

# Osteoporosis assessment tool for Sunderland city hospitals

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**Introduction** An estimated three million people in the United Kingdom suffer from osteoporosis. Osteoporosis increases the fracture risk when an older person falls. In the UK falls are a major cause of disability and the leading cause of mortality due to injury in older people aged over 75 years.<sup>1</sup>

The aims of this project were to investigate the extent of prescribing preventative treatment for osteoporosis for those taking oral prednisolone in Sunderland, and to develop an audit tool to measure preventative treatment in the presence of risk factors such as age, gender and steroid usage.

**Method** Total hospital population computer records were scanned to collect discharge medication data from January 2000 to October 2001 at Sunderland Royal Hospital. Data was downloaded into an Access database and screened by gender, date of birth and unique patient identifier.

Use of a hospital identifier avoided any possible errors due to double counting an episode.

**Results** A total of 184,117 patient discharges was studied; 98,816 total records were found for patients over 40 years (ratio of females to males 55:45) and scanned for prescribing of oral prednisolone with or without, osteoporosis preventative therapies. Preventative products routinely used by the hospital were alendronate or calcium.

Only 24 per cent of patients (392 males and 622 females) over 40 years of age discharged from hospital on prednisolone were prescribed a preventative treatment. Of this group prescribed a preventative treatment, 72 per cent were prescribed a calcium preparation and 28 per cent were prescribed alendronate. Those prescribed calcium were 68 per cent female (n=504) and those prescribed alendronate were 58 per cent female (n=118).

Figure 1 shows good correlation with increasing age and prescribing of preventative treatments for women prescribed oral prednisolone (correlation coefficient 0.9692). Similar plots in males showed good correlation over 50 years of age.

**Discussion** It has been estimated that 50 per cent of 80-year-old patients will suffer osteoporosis.<sup>2</sup> This study shows that

## FOCAL POINTS

- \* Patients prescribed oral steroids are at high risk of developing osteoporosis
- \* Discharge medication data was obtained from pharmacy records
- \* This study shows that approximately 30 per cent of males at 80, and 60 per cent of females received osteoporosis preventative treatment
- \* This osteoporosis assessment tool provides a relatively simple but comprehensive method to inform prescribing within the hospital

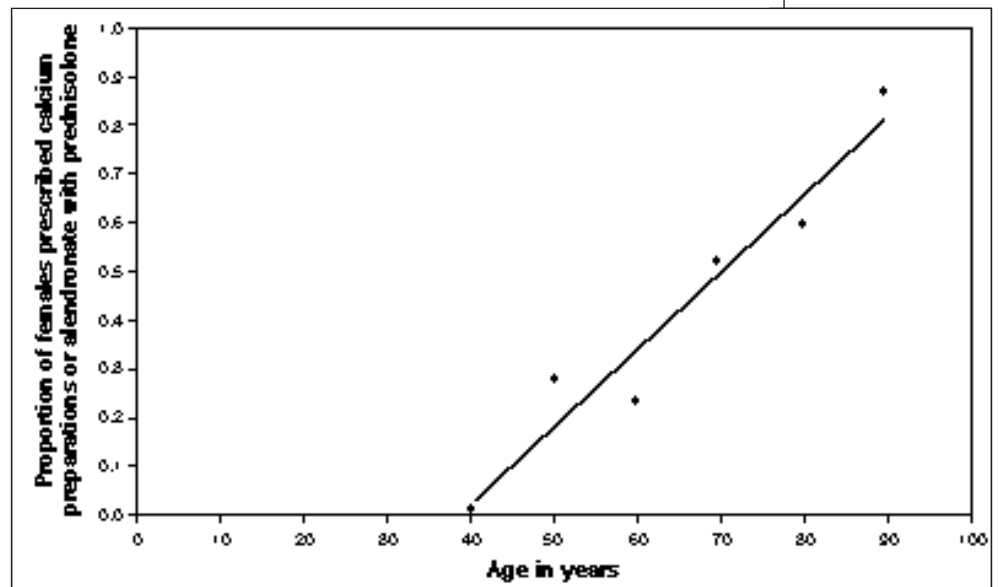


Figure 1: Relationship between age and prescribing of preventative treatments in females

approximately 30 per cent of males at 80, and 60 per cent of females received preventative treatment.

The National Service Framework (NSF) for Older People requires action to be taken to identify and to prevent osteoporosis in those people at high risk.<sup>1</sup> This method of data extraction and manipulation provides a relatively simple, but comprehensive, audit tool to inform prescribing within the hospital.

Prescribing within the hospital showed some degree of compliance with the NSF for the treatment of steroid-induced osteoporosis. This information can then be disseminated and reaudited to assess the impact of any initiatives to address osteoporosis prevention in the local area, and monitor performance with government targets for osteoporosis in NSF.<sup>1</sup>

At the present time there are no easy-to-use systems to verify whether continuation of medication on dis-

charge occurs. Further work to sample prescribing in primary care is planned.

## References

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2. Kanis JA, Delmas P, Burkhardt P, Cooper C, Togerson D. Guidelines for diagnosis and management of osteoporosis and the national osteoporosis foundation. *Osteoporos Int* 1997;7:390-406.

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