

# KNOWLEDGE AND OPINIONS OF ORTHOPAEDIC SURGEONS CONCERNING INITIATION OF TREATMENT FOR PATIENTS WITH OSTEOPOROTIC FRACTURES

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**INTRODUCTION:** Orthopaedic surgeons can play an important role in diagnosing and treating osteoporosis [1,2,3,4]. However, it has been shown that when they have patients with osteoporotic fractures, orthopaedic surgeons are highly inconsistent in initiating treatment and/or referring their patients to primary care providers (PCPs) for the medical management of this disease [3]. With the increasing incidence of osteoporotic fractures in the elderly population, routine, timely initiation of treatment is becoming increasingly important. This is especially critical since a large percentage of patients with osteoporotic fractures have not received previous treatment for osteoporosis. Additionally, timely pharmacologic treatment after a fracture can substantially reduce the risk of a subsequent fracture [5,6,7]. Following surgical treatment for an osteoporotic fracture, the surgeon could either initiate further work-up and medical treatment for osteoporosis or refer the patient to a PCP for these interventions. Time constraints may be a large factor in determining whether or not a surgeon will initiate treatment, while some surgeons might avoid treating osteoporosis because they see this as outside the realm of their specialty. The present study was designed to determine the opinions, basic knowledge, and concerns of orthopaedic surgeons regarding their willingness or reluctance to initiate medical/pharmacological treatment and work-up for their patients with osteoporotic fractures.

**METHODS:** We conducted a 21-question survey of 106 orthopaedic surgeons in Utah, Idaho, and Wyoming regarding their knowledge, opinions, and concerns about treating and/or referring patients with osteoporotic fractures. Survey questions were aimed at determining the scope of responsibility that surgeons feel they have with regards to treating these patients for their underlying disease. Surgeons were questioned on whether they do, or would, initiate pharmacological treatment and, if so, which type (e.g., estrogen, bisphosphonate, etc.). The survey asked whether surgeons conduct or initiate a work-up for osteoporosis when surgically treating an osteoporotic fracture, and, if so, what measures are taken (e.g., bone density scan, notification of PCP, etc.). Additionally, several questions dealt with the relationship between the surgeon and the PCP when treating patients with osteoporotic fractures.

**RESULTS:** 67.3% of orthopaedic surgeons surveyed agreed or strongly agreed that expanding orthopaedic practice into prescribing pharmacological treatments for osteoporosis is appropriate (Fig. 1). However nearly one-half of the surgeons are concerned enough about adverse events with many prescription pharmacologic agents that they would rather avoid prescribing these treatments (Fig. 2). The vast majority of surgeons would prefer to prescribe bisphosphonates, vitamin D supplements, or calcium supplements, as opposed to selective estrogen receptor modulators (SERMs) or conjugated estrogen. 53 surgeons (50%) notify the patient's PCP when treating a patient with an osteoporotic fracture. 72 surgeons (61.2%) would favor a program where they initiate treatment of patients with apparent osteoporotic fractures, but have the patient's PCP assume the continuation and monitoring of pharmacologic management and work-up for secondary causes (Fig. 3). 61 surgeons (58.7%) were aware that a fracture in a post-menopausal female might be more predictive of a future fracture than moderately to severely low bone mineral density determined by a dual energy x-ray absorptiometry (DXA) scan. Yet 58.9% of the surgeons feel that patients who have sustained an apparent osteoporotic fracture from low-energy trauma and have several major clinical risk factors for osteoporosis should have a DXA scan prior to initiating pharmacologic treatment for osteoporosis.

**DISCUSSION:** A majority of orthopaedic surgeons surveyed believe that expanding their practice into prescribing pharmacologic treatment for osteoporosis is appropriate. However, nearly one-half of these surgeons were concerned enough about adverse events associated with many of the effective pharmacologic treatments that they would rather not prescribe them. Instead they would rather refer these patients to a PCP. This appears to reflect a desire of orthopaedic surgeons to ensure that their patients with osteoporotic fractures receive treatment for this disease, but at the same time revealing a hesitancy to expand the scope

of their liability. If a referral for initiating treatment and work-up for patients with osteoporotic fractures were added to standard discharge orders at healthcare facilities, then surgeons' responsibilities and liabilities would not be increased, while ensuring that the patient receives the necessary medical care. This solution would establish a new standard of care for osteoporotic fracture patients by ensuring that treatment for osteoporosis is initiated, thereby reducing future fracture risk.

Expanding orthopaedic practice into prescribing pharmacologic treatments for osteoporosis is appropriate.

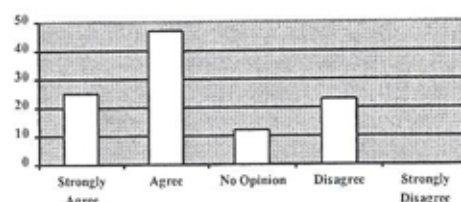


Fig. 1: Survey Question #2

I am concerned enough about adverse events with pharmacologic agents that I would rather avoid prescribing these agents for osteoporosis.

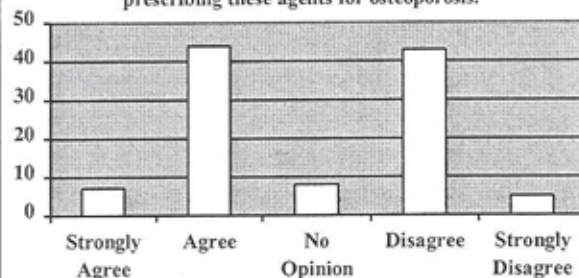


Fig. 2: Survey Question #4

I would favor a program where I initiate treatment of patient's with apparent osteoporotic fractures, but have their primary care provider assume the continuation and monitoring of pharmacologic management and work-up for secondary causes.

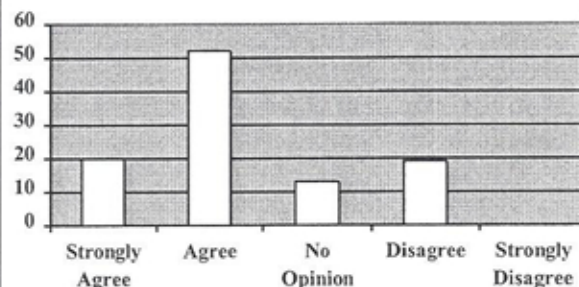


Fig. 3: Survey Question #20

**REFERENCES:** 1) Dobbs et al. (1999) *Iowa Orthop. J.* 19:43-52; 2) Lane and Nydick (1999) 7:19-31; 3) Skedros et al. (2002) *Osteoporos. Int.* 13(Suppl 1): S36; 4) Skedros et al. (2002) *Osteoporos. Int.* 13(Suppl 1): S128; 5) Broy et al. (2000) *J. Bone Min. Res.* 15(Suppl 1):S141; 6) Kamel et al. (2000) *Am. J. Med.* 109:326-327; 7) Lindsay et al. (2001) *JAMA* 285:320-323.