



Public Health  
England

Protecting and improving the nation's health

# Falls and fracture consensus statement

## Supporting commissioning for prevention

Produced by Public Health England with the National Falls Prevention Coordination  
Group member organisations

January 2017

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National Falls Prevention Coordination Group member organisations



**NHS England**  
**NHS Improvement**



## About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

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## Purpose

The National Falls Prevention Coordination Group (NFPCG) is made up of organisations involved in the prevention of falls, care for falls-related injuries and the promotion of healthy ageing. It was formed with the aim of coordinating and supporting falls prevention activity in England.

At the first NFPCG meeting in July 2016, it was agreed that the range of different professions and providers carrying out falls and fracture prevention activities, and the different ways of resourcing these, created the need for a consensus on ways to support and encourage 'whole-system' local commissioning. This document outlines interventions and approaches that the group recommends commissioners and strategic leads in local areas consider, and details the activities that NFPCG members have committed to take in order to support effective commissioning and provision.

The intended audience for this document is those local commissioning and strategic leads in England with a remit for falls, bone health and healthy ageing. Following publication, the NFPCG intend to initiate a programme of work to support local commissioning activity which will be underpinned by the commitments outlined in this document.

## Foreword

Evolving to stand upright has conferred a key survival advantage to humans. However, having a relatively high centre of gravity and a narrow base is also something of an Achilles heel if gravity gets the better of us. This is of particular concern as our older population is rapidly increasing in size and older people are especially vulnerable to falling over and its unwanted consequences.

The number of people aged 65 and over is projected to rise by over 40% in the next 17 years to more than 16 million.<sup>1</sup> Thirty percent of people aged 65 and over will fall at least once a year. For those aged 80 and over it is 50%.<sup>2</sup> A fall can lead to pain, distress, loss of confidence and lost independence. In around 5% of cases a fall leads to fracture and hospitalisation.<sup>3</sup> Given this situation, it is not a day too soon that we are publishing a consensus statement on actions and priorities that will encourage and support the commissioning of services which reduce risk of falls and fragility fracture. Effective, planned, evidence based approaches to falls and fracture risk reduction are of key importance to the health and wellbeing of people living in our communities and those that care for them. The routine identification of those most vulnerable to falling will allow us to target those interventions at individuals which confer the best chances of avoiding injury and its potentially catastrophic consequences.

The challenge for us all is to collectively commit to supporting and encouraging effective commissioning and the spreading of good practice so that every older person, whatever their background, wherever they live, is provided with the best opportunity to live and age well without fear of falling and injury.



Professor Martin J Vernon  
National Clinical Director for Older People

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<sup>1</sup> Office for National Statistics. National population projections for the UK, 2014-based [Internet]. 2015 [cited 2017 Jan 5]. Available from: [www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2015-10-29](http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2015-10-29)

<sup>2</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>3</sup> Rubenstein LZ, Powers CM, MacLean CH. Quality indicators for the management and prevention of falls and mobility problems in vulnerable elders. *Ann Intern Med.* [Internet] 2001 Oct 16 [cited 2017 Jan 9];135(8 Pt 2):686–93. Available from: [annals.org/aim/article/714861/quality-indicators-management-prevention-falls-mobility-problems-vulnerable-elders](http://annals.org/aim/article/714861/quality-indicators-management-prevention-falls-mobility-problems-vulnerable-elders)

## Executive summary

In human terms falls and fragility fractures can result in loss of independence, injury and death. In health service terms they are high volume and costly with 255,000 falls-related emergency hospital admissions per year for older people in England and the annual cost of hip fractures to the UK estimated at being around £2 billion.

There are a number of interventions with evidence of cost and clinical effectiveness. However, audit data has repeatedly shown variation in their coverage and provision. Effective commissioning for falls and fracture prevention will reduce demand and improve quality and outcomes. It can be supported and enabled at all stages of the commissioning cycle and by the governance frameworks that oversee and assure this activity. A collaborative and whole system approach to prevention, response and treatment is recommended for local areas. This should:

- promote healthy ageing across the different stages of the life course
- optimise the reach of evidence based case finding and risk assessment
- be able to demonstrate the commissioning of services that provide:
  - i. an appropriate response attending people who have fallen
  - ii. multifactorial risk assessment and timely and evidence based tailored interventions for those at high risk of falls
  - iii. evidence based strength and balance programmes and opportunities for those at low to moderate risk of falls
  - iv. home hazard assessment and improvement programmes
- ensure that local approaches to improve poor or inappropriate housing address falls prevention and promote healthy ageing
- be able to demonstrate actions to reduce risk in high-risk health and residential care environments
- provide fracture liaison services in line with clinical standards including access to effective falls interventions when necessary
- provide evidence based collaborative, interdisciplinary care for falls-related serious injuries supported by clinical audit programmes
- have a strategic lead and governance body with oversight and assurance of falls, bone health and related areas including frailty and multimorbidity

To support and encourage effective commissioning and provision, NFPCG member organisations have committed to increase public and professional awareness; ensure the co-production of services with older people, their families and carers; support the effective use of data and evidence; work with partners to develop and inform quality standards and guidance; inform skills development for patients, their carers, health and care professionals and the wider workforce; disseminate best practice; and inform relevant national policy and strategy.

