

1 Fragility fractures are fractures that are caused by impacts (such as a fall) that
2 would not normally result in fracture. Osteoporosis increases the risk of
3 fragility fractures, but the risk is increased by other factors such as likelihood
4 of falling, previous fragility fracture, current or frequent recent use of
5 glucocorticoids, family history of hip fracture, smoking and alcohol intake.

6 In England and Wales, the Falls and Fragility Fracture Audit Programme
7 reported there are over 300,000 fragility fractures every year in patients aged
8 50 years and over. In addition to the pain and reduced quality of life for people
9 who have a fragility fracture, the increased morbidity leads to mortality and
10 increased NHS costs.

11 Better assessment for adults at risk of fragility fracture would help more
12 people to get advice and interventions to prevent fractures. Currently, many
13 people who have a fragility fracture do not receive appropriate assessment
14 and treatment to prevent future fractures.

15 An increasing challenge in clinical practice is re-assessing risk for adults who
16 are already taking treatment to protect their bone health. Re-assessments
17 may help with decisions to stop or continue treatment.

18 An update to the current NICE osteoporosis guideline is needed, because
19 there is new research on how to target and conduct risk assessment. The
20 current guideline only covers risk assessment, but the update will also cover
21 treatment with bisphosphonates and non-bisphosphonates.

22 **2 Who the guideline is for**

23 This guideline is for:

- 24 • Health and social care professionals providing NHS-commissioned
25 services
- 26 • Commissioners of health and social care services
- 27 • People using services, their families and carers and the public.

1 NICE guidelines cover health and care in England. Decisions on how they
2 apply in other UK countries are made by ministers in the [Welsh Government](#),
3 [Scottish Government](#), and [Northern Ireland Executive](#).

4 ***Equality considerations***

5 NICE has carried out [an equality impact assessment](#) during scoping. The
6 assessment:

- 7 • lists equality issues identified, and how they have been addressed
- 8 • explains why any groups are excluded from the scope.

9 The guideline will look at inequalities relating to age, disability, pregnancy and
10 maternity, race and sex.

11 **3 What the guideline will cover**

12 **3.1 Who is the focus?**

13 **Groups that will be covered**

14 Adults (18 years and older)

15 **3.2 Settings**

16 **Settings that will be covered**

17 All settings where NHS-funded care or social care is provided or
18 commissioned.

19 **3.3 Activities, services or aspects of care**

20 **Key areas that will be covered**

21 We will look at evidence in the areas below when developing the guideline,
22 but it may not be possible to make recommendations in all the areas.

23 1 Information and support needs for adults with suspected or known risk of
24 fragility fracture and their families and carers.

25 2 Identifying adults who should be assessed for fragility fracture risk

- 1 – risk factors for fragility fracture
- 2 – use of GP practice lists.
- 3 3 Methods of risk assessment
- 4 – bone density assessment
- 5 – risk prediction tools, including FRAX and QFracture.
- 6 4 Identifying vertebral fragility fractures, including the use of risk prediction
- 7 tools such as the vertebral fracture clinical decision tool (VFRAC).
- 8 5 Treatments to reduce fracture risk
- 9 – bisphosphonate medicines
- 10 – non-bisphosphonate medicines.
- 11 6 Repeat risk assessment (timing and methods) for people not receiving
- 12 treatment, including
- 13 – re-assessment of bone density
- 14 risk prediction tools, including FRAX and QFracture.
- 15 7 Treatment monitoring and review (timing and methods), including
- 16 – re-assessment of bone density
- 17 – bone turnover markers
- 18 – risk prediction tools, including FRAX and QFracture
- 19 – actions after the review
- 20 – timing and duration of bisphosphonate drug holidays, if needed.

21

22 Note that guideline recommendations for medicines will normally fall within
 23 licensed indications. Exceptionally, and only if clearly supported by evidence,
 24 use outside a licensed indication may be recommended. The guideline will
 25 assume that prescribers will use a medicine’s summary of product
 26 characteristics to inform decisions made with individual patients.

27 **Areas that will not be covered**

- 28 1 Public health measures to reduce osteoporosis and fragility fracture.
- 29 2 Preventing falls.
- 30 3 Managing fractures.

