to their patients. They aim to bring attention to ineffective, dangerous and wasteful practices so that clinicians question the use of these practices and can, where appropriate, use alternative known best practices². Successful implementation of guidelines should therefore improve quality of care through standardisation. They should increase the use of best practice interventions known to be effective at improving patient outcomes and decrease the use of ineffective interventions and practices which represent sub-standard care².

The success of guidelines is determined by their use in real life situations and their impact on clinical practice and patient outcomes. Whilst there is evidence for the effectiveness of guidelines, not all guidelines are successful in achieving this. Many factors relating to the nature of the guideline itself, the target audience (end-user), the dissemination and implementation may all contribute to sub-optimal success³. These all need to be considered when implementing guidelines.

2.2 *Knowledge translation*

Knowledge translation relates to the concept of moving knowledge into action. It is a phenomenon that is gaining increasing attention in health care literature. It involves the process of exchange, synthesis and ethically sound application of knowledge in complex systems such as health care⁴. Guidelines have the potential to be essential catalysts in the process of knowledge translation as they provide a medium by which knowledge is synthesised and exchanged, as represented by the development and dissemination stages in the guideline lifecycle (Figure 1).

The focus on understanding and examining knowledge translation in health care stems from acknowledgement that the transfer of research findings into practice or implementation of guidelines is often a 'slow and haphazard process'⁵. Ultimately, this delay results in sub-optimal quality of patient care and inefficient use of limited health care resources⁴. This has stimulated increased interest in finding ways to minimise the *knowledge to practice gap* (more commonly known as *knowledge to action*).

Implementation of best practice guideline recommendations is a key component of knowledge translation. Implementation refers to the part of the guideline lifecycle in which systems are introduced to influence clinicians' behaviour toward guideline adherence.

Some guidelines have been found to be more difficult to put into practice than others. Consequently, as well as an increasing focus on guideline development and dissemination, evaluation and review of guidelines that focuses on their implementability and uptake is now also a key activity. This evaluation has assessed the implementability and uptake of the hospital falls prevention guidelines in a sample of Australian hospitals.

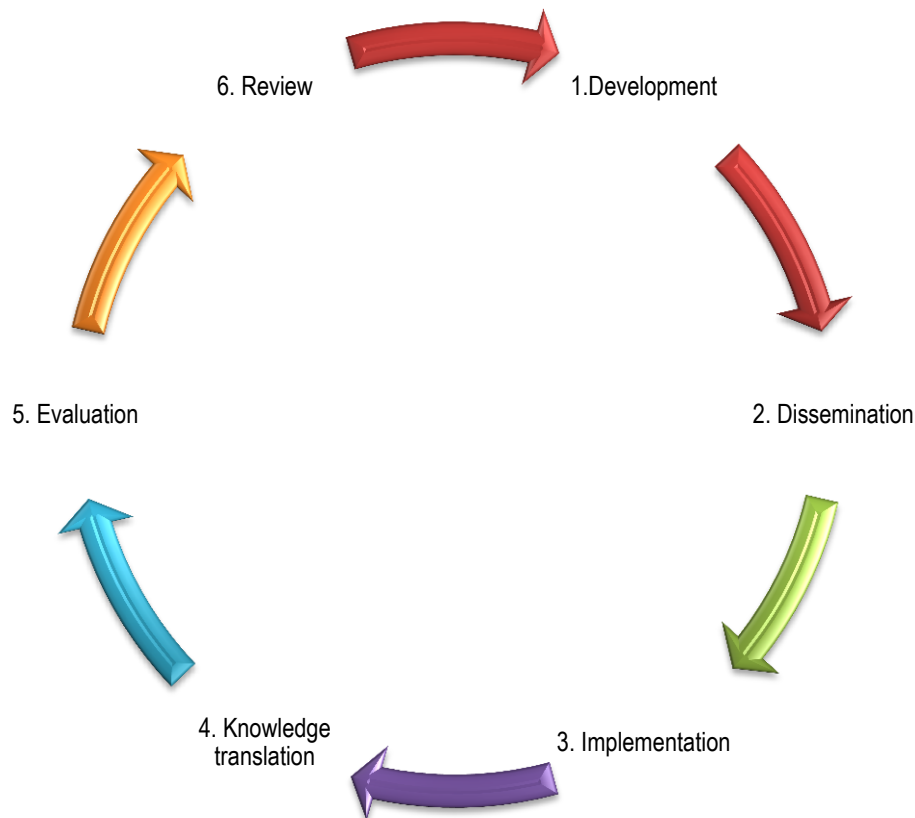


Figure 1: Guideline lifecycle

2.3 The 6-PACK falls prevention project

This evaluation was run as an extension to the 6-PACK project—a large hospital falls prevention research project that includes a cluster randomised controlled trial, program and economic evaluation. The 6-PACK project is being run by the Centre of Research Excellence in Patient Safety and researchers from five different universities across Australia.

2.4 National Falls Guidelines Evaluation Workshop

In May 2011, the Australian Commission on Safety and Quality in Health Care led a National Falls Guidelines Evaluation Workshop in Adelaide. The purpose of this meeting was to explore processes for the evaluation and revision of the guidelines. It was identified that the evaluation and revision processes should:

- be nationally consistent;
- obtain information about guideline dissemination and implementation; and
- provide quantitative and qualitative data to inform the guideline update.

An outcome of this workshop was the identification of the following key guideline recommendations for the acute hospital setting:

1. Systematic assessment of falls risk is undertaken.
2. Individual surveillance and observation is in place for high risk fallers.
3. Management programs are in place for patients with delirium and confusion.
4. Patients are receiving regular medication reviews with an emphasis on avoidance of psychoactive medications.

5. Post-falls management procedures are in place to ensure prompt identification of any significant injury resulting from a fall.

The recommendation 'Use a multifactorial falls prevention program that includes exercise and assessment of the need for walking aids to prevent falls in subacute hospital settings. (Level II)' was also identified as being important at the Guideline Evaluation Workshop. However, as this recommendation applies to the sub-acute hospital setting and this evaluation only included staff and patients from acute hospitals it was not included in this evaluation. Table 1 maps the above general recommendations to those articulated in the guideline document.

Table 1: Summary of key guideline recommendations included in the evaluation

1. Systematic assessment of falls risk	
i.	Document the patient's history of recent falls, or use a validated screening tool to identify people with risk factors for falls in hospital.
ii.	Use falls risk screening and assessment tools that have good predictive accuracy, and have been evaluated and validated across different hospital settings.
iii.	As part of a multifactorial program for patients with increased falls risk in hospital, conduct a systematic and comprehensive multidisciplinary falls risk assessment to inform the development of an individualised plan of care to prevent falls.
iv.	When falls risk screens and assessments are introduced, they need to be supported with education for staff and intermittent reviews to ensure appropriate and consistent use.
2. Individual surveillance and observation for high risk fallers	
i.	Include individual observation and surveillance as components of a multifactorial falls prevention program, but take care not to infringe on people's privacy. (Level III-2)
ii.	Falls risk alert cards and symbols can be used to flag high-risk patients as part of a multifactorial falls prevention program, as long as they are followed up with appropriate interventions. (Level II)
iii.	Consider using a volunteer sitter program for patients who have a high risk of falling, and define the volunteer roles clearly. (Level IV)
3. Management of delirium and cognitive impairment	
i.	Older people with cognitive impairment should have their risk factors for falls assessed.
ii.	Identified falls risk factors should be addressed as part of a multifactorial falls prevention program, and injury minimisation strategies (such as using hip protectors or vitamin D and calcium supplementation) should be considered. (Level II)
4. Medication reviews with emphasis on psychoactive drug use avoidance	
i.	Older people admitted to hospital should have their medications (prescribed and non-prescribed) reviewed and modified appropriately (and particularly in cases of multiple drug use) as a component of a multifactorial approach to reducing the risk of falls in a hospital setting. (Level I)
ii.	As part of a multifactorial intervention, patients on psychoactive medication should have their medication reviewed and, where possible, discontinued gradually to minimise side effects and to reduce their risk of falling. (Level II-*)
5. Post-falls management procedures	
i.	Hospital staff should report and document all falls.
ii.	It is advisable to ask a patient whether they remember the sensation of falling or whether they think that they blacked out, because many patients who have syncope are unsure whether they blacked out.
iii.	Staff should follow the hospital protocol or guidelines for managing patients immediately after a fall.
iv.	After the immediate follow-up of a fall, determine how and why a fall may have occurred, and implement actions to reduce the risk of another fall.
v.	Analysing falls is one of the key ways to prevent future falls. Organisational learning from this analysis can be used to inform practice and policies, and to prevent future falls. A post-fall analysis should lead to an interdisciplinary care plan to reduce the risk of future falls and injuries, and address any identified comorbidities or falls risk factors.
vi.	An in-depth analysis of the fall (e.g. a root-cause analysis) is required if there has been a serious injury following a fall, or if a death has resulted from a fall.

3 Evaluation plan

3.1 Objective

The objective of this evaluation was to undertake a comprehensive evaluation of the hospital falls prevention guidelines to inform the planned review in 2013-2014. The evaluation has used standardised guideline evaluation tools that are internationally recognised:

- the AGREE II (Appraisal of Guidelines for Research and Evaluation) instrument; and
- the GLIA (Guideline Implementability Appraisal) instrument.

This evaluation used a mixed methods approach that incorporated qualitative and quantitative data to gain information about the knowledge translation of the hospital falls prevention guidelines. Information was gained by undertaking four inter-linked studies.

Study 1	A standardised assessment of the quality of the hospital falls prevention guidelines using the AGREE II instrument to verify that the guideline is well constructed and representative of the hospital falls prevention evidence base.
Study 2	A standardised assessment of the implementability of the hospital falls prevention guidelines using the GLIA instrument to assess the relative ease of implementation of key guideline recommendations.
Study 3	A knowledge to action assessment where quantitative data on the use of guideline recommendations on high falls risk wards was undertaken to identify the effectiveness of knowledge translation of key guideline recommendations.
Study 4	A qualitative study of clinical staff knowledge and nursing perceptions of the guidelines and key recommendations to explore barriers and enablers to the use of key guideline recommendations in the acute hospital setting.

Several factors known to influence guideline success and resultant knowledge translation were explored. These include the guideline attributes, clinician and patient factors, the organisational environment and policy drivers. Studies 1 and 2 relate to the guideline attributes, whilst studies 3 and 4 address clinician and patient factors relating to falls prevention knowledge translation (Figure 2).

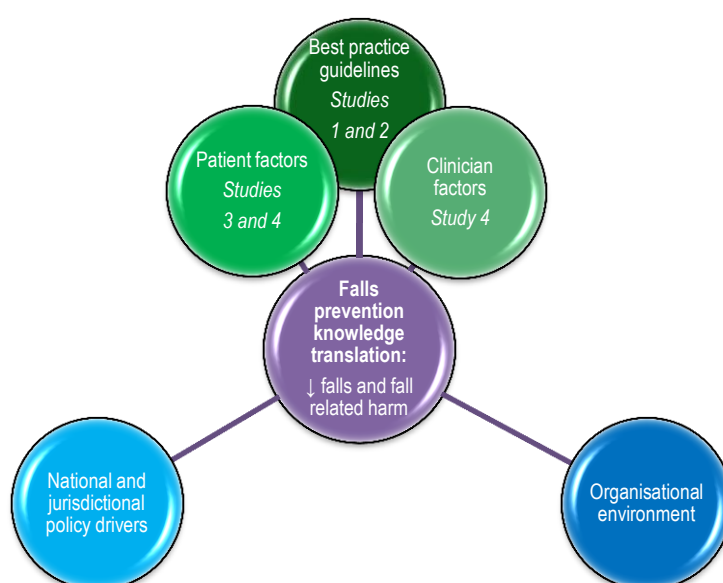


Figure 2: Mapping the evaluation activities to factors known to influence guideline success

3.2 Participants and setting

Eighteen falls prevention clinicians, researchers and policy leaders from Victoria, South Australia, Western Australia, New South Wales and Queensland completed the AGREE II and GLIA assessments of the guidelines and key recommendations as part of studies 1 and 2 (Appendix 1). For studies 3 and 4, information was obtained from 12,778 patients and 546 staff members from seven hospitals in Queensland, New South Wales and Victoria.

Data on the use of key recommendations in daily patient care were obtained via medical record audit and structured observation of patients admitted to the 26 participating wards between September 2011 and June 2012.

A falls prevention knowledge, attitudes and behaviours survey was administered to 428 clinical staff members from participating hospitals. All nursing staff working on the participating wards for 7.5 hours per week or more in the two months prior to the survey dissemination were invited to complete the survey. We conducted 12 focus groups that included 94 clinical staff members from participating hospitals where staff knowledge and beliefs about the guidelines and key recommendations were explored. All hospital clinical staff working on the participating wards for 7.5 hours per week or more in the two months prior were invited to participate in the focus groups.

Key informant interviews were conducted with 24 senior staff members from participating hospitals to gain information about their awareness of the guidelines and perceptions about key recommendations. These staff included a mix of nursing unit managers, senior physicians, directors of nursing and clinical services and senior personnel from quality and safety, risk management, injury prevention and falls prevention departments/committees.

3.3 Measurement

Study 1: Standardised assessment of the guideline quality using the AGREE II instrument

The guideline quality was evaluated with the AGREE II guideline evaluation instrument (Appendix 2). Ten assessors independently reviewed the hospital falls prevention guidelines and then used the AGREE II instrument to evaluate their quality.

The AGREE II instrument has been widely adopted around the world, and the authors recommended that it be adopted as the standard for guideline construction process evaluation⁶. The instrument is endorsed by the World Health Organization. The AGREE II instrument has three goals:

1. to assess the quality of clinical practice guidelines;
2. to provide a methodological strategy for the development of guidelines; and
3. to recommend how and what information should be reported in guidelines.

The instrument standardises the assessment of quality across six domains that include: scope and purpose, stakeholder involvement, rigour of development, clarity and presentation, application, and editorial independence. There are 23 items organised across the six domains, followed by one final question rating willingness to recommend. Each item is scored on a 7-point Likert scale.

Study 2: Standardised assessment of implementability using the GLIA tool

The implementability of the guidelines was assessed using the GLIA instrument (Appendix 2). The instrument contains a series of validated questions for assessing the relative ease of implementation of guideline recommendations. It identifies potential obstacles to implementation that are primarily intrinsic to the guideline. A panel of eight clinicians

engaged in hospital falls prevention activities appraised key recommendations included in the guidelines (Table 1).

The GLIA tool was developed specifically to assist the identification of barriers related to intrinsic factors of the guideline itself (e.g. ambiguity, inconsistencies, incompleteness) along with extrinsic factors related to a particular organisation, health service or healthcare provider⁷. Implementability refers to a set of guideline characteristics that predict potential challenges to effective implementation. There are several factors that influence implementability which are external to the guidelines, such as organisational characteristics and environments.

The GLIA tool consists of 30 items arranged into 10 dimensions. The first nine questions (global dimensions) relate to the entire guideline document. The remaining questions apply to individual recommendations that are rated as 'yes', 'no', 'not applicable' or 'unsure'. The GLIA tool considers the following factors intrinsic to the guideline:

- executability (exactly what to do);
- decidability (precisely under what conditions to do something; e.g. age, gender, clinical findings, laboratory results);
- validity (the degree to which the recommendation reflects the intent of the developer and the strength of evidence);
- flexibility (the degree to which a recommendation permits interpretation and allows for alternatives in its execution);
- effect on process of care (the degree to which the recommendation impacts upon the usual workflow in a typical care setting);
- measurability (the degree to which the guideline identifies markers or endpoints to track the effects of implementation of this recommendation); and
- novelty/innovation (the degree to which the recommendation proposes behaviours considered unconventional by clinicians or patients).

The GLIA tool also includes a computability domain (the ease with which a recommendation can be operationalised in an electronic information system). However, this was not assessed as it is only applicable when an electronic implementation is planned. This domain would be useful to consider in future aspects of the guideline review.

Study 3: Falls prevention knowledge to action assessment

Data on the use of the key recommendations on the 26 participating wards were obtained via structured medical record audit and observation of the patient's bedside environment by trained data collectors. The medical records and bedside environment of all patients admitted to the participating wards over a nine-month period were observed by the data collectors. Information about the use of the five key recommendations was extracted and recorded using a structured audit tool (Appendix 5). Hospital falls prevention policy documents were also reviewed to obtain information about expected procedures relating to falls prevention in participating hospitals. In addition to the structured medical record audit and observation, the falls prevention policies of participating hospitals were reviewed to identify whether they included information reflective of the guideline recommendations.

Study 4: Qualitative assessment of the guidelines and key recommendations including implementation barriers and enablers

Information on staff perceptions of the hospital falls prevention guidelines document and the five key recommendations (Table 1) were obtained via surveys, focus groups and interviews.

A semi-structured survey and focus group and interview discussion guides were developed by the research team (Appendices 3 and 4.). Focus groups and key informant interviews were conducted face-to-face at the participating hospitals by an investigator from the 6-PACK research team. The focus groups and interviews utilised appropriate qualitative methods to obtain further information about use and knowledge of the guidelines and the key recommendations. Main topics of the interviews and focus groups included the current perceptions of falls prevention practice on participating wards, suggestions for practice improvement, and key factors that influence the implementation of guideline recommendations in a negative or positive way.

3.4 Analysis

This report presents the evaluation findings in six sections: one for the overall quality, knowledge and perceptions of the guidelines, and one for each of the five recommendations assessed. Findings for sections 2-6 are presented under the following headings:

1. Overview
2. Hospital policy
3. Nurse perceptions
4. Implementability assessment
5. Knowledge to action assessment
6. Summary of findings and recommendations

The findings related to hospital falls prevention policy and practice as measured in the knowledge to action assessment are presented in a summary table in each section using the following ratings:

POLICY



Recommendation included in hospital policy and/or documentation such as a risk tools or training schedules



Some evidence of inclusion of recommendation in hospital policy and/or documentation such as a risk tools or training schedules



Limited/no evidence of inclusion of the recommendation in hospital policy and/or documentation such as a risk tools or training schedules

PRACTICE



Good evidence of uptake of recommendation (used for more than 75% of patients)



Some evidence of uptake of recommendation (used for 50-74% of patients)



Limited/no evidence of uptake of recommendation (used in less than 50% of patients)

Study 1: Standardised assessment of the guideline quality using the AGREE II instrument

A quality score was calculated for each of the six domains included on the AGREE II tool. As the six domains are independent, as per AGREE II instructions, domain scores were not aggregated to provide a single quality score. Domain scores were calculated by summing the item scores within a domain and scaling the total as a percentage of the maximum possible score for that domain. Descriptive statistics were used to summarise the domain scores from the ten appraisers.

Study 2: Standardised assessment of implementability using the GLIA tool

The GLIA item scores were aggregated and divergent responses identified. Divergent responses were discussed at a panel meeting in an effort to achieve consensus. Consensus on items was interpreted as majority agreement on the response. Items with the answer 'No'

were interpreted as barriers. Items with the answer 'Yes' were interpreted as facilitators. Items with a slight majority (one-point difference) were treated as borderline barriers.

Study 3: Falls prevention knowledge to action assessment

The observation and audit data were analysed descriptively with a focus on the frequency of the use of each recommendation for high risk fallers. To assess uptake of recommendation 4 (*Management programs are in place for patients with delirium and confusion*) sub-group analysis was completed on patients with documented delirium and confusion.

Study 4: Qualitative assessment of the guidelines and key recommendations including implementation barriers and enablers

The survey data were analysed descriptively. Focus group and interview discussions were audiotaped and transcribed verbatim. Transcripts were coded separately by two researchers and then checked for consistency. The data analysis and interpretation followed the standards of qualitative content analysis.

4 Knowledge of the guidelines and perceptions of usefulness

4.1 Overview

The guidelines were developed by the Commission and endorsed by Australian Health Ministers in November 2009. The guidelines, including a shorter 'guide book', 'fact sheets' and 'implementation guide' were distributed to Australian hospitals and also made available for download from the Commission website.

4.2 Nurse perceptions

Focus group and interview discussions revealed that overall awareness of guidelines was limited to more senior hospital staff (e.g. Director of Nursing) or staff with a direct responsibility for falls prevention in their hospital (education and training, establishment of policies and procedures). Whilst 58% of nurses surveyed believed guidelines were a useful resource (Figure 3), the majority of ward nurses were not familiar with the guideline document, guide book, fact sheets, implementation guide or key recommendations.

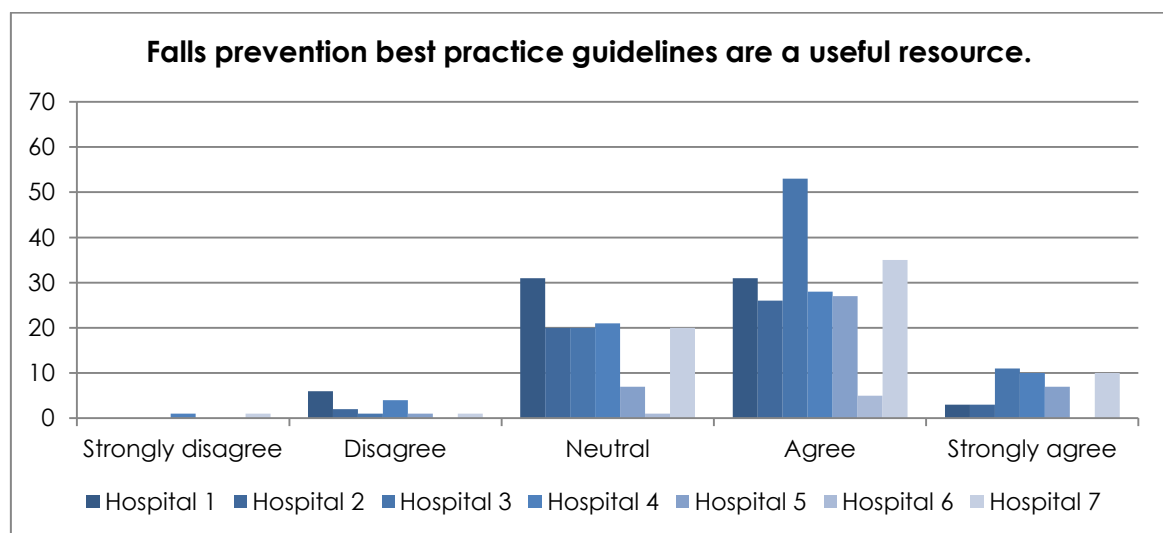


Figure 3: Nurse survey results for perceived usefulness of guidelines

Usability of the guidelines was explored in the focus groups and interviews. Ward nurses and senior staff members identified that guidelines should be brief and should include evidence summary tables, validated risk screening and assessment tools, and decision tools for the provision of care presented as flow charts. The current length and presentation of the guideline document were identified as barriers to their use by ward nurses:

'I'm sure they [the guidelines] have wonderful information in them. But, coming from a practical clinical area, they're always too long.'