# 1. Background

Falls and fractures are a common and serious health issue faced by older people in England. The human cost can include distress, pain, injury, loss of confidence, loss of independence and mortality. For health services they are both high volume and costly. In terms of annual activity and cost:

- there are around 255,000 falls-related emergency hospital admissions in England among patients aged 65 and older <sup>4</sup>
- unaddressed falls hazards in the home are estimated to cost the NHS in England £435m <sup>5</sup>
- the total cost of fragility fractures to the UK has been estimated at £4.4bn which includes £1.1bn for social care. Hip fractures account for around £2bn of this sum <sup>6</sup>
- falls in hospitals are the most commonly reported patient safety incident with more than 240,000 reported in acute hospitals and mental health trusts in England and Wales <sup>7</sup>

There are a number of interventions that can prevent some falls and fractures, resulting in improved health outcomes and independence for older people, and savings to health and care services. However, audits have consistently shown variation in their quality and coverage.<sup>8 9 10</sup> Effective and integrated commissioning of these interventions will reduce demand by shifting the focus towards prevention, reduce variation in the quality, safety and outcomes of care and improve efficiency.

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<sup>4</sup> Public Health England. Public Health Outcomes Framework [Internet]. 2016 [cited 2016 Nov 24]. Available from: [www.phoutcomes.info/search/falls](http://www.phoutcomes.info/search/falls)

<sup>5</sup> Nicol S, Roys M, Garrett H, BRE. The cost of poor housing to the NHS [Internet]. BRE Trust; 2016 [cited 2016 Nov 25]. Available from: [www.bre.co.uk/filelibrary/pdf/87741-Cost-of-Poor-Housing-Briefing-Paper-v3.pdf](http://www.bre.co.uk/filelibrary/pdf/87741-Cost-of-Poor-Housing-Briefing-Paper-v3.pdf)

<sup>6</sup> Svedbom A, Helmlund E, Ivergård M, Compston J, Cooper C, Stenmark J, McCloskey EV, et al. Osteoporosis in the European Union: a compendium of country specific reports. Arch Osteoporos [Internet]. 2013 [cited 2016 Nov 24];8(1–2). Available from: [www.ncbi.nlm.nih.gov/pmc/articles/PMC3880492/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3880492/)

<sup>7</sup> Royal College of Physicians. National audit of inpatient falls report 2015 [Internet]. 2015 [cited 2016 Nov 25]. Available from: [www.rcplondon.ac.uk/projects/outputs/naif-audit-report-2015](http://www.rcplondon.ac.uk/projects/outputs/naif-audit-report-2015)

<sup>8</sup> Royal College of Physicians. National audit of inpatient falls report 2015 [Internet]. 2015 [cited 2016 Nov 25]. Available from: [www.rcplondon.ac.uk/projects/outputs/naif-audit-report-2015](http://www.rcplondon.ac.uk/projects/outputs/naif-audit-report-2015)

<sup>9</sup> Royal College of Physicians. Falling standards, broken promises: report of the national audit of falls and bone health [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.rcplondon.ac.uk/projects/outputs/falling-standards-broken-promises-report-national-audit-falls-and-bone-health](http://www.rcplondon.ac.uk/projects/outputs/falling-standards-broken-promises-report-national-audit-falls-and-bone-health)

<sup>10</sup> Royal College of Physicians. Fracture Liaison Service Database (FLS-DB) facilities audit FLS breakpoint: opportunities for improving patient care following a fragility fracture [Internet]. 2016 [cited 2016 Nov 25]. Available from: [www.rcplondon.ac.uk/projects/outputs/fls-db-facilities-audit-fls-breakpoint-opportunities-improving-patient-care](http://www.rcplondon.ac.uk/projects/outputs/fls-db-facilities-audit-fls-breakpoint-opportunities-improving-patient-care)

## Headline message

National Falls Prevention Coordination Group member organisations commit to working in collaboration with national and local partners to promote healthy ageing for all through the collective and targeted use of our resources, skills and knowledge to:

- reduce falls and fracture risk across the life course and patient pathway
- improve treatment including secondary prevention for those older people who have suffered injury following a fall

## 2. Context

Around a third of all people aged 65 and over fall each year, increasing to half of those aged 80 and over.<sup>11</sup> Amongst older people living in the community, 5% of those who fall in a given year will suffer from fractures and hospitalisation.<sup>12</sup> One in two women and one in five men in the UK will experience a fracture after the age of 50.<sup>13</sup> Falls impact on mental as well as physical health.<sup>14</sup> There is increased prevalence of fear of falling amongst both older individuals who have fallen and those that have not. This can result in activity avoidance, social isolation and increasing frailty.

There are a large number of falls and fracture risk factors.<sup>15 16 17</sup> Significant risk factors for falls include: a history of falls, muscle weakness, poor balance, visual impairment, polypharmacy and the use of psychotropic and anti-arrhythmic medicines, environmental hazards and a number of specific conditions. These include arthritis, cognitive impairment, depression, diabetes, high alcohol consumption, incontinence, Parkinson's disease, stroke and syncope. Major risk factors for fragility fractures include low bone mineral density, previous fracture, age, female sex, history of falls, glucocorticoids, rheumatoid arthritis, smoking, high alcohol consumption, low BMI and visual impairment.

