Assessing falls in older people

For an older person in hospital a fall can have devastating consequences, prolonging hospital stay and leading to loss of confidence. Falls cost the NHS between £5,340 and £12,500 per patient in delayed discharge, and can cause nurses to question their own practice and blame themselves. Further, the efforts of clinicians and researchers implementing falls prevention interventions are hampered because of inconsistencies in assessing risk. The use of falls risk assessment tools varies throughout the UK. In Scotland some hospitals use them while others do not. Unlike England and Wales, Scotland has no national guidelines. To deal with this problem, the authors conclude that it is important to develop an evidence-based guideline that covers the whole of the UK.

A fall while in hospital can have tragic consequences for an older patient. The incident may result not only in fractures, head injury and delayed rehabilitation but may also cause the individual to become anxious when mobilising and fearful about falling again (Oliver 2004). A fall often delays discharge, forcing the patient to remain in hospital longer at an estimated cost to the NHS of between £5,340 and £12,500 per patient (Hayes 2004). The common occurrence of falls can make all members of the multidisciplinary team anxious about encouraging patients to mobilise. Falls account for more than 90 per cent of all reported accidents in hospitals (Goodwin and Westbrook 1993). In the UK, however, there has been no financial estimate of the cost of falls even though longevity has increased and will continue to do so as medical science progresses.

Not only are falls expensive for patients and hospitals, they can also result in guilt and anxiety among staff and litigation by patients’ families (Oliver 2004). There may be a feeling that measures should have been in place to prevent the fall in the first instance and that someone should be held accountable.

Although falls are common among older people (Kerzman et al 2004) there are no UK-wide guidelines on how falls can be prevented (Hayes 2004). There is also wide variation in the prevention programmes that hospitals are using.

**Risk factors**

It is documented in the literature that certain risk factors are associated with increased risk of falling. Such factors include being over 85 (Ash et al 1998), taking medications such as benzodiazepines, diuretics, laxatives, sedatives/hypnotics, vasodilators antihypertensives and antidepressants (Gales and Menard 1995, Frels et al 2002), and having impaired mental status (Tsai et al 1998). Other studies, however, have not always backed these findings. Goodwin and Westbrook (1993) suggest that people aged 65 and over are the ‘at risk’ age group. Alce
Risk assessment tools

Risk assessment tools have been developed based on factors believed to be associated with an increased risk of falling. The presence of these factors are an indicator of a patient’s risk of falling and help to provide a focus for preventative interventions. However, the lack of accuracy of falls risk assessment tools is problematic for clinicians and researchers implementing fall prevention interventions (Myers 2003).

In practice, there are few well-validated risk assessment tools (Oliver et al 2004). Certain tools are being used such as Tinetti’s (Tinetti and Speechley 1989), the Downton index (Downton 1993) from the US and the Morse assessment tool from Canada (Morse 1989), as well as the Cannard tool (Cannard 1996) and STRATIFY (Oliver et al 2004), which were both developed in the UK.

A systematic review of risk factors and risk assessment tools by Oliver et al (2004) identified 47 papers that mentioned falls risk assessment tools. However, only two fulfilled the criteria of prospective validation with specificity and sensitivity. These were the Morse and the STRATIFY tools.

Some of the risk assessment tools such as the Tinetti falls risk index are accurate in predicting falls, although it has been claimed that they are too complex to be convenient in clinical practice (Nyberg and Gustafson 1996). Of the other risk assessment tools in use, Oliver et al (2004) argue that many had obscure derivation and arbitrary scoring, and that there was little basis for using such tools in clinical practice. Although numerous researchers have developed, modified or used falls risk assessment tools, few of them are based on rigorous research design or evaluation.

Myers (2003) and Evans et al (2001) highlight a number of concerns such as lack of detail about the methodology used to develop the assessment tools and tools being developed on the basis of a review of the literature or according to expert opinion. Myers (2003) also identified that the STRATIFY tool developed by Oliver et al (1997) had some significant methodological problems. These create doubts over the validity of findings based on the tool’s use and in particular about the specificity and sensitivity of the calculations.

No matter how a risk assessment tool has been developed, testing for accuracy has been very limited. This makes it extremely difficult for those working in the clinical setting to know which tool is the most accurate to use in the clinical setting as part of a falls prevention programme.

In studies where the accuracy of a tool has been tested, this has mainly been undertaken by the developers of the tool and on the same population among which the tool was developed, limiting the generalisability of findings.

If falls risk assessment tools are found to be inaccurate then further development of tools is required. Those researchers who choose to develop new falls risk assessment tools need to gain knowledge from the methodological deficits identified in the current tools to ensure increased rigour and therefore increased validity of the findings.

