Falls and Osteoporosis

Introduction

Falls are a major cause of disability and the leading cause of mortality resulting from injury in people aged over 75 in the UK (Scuffham & Chaplin, 2002). They account for half of all accident related hospital admissions, up to a quarter of ambulance callouts and have been estimated to cost the NHS in England more than £2bn a year in direct healthcare costs alone.

Falls were the ninth highest cause of disability adjusted life years (DALYs) in England in 2013. The economic burden of incident and previous fragility fractures in the UK was estimated as being £3.5 billion in 2010. Approximately 74% of these costs relate to incident fractures i.e. health care, 24% relate to long-term social care and 2% to pharmacological prevention (PHE, 2015). Hip fractures carry a total cost equivalent to about 1% of the whole NHS budget (RCOP, 2016).

Unless organisations take effective joint action on falls and osteoporosis now, the number of falls and fragility fractures will continue to increase. Both statutory and voluntary service providers must therefore be engaged as part of the solution and supported to understand their contribution to reducing the number of falls locally (DoH, 2009a).

This chapter considers falls predominantly in adults aged 65 years and over as the key issue of concern is not simply the high incidence of falls in older people, but the combination of a high incidence and a high susceptibility to injury.

1.0 Falls

A fall can be defined as an event which causes a person to unintentionally rest on the ground or lower level, and is not the result of a major intrinsic event such as a stroke, or overwhelming hazard.

Having a fall can happen to anyone and it is not an inevitable result of ageing. However falls are more likely to occur as people get older and they can become recurrent. Approximately a third of people aged 65 and over living in the community are likely to fall at least once a year, and this rises to 50% of adults over 80 who are either at home or in residential care (DoH, 2009). Half of fallers are likely to have a further fall within the next 12 months.

Falls can be a symptom of an underlying health problem and tests should be undertaken to rule these out, particularly if they are unexplained. However, most falls do not result in serious injury but the consequences of falling, or of not being able to get up after a fall, can be devastating. Consequences can include:

- Fear of falling and loss of confidence to move around safely
- Loss of mobility, leading to social isolation and depression
- Increase in dependency and disability
- Hypothermia
- Pressure related injury
- Infection

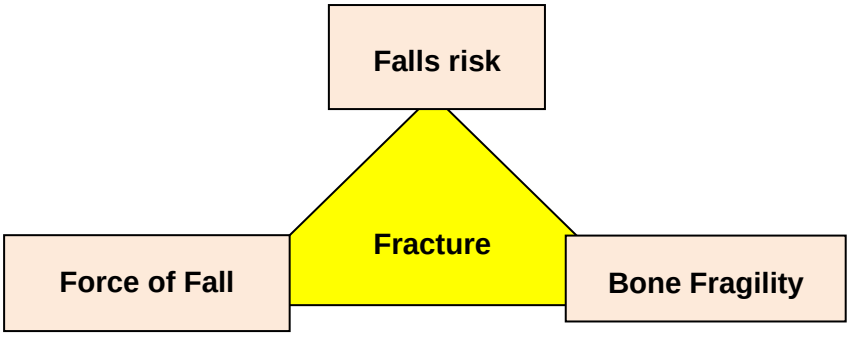
Osteoporosis is a condition that affects bone strength and over a third of women and one in five men in the UK have one or more bone fractures because of osteoporosis in their lifetime (NOS, 2013). Women lose bone material more rapidly than men, especially after the menopause when their oestrogen levels drop.

Osteoporosis Risk Factors	
Genes	higher risk if a parent has broken a hip
Age	older adults are at higher risk
Gender	women are at higher risk
Race	people from black Afro-Caribbean origin are at lower risk because they have bigger and stronger bones
Low body weight	body mass index (BMI) of below 19g/m^2
Previous fracture	
Certain medical conditions	rheumatoid arthritis, thyroid conditions and conditions such as Crohns Disease that affect absorption
Certain medications	corticosteroids, some cancer treatments, anti-epileptic drugs
Lifestyle factors	smoking and alcohol

1.1 The Relationship between Falls and Osteoporosis

Falls and osteoporosis are inextricably linked, both in their consequences and in the patient group who most suffer these outcomes. Approaches to fracture prevention must address both the force of the fall, the incidence of falling and bone fragility (see diagram 1).

