



Creation and Evaluation of a Preoperative Education Website for Hip and Knee Replacement Patients - A Pilot Study

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Abstract

Problem Statement: The use of websites to provide patient education is becoming more common, but the usability and quality of the information must be evaluated and ensured. Because patients undergoing hip and/or knee replacements are usually older adults, this population may have more difficulty with the technology of online education. The benefits of a properly executed and effective preoperative patient educational intervention have been shown to result in improved psychological and physical well-being for patients undergoing surgery, leading to better outcomes. Web-based preoperative teaching can also better incorporate evidence-based research into this important aspect of patient education. The goals of this pilot study are to determine the usability and feasibility of a website created to increase patient engagement in their own preoperative education, assess their access to online education, and improve the quality of the education patients receive in preparation for hip or knee surgery. **Methods:** Following expedited IRB approval of this quality improvement project, the study team used a convenience sample of two patient cohorts from a Preoperative Ambulatory Surgery Services (P.A.S.S.) department of a medium-sized community hospital. One group received the usual care (education via paper form) and the other group received the paper documents plus a link to the website. The patients were directed to complete anonymous Survey Monkey surveys. The design of the website was intentionally made to be simple, with evidence-based "menu-driven" drop-downs and other features to make the screens age-appropriate to the patient population. The website content was supported with video and PDFs of pamphlets containing educational and illustrative topics, materials the same as or similar to the usual educational classes and paper documentation provided to patients by the P.A.S.S. nurses. There was an option for the patient to contact a P.A.S.S. nurse with questions, and the clinical study nurse would monitor the email daily, to ensure timely response. Links were provided on the education website for further information about the study and the Survey Monkey questionnaire. The team used the Perceived Health Website Usability Questionnaire (PHWSUQ) in drafting survey questions. A website header and both surveys provided for passive informed consent. The clinical nurse student researcher polled the P.A.S.S. nursing staff to obtain preliminary qualitative feasibility results. **Data Analysis and Results:** Descriptive statistics and paired t-tests were used for comparative analysis of the cohorts. We hypothesize that the findings will show that patients who received web-based education in addition to the printed materials will opine that they are more knowledgeable about their procedure, have less anxiety, and experience greater satisfaction with their preoperative education. We further expect to find that the website preserved the nurses' time and that there was some cost savings for the unit in using less supply chain allocations. **Significance:** If our hypotheses are supported, nurses will save time otherwise spent on education and may have more opportunity to identify clinical issues in patients preparing for knee and hip replacements. We hope to show that evidence-based online education is effective and feasible for this population.