'From a ward level, no they are not useful ... if you put something like that on the ward as a guideline, how am I supposed to find what to do for my patient now when I've got to read through all this sort of stuff?'

'I couldn't imagine a ward using this as a resource just because of the size of them and being able to perhaps interpret it to apply to practice, which is I guess where it would be more useful for people developing the policy or procedure.'

4.3 Assessment of the guideline quality

The AGREE II scores of the overall quality of the guidelines are presented in Table 2. A score of 100% indicates a score of the highest possible quality. A larger value for the inter-quartile range presented in brackets next to the median score indicates greater variability in scoring across the 10 assessors. 'Scope and purpose' and 'clarity and presentation' were rated the highest, with 'stakeholder involvement' and 'applicability' the lowest.

Table 2: AGREE II assessor scores across domains

Assessor	Scope and purpose	Stakeholder involvement	Rigour of development	Clarity and presentation	Applicability	Editorial independence	Overall quality†
1	57%	52%	59%	71%	54%	36%	4
2	90%	57%	71%	95%	68%	100%	5
3	86%	67%	64%	90%	64%	100%	5
4	57%	38%	32%	38%	32%	43%	4
5	95%	81%	43%	90%	82%	21%	4
6	71%	57%	68%	67%	64%	93%	5
7	86%	71%	88%	86%	89%	100%	6
8	67%	57%	70%	81%	36%	71%	4
9	81%	79%	84%	76%	75%	14%	5
10	86%	86%	84%	86%	43%	71%	5
Median (IQR)	83% (18%)	62% (20%)	69% (20%)	83% (17%)	64% (28%)	71% (60%)	5 (1.0)

† Highest possible quality=7

IQR= Inter-quartile range

Below are some key notes made by the assessors relating to each of the six domains.

Scope and purpose

- The objectives, health questions and population were adequately described in the guideline document.
- The target audience of the guidelines was listed as being 'all hospital staff' including clinical, management and corporate staff. This broad target audience may have been a barrier to the effective communication of information as each of these groups requires different information regarding content, detail and presentation. Whilst the importance of involving many professional staff in hospital falls prevention activities is acknowledged, future guidelines may wish to include targeted information to those who have a priority role in falls prevention such as nurses and allied health and medical staff.

Stakeholder involvement

- It was noted that the guideline development group did not include representatives from occupational therapy, podiatry, pharmacy, psychology, dietetics and hospital governance expert groups.
- Some States, for example Tasmania, appear not to have had representatives involved in the guideline development, whereas New South Wales appears to be over represented.
- Although there is a section on involving older people in falls prevention, it was unclear whether patients, carers or consumers were consulted during the guideline development phase.

Rigour of development

- The guidelines state that non-systematic methods were used to search for evidence due to limited capacity and tight timeframes. A systematic approach to the literature search is likely to have ensured all relevant literature was identified and included. Failure to complete a systematic review of the literature was identified as being a factor that compromised the rigour of the guidelines.
- The guideline development group utilised evidence from previous published reviews and evidence known to panel members. External expert knowledge of evidence was also drawn upon. It appears relevant evidence may have been omitted such as fear of falling⁸, patient education⁹, behavioral services for inpatients with confusion¹⁰, environmental solutions¹¹ and staff training particularly nursing attitudes and behaviors¹².
- The guidelines seemed to include risk factor and intervention evidence from settings outside the hospital; for example, management of vision and foot problems, which may not have the same priority for management in hospital patients where the risk factors for falls are often different. Risk factors unique to the hospital setting were not extensively discussed, nor were there sufficient discussions of special patient populations at increased risk; for example, stroke, amputee or oncology patients.
- The process for formulating recommendations based on NHMRC levels of evidence was described although several recommendations were not supported by a level of evidence statement (e.g. risk assessment recommendations).
- There was some contradictory reporting of the efficacy of some interventions. For example, the constant patient observer (Sitter Program) section reports two trials in a light that indicates that these programs are beneficial. However, later in the economic evaluation section, two trials are reported for this same intervention indicating that the intervention did not work (one was the same trial presented earlier). It is not clear why this evidence was reported in this way, or how a level III-2 evidence recommendation was given in the light of these negative findings.
- It is not clear why community prevention is discussed in preference to more detail on hospital-specific areas such as ortho-geriatric, psychogeriatric and medical wards.
- The benefits in terms of falls prevention have been considered. Some side effects (such as restricting patient autonomy) have been commented upon, while others have not. For example, hip protectors have been demonstrated to reduce the independence of hospital patients in performing toileting tasks, however this research was not commented upon.
- Risks have not been considered in adequate detail. For example, previous research from the residential aged care setting has identified that using detailed falls risk assessment procedures can take up considerable amounts of nursing time, taking nurses away from the bedside environment and consequently increasing the risk of falls. This risk is likely to apply to the hospital setting as well.
- Links between evidence and recommendations are made but are limited in their explanation of where the research has been conducted, and the study design used to generate that evidence.
- No critical appraisal of the quality of the evidence identified has been undertaken and thus it is very difficult for the reader to separate recommendations that are based upon well-designed studies that provide credible evidence from those that are at high risk of bias.
- No data synthesis has been provided, creating occasions of conflicting evidence being presented (such as the Sitter Program example above) without resolution.

Clarity of presentation

- Key recommendations are outlined at the beginning of each chapter in a clearly identifiable box. This is a useful way to highlight important information for clinicians and other users of the guidelines.
- Recommendations require some background knowledge to interpret and apply, especially considering the broad target audience of the guidelines. Recommendations were not specific to categories of staff (e.g. nursing, allied health or medical) who should be responsible for executing particular recommendations that require specific skills.
- A multifactorial treatment approach for falls prevention is recommended, with comments on numerous individual approaches. Instances of competing approaches are not discussed. Although few falls prevention interventions are mutually exclusive, resource limitations often dictate that only limited services can be provided and that decisions to provide some interventions and not others must be made. There is no discussion of which recommendations should be followed at the expense of others in such circumstances, though statements that clinicians will still need to use their judgment are made.

Applicability

- The guideline does not provide sufficient information about the facilitators and barriers to application of best practice recommendations. They are described within the 'implementation guide' but this guide is not sufficiently referenced within the guideline document. The availability of this separate document could easily be missed by the uninformed reader who may access the guideline either electronically or in hard copy without knowing anything about the implementation guide.
- The implementation guide is largely unchanged from earlier versions. It is broad and is not specific in addressing falls prevention implementation issues in the hospital setting.
- The inclusion of the special considerations section is a strength.
- Little attention has been paid to the resource implications of applying the recommendations in real life if an economic evaluation has not been published. For example, implementing a falls risk screening process requires a certain amount of staff time (and funding to support that time) to conduct each assessment. Little discussion is evident of means by which hospitals/wards/clinicians may acquire these resources. Economic evaluation sections for interventions are provided where published.

Editorial independence

- Possible conflicts of interests of guideline development group members or other contributors have not been disclosed.

4.4 Assessment of the overall guideline implementability

'They are probably too academic for use by all hospital staff in their current form.'

The GLIA assessment provides an evaluation of the overall guideline implementability followed by a more detailed assessment of individual recommendations. A summary of the GLIA assessment scores for the overall implementability completed by the eight assessors is presented in Table 3. The detailed assessment of the implementability of key recommendations is presented in the subsequent sections.

Table 3: GLIA global considerations (entire guideline)

	Assessor								Aggregate
	1	2	3	4	5	6	7	8	
Does the guideline clearly define the target patient population?	Y	Y	Y	Y	Y	Y	Y	Y	Yes
Does the guideline clearly define its intended audience (i.e; types of providers)?	N	N	Y	Y	Y	Y	Y	N	Yes
Are the settings in which the guideline is to be used clearly described?	N	Y	Y	Y	Y	Y	Y	Y	Yes
Do the organisation(s) and author(s) who developed the guideline have credibility with the intended audience of the guideline?	Y	Y	Y	Y	Y	Y	Y	Y	Yes
Does the guideline suggest strategies for implementation or tools for application e.g; a summary document, a quick reference guide, educational tools, patients' leaflets, online resources or computer software?	Y	Y	Y	Y	Y	Y	Y	Y	Yes
Is it clear in what sequence the recommendations should be applied?	Y	N	Y	Y	Y	Y	N	N	Yes
Is the guideline internally consistent, i.e; without contradictions between recommendations or between text recommendations and flowcharts, summaries, patient education materials, etc.?	Y	N	Y	Y	Y	N	N	Y	Yes
Are all recommendations easily identifiable, e.g; summarised in a box, bold text, underlined, etc.?	Y	Y	Y	Y	Y	Y	Y	Y	Yes
Are all recommendations (and their discussions) concise?	N	N	N	Y	N	N	N	Y	No

N= Barrier to implementation

Y= Facilitator to implementation

Does the guideline clearly define the target population?

The guideline clearly defines the target population as being people in Australian hospitals aged 65 years and over, or in the case of Indigenous Australians, those 50 years and over. The guideline states that younger people with an increased risk of falling may be included and provides sufficient examples including those with a history of falls, neurological conditions, and cognitive impairment.

Does the guideline clearly define its intended audience?

The guideline describes the intended audience as all hospital staff responsible for the care, or delivery of care to older people, including clinical, management and corporate services. This may be considered clearly defined, referring to all staff, but this definition lacks the specificity required to be useful. Consideration should be given to developing a smaller set of guidelines that target specific audiences; for example, medical staff, physiotherapists and nursing staff individually.

Are the settings in which the guidelines are to be used clearly described?

The guidelines are clearly stated as being designed for use in Australian hospitals, including emergency departments, acute care settings, sub-acute care settings and specialised units. Furthermore, it is clearly stated that separate guidelines have been developed for the community and residential aged care settings. Given the considerable differences in patient mobility, nurse-patient ratios and access to allied health staff between the acute and sub-acute hospital settings in Australia, it was the opinion of the reviewers that further consideration of recommendations specific to each of these settings should be made in future guidelines. If specialised units are to be included, then this term needs to be more clearly defined or, at least, examples provided.

Do the organisation(s) and author(s) of the guidelines have credibility with the intended audience?

Importantly, the guideline authors included experts from multiple relevant disciplines including health policy development, health research, rehabilitation and geriatric medicine, physiotherapy and nursing. Many of the authors were associated with national organisations and leading Australian universities. Consequently, it was deemed that both the organisations and authors would have credibility with the target audience. More extensive consultation with clinical staff may have assisted in identifying recommendations that were easily implementable and those that required modification to improve implementability. Several of the guideline developers and reviewers were from New South Wales and it was identified that future guidelines should aim to have a more even representation of each of the states and territories in Australia.

Does the guideline suggest strategies for implementation or tools for application?

The guidelines do include an 'implementation guide' and 'guidebook' that were perceived as beneficial by the assessors. Of note, the implementation guide did not seem to be overtly referenced in the guidebook. In addition, the implementation guide is not listed in the preface of the guidelines when describing accompanying 'additional materials'. The 'falls guideline poster' mentioned in the preface of the guidelines is not listed in Table 2.1 (Resources to support the guidelines) of the implementation guide or in the guidebook. The guidebook is the only one of the three main resources which clearly states that some of these above-mentioned resources are available online.

Is it clear in what sequence the recommendations should be applied?

The sequence for implementation was made clear in the guidelines and implementation guide:

The implementation guide clearly describes 3 sections to be followed:

- | | |
|-----------------------|------------------|
| Section 1 - Plan | (Steps 1 to 6) |
| Section 2 - Implement | (Steps 7 to 12) |
| Section 3 - Evaluate | (Steps 13 to 15) |

The recommendations were presented sequentially in the guidelines and guidebook and this implies that the recommendations could be implemented in this order. However, it is otherwise not clearly stated in what sequence the recommendations should be applied.

Is the guideline internally consistent?

The guidelines and supporting documents were not always internally consistent. The following inconsistencies were noted:

- Inconsistencies between recommendation numbering/chapter numbering and terminology used across the guidelines and guidebook. For example, recommendations regarding management of falls are found in the guidelines at Chapter 20 under the title of 'Post-Fall Management' and in the guidebook at Chapter 6 under the title of 'Responding to Falls'. This occurs across several chapters and recommendations.
- Tools were included in the guidelines that did not meet the recommendation 'Use falls risk screening and assessment tools that have good predictive accuracy, and have been evaluated and validated across different hospital settings.' The STRATIFY tool is included, which suggests that it is a recommended tool, yet the information presented in the text states that it has poor accuracy. The Ontario Modified STRATIFY with Sydney scoring was also included yet it had not been validated, and so its accuracy remains unknown. Page 31, 5.1.2 reports the findings of the Oliver et al. (2004) systematic review which suggests that better validated falls risk assessment tools are needed in hospital settings, or a different approach is needed for identifying common modifiable risk factors in all patients¹³. The guideline, however, recommends that tools are used, which is confusing.

Are all recommendations easily identifiable?

Recommendations were easily identifiable as they were highlighted at the front of each chapter with a summary that was provided at the front of the guidelines. Within the guidelines, the recommendations are easily identified through the use of green highlighted boxes and symbols to imply either a recommendation or good practice point. The assessors suggested that the guidelines would be more user-friendly if they were set out so that each recommendation was a heading in itself within a chapter.

Are all recommendations (and their discussions) concise?

There was consensus amongst the assessors that the guidelines were too long and recommendations were often not concise. There are three different manuals, each with similar information but differing detail. The inclusion of so much detail meant that it was difficult to identify what information was most important. This amount of information is likely to be overwhelming for a staff member who may want to use the resources as a quick reference for what they should be doing. The need to identify and address several risk factors is made, but perhaps too much choice for how to address them is given. The guidelines are a comprehensive general falls prevention reference useful to those with a special interest in falls prevention but are presented with the depth of a textbook rather than a guideline. Most of the time the implementation of strategies is executed by ward staff and the valuable content that assists nurses and other clinicians is buried in the text and sometimes challenging to locate quickly. There is likely to be a place for a simplified step-by-step care-bundle approach for falls prevention such as that now in place for pressure care and the use of alternating pressure mattresses or as modelled by the NICE falls prevention guidelines from the United Kingdom¹⁴.

5 Recommendation 1: Systematic assessment of falls risk

5.1 Overview

Falls risk assessment and screening tools provide a starting point for the care processes associated with prevention of falls in hospitals. They aim to identify patients most at risk of falling, provide a medium by which risk can be communicated to members of the care team and should trigger the application of appropriate prevention strategies for patients. The guidelines make the following key recommendations surrounding falls risk screening and assessment:

- Document the patient's history of recent falls, or use a validated screening tool to identify people with risk factors for falls in hospital.
- Use falls risk screening and assessment tools that have good predictive accuracy, and have been evaluated and validated across different hospital settings.
- As part of a multifactorial program for patients with increased falls risk in hospital, conduct a systematic and comprehensive multidisciplinary falls risk assessment to inform the development of an individualised plan of care to prevent falls.
- When falls risk screens and assessments are introduced, they need to be supported with education for staff and intermittent reviews to ensure appropriate and consistent use.

The guidelines state that recommendation iii (systematic and comprehensive multidisciplinary falls risk assessment) is unlikely to be achievable in acute hospitals due to limited access to allied health staff. As this evaluation focused on acute hospitals, this recommendation was not included in the knowledge to practice component of this evaluation.

Table 4 summarises the findings relating to the use of key guideline recommendations and best practice points relating to falls risk assessment and screening at the seven hospitals.

Table 4: Use of key guideline recommendations relating to falls screening and assessment

	Documented falls history POLICY	Validated Tool POLICY	Staff education POLICY	Complete on admission POLICY	Review risk score POLICY	Complete on admission PRACTICE	Review risk score PRACTICE
Hospital 1	✓	✗	✗	✓	✓	✓	✗
Hospital 2	✓	✗	?	✓	✓	?	✗
Hospital 3	✓	?	✓	✓	✓	?	✗
Hospital 4	✓	✗	✗	✓	✓	?	✗
Hospital 5	✓	✓	✗	✓	✓	✗	✗
Hospital 6	✓	?	✓	✓	✓	✓	✗
Hospital 7	✓	✓	✗	✓	✓	✗	✗

POLICY



Recommendation included in hospital policy and/or documentation such as a risk tools or training schedules



Some evidence of inclusion of recommendation in hospital policy and/or documentation such as a risk tools or training schedules



Limited/no evidence of inclusion of the recommendation in hospital policy and/or documentation such as a risk tools or training schedules

PRACTICE



Good evidence of uptake of recommendation (used for more than 75% of patients)



Some evidence of uptake of recommendation (used for 50-74% of patients)



Limited/no evidence of uptake of recommendation (used in less than 50% of patients)

5.2 Hospital policy

All hospitals have implemented a risk assessment or screening tool and included procedures for their use in policies that are reflective of best practice; for example, tools should be completed as soon as practicable after the patient is admitted and should be reviewed when there is a change in functional status or after a fall.

The selection of tools used by hospitals did not reflect the recommendation to use tools with 'good predictive accuracy' and that have been 'evaluated and validated across different hospital settings'. Only two of the seven hospitals used tools that met these criteria.

5.3 Nurse perceptions

Overall, there were mixed feelings about the use of falls risk assessment and screening tools. Senior staff interviewed believed tools were useful and an important part of falls prevention care processes. They believed in the principles surrounding the use of tools—that they help nurses identify who is at risk and therefore who should receive prevention strategies, and that they communicate risk amongst the care team and provide a formal record that a patient's falls risk status has been evaluated.

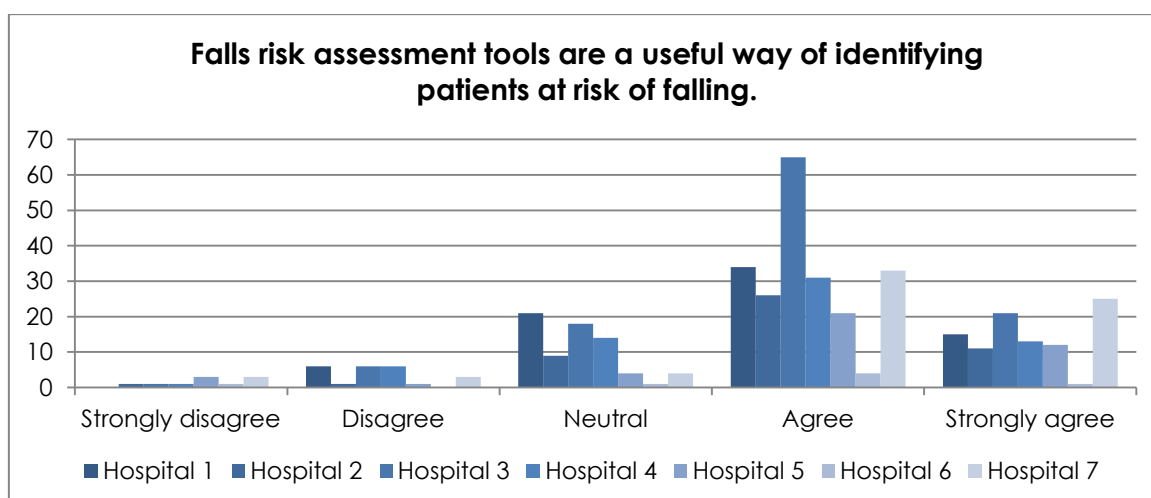
'I would think that the nurse coming on to their shift should be aware of what the risk assessment is and ensure that it's accurate for that time when you're taking over the care for that patient. You [the patient's nurse] have to feel comfortable that the assessment is suitable for that time that you're caring for the patient.'

Despite this, many senior staff members recognised that practice relating to the completion and review of risk tools was not optimal and cited that 'complacency' with the use of these tools was commonplace.

'The issue it raises is complacency, where staff just tick the same boxes that were done yesterday without really assessing.'

Ward nurses raised the point that whilst risk tools can provide a good trigger for the use of strategies, they were not used as well as they could be.

'When they first get admitted you do go through some of the stuff that you wouldn't have known if you didn't ask those questions [on the falls risk tool].'



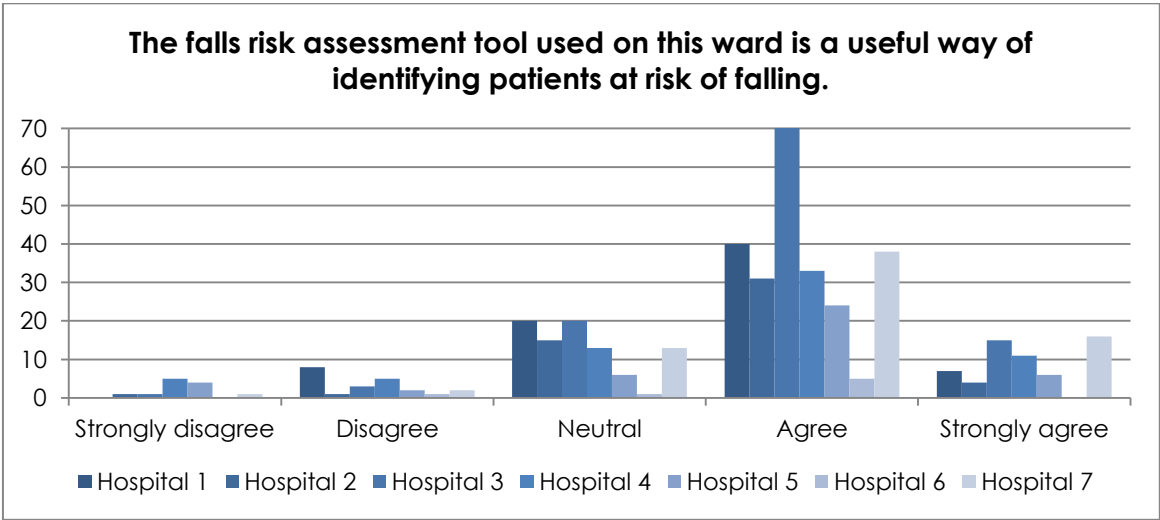
Nurses openly reported that whilst tools were often completed on admission they were rarely updated during a patient's stay. A preference for verbal communication was also

indicated. Nurses reported communicating a patient's risk status verbally at handover and also were supportive of this information being displayed on 'journey boards' within the ward.

'I think most staff just look at the patient, they know what's wrong with them, and they know if a patient is a high falls risk. The tools have taken away the staff's ability to, in some ways, make that assessment. Being an old-fashioned nurse you just know, but you need everything documented these days.'

