

Title: Interpreting Patient Reported Outcomes in Orthopaedic Surgery: A Systematic Review

Background: Reporting methods of patient reported outcome measures (PROMs) vary in orthopaedic surgery literature. While most studies report statistical significance, the interpretation of results would be improved if authors reported confidence intervals (CIs), the minimally clinically important difference (MCID), and number needed to treat (NNT).

Objectives: To assess the quality and interpretability of reporting the results of PROMs. To evaluate reporting, we will assess the proportion of studies that reported (1) 95% CIs, (2) MCID, and (3) NNT. To evaluate interpretation, we will assess the proportion of studies that discussed results using the MCID or the effect sizes and how they relate to 95% CIs.

Methods: We included the top five high impact factor orthopaedic journals (The American Journal of Sports Medicine, Arthroscopy, Journal of Bone and Joint Surgery, The Journal of Arthroplasty, and Osteoarthritis and Cartilage) published in 2017, that compared two or more therapies, and used PROMs to report study outcomes. Three sets of independent reviewers participated in screening and data extraction using a standardized form.

Results: Our search yielded 1502 studies. Following titles and abstracts screening, 254 studies remained. Following full text screening, 194 eligible studies were included in the final analysis. Data extraction is currently underway.

Discussion: Results of trials using PROMs should be completely reported and correctly interpreted. The current trend of reporting results and basing conclusions solely on p-values can lead to inaccurate conclusions and clinical recommendations. Journal guidelines should consider mandating such values in future research.