

Falls and fractures

*Effective interventions in
health and social care*



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Falls and fractures

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Introduction

Falls represent a significant public health challenge, with incidence increasing at about 2% per annum. Increased rates of falling, and the severity of the consequences, are associated with growing older and the rising rate of falls is expected to continue as the population ages.

In England, the number of people aged over 65 is due to rise by a third by 2025, the number of people over 80 will double and the number aged over 100 will increase fourfold. A significant rise in falls and associated fractures is therefore likely without preventive interventions.

Preventing older people from falling is a key challenge for the NHS and local authorities. It is not the preserve of one agency as the consequences of a fall and resultant fragility fracture cut across all local agencies working with older people. All local organisations working with older people, including statutory and voluntary service providers, are a part of the solution and must be supported to understand their contribution to reducing the number of falls locally.

Using this guide

This guide is part of the Department of Health's prevention package, a key component of the government's strategy for an ageing society. The package aims to raise the focus on older people's prevention services and encourage their use, ultimately improving older people's health, well-being and independence.

This resource aims to inform local dialogue between health and social care commissioners and service providers about falls and fractures care, setting out the context and key interventions. Other stakeholders, including older people and their carers, may also use it to find out about services. There are tools to support this guide, including an economic case for developing falls and fracture services, a template to assess local need, model falls care pathways, references and practice examples.

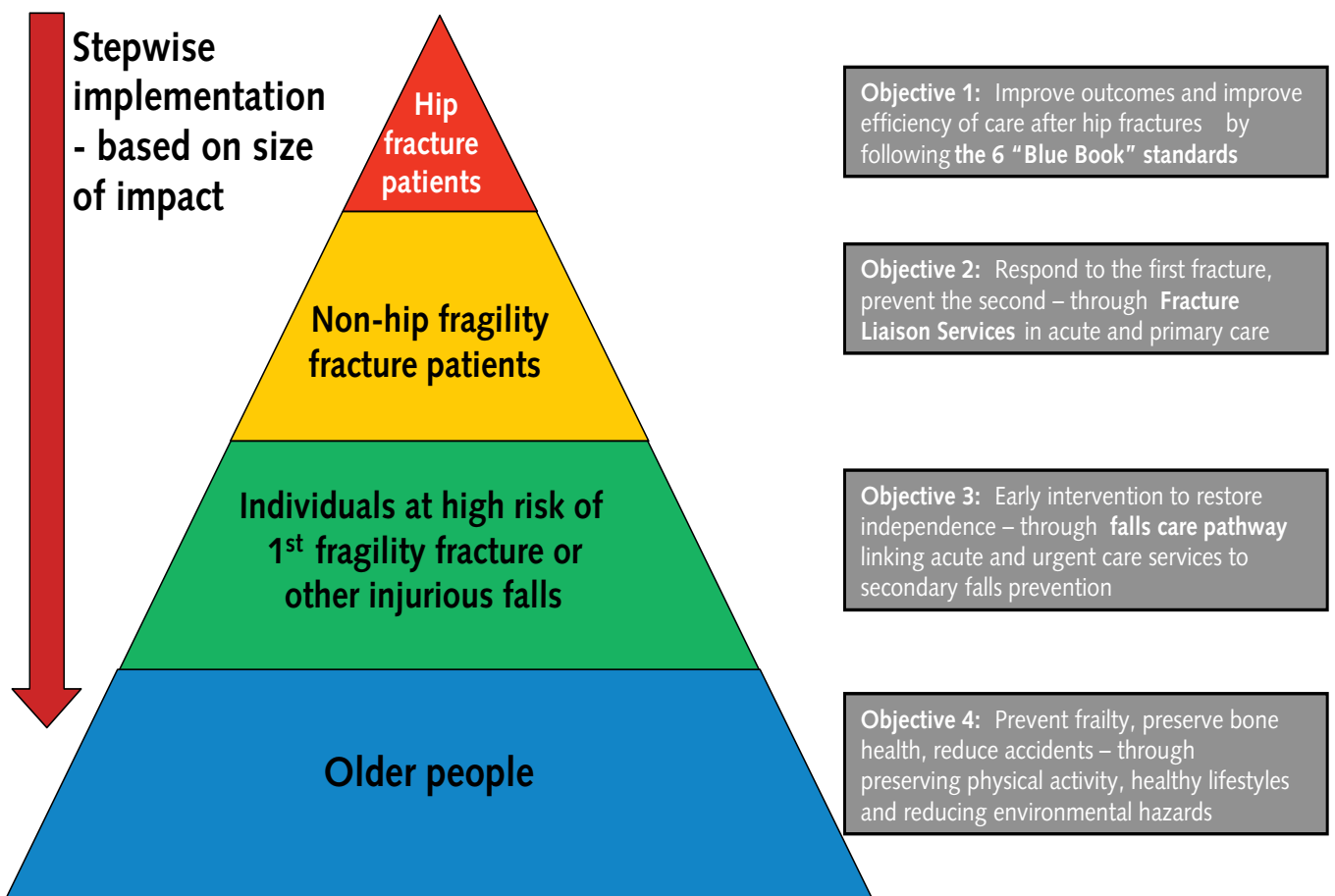
There are four key areas for intervention that commissioners, ideally working collaboratively across health and social care, should consider in the context of local services for falls, falls prevention and fractures.

