

A Controlled Trial of Mobile Short Message Service Among Participants in a Rural Cardiovascular Disease Prevention Program

The following is a synopsis of “A Controlled Trial of Mobile Short Message Service Among Participants in a Rural Cardiovascular Disease Prevention Program,” published in March 2019 in *Preventive Medicine Reports*.



What Is already known on this topic?

Every day, people make choices that affect their cardiovascular health, including choices related to diet and exercise. Health programs can help participants make everyday heart-healthy choices through screening and practical education. But keeping participants engaged over long periods of time can be challenging, especially when participants live in rural areas with less health care system access.

Sending text messages to participants in health programs may help participants stay engaged longer and live more healthily. Text messaging as an intervention has shown promise in recent research but has not been tested among rural medically underserved populations that might benefit from such interventions' low cost and ease of use.

What is added by this article?

One program in Colorado provides cardiovascular disease screenings and teaches healthy living strategies to rural medically underserved individuals. Many individuals who receive a screening through the program do not return, but participants who have returned for a second screening have seen some improvements in cardiovascular health. Researchers aimed to learn whether sending daily follow-up text messages to first-time screeners would improve long-term participation, health behaviors, and cardiovascular health.

Researchers enrolled 204 participants from five program worksites to receive daily text messages, with 408 participants from other sites serving as a comparison group. Researchers also worked with community focus groups to develop a set of health promotion text messages, such as, “Save over 100 cal by making sandwich wraps for lunch using whole-wheat tortillas instead of bread,” and, “Do you have a health goal? Give your CHW, [name], a call to share your progress or set a new health goal.” These messages were sent every day to everyone in the first group. After a year, the two groups' long-term participation, reported health behaviors, and follow-up measurements were compared.

Researchers found that receiving text messages did not significantly affect most indicators of participation, reported health behavior, or cardiovascular health. Participants who received text messages were more likely to report that they had cut back on fat intake in the year since their first screening, but body mass index (BMI) did not significantly differ between the two groups. However, participants who reported in a closeout survey that they found the text messages both helpful and motivational “all the time” were more likely to have stayed involved in the program than others who received text messages.

What are the implications for these findings?

Although text messaging has shown promise as a health promotion tool, its effects on the health behavior of this population were unclear. It is possible that text messaging had no impact on health behavior, had too little impact to be statistically significant, or influenced only certain subgroups of people. Future research on text messaging could look into increasing statistical power by recruiting more participants, using personalized texting strategies, and trying other innovative approaches to reach rural medically underserved populations.

Citation

Gore, M. O., Krantz, M. J., Albright, K., Beaty, B., Coronel-Mockler, S., Bull, S., & Estacio, R. O. (2019). A controlled trial of mobile short message service among participants in a rural cardiovascular disease prevention program. *Preventive Medicine Reports*, 13, 126–131. doi:10.1016/j.pmedr.2018.11.021.

Resources

- Martinez, L. M. (2018). Tackling eHealth literacy [Public Health Matters Blog]. Retrieved from <https://blogs.cdc.gov/publichealthmatters/2018/03/tackling-ehealth-literacy/>.
- Centers for Disease Control and Prevention. (2015). Preventing heart disease: Healthy living habits. Retrieved from https://www.cdc.gov/heartdisease/healthy_living.htm.
- Centers for Disease Control and Prevention. (2016). Mobile telephone text messaging for medication adherence in chronic disease: A meta-analysis. Retrieved from https://www.cdc.gov/dhdsp/pubs/docs/SIB_April2016.pdf.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



**Centers for Disease
Control and Prevention**
National Center for Chronic
Disease Prevention and
Health Promotion