'Half a day is filling out the paperwork.'

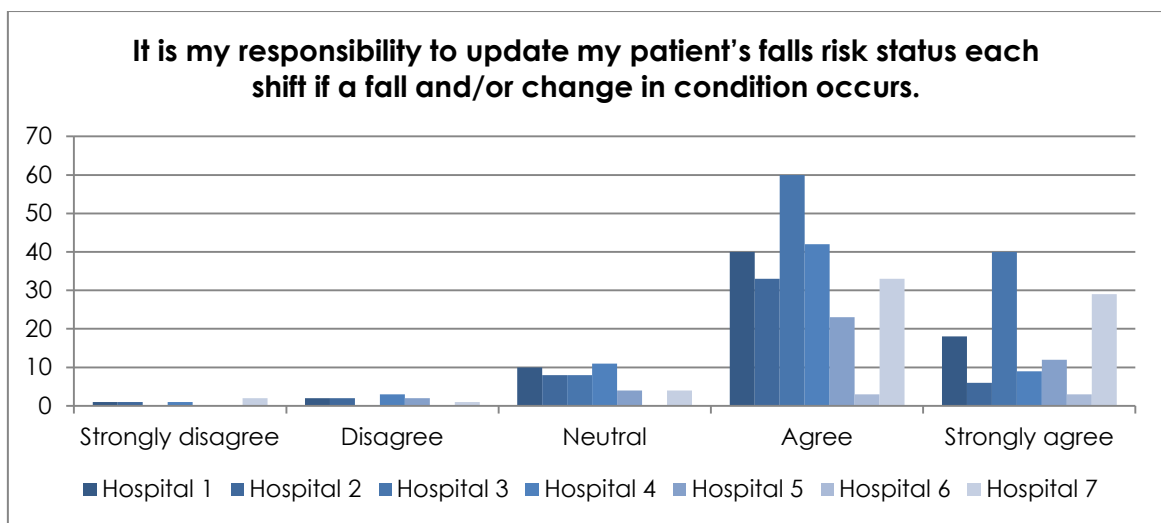
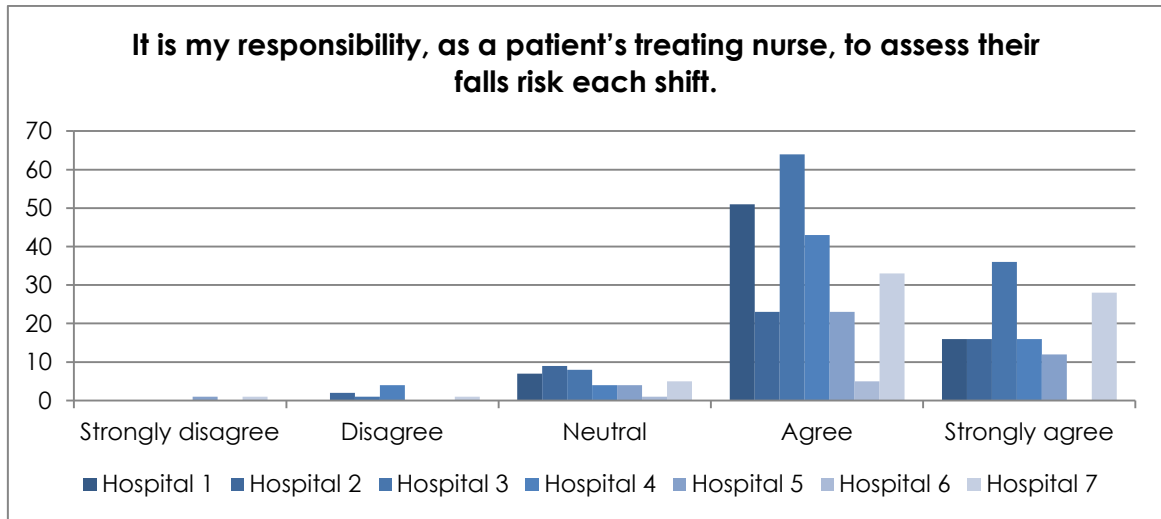
Nurses indicated a preference for tools that were quick and easy to complete, used only a two-level 'high' or 'low' risk classification and that were integrated into the documentation they viewed and used each shift such as the care plan.



Nurses reported that they felt education surrounding the use of tools was important but rarely/never occurred. With respect to education, nurses indicated that they prefer face-to-face, short sessions that include a combination of process (how and when to complete), reasoning behind tool use, risk factors and problem-based learning such as case studies.

'We're often given a sheet of paper and told this has to be done, but to get people more engaged with doing it you have to explain to them why and how it would benefit you as a caregiver.'

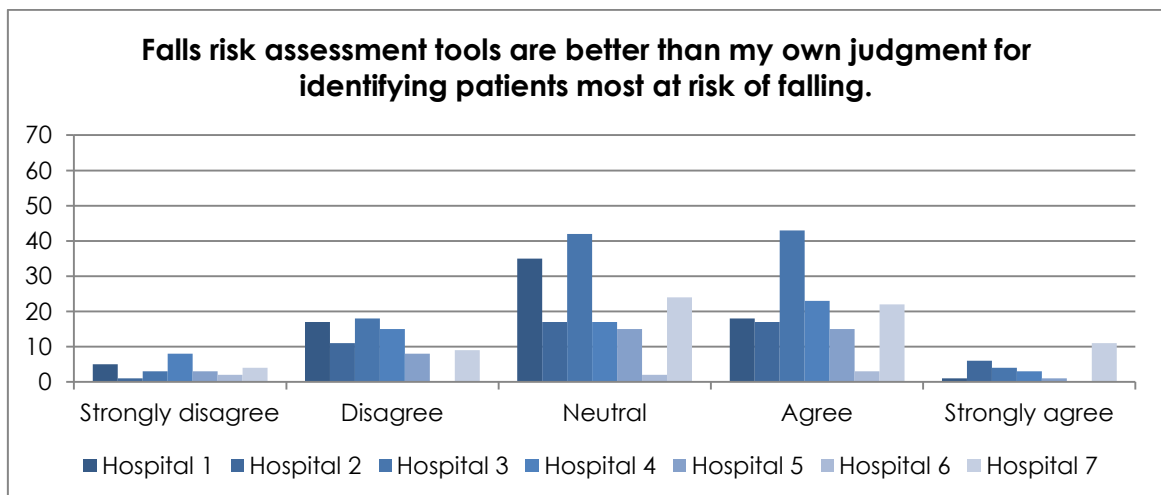
These findings highlight deficits in the delivery of guideline care relating to use of risk assessment and screening tools. The practice gap is unlikely to be due to a lack of knowledge about risk assessment and screening best practice. Survey results showed 82% of nurses agreed that it was their responsibility to update their patient's falls risk status if a fall and/or change in condition occurred.



When nurses were asked about practice relating to completing and reviewing falls risk tools a common theme was:

'We all just go tick, tick, tick, tick ...'

Practice gaps more likely represent a lack of belief of the tools' value and their usability. Only 39% of nurses surveyed indicated that they believed falls risk assessment tools were better than their own clinical judgement for identifying patients most at risk of falling.



Nurses reported limitations of currently used tools as being their length (one tool included 18 questions), use of scoring that did not seem intuitive, and inaccuracy in identifying patients most at risk of falling often rendering tools as offering little additional value above 'clinical judgement'.

'I think in terms of our risk assessment and documentation it can definitely improve. My personal view is that it's a large document which is time consuming and I think people get put off when they see something that's very wordy and large; even if they've only got to complete a small section. If it's large and wordy they tend to not do it.'

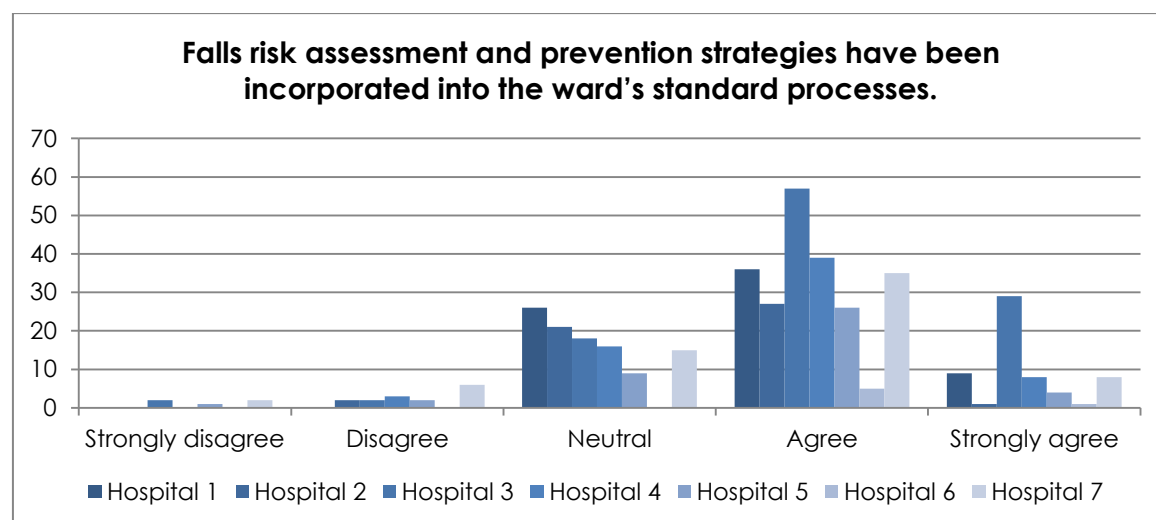
Some nurses raised concerns about the expectation of falls prevention action following assessment completion and how this was challenging in an environment of limited resources:

'The thing about risk assessment is that if I've identified someone who is a high-falls risk, I've got to then show that I've put an intervention in place; I don't have 30 high-low beds.'

Use of short, simple and accurate tools along with increased education and use of reminders were identified as key drivers for practice change.

'I think also when we implement something like this [a falls risk tool] you have to keep reminding people and educating people on how to use it because they get blasé about it and don't do it sometimes, or just tick boxes, and some people don't even know it's there.'

Overall, nurses indicated that the integration of falls risk assessment and prevention strategies into standard care practices had only been achieved to a moderate (67%) level.



'When they come to the ward you may not necessarily get a chance to do a FRAT [Falls Risk Assessment Tool] in the first 10 minutes, but it might only take 10 minutes before they fall over.'

5.4 Implementability

A summary of the GLIA assessment scores for the implementability of the recommendations relating to falls risk screening and assessment completed by the eight assessors is presented in Table 5.

Table 5: GLIA assessment summary for assessment of falls risk recommendations

Recommendation 1	Criterion failed	GLIA questions
i. Document the patient's history of recent falls or use a validated screening tool to identify people with risk factors for falls in hospital.	Executability	10, 11
	Validity	15, 16
	Novelty/Innovation	24
ii. Use falls risk screening and assessment tools that have good predictive accuracy, and have been evaluated and validated across different hospital settings.	Executability	10, 11
	Validity	16
	Novelty/Innovation	24
iv. When falls risk screens and assessments are introduced, they need to be supported with education for staff and intermittent reviews to ensure appropriate and consistent use.	Executability	11
	Validity	16
	Novelty/Innovation	24

The following provides a summary of the key barriers to the effective implementation of recommendations related to falls risk screening and assessment as identified by the eight assessors.

i. Document the patient's history of recent falls or use a validated screening tool to identify people with risk factors for falls in hospital.

Key factors identified by the assessors regarding executability:

- Use of the term 'recent' is ambiguous. This would be better defined as a specific time period, for example; in the last 12 months.
- It is unlikely that clinicians are experienced enough to be able to interpret 'validated'. Many tools are available and have undergone varying levels of 'validation'. Executability would be improved if the recommendation stated 'use tool X, Y or Z'.
- There is no inclusion of 'when' or 'by whom' the recommendation should be actioned. For example, executability would be improved if the recommendation stated 'within 24 hours of admission by the patient's treating nurse'.

Key factors identified by the assessors regarding validity:

- Justification for using a validated tool is important and should be included in the recommendation. For example: '...to identify people who require falls prevention strategies to minimise their risk of falling whilst in hospital'.
- The recommendation does not match the evidence provided. The supporting information in the section following the recommendation states that the evidence indicates that clinical judgement is as good as the screening tool, which raises the question of why the recommendation states to use a tool but does not mention the use of clinical judgement.
- The recommendation is not accompanied by a level of evidence statement.

Key factors identified by the assessors regarding novelty/innovation:

- The broad target audience of the guidelines—'All hospital staff ... including support services as well as clinical, management and corporate staff'—means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills. It is generally recognised that staff require some training to be able to effectively use even simple risk assessment tools.

ii. Use falls risk screening and assessment tools that have good predictive accuracy, and have been evaluated and validated across different hospital settings.

Key factors identified by the assessors regarding executability:

- It is not clear exactly which tools should be used. The user is required to assess whether a tool has 'good predictive accuracy' and whether it has been 'evaluated and validated across different hospital settings'. A ward nurse would not be expected to have access to this type of information. It is not clear which of the tools included in the guidelines meet these criteria. Indeed, the assessors identified that some of the tools included in the guideline do not meet this criteria. The executability would be improved if the recommendation stated explicitly to use tools X, Y or Z.

Key factors identified by the assessors regarding validity:

- Justification for why the action is important should be included in the recommendation. For example, the risks associated with using tools that have unknown or poor predictive accuracy should be mentioned.
- The recommendation does not match the evidence provided. The supporting information in the section following the recommendation states that the evidence indicates that clinical judgement is as good as the screening tool, which raises the question of why the recommendation states to use a tool but does not mention the use of clinical judgement.
- The recommendation is not accompanied by a level of evidence statement.

Key factors identified by the assessors regarding novelty/innovation:

- The broad target audience of the guidelines—'All hospital staff ... including support services as well as clinical, management and corporate staff'—means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills. The user is required to assess whether a tool has 'good predictive accuracy' and whether it has been 'evaluated and validated across different hospital settings'. A ward nurse would not be expected to have access to this type of information.

5.5 Knowledge to action assessment

Despite having a policy reflective of best practice guideline care, practice relating to the use of risk assessment and screening tools is poor. Only 64% of patients had a risk assessment or screening tool completed within the first day of being admitted to hospital and only 52% had a tool completed within one day of admission to the ward. Figure 4 shows that practice relating to completing falls risk tools on admission was also variable across the seven hospitals studied.

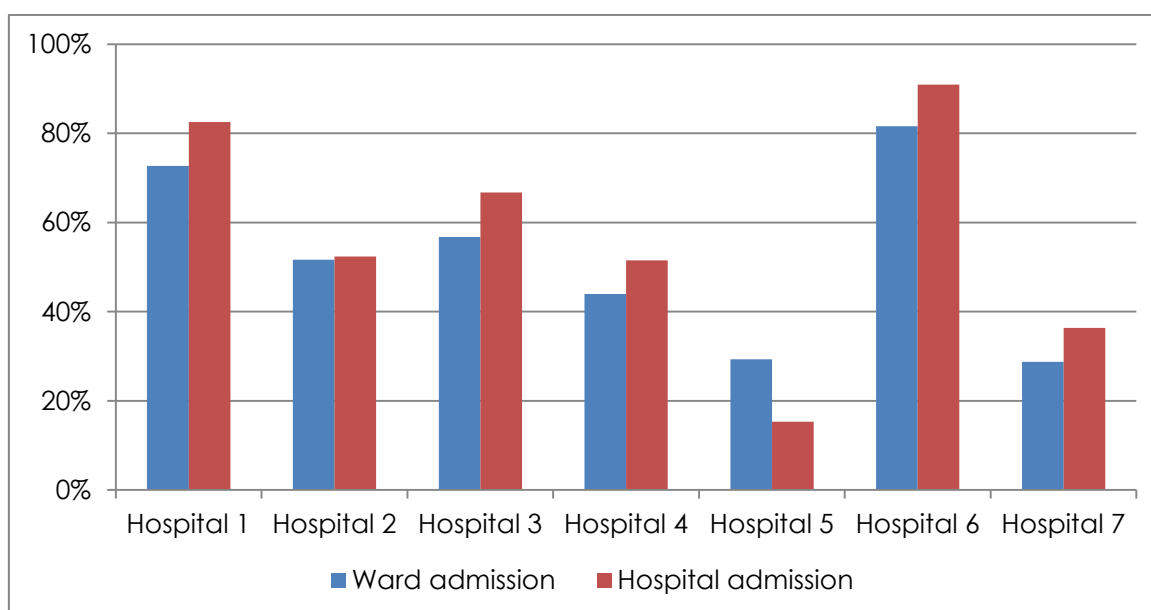


Figure 4: Proportion of patients with falls risk assessment completed within one day of admission

Only 13% of patients had their risk score updated during their ward admission and only 24% of patients who fell in hospital had their risk score updated within the day following the fall. Figure 5 shows that practice relating to review of falls risk tools was highly variable across the seven hospitals studied.

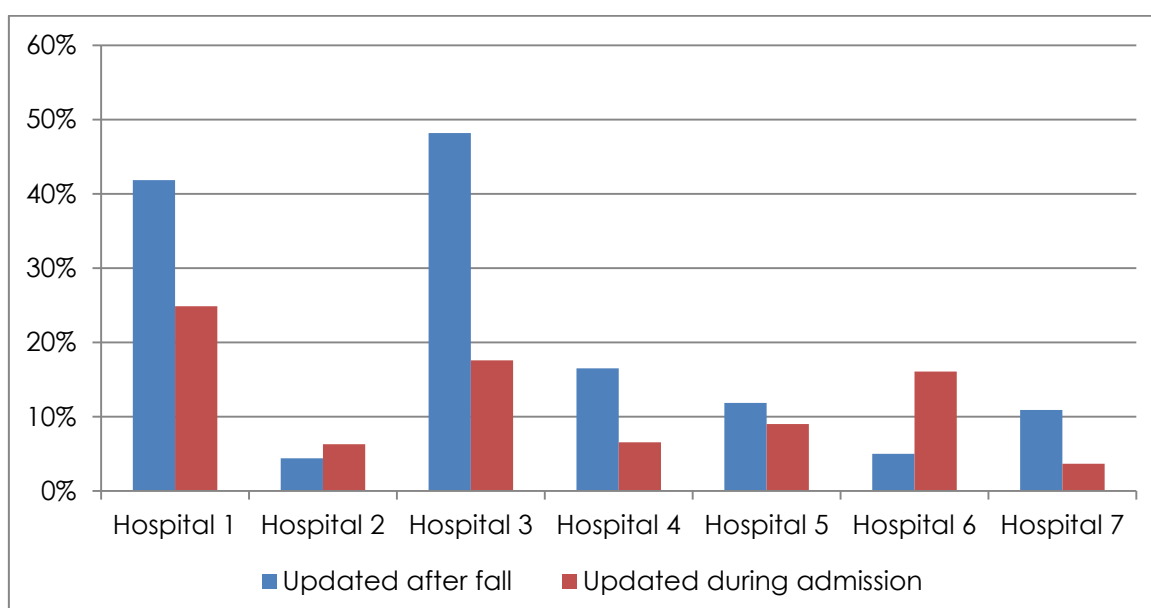


Figure 5: Proportion of patients with falls risk assessment updated during their ward admission

It is interesting to note that Hospital 6 demonstrates high levels of uptake for the recommendation related to completing risk assessments on admission. However, their practice relating to ongoing assessment is much poorer. This highlights a lack of consistency in performance across related recommendations and different parts of the patient journey.

More than 63% of fallers were recorded as low falls risk on the day of their fall or in the two days prior, on the risk tool completed by nurses. This result may reflect that: 1. Tools used

were inaccurate at predicting those most at risk of falling; 2. Tools were completed inaccurately by nurses, or 3. Tools were not updated when patient's falls risk increased.

6 Recommendation 2: Individual surveillance and observation

6.1 Overview

Many people in hospital require assistance or supervision to ensure their safety when mobilising. A high number of falls in hospital occur when these patients attempt to mobilise without seeking staff assistance. It is intuitive that increasing the observation of these patients by providing them with a constant patient observer or positioning them in a high visibility area will reduce the likelihood of these patients mobilising independently and subsequent falls. The guidelines make the following key recommendations surrounding the use of individual surveillance and observation for high risk fallers:

- Individual observation and surveillance should be included as components of a multifactorial falls prevention program, but take care not to infringe on people's privacy. (Level III-2)
- Falls risk alert cards and symbols can be used to flag high-risk patients as part of a multifactorial falls prevention program, as long as they are followed up with appropriate interventions. (Level II)
- Consider using a volunteer constant patient observer program for patients who have a high risk of falling, and define the volunteer roles clearly. (Level IV)

Table 6 summarises the use of key guideline recommendations relating to the use of individual surveillance and observation for high risk fallers at the seven hospitals.

Table 6: Summary of use of key guideline recommendations relating to the use of individual surveillance and observation for high risk fallers

Hospital	Individual surveillance and observation: POLICY	Falls risk alert cards: POLICY	Volunteer constant patient observer: POLICY	Individual surveillance and observation: PRACTICE	Falls risk alert cards: PRACTICE	Volunteer constant patient observer: PRACTICE
Hospital 1	✓	✓	✗	✗	✗	✗
Hospital 2	✓	✓	✓	?	✗	✗
Hospital 3	✓	✓	✓	?	✗	✗
Hospital 4	✓	✓	✓	?	✗	?
Hospital 5	✓	✓	✗	✓	✗	✓
Hospital 6	✓	✓	✗	?	✗	✗
Hospital 7	✓	✓	✗	?	✗	✓

POLICY

- ✓ Recommendation included in hospital policy and/or documentation such as a risk tools or training schedules
- ? Some evidence of inclusion of recommendation in hospital policy and/or documentation such as a risk tools or training schedules
- ✗ Limited/no evidence of inclusion of the recommendation in hospital policy and/or documentation such as a risk tools or training schedules

PRACTICE

- ✓ Good evidence of uptake of recommendation (used for more than 75% of patients)
- ? Some evidence of uptake of recommendation (used for 50-74% of patients)
- ✗ Limited/no evidence of uptake of recommendation (used in less than 50% of patients)

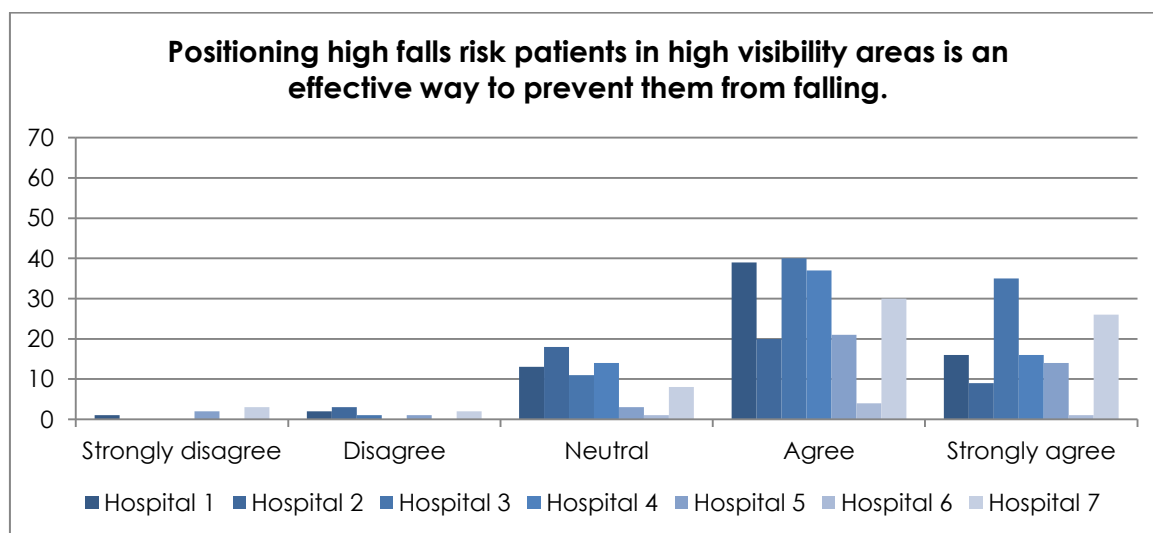
6.2 Hospital policy

All hospitals have included the use of increased surveillance as a falls prevention strategy in their falls prevention policies. These focused on the use of frequent monitoring and use of 'falls alert' signs above the patient's bed. Less frequently included was information surrounding the effective use of volunteer or paid constant patient observers.

