

# The Orthopaedic Surgeons Initiative

## A Call to Arms to Improve Osteoporosis Care

### Authors

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Over the last Decade, concern from osteoporosis groups has been rising about the growing menace of fragility fractures, which affects a staggering 1 in 3 women and 1 in 5 men over the age of 50. But despite countless lectures quoting undeniable statistics of fracture risk, its associated mortality, morbidity and costs in our aging populations, little seems to have changed in the way fracture patients are treated -- still today shamefully few receive any evaluation or treatment for osteoporosis -- the underlying cause of most of these fractures.

The Orthopaedic Surgeon's Initiatives is set on a path to change this. Key international groups, specifically The Bone and Joint Decade (BJD), the International Osteoporosis Foundation (IOF), and the International Society for Fracture Repair (ISFR), have banded together with a calls to arms to improve awareness of the scope and magnitude of fragility fractures as a global public health problem, to improve orthopaedic surgeons' understanding of osteoporosis and recognition of its cause of fragility fractures, and to motivate them to take an active role in optimising care of the fragility fracture patient with the ultimate goal of preventing future fractures.

The Orthopaedic Surgeon's Initiative believes that orthopaedic surgeons have a unique opportunity to transform the landscape of osteoporosis care: a fragility fracture is often the first indication that a patient has osteoporosis, and orthopaedists are often the first and possibly the only physician involved in the treatment. By the very nature of this position, the orthopaedic surgeon has a pivotal role in optimising care, not only of the fracture, but also of the underlying disease, and the prevention of future fractures.

### **The Growing Magnitude**

There is no lack of data to tell us that the prevalence and incidence of osteoporotic fractures is vast and increases exponentially with age.

- Every third woman and every fifth man over the age of 50 will eventually suffer from an osteoporosis-related fracture.
- The lifetime risk for an osteoporotic fracture of the hip, spine or wrist is 40% for Caucasian women in Europe.
- The risk for a hip fracture is between 11% and 18% in women, which is equal to the combined risk for breast, uterine, and ovarian cancers.
- Vertebral fractures are between 2 and 3 times more prevalent than those in the hip but only a third are ever diagnosed.

But this is only the beginning. The number of people over age 65 is expected to almost double by the year 2040, and as the population ages the number of hip fractures is predicted to rise exponentially. Cooper et al projects that by 2050 the total number of hip fractures worldwide will rise to 6.26 million.<sup>1</sup>

Furthermore, the economic costs associated with osteoporosis and fragility fractures are overwhelming. In Europe the total direct costs of osteoporotic fractures are over €31 billion and are expected to increase to more than €76 billion in 2050.<sup>2, 3</sup>

But it is not just about the economics. The negative impact on quality of life after a hip or vertebral fracture is a foremost concern. According to Cooper, et al, 20% of patients who sustain fracture of the hip will die as a result within the first year. 30% will suffer permanent disability, 40% will no

longer be able to walk independently, 80% will be unable to carry out at least one independent daily living activity, and up to 25% will have to go into long-term residential care.<sup>4</sup>

### **A Vicious Circle**

A fragility fracture is the strongest indicator of risk of future fracture. It's a known-fact in orthopaedic circles: patients who have had a fracture at any site have more than twice the risk of sustaining a future fracture compared with individuals who have never experienced such an injury as an adult.<sup>5</sup> Up to 50% of patients with a vertebral fracture will experience additional vertebral fractures within three years, many within the first year.

### **Under-Diagnosis**

Yet, still fragility fractures are under-diagnosed and under-treated. Despite availability of therapies proven to reduce fracture risk, even in patients who have already suffered a fracture, diagnosis and treatment of osteoporosis among fragility fracture patients remains low. In an example from Freedman et al: researchers looked at 1162 women over age 50 with low-energy distal radius fracture, at 6 months post-fracture, and found 266 (23%) had been prescribed osteoporosis medication, 33 (2.8%) had received a bone density scan, and only 20 (1.7%) had received a bone density scan plus osteoporosis medication. So a handful of women received correct care, but 883 (76%) received neither bone density test nor medical treatment for their obvious osteoporosis.<sup>6</sup> In 2000, Gehlbach et al. found that of 132 women over age 60 who sustained osteoporotic vertebral compression fractures, which were identified during radiological examinations, only 20% actually received any treatment for either the fracture or the osteoporosis.<sup>7</sup>

### **It's Time for a Change**

A recent BJD-IOF-EFORT survey<sup>8</sup> clearly indicates that many orthopaedic surgeons still neglect to identify, assess and treat fragility fractures patients for osteoporosis, but not by lack of will, rather by lack of essential knowledge. This has to change. Clearly there is a need for further education and improved training. More educational opportunities should be offered to orthopaedic surgeons through articles, web-based learning and educational seminars, and education about the disease should be integrated into the medical curriculum and postgraduate training.

To this end, the first outcome of the **Orthopaedic Surgeons Initiative** – a combined effort of the BJD, the IOF, and the ISFR – is an educational slide kit aimed at upgrading orthopaedic surgeons' ability to manage the underlying pathology of patients presenting with fragility fractures. The new educational training package, (downloadable from the IOF website in English, French and Italian at <http://www.iofbonehealth.org/health-professionals/educational-tools-and-slide-kits/orthopedic-surgeons-training-kit.html> or on the BJD website at <http://www.bjdonline.org/default.aspx?contId=1840> ) is available freely to orthopaedic surgeons worldwide. It includes four keynote lectures on osteoporosis, geared specifically for orthopaedic surgeons, its appropriate fracture management, including initiating or referring for bone density evaluation, pharmacological and non-pharmacological treatment, fall prevention, patient education and follow-up, plus a summary lecture to wrap-up all of the information presented.

Development of a simple clinical pathway from evidence-based guidelines is an important step to ensure that optimal care is provided for patients with fragility fractures. Finding the time and indeed the resources to initiate further investigation in a busy orthopaedic clinic is indeed challenging – so much so that it is easy to dismiss the underlying cause and simply “treat the fracture”. But in such a setting, the concept of a fracture liaison nurse has been put to the test in several countries and came through with resounding success. By playing a major coordinating role the nurse is able to ensure that the fragility fracture patient receives appropriate non-surgical treatment and follow-up after the initial fracture management. This service will be different in different countries; it is, therefore, important to create a pathway locally. This pathway must make it easy and not time-consuming for the orthopaedic surgeon, in order to for the system to ‘stick’ and ultimately succeed in preventing the next fracture.

Links:

[http://www.boneandjointdecade.de/downloads/recommendations\\_care\\_osteoporotic\\_fracture\\_patient.pdf](http://www.boneandjointdecade.de/downloads/recommendations_care_osteoporotic_fracture_patient.pdf)

<http://www.nhfd.co.uk>

The Bone and Joint Decade International Steering Committee decided in June, 2007 to establish a global Osteoporosis Fracture Initiative led by:

Professor Ghassan Maalouf, Lebanon

Dr Karsten Dreinhöfer, Ulm, Germany

Professor Lars Lidgren, Lund, Sweden

Professor Kristina Åkesson, Malmö, Sweden

The BJD Fracture Initiative will be working in close cooperation with major organisations as AAOS, IOF, ISFR, and EFORT among others.

### References

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