As the majority - around two thirds - of people aged 65 and over suffer from two or more long term conditions (multimorbidity), falls and fractures should not be viewed in isolation, but as particular events and injuries which have an adverse effect on an older person's overall health and wellbeing.<sup>18</sup> Falls can also be a sign of underlying health issues such as frailty.<sup>19</sup>

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<sup>11</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>12</sup> Rubenstein LZ, Powers CM, MacLean CH. Quality indicators for the management and prevention of falls and mobility problems in vulnerable elders. *Ann Intern Med*. 2001 Oct 16;135(8 Pt 2):686–93

<sup>13</sup> National Osteoporosis Society. Effective secondary prevention of fragility fractures: clinical standards for fracture liaison services. National Osteoporosis Society; 2015

<sup>14</sup> Parry SW, Bamford C, Deary V, Finch TL, Gray J, MacDonald C, et al. Cognitive-behavioural therapy-based intervention to reduce fear of falling in older people: therapy development and randomised controlled trial - the Strategies for Increasing Independence, Confidence and Energy (STRIDE) study. *Health Technol Assess Winch Engl*. 2016 Jul;20(56):1–206

<sup>15</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>16</sup> NICE. Osteoporosis: assessing the risk of fragility fracture | Guidance and guidelines | NICE [Internet]. 2012 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg146](http://www.nice.org.uk/guidance/cg146)

<sup>17</sup> The College of Optometrists. The importance of vision in preventing falls. 2011

<sup>18</sup> Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*. 2012 Jul 7;380(9836):37–4

<sup>19</sup> British Geriatrics Society. Fit for Frailty - Developing, commissioning and managing services for people living with frailty in community settings - a report from the British Geriatrics Society and the Royal College of General Practitioners. 2015

Older people often view the problem of falls as happening to those older and in poorer health than themselves. Many dislike the word 'falls', preferring concepts such as 'staying steady' or 'remaining active'.<sup>20</sup> It is important that preventative activity is carried out in a way that is meaningful to and appropriate for the people that it is targeted at. There is also a need for greater general awareness of falls as a public health issue and that falls are not an inevitable aspect of older age.<sup>21</sup>

Ultimately, the key goals of healthy ageing, where older people are supported to remain mobile, have their needs met, continue to learn, develop and maintain relationships and contribute to society, are deliverable at least in part through proactive falls and fracture prevention.<sup>22</sup>

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<sup>20</sup> Age UK. Don't mention the F-Word: advice to practitioners on communicating messages to older people [Internet]; 2012 [cited 2016 Nov 25]. Available from: [www.ageuk.org.uk/professional-resources-home/services-and-practice/health-and-wellbeing/falls-prevention-resources/](http://www.ageuk.org.uk/professional-resources-home/services-and-practice/health-and-wellbeing/falls-prevention-resources/)

<sup>21</sup> The ProFouND, EUFF, EIP-AHA AG2, E-NO FALLS working group. Silver Paper on Falls prevention in Older Age Executive Summary [Internet]. 2016 (cited 2017 Jan 5). Available from: [profound.eu.com/wp-content/uploads/2016/12/Silver-Paper-Executive-Summary-Final.pdf](http://profound.eu.com/wp-content/uploads/2016/12/Silver-Paper-Executive-Summary-Final.pdf)

<sup>22</sup> World report on ageing and health [Internet]. World Health Organisation; 2015 [cited 2016 Nov 24]. Available from: [www.who.int/ageing/events/world-report-2015-launch/en/](http://www.who.int/ageing/events/world-report-2015-launch/en/)

## 3. Key interventions

Interventions should form part of a whole system approach taking place right across the patient pathway, from population risk factor reduction to complex care for severe injuries. The large at-risk population gives rise to a number of challenges for commissioners and providers. These include:

- ensuring that those at risk are identified
- that they are risk assessed and appropriately referred
- that following referral, an intervention of the necessary quality is delivered that reduces risk
- that risk reduction is maintained

Additional information on key interventions can be found in the technical annexe that will be accompanying this document.

### 3.1 Risk factor reduction

Consistent and effective public, private and voluntary sector collaboration and action to reduce exposure to risk factors needs to take place at the different stages of the life course.<sup>23</sup> Increasing awareness of falls as a public health issue, and that falls do not need to be an inevitable aspect of ageing, is an important part of this.<sup>24</sup> Healthy lifestyles promotion targeting people aged 40 and over should take place with the aim of preventing or delaying the onset of ill health amongst older people.<sup>25</sup> Two key health-related behaviours for healthy ageing are maintaining adequate nutrition and physical activity across all domains – aerobic, strength and balance.<sup>26</sup>

The Chief Medical Officers recommend adults aged 65 and older should aim to be active daily and should aim for at least 150 minutes of moderate (or 75 minutes of vigorous activity) per week in bouts of 10 minutes or more, although any activity is better than none.<sup>27</sup> Activities that improve muscle strength, and balance and