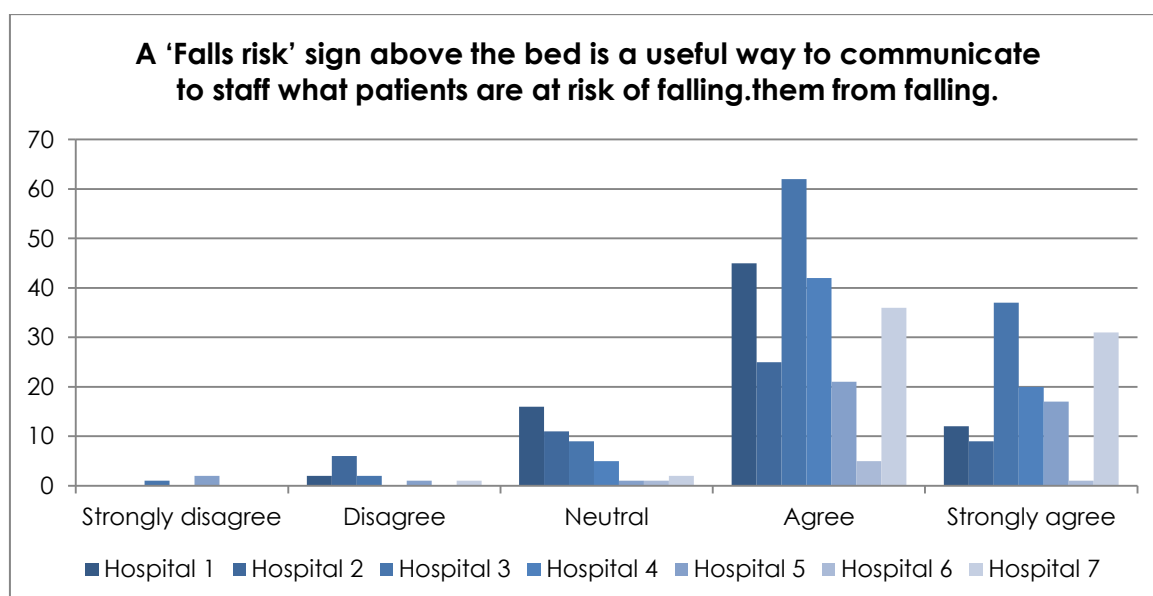
6.3 Nurse perceptions

Survey responses and focus group and interview discussions highlighted that nurses and senior staff involved in falls prevention valued the use of individual surveillance and observation as a strategy for preventing falls. Many nurses stated that the only way to prevent falls was to supervise patients at all times. This strategy was highlighted as being particularly useful for confused patients. Simple strategies such as positioning patients in view of the nurses' station and use of alert signs were considered useful by nurses.

'For patients that just constantly get up, if they are sitting directly in front of the nurses' desk, they'll be stopped a lot more than if they're in bed way down the corridor, and by having that high visibility, everyone sees them and everyone helps.'



'At the moment I enter the room and I see that sign so I'll be aware that the patient is high falls risk, I'll keep an eye on him or her.'



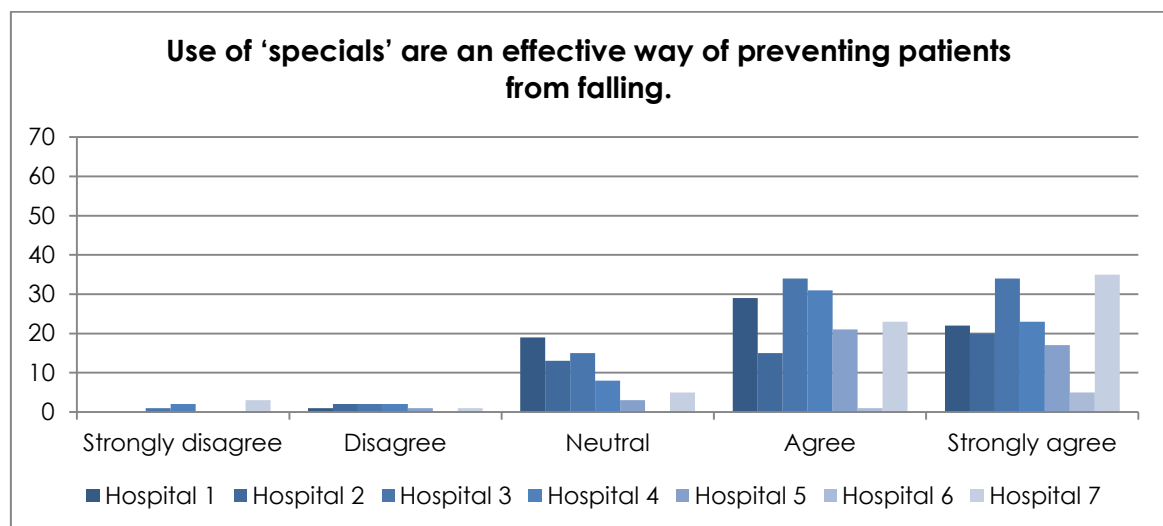
The use of 'team specialling' or 'specialling in numbers', where one nurse is allocated to be the patient special/constant patient observer for a small number of patients and their allocated patients are then shared by the remaining nurses was also thought to be a useful strategy for preventing falls. Some caveats surrounding the stress placed on the nurse responsible for providing the individual surveillance and observation to patients were identified:

'... I think when a nurse gets all the super high falls risk patients it is stressful, and as soon as you turn your back one's on the floor anyway.'

Nurses indicated that they believed a constant patient observer was the most effective strategy for preventing falls but did raise the point that they were often difficult to access/organise. This is despite several discussions around falls that had occurred even when a patient observer was present.

'I've had a sitter [constant patient observer] fall asleep on me.'

'They have to call them sleepers, not sitters.'



Some common limitations to using individual surveillance and observation were also raised by the nurses:

'Putting them into a room close to the nurses' station can be difficult on some wards, and probably that's a bit of an obstacle.'

'90% of patients on gen med could have that sign above their bed. So it doesn't really help you target your resources any better because everyone's getting it.'

Staying with patients with cognitive impairment while they are in the bathroom was a topic of debate. Whilst nurses indicated they knew many falls happened in the bathroom, and that many patients would try to mobilise on their own despite advice to wait for the nurse, they were uncomfortable with the compromise to patient privacy.

When asked about bed/chair alarms or movement sensors staff stated that these were rarely used. Many staff were not familiar with these devices. There were mixed feelings about why bed or chair alarms were not often used:

'[By the time the alarm sounds] It's still [going to] be too late, you still got to run.'

'By the time you get there they're already halfway out the door.'

'And also when you're showering someone and the buzzer's going off; well you can't run out of the shower and...'

'I think it's effective but it's not going to prevent every single fall, but it prevents at least some falls. [The alarms] let you know when a patient starts getting restless in the seat and that they started to stand up. If the patient needs to go to the toilet you can take them to the toilet, or maybe they want to go back to bed, so you can put them back to bed. So at least it gets you into that room to see what the patient's doing.'

6.4 Implementability

A summary of the GLIA assessment scores for the implementability of the recommendations relating to individual surveillance and observation completed by the eight assessors is presented in Table 7.

Table 7: GLIA assessment summary for individual surveillance and observation recommendations

Recommendation 2		Criterion failed	GLIA questions
i.	Include individual observation and surveillance as components of a multifactorial falls prevention program, but take care not to infringe on people's privacy. (Level III-2)	Executability	10, 11
		Validity	16
		Effect on processes of care	20, 21
		Novelty/Innovation	24
ii.	Falls risk alert cards and symbols can be used to flag high-risk patients as part of a multifactorial falls prevention program, as long as they are followed up with appropriate interventions. (Level II)	Validity	16
		Flexibility	17, 19
iii.	Consider using a volunteer sitter program for patients who have a high risk of falling, and define the volunteer roles clearly. (Level IV)	Executability	11
		Flexibility	17, 19
		Effect on processes of care	21
		Novelty/Innovation	24

The following provides a summary of the key barriers to the effective implementation of recommendations related to individual surveillance and observation identified by the eight assessors.

i. Include individual observation and surveillance as components of a multifactorial falls prevention program, but take care not to infringe on people's privacy. (Level III-2)

Key factors identified by the assessors regarding executability:

- It is quite a general statement that lacks detail of the 'how' to provide the individual observation and surveillance in the hospital environment.
- It is not clear in the guideline what is meant by 'individual observation and surveillance'. Some further detail has been provided in the chapter but this detail is lacking from the recommendation itself.

Key factors identified by the assessors regarding validity:

- The reference provided for the level of evidence statement relates to a trial that tested a multifactorial program in a predominantly sub-acute care setting. The level of evidence relates to the multi-factorial program, that included 29 different possible strategies, rather than evidence to support the efficacy of the individual strategy of

increased surveillance and observation. Whilst the recommendation does include surveillance should be used ‘...as part of a multifactorial program...’ use of this study to support a recommendation relating to surveillance is not appropriate.

- Surveillance programs are likely to take a substantial amount of staff resources. Alarms come at a cost, while hospital resources are scarce, therefore justification of why more resources should be allocated for this equipment is required. It would be useful to know the cost of these strategies.
- Without clearer definitions and detail on potential cost outcomes it may be difficult to implement this recommendation. It may be beneficial to have some costing information or details of specific types of interventions and for whom they would be most beneficial to enable the intervention to be more targeted and easier to provide a business case on.

Key factors identified by the assessors regarding novelty/innovation:

- The broad target audience of the guidelines—‘All hospital staff...including support services as well as clinical, management and corporate staff.’—means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills for example best practice for managing people with acute confusion or delirium.
- Training and education may be required for the use of alarms and other monitoring systems.

ii. Falls risk alert cards and symbols can be used to flag high-risk patients as part of a multifactorial falls prevention program, as long as they are followed up with appropriate interventions. (Level II)

Key factors identified by the assessors regarding flexibility:

- ‘Can be used’ does not clearly identify the strength of this recommendation.
- The recommendation would be clearer if it stated ‘All patients with...’

Key factors identified by the assessors regarding validity:

- The reference provided for the level of evidence statement relates to a trial that tested a multifactorial program in a sub-acute care setting. The level of evidence relates to the multi-factorial program that included five different possible strategies rather than evidence to support the use of alert cards as a single intervention. Whilst the recommendation does include surveillance should be used ‘...as part of a multifactorial program...’ use of this study to support a recommendation relating to alert cards is not appropriate.

iii. Consider using a volunteer sitter program for patients who have a high risk of falling, and define the volunteer roles clearly. (Level IV)

Key factors identified by the assessors regarding executability:

- It is quite a general statement that lacks detail of the ‘how’ to implement a volunteer patient observer program and what the specific role of the patient observer is.

Key factors identified by the assessors regarding flexibility:

- ‘Consider’ does not clearly identify the strength of this recommendation.
- It is unclear who (which patients) this recommendation is targeted at and who would benefit most from it.
- The recommendation would be clearer if it stated ‘All patients with...’

Key factors identified by the assessors regarding effect on processes of care:

- Patient observer programs are likely to take substantial staff resources to establish, implement and monitor. Volunteer programs need resources to recruit, train and supervise. It would be useful to know the cost of these programs.
- It may be beneficial to have information about the patients most likely to benefit from this intervention to ensure effective targeting of resources.
- Patient observers need training and support as do supervising nursing staff.

Key factors identified by the assessors regarding novelty/innovation:

- The broad target audience of the guidelines—'All hospital staff...including support services as well as clinical, management and corporate staff.' —means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills; for example management and coordination skills to set-up and oversee such a program and skills to educate/ train volunteers.
- It would be useful to include information on education skills required to manage and train volunteers. This could form part of the implementation guide.

6.5 Knowledge to action assessment

Practice seemed to reflect the positive nurse perceptions around the use of individual surveillance and observation, with 57% of high risk patients receiving individual surveillance and observation as a falls prevention strategy during their admission. Figure 6 shows that practice relating to the use of individual surveillance and observation was variable across the seven hospitals studied.

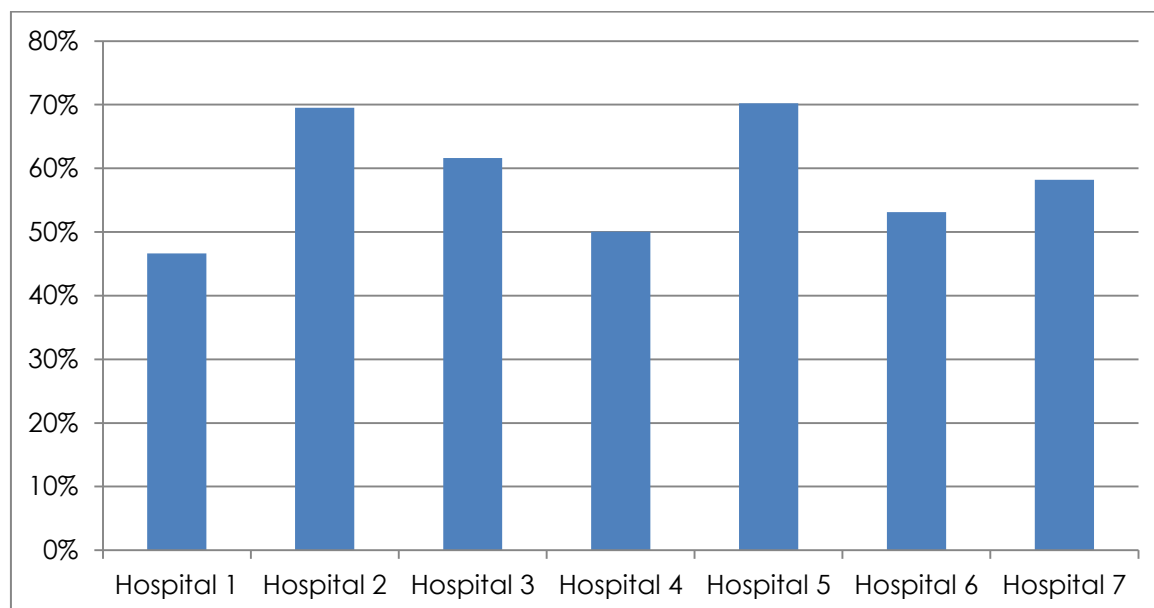


Figure 6: Proportion of high risk patients with individual surveillance and observation

The most commonly used surveillance strategies for high risk patients were signs at the bed head (29%), hourly checks (16%) and positioning in a high visibility area such as in-front of the nurses' station (12%), however use of individual surveillance strategies was again variable across the seven hospitals (Figure 7). Alarm systems and alert devices were infrequently used (3%) and nurses reported these devices were often not available on their ward.

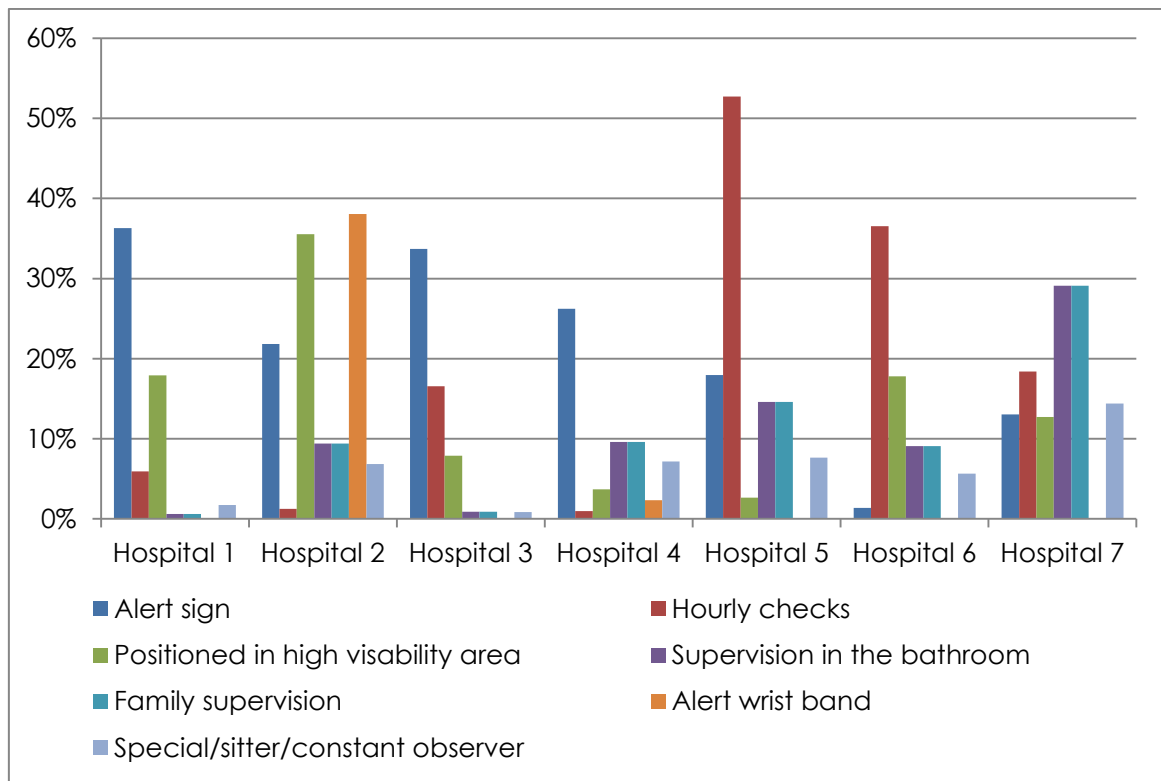


Figure 7: Use of different surveillance strategies for high falls risk patients

Reflective of the privacy issues nurses raised around staying with high falls risk patients with cognitive impairment while they were in the bathroom, it was found that almost 1 in 5 falls recorded occurred in the bathroom and of these, more than 70% were unwitnessed.

7 Recommendation 3: Management of delirium and cognitive impairment

7.1 Overview

There is an increased focus on the effective management of dementia and delirium in the acute setting, with a growing recognition that these patients are at risk of many negative events during their hospital stay and that management of patients with these conditions is a challenge. Delirium, an acute confusional state, is a common condition in older hospitalised patients. It is reported to affect up to 30% of all older patients admitted to hospital¹⁵.

Patients who develop delirium have high mortality, institutionalisation, complication and fall rates, and have longer lengths of stay than non-delirious patients¹⁵. Studies have shown that delirium may be prevented in up to a third of older patients¹⁵. Patients with delirium and cognitive impairment frequently experience agitation and confusion during their hospital stay and several studies have confirmed these patients are at high risk of falling¹⁶.

The guidelines make the following key recommendations surrounding management programs for people with delirium and cognitive impairment:

- i. Older people with cognitive impairment should have their risk factors for falls assessed.
- ii. Identified falls risk factors should be addressed as part of a multifactorial falls prevention program, and injury minimisation strategies (such as using hip protectors or vitamin D and calcium supplementation) should be considered. (Level II)

Table 8 summarises the use of key guideline recommendations relating to the management of delirium and cognitive impairment at the seven hospitals.

Table 8: Summary of use of key guideline recommendations relating management of delirium and cognitive impairment

Hospital	Risk assessment: POLICY	Hip protectors: POLICY	Medication review: POLICY	Risk assessment: PRACTICE	Hip protectors: PRACTICE	Medication review: PRACTICE
Hospital 1	✓	✓	✓	✓	✗	✗
Hospital 2	✓	✓	✓	?	✗	✗
Hospital 3	✓	✓	✓	?	✗	✗
Hospital 4	✓	✓	✓	✗	✗	✗
Hospital 5	✓	✓	✓	✗	✗	✗
Hospital 6	✓	✓	✓	?	✗	✗
Hospital 7	✓	✓	✓	✗	✗	✗

POLICY

- ✓ Recommendation included in hospital policy and/or documentation such as a risk tools or training schedules
- ? Some evidence of inclusion of recommendation in hospital policy and/or documentation such as a risk tools or training schedules
- ✗ Limited/no evidence of inclusion of the recommendation in hospital policy and/or documentation such as a risk tools or training schedules

PRACTICE

- ✓ Good evidence of uptake of recommendation (used for more than 75% of patients)
- ? Some evidence of uptake of recommendation (used for 50-74% of patients)
- ✗ Limited/no evidence of uptake of recommendation (used in less than 50% of patients)

7.2 Hospital policy

All hospitals have included the use of risk screening or assessment tools, hip protectors and medication reviews for patients in their falls prevention policies. However, these were not highlighted as strategies specific to patients with cognitive impairment. In addition, policies did not include details about how these processes and interventions should be modified to be specific to the needs of patients with cognitive impairment.