Diagram 1: The Fracture Prevention Triangle

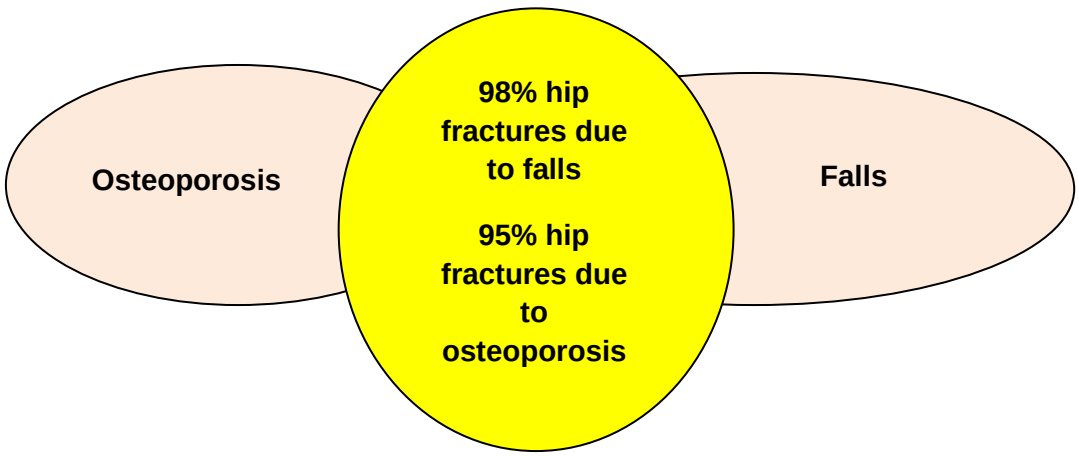


The incidence of falls is increasing at around 2% per annum and this is expected to continue as the population ages. Up to 10% of falls result in serious injury, of which 5% are fractures (DoH, 2009).

1.2 The Relationship between Osteoporosis and Fractures

In excess of 95% of hip fractures are fall related and over 90% of hip fractures occur in older people with osteoporosis (see diagram 2).

Diagram 2: The relationship between falls, osteoporosis and hip fractures



Short and long-term outlooks for patients are generally poor following a hip fracture, with an increased 1 year mortality of between 18% and 33% (PHE, 2015); 1 in every 12 patients will die in the first month following injury. Approximately half of those people who were previously independent become partly dependent following a hip fracture, with one third becoming totally dependent (DoH, 2009). Approximately 20% of older people that suffer a hip fracture enter long-term care in the first year after fracture (PHE, 2015).

Hospital costs following hip fracture are high and mostly occur in the first year after the index hip fracture; estimated hospital costs are £14,163 and £2,139 in the first and second year following fracture.

Nationally, the rate of falls in care homes is almost 3 times that of older people living in the community and injury rates are considerably higher; 30% of people admitted to hospital with a hip fracture come directly from a care home (DoH, 2009). Despite this, many care homes still do not have protocols in place to prevent, identify or act upon falls among residents (NOS, 2012). Secondary fractures appear to occur rapidly after incident fracture. The Glasgow Fracture Liaison Service found that 80% of re-fractures that occur over a 3 year follow-up period happen during the first year, with 50% occurring during the first 6-8 months – dependent of whether the incident fracture was hip (6 months) or non-hip (8 months).

2.0 What do we know?

More than 1 in 12 people will be aged 80 or over by 2039 (Office for National Statistics, 2015).

2.1 Quantitative Data

Between 2015 and 2020 the Bedford Borough 65 years and over population is projected to increase by 3,200 i.e. an increase from 28,500 to 31,700 (POPPI, 2014).

In 2016, approximately 7,766 people aged 65 and over are predicted to have a fall in Bedford Borough rising to 8,160 falls in 2018 (see table 1). Further projections suggest that this will rise to 11,222 falls in 2030. It is important to note that this is the number of people and not the number of falls which is likely to be higher given that approximately half of these people will go on to have multiple falls.

Table 1: People aged 65 and over predicted to have a fall in Bedford Borough

Age	2016	2017	2018
Males 65-69	792	756	720
Males 70-74	660	720	780
Males 75-79	456	456	475
Males 80-84	527	558	589
Males 85 and over	645	688	731
Total Males*	**3,080**	**3,178**	**3,295**
Females 65-69	1,035	1,012	966
Females 70-74	945	1,026	1,080
Females 75-79	729	729	756
Females 80-84	816	816	816
Females 85 and over	1,161	1,204	1,247
Total Females*	**4,686**	**4,787**	**4,865**
Grand Total	**7,766**	**7,965**	**8,160**

Source: www.POPPI.org.uk

***NB** Figures taken from Health Survey for England (2005), volume 2, table 2.1: Prevalence and number of falls in last 12 months, by age and sex and may not sum due to rounding.*

In 2016, the number of people predicted to be admitted as a result of a fall in Bedford Borough is 606, rising to 637 in 2018 (see table 2). Further projections suggest that this will rise to 912 in 2030. The majority of falls do not result in an admission to hospital therefore this data does not reflect the total number of falls or injuries attributed to falls.

