

Text Messaging to Improve Hypertension Medication Adherence in African Americans

Principal Investigator:	Buis, Lorraine, M.S.I., Ph.D.
Organization:	Wayne State University
Mechanism:	PAR: HS08-269: Exploratory and Developmental Grant to Improve Health Care Quality Through Health Information Technology (IT)(R21)
Grant Number:	R21 HS 019092
Project Period:	September 2010–September 2012
AHRQ Funding Amount:	\$172,260
Summary Status as of:	December 2010

Target Population: Adults, Hypertension, Racial or Ethnic Minorities*: African American

Summary: Hypertension is a major public health concern and is the leading cause of cardiovascular disease worldwide. Chronic hypertension is particularly onerous for African Americans as they are more susceptible to the condition. Poor adherence to prescribed medication regimens is a major problem because, in spite of evidence that hypertension medications can reduce the risk of stroke and myocardial infarction, only about half of patients who have been diagnosed with hypertension adhere to those regimens.

Mobile phones and text messages are becoming widely integrated into daily life and may offer a simple and less labor-intensive way to enhance medication adherence. This project will develop and test an automated text message system to improve medication management by helping individuals self-monitor adherence through medication logging, adherence reminders, and feedback on adherence goals. The text messaging system will be assessed by blood pressure measurements, from baseline to 1 month followup, among African Americans with uncontrolled hypertension, and by participant perceptions of intervention effectiveness and satisfaction. It is theorized that individuals who use a mobile phone-based automated text message system will have improved medication adherence, medication self-efficacy, and blood pressure control.

This research is one of the first theoretically driven text message interventions for improving medication adherence among African Americans. The intervention is a highly-innovative, scalable, and adaptable technological infrastructure that can be applied to other public health concerns.

Specific Aims:

- Utilize patient participant feedback in the development of a mobile phone text message system to improve adherence to antihypertensive medications. **(Ongoing)**
- Understand the effect of the newly developed text message system on changes in medication adherence, medication self-efficacy, and blood pressure from baseline to 1 month follow up in African Americans with uncontrolled hypertension. **(Upcoming)**
- Assess participant perceptions of intervention effectiveness and satisfaction in order to guide further system refinement. **(Upcoming)**

2010 Activities: Two recruitment sites were identified in the original grant application. After receiving funds for the project, the grantee contacted the sites to prepare for the focus groups. The grantee learned

that the first site had recently relocated and that the research assistant who worked at this site resigned, both of which delayed recruitment. The grantee found that the second site was difficult to contact and engage in study participation, and is considering replacing the second recruitment site. These recruitment issues delayed the initiation of focus groups. Additional project activities have focused on preparation for the focus groups, including hiring staff, developing and refining the focus group script, and revising recruitment materials for the internal review board.

Grantee's Most Recent Self-Reported Quarterly Status (as of December 2010): The project is slightly delayed due to the issues with the recruitment sites. The grantee anticipates getting back on track in the first quarter of 2011. The project is somewhat underspent due to the delays described in the 2010 Activities section.

Preliminary Impact and Findings: This project has no findings to date.

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions in care settings, and the use of electronic exchange of health information to improve quality of care.

Business Goal: Implementation and Use

* *AHRQ Priority Population*