

Assessment of Internet Information Available to Patients for Total Wrist Arthroplasty

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Introduction

Hand surgeons are performing an increased number of total wrist arthroplasty procedures. Despite the informed consent process between the patient and surgeon, patients will turn to the Internet for education regarding this procedure, and hand surgeons need to understand the information available. To date, no studies have assessed the Internet information available to patients regarding total wrist arthroplasty. We hypothesize that information found on the Internet during a simulated patient search does not adequately address the core components necessary for an informed decision and is presented at too advanced of a reading grade level.

Methods

The search terms “total wrist arthroplasty” and “wrist joint replacement” were search-using Google, Bing, and Yahoo search engines. The top 25 websites for each search term were recorded for each search engine. This search was modeled to represent the patient experience. We used this to compile a list of unique websites for analysis (Figure 1). The websites were reviewed for authorship and a discussion of indications, contraindications, risks, benefits and alternatives. We noted this and additional information on a web-site review worksheet. The readability of the information was calculated using the Flesch-Kincaid score. A paired t-test was used for statistical analysis with $p < 0.05$ as significant.

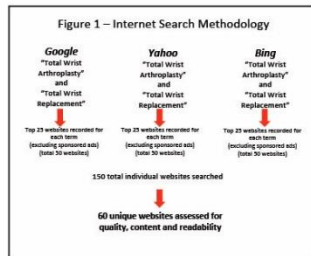


Table 1. Breakdown of Authorship and Elements of Informed Consent

	# of Websites	Mean # Indications	Any Indications?	Mean # Contraindications	Any Contraindications?	Mean # of Benefits	Any Benefits?	Mean # of Risks	Any risks?	Mean # of Alternatives	Any Alternatives?
Academic	31 (51.7%)	1.9	28/31	1.1	9/31	1.7	21/31	2.1	17/31	1.4	27/31
Private	13 (21.7%)	2.2	11/13	0.1	1/13	2.1	10/13	1.6	5/13	2.5	10/13
Industry	8 (13.3%)	0.5	2/8	0.0	0/8	0.8	2/8	1.0	3/8	1.0	3/8
Other	8 (13.3%)	2.1	6/8	0.3	1/8	0.8	3/8	1.0	2/8	2.3	7/8

Results

A total of 60 unique websites were analyzed. Authorship of the websites were 51.7% academic, 21.7% private, 13.3% industry sponsored and 13.3% other sources. The mean number of indications, contraindications, benefits, risks and alternatives are reported by website authorship (Table 1). There was no difference in the number of indications, benefits, risks and alternatives when academic websites were compared with the other website types. Academic websites provided more detailed discussion of contraindication ($P < 0.05$) compared with the other authorships. Of the academic websites, 28/31 provided indications, 9/31 discussed contraindications, 21/31 reported benefits, 17/31 identified risks, and 27/31 provided alternatives. Peer reviewed literature was only referenced on 54.8% of academic websites vs. 10.3% private, industry and other websites. Flesch-Kincaid score was 10.8 (range 6.8-12) with only 6.7% of websites written under an 8th grade reading level.

Discussion

Internet information available for total wrist arthroplasty does not adequately report the necessary information to help a patient make an informed decision for their procedure. Academic websites do not provide better information than other website types. Peer reviewed references were scarce. The grade level of the information provided was far above the understanding of the average patient. Hand surgeons should properly counsel patients and supplement poor information available on the Internet.

References

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