Table 2: People in Bedford Borough aged 65 and over predicted to be admitted to hospital as a result of falls

Age	2016	2017	2018
65-69	46	45	43
70-74	63	68	72
75 and over	497	504	523
Total	**606**	**617**	**637**

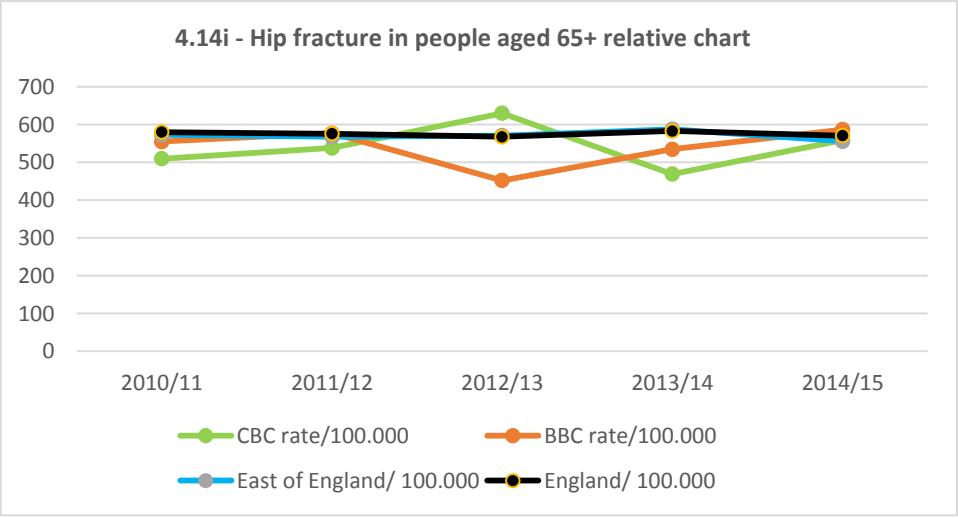
Source: www.POPPI.org.uk

***NB** Figures are based on a study of 647,721 A&E attendances and 204,424 admissions to hospital for fall related injuries in people aged 60 years and over (Scuffham et al, 2003). They may not sum due to rounding.*

Falls data should generally be used with caution. The recording of falls is poor nationally as a result of unreported falls and incomplete recording i.e. the resulting injury may be coded but the fall may not be captured in the medical notes/data.

The 2014/15 data show that for Bedford Borough over the last three years, the trend in the rate of hip fractures in the 65+ population is increasing (see graph 1). There was an increase from 535 hip fractures per 100,000 in 2013/14 to 587 per 100,000 in 2014/15 (local number increasing from 156 to 179).

Graph 1:



Source: Calculated by West Midlands Knowledge and Intelligence Team from data from the Information Centre for Health and Social Care - Hospital Episode Statistics (HES) and Office for National Statistics (ONS) - Mid Year Population Estimates

http://www.phoutcomes.info

Table 3 shows a comparison of injuries due to falls in people aged 65 and over, with regional neighbours in 2014/15.

Table 3:

2.24i - Injuries due to falls in people aged 65 and over (Persons) 2014/15 — Directly standardised rate - per 100,000

Area	Count	Value	95% Lower CI	95% Upper CI
England	211,521	2,125	2,115	2,134
East of England region	23,667	1,956	1,931	1,982
Bedford	620	2,076	1,909	2,253
Cambridgeshire	2,448	2,054	1,971	2,140
Central Bedfordshire	875	2,016	1,881	2,159
Essex	5,860	1,958	1,906	2,011
Hertfordshire	4,493	2,126	2,061	2,191
Luton	498	1,899	1,730	2,080
Norfolk	3,842	1,768	1,710	1,827
Peterborough	665	2,373	2,189	2,569
Southend-on-Sea	975	2,550	2,384	2,724
Suffolk	3,048	1,749	1,685	1,814
Thurrock	343	1,560	1,390	1,743

Source: Calculated by West Midlands Knowledge and Intelligence Team from data from the Information Centre for Health and Social Care - Hospital Episode Statistics (HES) and Office for National Statistics (ONS) - Mid Year Population Estimates

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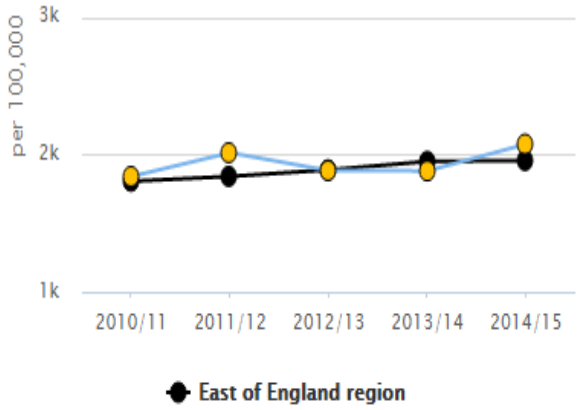
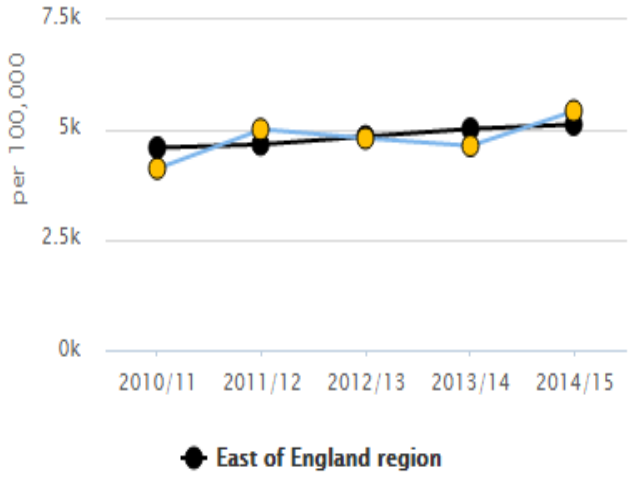
In 2014/15, there were 2,076 injuries due to falls per 100,000 people aged 65 and over[1] (local number: 620 injuries), which is not significantly different to the East of England region average (see graph 2 below). The number of falls related injuries in people aged over 80 increased from 4,614 per 100,000 in 2013/14 to 5,404 per 100,000 in 2014/15 (local number increasing from 359 to 437) (see graph 3).