The guide looks at developing services to achieve these four objectives, which are listed in priority order in terms of impact and evidence-base, although they each have a role for different risk groups.

- **Objective 1: Improve patient outcomes and improve efficiency of care after hip fractures through compliance with core standards.**
- **Objective 2: Respond to a first fracture and prevent the second – through fracture liaison services in acute and primary care settings.**
- **Objective 3: Early intervention to restore independence – through falls care pathways, linking acute and urgent care services to secondary prevention of further falls and injuries.**
- **Objective 4: Prevent frailty, promote bone health and reduce accidents – through encouraging physical activity and healthy lifestyle, and reducing unnecessary environmental hazards.**

A systematic approach to falls and fracture prevention

Four key objectives



June 11, 2009

Background

Falls and frailty among older people

People fall for many reasons. Active people sometimes fall. It is embarrassing but no more.

Falls become an issue however, when they:

- occur doing ordinary and necessary activities
- induce fear of falling, which restricts activity and leads to loss of independence
- keep happening ('recurrent' falls)
- cause injuries.

Falls are not an inevitable consequence of old age; rather they are nearly always due to one or more underlying risk factors. Recognising and modifying these risk factors is crucial in preventing falls and injuries. Common risk factors include occurrence of a previous fall, gait and balance problems, muscle weakness, cognitive impairment – for example from dementia or delirium, multiple medications (notably sedating drugs, with a significant link to people with dementia), visual impairment, fainting and acute medical illness.

Recurrent falls are often a manifestation of impaired postural stability. This can result from a combination of factors, such as conditions like arthritis, stroke or Parkinson's disease, age-related frailty and long-term cardio-respiratory conditions leading to loss of strength, balance and concentration or insight.

External factors can contribute to falls, such as poor or cold housing or behavioural issues such as excessive alcohol consumption.

Fragility fractures

The majority of fractures in older people occur as a result of a fall from standing height. These are low trauma fragility fractures commonly affecting the pelvis, wrist, upper arm or hip. Currently, almost half of all women and one in six men experience a painful and disabling fragility fracture in later life.

Hip fractures remain the most serious consequence of a fall and the commonest cause of accident-related death in older people – 20% die within four months and 30% within a year. Approximately half of those who were previously independent become partly dependent following a hip fracture, while one-third become totally dependent.

Underlying many of the risk factors is a common condition known as osteoporosis, which weakens bone strength. It is a chronic disease that affects one in three women and one in 12 men aged over 50. Osteoporosis particularly affects post-menopausal women. The incidence in both sexes rises rapidly as the population ages. Its onset is asymptomatic and it is often only recognised after an older person falls and sustains a fragility fracture. Osteoporosis can be diagnosed and treated using specialist bone density or DXA scans and drugs, although many fragility fractures occur in people with a milder form of the disease, known as osteopenia.

Older people's perspectives on falls

Some older people are fearful of falling, but they are most concerned about loss of mobility and independence. This should influence how professional advice is promoted.

One study¹ found that 80% of older women surveyed said they would rather be dead than experience the loss of independence and quality of life that results from a bad hip fracture and subsequent admission to a nursing home.

Yet older people can be resistant to lifestyle advice linked to the theme of 'falls', as the word has connotations for many of getting frail, and losing their pride in being upright and independent. In general, there is a better response to the theme of 'improving strength and balance' and staying active.

Research commissioned by Help the Aged², which draws on feedback from older people through falls prevention focus groups, has found that the key messages to maximise the impact of lifestyle advice relevant to preventing falls are:

- focus on improving strength and balance, not falls
- encourage people to personally choose the advice and activities that suit them
- don't focus on avoiding 'hazards' or physical restriction such as wearing hip protectors – this is perceived as overbearing.

1 (Salkeld et al (BMJ 2000))

2 *Don't Mention the F- Word* Help the Aged 2005 <http://www.helptheaged.org.uk>

Within this context the headline messages for older people, family and carers are that:

- falls are a risk as you get older, but are not inevitable
- staying active and dealing proactively with any long-term condition will reduce frailty and preserve independence
- if you are getting unsteady, seek advice so underlying factors, such as eyesight, medications, strength and balance, can be addressed.

Prevalence of falls and fractures

Falling is a serious and frequent occurrence in people aged 65 and over. Each year, 35% of over-65s experience one or more falls. About 45% of people aged over 80 who live in the community fall each year. Between 10 and 25% of such fallers will sustain a serious injury.

