Service level predictors of bone treatment recommendations after a fragility fracture: Baseline findings from the first UK patient level Fracture Liaison Service Audit

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Background

Fracture Liaison Services (FLSs) are recommended nationally to provide effective secondary fracture prevention after a fragility fracture. Bone therapies vary in cost, adherence and effectiveness. The United Kingdom Department of Health has produced NICE guidance to define first, second and third line treatment choices.

Objective

We wished to identify the proportion, type and service level determinants of bone protection therapy recommendations by FLSs.

Methods

Each FLS in the United Kingdom was required to submit data on all patients they managed aged 50 or over and who had sustained a fragility fracture diagnosed between 1st January and 30th December 2016. Part of the audit focused on the treatments recommended by the FLS. Outcomes included treatment clinically inappropriate, patient declined, referred to primary care physician or another clinician, specific anti-osteoporotic medication, don't know and missing. We excluded FLS with less than 50 patients submitted. Where more than one drug was recommended by the FLS, the following hierarchy was used to select the one drug: oral bisphosphonate > denosumab > zoledronate, then teriparatide or raloxifene or strontium or activated vitamin D or oestrogen therapy.

Results

50 FLS submitted data on 44,139 patient records. Overall, the mean age of patients was 73 years, and 78% were women. Eighteen percent had an index hip fracture, 3.8% spine fracture and 72.9% non-hip non-spine fracture. Nine FLSs had more than 50% missing treatment data. 40% of patients submitted were recommended a specific medication or referred to another clinician. However, there was considerable variation between individual FLSs: the decision to treat (10% to 94%), the proportion referred to another clinician (0.3 to 69%) and the proportion recommended a parenteral therapy (0 to 33%). Neither the volume of patients or proportion of patients recommended therapy predicted type of therapy.

Conclusions

This audit has demonstrated marked variation between FLSs in the decision to treat and the type of bone therapy recommended despite national recommendations. A better understanding of the contributory factors for this variation will inform quality improvement for FLSs to provide more effective and efficient secondary fracture prevention.

Disclosures

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