Graph 2: Injuries due to falls in people aged 65+



Graph 3: Injuries due to falls in people aged 80+



Source: Calculated by West Midlands Knowledge and Intelligence Team from data from the Information Centre for Health and Social Care - Hospital Episode Statistics (HES) and Office for National Statistics (ONS) - Mid Year Population Estimates

http://www.phoutcomes.info

Table 4 shows a comparison of hip fractures in people aged 65 and over, with regional neighbours in 2014/15.

[1] These figures are Directly Standardised Rates, which means that differences in the age structures of the populations are accounted for, and direct comparisons are valid.

Table 4:

4.14i - Hip fractures in people aged 65 and over (Persons) 2014/15 — Directly standardised rate - per 100,000

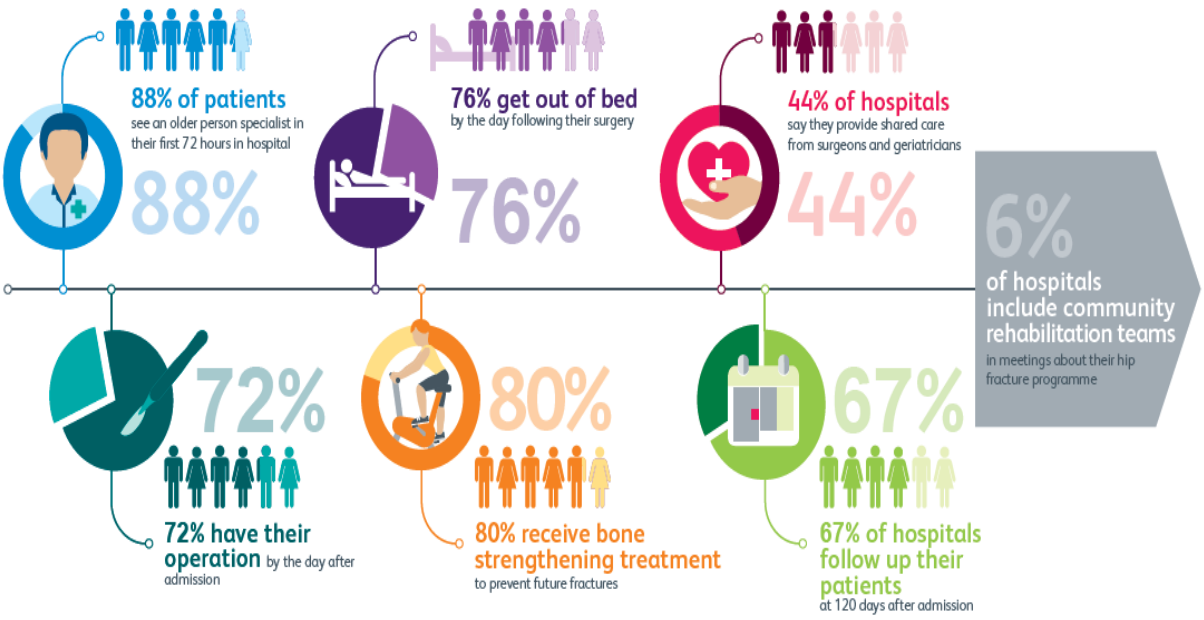
Area	Count	Value	95% Lower CI	95% Upper CI
England	57,712	571	567	576
East of England region	6,810	556	543	570
Bedford	179	587	501	684
Cambridgeshire	635	529	488	574
Central Bedfordshire	249	559	490	635
Essex	1,826	601	572	630
Hertfordshire	1,150	531	499	563
Luton	144	523	439	618
Norfolk	1,174	540	508	573
Peterborough	192	692	594	803
Southend-on-Sea	253	640	559	728
Suffolk	876	502	468	537
Thurrock	132	610	504	730

Source: Hospital Episode Statistics (HES), Health and Social Care Information Centre for the respective financial year, England. Hospital Episode Statistics (HES) Copyright © 2014, Re-used with the permission of The Health and Social Care Information Centre. All rights reserved. Local Authority estimates of resident population, Office for National Statistics (ONS) Unrounded mid-year population estimates produced by ONS and supplied to the Public Health England

http://www.phoutcomes.info

2.2 National Hip Fracture Database

The **UK National Hip Fracture Database** (NHFD) is a clinically led, web-based audit of hip fracture care and secondary prevention, treating patients after their first fragility fracture to prevent them having another. Since its inception in 2007, the NHFD has improved the outcome for patients with hip fracture and all eligible hospitals are regularly uploading data. A hip fracture programme can deliver:-



Source: NHFD Annual Report 2016

3.0 Current Falls Programmes / Services

The multi-agency ***Bedfordshire Falls and Fracture Prevention Steering Group*** drives the falls prevention and osteoporosis agenda in Bedford Borough and Central Bedfordshire.