The numbers are large. A local authority and PCT population of 300,000 may currently include 45,000 people aged over 65. Of these:

- 15,500 will fall each year
- 6,700 will fall twice or more
- 2,200 fallers will attend an accident and emergency (A&E) department or minor injuries unit (MIU)
- a similar number will call the ambulance service
- 1,100 will sustain a fracture, 360 to the hip.

Based on NICE guidelines and population modelling, amongst a population of 300,000 around 10,000 people per year who fall should receive a falls assessment, with a further 5,000 potentially requiring a brief screening of gait and balance.

Table 1: Bone health and post-menopausal women

In a PCT of 300,000, there will be:

- a. 55,000 Post-menopausal women
- b. 17,400 Post-menopausal women with undiagnosed osteoporosis
- c. 6,900 Post-menopausal women with a previous fracture of any kind
- d. 900 Post-menopausal women with new fracture each year

Groups c and d above constitute just 16% of the local population but it is from these clearly identifiable groups that **50%** of hip fractures occur. Targeting these groups in primary care and through fracture liaison case-finding services based in hospital provides ready access to those at greatest risk of hip fractures.

Health and social care: a joint interest in falls and fractures

The consequences of falls can be significant – life changing, and in many cases life threatening for older people. They have an impact on both NHS and on social care services. Falling can precipitate loss of confidence, the need for regular social care support at home, or even admission to a care home. Fractures of the hip require major surgery, and inpatient care in acute and often rehabilitation settings, ongoing recuperation and support at home from NHS community health and social care teams. In addition, hip fractures are the event that prompts entry to a care home in up to 10% of cases. Indeed, fractures of any kind can require a care package for most older people to support them at home.

The additional direct cost to commissioners for hip fractures alone is estimated to be £10,000 to the NHS plus the costs of local authority social care. This is in addition to existing capacity that is released, for example in intermediate care services or community hospitals, but does not necessarily become a direct saving.

This means there is a joint interest between health and social care services in developing effective falls and fracture preventative services, and to work together to identify where and by how much direct costs and other kinds of savings – releasing staff or service time, for example – are generated.

See the accompanying **economic evaluation** for more details of falls and fracture costs and the economic benefits of effective interventions.

Objective 1: Improving the experience of hip fracture surgery

The evidence base for hip fracture care highlights that timely and co-ordinated multi-disciplinary management can improve outcomes and efficient use of resources.

Improved outcomes and reductions in variability in time to surgery, length of stay and other key indicators can be secured via commissioning to meet six key standards. The rationale for these standards is set out in *The Care of Patients with Fragility Fracture*, published in 2007 by the British Orthopaedic Association and British Geriatrics Society and known as the 'Blue Book'. Progress towards compliance can be continuously monitored by participation in the National Hip Fracture Database (NHFD)³. Commissioners can ensure a focus on quality and outcomes by requiring providers to participate in and share with commissioners their comparative data from NHFD.

The standards are:

- 1. All patients with hip fracture should be admitted to an acute orthopaedic ward within 4 hours of presentation.**
- 2. All patients with hip fracture who are medically fit should have surgery within 48 hours of admission, and during normal working hours.**
- 3. All patients with hip fracture should be assessed and cared for with a view to minimising their risk of developing a pressure ulcer.**
- 4. All patients presenting with a fragility fracture should be managed on an orthopaedic ward with routine access to acute ortho-geriatric medical support from the time of admission.**
- 5. All patients presenting with fragility fracture should be assessed to determine their need for anti-resorptive therapy to prevent future osteoporotic fractures.**
- 6. All patients presenting with a fragility fracture following a fall should be offered multi-disciplinary assessment and intervention to prevent future falls.**

³ National Hip Fracture Database <http://www.nhfd.co.uk>

The NHS Institute's Orthopaedic Rapid Improvement Programme⁴ has highlighted a marked variation in outcomes, including mortality, associated with hip fracture care, and identifies in *Focus On: Fractured Neck of Femur*⁵ several characteristics of organisations providing high-quality care and value for money, and this should be used to promote implementation of best practise through service redesign.

- The pathway is co-ordinated and designed to reduce variation in length of stay, reduce mortality and re-admissions.
- Treating hip fracture patients in a dedicated unit with a focus on rapid rehabilitation ensures optimal health outcomes, and has proved to reduce the average length of stay by up to eight days per patient. They avoid 'superspell' stays across acute and rehabilitation settings and aim to care for 90% of patients on an appropriate clinical ward area with nursing, ortho-geriatric medicine and surgical expertise appropriate for this often frail patient group.
- Every eight-hour delay to surgery after the initial 48 hours equates to an extra day in hospital. If patients' fluid status and significant co-morbidities are optimised in a timely and appropriate way, more patients receive surgery within 24 hours, resulting in better health outcomes and reduced post-operative stay.
- Patients should be mobilised within 12-18 hours post op and receive seven-day therapy input. For this standard the aim should be 95% compliance.
- Patients are discharged back to their usual address using a criteria-based discharge process. The aim should be at least 60% 'home to home' within 30 days.
- Health and social care teams are co-ordinated and integrated across the patient pathway and work in partnership with an ortho-geriatrician.

