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Breaking the fracture cycle through effective and coordinated models of care

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A prior fracture at least doubles a patient's future fracture risk – yet numerous studies from across the world have found that healthcare systems fail to respond to the first fracture to prevent future fractures. Professor Cyrus Cooper, chair of the Committee of Scientific Advisors of the International Osteoporosis Foundation (IOF) and director of the MRC Lifecourse Epidemiology Unit, University of Southampton in the UK stated, "Studies from the UK, USA and Australia have reported that 45% or more of today's hip fracture patients have a prior fracture history. Healthcare systems are evidently failing to respond to the first fracture – this is, tragically, a missed opportunity for intervention. Worldwide, millions of people go on to experience debilitating and life-threatening hip fractures, at great cost to the individual and to healthcare systems."

A new position paper issued today by IOF concludes that coordinator-based systems are the most clinically- and cost-effective models to optimise outcome in fragility fracture patients, helping to improve diagnosis and treatment of osteoporosis in high risk patients for the prevention of secondary fractures. The position paper emphasises the need for coordinator-based models, considers practical experience that is transferable between healthcare systems and describes steps to achieve consensus amongst professionals, patients and policymakers.

Professor Kristina Åkesson, of the Department of Orthopedics, Skåne University Hospital Malmö, Lund University in Sweden, and chair of the IOF Fracture Working Group said, "The coordinator, often a nurse or

nurse practitioner, acts as a liaison between the orthopaedist, other specialists, the patient and the primary care physician to ensure that that the patient receives coordinated, comprehensive and customized intervention and follow-up. Without this kind of systematic and coordinated approach, there is often a lack of clear responsibility and the patient is liable to fall into what is termed a 'care gap'."

The cost-effectiveness of coordinator-based models has been established in several studies. A Canadian study showed that, at a cost of $12 per patient, for every 100 patients receiving intervention three fractures (including one hip fracture) were avoided, resulting in $26,800 saved by the healthcare system. A recent health economic analysis in the UK determined that cost savings from national implementation of a Fracture Liaison Service such as the one used in Glasgow, Scotland, would potentially amount to £8.5 million over five years. US studies have also shown that aggressive osteoporosis programmes in integrated healthcare systems can reduce the risk of fractures and ultimately save money.

"This Position Paper provides a clear outline of best practice in an international context and suggests steps in implementing effective post-fracture coordinator-based models. We also hope that it will serve as a reference to help convince key stakeholders - health policy makers, professional societies and patient organizations - of the urgent need for improved secondary prevention of fractures, " commented co-author of the report, Professor David Marsh of the Institute of Orthopaedics and Musculoskeletal Science, University College London. He added, "If we fail to take action, our healthcare systems will be overwhelmed by an avalanche of fractures in our ageing populations."

More information: Coordinator-based systems for secondary prevention in fragility fracture patients. D. Marsh, K. Åkesson, D. E. Beaton, E. R. Bogoch, S. Boonen, M.-L. Brandi, A. R. McLellan, P. J. Mitchell, J. E. M. Sale, D. A. Wahl and the IOF CSA Fracture Working

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Editorial – Breaking the fragility fracture cycle. C. Cooper, P. Mitchell, J. A. Kanis (2011) *Osteoporos Int* DOI:10.1007/s00198-011-1643-9