

Quality and Outcomes Framework Programme
NICE Resource impact report
August 2011

Indicator area: Osteoporosis - fragility fracture

Indicators

IND90: The practice can produce a register of patients:

1. Aged 50 to 74 years with a record of a fragility fracture after 1 April 2012 and a diagnosis of osteoporosis confirmed on DXA scan
2. Aged 75 years and over with a record of a fragility fracture after 1 April 2012

IND91: The percentage of patients aged between 50 and 74 years, with a fragility fracture, in whom osteoporosis is confirmed on DXA scan, who are currently treated with an appropriate bone-sparing agent.

IND92: The percentage of patients aged 75 years and over with a fragility fracture, who are currently treated with an appropriate bone-sparing agent

Introduction

This report provides a high-level cost impact assessment for three indicators relating to osteoporotic fragility fracture piloted for the 2012/13 NICE menu of indicators for QOF. The intent of these indicators is to establish a register of people with fragility fracture and confirmed osteoporosis in the QOF, and to incentivise management in this population through treatment with bone sparing agents.

Fragility fracture (referred to in this document as ‘osteoporotic fragility fracture’) is the clinically apparent and relevant outcome in osteoporosis. In the absence of a fracture, osteoporosis is asymptomatic and often remains undiagnosed.

Cost implications (IND90)

Patient numbers affected

Osteoporosis is usually an age-related disease. It can affect both sexes, but women are at greater risk because the decrease in oestrogen production after the menopause accelerates bone loss to a variable degree.

In the UK one in two women and one in five men over the age of 50 in the UK will fracture a bone, usually as a result of osteoporosis.

UK data focuses on women over 50, and there is a lack of available UK data for men. Prevalence data from the costing template for ‘Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for the primary and secondary prevention of osteoporotic fragility fractures in postmenopausal women’ (NICE technology appraisal guidance 161 2009) has been used to derive the incidence of osteoporosis in women older than 50 with a clinically apparent osteoporotic fragility fracture, by dividing prevalence by the number of women in the age range. This is set out in table 1.

Table 1 Estimated incidence of osteoporosis with a clinically apparent osteoporotic fragility fracture in women

Age	Number of women this age in the UK	Prevalence of osteoporosis with clinically apparent fragility fracture	Estimated incidence of osteoporosis with clinically apparent fragility fracture
50 to 54 years	1,546,405	2.00%	0.40%
55 to 59 years	1,651,767	3.00%	0.60%
60 to 64 years	1,376,379	7.00%	1.40%
65 to 69 years	1,155,547	9.00%	1.80%
70 to 74 years	1,034,532	14.00%	2.80%

There are limited data for men. However, the Osteoporosis Society states, 'One in two women and one in five men over the age of 50 in the UK will fracture a bone, mainly as a result of osteoporosis.'

Current care

There is currently no register for osteoporotic fragility fracture in the QOF. However, data from the costing template for NICE technology appraisal guidance 161 suggest that 63.81% of women older than 50 are eligible for treatment; but only 50% present for treatment. Reference costs for 2009/10 showed that 85,000 dual-energy X-ray absorptiometry (DXA) scans were completed in that year for all ages and disease groups. We therefore assume that a significant proportion of women are already having a DXA scan in order to obtain a diagnosis of osteoporosis fragility fracture.

Resource impact

Based on the incidence set out in table 1, the total cost of DXA scans is set out in table 2.

Table 2 Estimated total cost of DXA scans

Age	Incidence of osteoporosis (women)	National tariff	Total cost
50 to 54 years	6,186	£79	£488,664
55 to 59 years	9,911	£79	£782,938
60 to 64 years	19,269	£79	£1,522,275
65 to 69 years	20,800	£79	£1,643,188
70 to 74 years	28,967	£79	£2,288,385
Total	85,132		£6,725,450

Based on the costing template for NICE technology appraisal guidance 161 we estimate a minimum of 60% of people with an osteoporotic fragility fracture are already having a DXA scan, although this is likely to be significantly more. Therefore a range of costs have been estimated. Table 3 shows the estimated costs of increased DXA scans from 10 to 40%.