Influencing hip fracture care through commissioning

There are a number of key opportunities to influence hip fracture care through commissioning, including the following.

- Commissioning an integrated ortho-geriatric service to specified quality standards, whereby all older trauma patients are seen by a team involving both orthopaedic surgeons and geriatricians, plus regular multidisciplinary assessment and input towards discharge planning, rehabilitation, and management of co-existent medical problems
- Commissioning post-acute care with appropriate multi-disciplinary inputs

4 <http://www.institute.nhs.uk>

5 *Focus on: Fractured Neck of Femur* NHS Institute for Innovation and Improvement 2006

- Monitoring local services against the six standards (see above)
- Using the Focus on Fractured Neck of Femur guide
- Requiring continuous quality benchmarking via the National Hip Fracture Database
- Applying World Class Commissioning competencies when commissioning fracture care services.

Objective 2: Respond to the first fracture and prevent the second

Preventing recurrent falls and fractures

The most effective way of identifying people at risk of hip fractures, and organising appropriate treatment, is to focus on two particular groups:

- patients with new fragility fractures
- patients who have fractured in the past or are at risk of osteoporotic fractures in the future.

The nature of the disease progression of osteopenia and osteoporosis provides an opportunity for intervention in up to 50% of future hip fracture cases. Studies from the UK and abroad consistently report that half of hip fracture patients have a history of previous, clinically apparent, fragility fracture, such as the wrist, ankle or vertebra. Treatment of osteoporosis from the time of the first fracture in these patients would have prevented around half of the subsequent hip fractures.

The latest NICE technology appraisal on secondary prevention, TA161⁶ advocates osteoporosis assessment and treatments, where appropriate based on bone mineral density and clinical factors, for all female patients aged over 50 who have suffered fragility fractures.

Fracture liaison, working with acute care

For patients with new fragility fractures a service known as fracture liaison can target the highest risk group. Patients aged over 50, who are admitted to hospital or who attend outpatient clinics or A&E due to a low impact fracture, gained from a fall, slip or trip from a standing height or lower, are highlighted to the service, and assessed by a specialist osteoporosis nurse. For a 300,000 population the service would assess around 1000 older people with fragility fractures each year, and of these about half would be recommended for osteoporosis treatment.

⁶ NICE Technology Appraisal (TA) 161 *Review of treatments for the on secondary prevention of osteoporotic fragility fractures in post-menopausal women (updating TA87)*

The nurse can:

- investigate bone density using scans and measurements
- start drug and other treatments to reduce the risk of a future break if someone has osteoporosis
- liaise directly with falls services
- monitor and maintain medication adherence.

Around 30% of hospitals in England currently operate this service, and there is strong research evidence for its effectiveness in reducing hip fractures in this group of patients. See the accompanying **economic evaluation** for more details.

Fracture liaison, working with primary care

For patients who have fractured in the past or are at risk of osteoporotic fractures, a primary care-based fracture liaison programme can undertake proactive case finding of unassessed fragility fracture and other high-risk patients across a much wider group.

Using primary care records and the FRAX™ osteoporosis risk assessment tool⁷, the service can proactively identify people whose fragility fractures have not previously been assessed, and other patients at high risk of primary fractures.

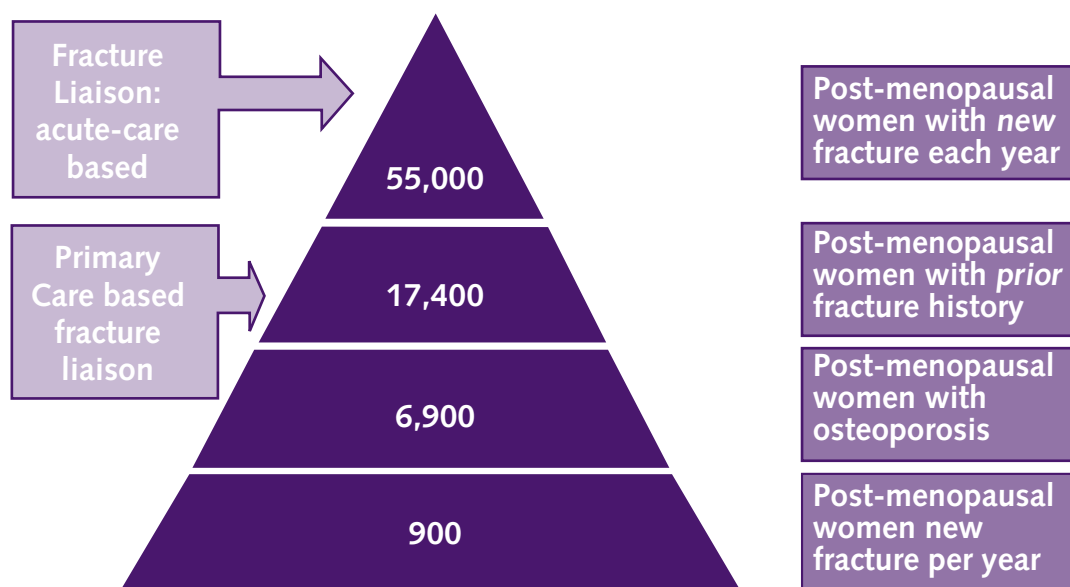
A primary care-based fracture liaison nurse, working to agreed protocols under the guidance of a GP with a specialist interest in osteoporosis, can:

- carry out assessments
- review patients' medication
- recommend treatment for long-term management of osteoporosis.

