

INTERNET USE BY PATIENTS IN ORTHOPAEDIC SURGERY

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ABSTRACT

This study evaluated Internet use among orthopaedic patients in a private practice general orthopaedic setting. Of 201 participants, 45% had used the Internet either personally or thru a surrogate to search for information about their orthopaedic condition. Utilization of the Internet was significantly higher than that reported for a community orthopaedic practice surveyed in 1998, suggesting that utilization by orthopaedic patient populations mirrors the increasing societal use for health information.

Most users in this study employed multiple search strategies, including using search engines and sites recommended by others. The majority of users found medical information on Internet sites to be useful and accurate. The number one choice for reconciling conflicting information was to ask a physician or a nurse. Most users and non-users reported that they would recommend the Internet to others as a source for medical information. We recommend several strategies for orthopaedic surgeons to stay abreast of these changes and to utilize Internet Patient education resources to their own advantage.

INTRODUCTION

We previously reported on Internet use by outpatient orthopaedic patients in a community and in an academic tertiary care setting based on data collected in 1998.^{1,2} Internet use in the United States has grown exponentially over the past five years, and access to the Internet has increased yearly. In this study, we surveyed a population of patients in a community outpatient orthopaedic practice in 2002 to see whether there were changes in Internet utilization.

METHODS

After obtaining Institutional Review Board (IRB) approval, we invited patients visiting an outpatient community orthopaedic practice (OSMC, Elkhart, Indiana) during a one week period in July 2002 to participate. We used a questionnaire that had previously been found to be reliable in another outpatient orthopaedic sample.² Patients were recruited by a medical student investigator (JK) at time of check-in for their appointment in the outpatient office, and surveys were filled out on-site. As many patients as possible were invited to participate in the study. Informed consent was obtained and patients were surveyed regarding their Internet use and their attitudes about Internet-retrieved health information. Specifically, the questionnaire was designed to assess study group demographics, access to and usage of the Internet, and opinions about the utility of the Internet in obtaining medical information. As in previous studies, we assessed not only Internet use by respondents, but also Internet use by persons other than the respondent for the respondents' use (designated "surrogate" users). We also surveyed patients regarding their methods of identifying information to review, and asked how they planned to utilize the information. All survey responses were sorted and prepared for analysis using the SPSS (Chicago, Illinois, USA) statistical package.

RESULTS

During a one week period, 568 patients were seen in this clinic. Of these eligible patients, 210 were invited to participate in the study; 201 returned the questionnaire. Of the 201 respondents, 108 (54%) were female,

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93 (46%) were male. The mean age of participants was 46 years (range 12-86 years), and the mean time between initial orthopaedic diagnosis and questionnaire completion was 1.8 years (range 0-46 years). Of the 178 patients responding to the question regarding prior surgery, 93 (52%) reported having had surgery for their orthopaedic conditions. One hundred fifty-one respondents (75%) reported that they had access to the internet at work or home. Of the 50 who reported no Internet access, 3 (6%) reported that they nevertheless personally searched the Internet for information on their condition, and 3 (6%) had a surrogate search for them. Of the 151 participants with Internet access, 59 (39%) reported that they personally searched the Internet for orthopaedic information; 45 (30%) had a surrogate search for them, and 69 (46%) reported that they had used the Internet either personally or through a surrogate to find information about their condition (further designated as "Internet users").

Internet users were slightly younger on average than non-internet users (42.7 yrs vs. 47.4 yrs), but the difference was not statistically significant. There was no significant difference in percentage of women among users vs. non-users. There was no significant difference in surgery status between the two groups.

Of the 68 subjects who reported how they found their sites, 55 (81%) reported that they used a search engine to find information about their orthopaedic condition. Forty-two percent used sites recommended by others, and 47% found sites through other means. The most frequently used search engine was Google (24%), followed by Yahoo (21%), AOL (17%) and Netscape (8%). Not everyone who reported using a search engine listed which one they used, but of those who did, many listed two or three different engines.

Of the 64 who responded to the question, 50 (78%) reported that sites they visited helped them better understand their medical condition. Of the 66 who responded to the question, 27 (41%) reported that sites they visited raised questions to discuss with their physicians. Of the 62 who responded to the question, 49 (79%) reported that *all or most* of the information on the sites they visited was accurate, and the remaining 13 (21%) reported that *some* of the information was accurate. Of the 62 who responded, 42 (68%) reported that they usually can tell if the information on a site is accurate, 16 (26%) reported that they can sometimes tell, and 4 (7%) reported that they can rarely tell. Seventy-five percent of those who responded would ask a physician or nurse to help them reconcile conflicting information they found on a site; 16% would compare information on different sites to reconcile conflicts; 12%

would ask support group members; and 4% used other strategies. Many who responded gave multiple responses.

Of the non-Internet users with valid responses, 77% said that they would recommend the Internet to others as a source of medical information. Of the internet users with valid responses, 96% said that they would recommend the Internet to others as a source of medical information. Of the non-internet users with valid responses, 46% would use Internet access available in the clinic; of the internet users with valid responses, 74% would use Internet access available in the clinic

DISCUSSION

We identified a higher use of the Internet among community outpatient orthopaedic patients in this study (46%) than in our previous report (20%) from data collected only four years earlier, confirming that Internet utilization for medical information among orthopaedic patients mirrors the substantial increases in use of the Internet for health information seen in the general population.

Not only are more orthopaedic patients using the Internet, but they are having questions about the material they have researched which they plan to raise with their caregivers—75% in this study. Unfortunately, in this study as in others, patients are mainly finding material by using commercial search engines, a strategy which has proved to be inefficient of their time and often finds incomplete or inaccurate web sites.³

Patients may not be the best judges of the quality or accuracy of material they retrieve. A study by Consumer Web Watch looked at how Internet health experts rated sites compared to "consumers".⁵ Not surprisingly, health experts highly rate such factors as the posting institution, presence or absence of solicitation or advertising, and the source of the material as the most important. Consumers, on the other hand, rated "design look" as the most important criteria in determining the credibility of a site.

What is the best strategy for addressing this growing trend among patients? Orthopaedic surgeons can a) familiarize themselves with available web material, b) recommend sites to patients, and c) participate within the AAOS and specialty societies to create high quality web-based instruction.

While the thought of reviewing all patient education material on the Web is daunting, it is also unnecessary. Several sources of high quality patient education are available, including the American Academy of Orthopaedic Surgeons (www.aaos.org), and the University of Iowa Virtual Hospital (www.vh.org). Reviews of Web

based patient education information can be found in the AAOS Bulletin⁴, or at Orthopaedic Web Links (<http://www.orthopaedicweblinks.com>). Taking only a few minutes to review material in one's area will pay off.

By recommending sites to patients, the surgeon can ensure they are receiving quality materials to review, patients can be saved many hours fruitless searching and finding material which may or may not apply to them, and the surgeon can, to some extent, preempt patient explorations of material of questionable quality. Expedient ways of making these recommendations include a) making a handout of sites, especially focusing on specific documents or portions of web sites for a specialty practice, or b) placing links on one's own web site (which American Academy of Orthopaedic surgeons members can create for free at the AAOS web site).

Finally, as we strive to keep up with this trend in patient education, we should promote and contribute as much as possible to the Web based patient education efforts of our professional societies. If we, rather than the commercial sector, wish to be our patient's main educators, staying on the leading edge of the information wave is crucial.

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