A small telephone audit was carried out by one of the authors in 2005 involving 35 NHS units throughout Scotland that provided care for older people. The audit demonstrated a wide variation in the use of falls risk assessment tools. Some of the units admitted to not using any specific tools but rather placed dependence on incident-reporting forms completed after an older patient fell. Other hospitals used the Cannard falls risk assessment tool, while the remaining hospitals devised their own risk assessment tools, sometimes derived from existing tools.

From the telephone audit it emerged that some hospitals have managed to develop falls strategy groups that examine the tools that are currently available and adapt them for local own use. But in practice it is apparent that across Scotland there is an individual system of assessment and that this is variable and inconsistent.

Management of falls

Although there is evidence that multidisciplinary interventions in community settings are available, in hospital environments randomised fall prevention studies are few and are disappointing (Vasallo et al 2004). There needs to be a mechanism put in place whereby high-risk individuals are identified and local specialised services are tailored to support assessment and treatment.

Jyoti et al (2005) argue that since many of the patients who fall arrive at hospital via accident and emergency departments then perhaps those patients may be identified as being suitable for preventative interventions.

Oliver (2004) argues that there is no consistent evidence for the prevention of falls in hospitals, but that services could benefit from the use of specialist falls practitioners who can work across
inpatient and outpatient settings, and continuing care, and who can help in supporting both staff and patients. This would facilitate greater liaison between all disciplines and departments. Lightbody et al (2002) argue that a falls practitioner working in partnership between primary care and accident and emergency departments could reduce dependence and maintain mobility in older people.

An assessment is required of common reversible risk factors in all patients and of patients who fall during admission. Oliver (2004) argues that special attention should be given to basic environmental safety factors, especially around the bedside, and that the individual’s gait and balance should be targeted.

The environment in which falls are taking place needs to be recorded as well as staffing levels and circumstances, although it should be remembered that ‘a risk-free life is no life at all’ (McMurdo and Harper 2004). Hayes (2004) suggests that a whole-system approach should be established which staff and the patient can use to manage falls, whether in continuing care or the acute sector.

Other means of preventing falls involve running specific programmes of exercise (Day et al 2002) and using specific equipment such as hip protectors (Parker et al 2003) or alarms and sensors that ring when a patient rises from a bed or chair (Hayes 2004).

Haines et al (2004) suggest that a targeted multiple-intervention strategy is required where all staff are proficient in assessing and preventing falls. But it is important that restraint is avoided and that patients’ independence is encouraged. Parker and Miles (1997) highlight the occurrence of fatal accidents in response to the use of inappropriate restraint methods such as bed rails. So often cot sides are in place not because the patient is in danger of falling but because of the potential danger around the bed if the patient gets out of it (Ali 2000). It should be remembered that forced immobility that reduces an individual’s ‘dignity and independence’ (Parker 2000) must not be allowed to occur.

McMurdo and Harper (2004) highlight how misleading it can be simply to interpret a low fall rate as indicating good practice, although it may demonstrate effective fall management strategies. It could indicate that patients are being left in a bed or a chair and are quickly becoming de-conditioned (Graf 2006). Older people must be encouraged to move otherwise the ageing process means that muscles in the legs as well as the back will show significant atrophy. This in turn will lead to falls and functional decline (Graf 2006).

A higher fall rate may indicate that individuals are being given the opportunity to mobilise and therefore to take acceptable risks, as mentioned in NHS Quality Improvement Scotland’s Best Practice Statement: Working with dependent older people towards promoting movement and physical activity (2005). NHS Quality Improvement Scotland was set up by the Scottish parliament in 2003 to take the lead in improving the quality of care and treatment delivered by the NHS in Scotland. It sets standards and monitors performance by providing the NHS in Scotland with advice and support on effective clinical practice and service improvements.

A clinical practice guideline for the assessment and prevention of falls in older people (2004) was commissioned by the National Institute for Health and Clinical Excellence (NICE) and developed by the Royal College of Nursing (Royal College of Nursing 2004). This gives a well-defined pathway for the healthcare professional in managing and preventing falls among older people. The NHS Quality Improvement Scotland best practice statement (2005) offers evidence to show that keeping physically active in older age is beneficial to health and helps prevent falls, but is not as clear as the guideline commissioned by NICE.

There is also some conflict between these two documents. The NICE guideline does not recommend the use of hip protectors due to insufficient evidence, whereas the NHS Quality Improvement Scotland statement argues for the use of hip protectors in patients and clients who are at risk of falling.

NICE bases its recommendations on the lack of sufficient evidence to support their use. NHS Quality Improvement Scotland took the view that the anecdotal evidence available was sufficient to support their use.

The overseas context

The overseas context is interesting. In Australia, where falls and falls-related injuries also cost the health system large sums of money (Department of Health and Ageing 2005), a national falls prevention plan for older people has been set up. The plan has been devised to ensure that not only those who are working within the healthcare system are involved in it but also local government, community organisations, transport operators, and the building and leisure industries. The Australian health department states that no single agency or organisation can achieve any results without the assistance of other groups.