7 <http://www.shef.ac.uk/FRAX>™

This enables more comprehensive case-finding, using primary care records and the FRAX™ tool to identify patients at high risk of primary fractures, plus systematic annual follow-up to ensure medication compliance.

Table 2: Bone health and post-menopausal women in a PCT and local authority of 300,000 population



Objective 3:

Early intervention to restore independence and reduce future injuries

Interventions in the community with the highest quality evidence base include:

- a falls care pathway
- a falls service
- a falls co-ordinator
- multi-factorial interventions
- community-based therapeutic exercise.

A falls care pathway

A falls care pathway, commissioned locally by health and social care from a multi-agency team, should draw on the Department of Health pathways accompanying this guide. A local exercise to map and review current falls provision – where and by whom, estimating unmet need and additional information about activity, and involving key stakeholders – is recommended. Besides medical, nursing, social care and therapy staff, other professional groups should include podiatrists, exercise co-ordinators, ambulance staff, A&E, pharmacists, occupational therapists and Home Improvement Agency staff.

The pathway should agree:

- the contribution of each professional group to the pathway
- specific proposals for incorporating falls prevention and awareness into mainstream health and social care services, with criteria for identifying people suitable for falls assessment, including bone scanning where appropriate
- what sort of assessment activity is undertaken between GPs, a primary care-based falls team, and secondary care based falls clinics.
- opportunities to consider any adaptations needed to a home environment, including the use of aids and adaptations, community equipment and assistive technology, such as fall detectors and related community alarm or telecare packages

Developing the pathway can help commissioners make a local decision about what they want from each sector.

A falls service and falls co-ordinator

A falls service can triage and assess older people who have fallen or are at high risk of falling.

Anyone presenting with a fall or fracture in any urgent care setting – A&E, minor injury units, primary care out of hours service, or ambulance service non-conveyed faller – should be assessed for the following.

- Falls risk, via a multi-factorial risk assessment. This should include a review of any medical conditions, strength and balance tests, visual impairment and medication review. Staff providing a falls assessment should have access to specialist medical input to assist in establishing the reason why a person has fallen.
- Fracture risk using professional consensus guidance such as the FRAX™ assessment tool. NICE technology appraisals 160 and 161 provide guidance on the treatment of primary and secondary osteoporosis and NICE guidance on assessment and treatments to prevent fragility fractures is anticipated. Meanwhile, FRAX™ allows the calculation of a risk score and where risk is high does not require a DXA scan in order to initiate treatment.

Falls assessment service can be run from a range of settings including community hospitals, GP surgeries, intermediate care teams or secondary care. The key requirement is practitioners with appropriate skills, including access to secondary care specialists and facilities where appropriate. Commissioners should consider current arrangements locally as a starting point for service development, as well as known patient preference for local venues.

Alternatively, individuals could be referred to primary care or community teams for assessment, based on a locally designated process or pathway.

Falls co-ordinator

A falls co-ordinator can ensure that hospital and community efforts to prevent falls are co-ordinated and integrated. This post also has a key communications role, promoting falls management and prevention to other agencies, based on the effective messages to older people highlighted by the Help the Aged research (see **Older people's perspectives on falls** above).

Multi-factorial targeted interventions

Multi-factorial targeted interventions are based on risk assessment, and are likely to include optimising medication, reducing visual disability, avoiding unnecessary environmental hazards in the context of lifestyle advice and support to prevent frailty, preserving bone health, and promoting independence. The most effective component of multi-factorial interventions is therapeutic exercise.

Community-based therapeutic exercise

The national physical activity strategy *Be Active, Be Healthy: A plan for getting the nation moving*⁸ highlights the benefits of strength training programmes for older people, which can produce significant improvements in muscle strength, leading to better functional mobility and a reduction in falls.

Community-based therapeutic exercise is therefore an effective intervention. This should include programmes tailored to:

- fallers who attend urgent care
- people with fragility fractures
- people with hip fractures.

The overall aim of these programmes is to improve postural stability through increasing strength and balance. While some individuals will need physiotherapy-led modifications based on their particular co-morbidity, there is good evidence for both domiciliary and group-based approaches that can be delivered by trained exercise instructors and include people with cognitive impairment. These approaches include targeting and individual progression of exercises.

