

## Poster #29

### Research Study

Title: “Readability of Shoulder Arthroplasty Patient Educational Materials on Websites of The Top 100 Orthopedic Hospitals”

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Category: Orthopedics; Health Disparities

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**Introduction and Objective.** Low health literacy has been linked to poor medical outcomes. Few studies have investigated the readability of Total Shoulder Arthroplasty (TSA) related online patient educational materials (PEMs). With TSA becoming more popular, we assessed the readability and content of shoulder arthroplasty PEMs found on the websites of the top 100 orthopedic hospitals in the United States.

**Methods.** The top 100 ranked orthopedic hospitals were identified from the U.S. News and World Report website and were searched on google with the words “shoulder arthroplasty”. We evaluated the websites by geographical region (Midwest, Northeast, Southeast, Southwest and West) and quartile ranking based on the national rankings. Two authors gathered information from the websites, corroborated by a third author, and readability assessments were performed using the Flesch Reading Ease test, Flesch-Kincaid grade level, and Gunning Fog Index.

**Results.** Only 53 of the 100 unique websites had TSA information. There were no statistically significant differences in the primary readability outcomes across quartile or region for Flesch Kincaid, Gunning-Fog, and Flesch Reading Ease with average scores for the 53 websites was 9.51, 12.21, and 52.67 respectively. Furthermore, only 17% of websites had shoulder arthroplasty readability at or below a 6th grade level. Website content for patient education on TSA was highly variable, all leading to poor understanding.

**Conclusions-Implications.** This study shows that PEMs for total shoulder arthroplasty on hospital websites is more difficult to read and understand than the recommended 6th grade level. Additionally, the content provided by these websites lack important subjects necessary to properly inform patients for TSA. There is a significant need to review and improve hospital website-based information to educate patients to make it easier to understand. Patients may have a greater benefit if the patient educational materials online followed the AHRQs recommendation about grade level.