

Internet Enhanced, Patient-Centered Orthopaedic Care: A Prospective, Randomized, Controlled Pilot Trial

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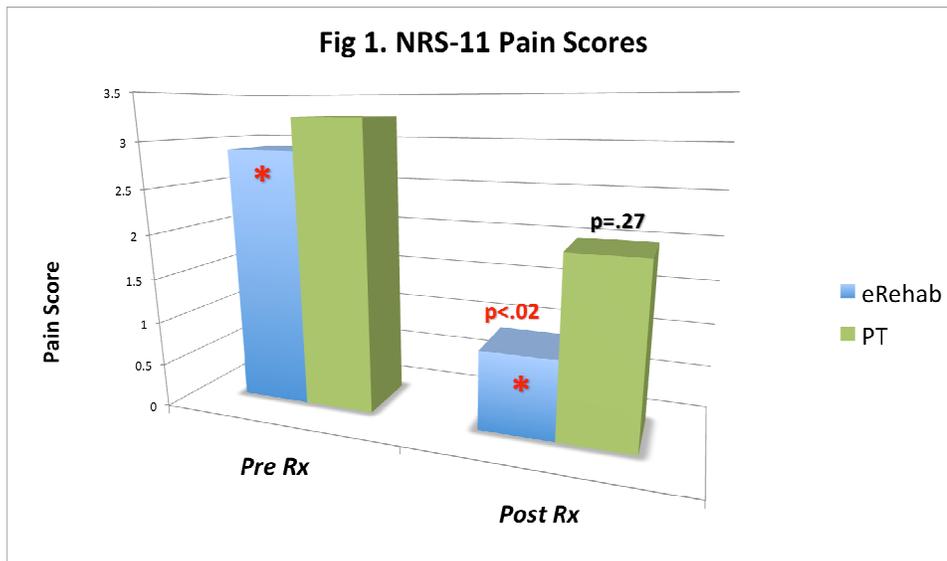
INTRODUCTION: We have developed a patient-centered web portal that utilizes streaming, clinician prescribed video instruction to motivate and inform patients in self-care of their orthopaedic condition, focusing on the importance of a home exercise program. The purpose of this study is to compare this web portal (eRehab) to formal outpatient physical therapy (PT) in terms of patient costs and outcomes.

METHODS: This is a multicenter, prospective, randomized controlled pilot trial. Twenty patients with an initial pain score less than 6 who were candidates for a knee or shoulder orthopaedic outpatient physical therapy referral were randomized to a six-week treatment course of either PT or eRehab. Patients were evaluated for outcome scores (Dash or Reverse KOOS), pain NRS-11 scores, patient subjective outcomes, and cost of treatment for the current episode of care.

RESULTS: Three patients (two eRehab and one PT) dropped out of the study. At the six-week follow-up evaluation, only the eRehab group achieved a statistically significant improvement in both pain scores (2.9 vs .9, $p = .02$) and outcome scores (25.1 vs. 12.6, $p < .02$). Patients who were candidates for an outpatient physical therapy referral who instead were treated with an eRehab treatment plan had a significant reduction in total cost of care per episode (\$214 vs. \$705, $p < .001$) and patient cost per episode (\$65 vs. \$172, $p < .04$).

DISCUSSION AND CONCLUSION: The outcomes of this pilot study suggest that Internet-based home exercise programs may be a viable option to standard physical therapy for some patient populations. An orthopaedic eRehab portal has potential to play a pivotal role in the future paradigm shift from physician-centered to patient-centered care in the treatment of musculoskeletal

disorders.



