

# The Use of Technology to Improve Patient Outcomes – A Texting Study

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## Introduction

The majority of Americans own smart phones (Endgaget, 2014), which may be utilized to improve patient outcome.

In a concurrent study, we distributed a survey to patients with distal radius fractures, which showed that 84% owned smart phones. Additionally, 96% expressed interest in apps to assist and monitor their rehabilitation.

Prior to app development we needed to provide proof of concept. We developed a daily texting study in order to test patient willingness and ability to use their phone to monitor their adherence to the prescribed therapy program.

## Methods

- ❖ After obtaining IRB approval, patients were recruited from the previous technology survey.
- ❖ Eligible patients had a unilateral distal radius fracture and were actively engaged in a home therapy program.
- ❖ They also owned a smart phone with no history of texting overage charges.
- ❖ Once enrolled, patients would receive daily texts from their health care provider asking about completion of their wrist exercises.
- ❖ Failure to respond or a response of no resulted in a second text. Texts were sent for 30 continuous days.
- ❖ Patients were then asked about their experience in a post-text survey.

## Results

- ◆ Of the 26 patients identified from the technology survey, 21 were eligible for enrollment in the daily texting study.
- ◆ 14 patients chose to enroll. 10 were female. Age ranged from 24-65.
- ◆ We received a response, “yes, completed” or “not done yet”, on the first text of the day 77% of the time.
- ◆ When patients responded on the first text, “not done yet” was the response 8% of the time, and 34.4% of the time they did complete the exercises by the second text.
- ◆ When patients did not respond on the first text, 81% of the time they did not respond on the second text.
- ◆ On average, participants reported completing their daily exercises 81% of the days in the study.
- ◆ Age and gender did not impact response to texts or completion of exercises.
- ◆ In post text surveys, 100% felt that the daily texts were useful reminders and provided them with motivation to complete their exercises.



## CONCLUSIONS

Patients are willing to and capable of using their smart phone to adhere to a daily exercise program, which is monitored by their health care provider.

Patients found this interaction useful and motivating, which provides proof of concept for the development of an app to assist in patient exercises and to track/monitor patient progress.