

economic loss to the GDP was approximately £55,000. With the average cost of hospital stay per day being £350, the total expenditure to the trust for waiting for the ankle surgery to recede was £272,685 annum⁻¹.

Discussion: Loosing an opportunity of operating the ankle fractures within a few hours of admission results in an enormous cost to the patient, hospital and the economy in general. Hospitals should consider arranging provisions for such surgeries on the CEPOD or on parallel emergency trauma theatre lists. With the implementation of the EWTD, performing such cases out of hours will prove beneficial for the surgical trainee as well.

Keywords: Ankle fractures; Health economics

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4B.1

4B: Osteoporosis

Bisphosphonates following fragility fracture: Are we prescribing enough?

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Aim: Over 200,000 osteoporotic fractures occur in the UK annually. Patients with fragility fractures are at highest risk of further fracture, though preventative treatment has been shown to reduce subsequent fracture incidence. The *National Institute for Health & Clinical Excellence (NICE)* recommended bisphosphonates as a treatment option in women =75 years without the need for prior DEXA scanning. Secondary prevention for osteoporosis is the first of 14 Standards for Practice Audit recommended by the *British Orthopaedic Association Standards for Trauma (BOAST)* January 2008. We prospectively reviewed three different models of bisphosphonate prescribing on patients discharged from our Trauma Units to identify if NICE guidance was being followed.

Method: 108 women aged =75 years were discharged from our Trauma Units having sustained an osteoporotic fracture. There were three methods of bisphosphonate prescribing. The first group had no organised system. The second group had junior Orthopaedic doctors advising the General Practitioner to prescribe a bisphosphonate. The third group had a Consultant Orthogeriatrician involved in the patient's care.

Results: In the first group of 47 women, only 12.8% were prescribed a bisphosphonate (6.4% Trauma Unit: 6.4% General Practitioner). Only one of the discharge letters recommended commencing a bisphosphonate. In the second group of 37 women, only 24.3% were prescribed a bisphosphonate (5.4% Trauma Unit: 18.9% General Practitioner) despite 40.5% of the discharge letters recommending to. However, in the third group of 34 women, 82.4% were prescribed a bisphosphonate by the Consultant Orthogeriatrician on the Trauma Unit. The remaining six patients had a contraindication or were intolerant to bisphosphonates.

Conclusion: NICE guidance regarding bisphosphonate prescribing is only being fully implemented within an Orthogeriatric Service. Only a minority of patients will have contraindications, allergies or be intolerant to bisphosphonates (up to one in four patients as highlighted recently by the National Osteoporosis Society).

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4B.2

Improving osteoporosis assessment in the fracture clinic

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Osteoporosis is a major cause of fractures. Patients sustaining one osteoporosis related fracture have an increased risk of further fractures. Osteoporosis assessment should in principle be an integral part of any orthopaedic fracture service. Identifying patients who might benefit from the osteoporosis assessment, and referring them accordingly still remains a major challenge.

The aim of this study was to compare the effectiveness of three different ways of referring patients with possible osteoporosis related fractures to an osteoporosis assessment service in orthopaedic fracture clinic of a hospital in UK.

In the first arm, doctors in fracture clinic were asked to refer patients over the age of fifty with fractures to osteoporosis specialist nurse using pre-designed pro-forma. In the second arm, in addition to doctors referral, patients were asked to self-register for osteoporosis assessment using explanatory leaflet and pre-designed pro-forma. In the third arm, osteoporosis specialist nurse present in clinic identified appropriate patients through medical records, and performed their assessment.

Relying on doctors gave an osteoporosis catchment rate of only 1.6%. In addition to that, asking patients to self-refer increased it to 63% ($P < 0.0001$). Having a specialist osteoporosis nurse in clinic, who identified patients at risk further increased catchment to 77% ($P = 0.036$).

Our study suggests that simply having osteoporosis assessment service and strict referral criteria does not necessarily increase osteoporosis catchment rate. Besides, it has confirmed that relying on doctors referral gives poor yield. It has also showed that encouraging patients to self-refer, and especially having osteoporosis specialist nurse present in fracture clinic greatly improves catchment. Lastly, it emphasizes the importance of each hospital's individual need being examined, and osteoporosis protocols geared accordingly.

Keywords: Osteoporosis; Fracture

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4B.3

Biomechanical evaluation of a cemented vs. non-augmented gamma-nail screw in the osteoporotic model of the femoral head

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Introduction: Osteoporotic fractures of the trochanteric area are often treated with a gamma-nail or similar implants utilizing a screw applied into the femoral head. One of the main problems of these techniques is the cut out in the femoral head. We biomechanically evaluated a novel technique of cement augmentation of