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<sup>23</sup> Blain H, Masud T, Dargent-Molina P, Martin FC, Rosendahl E, van der Velde N, et al. A Comprehensive Fracture Prevention Strategy in Older Adults: The European Union Geriatric Medicine Society (EUGMS) Statement. *J Nutr Health Aging*. 2016;20(6):647–52

<sup>24</sup> The ProFouND, EUFF, EIP-AHA AG2, E-NO FALLS working group. Silver Paper on Falls prevention in Older Age Executive Summary [Internet]. 2016 [cited 2017 Jan 5]. Available from: [profound.eu.com/wp-content/uploads/2016/12/Silver-Paper-Executive-Summary-Final.pdf](http://profound.eu.com/wp-content/uploads/2016/12/Silver-Paper-Executive-Summary-Final.pdf)

<sup>25</sup> NICE. Midlife approaches to preventing the onset of disability, dementia and frailty | Guidance and guidelines | NICE [Internet]. 2016 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/ng16](http://www.nice.org.uk/guidance/ng16)

<sup>26</sup> World report on ageing and health [Internet]. World Health Organization; 2015 [cited 2016 Nov 24]. Available from: [www.who.int/ageing/events/world-report-2015-launch/en/](http://www.who.int/ageing/events/world-report-2015-launch/en/)

<sup>27</sup> DH/Physical Activity Team. Start Active, Stay Active: a report on physical activity for health from the four home countries' Chief Medical Officers. 2011

coordination should be undertaken on at least two days per week and extended sedentary periods should be minimised. Other modifiable risk factors are high alcohol consumption (falls and bone health) and smoking (bone health).

### 3.2 Case finding

It is recommended that the assessment of fracture risk is considered in all women aged 65 and over, all men aged 70, and for men and women younger than this in the presence of risk factors.<sup>28</sup> Fracture liaison services (see section 3.7) aim to identify all patients aged 50 and over with a fragility fracture.

Older people coming into contact with professionals and organisations which have health and care as part of their remit should be asked routinely about falls.<sup>29</sup> Older people reporting a fall or at risk of falling should be observed for balance and gait deficits and considered for risk assessment and risk reduction interventions.

Relevant professional groups include: primary, community and secondary care clinicians; allied health professionals; emergency ambulance crews; social workers; employees of voluntary and community sector organisations working with older people; and members of the Fire and Rescue Service (FRS). The development of workforce competencies and training may be necessary for a wide range of health and other professions.

The large number of primary care consultations carried out with older people, including in care homes and at home, provide a significant opportunity for case finding.<sup>30</sup> A significant number of patients that fall may not be subsequently transported to hospital or present to primary care. Local areas should consider what systems exist to ensure that services are alerted to a fall taking place and are able to respond effectively. This can involve the ambulance service, but also telecare and non-ambulance rapid

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<sup>28</sup> NICE. Osteoporosis: assessing the risk of fragility fracture | Guidance and guidelines | NICE [Internet]. 2012 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg146](http://www.nice.org.uk/guidance/cg146)

<sup>29</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>30</sup> Mortimer J, Green M. Briefing: the health and care of older people in the England 2015 [Internet]. 2016 [Cited 2017 Jan 4]. Available from: [www.ageuk.org.uk/Documents/EN-GB/For-professionals/Research/Briefing-The\\_Health\\_and\\_Care\\_of\\_Older\\_People\\_in\\_England-2015-UPDATED\\_JAN2016.pdf?dtrk=true](http://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Research/Briefing-The_Health_and_Care_of_Older_People_in_England-2015-UPDATED_JAN2016.pdf?dtrk=true)

response teams.<sup>31 32</sup> All patients aged 65 and older admitted to hospital should be regarded as at risk of falling.<sup>33</sup>

An evaluation of local FRS's delivering home visits to older people that focused on a range health and wellbeing issues, including falls, found that 22% of visits (n=1378) resulted in a referral for a falls risk assessment.<sup>34</sup>

### 3.3 Risk assessment

For people identified via case finding that are potentially at high risk of falls or fractures, evidence based and comprehensive risk assessment should be carried out by a trained healthcare professional.<sup>35 36</sup> This should be followed by appropriate interventions. In the case of falls these may include strength and balance exercise programmes (see section 3.4), home hazard assessment and intervention (see section 3.5), vision assessment and referral, and medication review with modification/withdrawal of medicines. For fractures, this could include the prescribing of bone strengthening medicines or referral for interventions to reduce falls' risk (see section 3.7 on fracture liaison services).

