

Impact of Mobile Text Reminders on Medication Compliance

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Purpose

The purpose of this scoping review is to identify and evaluate current literature to determine the impact of mobile text reminders on patient compliance with medications.

- Using mobile reminders, patients can be prompted to take their medication, schedule their follow-up appointments, or fill their prescription to encourage compliance and better overall health.

Specific Aim

- To determine whether daily reminders using mobile text messaging results in significant change in medication compliance.

Background

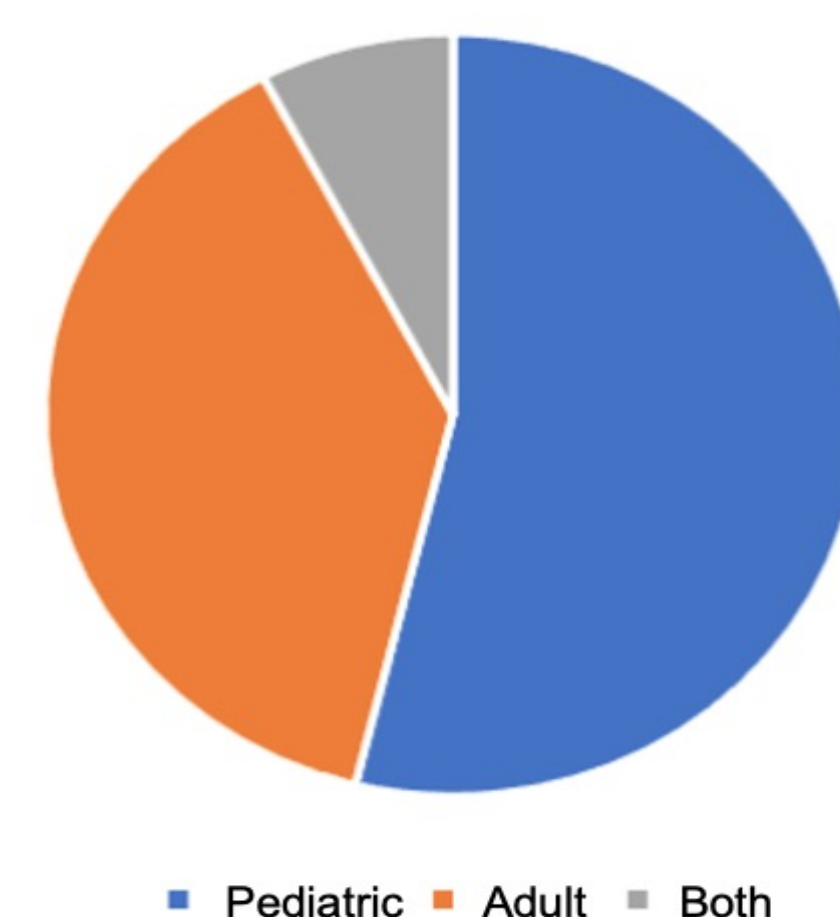
- Medication non-adherence is an international concern and associated with poor health outcomes.
- Patient noncompliance with medication leads to longer and more frequent infections and health issues.
- 50% of the time medication is not taken as prescribed.
- The Centers for Disease Control and Prevention (CDC) estimates that medication non-compliance results in:
 - 30 - 50% of treatment failures in adults and children with chronic diseases.
 - 125,000 American deaths annually.
- Using mobile reminders, patients can be prompted to take their medication, schedule follow-up appointments, or fill their prescription to encourage compliance and better overall health.
- Mobile text messaging approximately doubles the odds of medication adherence.
- Text messaging and app interventions display improvements in rates of medication adherence for health conditions in adults and children.