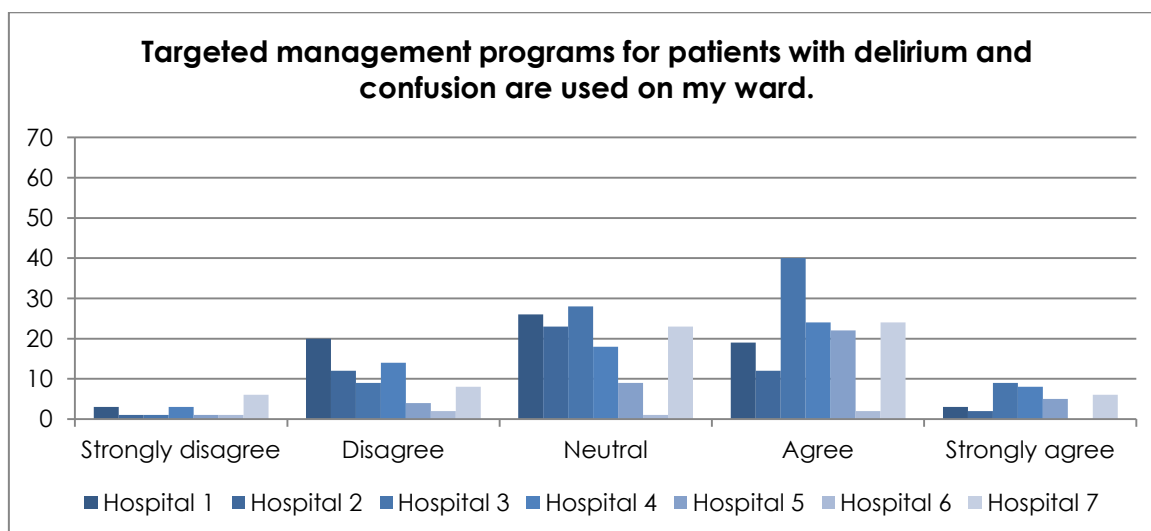
7.3 Nurse perceptions

Managing patients with delirium and confusion was consistently identified by nurses as being the biggest challenge they face within falls prevention.

'It can be quite challenging; it's not easy nursing. If you've got people that are really quite delirious it's really hard. And it can be quite intensive work.'

'...you get a lot of elderly patients now that are confused ... they're not happy being in a foreign environment, they don't want to stay in bed. We have to get them out of bed but then they are at risk. If they want to get up they will. That's what happened to me just the other week: one patient known falls risk, done everything you possibly can. I had to take a patient to X-ray, I walked out the room; 10 seconds later the patient was on the floor.'

Management programs for patients with delirium and confusion were reported to be infrequently used in the hospitals included in this evaluation. Only 41% of nurses surveyed reporting that they were used on their ward.



Nurses indicated they would like more education and strategies for managing these patients. Diversion therapy activities similar to that offered in sub-acute and residential aged care settings were highlighted as being potentially useful.

'One patient wanted something to do. He was confused, so I told him he can be patient watch because he's near the desk where everybody walks by...That was his job to be the watchman'.

'I always give patients bandages to unroll or something. Just to try and keep them in the chair.'

7.4 Implementability

A summary of the GLIA assessment scores for the implementability of the recommendations relating to the management of delirium and cognitive impairment completed by the eight assessors is presented in Table 9.

Table 9: GLIA summary on the management of delirium and cognitive impairment recommendations

Recommendation 3	Criterion failed	GLIA questions
i. Older people with cognitive impairment should have their risk factors for falls assessed.	Novelty/Innovation	24
ii. Identified falls risk factors should be addressed as part of a multifactorial falls prevention program, and injury minimisation strategies (such as using hip protectors or vitamin D and calcium supplementation) should be considered.	Novelty/Innovation	24

The following provides a summary of the key barriers to the effective implementation of recommendations related to management of delirium and cognitive impairment as identified by the eight assessors.

i. Older people with cognitive impairment should have their risk factors for falls assessed.

Key factors identified by the assessors regarding novelty/innovation:

- o The broad target audience of the guidelines—‘All hospital staff...including support services as well as clinical, management and corporate staff.’—means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills; for example best practice for managing people with acute confusion or delirium.

ii Identified falls risk factors should be addressed as part of a multifactorial falls prevention program and injury minimisation strategies (such as using hip protectors or vitamin D and calcium supplementation) should be considered.

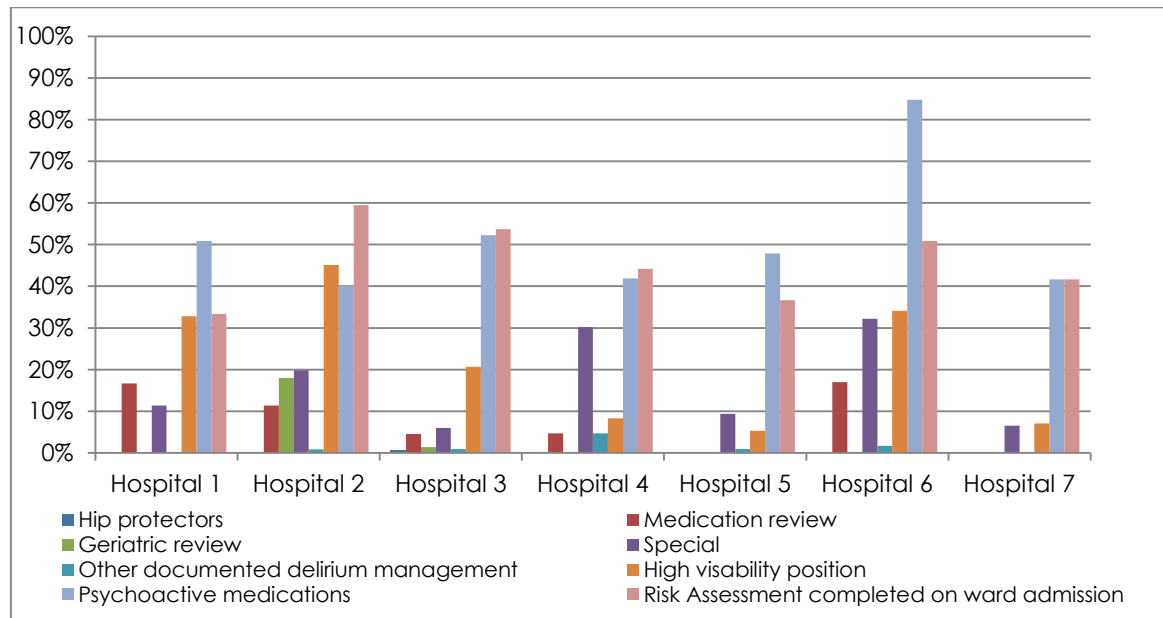
Key factors identified by the assessors regarding novelty/innovation:

- o The broad target audience of the guidelines—‘All hospital staff...including support services as well as clinical, management and corporate staff.’—means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills; for example, how to fit and prescribe hip protectors.
- o There is much debate surrounding effective doses of vitamin D and to whom it should be prescribed. It would be useful to include this type of information in the guidelines and specifics in the recommendations. It is also noted that the possible positive effects of Vitamin D will not be realised within the hospital admission and therefore this recommendation will not have a positive impact on in-hospital falls and injuries.

7.5 Knowledge to action assessment

Effective prevention of falls in people with delirium and confusion remains a challenge. It was found that 1 in 3 falls that occurring in the wards included in this review were in patients recorded as being confused, agitated or disorientated. Less than 6% of high falls risk

patients with documented delirium or dementia were documented as receiving targeted management such as specialised delirium management program, geriatrician or medication review. Hip protectors were also infrequently used in these patients. The most commonly used strategies were high visibility positioning (22%) and specials (constant patient observers) (10%). Of note, 49% of patients with documented delirium or cognitive impairment on admission were receiving psychoactive medications such as sedatives (8%), antipsychotics (27%), antidepressants (17%) or anxiolytics (14%).



8 Recommendation 4: Medication reviews

8.1 Overview

There is some evidence that older people admitted to hospital should have their medications reviewed and modified appropriately as a component of a multi-factorial approach to reducing the risk of falling¹⁶.

The guidelines make the following key recommendations surrounding medication reviews for high risk fallers:

- i. Older people admitted to hospital should have their medications (prescribed and non-prescribed) reviewed and modified appropriately (and particularly in cases of multiple drug use) as a component of a multifactorial approach to reducing the risk of falls in a hospital setting. (Level 1)
- ii. As part of a multifactorial intervention, patients on psychoactive medication should have their medication reviewed and, where possible, discontinued gradually to minimise side effects and to reduce their risk of falling.

Table 10 summarises the use of key guideline recommendations relating to the use of medication reviews at the seven hospitals.

Table 10: Summary of use of key guideline recommendations relating to the use of medication reviews

Hospital	Medication review: POLICY	Withdrawal of psychoactive medications: POLICY	Medication review: PRACTICE	Withdrawal of psychoactive medications: PRACTICE
Hospital 1	✓	✓	?	✗
Hospital 2	✓	✓	✗	✗
Hospital 3	✓	✓	✗	✗
Hospital 4	✓	✓	✗	✗
Hospital 5	✓	✓	✗	✗
Hospital 6	✓	✗	?	✗
Hospital 7	✓	✓	✗	✗

POLICY



Recommendation included in hospital policy and/or documentation such as a risk tools or training schedules



Some evidence of inclusion of recommendation in hospital policy and/or documentation such as a risk tools or training schedules



Limited/no evidence of inclusion of the recommendation in hospital policy and/or documentation such as a risk tools or training schedules

PRACTICE



Good evidence of uptake of recommendation (used for more than 75% of patients)



Some evidence of uptake of recommendation (used for 50-74% of patients)



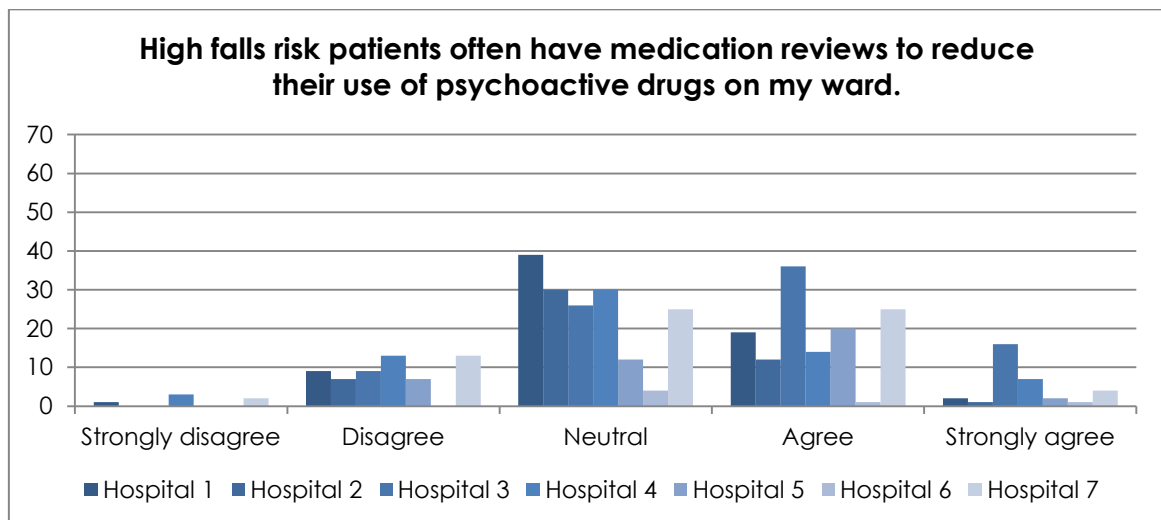
Limited/no evidence of uptake of recommendation (used in less than 50% of patients)

8.2 Hospital policy

All hospitals have included medication reviews as a falls prevention strategy for high risk patients in their falls prevention policies or risk tools. However, policies lacked specific detail as to the types of medications that should be reviewed, such as psychoactive medications, and target activities for the review such as discontinuing psychoactive medications where appropriate.

8.3 Nurse perceptions

It appears there is a substantial evidence-practice gap surrounding the use of medication reviews and decreasing psychoactive medications for high risk patients. Nurses reported that medication reviews for falls prevention occurred infrequently. Only 37% of nurses surveyed reported that high falls risk patients had their medications reviewed to reduce the use of psychoactive drugs.



Nurses seemed to be aware of the increased falls risk that these medications pose for older patients but were in a quandary as to how else to manage challenging patient behaviours.

'They are very demented and sick and delirious when they come in. So what do we give them, sedation, and what happens – bang.'

'It's weighing up between the falls risk versus the medication management to keep them settled. So it is a balancing act.'

Nurses felt that whilst geriatricians were cognisant of reviewing medications to decrease falls risk, other medical staff were less aware and therefore reviews for this purpose were rarely undertaken. It was highlighted that to improve the use of medication reviews a structured process needed to be implemented to trigger the review. It was felt that this has been achieved in residential aged care but not yet in acute hospitals.

'It [medication review] happens regularly in residential [care]. If there was a structured way that that's done that would be definitely be helpful.'

'We've got a clinician, a geriatrician who would fully support that because she's doing quite a bit of work around the delirium as well, but I think there is still quite a bit of work to do. I don't think it's even looked at as a priority. I don't know whether that information's got down to the clinicians.'

'If they're sedated and try to get out of bed they're going to fall over.'

'We get our psych liaison who comes along and looks at the medication to see if we're giving the correct medication to help control their behaviour. So we do get them but, again, it doesn't happen as often as it should.'

'I don't think medical staff, excluding perhaps geriatricians maybe even pharmacists, when they look at medications think about falls. And even nursing staff, I don't think they really think about medications in relation to falls risk either.'

8.4 Implementability

A summary of the GLIA assessment scores for the implementability of the recommendations relating to medication reviews completed by the eight assessors is presented in Table 11.

Table 11: GLIA summary on medication review recommendations

Recommendation 4		Criterion failed	GLIA questions
i.	Older people admitted to hospital should have their medications (prescribed and non-prescribed) reviewed and modified appropriately (and particularly in cases of multiple drug use) as a component of a multifactorial approach to reducing the risk of falls in a hospital setting.	Executability	11
		Decidability	12
		Flexibility	17, 19
ii.	As part of a multifactorial intervention, patients on psychoactive medication should have their medication reviewed and, where possible, discontinued gradually to minimise side effects and to reduce their risk of falling.	Executability	11
		Flexibility	17, 19

The following provides a summary of the key barriers to the effective implementation of recommendations related to medication reviews as identified by the eight assessors.

i. Older people admitted to hospital should have their medications (prescribed and non-prescribed) reviewed and modified appropriately (and particularly in cases of multiple drug use) as a component of a multifactorial approach to reducing the risk of falls in a hospital setting.

Key factors identified by the assessors regarding executability:

- The specifics of how, when and by whom medications should be reviewed is not clear. For example, should this be completed by a pharmacist or the patient's medical officer on admission?

Key factors identified by the assessors regarding decidability:

- The recommendation is very broad. Further detail on the medications that should be reviewed specific to falls risk should be included.
- It is difficult to determine exactly under what conditions a medication review should be conducted. Is it for all 'older' patients or just those identified as being high falls risk? It would be useful to include a criterion for deciding when a medication review for the purpose of falls prevention should be triggered. Details within the chapter do provide some guide but as the audience for the guideline is broad there is not sufficient detail for all intended audiences.

8.5 Knowledge to action assessment

Medication reviews with an emphasis on avoidance of psychoactive medications are rarely completed. Only 6% of high falls risk patients had a documented medication review for falls prevention and 37% of high falls risk patients were taking psychoactive medications. It should be noted that there did not seem to be a standardised process for recording when a medication review was undertaken for the purpose of falls prevention as opposed to other purposes such as pain management.

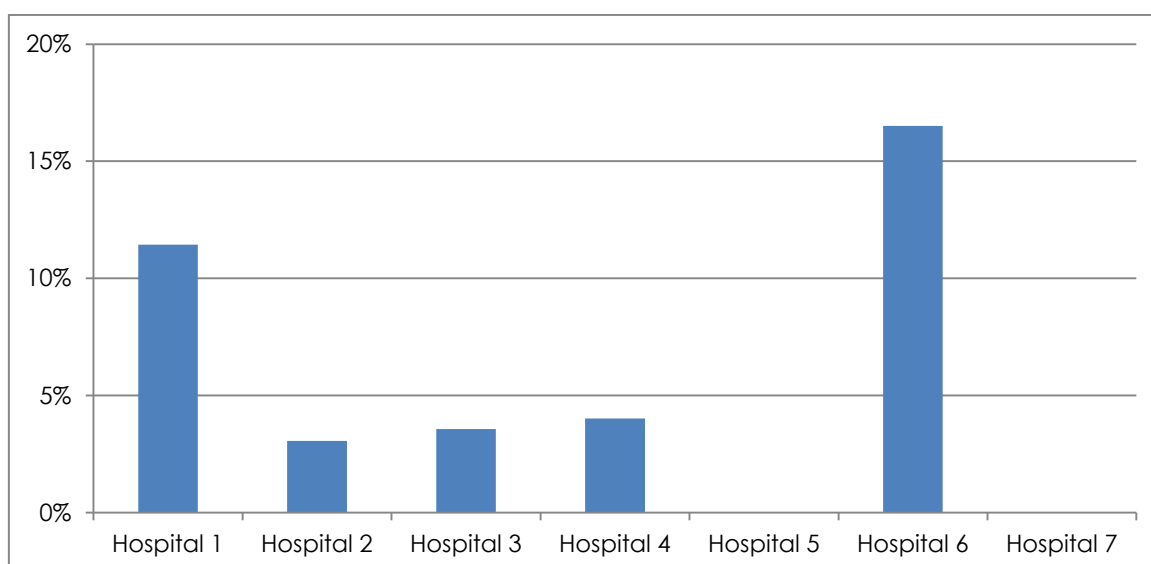


Figure 8: Proportion of high falls risk patients that received a medication review

Nurses felt that whilst geriatricians were vigilant in reviewing medications to decrease falls risk, other medical staff were less aware and therefore reviews for this purpose were rarely undertaken. To improve the use of medication reviews a structured process should be implemented to trigger reviews.

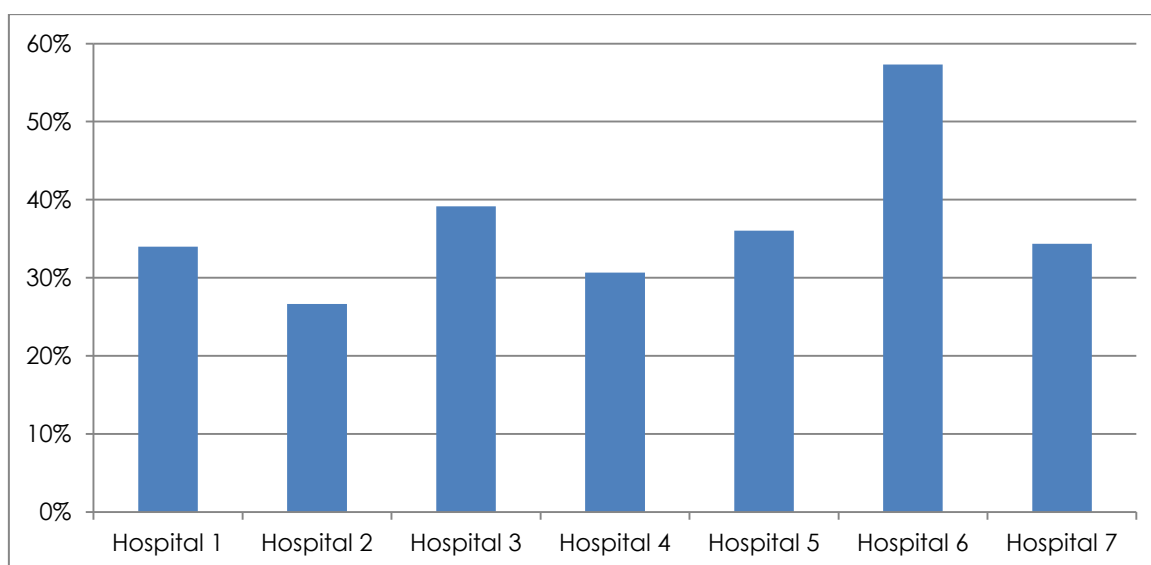


Figure 9: Proportion of high falls risk patients recorded as receiving psychoactive medications

There was no evidence that use of psychoactive medications was discontinued throughout a patients hospital stay. Indeed, an increased likelihood of increasing the use of psychoactive medications during the hospital stay was found at two of the hospitals studied.

The most commonly prescribed psychoactive medications for each hospital varied as shown in Figure 10. However, antipsychotics were the most frequently prescribed psychoactive medication at four of the seven hospitals studied.

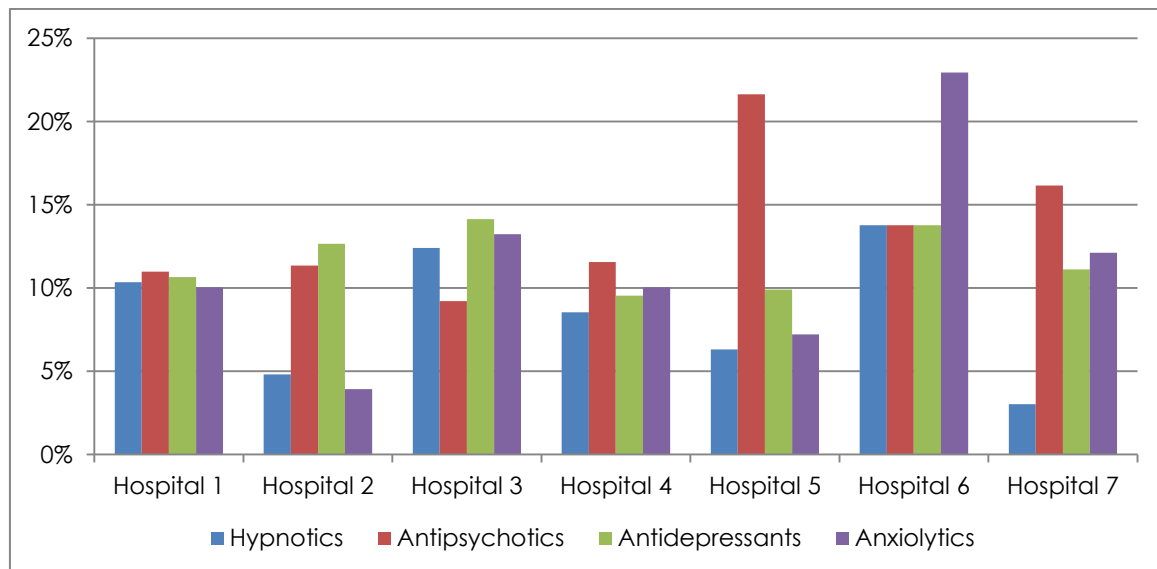


Figure 10: Proportion of high falls risk patients receiving psychoactive medications by type

9 Recommendation 5: Post-falls management procedures

9.1 Overview

Effective post-falls assessment and management procedures aim to promptly identify any injuries that a patient may have sustained as a result of a fall, and inform the review of falls prevention strategies the patient requires by identifying risk factors and circumstances that contributed to the fall. In-hospital falls frequently (44-60% of falls) result in injury^{17 18}, so prompt assessment and investigation after a fall is required to ensure timely identification and management of injuries sustained. Effective post-falls review facilitates staff to implement targeted fall prevention strategies that reduce the likelihood of secondary falls.