A Cochrane Collaboration systematic review found that risk assessment followed by appropriate interventions for falls prevention (also known as a multifactorial intervention) reduced the rate of falls by 24%.<sup>37</sup>

### 3.4 Strength and balance exercise programmes

The optimum approach for the majority of older people living in the community with a low to moderate risk of falls should include strength and balance exercise

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<sup>31</sup> Age UK. Adapting your home: services and equipment to help you staying at home [Internet]; 2016 [cited 2017 Jan 4]. Available from: [www.ageuk.org.uk/Documents/EN-GB/Information-guides/AgeUKIG17\\_Adapting\\_your\\_home\\_inf.pdf?dtrk=true](http://www.ageuk.org.uk/Documents/EN-GB/Information-guides/AgeUKIG17_Adapting_your_home_inf.pdf?dtrk=true)

<sup>32</sup> Logan PA, Coupland CAC, Gladman JRF, Sahota O, Stoner-Hobbs V, Robertson K, et al. Community falls prevention for people who call an emergency ambulance after a fall: randomised controlled trial. *BMJ* [Internet]. 2010 [Cited 2017 Jan 4]; 340: c2102. Available from: [www.bmj.com/content/340/bmj.c2102](http://www.bmj.com/content/340/bmj.c2102)

<sup>33</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2017 Jan 4]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>34</sup> Public Health England. Evaluation of the impact of Fire and Rescue Service interventions to reduce the risk of harm to vulnerable groups of people from winter-related illnesses. Public Health England [Internet]. 2016 [cited 2016 Nov 24]. Available from: [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/573558/FRS\\_winter\\_pressures\\_evaluation.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/573558/FRS_winter_pressures_evaluation.pdf)

<sup>35</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>36</sup> NICE. Osteoporosis: assessing the risk of fragility fracture | Guidance and guidelines | NICE [Internet]. 2012 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg146](http://www.nice.org.uk/guidance/cg146)

<sup>37</sup> Gillespie LD, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, et al. Interventions for preventing falls in older people living in the community. In: *Cochrane Database of Systematic Reviews* [Internet]. John Wiley & Sons, Ltd; 2012 [cited 2016 Nov 24]. Available from: [onlinelibrary.wiley.com/doi/10.1002/14651858.CD007146.pub3/abstract](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007146.pub3/abstract)

programmes.<sup>38 39</sup> These programmes have been shown to be effective for both primary and secondary prevention of falls and non-vertebral fractures in older people, but with greater efficacy in those who have a history of recurrent falls or who have a balance or gait deficit.

To be effective, programmes should comprise a minimum of 50 hours or more delivered for at least two hours per week.<sup>40 41</sup> They should involve highly challenging balance training and progressive strength training. While there is evidence that walking has numerous health benefits for older people in general, it should not be included in programmes for participants considered at high risk of falling as this may result in further falls. At the end of the programme, older people should be assessed and offered a range of follow-on classes. These should suit their needs and abilities, include strength and balance, and support their progression.

A Cochrane Collaboration systematic review found that group exercise reduced the rate of falls by 29% and the risk of falling by 15%.<sup>42</sup> Home-based exercise reduced the rate of falls by 32% and the risk of falls by 22%. One trial included in the review indicated that home based exercise was cost saving for those aged 80 and older.

### 3.5 Healthy homes

Assessing risks in the home environment can be carried out by housing practitioners or occupational therapists. The Building Research Establishment recommends mitigating falls-related environmental hazards through home adaptations such as installing handrails on unsafe stairs.<sup>43</sup> This can be carried out by home improvement and handyman services. NICE recommends that older people who have received treatment in hospital following a fall should be offered a home hazard assessment

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<sup>38</sup> Blain H, Masud T, Dargent-Molina P, Martin FC, Rosendahl E, van der Velde N, et al. A Comprehensive Fracture Prevention Strategy in Older Adults: The European Union Geriatric Medicine Society (EUGMS) Statement. *J Nutr Health Aging*. 2016;20(6):647–52.

<sup>39</sup> The ProFouND, EUFF, EIP-AHA AG2, E-NO FALLS working group. Silver Paper on Falls prevention in Older Age Executive Summary [Internet]. 2016 (cited 2017 Jan 5). Available from: [profound.eu.com/wp-content/uploads/2016/12/Silver-Paper-Executive-Summary-Final.pdf](http://profound.eu.com/wp-content/uploads/2016/12/Silver-Paper-Executive-Summary-Final.pdf).

<sup>40</sup> Sherrington C, Tiedemann A, Fairhall N, Close JCT, Lord SR. Exercise to prevent falls in older adults: an updated meta-analysis and best practice recommendations. *New South Wales Public Health Bull* [Internet]. 2011 Jun [cited 2016 Nov 24]; 22(3–4):78–83. Available from: [www.phrp.com.au/issues/volume-22-issue-3-4/exercise-to-prevent-falls-in-older-adults-an-updated-meta-analysis-and-best-practice-recommendations/](http://www.phrp.com.au/issues/volume-22-issue-3-4/exercise-to-prevent-falls-in-older-adults-an-updated-meta-analysis-and-best-practice-recommendations/)

<sup>41</sup> Charters A, Age UK. Falls Prevention Exercise – following the evidence [Internet]. Age UK; 2013 [cited 2016 Nov 25]. Available from: [www.bhfactive.org.uk/userfiles/Documents/FallsPreventionGuide2013.pdf](http://www.bhfactive.org.uk/userfiles/Documents/FallsPreventionGuide2013.pdf)