31

1 **Related NICE guidance**

2 ***Published***

- 3 • [Hyperparathyroidism \(primary\): diagnosis, assessment and initial](#)
4 [management](#) (2019) NICE guideline NG132
- 5 • [Prostate cancer: diagnosis and management](#) (2019, last updated 2021)
6 NICE guideline NG131
- 7 • [Ulcerative colitis: management](#) (2019) NICE guideline NG130
- 8 • [Crohn's disease: management](#) (2019) NICE guideline NG129
- 9 • [Eating disorders: recognition and treatment](#) (2017, last updated 2020)
10 NICE guideline NG69
- 11 • [Spondyloarthritis in over 16s: diagnosis and management](#) (2017) NICE
12 guideline NG65
- 13 • [Multimorbidity: clinical assessment and management](#) (2016) NICE
14 guideline NG56
- 15 • [Menopause: diagnosis and management](#) (2015, last updated 2019) NICE
16 guideline NG23
- 17 • [Coeliac disease: recognition, assessment and management](#) (2015) NICE
18 guideline NG20
- 19 • [Hip fracture: management](#) (2011, last updated 2017) NICE guideline
20 CG124
- 21 • [Percutaneous vertebroplasty and percutaneous balloon kyphoplasty for](#)
22 [treating osteoporotic vertebral compression fractures](#) (2013) NICE
23 technology appraisal guidance TA279
- 24 • [Falls in older people: assessing risk and prevention](#) (2013) NICE guideline
25 CG161

26 ***In development***

- 27 • [Hip fracture: management \(update\)](#). NICE guideline. Publication expected
28 January 2023.
- 29 • [Falls: assessment and prevention in older people and people 50 and over](#)
30 [at higher risk \(update\)](#). NICE guideline. Publication expected June 2024.

1 ***NICE guidance that will be incorporated in this guideline***

2 This guideline will update and replace [CG146 Osteoporosis: assessing the](#)
3 [risk of fragility fracture](#).

4 NICE will also undertake a comparative analysis of medicines options from
5 the following technology appraisals and sequence them within the care
6 pathway. This may include updating TA464, TA204, TA161 and TA160. We
7 will position TA791 in the care pathway but not update it, as this technology
8 appraisal was only published in 2022.

- 9 • [Romosozumab for treating severe osteoporosis](#) (2022) NICE technology
10 appraisal guidance TA791
- 11 • [Bisphosphonates for treating osteoporosis](#) (2017, last updated 2019) NICE
12 technology appraisal guidance TA464
- 13 • [Denosumab for the prevention of osteoporotic fractures in postmenopausal](#)
14 [women](#) (2010) NICE technology appraisal guidance TA204
- 15 • [Raloxifene and teriparatide for the secondary prevention of osteoporotic](#)
16 [fragility fractures in postmenopausal women](#) (2008, last updated 2018)
17 NICE technology appraisal guidance TA161
- 18 • [Raloxifene for the primary prevention of osteoporotic fragility fractures in](#)
19 [postmenopausal women](#) (2008, last updated 2018) NICE technology
20 appraisal guidance TA160
- 21 • [Abaloparatide for treating idiopathic or hypogonadal osteoporosis in men](#).
22 NICE technology appraisal guidance. Publication date to be confirmed

23 ***NICE guidance about the experience of people using NHS and social***
24 ***care services***

25 NICE has produced the following guidance on the experience of people using
26 the NHS and social care. This guideline will not include additional
27 recommendations on these topics unless there are specific issues related to
28 Osteoporosis: assessing the risk of fragility fracture:

- 29 • [People's experience in adult social care services](#) (2018) NICE guideline
30 NG86
- 31 • [Medicines optimisation](#) (2015) NICE guideline NG5

- 1 • [Patient experience in adult NHS services](#) (2012) NICE guideline CG138
2 • [Medicines adherence](#) (2009) NICE guideline CG76

3 **3.4 Economic aspects**

4 We will take economic aspects into account when making recommendations.
5 We will develop an economic plan that states for each review question (or key
6 area in the scope) whether economic considerations are relevant, and if so
7 whether this is an area that should be prioritised for economic modelling and
8 analysis. We will review the economic evidence and carry out economic
9 analyses, using an NHS and personal social services (PSS) perspective, as
10 appropriate.