3.1 Prevention

Interventions that reduce the likelihood of falling, or falls related injury, have the potential to save NHS and social care resources and improve the health of the UK's increasingly elderly population (NICE, 2004).

- ***Falls awareness training*** is offered to all care homes and as at the end of June 2016, over 90% of Bedford Borough care home managers had sent a 'falls champion' to the training.
    a. Quarterly 'Falls Champion' meetings cover a wide range of falls prevention topics and provide an opportunity for staff to network with other carers, share learning, experience and ideas.
    b. Attendance at the meetings is consistently good and some care homes have reported a decrease in the number of falls; it is too early to determine whether this will be sustained or likely to be as a direct result of the training.
    c. Preliminary data indicate that there has also been a reduction in the number of falls-related calls to the ambulance service; it is too early to determine whether this will be sustained, or likely to be as a result of the training.

  The next stage is to extend the training to extra care sheltered housing and relevant day care staff.

- A range of locally developed ***Falls Prevention Leaflets*** are available to download electronically and hard copies are available on request.

3.2 Falls Specific Assessment and Rehabilitation Services

- The Bedford Borough ***1st Response Service*** operates 7 days a week from 08.00 to 20.00. It responds to 999 calls to people that have fallen within their home, including residential care, but are medically stable. The team undertake assessments, provide equipment and ensures the persons' social care needs are met. When required, the team refers clients to specialist services and support.

- The aim of the ***Bedford Borough Falls Service*** is to identify people aged 65 and over who have fallen in the past 12 months and those at high risk of falling, and support them to identify and avoid potential causes of future falls. The service provides older people with the relevant skills and knowledge to minimise future fall risks and to enable them to develop coping strategies should they fall again.

- The ***Bedfordshire and Luton Fire and Rescue Service*** complete a brief falls risk assessment tool to identify individuals at high risk of falling as part of their fire safety check visits; a referral to the Falls Group can then be made accordingly.

3.3 Falls Related Equipment Services

- The ***Community Equipment Service*** is jointly commissioned between Health and Social Care across Bedfordshire and Luton. The service provides a range of equipment to promote safety and independence at home, prevent admission and facilitate discharges from hospital.

- The ***Carelink Community Alarm Service*** provided through Bedfordshire Pilgrims Housing Association, provides a 24 hour, 365 day monitoring service. Community alarm pendants and pull-cords enable people to report that they have fallen, or to report symptoms which may lead to falls if not attended to.

- Bedford Borough Council works in partnership with Aragon Housing Association, who will install and demonstrate ***Telecare*** equipment which supports individuals in their own home 24 hours a day, 365 days a year. Equipment includes a pendant alarm, falls detectors and movement sensors.

3.4 Current and Future Activity

- Bedfordshire Clinical Commissioning Group and Public Health commissioners are currently

working with the National Osteoporosis Society (NOS) to develop a business case(s) for a ***Fracture Liaison Service(s)*** (FLS). A FLS is a multidisciplinary service responsible for the secondary prevention of osteoporotic fractures through fracture case finding. It systematically identifies, treats and refers to appropriate services, all eligible patients who have suffered fragility fractures, with the aim of reducing their risk of subsequent fractures.

- Bedford Borough Council's Sports Development Team is developing a pilot project in partnership with Oomph! to develop care home staff into exercise leaders capable of delivering ***physical activity classes*** for their residents. Even those who take up exercise in later years reap significant benefits from participating in strength and balance exercises.

