

# Patient Preference Using a HIPPA Compliant Healthcare Texting App Over Conventional Telecommunication

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## Introduction

The ability to communicate with patients effectively continues to be a major hindrance for physicians and physician offices<sup>1</sup>. Coordinating care via conventional telecommunication, involving making calls to a healthcare facility or call-center for appointments and follow-up, is often fraught with the difficulties of long wait times, which in turn discourages patients' confidence in obtaining timely and appropriate care. Despite this, the prevalence of call centers in medical practices is predicted to increase within the next decade<sup>2</sup>.

The advent of numerous technologic advancements and software solutions have offered opportunities to enhance the accessibility of healthcare providers with their patients. Specifically, multiple mobile device "apps" have sprouted in the healthcare field, specifically designed to be HIPPA compliant and utilized by providers<sup>3</sup>.

Various EMR-linked patient portal applications have shown to be well received and helpful in avoiding unnecessary ER and office visits<sup>4</sup>. While many of these systems allow for updates to be posted on patient's computer or mobile devices, research into the effectiveness and practicality of smartphone exclusive applications, utilizing direct-to-provider texting features, is lacking.

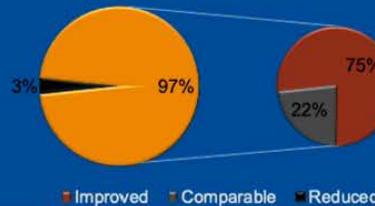
We investigated patient preference using a smartphone, HIPPA compliant healthcare texting app, compared to conventional telecommunication with the office, in perceived quality of care, as well as surveyed the impact that these interfaces have on preventing unwarranted ER visits.

## Methods

This study utilized a retrospective review from a single private-practice surgeon specializing in hernia repair in Indianapolis, Indiana.

- Patients with access to a smart phone who received care between July 2017- March 2020 were offered care with the direct-to-provider texting healthcare app, Klara.
- The Klara patient communication app allows for direct-to-provider text messaging, developed in 2016
- An anonymous, depersonalized Qualtrics link was distributed to all patients with instructions to complete an online survey, assessing satisfaction and preference using the app compared to their cumulative historic experience calling physician offices.
- Patients were asked if a concern for needing an ER visit ever occurred during their care, and how using the app influenced their decision
- Patient demographic information included a survey of age

Chart 1: Quality of Care with Klara Compared to Conventional Telecommunication (n=90)



90 Patients surveyed:  
70% age 50 or older



86% preferred the mobile app over conventional telecommunication



Unnecessary ED visits avoided in 9% of patients

## Results

- Surveys were submitted in March 2020 to the entirety of the private practice patient registry via email, as well as through the healthcare texting app, cumulating to 320 patients.
- 90 patients completed the entirety of the survey at 9 months
- Age demographics were recorded (Table 1), median age range 50-60 years old, with the highest category of respondents between 60-70 years old
- Chart 1 demonstrates 97% of respondents felt using the app was non-inferior to conventional modes of telecommunication
- A majority (75%) of patients experienced an overall improved quality of care
- 86% of patients preferred using the app over calling the office when needing to communicate with their physician
- While 84% of patients never felt the need to seek attention in an emergency department, 9% of respondents had an unnecessary ED visit avoided after consulting their physician through Klara first

## Discussion

These results from a small private surgical practice demonstrate that patients find communication with their physician via mobile texting to be superior to the conventional method of phone calls to the physicians office. These results were apparent despite the predominance of older respondents included in this study, which challenges conventional notions that modern technological innovations may be too complicated or inaccessible to this population of patients. However, a discrepancy between those who perceived the quality of care with the app to be comparable or superior to conventional telecommunication (97%), compared to those who would overall prefer the mobile app over calling the office (86%) may signify the momentum of conventional telecommunication making adoption of contemporary technology slower.

The impact of effective communication using Klara is also reflected in the 9% of patients who were able to avoid an unnecessary visit to the ED. Patient complaints can be viewed by the entire care team assigned to a patient in real time, and allows triaging of benign, non-urgent symptoms away from the ED. The impact of this finding, and of this new technology, may potentially reduce healthcare costs and the liberate emergency departments.

Limitations to this study include its small sample size, limited demographic information, limited external validity, and lack of a controlled comparator group. An additional source of bias was that only those with smartphones were enrolled in this study, potentially skewing patient preference toward comfort and familiarity with mobile apps. Finally, a low response rate (<30%) potentiates selection bias and reduces the internal validity of this study. Additional larger cohort studies that capture a larger proportion of candidate responses, and that introduces more expansive demographic information are needed to validate the results of this study.

## References

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## Acknowledgements

We would like to thank the Indiana Hernia Center for supporting this presentation.