

Falls: assessment and prevention of falls in older people

NICE guideline

Draft for consultation, January 2013

If you wish to comment on this version of the guideline, please be aware that all the supporting information and evidence is contained in the full version.

This guideline is an extension to the remit of NICE clinical guideline 21 (published November 2004) to include falls in a hospital inpatient setting. The recommendations for the inpatient setting are new and you are invited to comment on them. The recommendations for the community setting (shaded in grey and labelled **[2004]**) have not been changed (except for minor wording changes for the purposes of clarification only). Please do not comment on the 2004 recommendations.

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Introduction

Falls and fall-related injuries are a common and serious problem for older people. People aged 65 and older have the highest risk of falling, with 30% of people older than 65 and 50% of people older than 80 falling at least once a year. This is estimated to cost the NHS more than £2.3 billion per year.

The human cost of falling includes distress, pain, injury, loss of confidence, loss of independence and mortality. Falling also affects the family members and carers of people who fall. Therefore falling has an impact on quality of life, health and healthcare costs.

This guideline provides recommendations for the assessment and prevention of falls in both inpatient and community settings. It is an extension to the remit of NICE clinical guideline 21 (published November 2004) to include falls in a hospital inpatient setting. New recommendations for the inpatient setting (2013) sit alongside the original recommendations from the 2004 guideline, which cover the community setting. It is important to emphasise that all of the 2004 recommendations are just as relevant and important now as they were when they were originally published.

Who this guideline is for

This document is for healthcare and other professionals and staff who care for older people who are at risk of falling.

Populations covered by this guideline

All people aged 65 or older are covered by all guideline recommendations. This is because people aged 65 and older have the highest risk of falling in both inpatient and community settings.

People aged 50 to 64 who are admitted to hospital and are identified by a clinician as being at risk of falling (for example, patients with a sensory impairment or dementia, and patients admitted to hospital with a fall, stroke, syncope, delirium or gait disturbances) are also covered by the guideline recommendations that relate to the inpatient setting.

Patient-centred care

This guideline offers best practice advice on the care of older people who are at risk of falling.

Patients and healthcare professionals have rights and responsibilities as set out in the [NHS Constitution for England](#) – all NICE guidance is written to reflect these. Treatment and care should take into account individual needs and preferences. Patients should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If someone does not have the capacity to make decisions, healthcare professionals should follow the [Department of Health's advice on consent](#), the [code of practice that accompanies the Mental Capacity Act](#) and the supplementary [code of practice on deprivation of liberty safeguards](#). In Wales, healthcare professionals should follow [advice on consent from the Welsh Government](#).

NICE has produced guidance on the components of good patient experience in adult NHS services. All healthcare professionals should follow the recommendations in [Patient experience in adult NHS services](#).

Strength of recommendations

Some recommendations can be made with more certainty than others. The Guideline Development Group makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the Guideline Development Group is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

For all recommendations, NICE expects that there is discussion with the patient about the risks and benefits of the interventions, and their values and preferences. This discussion aims to help them to reach a fully informed decision (see also 'Patient-centred care').

Interventions that must (or must not) be used

We usually use 'must' or 'must not' only if there is a legal duty to apply the recommendation. Occasionally we use 'must' (or 'must not') if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions that should (or should not) be used – a 'strong' recommendation

We use 'offer' (and similar words such as 'refer' or 'advise') when we are confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. We use similar forms of words (for example, 'Do not offer...') when we are confident that an intervention will not be of benefit for most patients.

Interventions that could be used

We use 'consider' when we are confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values

and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Wording of 2004 recommendations

NICE began using this approach to denote the strength of recommendations in guidelines that started development after publication of the 2009 version of 'The guidelines manual' (January 2009). This does not apply to any recommendations shaded in grey and ending [2004] (see 'Labelling of recommendations' box below for details about how recommendations are labelled). In particular, for recommendations labelled [2004], the word 'consider' may not necessarily be used to denote the strength of the recommendation.

Labelling of recommendations

This guideline is an extension of NICE clinical guideline 21 (published November 2004) and will replace it.

New recommendations have been added about falls in the inpatient setting. The original recommendations from NICE clinical guideline 21 about falls in the community setting are incorporated unchanged (except for minor wording changes for the purposes of clarification only).