4.0 Local Views

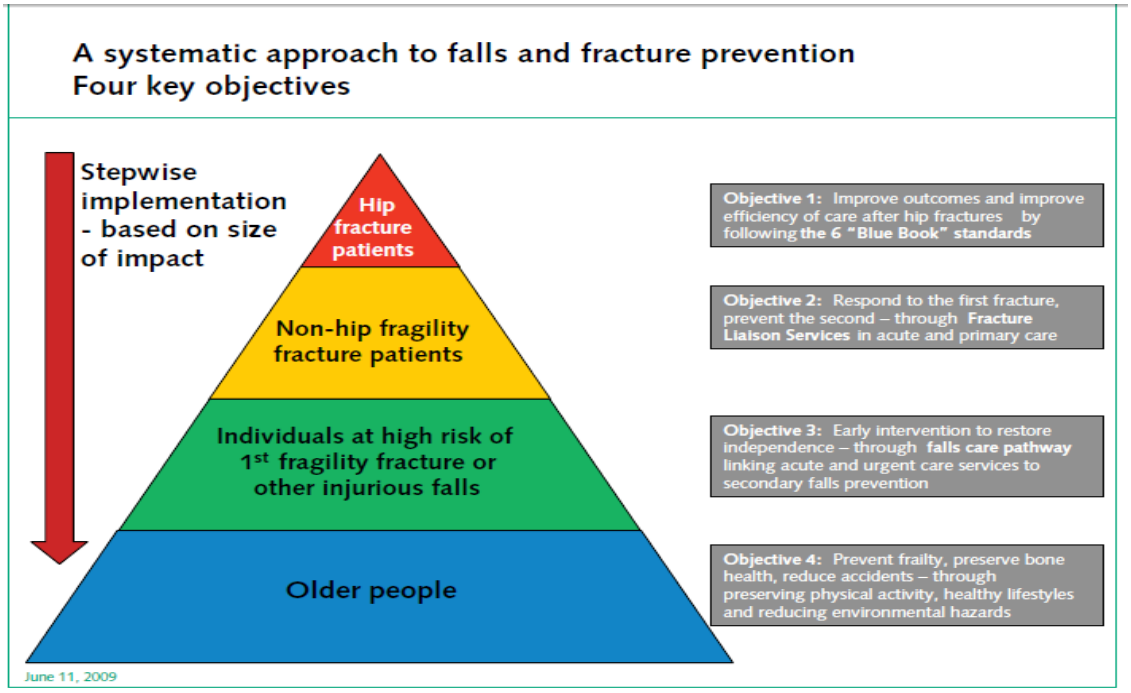
Membership of the multi-agency Bedfordshire Falls and Fracture Prevention Steering Group include members of Healthwatch and the voluntary sector. Service users attending the Bedford Borough Falls Group or/and have accessed the 1st Response Service are asked for feedback to inform future service delivery, and service user feedback will be included in the FLS business case(s).

5.0 Best Practice

Commissioners, working collaboratively across health and social care, should consider the **key areas for intervention** in the context of local services for falls, falls prevention and fractures (see figure 1). The four objectives, which are listed in order of priority, are:

- **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 lifestyles, and reducing unnecessary environmental hazards.
  http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@pg/documents/digitalasset/dh_109122.pdf

Figure 1



Source: DoH Prevention Package, 2009

- The '**Fracture Liaison Services** (FLS) Resource Pack' (2010) provides a summary of all the experience accumulated nationally and internationally http://www.nos.org.uk/document.doc?id=724
  - The Quality Adjusted Life Years (QALY) value for hip fracture patients is set at £50,000.
  - Quality adjusted life expectancy may be 0.7 per hip fracture.
  - Life expectancy quality adjusted for prevented fatality at age 75 years is 9 QALYs.
  - There will be further capacity saving in rehabilitation/NHS community team services and primary care, in addition to a very significant quality of life gain for older people who do not incur a secondary fracture. There is also a positive impact on local authority funded social care services *(DoH, 2009).*

- The World Health Organisation supported Fracture Risk Assessment Tool i.e. **FRAX®**, assesses fracture risk and calculates an individual's 10-year probability of a major osteoporotic fracture www.shef.ac.uk/FRAX

- The most effective and evidence-based component of multifactorial interventions is **community based therapeutic exercise** programmes that are tailored to the needs of the person. However exercise classes that are 'general' in nature, such as chair-based exercises, do improve certain risk factors for falling e.g. muscle weakness, but they do not reduce the actual risk of a fall or fall related injury (DoH, 2009a). Conversely, evidence based **strength and balance exercise** programmes such as Otago and Tai Chi can help prevent 44% of falls and 0.2 fractures per 300,000 population (DoH, 2009a).

  NICE (2004) reported cost effectiveness analyses for **exercise programmes** for at risk individuals living in the community setting and **multifactorial interventions** for at risk individuals living in the community. The incremental cost effectiveness ratios (ICERs)[2] indicate that both interventions are cost effective compared to doing nothing however the results should be interpreted with caution given the large confidence intervals[3] around the ICERs. A study exploring the cost and clinical effectiveness of multifactorial interventions which identified the 'at risk' population are likely to be cost effective compared to conventional thresholds.

  Note: Although clinical and cost effectiveness data exists for falls prevention, there are no UK studies and the quality of reporting in these studies is often patchy, with some costs and benefits reported and not others. Few comparisons can be made between studies due to the differences in methodology (NICE, 2004).

- Healthcare professionals involved in the assessment and prevention of falls should discuss what changes a person is willing to make in order to increase their ***participation*** in falls prevention programmes. Information should be relevant and accessible and programmes should address potential barriers such as low self-efficacy and fear of falling, and encourage activity change as negotiated with the participant.

6.0 Interventions that cannot be recommended to prevent falls:

Intervention	Reason
Brisk walking	• No evidence that it reduces the risk of falling – however there may be other health benefits. • Unsupervised brisk walking programme could increase the risk of falling in postmenopausal women with an upper limb fracture in the previous year.

