Underrepresentation of Non-White Participants in the American Academy of Orthopaedic Surgeons Guidelines for Symptomatic Spinal Compression Fractures

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INTRODUCTION: Compression fractures affect more than 1.5 million individuals annually. In response to this healthcare burden, the American Academy of Orthopaedic Surgeons (AAOS) released the Clinical Practice Guideline on the Treatment of Osteoporotic Spinal Compression Fractures in 2010, aiming to improve care. However, the utility of this guideline is contingent on the evidence with which it can be applied to the population at large. We aimed to assess the racial and ethnic composition of patients enrolled in the studies cited in the AAOS Clinical Practice Guideline on the Treatment of Osteoporotic Spinal Compression Fractures.

METHODS: We reviewed the full-text articles cited in the 2010 American Academy of Orthopaedic Surgeons Clinical Practice Guideline on the Treatment of Osteoporotic Spinal Compression Fractures, which represents the most recent AAOS guideline published. Inclusion criteria consisted of randomized controlled trials (RCTs) or prospective studies reporting patient data. Studies were considered to adequately report race if they utilized specific categorization of participants' race or ethnicity. Primary outcomes were the proportion of studies that reported race and the proportion of studies that referenced race without reporting data.

RESULTS: In the AAOS guidelines, 76 studies were cited, of which 50 met inclusion criteria. Of these, 12 (24%) studies reported race totaling 3,832 patients. Two (4%) studies referenced race without reporting the breakdown of race included in the study. The majority of patients included across all studies were female and white. Notably, none of the 50 studies enrolled Black or Hispanic patients. The majority of studies reported on osteoporosis medication recommendations while 3 (6%) assessed Kyphoplasty vs Vertebroplasty, 3 (6%) assessed Kyphoplasty vs conservative treatment, and 5 (10%) assessed Vertebroplasty vs conservative treatment.

DISCUSSION: There is a substantial lack of racial diversity in clinical trial enrollment of studies cited by the current AAOS guidelines for Treatment of Osteoporotic Spinal Compression Fractures. This underscores the need for more inclusive research practices and updated orthopaedic guidelines to ensure that practice guidelines are generalizable to the population at large.

SIGNIFICANCE/CLINICAL RELEVANCE: This study is significant due to its identification of the current AAOS Clinical Practice Guideline on the Treatment of Osteoporotic Spinal Compression Fractures as being based on studies that lack racial diversity with no Black or Hispanic patients enrolled. The clinical significance of this study is the encouragement of more broadly representative research and policies on osteoporotic compression fractures that may reveal important clinical findings or recommendations relevant to previously underrepresented groups.