Where recommendations are shaded in grey and end **[2004]** the evidence has not been reviewed since the original guideline. Yellow shading in these recommendations indicates where wording changes have been made for the purposes of clarification only.

You are invited to comment only on the new recommendations in this guideline. These are marked **[new 2013]**.

The original NICE guideline and supporting documents are available [here](#).

Key priorities for implementation

The following recommendations have been identified as priorities for implementation.

Inpatient setting

- Regard the following groups of inpatients as being at risk of falling in hospital and manage their care according to recommendations 1.1.2.1 to 1.1.3.1:
 - all patients aged 65 years or older
 - patients aged 50 to 64 years who are identified by a clinician as being at higher risk of falling (for example, patients with a sensory impairment, dementia, and patients admitted to hospital with a fall, stroke, syncope, delirium or gait disturbances). **[new 2013] [1.1.1.1]**

- For patients at risk of falling in hospital (see recommendation 1.1.1.1), consider a multifactorial assessment¹ and multifactorial interventions². **[new 2013] [1.1.2.2]**
- Ensure that any multifactorial assessment **Error! Bookmark not defined.** identifies a patient's individual risk factors for falling in hospital that can be treated, improved or managed during their expected stay, including:
 - cognitive impairment
 - continence problems
 - falls history, including causes and consequences (such as injury and fear of falling)
 - footwear that is unsuitable or missing
 - health problems that may increase their risk of falling
 - medication
 - postural instability, mobility problems and/or balance problems
 - visual impairment. **[new 2013] [1.1.2.3]**

¹ An assessment with multiple components that aims to identify risk factors that can be treated, managed or improved.

² An intervention with multiple components that is linked to a person's multifactorial assessment.

Community setting

- Older people in contact with healthcare professionals should be asked routinely whether they have fallen in the past year and asked about the frequency, context and characteristics of the fall/s. **[2004] [1.2.1.1]**
- Older people who present for medical attention because of a fall, or report recurrent falls in the past year, or demonstrate abnormalities of gait and/or balance should be offered a multifactorial falls risk assessment. This assessment should be performed by a healthcare professional with appropriate skills and experience, normally in the setting of a specialist falls service. This assessment should be part of an individualised, multifactorial intervention. **[2004] [1.2.2.1]**

1 Recommendations

The following guidance is based on the best available evidence. The [full guideline](#) **[hyperlink to be added for final publication]** gives details of the methods and the evidence used to develop the guidance.

1.1 *Inpatient setting*

1.1.1 Predicting patients' risk of falling in hospital

1.1.1.1 Regard the following groups of inpatients as being at risk of falling in hospital and manage their care according to recommendations 1.1.2.1 to 1.1.3.1:

- all patients aged 65 years or older
- patients aged 50 to 64 years who are identified by a clinician as being at higher risk of falling (for example, patients with a sensory impairment or dementia, and patients admitted to hospital with a fall, stroke, syncope, delirium or gait disturbances). **[new 2013]**

1.1.1.2 Do not use numerical fall risk prediction tools to predict inpatients' risk of falling in hospital. **[new 2013]**

1.1.2 Assessment and interventions

1.1.2.1 Ensure that aspects of the inpatient environment that could affect patients' risk of falling (such as flooring, lighting and provision of hand holds) are systematically identified and addressed. **[new 2013]**

1.1.2.2 For patients at risk of falling in hospital (see recommendation 1.1.1.1), consider a multifactorial assessment³ and multifactorial interventions⁴. **[new 2013]**

³ An assessment with multiple components that aims to identify risk factors that can be treated, managed or improved.

1.1.2.3 Ensure that any multifactorial assessment⁵ identifies a patient's individual risk factors for falling in hospital that can be treated, improved or managed during their expected stay, including:

- cognitive impairment
- continence problems
- falls history, including causes and consequences (such as injury and fear of falling)
- footwear that is unsuitable or missing
- health problems that may increase their risk of falling
- medication
- postural instability, mobility problems and/or balance problems
- visual impairment. **[new 2013]**

1.1.2.4 Ensure that any multifactorial interventions⁶:

- promptly address the patient's identified individual risk factors for falling in hospital **and**
- take into account whether the risk factors can be treated, improved or managed during the patient's expected stay. **[new 2013]**

1.1.2.5 Do not offer falls prevention interventions that are not tailored to address the patient's individual risk factors for falling. **[new 2013]**

1.1.3 Information and support

1.1.3.1 Provide relevant oral and written information and support for patients and their family members and carers, taking into account the patient's ability to understand and retain information. This should include:

⁴ An intervention with multiple components that is linked to a person's multifactorial assessment.