[2] The **incremental cost-effectiveness ratio (ICER)** is an equation used commonly in health economics to provide a practical approach to decision making regarding health interventions. It is the ratio of the change in costs of a therapeutic intervention (compared to the alternative, such as doing nothing or using the best available alternative treatment) to the change in effects of the intervention.

[3] A **confidence interval** gives an estimated range of values which is likely to include an unknown population parameter. The width of the confidence interval gives an idea about how uncertain the unknown parameter is; the wider the interval, the greater the uncertainty.

Interventions that cannot be recommended due to insufficient evidence:	
Low intensity exercise combined with incontinence programmes	• No evidence that it reduces the incidence of falls in older people in extended care settings.
Untargeted group exercise	• Little evidence that exercise not individually prescribed for older people living in the community are effective in falls prevention – should not be discouraged as a means of health promotion.
Cognitive / behavioural interventions	• No evidence that Cognitive / behavioural interventions alone reduce the incidence of falls in older people living in the community who are of unknown risk status. • No evidence that complex interventions, in which group activities included education, a behaviour modification programme, advice and exercise interventions, are effective in falls prevention with older people living in the community.
Referral for correction of visual impairment	• No evidence that referral for corrective vision as a single intervention for older people living in the community is effective in reducing the number • Vision assessment and referral has been a component of successful multifactorial falls prevention programmes.
Vitamin D	• Emerging evidence that correction of vitamin D deficiency / insufficiency may reduce the propensity for falling, however there is uncertainty about the relative contribution to fracture reduction and the dose and route of administration.
Hip Protectors	• No evidence for the effectiveness of hip protectors to prevent fractures when offered to older people living in extended care settings or in their own homes. • Some evidence that hip protectors are effective with older people living in extended care settings who are considered high risk.

Source: NICE, 2013

7.0 Evidence Summary

- The 2012, **Cochrane Evidence Review** review examined interventions for preventing falls in older people living in the community (Gillespie et al, 2012). It was based on 159 trials with 79,193 participants (see table 5).

Table 5 'Interventions for preventing falls in older people living in the community'

Intervention	Decreased RATE of falls	Decreased RISK of falls
Multi component exercise group	Yes	Yes
Multi component home based exercise	Yes	Yes
Tai Chi (borderline statistical significance)	Yes	Yes
Multifactorial interventions which include individual risk assessments	Yes	No
Vitamin D	No	No
Vitamin D in people with lower vitamin D levels before treatment	Possibly	Possibly
Home safety assessment/modifications –-particularly when delivered by an Occupational Therapist and for those at higher risk	Yes	Yes
Treatment for vision problems	No*	No*
Pacemaker – in people with carotid sinus hypersensitivity	Yes	No

1st eye cataract surgery in women 2nd eye cataract surgery in women	Yes No	Unknown Unknown
Gradual withdrawal of psychotropic medications	Yes	No
Prescribing modification programme for 10 care physicians	Unknown	Yes
Anti-slip shoe devices – in icy conditions	Yes	
Cognitive behavioural interventions	No Evidence	No Evidence
Education alone	No	Unknown

**Risk increased when regular wearers of multifocal glasses were given single lens glasses; falls inside and outside were significantly reduced in those that regularly took part in outside activities however outside falls increased for those that took part in little outside activity.*
http://summaries.cochrane.org/CD007146/interventions-for-preventing-falls-in-older-people-living-in-the-community

- **Screening and early detection** of people at high risk of falling is a key component to an integrated falls service. Many older people who fall do not seek medical help but they may be identified as being at risk through the presence of risk factors (NICE, 2004 & 2013).

- Older people 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 (NICE, 2004 & 2013).

- Healthcare professionals should routinely **ask older people** whether they have fallen in the last year and about frequency, context and characteristics of the fall/s (NICE< 2004 & 2013).

- Individuals at risk of falling, and their carers, should be offered **information** verbally and in writing about what measures they can take to prevent further falls (NICE, 2004 & 2013).

- 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** (NICE, 2004 & 2013).

- **Multifactorial interventions** are the most effective strategy to reduce decline in function and independence and to prevent the associated costs of complications.
    - Older people that 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 (NICE, 2004 & 2013).
    - All older people with recurrent falls or assessed as being at increased risk of falling should be considered for an individualised multifactorial intervention which should include:
        - Strength and balance training
        - Home hazard assessment, follow-up and intervention
        - Vision assessment and referral
        - Medication review and modification/withdrawal
        - Cardiac pacing where indicated.

- Inadequate **recording of falls and related injuries** impacts on the commissioning process. The lack of reliable data makes it difficult to prove that falls and fractures are a local public health problem and as such, may not be seen as a commissioning priority.

