## THE SOCIETAL BURDEN OF OSTEOPOROSIS

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OBJECTIVE: In osteoporosis the bone mass is decreased, thereby increasing the risk of fractures. Common osteoporotic fractures include those at the hip, spine and forearm. Fractures are a burden to the society; both in terms of costs, morbidity and mortality. The main objective of this study was to investigate some important aspects of the burden of osteoporosis in Sweden in a health economic perspective. METHODS: The study used a combinated incidence/prevalence bottom-up approach to estimate the total annual burden of osteoporosis in Sweden. The burden was assessed in a societal perspective including medical care costs, non-medical care costs, informal care and indirect costs. Moreover, the value of quality-adjusted life-years (QALYs) foregone because of fractures was included in the total burden estimations. RESULTS: The total annual fracture cost was estimated at MSEK 6547, which is about $3.2 \%$ of the total health care costs in Sweden. Community care was the most important cost category accounting for $66 \%$ of the total annual cost followed by medical care costs ( $31 \%$ ), informal care ( $2 \%$ ) and indirect costs $(1 \%)$. By combining the annual value of QALYs foregone (MSEK 10,354 ) and the annual fracture costs the total annual societal burden of osteoporosis in Sweden was estimated at MSEK 16,901. Assuming no changes in the age-differentiated fracture risk the burden of osteoporosis was projected to increase to MSEK 26,301 in year 2050. CONCLUSIONS: This study shows that the societal burden of osteoporosis in Sweden is higher than previously perceived. The burden of osteoporosis is substantial and has to be acknowledged as an important health problem. Osteoporosis related fractures do not only lead to high medical care costs but also lead to high community care costs.

POS9
COMPARISON OF THE BURDEN OF ILLNESS OF DISPLACED AND UNDISPLACED FEMORAL NECK FRACTURE AFTER REDUCTION INTERNAL FIXATION
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OBJECTIVES: The aim of the study is to compare the burden of displaced and undisplaced medial femoral neck fracture treated with primary osteosynthesis in patients under 60 years on 2 years follow up. METHODS: Data derive from the financial database of the National Health Insurance Fund Administration and based on the S7200 code (femoral neck fracture) of the International Classification of Diseases (ICD) tenth revision and the surgical codes of the Hungarian Homogenous Disease Groups related to primary treatment of fracture in 2000. The patients with polytrauma were excluded from the study. During the 2 years follow up we analysed the health insurance costs, ratio of further treatments, the ratio of multiple treatment and mortality, while during the 3 years follow up we analysed the $50-100 \%$ impaired ability to work. The health insurance costs include the reimbursement of acute and chronic inpatient care, outpatient care and sick-pay costs. Exchange rate: 1 EUR = 253,23 HUF. RESULTS: Altogether 413 patients were included into the study, 154 undisplaced and 259 displaced femoral neck fracture. Undisplaced fracture: average cost per patient 1993 EUR for all the patients, 3682 EUR for patients with complications. The ratio of further treatment is $12.9 \%$ (secondary prosthesis $6.5 \%$ ), ratio of multiple treatment $2.6 \%$. Ratio of patients with impaired ability to work was $21.4 \%$ on average. Displaced fracture: average cost per patient 2249 EUR for all the patients,

4074 EUR for patients with complications. The ratio of further treatment is $21.6 \%$ (secondary prosthesis $12.4 \%$ ), ratio of multiple treatment $4.6 \%$. Ratio of patients with impaired ability to work was $25.1 \%$ on average. CONCLUSION: In case of using osteosynthesis after displaced femoral neck fracture, the ratio of further treatment (secondary prosthesis and multiple treatments), impaired patients and the costs are significantly higher.

## POSIO

OSTEOPOROSIS RELATED HEALTH CARE UTILISATION IN HUNGARY BY THE NATIONWIDE HEALTH INSURANCE DATABASE
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OBJECTIVES: The national health insurance database covers $97 \%$ of the population in Hungary. The aim of our study was to assess the osteoporosis related health care utilisation and disease management in Hungary, focussing on hip fractures and on the activity of the qualyfied Osteoporosis Centre (OPC) network. METHODS: A systematic search was performed in the database between 1999-2003. Patients of age 50-100 with fractures and/or osteoporosis were identified. Reports on visits to OPCs, osteodensitometries were analysed by age and gender. RESULTS: Hip fractures increased consistently (women: 8570-9180, men 2200-3480) leading to mean 556,800/40,450 acute, and 3652/1129 chronic bed days/year, respectively. A total of 67,600 women ( 115,860 cases) and 5980 men ( 9010 cases) visited an OPC in 1999; while $151,340(261,550)$ and 13,300 $(19,770)$ in 2003. A total 345,060 women and 36,130 men had osteoporosis diagnosis in an OPC during the 5 years, $49 \%$ and $45 \%$ of them was $50-65$ years age. A total $94-98 \%$ of the patients had osteodensitometry in the year of the diagnosis $47.1 \%, 37.9 \%$ and $38.1 \%$ of women with hip, forearm or shoulder fracture did not have osteoprosis diagnosis during the 5 years (men: $89.1 \%, 88.6 \%, 88.8 \%$ ). Osteodensitometry was performed in $5 \%, 13 \%$ and $11.6 \%$ of women with hip, forearm or shoulder fracture in 1999, slightly higher rates occurred in 2002 $(6.9 \%, 18.8 \%$ and $16 \%)$; lower proportions were observed in males $(2.2-2.9 \%)$ and $3-5 \%$ of the patients had osteoporosis diagnosis. CONCLUSIONS: Hip fracture has a significant burden on the health care system in Hungary. Osteoporosis related health care utilisation increased consistently in the time period observed. However, the rate of patients screened for osteoporosis before fracture was rather low and patient ways for osteporosis management after fracture were not guaranteed. Our study provide helpful data for further target population identification and health care improvement projects.

POSII
EVOLUTION OF THE CONSUMPTION OF BISPHOSPHONATES AND RALOXIFENE FINANCED BY THE SPANISH NATIONAL HEALTH SYSTEM FOR OSTEOPOROSIS IN POSTMENOPAUSAL WOMEN

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OBJECTIVES: Osteoporosis affects a $35 \%$ of the Spanish women over 50 . This percentage rises to $52 \%$ in those who are over 70. Currently, bisphosphonates (alendronate, etidronate and risedronate) and raloxifene are approved by the Spanish Agency of Medicines and Health care Products for preventing

