

Comparative Inquiry Strategies for Improving Patient-Reported Outcome Engagement in Orthopedic Surgery

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INTRODUCTION: Patient-reported outcome measures (PROMs) are increasingly used to assess clinical effectiveness from the patient’s perspective. However, low response rates, particularly with digital delivery methods such as text messages and emails, can limit their utility. The structure, content, and length of survey prompts may greatly influence patient engagement and willingness to respond. As PROMs become more closely tied to quality reporting and reimbursements, optimizing patient compliance is vital. This study examines whether variations in message length and the inclusion of an estimated time commitment impacts response rates among patients unfamiliar with digital PROM collection.

METHODS: 2,966 TJA patients, naïve to digital PROM collection, were propensity-score matched based on patient age, sex and time since surgery (all > 1-year) as to not disproportionate any study findings related to response rate. The patients were divided into four survey prompt cohorts: short message, short message with time commitment, long detailed message, long detailed message with time commitment. Each patient received a single survey invitation, via text-message and email, based on their assigned prompt. Responding patients first completed a brief survey evaluating the perceived burden of PRO surveys, followed by a validated quality-of-life PROM.

RESULTS: In total, 1176 patients (39.9%) patients responded, which was 669 (56.9%) females. The rates of responses by invitational method are as follows: short 39.54%, short with time 42.80%, long 36.02%, and long with time 41.09% (P=.0535; Figure 1). There was no significant difference in response rate between the short and short with time messages (P=.2030); however, there was a significant difference between long and long with time messages (P=.0459). Further, combining cohorts to assess time commitment in the invitation revealed statistically significant response rates (41.94% with time presented v 37.80% without time presented, P=.0214). The majority of patients (82.99%) reported that the survey was “not at all” disruptive to their day, and only 0.94% and 0.34% reported “very” or “extremely”, respectively, regarding the disruptive nature of the survey. No significant differences were found in the responses about the disruption of the surveys to the patient’s day with respect to the four invitational messages (P=.4481).

DISCUSSION: Including an estimated time commitment in PROM invitation messages significantly improves response rates, especially when paired with shorter messages. Although the difference between short messages with and without a time estimate was not statistically significant, the overall results suggest that setting clear expectations about time burden enhances patient engagement. These findings support incorporating time estimates into digital PROM prompts to improve response rates and the overall quality of patient-reported data in clinical practice.

SIGNIFICANCE/CLINICAL RELEVANCE: Optimizing the response rate of PROMs has both clinical implications for patients to participate in the feedback loop in their care, as well as hospital and fiscal implications for complete reimbursement.

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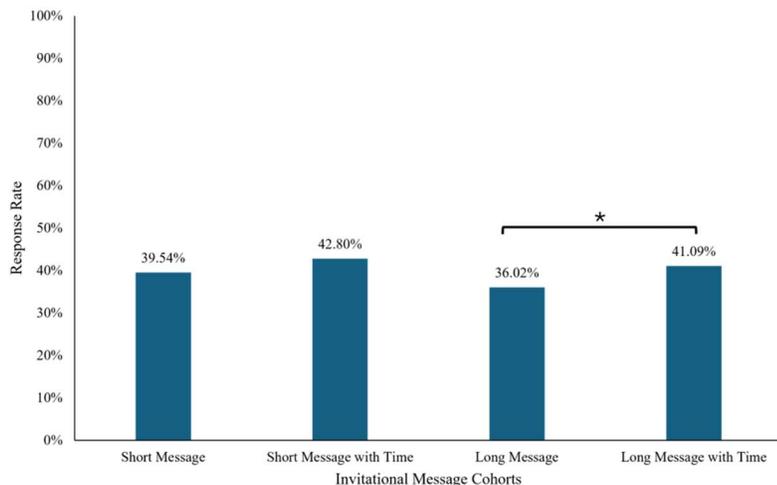


Figure 1. Response Rates by Invitational Message Cohort.