The guidelines make the following key best practice points surrounding post-fall management:

- i. Hospital staff should report and document all falls.
- ii. It is advisable to ask a patient whether they remember the sensation of falling or whether they think that they blacked out, because many patients who have syncope are unsure whether they blacked out.
- iii. Staff should follow the hospital protocol or guidelines for managing patients immediately after a fall.
- iv. After the immediate follow-up of a fall, determine how and why a fall may have occurred, and implement actions to reduce the risk of another fall.
- v. Analysing falls is one of the key ways to prevent future falls. Organisational learning from this analysis can be used to inform practice and policies, and to prevent future falls. A post-fall analysis should lead to an interdisciplinary care plan to reduce the risk of future falls and injuries, and address any identified comorbidities or falls risk factors.
- vi. An in-depth analysis of the fall (e.g. a root-cause analysis) is required if there has been a serious injury following a fall, or if a death has resulted from a fall.

Table 12 summarises the use of key guideline recommendations relating to the use of medication reviews at the seven hospitals.

Table 12: Summary of use of key guideline best practice points relating to post-fall management

Hospital	Falls reporting and documentation POLICY	Managing patients immediately after a fall: POLICY	Review and implement new strategies: POLICY	Post-fall analysis: POLICY	Falls reporting and documentation PRACTICE	Managing patients immediately after a fall: PRACTICE	Review and implement new strategies: PRACTICE	Post-fall analysis: PRACTICE
Hospital 1	✓	✓	✓	✓	?	?	✗	✗
Hospital 2	✓	✓	✓	✗	✓	✓	✗	✗
Hospital 3	✓	✓	✓	✓	✓	✓	✗	✗
Hospital 4	✓	✓	✓	✗	?	✓	✗	✗
Hospital 5	✓	✓	✓	✓	✗	?	✗	✗
Hospital 6	✓	✓	✓	✓	✗	?	✗	✗
Hospital 7	✓	✓	✓	✓	✗	✗	✗	✗

POLICY

- ✓ Recommendation included in hospital policy and/or documentation such as a risk tools or training schedules
- ? Some evidence of inclusion of recommendation in hospital policy and/or documentation such as a risk tools or training schedules
- ✗ Limited/no evidence of inclusion of the recommendation in hospital policy and/or documentation such as a risk tools or training schedules

PRACTICE

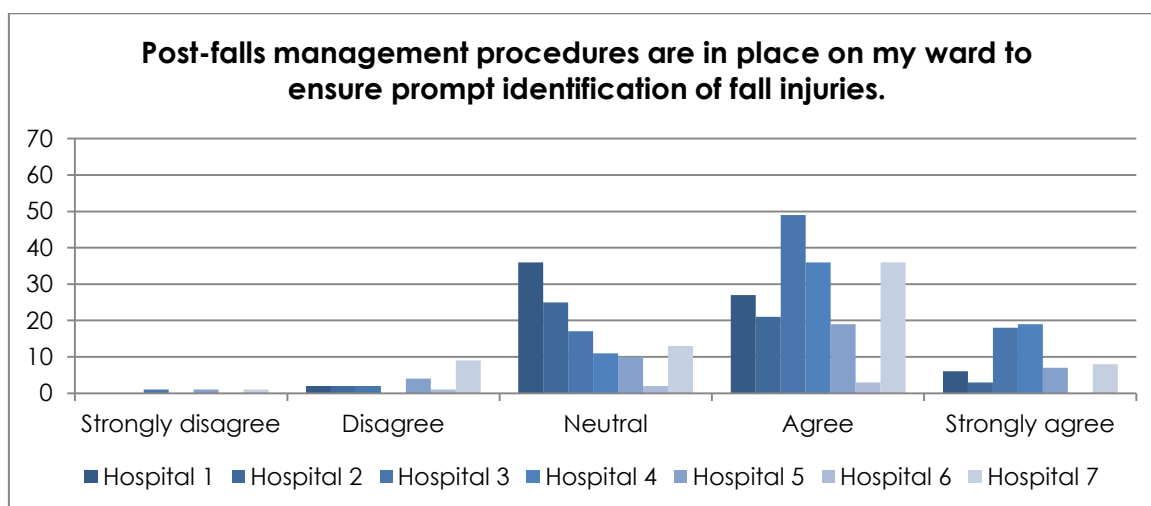
- ✓ Good evidence of uptake of recommendation (used for more than 75% of patients)
- ? Some evidence of uptake of recommendation (used for 50-74% of patients)
- ✗ Limited/no evidence of uptake of recommendation (used in less than 50% of patients)

9.2 Hospital policy

All hospitals have included post-falls management strategies reflective of the best practice points included in the guidelines in their falls prevention policies.

9.3 Nurse perceptions

Appropriate post-falls management is important to ensure injuries are promptly identified and secondary falls are prevented. Despite this, only 60% of nurses surveyed reported that their ward had a post-falls procedure in place (that they were aware of) to ensure prompt identification of fall injuries.



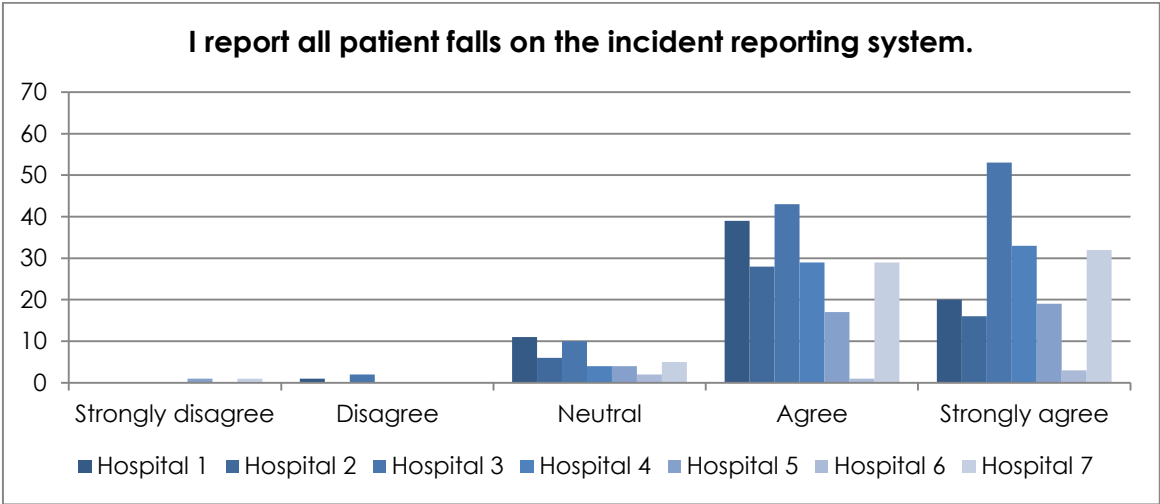
The guidelines recommend that all falls should be reported, investigations for injury should be undertaken and analysis of the fall circumstances completed to identify new risk factors and to inform the care plan for reducing future falls. Nurses seemed to value the post-fall review process highlighting it as an opportunity to see whether strategies identified for a patient were put in place and whether they were working.

'Our post-fall management is not just our injury assessments; it's also knowing were we actually following on the strategies. I think that's a big bit of learning to come out of a lot of these things. A patient has had a fall, did we actually implement the strategies we identified; were they put in place? Did they fall regardless of our strategies? things need to be driven back into the simple did we actually follow the strategies?'

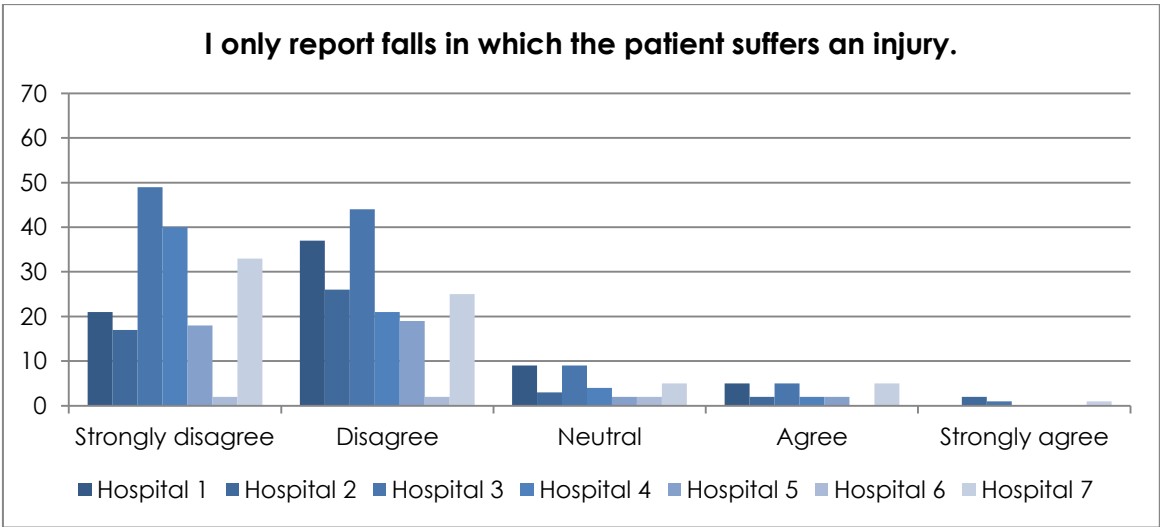
The completion of the post-falls review in a small group situation was also identified as a useful approach:

'One of the things I really like is the huddle concept, where people stop and you chat about what's happened and what you can do to prevent and improve. I really like that concept because it shares the responsibility and it communicates to everyone there's been an incident, for example, with falls, that there has been an incident so everyone's then aware that this patient is a high risk, so then everyone can share the responsibility in managing the interventions for the patient and then you get that group also assisting in coming up with an appropriate intervention plan. I really like that idea.'

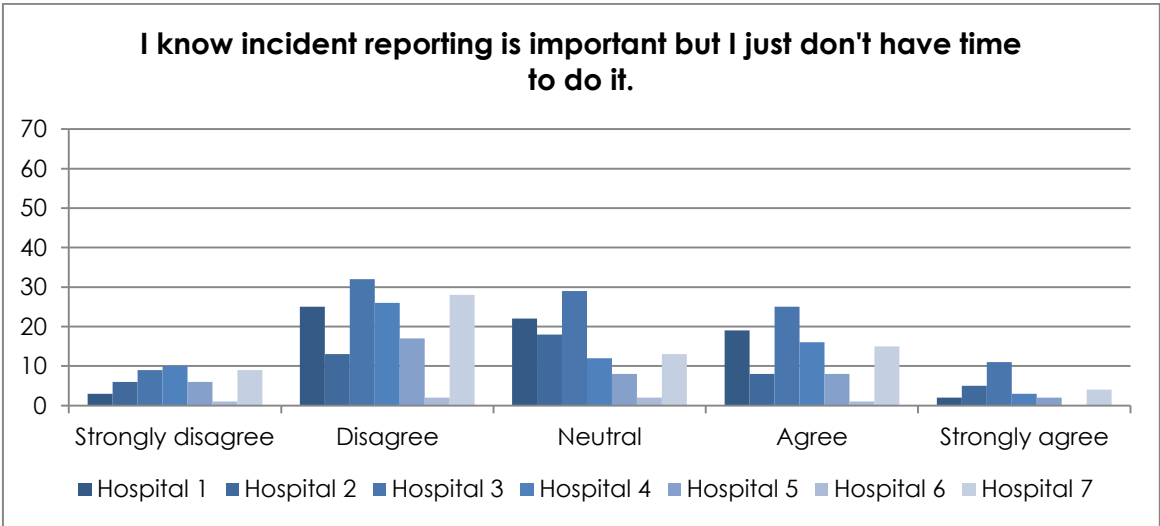
Reporting of falls incidents on the incident reporting system is a key component of post-falls management. Of the nurses surveyed, 85% reported that they record all falls in the incident reporting system.



There was some indication towards the importance of reporting only falls that result in injury rather than all falls.



A lack of time may be a reason for not reporting all falls.



9.4 Implementability

A summary of the GLIA assessment scores for the implementability assessment of the best practice points relating to post-fall management completed by the eight assessors is presented in Table 13.

Table 13: GLIA summary on post-fall management best practice points

Recommendation 5		Criterion failed	GLIA questions
i.	Hospital staff should report and document all falls.	Validity	16
		Flexibility	17
ii.	It is advisable to ask a patient whether they remember the sensation of falling or whether they think that they blacked out, because many patients who have syncope are unsure whether they blacked out.	Validity	15, 16
		Flexibility	17, 19
iii.	Staff should follow the hospital protocol or guidelines for managing patients immediately after a fall.	Validity	16
		Flexibility	17, 19
iv.	After the immediate follow-up of a fall, determine how and why a fall may have occurred, and implement actions to reduce the risk of another fall.	Validity	16
		Flexibility	17, 19
v.	Analysing falls is one of the key ways to prevent future falls. Organisational learning from this analysis can be used to inform practice and policies, and to prevent future falls. A post-fall analysis should lead to an interdisciplinary care plan to reduce the risk of future falls and injuries, and address any identified comorbidities or falls risk factors.	Executability	10
		Flexibility	17, 19
		Novelty/Innovation	24
vi.	An in-depth analysis of the fall (e.g. a root-cause analysis) is required if there has been a serious injury following a fall, or if a death has resulted from a fall.	Executability	11
		Decidability	12
		Flexibility	19
		Novelty/Innovation	24

The following provides a summary of the key barriers to the effective implementation of recommendations related to post falls management as identified by the eight assessors.

i. Hospital staff should report and document all falls.

Key factors identified by the assessors regarding validity:

- The level of evidence is not provided, as this is a good practice point.

Key factors identified by the assessors regarding flexibility:

- Does the term 'should' imply 'all falls, including rolls out of bed and slips from chairs must be reported'.

ii. It is advisable to ask a patient whether they remember the sensation of falling or whether they think that they blacked out, because many patients who have syncope are unsure whether they blacked out.

Key factors identified by the assessors regarding validity:

- The rationale for this best-practice point is somewhat unclear. If it is to improve the post-falls management of patients suspected of having syncope then the specific management activities that should be applied to these patients should be included.
- The level of evidence is not provided, as this is a good practice point.

Key factors identified by the assessors regarding flexibility:

- Stating that it 'is advisable' makes the strength of the recommendation ambiguous. The wording needs to be changed to state the strength of the recommendation more clearly.
- It may be assumed that this applies to all falls, irrespective of hospital setting; however clarity would be improved if this were stated explicitly in the recommendation itself.

iii. Staff should follow the hospital protocol or guidelines for managing patients immediately after a fall.

Key factors identified by the assessors regarding validity:

- The level of evidence is not provided, as this is a good practice point.

Key factors identified by the assessors regarding flexibility:

- There is no mention of special considerations here. For example, should all falls involving the head, or that are unwitnessed, be reviewed by a medical officer? Inclusion of specific actions for specific circumstances would be useful.

iv. After the immediate follow-up of a fall, determine how and why a fall may have occurred, and implement actions to reduce the risk of another fall.

Key factors identified by the assessors regarding validity:

- The level of evidence is not provided, as this is a good practice point.
- It may be assumed that this applies to all falls irrespective of hospital setting, however clarity would be improved if this were stated explicitly in the recommendation itself.

Key factors identified by the assessors regarding flexibility:

- This recommendation does not contain a word describing the strength of the recommendation therefore the importance and necessity with which it should be undertaken are unclear.
- It may be assumed that this applies to all falls irrespective of type; however clarity would be improved if this were stated explicitly in the recommendation itself.

v. Analysing falls is one of the key ways to prevent future falls. Organisational learning from this analysis can be used to inform practice and policies, and to prevent future falls. A post-fall analysis should lead to an interdisciplinary care plan to reduce the risk of future falls and injuries, and address any identified comorbidities or falls risk factors.

Key factors identified by the assessors regarding executability:

- The first two lines do not actually recommend an action, but rather make a statement about what *can* be done. The recommendation needs to be stated more directly.
- There is insufficient information about how to undertake a post-falls analysis.

Key factors identified by the assessors regarding flexibility:

- The term 'should', in relation to the post-fall analysis, indicates the strength of recommendation but this dimension needs to be addressed more clearly and uniformly throughout the guideline.
- It may be assumed that this applies to all falls analyses, irrespective of hospital setting; however clarity would be improved if this were stated explicitly in the recommendation itself.

Key factors identified by the assessors regarding novelty/innovation:

- The broad target audience of the guidelines—‘All hospital staff...including support services as well as clinical, management and corporate staff.’—means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills regarding the analysis of falls and development of multi-disciplinary care plans.

vi. An in-depth analysis of the fall (e.g. a root-cause analysis) is required if there has been a serious injury following a fall, or if a death has resulted from a fall.

Key factors identified by the assessors regarding executability:

- There is insufficient detail provided regarding how to execute this recommendation. In 20.3 it is stated that ‘a root cause analysis’ is always required if a fall results in a ‘serious injury or death’ but no information is provided on what a root-cause analysis is or how it can be executed. If Figure 20.4.1 (minimum data set for reporting and recording falls) is meant to be an example of such an analysis, then an appropriate reference to this needs to be made at 20.3.

Key factors identified by the assessors regarding decidability:

- What constitutes a ‘serious injury’ needs to be more clearly defined; otherwise different staff could interpret this differently.

Key factors identified by the assessors regarding flexibility:

- It may be assumed that this applies to all falls analyses irrespective of hospital setting; however clarity would be improved if this were stated explicitly in the recommendation itself.

Key factors identified by the assessors regarding novelty/innovation:

- The broad target audience of the guidelines—‘All hospital staff...including support services as well as clinical, management and corporate staff.’ —means that not all of these people would be able to perform the recommendation without the acquisition of new knowledge or skills in root-cause analysis.

9.5 Knowledge to action

The evaluation identified that only 64% of all falls and 75% of falls with injury are documented in the incident reporting database. This suggests that research, benchmarking activities and temporal trend analysis based on incident reporting data alone may lead to inaccurate and misleading conclusions. Figure 11 shows that incident reporting practice varied across the seven hospitals included in the evaluation.

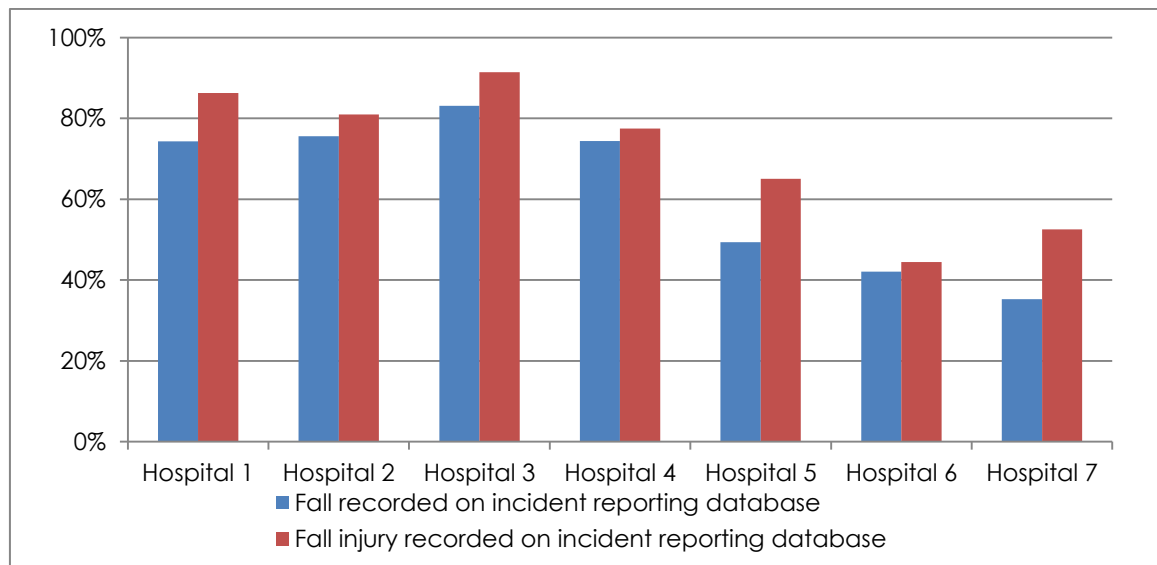
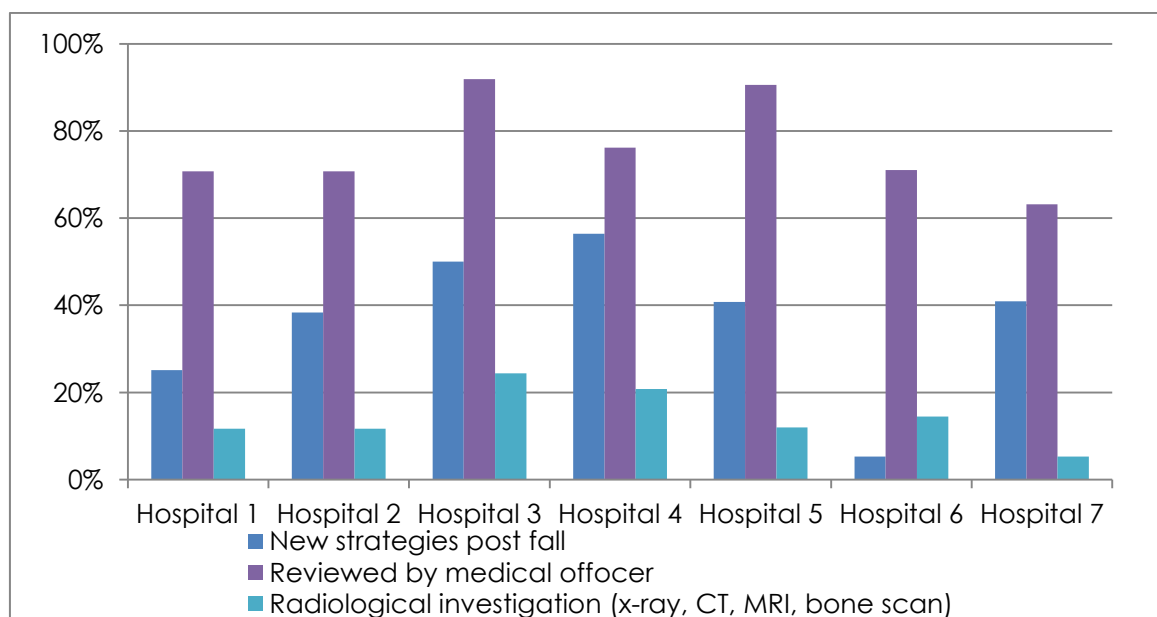


Figure 11: Recording of falls and fall injuries in the incident reporting database

Eleven percent of falls are investigated radiologically (x-ray, CT or MRI scan), 56% are reviewed by a medical officer and only 40% receive new falls prevention strategies.