⁵ An assessment with multiple components that aims to identify risk factors that can be treated, managed or improved.

⁶ An intervention with multiple components that is linked to a person's multifactorial assessment.

- explaining about the patient's individual risk factors for falling in hospital
- showing the patient how to use the nurse call system and encouraging them to use it when they need help
- informing family members and carers about when and how to raise and lower bed rails
- providing consistent messages about when a patient should ask for help before getting up or moving about
- helping the patient to engage in any multifactorial interventions that are part of their care plan. **[new 2013]**

1.2 Community setting

1.2.1 Case/risk identification

1.2.1.1 Older people in contact with healthcare professionals should be asked routinely whether they have fallen in the past year and asked about the frequency, context and characteristics of the fall/s. **[2004]**

1.2.1.2 Older people reporting a fall or considered at risk of falling should be observed for balance and gait deficits and considered for their ability to benefit from interventions to improve strength and balance. (Tests of balance and gait commonly used in the UK are detailed in **section 4.5 of the full guideline.**) **[2004]**

1.2.2 Multifactorial falls risk assessment

1.2.2.1 Older people who present for medical attention because of a fall, or report recurrent falls in the past year, or demonstrate abnormalities of gait and/or balance should be offered a multifactorial falls risk assessment. This assessment should be performed by a healthcare professional with appropriate skills and experience, normally in the setting of a specialist falls service. This assessment should be part of an individualised, multifactorial intervention. **[2004]**

1.2.2.2 Multifactorial assessment may include the following:

- identification of falls history
- assessment of gait, balance and mobility, and muscle weakness
- assessment of osteoporosis risk
- assessment of the older person's perceived functional ability and fear relating to falling
- assessment of visual impairment
- assessment of cognitive impairment and neurological examination
- assessment of urinary incontinence
- assessment of home hazards
- cardiovascular examination and medication review. **[2004]**

1.2.3 Multifactorial interventions

- 1.2.3.1 All older people with recurrent falls or assessed as being at increased risk of falling should be considered for an individualised multifactorial intervention. **[2004]**

In successful multifactorial intervention programmes the following specific components are common (against a background of the general diagnosis and management of causes and recognised risk factors):

- strength and balance training
- home hazard assessment and intervention
- vision assessment and referral
- medication review with modification/withdrawal. **[2004]**

- 1.2.3.2 Following treatment for an injurious fall, older people should be offered a multidisciplinary assessment to identify and address future risk and individualised intervention aimed at promoting independence and improving physical and psychological function. **[2004]**

1.2.4 Strength and balance training

1.2.4.1 Strength and balance training is recommended. Those most likely to benefit are **older people living in the community** with a history of recurrent falls and/or balance and gait deficit. A muscle-strengthening and balance programme should be offered. This should be individually prescribed and monitored by an appropriately trained professional. **[2004]**

1.2.5 Exercise in extended care settings

1.2.5.1 Multifactorial interventions with an exercise component are recommended for older people in extended care settings who are at risk of falling. **[2004]**

1.2.6 Home hazard and safety intervention

1.2.6.1 Older people who have received treatment in hospital following a fall should be offered a home hazard assessment and safety intervention/modifications by a suitably trained healthcare professional. Normally this should be part of discharge planning and be carried out within a timescale agreed by the patient or carer, and appropriate members of the health care team. **[2004]**

1.2.6.2 Home hazard assessment is shown to be effective only in conjunction with follow-up and intervention, not in isolation. **[2004]**

1.2.7 Psychotropic medications

1.2.7.1 Older people on psychotropic medications should have their medication reviewed, with specialist input if appropriate, and discontinued if possible to reduce their risk of falling. **[2004]**

1.2.8 Cardiac pacing

1.2.8.1 Cardiac pacing should be considered for older people with cardioinhibitory carotid sinus hypersensitivity who have experienced unexplained falls. **[2004]**

1.2.9 Encouraging the participation of older people in falls prevention programmes

1.2.9.1 To promote the participation of older people in falls prevention programmes the following should be considered.

- Healthcare professionals involved in the assessment and prevention of falls should discuss what changes a person is willing to make to prevent falls.
- Information should be relevant and available in languages other than English.
- Falls prevention programmes should also address potential barriers such as low self-efficacy and fear of falling, and encourage activity change as negotiated with the participant.