8.0 National Guidelines

- The National Hip Fracture Database (NHFD) was launched to improve hip fracture care and secondary prevention http://www.nhfd.co.uk/

- 2011, NICE Technology Appraisal (TA) 160 provides guidance for the primary prevention of

fragility fractures in postmenopausal women. http://guidance.nice.org.uk/TA160

- 2011, NICE TA 161 provides guidance for the secondary prevention of fragility fractures in postmenopausal women. http://guidance.nice.org.uk/TA161
- 2013, NICE clinical guideline (CG) 161,'Falls: assessment and prevention of falls in older people', is for healthcare and other professionals and staff who care for older people who are at risk of falling http://guidance.nice.org.uk/CG161
- 2015, the National Audit of Inpatient Falls (NAIF) audit report aims to improve inpatient falls prevention through audit and quality improvement http://web1.crownaudit.org/Report2016/NHFD2016Report.pdf
- 2015 The NICE quality standard published in March 2015 presents a structured overview of potential quality improvement areas for falls. It provides a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation https://www.nice.org.uk/guidance/qs86
- 2016 (updated) 'Osteoporosis clinical guideline for prevention and treatment' provides guidance on prevention and treatment of osteoporosis. https://www.shef.ac.uk/NOGG/NOGG_Executive_Summary.pdf
- 2016 (updated) 'Falls in Older People' pathway and overview covers the assessment and prevention of falls in older people both in the community and during a hospital stay https://pathways.nice.org.uk/pathways/falls-in-older-people

9.0 Health Inequalities

The risk of falling increases with age however the presence of more than one risk factor further increases the risk of a fall.

Although 35% of people aged 65 years and over living in the community are likely to fall at least once a year, the fall rates among institution residents are much higher. Approximately 50% of older people in residential care facilities fall at least once a year and up to 40% fall more than once a year. People living alone are considered to be at higher risk of falling – part of this appears to be related to certain types of housing older people may occupy (Todd and Skelton, 2004).

For the younger older person, fall rates for men and women are similar, however among the older old, women fall more often than men and are more likely to incur fractures when they fall (Todd and Skelton, 2004).

Evidence suggests Caucasian ethnic groups fall more frequently than Afro-Caribbean's, Hispanics or South Asians however there are no papers reporting ethnicity variations for continental Europe (Todd and Skelton, 2004). Caucasians and Asians tend to be at greater risk of fragile bones than people of other ethnic backgrounds (NOS, 2015).

Some medical conditions increase the risk of falling e.g. circulatory disease, respiratory disease, depression, arthritis and Parkinson's Disease (Todd and Skelton, 2004). The needs of older people with dementia (who are all at increased risk of falling) are complex and need to be taken account of in an integrated falls service. Whilst a falls programme is unlikely to be appropriate for those people in the later stages of dementia, interventions such as medication, footwear, eyesight and lighting should be considered.

10.0 Unmet needs/service gaps

The current burden of falls for the Bedford Borough population is significant in terms of time spent in hospital, financial cost of treatment/support in relation to both health and social care, and patient outcomes.

In the past, local falls prevention services / interventions have tended to be reactive however this has started to be addressed. Examples of this can be seen in the work that is being undertaken with care homes and the development and implementation of the Bedford Borough Falls Group and 1st Response Team.

11.0 Recommendations

The Department of Health estimates that the number of falls in elderly patients could be reduced by 15 - 30% through the use of successful falls prevention strategies.

Recommendation 1:
Statutory and voluntary service providers should work together to develop and implement **falls prevention and fragility fracture care pathways** and initiatives, based on the following objectives:

- **Prevention** – ensuring that population approaches to reducing the occurrence of falls, osteoporosis and fragility fractures are in place and link with work on key health behaviours such as healthy eating, physical activity, sensible drinking and stopping smoking.
- **Identification** – ensuring that older people at higher risk of falls, osteoporosis and fragility fractures are identified in a timely and effective manner.
- **Assessment** – ensuring that people identified as being at higher risk of falls and/or osteoporosis and those that have already fallen and/or fractured, are assessed and referred to appropriate, evidence based specialist services.
- **Treatment** – ensuring that the people assessed as requiring a referral to specialist services have timely and appropriate access to evidence based intervention.

Recommendation 2:
Develop business case(s) for local **Fracture Liaison Service(s)** for consideration in 2017/18 commissioning intentions.

Recommendation 3:
Continue commissioning the ***Bedford Borough Falls Group*** and the **1st Response Service** (subject to outcomes) and extend provision of evidence based **strength and balance exercise** programmes.

Recommendation 4:
Actively **promote messages** to reduce the risk of falls and fractures in later life.

- Ensure that patients, carers and professionals are aware that a fall or fracture in an older person requires further assessment and possible treatment, and not an inevitable part of getting old.
- Public health messages should promote good bone health and healthy lifestyles to reduce falls risk in later life.

Recommendation 5:
Ensure **patient views** are captured.

- Consider using the questionnaire developed by the Royal College of Physicians. http://www.rcplondon.ac.uk/sites/default/files/falls-patient-experience-questionnaire-jan-2010.pdf

This section links to the following sections in the JSNA:
Excess winter deaths

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