11 **3.5 Key issues and draft questions**

12 While writing this scope, we have identified the following key issues and draft
13 review questions related to them:

14 1 Information and support needs for adults with suspected or known risk of
15 fragility fracture and their families and carers

16 1.1 What are the information and support needs of adults having risk
17 assessment for fragility fractures and their families and carers?

18 1.2 What are the information and support needs of adults who are at risk
19 of fragility fractures or who have osteoporosis and their families and
20 carers?

21

22 2 Identifying adults who should be assessed for fragility fracture risk

23 2.1 What are the indications for identifying adults who should be
24 assessed for fragility fracture risk?

25 2.2 How useful are GP practice lists for identifying adults who should be
26 assessed for fragility fracture risk?

27

28 3 Methods of risk assessment

29 3.1 What is the diagnostic accuracy of risk assessment tools (including
30 FRAX and QFracture) for predicting the risk of fragility fracture in adults,
31 including those who have had a previous fragility fracture?

1 3.2 What is the clinical and cost effectiveness of risk assessment tools
2 (including FRAX and QFracture) for predicting the risk of fragility fracture
3 in adults, including those who have had a previous fragility fracture?

4 3.3 What is the diagnostic accuracy of bone density assessment
5 techniques such as DEXA, ultrasound (for example Bindex) and CT
6 scans?

7 3.4 What is the clinical and cost effectiveness of bone density
8 assessment techniques such as DEXA, ultrasound (for example Bindex)
9 and CT scans?

10

11 4 Identifying vertebral fragility fractures

12 4.1 What is the diagnostic accuracy of methods of identifying vertebral
13 fracture, including VFRAC, spinal x-ray, MRI, and CT?

14 4.2 What is the clinical and cost effectiveness of methods of identifying
15 vertebral fracture, including VFRAC, spinal x-ray, MRI, and CT?

16

17 5 Treatments to reduce fracture risk

18 5.1 What is the clinical and cost effectiveness of treatment for preventing
19 fragility fractures? Treatments include:

20 – bisphosphonates (alendronate, ibandronate, risedronate and
21 zoledronate)

22 – non-bisphosphonates (abaloparatide, denosumab, raloxifene,
23 romosozumab, teriparatide, and strontium ranelate)

24 5.2 What is the clinical and cost effectiveness of calcium or vitamin D in
25 addition to other pharmacological treatments for preventing fragility
26 fractures?

27

28 6 Repeat risk assessment (timing and methods) for people not receiving
29 treatment

30 6.1 What is the most clinically and cost-effective strategy for monitoring
31 adults at risk of fragility fracture, including repeating the risk assessment
32 and bone mineral density techniques?

33

- 1 7 Treatment monitoring and review (timing and methods)
- 2 7.1 What is the most clinically and cost-effective strategy for monitoring
- 3 adults who are having treatment?
- 4 7.2 Which risk assessment tools (including FRAX and QFracture) are the
- 5 most accurate for predicting the risk of fragility fracture in adults having
- 6 treatment?
- 7 7.3 What is the most effective timing and duration of drug holidays for
- 8 adults on bisphosphonates?

9

10 The key issues and draft questions will be used to develop more detailed

11 review questions, which guide the systematic review of the literature.

12 **3.6 Main outcomes**

13 The main outcomes that may be considered when searching for and

14 assessing the evidence are:

- 15 • health-related quality of life
- 16 • mortality after fracture
- 17 • fragility fracture (including hip and vertebral fractures)
- 18 • bone mineral density at the femoral neck, as assessed by dual-energy X-
- 19 ray absorptiometry (DEXA)
- 20 • adverse effects of treatment
- 21 • adherence
- 22 • healthcare resource use, for example hospitalisation and entry into long-
- 23 term residential care.

24 **4 NICE quality standards**

25 **NICE quality standards that may need to be revised or updated when**

26 **this guideline is published**

- 27 • [Osteoporosis](#) (2017) NICE quality standard QS149

1 **5 Further information**

This is the draft scope for consultation with registered stakeholders. The consultation dates are 27 October to 24 November.

The guideline is expected to be published in January 2025.

You can follow progress of the [guideline](#). Our website has information about how [NICE guidelines](#) are developed.

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