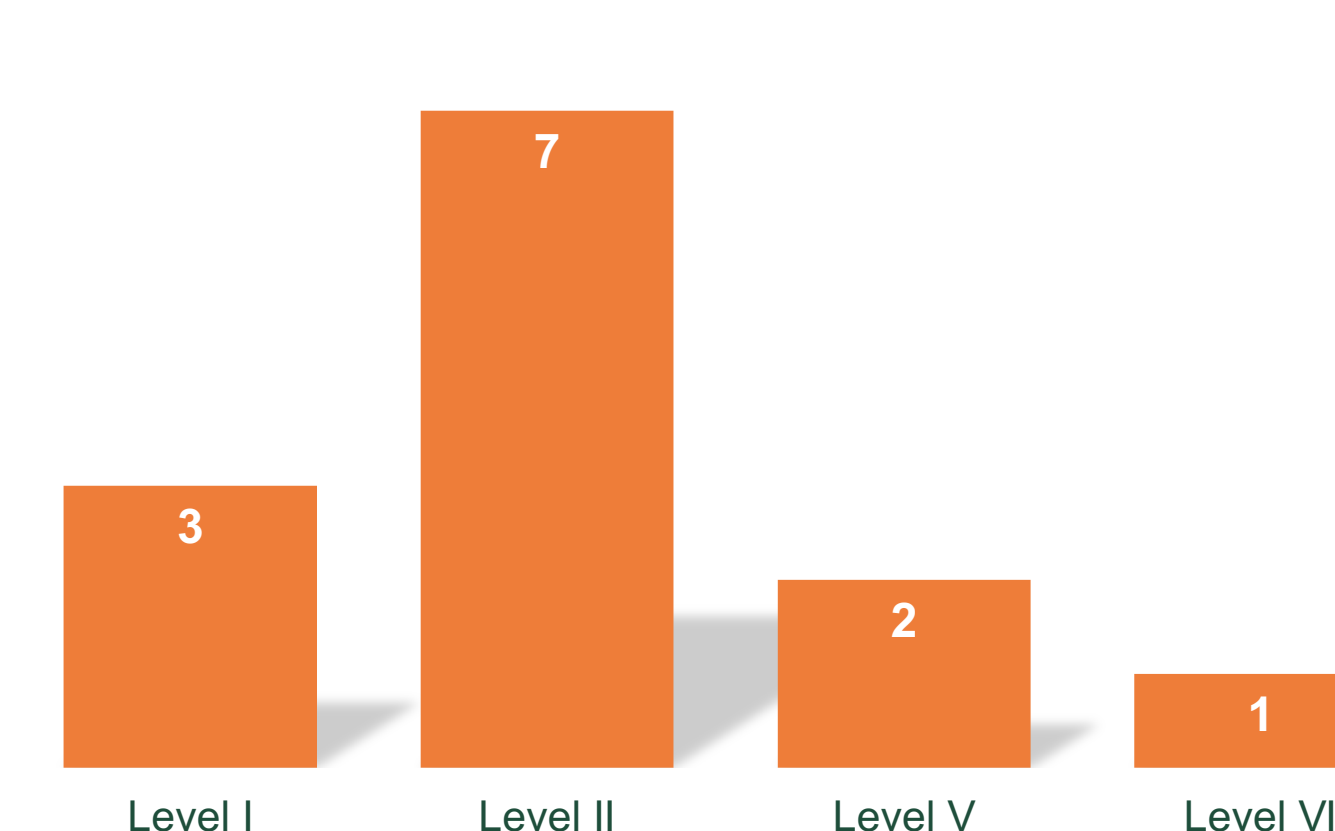
Methods

- PubMed, LibKey, and EBSCO databases were utilized to identify articles.
 - The search included the terms “text message reminders,” “automated medication reminders,” “medication reminders,” “automated reminders,” “pediatrics,” and “children.”
- 109 articles were initially identified.
- The article results were first narrowed by:
 - Publication date to reflect the last 6 years.
 - Full-text articles.
- Rapid critical appraisal was conducted to further narrow the results.
- 13 articles were identified for this scoping review.
- The 13 articles were reviewed for the following data:
 - Patient age, health issues, method of digital reminder, population size, and length of study.