Appendix 1: Assessors completing the AGREE II and GLIA assessments

Anna Barker	Physiotherapist, Senior Research Fellow Centre of Research Excellence in Patient Safety Department of Epidemiology & Preventive Medicine School of Public Health and Preventive Medicine Monash University VICTORIA
Renata Morello	Physiotherapist, 6-PACK Project Manger Centre of Research Excellence in Patient Safety Department of Epidemiology & Preventive Medicine School of Public Health and Preventive Medicine Monash University VICTORIA
Terry Haines	Director Allied Health Research Unit, Southern Health Director of Research, Southern Physiotherapy Clinical School Physiotherapy Department Monash University VICTORIA
Nick Waldron	Geriatrician Lead Falls Prevention Health Network West Australian Department of Health WESTERN AUSTRALIA
Anne-Marie Hill	Senior Lecturer, School of Physiotherapy APA Gerontological Physiotherapist The University of Notre Dame WESTERN AUSTRALIA
Nicole Depraizer	Senior Policy Officer Health Networks Branch System Policy & Planning West Australian Department of Health WESTERN AUSTRALIA
Karina Moore	Senior Development Officer Health Network Branch System Policy & Planning West Australian Department of Health WESTERN AUSTRALIA
Michelle Sutherland	Falls Prevention Program Manager SA Health SOUTH AUSTRALIA
Pamela Dean	Master Trainer Preventing falls and harm from falls Safety and Quality Department of Health SOUTH AUSTRALIA

Meredith Stewart	Falls Prevention Project Manager & Master Trainer Country Health SA Local Health Network SA Health SOUTH AUSTRALIA
Rebecca Curtis	Patient Safety & Assessment Advisor Acute Care of the Elderly (ACE UNIT) Clinical Practice Consultant Flinders Medical Centre SOUTH AUSTRALIA
Chris Lowndes	APA Gerontological Physiotherapist 6-PACK Data collector Royal Prince Alfred Hospital NEW SOUTH WALES
Trish Turner	Registered Nurse 6-PACK Data collector Blacktown Hospital NEW SOUTH WALES
Sandra Brauer	Associate Professor Physiotherapy School of Health and Rehabilitation Sciences The University of Queensland QUEENSLAND
Kate Smith	Queensland Health Manager Safer Practice Patient Safety Unit Health Systems Innovation Branch Health Service and Clinical Innovation Division Queensland Health QUEENSLAND
Melinda Aylett	Registered Nurse 6-PACK Data collector Western Health VICTORIA
Georgie Rose	Senior Physiotherapist (Cardiorespiratory / Gerontology) Research Assistant Centre of Research Excellence in Patient Safety Department of Epidemiology & Preventive Medicine School of Public Health and Preventive Medicine Monash University Eastern Health VICTORIA
Melanie Farlie	Physiotherapist, Senior Clinician (Gerontology) Allied Health Research Unit, Southern Health VICTORIA

Appendix 2: AGREE II and GLIA assessments

AGREE II

Domain	Item	AGREE II Rating						
		1 <i>Strongly Disagree</i>	2	3	4	5	6	7 <i>Strongly Agree</i>
Scope and purpose	1. The overall objective(s) of the guideline is (are) specifically described.							
	2. The health question(s) covered by the guideline is (are) specifically described.							
	3. The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described.							
Stakeholder involvement	4. The guideline development group includes individuals from all the relevant professional groups.							
	5. The views and preferences of the target population (patients, public, etc.) have been sought.							
	6. The target users of the guideline are clearly defined.							
Rigor of development	7. Systematic methods were used to search for evidence.							
	8. The criteria for selecting the evidence are clearly described.							
	9. The strengths and limitations of the body of evidence are clearly described.							
	10. The methods for formulating the recommendations are clearly described.							
	11. The health benefits, side effects and risks have been considered in formulating the recommendations.							
	12. There is an explicit link between the recommendations and the supporting evidence.							
	13. The guideline has been externally reviewed by experts prior to its publication.							
Clarity of presentation	14. A procedure for updating the guideline is provided.							
	15. The recommendations are specific and unambiguous.							
	16. The different options for management of the condition or health issue are clearly presented.							
Applicability	17. Key recommendations are easily identifiable.							
	18. The guideline describes facilitators and barriers to its application.							
	19. The guideline provides advice and/or tools on how the recommendations can be put into practice.							
	20. The potential resource implications of applying the recommendations have been considered.							
Editorial independence	21. The guideline presents monitoring and/ or auditing criteria.							
	22. The views of the funding body have not influenced the content of the guideline.							
Overall Guideline Assessment	23. Competing interests of guideline development group members have been recorded and addressed.							
	1. Rate the overall quality of this guideline.	1 <i>Lowest possible quality</i>	2	3	4	5	6	7 <i>Highest possible quality</i>
Overall Guideline Assessment	2. I would recommend this guideline for use.	Yes	Yes, with modifications					No

Guideline Implementability Appraisal (GLIA)

Score each question as 'yes', 'no', 'not applicable' or 'unsure'.

GLOBAL CONSIDERATIONS (entire guideline)

- 1) Does the guideline clearly define the target patient population?
- 2) Does the guideline clearly define its intended audience (i.e., types of providers)?
- 3) Are the settings in which the guideline is to be used clearly described?
- 4) Do the organization(s) and author(s) who developed the guideline have credibility with the intended audience of the guideline?
- 5) Does the guideline suggest strategies for implementation or tools for application e.g., a summary document, a quick reference guide, educational tools, patients' leaflets, online resources or computer software?
- 6) Is it clear in what sequence the recommendations should be applied?
- 7) Is the guideline internally consistent, i.e., without contradictions between recommendations or between text recommendations and flowcharts, summaries, patient education materials, etc.?
- 8) Are all recommendations easily identifiable, e.g., summarized in a box, bold text, underlined, etc.?
- 9) Are all recommendations (and their discussions) concise?
(Longwinded explanations impair implementability.)

EXECUTABILITY – (exactly what to do)

- 10) Is the recommended action (**what to do**) stated specifically and unambiguously?
That is, would the intended audience execute the action in a consistent way?
- 11) Is sufficient detail provided or referenced (about **how to do it**) to allow the intended audience to perform the recommended action.

DECIDABILITY – (precisely under what conditions (e.g., age, gender, clinical findings, laboratory results) to do something)

- 12) Would the guideline's intended audience consistently determine whether each condition in the recommendation has been satisfied?
That is, is each and every condition described clearly enough so that reasonable practitioners would agree when the recommendation should be applied?
- 13) Are all reasonable combinations of conditions addressed?
- 14) If this recommendation contains more than one condition, is the logical relationship (ANDs and ORs) between conditions clear?

VALIDITY – (the degree to which the recommendation reflects the intent of the developer and the quality of evidence)

- 15) Is the justification for the recommendation stated explicitly?
- 16) Is the quality of evidence that supports each recommendation stated explicitly?

FLEXIBILITY – (the degree to which a recommendation permits interpretation and allows for alternatives in its execution)

- 17) Is the strength of each recommendation stated explicitly?
Note: Strength of recommendation reflects anticipated level of adherence and is different from quality of evidence (question 16). Potential statements to satisfy this criterion might include 'Strong recommendation', 'Standard', 'Clinical option', etc.
- 18) Does the recommendation specify patient characteristics (such as coincident drug therapy and common co-morbid conditions) that require or permit individualization?
- 19) Does the recommendation specify practice characteristics (such as location and availability of support services) that require or permit modification?

EFFECT ON PROCESS OF CARE – (the degree to which the recommendation impacts upon the usual workflow of a care setting)

- 20) Can the recommendation be carried out without substantial disruption in current workflow?
- 21) Can the recommendation be **pilot tested** without substantial resource commitment?
For example, buying and installing expensive equipment to comply with a recommendation is not easily reversible.

MEASURABILITY – (the degree to which markers or endpoints can be identified to track the effects of implementation of this recommendation)

- 22) Can **adherence** to this recommendation be measured?

Measurement of adherence requires attention to both the actions performed and the circumstances under which the actions are performed.

- 23) Can **outcomes** of this recommendation be measured?

Outcomes include such things as changes in health status, mortality, costs, and satisfaction.

NOVELTY/INNOVATION – (the degree to which the recommendation proposes actions considered unconventional by clinicians or patients)

- 24) Can the recommendation be performed by the guideline's intended users without acquisition of new knowledge or skills?

- 25) Is the recommendation consistent with existing attitudes and beliefs of the guideline's intended audience?

- 26) Is the recommendation consistent with **patient** expectations?

In general, patients expect their concerns to be taken seriously, benefits of interventions to exceed risks, and adverse outcomes to fall within an acceptable range.

COMPUTABILITY (only applicable when an electronic implementation is planned for a particular setting) – the ease with which a recommendation can be operationalized in an electronic information system

- 27) Are all patient data needed for this recommendation available electronically in the system in which it is to be implemented?

- 28) Is each condition of the recommendation defined at a level of specificity suitable for electronic implementation?

- 29) Is each recommended action defined at a level of specificity suitable for electronic implementation?

- 30) Is it clear by what means a recommended action can be executed in an electronic setting, e.g., creating a prescription, medical order, or referral, creating an electronic mail notification, or displaying a dialog box?

Appendix 3: Falls prevention nurse survey

Thank you for participating in this survey

We recognise the importance of your privacy so please note:

- All information collected in this survey will be anonymous.
- Your employer will not know if you have participated in the survey.
- No personal details are required so we have no way of linking your survey response to you.
- All results will be grouped, for example '80% of nurses strongly agreed that falls risk assessment tools are a useful way of identifying patients at risk of falling'.

Please answer the following five questions by ticking the appropriate box:

- How long have you worked at this hospital?
☐ <4 months ☐ 4-12 months ☐ 1-5 years ☐ > 5 years
- How long have you worked on this ward?
☐ <4 months ☐ 4-12 months ☐ 1-5 years ☐ > 5 years
- What is your qualification?
☐ Registered nurse Division 1 ☐ Registered nurse Division 2 ☐ Other (specify)
- On what ward do you most frequently work?
- How many shifts do you usually work on the above ward?
☐ <1 shift per week ☐ 1 shift per week ☐ 2-4 shifts per week ☐ 5 shifts per week

Please circle the response that best matches your perceptions/experiences of the falls prevention and safety climate on the ward where you most frequently work.

Please answer the following items with respect to your ward using the scale below.

					Strongly agree ▼				
					Agree ▼				
					Neutral ▼				
					Disagree ▼				
					Strongly disagree ▼				
A	B	C	D	E					
Strongly disagree	Disagree	Neutral	Agree	Strongly agree					
The current falls prevention program is effective at reducing falls on my ward.					A	B	C	D	E
Falls risk assessment tools are a useful way of identifying patients at risk of falling.					A	B	C	D	E
Falls risk assessment tools are better than my own judgment for identifying patients most at risk of falling.					A	B	C	D	E
Low-low beds are an effective way to prevent injuries in patients at risk of falling out of bed.					A	B	C	D	E
Keeping the bed rails up is an effective way to prevent injuries in patients at risk of falling out of bed.					A	B	C	D	E
It is not my responsibility to stop patients from falling.					A	B	C	D	E
Falls risk assessment is a waste of time.					A	B	C	D	E
The falls risk assessment tool used on this ward is a useful way of identifying patients at risk of falling.					A	B	C	D	E
I don't have time to complete a falls risk assessment on all of my patients.					A	B	C	D	E
A 'Falls risk' sign above the bed is a useful way to communicate to staff what patients are at risk of falling.					A	B	C	D	E
It is my responsibility, as a patient's treating nurse, to assess their falls risk each shift.					A	B	C	D	E
It is my responsibility to implement prevention strategies for patients I identify as high falls risk.					A	B	C	D	E
Falls are not a problem on my ward so falls prevention programs are not required.					A	B	C	D	E
Falls prevention is not a priority on this ward.					A	B	C	D	E
Incident reporting provides us with a way of measuring how we are going with patient falls.					A	B	C	D	E
I never know what to write on a falls incident report.					A	B	C	D	E
I know incident reporting is important but I just don't have time to do it.					A	B	C	D	E
I only report falls in which the patient suffers an injury.					A	B	C	D	E
Falls prevention is primarily the responsibility of the physiotherapist.					A	B	C	D	E
You can't stop older people from falling.					A	B	C	D	E
It is my responsibility to update my patient's falls risk status each shift if a fall and/or change in condition occurs.					A	B	C	D	E

Please answer the following items with respect to your ward using the scale below.

Please answer the following items with respect to your ward using the scale below.					Strongly agree ▼				
A	B	C	D	E	Agree ▼				
Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Neutral ▼				
					Disagree ▼				
					Strongly disagree ▼				
There are more important things I should do than falls prevention strategies for my high risk patients.					A	B	C	D	E
My supervisors have assisted when I raise problems about falls on my ward.					A	B	C	D	E
Positioning high falls risk patients in high visibility areas is an effective way to prevent them from falling.					A	B	C	D	E
Targeted management programs for patients with delirium and confusion are used on my ward.					A	B	C	D	E
High falls risk patients often have medication reviews to reduce their use of psychoactive drugs on my ward.					A	B	C	D	E
There is strong leadership for falls prevention on my ward.					A	B	C	D	E
My supervisors are supportive of falls prevention activities on my ward.					A	B	C	D	E
I experience good collaboration with other nurses on this ward.					A	B	C	D	E
I am given useful feedback about whether I am using falls prevention strategies properly.					A	B	C	D	E
This feedback helps me use falls prevention strategies more effectively.					A	B	C	D	E
If a patient has had a fall on the ward, this is always discussed at handover.					A	B	C	D	E
I receive regular reminders to use falls prevention strategies.					A	B	C	D	E
I receive useful support and training from falls prevention leaders.					A	B	C	D	E
Falls risk assessment and prevention strategies have been incorporated into the ward's standard processes.					A	B	C	D	E
Falls prevention best practice guidelines are a useful resource.					A	B	C	D	E
Use of 'specials' are an effective way of preventing patients from falling.					A	B	C	D	E
I report all patient falls to the person in charge of my shift.					A	B	C	D	E
I report all patient falls on the incident reporting system.					A	B	C	D	E
I document all patient falls in the patient files (medical records).					A	B	C	D	E
Exercise programs are commonly used to reduce the risk of falls in high falls risk patients on my ward.					A	B	C	D	E
Exercise programs are an effective way of preventing falls in high falls risk patients.					A	B	C	D	E
Post-falls management procedures are in place on my ward to ensure prompt identification of fall injuries.					A	B	C	D	E
An active falls prevention leader is essential for falls prevention programs to be successful on my ward.					A	B	C	D	E

Comments:

How do you think training in falls prevention could be improved at this hospital?

What are the best features of your current falls prevention program?

What features of your current falls prevention program need improvement?

Appendix 4: Discussion guides

Focus groups

Introduction	
<ul style="list-style-type: none"> • Thank you • Introductions • Purpose • Confidentiality • Audiotaping 	<ul style="list-style-type: none"> • Duration • How the group will be conducted • Opportunity for questions • Signature of consent
Questions	Prompts
<p><i>Falls as a quality and safety priority.</i> Falls are just one of the many patient safety issues in hospitals.</p> <p>How does falls prevention compare with other patient safety priorities on your ward?</p>	<ul style="list-style-type: none"> • What patient safety activities are currently occurring on your ward? • Do you perceive these activities to be complementary or inhibitory to falls prevention? Please explain. • How would you prioritise the importance of these activities? • Who are the critical people that need to be involved in falls prevention activities at your hospital? Why? What about on your ward? • What do you see as your role in falls prevention? • Do you believe falls can be prevented? What strategies do you feel are most important?
<p><i>What do you think about the current falls prevention practices at your hospital?</i></p>	<ul style="list-style-type: none"> • What are the best features of your current falls prevention program? • What features of your current falls prevention program need improvement? • How do you think training in falls prevention could be improved at this hospital? • What do you think about the current falls risk assessment tool? • What do you think about the use of individual surveillance and observation for high risk fallers? Is it useful? Is it used? • What do you think about specialised management programs for patients with delirium and confusion? Are they useful? Are they used? • What do you think about medication reviews with an emphasis on psychoactive drug use avoidance for high falls risk patients? Are they useful? Are they used? • What do you think about exercise programs as part of multi-factorial interventions for high falls risk patients? Are they useful? Are they used? • What post-falls management procedures are in place to ensure prompt identification of any significant injury resulting from a fall? Are they useful?
<p><i>Achieving practice change in falls prevention.</i></p>	<ul style="list-style-type: none"> • What barriers do you feel may exist to implementing falls prevention programs? <ul style="list-style-type: none"> ○ Equipment and staffing resources ○ Agency staff ○ Communication ○ Leadership and teamwork

	<ul style="list-style-type: none"> ○ Environmental constraints (budgets, redevelopments, restructuring, etc.)
<p>What learnings can we take from other program implementation experiences on your ward?</p> <p>What worked well?</p>	<ul style="list-style-type: none"> • What were some of the barriers, if any, that you encountered? Staff turnover? Lack of key support? Lack of resources? • What would you do differently next time? Please explain why. • How did you overcome the barrier(s)? • What strategies would you recommend we use when implementing a falls prevention program? Why? • What effect do you feel audit, feedback and reminders will have on the effectiveness of falls prevention programs? Can you provide examples of when these have been effectively used previously?
<i>Outcomes</i>	<ul style="list-style-type: none"> • How do you gain information about falls on your ward? Incident reporting data? Staff feedback? Patient feedback? • How do you measure your wards falls prevention performance? Benchmarking activities? Trends over time?
<p><i>Sustainability.</i></p> <p>A frequent challenge with new programs is how to ensure that they are sustained if they are deemed to be useful and effective. In your experience, what are the critical factors to ensuring these programs are sustained and continue to be effective?</p>	<ul style="list-style-type: none"> • What strategies/factors would you consider to be essential to sustaining falls prevention programs? Please explain. • What programs have been effectively sustained as part of usual care practice at your hospital? Please explain why.
<p><i>Guidelines</i></p> <p>Have you seen the hospital falls prevention guidelines produced by the Australian Commission for safety and Quality in Health care?</p>	<ul style="list-style-type: none"> • Have you read them? • Do you find them useful? • Do you know any of the key recommendations included in the guidelines? • What do you look for in a guideline/what makes a 'good' guideline? <ul style="list-style-type: none"> ○ Evidence summaries? ○ Tools? ○ Size and presentation?
<p>Closing</p> <p>Is there anything more you would like to add?</p> <p>I will be analysing the information you and others participating in the interviews have provided and submitting a draft report for you to review in six weeks.</p> <p>Thank you for your time.</p>	

Interview guide

Introduction	
<ul style="list-style-type: none"> • Thank you • Introductions • Purpose • Confidentiality 	<ul style="list-style-type: none"> • Duration • How the interview will be conducted • Opportunity for questions • Signature of consent
Questions	Prompts
<p><i>Falls as a quality and safety priority.</i> Falls are just one of the many patient safety issues in hospitals. How important is falls prevention in your hospital and how does it fit with other patient safety priorities?</p>	<ul style="list-style-type: none"> • What patient safety activities are currently occurring at your hospital? • What falls prevention activities are currently occurring/or planned for your hospital and the broader hospital network? • Do you perceive these activities to be complementary or inhibitory to the implementation of a falls prevention program at your hospital? Please explain. • How would you prioritise the importance of these activities? • Who are the critical people that need to be involved in falls prevention activities at your hospital? Why? • What do you see as your role in falls prevention? • Do you believe falls can be prevented? What strategies do you feel are most important? • Should hospitals have a falls prevention policy? What do you perceive the benefits of these to be?
<p><i>Achieving practice change in falls prevention.</i> What do you see as some of the challenges in implementing a falls prevention program at your hospital?</p>	<ul style="list-style-type: none"> • Who should be involved in the processes of implementing a falls prevention program at your hospital? <ul style="list-style-type: none"> ○ What do you see their role as being? ○ How do you rate the relative importance of these individuals or groups in terms of making the implementation successful? • What strategies do you recommend to better engage these people? <ul style="list-style-type: none"> ○ Incentives and motivators ○ Best ways to inform/approach/involve them in the change process • What system-level barriers do you feel may exist to implementing a falls prevention program? <ul style="list-style-type: none"> ○ Equipment and staffing resources ○ Communication ○ Leadership and teamwork ○ Environmental constraints (budgets, redevelopments, restructuring...)
<p>What are likely to be the key success factors and what learnings can we take from other program implementation experiences at your hospital?</p>	<ul style="list-style-type: none"> • What worked well? • What were some of the barriers, if any, that you encountered? Staff turnover? Lack of key support? Lack of resources? • What would you do differently next time? Please explain why. • How did you overcome the barrier(s)? • What strategies would you recommend we use when implementing a falls prevention program? Why?