It is important to manage patients who fail to respond to evidence-based exercise, as demonstrated by further declining postural instability or increased falls. This includes investigation for underlying causes of bone loss and consideration of alternative treatments and therapy-led techniques to ensure patients avoid long-lies following a fall.

Many exercise interventions provided as part of falls services currently fall short of these standards. Commissioning to the required quality and capacity could include a range of providers, including local leisure services and the voluntary sector.

8 *Be Active, Be Healthy: A plan for getting the nation moving* HM Government 2009

This exercise approach should be must be delivered in the context of *Be Active, Be Healthy* with a view to ongoing increases in habitual physical activity, resulting in physical and psychological benefits. The best simple predictor of need for targeted therapeutic exercise interventions is age distribution, in particular numbers of people aged over 65, with post-menopausal women at highest risk. Further detailed advice on evidence-based exercise interventions is outlined in the accompanying DH advice note *Exercise Training to Prevent Falls*.

Objective 4: Prevent frailty, promote bone health and reduce accidents

Preventing falls in the community, home and hospital

Falls and associated fractures occur regularly in a variety of settings, principally the community, home and hospital. Promoting healthy lifestyle and 'strong bones' among older people is a key activity, as is early intervention to restore independence when falls occur. Local falls strategies should also include approaches to improving balance and strength, such that whether living at home or in care homes older people can take advantage of a wide range of activities designed to improve postural stability and increase strength.

Local falls strategies also need to consider 'environmental' approaches to falls prevention, acting on the risks that surround older people in their homes and the community. A recent review⁹ concluded that: "Home modification in the absence of other intervention approaches may be effective for persons with a history of falling but is likely to be most effective when integrated into a multi-faceted intervention program that also focuses on education, exercise, and nutritional status."

There is not conclusive evidence that addressing home hazards alone – eg poorly maintained stairways, poor lighting and visibility, hard surfaces on which to fall, and lack of safety devices such as grab bars – will reduce falls and fractures. But these hazards should be addressed, using professionally prescribed environmental assessment and modification, because problems with vision, balance, chronic conditions and side effects of medication that increase with age will hinder people's ability to negotiate these home hazards and increase the risk of falls and fractures.

Home assessments should be an intervention option following a structured falls assessment, in a similar way as for exercise interventions. Demand for these interventions will be a by-product of more effective case-finding, and commissioners will need to consider the potential additional demand generated for therapy services.

9 Corinne Peek-Asa and Craig Zwerling – Epidemiol Rev 2003;25:77–89

There is a wider environmental dimension in ensuring that people like town planners and architects take account of the risk of falls to older people in design. For instance, there is emerging evidence of the importance of physical design in preventing falls among people with dementia, with particular attention paid to colour contrast, floors and lighting. The government's national housing strategy for an ageing society, *Lifetime Homes, Lifetime Neighbourhoods*, promotes the importance of inclusive housing design standards.

Falls in hospitals and other care settings

Falls of older people in hospitals and other care settings is an important area where appropriate systems and awareness can reduce risk. A patient falling in hospital is the most common patient safety incident reported to the National Patient Safety Agency (NPSA). The NPSA estimates that in an average 800-bed acute hospital there will be over 1,260 falls each year, with significant associated direct and litigation costs.

The NPSA report *Slips, Trips and Falls in Hospital*¹⁰ highlights the dilemma that "achieving zero falls is not realistic, because rehabilitation always involves risk". However, the report also identifies that "some NHS organisations do not have a falls prevention policy, or are placing too much emphasis on completing falls risk scores, rather than preventing falls".

Many of the issues and good practice examples highlighted by the NPSA for the NHS also apply to care homes, where there is generally a concentration of older people with a previous history of falls or who are at risk of falling. Involvement of community pharmacists to review medications is particularly useful.

In care homes the rate of falls is almost three times that of older people living in the community. Injury rates are also considerably higher, with 10-20% of institutional falls resulting in a hip fracture, and 30% of people admitted to an acute hospital with a hip fracture coming directly from a care home.

Interventions to reduce falls and fractures in care homes include:

- providing high-strength vitamin D and calcium supplements
- staff training eg information on modifiable risk factors and other preventive measures
- education for residents eg information on exercise and fall prevention, recommendation to wear hip protectors

10 *Slips, Trips and Falls in Hospital* National Patient Safety Agency 2007 <http://www.npsa.nhs.uk>

- falls prevention environmental assessments eg lighting, bed height, floor surfaces
- therapeutic exercise programmes.

Commissioners of NHS and social care services can incorporate falls and falls prevention as a key quality indicator or outcome in monitoring provider services, and the NPSA identifies that benchmarking is possible between hospitals.

The role of ambulance services

Local ambulance services can play a key role in securing the patient care pathway for falls linking urgent care to secondary prevention. Nationally ambulance services receive around 700,000 calls annually concerning people who have fallen, 10% of total calls. Ambulance staff assess the need for patients to be conveyed to A&E departments of acute hospitals, and around 25% are not conveyed. This assessment offers staff direct experience of a person's living conditions, including environmental safety and other risk factors.