Characteristics of Evidence



Levels of Evidence



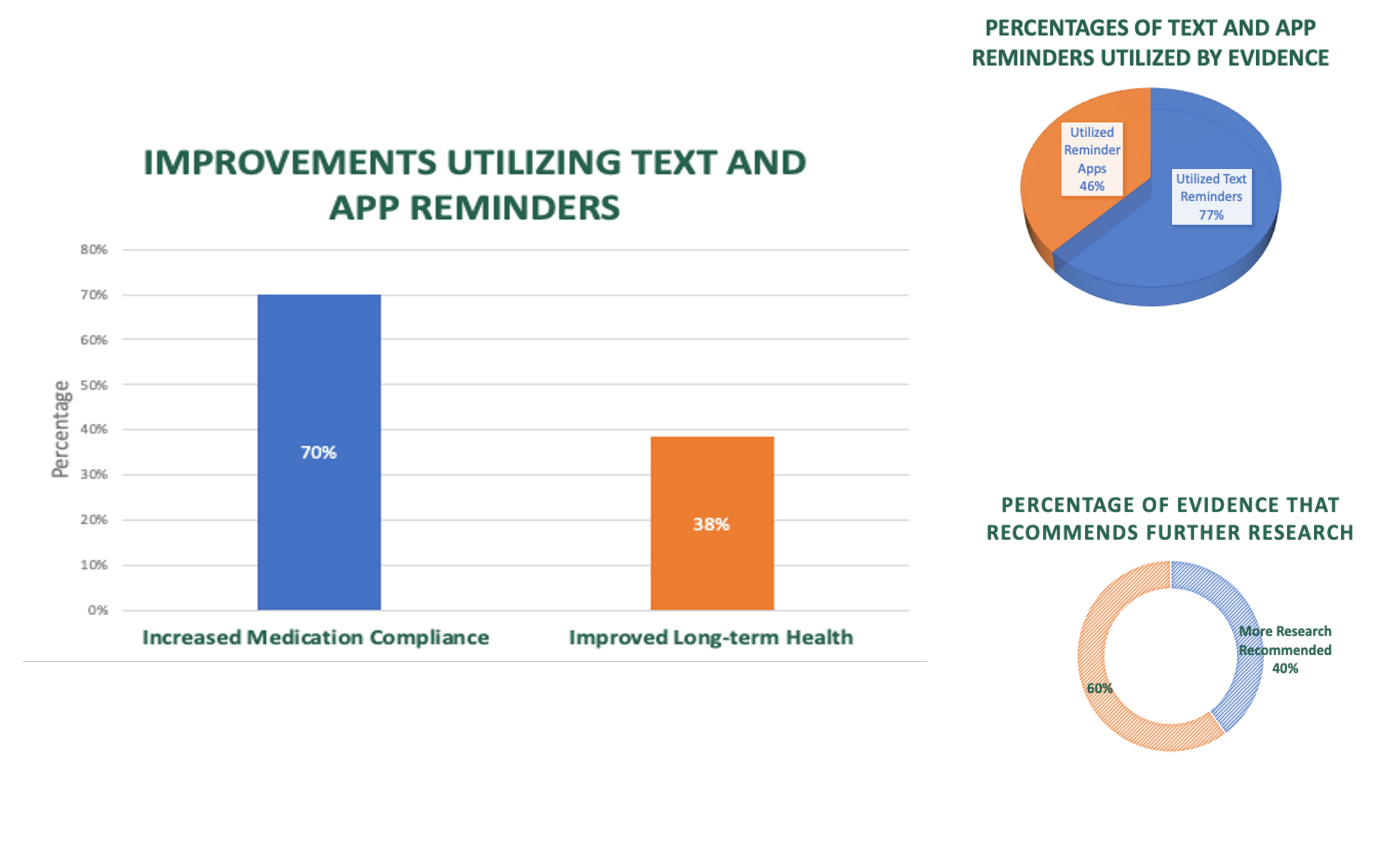
Results

- ~ 70% of the articles show an increase in medication compliance.
- These studies show clinically significant improvements in:
 - Medication adherence
 - Health outcomes
- ~ 40% show need for further research including increasing study participants and length of time for the study.
- Overall, these studies trend toward medical compliance, but further research with broader population sizes and longer multicenter studies could better confirm this.

Limitations

- Small sample sizes and inefficient study lengths.
- Only a small number of studies utilized caregivers for reminder systems and medication administration in the pediatric populations.

Results



Implications for Practice

- Mobile text reminders can improve patient medication compliance.
 - Many studies show a positive effect on long-term health.
 - This improvement in compliance can decrease negative sequelae associated with poor medication adherence in patients with acute and chronic health conditions.
- These results are promising and promote continued research on implementing technology to improve health outcomes.
- Many studies showed a positive effect on long-term health.
- Further research would be beneficial.

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