

key points

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The average age at hip fracture is 83 for women and 84 for men, with around 80% of cases in women. The 30% mortality and 20% new institutionalisation rates at 12 months reflect the high prevalence of comorbidity and to some extent suboptimal management at the time of the fracture. With timely intervention and better clinical management many fractures can be prevented and when they do occur their human and economic costs can be greatly reduced.

Defined as fractures caused by a fall from standing height or less, fragility fractures occur in those with demonstrable osteoporosis or osteopaenia and/or a range of factors placing them at risk. The goal of prevention is to identify and treat those at risk. The WHO definition of osteoporosis stipulates a bone mineral density (BMD) T-score, of >2.5 standard deviations (SD) below normal. However, it is clear that many fragility fractures occur not only with osteoporosis but also with osteopaenia (a T-score below normal but by < 2.5 SD). Additional risk factors are commonly identifiable, so BMD alone is not a watertight predictor. The risk factor evidence has been assimilated into a multiple risk assessment algorithm, FRAX[®]. This computes the 10-year major fracture (and specific hip fracture) risk for any one individual, either with or without, the benefit of a T-score.

The National Osteoporosis Guideline Group has produced guidance based on FRAX[®] and a threshold for intervention defined as a 10-year fracture risk equivalent to that of prior fracture. However, there is a counterintuitive rising threshold for intervention with age resulting from the amalgamation of the FRAX[®] life-expectancy based (lifetime threshold) approach to 10-year risk prediction with the exclusion from both of the list of evidence-based risk factors of key age-associated risk determinants (with the exception of age), such as comorbidity, multiple medication and risk of falling. UK clinicians lack a single universally endorsed, decision support resource.

Pending a NICE clinical guideline and/or quality standard, the prudent strategy for clinicians is to become familiar with all three available risk measures, introduce fracture risk assessment into routine practice, and allow clinical judgement to prevail in cases of doubt – perhaps, especially in the case of very elderly people, more often in the direction of intervention than non-intervention.

The classical signs after a fall by an older person, of severe pain, shortening and external rotation of the affected limb, and loss of mobility, are well known and should result in immediate and rapid transfer to hospital, with adequate pain relief en route. It is not rare in the case of intracapsular fractures for mobility to be deceptively maintained on a moderately or minimally painful hip. Plain radiographs may not show the fracture, in which case MRI or CT should be promptly undertaken if there is still uncertainty. Surgery is the norm for hip fracture and is the ideal form of pain relief. Modern surgical techniques promote immediate postoperative unrestricted weightbearing.