[2004]

1.2.9.2 Practitioners who are involved in developing falls prevention programmes should ensure that such programmes are flexible enough to accommodate participants' different needs and preferences and should promote the social value of such programmes. **[2004]**

1.2.10 Education and information giving

1.2.10.1 All healthcare professionals dealing with patients known to be at risk of falling should develop and maintain basic professional competence in falls assessment and prevention. **[2004]**

1.2.10.2 Individuals at risk of falling, and their carers, should be offered information orally and in writing about:

- what measures they can take to prevent further falls
- how to stay motivated if referred for falls prevention strategies that include exercise or strength and balancing components
- the preventable nature of some falls
- the physical and psychological benefits of modifying falls risk
- where they can seek further advice and assistance

- how to cope if they have a fall, including how to summon help and how to avoid a long lie. [2004]

1.2.11 Interventions that cannot be recommended

1.2.11.1 **Brisk walking.** There is no evidence⁷ that brisk walking reduces the risk of falling. One trial showed that an unsupervised brisk walking programme increased the risk of falling in postmenopausal women with an upper limb fracture in the previous year. However, there may be other health benefits of brisk walking by older people. [2004]

1.2.12 Interventions that cannot be recommended because of insufficient evidence

We do not recommend implementation of the following interventions at present. This is not because there is strong evidence against them, but because there is insufficient or conflicting evidence supporting them⁷. [2004]

1.2.12.1 **Low intensity exercise combined with incontinence programmes.** There is no evidence⁷ that low intensity exercise interventions combined with continence promotion programmes reduce the incidence of falls in older people in extended care settings. [2004]

1.2.12.2 **Group exercise (untargeted).** Exercise in groups should not be discouraged as a means of health promotion, but there is little evidence⁷ that exercise interventions that were not individually prescribed for **older people living in the community** are effective in falls prevention. [2004]

1.2.12.3 **Cognitive/behavioural interventions.** There is no evidence⁷ that cognitive/behavioural interventions alone reduce the incidence of falls in **older people living in the community** who are of unknown risk status. Such interventions included risk assessment with

⁷ This refers to evidence reviewed in 2004.

feedback and counselling and individual education discussions. There is no evidence⁸ that complex interventions in which group activities included education, a behaviour modification programme aimed at moderating risk, advice and exercise interventions are effective in falls prevention with **older people living in the community**. [2004]

1.2.12.4 **Referral for correction of visual impairment.** There is no evidence⁸ that referral for correction of vision as a single intervention for **older people living in the community** is effective in reducing the number of people falling. However, vision assessment and referral has been a component of successful multifactorial falls prevention programmes. [2004]

1.2.12.5 **Vitamin D.** There is evidence⁸ that vitamin D deficiency and insufficiency are common among older people and that, when present, they impair muscle strength and possibly neuromuscular function, via CNS-mediated pathways. In addition, the use of combined calcium and vitamin D3 supplementation has been found to reduce fracture rates in older people in residential/nursing homes and sheltered accommodation. Although there is emerging evidence⁸ that correction of vitamin D deficiency or insufficiency may reduce the propensity for falling, there is uncertainty about the relative contribution to fracture reduction via this mechanism (as opposed to bone mass) and about the dose and route of administration required. No firm recommendation can therefore currently be made on its use for this indication.⁹ [2004, amended 2013]

⁸ This refers to evidence reviewed in 2004.

⁹ The following text has been deleted from the 2004 recommendation: 'Guidance on the use of vitamin D for fracture prevention will be contained in the forthcoming NICE clinical practice guideline on osteoporosis, which is currently under development.' As yet there is no NICE guidance on the use of vitamin D for fracture prevention.