<sup>42</sup> Gillespie LD, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, et al. Interventions for preventing falls in older people living in the community. In: *Cochrane Database of Systematic Reviews* [Internet]. John Wiley & Sons, Ltd; 2012 [cited 2016 Nov 24]. Available from: [onlinelibrary.wiley.com/doi/10.1002/14651858.CD007146.pub3/abstract](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007146.pub3/abstract)

<sup>43</sup> Nicol S, Roys M, Garrett H, BRE. The cost of poor housing to the NHS [Internet]. BRE Trust; 2016 [cited 2016 Nov 25]. Available from: [www.bre.co.uk/filelibrary/pdf/87741-Cost-of-Poor-Housing-Briefing-Paper-v3.pdf](http://www.bre.co.uk/filelibrary/pdf/87741-Cost-of-Poor-Housing-Briefing-Paper-v3.pdf)

carried out by a suitably trained healthcare professional, such as an occupational therapist, followed by necessary safety interventions/modifications.<sup>44</sup>

A Cochrane Collaboration systematic review found that home hazard assessment and modification carried out by occupational therapists reduced the rate of falls by 19% and the risk of falling by 12%.<sup>45</sup> One trial included in the review indicated the intervention was cost saving in patients who have had a previous fall.

### 3.6 High-risk care environments

High-risk care environments include hospitals, mental health and learning disability units and care and nursing homes. Around a quarter of patients with hip fractures are admitted to hospital from care settings.<sup>46</sup> While there are no single or easily defined interventions which, when done on their own, are shown to reduce falls in these environments, there is evidence that multiple interventions performed by a multi-disciplinary team and tailored to the individual patient can reduce falls by 20 to 30%.<sup>47 48</sup> <sup>49</sup> These interventions are particularly important for patients with dementia or delirium who are at high risk of falls in hospitals.

### 3.7 Fracture liaison services

Patients presenting with a fragility fracture, related or unrelated to a fall, should be assessed for osteoporosis and receive effective management to improve their bone health and reduce their risk of future fractures.<sup>50</sup> Fracture liaison services are usually hospital-based services in which a co-ordinator identifies patients aged 50 and over with a first fracture, carries out risk assessments, initiates evidence based interventions for

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<sup>44</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>45</sup> Gillespie LD, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, et al. Interventions for preventing falls in older people living in the community. In: Cochrane Database of Systematic Reviews [Internet]. John Wiley & Sons, Ltd; 2012 [cited 2016 Nov 24]. Available from:

[onlinelibrary.wiley.com/doi/10.1002/14651858.CD007146.pub3/abstract](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007146.pub3/abstract)

<sup>46</sup> NICE. The management of hip fracture in adults | Guidance and guidelines | NICE [Internet]. 2011 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg124](http://www.nice.org.uk/guidance/cg124)

<sup>47</sup> Royal College of Physicians. National audit of inpatient falls report 2015 [Internet]. 2015 [cited 2016 Nov 25]. Available from: [www.rcplondon.ac.uk/projects/outputs/naif-audit-report-2015](http://www.rcplondon.ac.uk/projects/outputs/naif-audit-report-2015)

<sup>48</sup> Royal College of Physicians. Falling standards, broken promises: report of the national audit of falls and bone health [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.rcplondon.ac.uk/projects/outputs/falling-standards-broken-promises-report-national-audit-falls-and-bone-health](http://www.rcplondon.ac.uk/projects/outputs/falling-standards-broken-promises-report-national-audit-falls-and-bone-health)

<sup>49</sup> NICE. Falls in older people: assessing risk and prevention | Guidance and guidelines | NICE [Internet]. 2013 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg161](http://www.nice.org.uk/guidance/cg161)

<sup>50</sup> National Osteoporosis Society. Effective secondary prevention of fragility fractures: clinical standards for fracture liaison services. National Osteoporosis Society; 2015

bone health and falls prevention, and monitors adherence and any recurrent events.<sup>51 52</sup> Treatment includes prescribing bone strengthening medicines. Patients should be referred to falls risk assessment and prevention services where appropriate.

An evaluation of fracture liaison services showed a reduction of hip fracture rates by 2.26%, vertebral fracture rates by 0.75% and other fracture rates (inpatient and outpatient) by 1.13%.<sup>53</sup>

### 3.8 Collaborative care for severe injury

A significant number of falls result in severe injury. The acute care of these patients requires a collaborative interdisciplinary approach. The evidence for this is strongest for hip fractures.<sup>54</sup> Care should involve orthopaedic doctors and nurses, geriatricians and allied health professionals within a hospital, but also liaison and integration with related services, particularly specialist falls prevention and bone health services, mental health, primary care and social services. For hip fractures, this has been supported by the National Hip Fracture Database clinical audit programme. Recovery, including mobility function, is dependent on intermediate care rehabilitation services.<sup>55</sup>

30 day mortality fell by 7.6% per year in the four years after the introduction of the National Hip Fracture Database compared to a 1.8% per year decrease in the four years preceding its introduction.<sup>56</sup>

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<sup>51</sup> NICE. Osteoporosis: assessing the risk of fragility fracture | Guidance and guidelines | NICE [Internet]. 2012 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg146](http://www.nice.org.uk/guidance/cg146)

