

# NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

## SCOPE

### 1 Guideline title

Hip fracture: the management of hip fracture in adults

#### 1.1 *Short title*

Hip fracture

### 2 The remit

The Department of Health has asked NICE: "to prepare a clinical guideline on the management of fractured neck of femur".

### 3 Clinical need for the guideline

#### 3.1 *Epidemiology*

- a) About 70–75,000 hip fractures (proximal femoral fractures) occur annually in the UK. Hip fracture is the commonest reason for admission to an orthopaedic ward, and is usually a 'fragility' fracture<sup>1</sup> caused by a fall affecting an older person with osteoporosis or osteopaenia (a lesser degree of bone reduction and weakness due to the same process as in osteoporosis). The average age of a person with hip fracture is 77 years. The annual cost of medical and social care for all the hip fracture cases in the UK amounts to about £2 billion. Demographic projections indicate that the UK annual incidence will rise to 91,500 by 2015 and

101,000 in 2020, with an associated increase in annual expenditure that could reach £2.2 billion by 2020. The majority of this expenditure will be accounted for by hospital bed days and a further substantial contribution will come from health and social aftercare. About a quarter of patients with hip fracture are admitted from institutional care. About 10–20% of those admitted from home ultimately move to institutional care.

- b) Mortality is high – about 10% of people with a hip fracture die within 1 month, and about one third within 12 months. However, fewer than half of deaths are attributable to the fracture. This reflects the high prevalence of comorbidity in people with hip fractures; often the combination of fall and fracture brings to light underlying ill health. This presents major challenges for anaesthetic, surgical, postoperative and rehabilitative care.

### **3.2 *Current practice***

- a) The primary and secondary prevention of fragility fractures by treating osteoporosis and reducing the risk of falls are of key importance to the current and future epidemiology of hip fracture. These are, or will be, covered by related NICE guidance (see section 5).
- b) The diagnosis and management of hip fracture itself and of any comorbidity before, during and after surgery, have a profound effect on outcome, both for individuals and for services.
- c) Patients with hip fracture need immediate referral to hospital (other than in exceptional circumstances). Their assessment and management on admission commonly involve a range of specialties and disciplines, but it is not always clear how and when this involvement should take place. Prompt surgery is important but

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<sup>1</sup> The strict definition of a fragility fracture is one caused by a fall from standing height or less. For the purposes of this guidance, the definition will be slightly more flexible to encompass all hip fractures judged to have an osteoporotic or osteopaenic basis

is sometimes delayed for administrative or clinical reasons. It is essential that mobilisation and rehabilitation after surgery are undertaken according to individual need, but this does not always happen.

- d) In spite of a significant body of evidence, hip fracture management and the resulting length of hospital stay vary markedly among centres across England and Wales.
- e) Existing UK guidance from other sources includes:
  - Scottish Intercollegiate Guidelines Network (2002) Prevention and management of hip fracture in older people. Available from [www.sign.ac.uk/guidelines/fulltext/56/index.html](http://www.sign.ac.uk/guidelines/fulltext/56/index.html)
  - British Orthopaedic Association (2007) The care of patients with fragility fracture. Available from [www.nhfd.co.uk](http://www.nhfd.co.uk)
  - Department of Health (2001) National service framework for older people<sup>2</sup>. Available from [www.dh.gov.uk](http://www.dh.gov.uk)
- f) This clinical guideline will provide guidance on the emergency, preoperative, operative and postoperative management of hip fracture, including rehabilitation, in adults. It will not cover those aspects of hip fracture addressed by related NICE guidance, but will refer to them as appropriate.
- g) At all stages of hip fracture management, and especially during rehabilitation, the importance of optimal communication with, and support for, patients themselves and those who provide or will provide care – including unpaid care family members or others – will be a fundamental tenet of guidance development.

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<sup>2</sup> Elaborates on relevant (but not specific) standards of contextual importance (intermediate care, general hospital care and falls).

## 4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, ‘Further information’).

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health.

The areas that will be addressed by the guideline are described in the following sections.

### 4.1 *Population*

#### 4.1.1 Groups that will be covered

- a) Adults aged 18 years and older presenting to the health service with a clinical diagnosis (firm or provisional) of fragility fracture of the hip.
- b) People with the following types of hip fracture:<sup>3</sup>
  - intracapsular (undisplaced and displaced)
  - extracapsular (trochanteric and subtrochanteric).
- c) Those with comorbidity strongly predictive of outcome, and those without such comorbidity. The influence (if any) of advanced age or gender on clinical decision-making, management and outcome will be specifically evaluated.

#### 4.1.2 Groups that will not be covered

- a) People younger than 18 years.
- b) People with fractures caused by specific pathologies other than osteoporosis or osteopaenia (because these would require more condition-specific guidance).

## **4.2      *Healthcare setting***

- a) Secondary care settings where preoperative, operative, and postoperative acute and subacute care are undertaken.
- b) Primary, secondary and social care settings, as well as an individual's own home, where rehabilitation is undertaken.

