

Industry Influence and Implant Transparency in Shoulder Arthroplasty: A Review of the 100 Most Cited Articles

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INTRODUCTION:

With the continued growth of shoulder arthroplasty, the volume of literature guiding clinical decision-making has expanded significantly. Highly cited studies play a pivotal role in shaping implant selection, surgical techniques, and perioperative care pathways. Despite their influence, the transparency of these publications—particularly in reporting implant manufacturers and disclosing financial conflicts of interest—has not been thoroughly investigated. Transparent reporting is critical for evaluating reproducibility and identifying potential sources of bias. When such information is omitted, it hinders the ability to accurately interpret outcomes and assess whether industry affiliations may have influenced the findings. As clinicians increasingly rely on published data to inform practice, it is essential to evaluate whether the most cited shoulder arthroplasty literature adheres to basic standards of transparency. This study aimed to assess the frequency of implant manufacturer disclosure and industry relationship reporting among the most cited clinical studies in shoulder arthroplasty, and to analyze whether these reporting patterns vary by procedure type, journal, or publication year.

METHODS:

The Web of Science database was used to identify the 100 most cited clinical studies on shoulder arthroplasty published between 1981 and 2025. Articles were included if they focused on surgical technique, clinical outcomes, or implant evaluation. Reviews, editorials, basic science, and cadaveric studies were excluded. Data were extracted on publication year, citation count, journal, procedure type, region of origin, implant manufacturer reporting, and presence of an industry disclosure. Studies were classified as either reporting or omitting implant manufacturer information. Descriptive statistics were used to summarize reporting trends. Subgroup analysis was performed to evaluate patterns by decade, procedure type, and journal.

RESULTS:

Among the 100 most cited studies, 56 evaluated reverse shoulder arthroplasty, 55 included total shoulder arthroplasty, and 44 referenced hemiarthroplasty. Implant manufacturer was reported in 77 studies (77%) and omitted in 23(23%). Industry disclosures were present in 35 studies (45%), absent in 41 (53%), and not applicable or unclear in 24. There was no clear difference in reporting based on publication year or citation count (p). Among studies that reported implant manufacturer, the most frequently cited were DePuy, Tornier, and Zimmer. Omission of manufacturer information was more common in studies involving total shoulder arthroplasty compared to reverse or hemiarthroplasty. Several studies with more than 500 citations did not report either the implant manufacturer or any industry disclosure.

DISCUSSION AND CONCLUSION:

Many of the most frequently cited studies in shoulder arthroplasty fail to consistently report implant manufacturers or disclose financial relationships, with this gap being particularly pronounced in the total shoulder arthroplasty literature. The omission of these critical details undermines transparency and may obscure potential sources of bias. As implant design continues to evolve and clinical outcomes remain closely tied to specific systems clear and consistent reporting of implant information and financial disclosures is essential. Standardizing these reporting practices is necessary to enhance reproducibility, ensure accountability, and preserve trust in the evidence base guiding orthopedic care.