In the US, the National Council on Aging, the Centre for Healthy Aging, the Home Safety Council and the Archstone Foundation have drawn up a
national action plan on falls prevention (National Council on Aging et al 2005). This estimates that because of the growing size of the older population, by 2020 the cost of falls and falls-related injuries among people aged 65 and over will be $43.8 billion per year. The action plan was drawn up after a falls summit where clinicians, nurses, therapists, builders, pharmacists, voluntary organisations with an interest in older people, and state and national governments examined all issues linked to falls.

Recommendations were made in a number of areas, including better labelling of medications that are known to cause postural hypotension and therefore falls. Another area that the National Council on Aging feels is important is greater involvement of pharmacists in advising healthcare professionals on the prescribing of medication known to cause postural hypotension.

**Conclusion**

With falls among older people becoming a national problem, not only medically but also financially, and NHS deficits rising annually, perhaps it is time that we examined the systems used elsewhere such as the US. We should also consider greater collaboration between various agencies such as NICE and NHS Quality Improvement Scotland so that guidelines can be developed and applied across the whole of the UK.

**Implications for practice**

For an older person in hospital, a fall can have devastating consequences in terms of prolonged hospital stay and loss of confidence. A patient falling may also result in staff feeling guilty and anxious about encouraging patients to mobilise. The use of falls risk assessment tools in predicting whether patients are at risk of falling varies, with some hospitals using them and others not. Scotland has no national guidelines on falls assessment. As the population ages, with increasing longevity, the incidence of falls will continue to rise. UK nurses need national, evidence-based guidelines to help assess patients’ risk factors and to predict whether individuals are at risk of falling. These would help all members of the healthcare team, but especially nurses, in the assessment of an older person’s abilities, thereby ensuring the patient mobilises to full potential. Strategies for the better management of falls are highlighted, such as specialist falls practitioners, evaluating environmental safety factors and the importance of keeping as active as possible in old age.

**References**


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Assessing falls in older people

Do you know how to test the accuracy and reliability of a falls risk assessment tool?

HOW TO USE THIS ASSESSMENT

This self-assessment questionnaire (SAQ) will help you to test your knowledge. Each month you will find 12 multiple-choice questions which are broadly linked to the preceding gerontological care and practice article.

Note: There is only one correct answer for each question.

Ways to use this assessment

- You could test your subject knowledge by attempting the questions before reading the article, and then go back over them to see if you would answer any differently.
- You might like to read the article to update yourself before attempting the questions.

The answers will be published in the next issue of Nursing Older People.

1. The estimated maximum additional cost to the NHS, per patient, for a fall-related delayed discharge is:
   a) £5,340
   b) £10,500
   c) £12,500

2. Falls account for what percentage of all reported accidents in hospital?
   a) 90 per cent
   b) 75 per cent
   c) 50 per cent

3. Which author or authors suggested there was no correlation between the use of medication and falling?
   a) Alcee
   b) Goodwin and Westbrook
   c) Friels et al

4. ‘To reduce the number of falls which result in serious injury and ensure effective treatment.’ From which strategy document does this come?
   a) NHS Plan
   b) NSF for Older People
   c) National Falls Prevention for Older People Initiative

5. From which country does the Morse assessment tool originate?
   a) United States
   b) Scotland
   c) Canada

6. Which of the two falls risk assessment tools fulfill the criteria of prospective validation, according to Oliver et al:
   a) Tinetti and Downton
   b) Morse and STRATIFY
   c) Morse and Cannard

7. What criticism has been levelled at the STRATIFY tool?
   a) Methodological problems
   b) Based on too small a sample
   c) Not applicable in hospital settings

8. A small telephone audit is reported in the article. What was its main finding?
   a) Widespread use of a single risk assessment tool
   b) Poor compliance with national guidance on falls prevention
   c) Wide variation in use of risk assessment tools

9. What does Oliver (2004) suggest as a means of improving communication about falls prevention?
   a) Local policies
   b) Specialist falls practitioners
   c) UK-wide guidelines

10. In what way, according to the article, might a low fall rate be misleading?
    a) Patients’ ages might not have been taken into account
    b) Prescribed medication and its falls-associated side effects might have been ignored
    c) Patients could have been left in bed or in chairs

11. Guidance from the National Institute for Health and Clinical Excellence appears to be at odds with an NHS Quality Improvement Scotland statement on falls in which area?
    a) Bed rails

This is self-assessment questionnaire (SAQ) number 10 and was compiled by Daniel Allen

This activity has taken me ______ minutes/hours to complete

Now that I have read this article and completed this assessment, I think my knowledge is:

Excellent
Good
Satisfactory
Unsatisfactory
Poor

As a result of this I intend to:

Answers to SAQ no. 9
1. b  5. b  9. a
2. a  6. c  10. c
3. b  7. b  11. b
4. c  8. a  12. c