Table 3 Estimated cost of increased DXA scans for women

Increase in scans	10%	20%	30%	40%
Increase in costs	£672,545	£1,345,090	£2,017,635	£2,690,180

There are limited data on how this would apply to men, but we know that the impact will be less than for women. Therefore we have assumed that including men would increase the total cost by around 50%, as shown in table 4.

Table 4 Estimated cost of increased DXA scans for women and men

Increase in scans	10%	20%	30%	40%
Increase in costs	£1,008,817	£2,017,635	£3,026,452	£4,035,270

Conclusion

The cost of creating a register of all patients aged between 50 and 74 years with a fragility fracture, with a diagnosis of osteoporosis confirmed on DXA scan after 1 April 2012, is estimated to range between £1 million and £4 million.

Cost implications (IND91)

Current care

QOF pilot data suggests that appropriate bone sparing agents are routinely prescribed to people with an osteoporotic fragility fracture.

Proposed care

Data from NICE technology appraisal guidance 161 suggest 63.81% of women older than 50 are eligible for treatment, but only 50% present for treatment. We have therefore used the same principles as for the calculation of the register costs and assumed that only 50% of the population have treatment. The resulting anticipated cost is set out in table 5.

Resource impact

Table 5 Estimated cost of additional drug therapy

Increase in prescribing	10%	20%	30%	40%
Estimated additional women	8,513	17,026	25,540	34,053
Estimated additional men	4,257	8,513	12,770	17,026
Total additional patients	12,770	25,540	38,310	51,079
Estimated uptake at 50%	6,385	12,770	19,155	25,540
Weighted drug costs from NICE technology appraisal guidance 161	£101.08	£101.08	£101.08	£101.08
Total cost	£645,414	£1,290,827	£1,936,241	£2,581,655

Note: The estimate of additional women is based on the estimate set out in table 1. The incidence of osteoporotic fragility fracture is estimated to occur in men half as often as women.

Conclusion

The estimated cost of prescribing an appropriate bone-sparing agent for men and women aged between 50 and 74 years with fragility fracture, and osteoporosis confirmed by DXA scan, is between £0.6 million and £2.6 million.

Cost implication (IND92)

QOF pilot data suggest the use of bone sparing agents in men and women aged 75 and older is already relatively common. The data also showed no significant changes during piloting to the baseline level of prescribing for this indicator.

Data from NICE technology appraisal guidance 161 estimate the prevalence of osteoporosis with a clinically apparent osteoporotic fragility fracture in women of this age to be 26%, affecting 600,000 people. Given the relatively small numbers of people involved and the comments from the pilot, we expect the costs of meeting this indicator to be minimal.

The cost of prescribing an appropriate bone-sparing agent for people aged 75 years and over with fragility fracture is therefore not expected to be significant at a national level.

Potential savings

The benefits from these indicators are anticipated to be similar to those set out in NICE technology appraisal guidance 161, which states, 'In addition to savings generated by reducing the number of fractures, the avoidance of fractures will also lead to fewer women being unable to live independently. This will result in savings to the NHS and social services'.

Overall conclusions

The calculation of the cost indicators for osteoporosis fragility fracture has been estimated to range between £1.6 million and £6.6 million. A range of costs have been provided because of the limited data available from the QOF pilot and on the incidence of osteoporosis fragility fracture in both men and women.

Related QOF indicators

There are currently no osteoporotic fragility fracture related QOF indicators.

References

National Osteoporosis Society www.nos.org.uk accessed 13th July 2011

NICE (2009) Alendronate, etidronate, risedronate, raloxifene, strontium ranelate and teriparatide for the primary and secondary prevention of osteoporotic fragility fractures in postmenopausal women. NICE technology appraisal guidance 161.