<sup>52</sup> Blain H, Masud T, Dargent-Molina P, Martin FC, Rosendahl E, van der Velde N, et al. A Comprehensive Fracture Prevention Strategy in Older Adults: The European Union Geriatric Medicine Society (EUGMS) Statement. *J Nutr Health Aging*. 2016;20(6):647–52

<sup>53</sup> DH/SC, LG & CP directorate/Older People and Dementia. Fracture prevention services an economic evaluation [Internet]. 2009 [cited 2016 Nov 25]. Available from: [www.cawt.com/Site/11/Documents/Publications/Population%20Health/Economics%20of%20Health%20Improvement/fractures.pdf](http://www.cawt.com/Site/11/Documents/Publications/Population%20Health/Economics%20of%20Health%20Improvement/fractures.pdf)

<sup>54</sup> NICE. The management of hip fracture in adults | Guidance and guidelines | NICE [Internet]. 2011 [cited 2016 Nov 25]. Available from: [www.nice.org.uk/guidance/cg124](http://www.nice.org.uk/guidance/cg124)

<sup>55</sup> NHS Benchmarking Network. National Audit of Intermediate Care [Internet]. 2015 [cited 2016 Nov 25]. Available from: [www.nhsbenchmarking.nhs.uk/index.php](http://www.nhsbenchmarking.nhs.uk/index.php)

<sup>56</sup> Neuburger J, Currie C, Wakeman R, Tsang C, Plant F, De Stavola B, Cromwell DA, van der Meulen J. The impact of a national clinician-led audit initiative on care and mortality after hip fracture in England: an external evaluation using time trends in non-audit data. *Med Care* [Internet]. 2015 Aug [cited 2016 Nov 25];53(8):686-91. Available from: [europepmc.org/articles/PMC4501693](http://europepmc.org/articles/PMC4501693)

## 4. Commissioning services

Commissioning for falls and fracture prevention is complex. It involves working across the health, social care and housing sectors. It can be commissioned by local authorities and clinical commissioning groups, but is also resourced as part of private and voluntary and community sector activity. It is likely that patients and service users will be under the care of different professional groups and that they will be referred from one service to another. However, falls and fracture prevention can be supported and enabled at all stages of the commissioning cycle - assessing needs, designing services, sourcing providers, delivering to service users, monitoring and evaluation, and in the governance frameworks that oversee and assure this activity.

### 4.1 Assessing needs

Decisions on the volume and mix of service activity should be underpinned by a robust assessment of local falls and bone health need, such as a Joint Strategic Needs Assessment chapter. This should involve engagement with older people and their carers.

### 4.2 Designing services

**Responding to falls:** Local areas are recommended to agree systems and services for responding promptly to a fall, which help the person who has fallen to get up from the floor where appropriate, and ensure assessment and onward referral to avoid hospital attendance and admission if possible.

**Falls prevention service options:** These include specialist falls services or services that include a component of falls prevention such as frailty services/pathways. A specialist falls service might involve a single point of access for referrals, multifactorial interventions, and strength and balance exercise programmes. It is important to note that services focussing solely on frailty will not necessarily target older people with low to moderate falls risk.

**Embedding prevention:** Falls and fracture prevention can be embedded in non-specialist services either contractually or via locally agreed ways of working where this is not possible. This should include those services for people with conditions that increase the risk of falls. Embedded prevention covers case finding, developing workforce competencies in areas such as motivational interviewing and making every contact count, the delivery of brief interventions promoting physical activity, and incorporating strength and balance training into physical activity services. Services that reduce exposure to relevant risk factors such as smoking cessation, alcohol, and

dietetic services should be acknowledged as improving bone health and reducing falls risk.

**Improving quality:** Service specifications and service level agreements should be developed or revised to ensure that services are in line with quality standards. For example, all strength and balance programmes should take place for two or more hours per week for a total of 50 hours or more, involve highly challenging balance training and progressive strength training.<sup>57 58</sup>

### 4.3 Sourcing providers

**Joint commissioning:** Given that the benefits of falls and fracture prevention are realised across organisations, commissioners are encouraged to work closely together and to ensure that contractual mechanisms support integrated working between health, social care and housing providers.

**Block contracts:** Some community and hospital based services (for example fracture liaison services) will be commissioned as part of a block contract. This will make it necessary to require the reporting of specific indicators as part of the contract.

### 4.4 Delivering to service users

While details of specific interventions are given in the previous section, it is worth noting some of the general issues relating to the delivery of services for older people. These should be tailored to a patient or service user's needs and circumstances, taking into account co-existing conditions, personal goals, values and priorities. Service accessibility, including mobility and transport needs, should be considered. The involvement of partners, family members and carers should be clarified with the patient or service user. Also, the wider benefits of interventions should be recognised, such as the opportunity for social interaction which is often valued by older people.

### 4.5 Monitoring and evaluation

**Evaluation frameworks:** These need to be developed early on and to include: overall system aim, objectives, associated outcomes, outcome criteria, costs, data sources, comparators and performance targets/ambitions.