1.2.12.6 **Hip protectors.** Reported trials that have used individual patient randomisation have provided no evidence¹⁰ for the effectiveness of hip protectors to prevent fractures when offered to older people living in extended care settings or in their own homes. Data from cluster randomised trials provide some evidence¹¹ that hip protectors are effective in the prevention of hip fractures in older people living in extended care settings who are considered at high risk. [2004]

2 Research recommendations

The Guideline Development Group has made the following recommendations for research, based on its review of evidence, to improve NICE guidance and patient care in the future. The Guideline Development Group's full set of research recommendations is detailed in the full guideline.

2.1 *Adjustments to the ward environment aimed at reducing the risk of patients falling in hospital*

What environmental adaptations can be made in existing inpatient units, and should be considered when inpatient units are built, to reduce the risk of inpatient falls?

Why this is important

Dementia, delirium, poor mobility and balance, urgent or frequent toilet needs or incontinence and visual impairment are common in older hospital patients. Several multifactorial studies have included adjustments to the ward environment that have plausible mechanisms for reducing falls in patients with these risk factors (such as improved lighting, changes to flooring, furniture, handholds, walking routes, lines of sight and signposting), but the impact of these changes has not been recorded. There is a need to understand what improvements to the inpatient environment are the most effective and cost-

¹⁰ This refers to evidence reviewed in 2004.

effective for preventing falls in hospital, and what factors architects should consider when designing new hospitals. **[2013]**

2.2 *Research recommendations from the 2004 guideline*

The following research gaps were identified by the GDG. Following NICE requirements, the first five are those prioritised by the GDG. **[2004]**

Further analysis of existing trial data to identify which components of multifactorial interventions are important in different settings and amongst different patient groups. **[2004]**

Future trials designed and analysed with the intention of identifying cost effective components of multifactorial programmes for particular groups of older people in different settings. **[2004]**

Evaluation of multi-agency falls prevention programmes to measure the impact of these programmes on reducing falls, injurious falls and fractures in older people. **[2004]**

Falls prevention trials with a focus on injury reduction, such as fracture outcomes and fall related outcomes. **[2004]**

Research on the optimal methods of risk assessment for falls in older people and evaluation of whether fall-prone individuals can be risk stratified, in terms of whom will most benefit from assessment and intervention. **[2004]**

Trials investigating the most effective strategy for preventing falls in older people with cognitive impairment and dementia. **[2004]**

UK-based cost effectiveness studies of falls prevention interventions. **[2004]**

Trials to investigate the effectiveness of hip protectors compared with other fracture prevention interventions in older people at high risk of falling. **[2004]**

3 Other information

3.1 *Scope and how this guideline was developed*

NICE guidelines are developed in accordance with a [scope](#) that defines what the guideline will and will not cover.

How this guideline was developed

NICE commissioned the Internal Clinical Guidelines Programme to develop the inpatient recommendations (labelled **[new 2013]**) of this guideline, and the National collaborating Centre for Nursing and Supportive Care (NCC-NSC) to develop the community recommendations (labelled **[2004]**) of this guideline. Each team established a Guideline Development Group (see sections 4 and 5), which reviewed the evidence and developed the recommendations.

The methods and processes for developing NICE clinical guidelines are described in [The guidelines manual](#).

3.2 *Related NICE guidance*

Details are correct at the time of consultation on the guideline (January 2013). Further information is available on [the NICE website](#).

Published

General

- [Patient experience in adult NHS services](#). NICE clinical guidance 138 (2012).
- [Service user experience in adult mental health](#). NICE clinical guidance 136 (2011).
- [Medicines adherence](#). NICE clinical guideline 76 (2009)

Condition-specific

- [Osteoporosis: assessing the risk of fragility fracture](#). NICE clinical guideline 146 (2012).

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- [Hip fracture](#). NICE clinical guideline 124 (2011).
- [Delirium](#). NICE clinical guideline 103 (2010).
- [Mental wellbeing and older people](#). NICE public health guidance 16 (2008).
- [Stroke](#). NICE clinical guideline 68 (2008).
- [Head injury](#). NICE clinical guideline 56 (2007).
- [Dementia](#). NICE clinical guideline 42 (2006).
- [Parkinson's disease](#). NICE clinical guideline 35 (2006).

Under development

NICE is developing the following guidance (details available from [the NICE website](#)):

- Older people with multiple morbidities. NICE public health guidance.
Publication expected September 2014.

4 The Guideline Development Group, Internal Clinical Guidelines Team, and NICE project team 2013

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