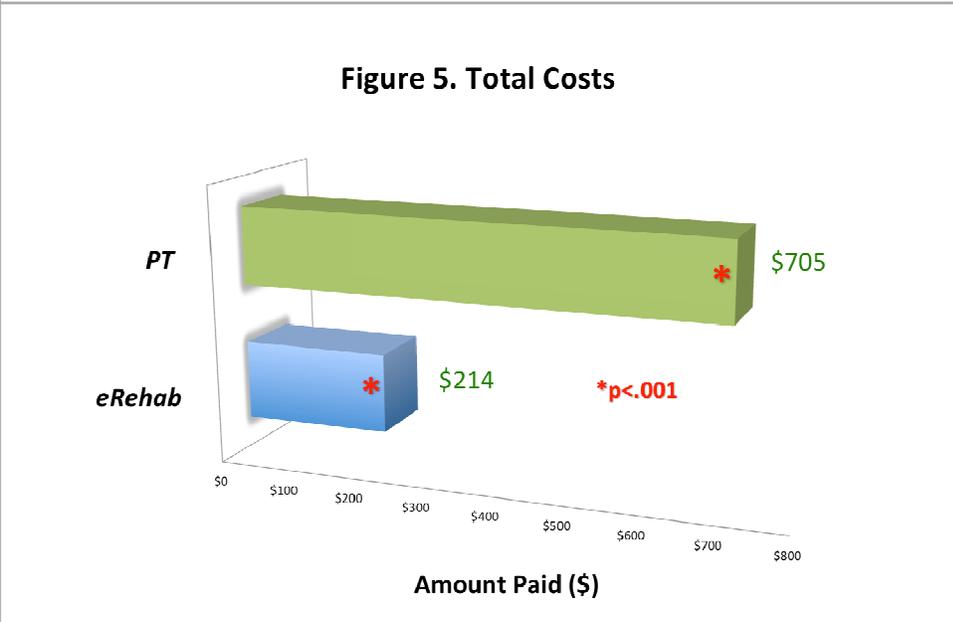
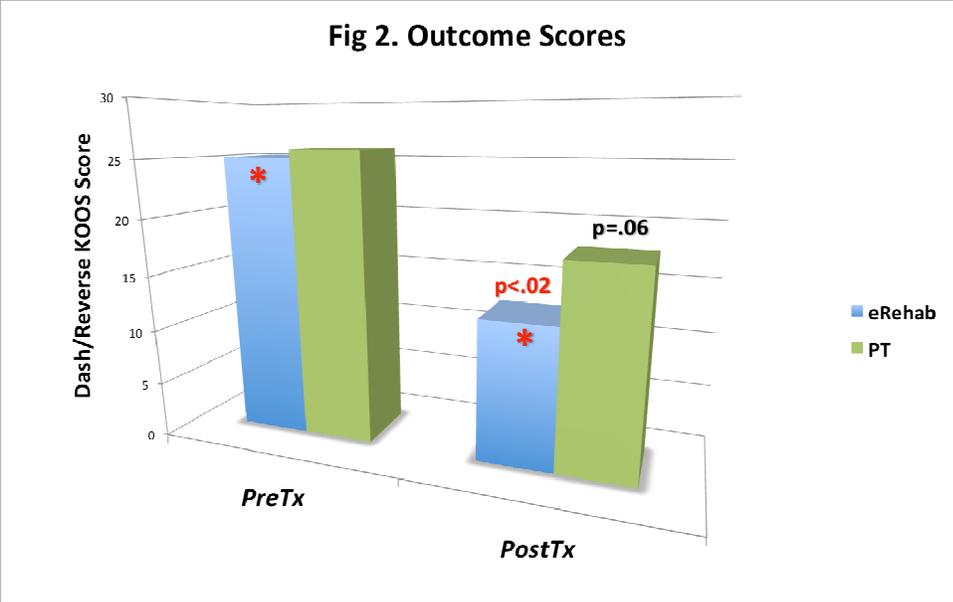


Table 3. Six-week Follow-up questionnaire.

Likert Type Scale:
 1=Strongly Disagree/Very Dissatisfied,
 2=Disagree/Dissatisfied,
 3= Neutral, neither agree or disagree/Neutral, neither satisfied of dissatisfied,
 4=Agree/Satisfied,
 5=Strongly Agree/Very Satisfied

Question	eRehab Group	PT Group
My treatment plan helped my understand my injury and how to manage the symptoms	4.75	4
Satisfaction with outcome of treatment	4.5	4.3
Satisfaction with evaluation and treatment at orthopedic office	4.5	4
Satisfaction in the recommended treatment for your injury	4.5	4