

Low Incidence of Bone Health Presentations at National Hand Meetings

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Purpose The purpose of this study was to determine the frequency with which osteoporosis topics (screening, medical treatment, and fracture prevention) are presented at national hand surgery meetings. This was compared with the frequency of the same topics presented at the Orthopaedic Trauma Association (OTA) annual meetings.

Methods The annual meeting programs for the American Society for Surgery of the Hand (ASSH), the American Association for Hand Surgery (AAHS), and the OTA from the previous 10 years (2007–2016) were searched for presentations that covered bone health at each of these meetings. We categorized the presentations as either instructional or research.

Results There were 2 bone health instructional presentations at hand surgery meetings in contrast to 13 presentations at OTA meetings over the last 10 years. For the last 9 years, the OTA has featured at least 1 instructional presentation on bone health every year. We identified 11 research presentations at the hand surgery meetings compared with 16 at the OTA meetings.

Conclusions Osteoporosis and bone health are infrequently presented instructional topics at national hand meetings compared with OTA meetings. The cause of the difference is unclear and likely multifactorial, varying each year with different program chairs and committees. The level of involvement of hand surgeons in osteoporosis management is controversial; however, incorporation of this topic may stimulate discussion and help identify solutions for this controversy.

Clinical relevance It may benefit hand surgeons to place more importance on osteoporosis screening and treatment. We believe that there should be an annual instructional course on this topic at the ASSH and AAHS meetings. (*J Hand Surg Am.* 2017; ■(■):1.e1-e5. Copyright © 2017 by the American Society for Surgery of the Hand. All rights reserved.)

Key words Bisphosphonate, bone health, distal radius fracture, fragility fracture, osteoporosis.



OSTEOPOROSIS IS AN EPIDEMIC. An estimated 10 million Americans have the condition and an additional 43 million are osteopenic. This represents over half of the at-risk population in the United States.¹ This prevalence is expected to increase to 70 million in the next 15 years,¹ while the

number of fragility fractures is expected to increase from 2 to 3 million annually by the year 2025.² The financial cost associated with fragility fractures is difficult to accurately calculate and varies widely based upon the assumed costs and methodology utilized; it is estimated to be approximately \$16.9 billion

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in 2005 growing to over \$25 billion annually by 2025.² More importantly, however, and not easily quantified, is the increased level of human suffering and possible early death that will arise from the increased number of individuals sustaining fragility fractures.^{3–5}

The diagnosis of osteoporosis in healthy, asymptomatic individuals is based upon dual-energy x-ray absorptiometry (DEXA) screening with bone mineral density results 2.5 SD below the young adult mean, represented by a *t* score below -2.5 . The diagnosis of osteopenia is similarly based on a *t* score between -1 and -2.5 .⁶ Recent studies identified that imaging data from radiographs or computed tomography scans correlates with DEXA scanning, yet conflicting reports warrant further study on this issue.^{7–11} The literature supports that there are multiple interventions proven to increase osteoporosis screening and treatment, with several demonstrating screening rates upwards of 90% after the intervention.^{12–21}

The earliest obvious warning sign, and easily identifiable opportunity for osteoporosis intervention, is the distal radius fracture.^{22,23} Providers treating these wrist injuries are in an optimal position to intervene early in attempt to prevent subsequent, more serious, fractures associated with increased morbidity and mortality.^{24–26} Even with literature published over 17 years ago demonstrating low rates of osteoporosis screening after fragility fractures within the United States,²⁷ evidence continues to show that referral rates and appropriate medical treatment of osteoporosis after fragility fracture are extremely low, despite the widespread nature of this pathology.^{16,25,28–33}

We anecdotally perceived a lack of educational opportunities on this topic at the annual hand surgery meetings. The purpose of this paper was to determine the frequency with which osteoporosis treatment and subsequent fracture prevention are presented at the annual meetings of the American Society for Surgery of the Hand (ASSH) and the American Association for Hand Surgery (AAHS). Our primary hypothesis is that, over the last 10 years of meetings, the topic of osteoporosis screening and treatment would be minimally represented in the annual programs. Secondarily, we quantified the same topic at the Orthopedic Trauma Association (OTA) meetings for comparison because this was considered the subspecialty organization most likely to also frequently treat distal radius fractures. Admittedly, OTA members and attendees treat a wider variety of fragility fractures. Although this may create an unbalanced comparison with a group that primarily treats only 1 type

of fragility fracture, we believe this may allow the lessons learned from an organization more broadly affected by fragility fractures to benefit attendees of national hand meetings.

MATERIALS AND METHODS

We obtained electronic access to the annual meeting programs of the ASSH, the AAHS, and the OTA from the years 2007 to 2016, for a total of 30 annual meeting programs. Our inclusion criteria included all types of presentations (poster, paper presentations, oral presentations, podium presentations, symposiums, and instructional course lectures [ICLs]) with any of the following key words in the title or abstract: osteoporosis, osteopenia, bone health, fragility fracture, bisphosphonate, dual-energy x-ray absorptiometry, DEXA, DXA, and bone mineral density. Exclusion criteria were any presentation not focused on the topic of osteoporosis screening, treatment, and subsequent fracture prevention (eg, presentations on fixation methods or failure in osteoporotic bone). Presentations strictly devoted to the surgical management of osteoporotic fractures, as well as industry supported talks, were also excluded.

For each year group, we categorized abstracts into instructional sessions (ICLs or symposiums that represent established knowledge) or research sessions (topics of interest presented in the form of posters, podium, oral and paper presentations). We searched the titles and abstracts of all 30 annual meeting programs for our key words identified in the inclusion criteria. The search was completed electronically and then all programs were manually reviewed to ensure all possible presentations were captured according to our inclusion criteria. Any presentation meeting our inclusion criteria was set aside for final review. This initial search was performed by 1 individual. After the initial review, all available abstracts were reviewed separately by 2 authors (D.L.C. and K.E.N.) to verify relevance to osteoporosis screening, treatment, and subsequent fracture prevention. Any presentations that met our exclusion criteria were removed. Any disagreement between these 2 reviewers was discussed with the senior author (S.M.T.) who held final decision authority for inclusion or exclusion. Finally, we quantified the total number of presentations over 10 years within each of the instructional and research categories. Descriptive statistical analysis was performed.

RESULTS

Over the past 10 years, we identified 2 instructional presentations on bone health at the hand surgery

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