For these 'non-conveyed, patients there is a clear opportunity to flag up the event and patient's circumstances to primary care or the community falls services, depending on the local pathway, and a variety of mechanisms to do this have already been developed. Some services have gone a step further and ambulance staff can convey suitable patients direct to appropriate alternate urgent care services (eg out of hours primary care) or refer non-conveyed patients directly to a single point of access to PCT community falls or intermediate care services. As a first step, systematic information sharing could be incentivised by commissioners adopting this theme as a commissioning for quality and innovation (CQUIN)¹¹ target for ambulance services.

Home Improvement Agencies and handyperson services

Home Improvement Agencies and handyperson services play an essential role in the delivery of aids and adaptations, and of repairs and maintenance services, which can help prevent future falls from taking place. Indeed, with the diverse range of services which HIAs provide in many communities, including information and advice services about local housing and support options, HIAs are critical partners with whom commissioners should engage as part of an integrated approach to falls prevention services. There is an HIA service available in almost every local authority area.

¹¹ *Using the Commissioning for Quality and Innovation (CQUIN) payment framework*
Department of Health 2008 [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/
PublicationsPolicyAndGuidance/DH_091443](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_091443)

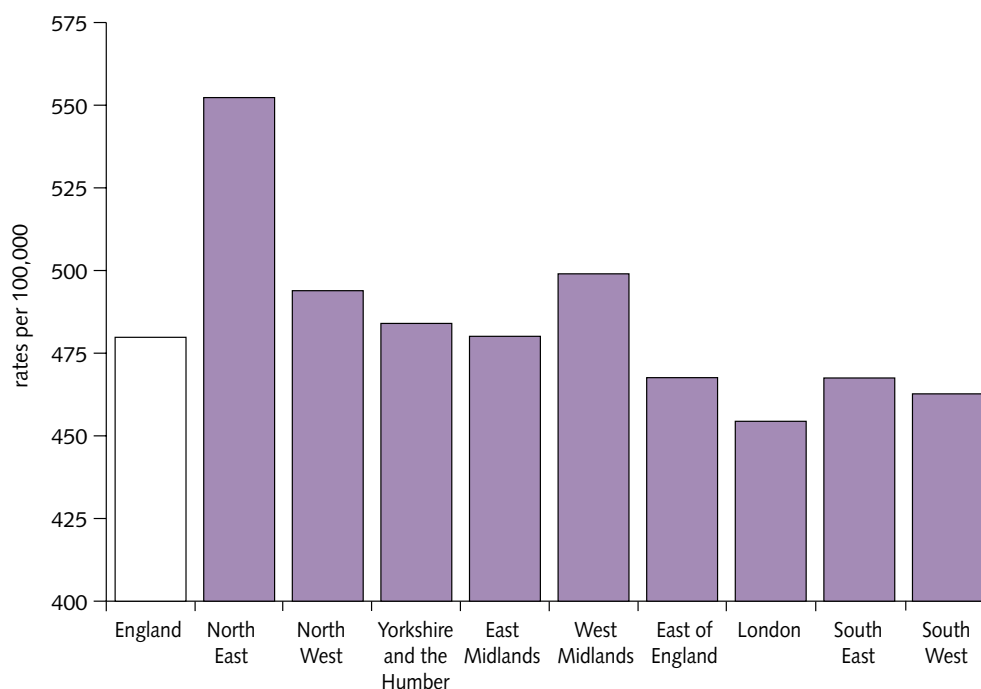
Making a difference: outcomes, metrics and levers for change

Key outcomes

The main measurable outcomes for falls and fractures services are:

- the incidence of hip and other fractures, based on standardised admissions ratio. The regional profile of hip fractures is shown in Table 3.
- benchmarking numbers of people receiving a falls assessment annually, based on known risk groups
- the number of people in target groups undergoing a community-based therapeutic exercise programme
- the number of people undergoing fracture risk assessment after a fragility fracture, with recommendation for osteoporosis treatment where appropriate
- compliance with the six Blue Book standards for hip fracture treatment and care (see **Objective 1** above)
- incidence of recurrent fragility fractures in the longer term.

Table 3: National and regional rate (per 100,000) of hip fractures in over 65s, 2006/7 (source: Health Profile of England, 2008)



Evidence-based inputs to deliver these key outcomes include:

- case-finding systems in hospital and community settings to identify high-risk fallers
- adherence to NICE appraisal guidance with monitoring by local audit
- identified clinical leaders including a consultant with job plan commitment
- a fracture liaison service to ensure initiation of secondary prevention medical treatments for osteoporotic fragility fractures
- widespread and accessible evidence-based exercise programmes
- targeted use of validated home safety assessments.

Accessing local data

There are several national audits providing local comparative data that will be useful to commissioners and provider in developing and maintaining services.