## **4.3      *Clinical management***

### **4.3.1    *Key clinical issues that will be covered***

- a) Using alternative radiological imaging to confirm or exclude a suspected hip fracture in patients with a normal X-ray.
- b) Involving a physician or orthogeriatrician in the care of patients presenting with hip fracture.
- c) Early surgery (within 48 hours).
- d) Optimal preoperative and postoperative analgesia (pain relief), including the use of nerve blockade.
- e) Regional (spinal – also known as 'epidural') versus general anaesthesia in patients undergoing surgery for hip fracture.
- f) Does surgeon experience reduce the incidence of mortality, the need for repeat surgery, and poor outcome in terms of mobility?
- g) For displaced intracapsular fracture:
  - internal fixation versus arthroplasty (hip replacement surgery)
  - total hip replacement versus hemiarthroplasty (replacing the head of the femur only) .
- h) Choice of surgical implants - Sliding hip screw versus intramedullary nail for trochanteric extracapsular fracture.

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<sup>3</sup> These terms explain where the bone has fractured, which can be either near or within the hip joint.

- i) Choice of surgical implants - Sliding hip screw versus intramedullary nail for subtrochanteric extracapsular fracture.
- j) Cemented versus non-cemented arthroplasty implants.
- k) Hospital-based multidisciplinary rehabilitation for patients who have undergone hip fracture surgery.
- l) Early transfer to community-based multidisciplinary rehabilitation for patients who have undergone hip fracture surgery.

#### **4.3.2 Clinical issues that will not be covered**

The following will not be directly covered in this guideline, but related NICE guidance will be referred to if appropriate:

- a) Primary and secondary prevention of fragility fracture.
- b) Prevention and management of pressure sores.
- c) Prophylaxis for venous thromboembolism.
- d) Prevention and management of infection at the surgical site.
- e) Nutritional support.
- f) Selection of prostheses for hip replacement.
- g) Complementary and alternative therapies.

#### **4.4 Main outcomes**

- a) Requirement for surgical revision.
- b) Short-term and long-term mortality.
- c) Length of stay in secondary care.
- d) Length of time before community resettlement/discharge.

- e) Place of residence (compared with baseline) 12 months after fracture.
- f) Short-, medium- and long-term functional status.
- g) Short-, medium- and long-term quality of life.

## **4.5 *Economic aspects***

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY), and the costs considered will usually be only from an NHS and personal social services (PSS) perspective. Further detail on the methods can be found in 'The guidelines manual' (see 'Further information').

## **4.6 *Status***

### **4.6.1 *Scope***

This is the final scope.

### **4.6.2 *Timing***

The development of the guideline recommendations will begin in June 2010.

## **5 *Related NICE guidance***

### **5.1 *Published***

- Surgical site infection. NICE clinical guideline 74 (2008). Available from [www.nice.org.uk/CG74](http://www.nice.org.uk/CG74)
- Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for the secondary prevention of osteoporotic fragility fractures

- in postmenopausal women. NICE technology appraisal guidance 161 (2008). Available from [www.nice.org.uk/TA161](http://www.nice.org.uk/TA161)
- Alendronate, etidronate, risedronate, raloxifene and strontium ranelate for the primary prevention of osteoporotic fragility fractures in postmenopausal women. NICE technology appraisal guidance 160 (2008). Available from [www.nice.org.uk/TA160](http://www.nice.org.uk/TA160)
  - Venous thromboembolism. NICE clinical guideline 46 (2007). Available from [www.nice.org.uk/CG46](http://www.nice.org.uk/CG46)
  - Nutrition support in adults. NICE clinical guideline 32 (2006). [www.nice.org.uk/CG32](http://www.nice.org.uk/CG32)
  - The management of pressure ulcers in primary and secondary care. NICE clinical guideline 29 (2005). Available from [www.nice.org.uk/CG29](http://www.nice.org.uk/CG29)
  - Falls. NICE clinical guideline 21 (2004). Available from [www.nice.org.uk/CG21](http://www.nice.org.uk/CG21)
  - Preoperative tests. NICE clinical guideline 3 (2003). Available from [www.nice.org.uk/CG3](http://www.nice.org.uk/CG3)
  - The selection of prostheses for primary total hip replacement. NICE technology appraisal guidance 2 (2000). Available from [www.nice.org.uk/TA2](http://www.nice.org.uk/TA2)

## **5.2        *Guidance under development***

NICE is currently developing the following related guidance (details available from the NICE website).

- Osteoporosis. NICE clinical guideline. Publication date to be confirmed.
- Venous thromboembolism –prevention. NICE clinical guideline. Publication expected November 2009.
- Delirium: diagnosis, prevention and management of delirium. Publication expected June 2010.

## 6        Further information

Information on the guideline development process is provided in:

- ‘How NICE clinical guidelines are developed: an overview for stakeholders, the public and the NHS’
- ‘The guidelines manual’.

These are available from the NICE website

([www.nice.org.uk/guidelinesmanual](http://www.nice.org.uk/guidelinesmanual)). Information on the progress of the guideline will also be available from the NICE website ([www.nice.org.uk](http://www.nice.org.uk)).