	<ul style="list-style-type: none"> • What effect do you feel audit, feedback and reminders will have on the effectiveness of the implementation of a falls prevention program? Can you provide examples of when these have been effectively used previously?
<p><i>Outcomes for your hospital.</i></p> <p>What outcomes are you seeking from your participation in the project and how will you measure these?</p>	<ul style="list-style-type: none"> • How do you gain information about falls at your hospital? Incident reporting data? Staff feedback? Patient feedback? • How do you measure your hospital's falls prevention performance? Benchmarking activities? Trends over time?
<p><i>Sustainability.</i></p> <p>A frequent challenge with new programs like a falls prevention program is how to ensure that they are sustained if they are deemed to be useful and effective. In your experience, what are the critical factors to ensuring these programs are sustained and continue to be effective?</p>	<ul style="list-style-type: none"> • What strategies/factors would you consider to be essential to sustaining programs like a falls prevention program? Please explain. • What programs have been effectively sustained as part of usual care practice at your hospital? Please explain why.
<p><i>Guidelines</i></p> <p>Have you seen the hospital falls prevention guidelines produced by the Australian Commission for safety and Quality in Health care?</p>	<ul style="list-style-type: none"> • Have you read them? • Do you find them useful? • Do you know any of the key recommendations included in the guidelines? • What do you look for in a guideline/what makes a 'good' guideline? <ul style="list-style-type: none"> ○ Evidence summaries? ○ Tools? ○ Size and presentation?
<p>Closing</p> <p>Is there anything more you would like to add?</p> <p>I will be analysing the information you and others participating in the interviews have provided and submitting a draft report for you to review in six weeks.</p> <p>Thank you for your time.</p>	

Appendix 5: Audit and structured observation tool



ADMISSION: FORM ADM001A

Hospital: _____ Ward: _____

Today's date:/...../2012

Patient Study Number:

Age: (years) ☐ Male ☐ Female

Reference	Label															
ADM001A_03	<p>Date the patient was admitted to the ward _____</p> <p><i>Enter the date the patient was admitted to this hospital ward.</i></p>															
ADM001A_06	<p>Primary admission diagnosis</p> <p><i>Please select the first listed diagnosis recorded by the admitting doctor.</i></p> <table border="0"> <tr> <td><input type="checkbox"/> Arthritis (OA/RA)</td> <td><input type="checkbox"/> Dementia/cognitive impairment</td> <td><input type="checkbox"/> Osteoporosis (OP)</td> </tr> <tr> <td><input type="checkbox"/> Cancer (Ca)</td> <td><input type="checkbox"/> Fall</td> <td><input type="checkbox"/> Parkinson's disease (PD)</td> </tr> <tr> <td><input type="checkbox"/> Cardiac disease (HD, IHD)</td> <td><input type="checkbox"/> Hip fracture (#NOF)</td> <td><input type="checkbox"/> Respiratory disease (COPD, COAD)</td> </tr> <tr> <td><input type="checkbox"/> Debility/decreased mobility</td> <td><input type="checkbox"/> Non-hip fracture</td> <td><input type="checkbox"/> Stroke (CVA)</td> </tr> <tr> <td><input type="checkbox"/> Delirium/acute confusion</td> <td><input type="checkbox"/> Not coping (Acopia)</td> <td><input type="checkbox"/> Other</td> </tr> </table>	<input type="checkbox"/> Arthritis (OA/RA)	<input type="checkbox"/> Dementia/cognitive impairment	<input type="checkbox"/> Osteoporosis (OP)	<input type="checkbox"/> Cancer (Ca)	<input type="checkbox"/> Fall	<input type="checkbox"/> Parkinson's disease (PD)	<input type="checkbox"/> Cardiac disease (HD, IHD)	<input type="checkbox"/> Hip fracture (#NOF)	<input type="checkbox"/> Respiratory disease (COPD, COAD)	<input type="checkbox"/> Debility/decreased mobility	<input type="checkbox"/> Non-hip fracture	<input type="checkbox"/> Stroke (CVA)	<input type="checkbox"/> Delirium/acute confusion	<input type="checkbox"/> Not coping (Acopia)	<input type="checkbox"/> Other
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<input type="checkbox"/> Cardiac disease (HD, IHD)	<input type="checkbox"/> Hip fracture (#NOF)	<input type="checkbox"/> Respiratory disease (COPD, COAD)														
<input type="checkbox"/> Debility/decreased mobility	<input type="checkbox"/> Non-hip fracture	<input type="checkbox"/> Stroke (CVA)														
<input type="checkbox"/> Delirium/acute confusion	<input type="checkbox"/> Not coping (Acopia)	<input type="checkbox"/> Other														
ADM001A_07	<p>Comorbidities (second + listed) diagnosis</p> <p><i>Please select the second and subsequent listed diagnoses recorded by the admitting doctor.</i></p> <table border="0"> <tr> <td><input type="checkbox"/> Delirium/acute confusion</td> <td><input type="checkbox"/> Fall in last 12 months</td> <td><input type="checkbox"/> Parkinson's disease (PD)</td> </tr> <tr> <td><input type="checkbox"/> Dementia</td> <td><input type="checkbox"/> Non-hip fracture from a fall</td> <td><input type="checkbox"/> Past hip fracture (#NOF)</td> </tr> <tr> <td><input type="checkbox"/> Diabetes (DM, T2DM, NIDDM, IDDM)</td> <td><input type="checkbox"/> Osteoporosis (OP)</td> <td><input type="checkbox"/> Stroke (CVA)</td> </tr> </table>	<input type="checkbox"/> Delirium/acute confusion	<input type="checkbox"/> Fall in last 12 months	<input type="checkbox"/> Parkinson's disease (PD)	<input type="checkbox"/> Dementia	<input type="checkbox"/> Non-hip fracture from a fall	<input type="checkbox"/> Past hip fracture (#NOF)	<input type="checkbox"/> Diabetes (DM, T2DM, NIDDM, IDDM)	<input type="checkbox"/> Osteoporosis (OP)	<input type="checkbox"/> Stroke (CVA)						
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<input type="checkbox"/> Diabetes (DM, T2DM, NIDDM, IDDM)	<input type="checkbox"/> Osteoporosis (OP)	<input type="checkbox"/> Stroke (CVA)														

Reference	Label										
TDC001A_01	<p>Date the patient was discharged from the ward _____</p> <p><i>Record the date that the patient was discharged from the ward</i></p>										
TDC001A_04	<p>Discharge destination</p> <p><i>Record where the patient went when they left the 6-PACK study ward</i></p> <table border="0"> <tr> <td><input type="checkbox"/> Death</td> <td><input type="checkbox"/> Other hospital</td> </tr> <tr> <td><input type="checkbox"/> Home accompanied</td> <td><input type="checkbox"/> Rehabilitation/sub-acute/GEM: In-patient</td> </tr> <tr> <td><input type="checkbox"/> Home alone</td> <td><input type="checkbox"/> Rehabilitation/sub-acute/GEM: Out-patient</td> </tr> <tr> <td><input type="checkbox"/> Hospital in the home</td> <td><input type="checkbox"/> Residential aged care (low) / hostel (RACF low care)</td> </tr> <tr> <td><input type="checkbox"/> Non 6-PACK study ward</td> <td><input type="checkbox"/> Residential aged care (high) / nursing home (RACF high care/NH)</td> </tr> </table>	<input type="checkbox"/> Death	<input type="checkbox"/> Other hospital	<input type="checkbox"/> Home accompanied	<input type="checkbox"/> Rehabilitation/sub-acute/GEM: In-patient	<input type="checkbox"/> Home alone	<input type="checkbox"/> Rehabilitation/sub-acute/GEM: Out-patient	<input type="checkbox"/> Hospital in the home	<input type="checkbox"/> Residential aged care (low) / hostel (RACF low care)	<input type="checkbox"/> Non 6-PACK study ward	<input type="checkbox"/> Residential aged care (high) / nursing home (RACF high care/NH)
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<input type="checkbox"/> Non 6-PACK study ward	<input type="checkbox"/> Residential aged care (high) / nursing home (RACF high care/NH)										



DAILY DATA COLLECTION: FORM DDC001A

Hospital: _____ Ward: _____

Today's date:/...../2012

Patient Study Number:

Age: (years) ☐ Male ☐ Female

Reference	Label																																							
DDC001A_01	<p>Date which the below responses relate to _____/_____/_____</p> <p><i>For example, if you are entering Saturday's (e.g. 10/09/2011) responses/data on Monday (e.g. 12/09/2011) record Saturday's date (10/09/2011).</i></p>																																							
DDC001A_W	<p>Current Ward _____</p>																																							
DDC001A_02	<p>Falls risk score _____</p> <p><i>Record the total falls risk assessment score current for today. If there is no score recorded for today. Leave the box blank.</i></p>																																							
DDC001A_03	<p><input type="checkbox"/> High falls risk</p> <p><i>Select this box if the falls risk assessment classifies the patient as high falls risk.</i></p>																																							
DDC001A_04	<p><input type="checkbox"/> Falls risk assessment tool NOT completed</p>																																							
DDC001A_05	<p>Documented falls prevention strategies <i>Select the falls prevention strategies DOCUMENTED in the patient's medical record.</i></p> <table border="0"> <tr> <td><input type="checkbox"/> Adequate lighting</td><td><input type="checkbox"/> Hip protectors</td><td><input type="checkbox"/> Review: Geriatrician</td></tr> <tr> <td><input type="checkbox"/> Bed/chair alarm (mobility alert alarm)</td><td><input type="checkbox"/> Hourly checks/ Patient positioned in high visibility area</td><td><input type="checkbox"/> Review: Medication</td></tr> <tr> <td><input type="checkbox"/> Bed lowered to lowest position</td><td><input type="checkbox"/> Individual environment checklist</td><td><input type="checkbox"/> Review: OT</td></tr> <tr> <td><input type="checkbox"/> Bed rails up</td><td><input type="checkbox"/> Low-low bed</td><td><input type="checkbox"/> Review: Other allied health</td></tr> <tr> <td><input type="checkbox"/> Bedside commode</td><td><input type="checkbox"/> Mattress on floor</td><td><input type="checkbox"/> Review: Physio (including exercise program)</td></tr> <tr> <td><input type="checkbox"/> Bedside mats</td><td><input type="checkbox"/> Non-slip socks</td><td><input type="checkbox"/> Review: Podiatry</td></tr> <tr> <td><input type="checkbox"/> Continence aids</td><td><input type="checkbox"/> Orientate to room</td><td><input type="checkbox"/> Review: Psychiatric/cognitive</td></tr> <tr> <td><input type="checkbox"/> Education: Family</td><td><input type="checkbox"/> Personal items within reach (call bell, telephone etc.)</td><td><input type="checkbox"/> Room free from clutter</td></tr> <tr> <td><input type="checkbox"/> Education: Patient</td><td><input type="checkbox"/> Physical restraints</td><td><input type="checkbox"/> Special (hospital staff)</td></tr> <tr> <td><input type="checkbox"/> Falls risk alert sign</td><td><input type="checkbox"/> Review: Continence service</td><td><input type="checkbox"/> Supervision in the bathroom</td></tr> <tr> <td><input type="checkbox"/> Falls risk alert bracelet/wrist band</td><td><input type="checkbox"/> Review: Footwear</td><td><input type="checkbox"/> Toileting regime</td></tr> <tr> <td><input type="checkbox"/> Family member supervision</td><td></td><td><input type="checkbox"/> No documented strategies</td></tr> <tr> <td><input type="checkbox"/> Gait aid within reach</td><td></td><td></td></tr> </table>	<input type="checkbox"/> Adequate lighting	<input type="checkbox"/> Hip protectors	<input type="checkbox"/> Review: Geriatrician	<input type="checkbox"/> Bed/chair alarm (mobility alert alarm)	<input type="checkbox"/> Hourly checks/ Patient positioned in high visibility area	<input type="checkbox"/> Review: Medication	<input type="checkbox"/> Bed lowered to lowest position	<input type="checkbox"/> Individual environment checklist	<input type="checkbox"/> Review: OT	<input type="checkbox"/> Bed rails up	<input type="checkbox"/> Low-low bed	<input type="checkbox"/> Review: Other allied health	<input type="checkbox"/> Bedside commode	<input type="checkbox"/> Mattress on floor	<input type="checkbox"/> Review: Physio (including exercise program)	<input type="checkbox"/> Bedside mats	<input type="checkbox"/> Non-slip socks	<input type="checkbox"/> Review: Podiatry	<input type="checkbox"/> Continence aids	<input type="checkbox"/> Orientate to room	<input type="checkbox"/> Review: Psychiatric/cognitive	<input type="checkbox"/> Education: Family	<input type="checkbox"/> Personal items within reach (call bell, telephone etc.)	<input type="checkbox"/> Room free from clutter	<input type="checkbox"/> Education: Patient	<input type="checkbox"/> Physical restraints	<input type="checkbox"/> Special (hospital staff)	<input type="checkbox"/> Falls risk alert sign	<input type="checkbox"/> Review: Continence service	<input type="checkbox"/> Supervision in the bathroom	<input type="checkbox"/> Falls risk alert bracelet/wrist band	<input type="checkbox"/> Review: Footwear	<input type="checkbox"/> Toileting regime	<input type="checkbox"/> Family member supervision		<input type="checkbox"/> No documented strategies	<input type="checkbox"/> Gait aid within reach		
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<input type="checkbox"/> Family member supervision		<input type="checkbox"/> No documented strategies																																						
<input type="checkbox"/> Gait aid within reach																																								
DDC001A_06	<p>Observed falls prevention strategies <i>Select the falls prevention strategies OBSERVED to be in place for patients. Only select 'No observed strategies in place' if you observe the patient's bedside and see that there are no strategies in place. If you do not observe the bedside for a day record the same strategies that were in place the last time you observed the bedside.</i></p> <table border="0"> <tr> <td><input type="checkbox"/> Adequate lighting</td><td><input type="checkbox"/> Family member supervision</td><td><input type="checkbox"/> Personal items within reach (call bell, telephone etc.)</td></tr> <tr> <td><input type="checkbox"/> Bed/chair alarm</td><td><input type="checkbox"/> Gait aid within reach</td><td><input type="checkbox"/> Physical restraints</td></tr> <tr> <td><input type="checkbox"/> Bed in low position</td><td><input type="checkbox"/> Low-low bed</td><td><input type="checkbox"/> Room free of clutter</td></tr> <tr> <td><input type="checkbox"/> Bed rails up</td><td><input type="checkbox"/> Mattress on floor</td><td><input type="checkbox"/> Special (hospital staff)</td></tr> <tr> <td><input type="checkbox"/> Bedside commode</td><td><input type="checkbox"/> Non-slip socks</td><td><input type="checkbox"/> No observed strategies in place</td></tr> <tr> <td><input type="checkbox"/> Bedside mats</td><td><input type="checkbox"/> Patient positioned in high visibility area</td><td><input type="checkbox"/> Patient admitted and discharged without the patient's bedside ever being observed</td></tr> <tr> <td><input type="checkbox"/> Falls alert sign</td><td></td><td></td></tr> <tr> <td><input type="checkbox"/> Falls risk alert bracelet/wrist band</td><td></td><td></td></tr> </table>	<input type="checkbox"/> Adequate lighting	<input type="checkbox"/> Family member supervision	<input type="checkbox"/> Personal items within reach (call bell, telephone etc.)	<input type="checkbox"/> Bed/chair alarm	<input type="checkbox"/> Gait aid within reach	<input type="checkbox"/> Physical restraints	<input type="checkbox"/> Bed in low position	<input type="checkbox"/> Low-low bed	<input type="checkbox"/> Room free of clutter	<input type="checkbox"/> Bed rails up	<input type="checkbox"/> Mattress on floor	<input type="checkbox"/> Special (hospital staff)	<input type="checkbox"/> Bedside commode	<input type="checkbox"/> Non-slip socks	<input type="checkbox"/> No observed strategies in place	<input type="checkbox"/> Bedside mats	<input type="checkbox"/> Patient positioned in high visibility area	<input type="checkbox"/> Patient admitted and discharged without the patient's bedside ever being observed	<input type="checkbox"/> Falls alert sign			<input type="checkbox"/> Falls risk alert bracelet/wrist band																	
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DAILY DATA COLLECTION: FORM DDC001A

Hospital: _____

Ward: _____

Today's date:/...../2012

Patient Study Number:

Age: (years) ☐ Male ☐ Female

DDC001A_07	<p>Walking status <i>Select the level of assistance recorded by the physiotherapist in the patient's medical record that the patient requires for walking with/without the nurses on the ward. If no physiotherapy assessment is documented record the walking status documented by the patient's nurse.</i></p> <p> <input type="checkbox"/> Independent <input type="checkbox"/> Assistance x 1 <input type="checkbox"/> Non ambulant </p> <p> <input type="checkbox"/> Supervision <input type="checkbox"/> Assistance x 2 <input type="checkbox"/> Rest in bed (RIB) </p> <p><input type="checkbox"/> Not recorded/reported</p>
DDC001A_08	<p>Walking aid <i>Select the aid recorded by the physiotherapist in the patient's medical record that the patient requires for walking with/without the nurses on the ward (most dependent aid). If no physiotherapy assessment is documented record the walking aid documented by the patient's nurse.</i></p> <p> <input type="checkbox"/> No aid <input type="checkbox"/> Pick up frame (PUF) <input type="checkbox"/> Wheelchair (WC) </p> <p> <input type="checkbox"/> Single point stick (SPS) <input type="checkbox"/> 2 wheel frame (2ww) <input type="checkbox"/> Weight-bearing/standing hoist (WB hoist) </p> <p> <input type="checkbox"/> 4 point stick <input type="checkbox"/> 4 wheel frame (4ww) <input type="checkbox"/> Not recorded/reported </p> <p> <input type="checkbox"/> Crutches <input type="checkbox"/> Frame with forearm support (gutter frame/FASF) </p>
DDC001A_09	<p>Transfers <i>Select the level of assistance recorded by the physiotherapist in the patient's medical record that the patient requires for moving to and from a bed or chair. If no physiotherapy assessment is documented record the transfer status documented by the patient's nurse.</i></p> <p> <input type="checkbox"/> Independent <input type="checkbox"/> Assistance x 1 <input type="checkbox"/> Non weight bearing </p> <p> <input type="checkbox"/> Supervision <input type="checkbox"/> Assistance x 2 <input type="checkbox"/> Rest in bed (RIB) </p> <p><input type="checkbox"/> Not recorded/reported</p>
DDC001A_13	<p>Shower/ bath mobility <i>Select the level of assistance recorded by the physiotherapist in the patient's medical record that the patient requires for moving in and out of the shower/bathroom. If no physiotherapist assessment is recorded, select the level of assistance documented by the patient's nurse.</i></p> <p> <input type="checkbox"/> Independent <input type="checkbox"/> Assistance x 1 <input type="checkbox"/> Non weight bearing </p> <p> <input type="checkbox"/> Supervision <input type="checkbox"/> Assistance x 2 <input type="checkbox"/> Rest in bed (RIB) </p> <p><input type="checkbox"/> Not recorded/reported</p>
DDC001A_18	<p>Psychotropics currently being taken <i>Select the type/s of psychoactive medications the patient is CURRENTLY taking. Only include PRN or standing order medications if they have been administered in the last 24 hours.</i></p> <p> <input type="checkbox"/> Anti-anxiety medications (e.g. Diazepam, Serepax, Valium, Xanax) </p> <p> <input type="checkbox"/> Antidepressants (e.g. Allergon, Cipramil, Efexor, Endep, Zoloft) </p> <p> <input type="checkbox"/> Antiemetics (e.g. anti-nausea drugs Maxalon, Stemetil, Stemetizine) </p> <p> <input type="checkbox"/> Antipsychotics (e.g. dementia and schizophrenia medications, e.g. Risperidone, Epilim, Seroquel, Zyprexa) </p> <p> <input type="checkbox"/> Narcotic pain medications (e.g. Morphine, Capdex, Pethadine, Endone, Fentanyl, MS contin, Oxycontin, Tramal) </p> <p> <input type="checkbox"/> Sedatives/ sleeping tablets (e.g. Stilnox) </p> <p> <input type="checkbox"/> Other (e.g. anticonvulsants) </p>
DDC001A_16	<p><input type="checkbox"/> Management programs are in place for patients with delirium and confusion</p> <p><i>Select is there is a behaviour management strategy in place. For example diversional therapy, a rummage box or life board.</i></p>
DDC001A_17	<p><input type="checkbox"/> Patient fell in last 24 hours</p> <p><i>Select if the patient had a fall in the last 24 hours or since yesterday's data was entered.</i></p>

References

1. Kastner M, Estey E, Perrier L, Graham ID, Grimshaw J, Straus SE, et al. Understanding the relationship between the perceived characteristics of clinical practice guidelines and their uptake: protocol for a realist review. *Implement Sci* 2011;6:69.
2. Cecamore C, Savino A, Salvatore R, Cafarotti A, Pelliccia P, Mohn A, et al. Clinical practice guidelines: what they are, why we need them and how they should be developed through rigorous evaluation. *Eur J Pediatr* 2011;170(7):831-6.
3. Grimshaw JM, Russell IT. Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet* 1993;342(8883):1317-22.
4. Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, et al. Lost in knowledge translation: time for a map? *J Contin Educ Health Prof* 2006;26(1):13-24.
5. Agency for Health Research and Quality. Translating research into practice (TRIP)-II. Washington, DC: Agency for Health Research and Quality, 2001.
6. Dans AL, Dans LF. Appraising a tool for guideline appraisal (the AGREE II instrument). *J Clin Epidemiol* 2010;63(12):1281-2.
7. Shiffman RN, Dixon J, Brandt C, Essaihi A, Hsiao A, Michel G, et al. The GuideLine Implementability Appraisal (GLIA): development of an instrument to identify obstacles to guideline implementation. *BMC Med Inform Decis Mak* 2005;5:23.
8. Rucker D, Rowe BH, Johnson JA, Steiner IP, Russell AS, Hanley DA, et al. Educational intervention to reduce falls and fear of falling in patients after fragility fracture: results of a controlled pilot study. *Preventive medicine* 2006;42(4):316-9.
9. Haines TP, Hill KD, Bennell KL, Osborne RH. Patient education to prevent falls in subacute care. *Clinical rehabilitation* 2006;20(11):970-9.
10. Vassallo M, Vignaraja R, Sharma J, Briggs R, Allen S. Tranquilliser use as a risk factor for falls in hospital patients. *Int J Clin Pract* 2006;60(5):549-52.
11. Jeske L, Kolmer V, Muth M, Cerns S, Moldenhaur S, Hook ML. Partnering with patients and families in designing visual cues to prevent falls in hospitalized elders. *Journal of nursing care quality* 2006;21(3):236-41.
12. Fonad E, Burnard P, Emami A. Shielding or caging? Healthcare staffs' views on fall risk and protection in Stockholm. *International journal of older people nursing* 2008;3(1):46-54.
13. Oliver D, Daly F, Martin FC, McMurdo ME. Risk factors and risk assessment tools for falls in hospital in-patients: a systematic review. *Age and ageing* 2004;33(2):122-30.
14. (NICE) NIfHaCE. Falls: assessment and prevention of falls in older people, 2013.
15. Potter J, George J. The prevention, diagnosis and management of delirium in older people: concise guidelines. *Clin Med* 2006;6(3):303-8.
16. Oliver D, Healey F, Haines TP. Preventing falls and fall-related injuries in hospitals. *Clin Geriatr Med* 2010;26(4):645-92.
17. Barker A, Kamar J, Morton A, Berlowitz D. Bridging the gap between research and practice: review of a targeted hospital inpatient fall prevention programme. *Quality & safety in health care* 2009;18(6):467-72.
18. Cumming RG, Sherrington C, Lord SR, Simpson JM, Vogler C, Cameron ID, et al. Cluster randomised trial of a targeted multifactorial intervention to prevent falls among older people in hospital. *BMJ* 2008;336(7647):758-60.