- The National Hip Fracture Database (NHFD) – web-based audit, at www.nhfd.co.uk, designed to record case-mix, care and outcomes for hip fracture patients and properly monitor the use of secondary prevention interventions. The database is based on the successful Myocardial Infarction National Audit Project (MINAP) and for participating sites allows the national benchmarking of hip fracture for the first time.
- The Royal College of Physicians Clinical Effectiveness and Evaluation Unit (CEEU) National Clinical Audit of Falls and Bone Health in Older People has audited local services since 2005. Its 2009 report highlighted a *“large variation in the quality of services...Some services are doing well but for most there are important deficiencies in both commissioning and provision of specialist care”*. Opportunities for widespread improvements in several areas are raised, including risk assessments, case-finding systems to identify high-risk fallers, knowledge of local fragility fracture rates and evidence-based exercise programmes. The importance of commissioning the right services at the right quality is highlighted,
- The Q Research project evaluation of standards of care for osteoporosis and falls in primary care indicates the potential for identifying patients at risk of osteoporosis and falls using electronic healthcare records from primary care.

NICE guidance

NICE has published the following relevant guidance.

- *NICE Clinical Guidance 21 Clinical practice guideline for the assessment and prevention of falls in older people*¹².
- *NICE Technology Appraisal (TA) 87 The clinical effectiveness and cost effectiveness of technologies of the secondary prevention of osteoporotic fractures in post-menopausal women*¹³
- *NICE Technology Appraisal (TA) 161 Review of treatments for the on secondary prevention of osteoporotic fragility fractures in post-menopausal women*¹⁴

Levers for change

Local Area Agreements in some communities have been used to drive improvement, with falls and falls prevention prioritised by agreement between the local authority and health partners.

Falls and fractures should be prioritised for early inclusion in each area's joint strategic needs assessment (JSNA). The **needs assessment** guide accompanying this guide provides a JSNA template and minimum data set relating to falls and fracture services.

From April 2010 new quality payments will be introduced under payment by results, following the commitment in *High Quality Care for All*¹⁵, for providers who meet key quality standards for hip fracture care. The best practice tariff will be structured and priced to incentivise and enable best practice.

A directly enhanced service began in 2008/9, aiming to encourage primary care to confirm the diagnosis and prescribe appropriate pharmacological secondary prevention in patients with osteoporosis. Practices are expected to compile an audit of older women with a diagnosis of osteoporosis, and receiving treatment.

12 NICE Clinical Guidance 21: *Clinical practice guideline for the assessment and prevention of falls in older people*

13 NICE Technology Appraisal (TA) 87: *The clinical effectiveness and cost effectiveness of technologies of the secondary prevention of osteoporotic fractures in post-menopausal women* (January 2005).

14 NICE Technology Appraisal (TA) 161 *Review of treatments for the on secondary prevention of osteoporotic fragility fractures in post-menopausal women* (updating TA87)

15 *High quality care for all: NHS Next Stage Review* Department of Health 2008 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085825

In addition, reducing the incidence of falls and fractures using interventions with a strong evidence base can improve local performance in several national performance indicators. These include:

- NI 134 – the number of emergency bed days per head of weighted population
- NI 124 – people with a long-term condition supported to be independent and in control of their condition
- NI 120 – all age, all cause mortality rate.

Appendix:

List of members of the DH Falls and Fractures Working Group

Nye Harries (Co-Chair), National Programme Manager, Department of Health

Dr Finbarr Martin, (Co-Chair), Acting National Clinical Director for Older People, Department of Health

Dr Elizabeth Aitken, Consultant Geriatrician, Lewisham University Hospitals NHS Trust

Gary Cook, Consultant Epidemiologist and Director of the Clinical Effectiveness Unit, Stockport NHS Foundation Trust

Dr Alun Cooper, General Practitioner, Bridge Medical Centre, West Sussex Primary Care Trust

Robin Davis, 18 Weeks Programme, Department of Health

Mark Dinsdale, Project Officer, Department of Health

Professor Roger Francis, Consultant Physician, Freeman Hospital, The Newcastle Upon Tyne Hospitals NHS Foundation Trust

Claire Goodchild, National Programme Manager, Department of Health

Judy Hillier, Director of Clinical and Community Services, NHS Portsmouth

Dr Steve Laitner, General Practitioner & Associate Medical Director, East of England SHA

Professor David Marsh, Professor of Clinical Orthopaedics, University College London Hospitals NHS Foundation Trust

Dr Paul Mitchell, Associate Lecturer, University of Derby

Professor David Oliver, Consultant Geriatrician, Royal Berkshire NHS Foundation Trust

Carl Petrokofsky, Specialist in Public Health, Department of Health South East

Sarbjit Purewal, Associate, NHS Institute for Innovation and Improvement

Dr Opinder Sahota, Consultant Physician, Nottingham University Hospitals NHS Trust

Professor Keith Willett, National Clinical Director for Trauma, Department of Health



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