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<sup>57</sup> Sherrington C, Tiedemann A, Fairhall N, Close JCT, Lord SR. Exercise to prevent falls in older adults: an updated meta-analysis and best practice recommendations. *New South Wales Public Health Bull* [Internet]. 2011 Jun [cited 2016 Nov 24]; 22(3–4):78–83. Available from: [www.phrp.com.au/issues/volume-22-issue-3-4/exercise-to-prevent-falls-in-older-adults-an-updated-meta-analysis-and-best-practice-recommendations/](http://www.phrp.com.au/issues/volume-22-issue-3-4/exercise-to-prevent-falls-in-older-adults-an-updated-meta-analysis-and-best-practice-recommendations/)

<sup>58</sup> Charters A, Age UK. Falls Prevention Exercise – following the evidence [Internet]. Age UK; 2013 [cited 2016 Nov 25]. Available from: [www.bhfactive.org.uk/userfiles/Documents/FallsPreventionGuide2013.pdf](http://www.bhfactive.org.uk/userfiles/Documents/FallsPreventionGuide2013.pdf)

**Data:** Robust and meaningful data is necessary for the planning, monitoring, evaluating and resourcing of services. Data sources include:

- the systematic use of structured experience and outcome feedback from older people and their carers and families to ensure that services are meeting their needs
- electronic patient records which allow primary care providers to identify patients at risk of fracture using risk assessment tools such as fracture risk assessment tool (FRAX) or QFracture, or living with frailty and at risk of falls and fracture using the electronic frailty index tool, as well as numbers receiving appropriate treatment such as bone strengthening medicines
- clinical audits such as the National Hip Fracture Database which has driven improvement in quality and outcomes such as 30 day mortality rates <sup>59</sup>

Data can be collected nationally for local use, but there are many meaningful local indicators. Examples include: data on cases identified by profession; number of falls ambulance call outs; the number of risk assessments carried out by referral source; the number of referrals for interventions such as strength and balance exercise programmes by referral source and the actual delivery or completion of interventions; the number and percentage of patients adherent to bone strengthening medicines prescribed by general practitioners or fracture liaison services; numbers of falls in hospital and other care settings; individual mobility, fear of falling and falls rates pre- and post-intervention. Outcome data should be collected where possible.

## 4.6 Governance

There is a need for assurance and oversight of falls and fracture prevention systems including related areas such as multimorbidity and frailty. Health and Wellbeing Boards are the appropriate local governance body for signing off and monitoring relevant local strategies and action plans, but local partnership groups may need to take responsibility for more granular performance monitoring. It is recommended that there is a named strategic or commissioning lead for falls and bone health.

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<sup>59</sup> Neuburger J, Currie C, Wakeman R, Tsang C, Plant F, De Stavola B, Cromwell DA, van der Meulen J. The impact of a national clinician-led audit initiative on care and mortality after hip fracture in England: an external evaluation using time trends in non-audit data. *Med Care* [Internet]. 2015 Aug [cited 2016 Nov 25];53(8):686-91. Available from: [europepmc.org/articles/PMC4501693](http://europepmc.org/articles/PMC4501693)

## 5. Next steps: our commitment

Falls and fractures are a serious and costly health issue. We hope that this statement has suggested a number of approaches that will reduce their burden. To support and encourage effective commissioning, member organisations of the NFPCG have committed to a number of activities. These are:

- increasing public and professional awareness of falls and fractures as an issue within the context of older people's health, including evidence based preventative interventions
- ensuring that the development and delivery of services is co-produced in partnership with older people, and their carers and families
- supporting the collection and dissemination of meaningful data, information and intelligence
- supporting the dissemination of findings from research, audit and needs assessment to inform commissioning and provision
- working with partners to develop and inform quality standards and guidance for practice
- informing skills development for patients, their carers, health and care professionals and the wider workforce
- disseminating and facilitating learning from best practice
- informing relevant national policy and strategy in order to support and enable commissioning and provision
- reviewing our activity in the above areas on a regular basis to ensure that we are meeting these commitments

We welcome the involvement of any national and local organisations who want to work with us on this programme, supporting and enabling healthy ageing through tackling falls and fractures.

## 6. National Falls Prevention Co-ordination Group membership

Members of the National Falls Prevention Co-ordination Group during the development of this document and who contributed to its content were:

Tom Gentry, Léa Renoux - Age UK  
Cathryn James - Association of Ambulance Chief Executives  
Dr Jonathan Trembl - British Geriatrics Society  
Martin Hodges - Care & Repair England  
Louise Ansari - Centre for Ageing Better  
Katherine Bennett, Priya Dasoju - Chartered Society of Physiotherapy  
Karin Orman - College of Occupational Therapists  
Bob Fellows - College of Paramedics  
Eugene Quinn – Healthwatch England  
Peter O’Reilly – National Fire Chiefs Council  
Anne Thurston – National Osteoporosis Society  
David Bramley, Katie Walkin - NHS England  
Julie Windsor – NHS Improvement (Patient Safety)  
Daniel MacIntyre, Nuzhat Ali, Raymond Jankowski - Public Health England  
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Ashley Martin - Royal Society for the Prevention of Accidents