

Screen time for older adults: Mobile health tech can support seniors with heart disease

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Mobile health technology can be beneficial in encouraging lifestyle behavior changes and medication adherence among adults ages 60 and older with existing heart disease, yet more research is needed to determine what methods are the most effective, according to a new scientific statement from the American Heart Association published today in the American Heart Association journal *Circulation*:

Cardiovascular Quality and Outcomes.

Mobile health technology—the use of mobile and wireless technologies to support the achievement of health objectives—can include voice and short messaging services (text messaging), global positioning systems (GPS) and/or Bluetooth technology, as well as wearable devices that can monitor and inform the user about specific health measures or behaviors to improve health.

"Over the last decade, mobile health technology, especially the wearable technology and mobile health application markets, has grown substantially," said the chair of the statement writing committee Erica N. Schorr, Ph.D., B.S.B.A, R.N., FAHA, an associate professor in the Adult and Gerontological Health Cooperative at the University of Minnesota School of Nursing. "There is, however, a common misperception that mobile health technology use is lower among [older adults](#), when in fact most Americans aged 60 years and older own a cell phone and spend a significant amount of leisure time in front of a screen. This statement highlights the potential benefits that mobile health interventions can provide for monitoring, prompting, encouraging and educating older adults with [cardiovascular disease](#)."

An estimated two-thirds of all people with [heart disease](#) are 60 years old and over, and the prevalence of physical activity declines with aging, particularly in people who have heart disease. People who have experienced a major cardiac event, such as a heart attack or stroke, are at 20 times the risk for future cardiac events compared to people without heart disease, therefore more research is needed to identify strategies to slow the progression of heart disease—secondary prevention strategies—in this population.

The scientific statement highlights research from 26 studies from the past 11 years that examined mobile health technology for secondary

heart disease prevention in adults ages 60 and older with existing heart disease.

Studies that incorporated text messaging and website resource information showed improvements in people's physical activity and other lifestyle [behavioral changes](#) after three months of enrollment and led to an increase in medication adherence among study participants. Significant improvements in medication adherence have also been noted in some trials when study participants used a mobile app or received a text messaging reminder. A large systematic review showed that successful mobile health interventions include frequent, personalized, two-way messaging.

"We know that controlling blood pressure, blood sugar and cholesterol are essential secondary prevention strategies and often require medication management," added Schorr. "Reducing sedentary time, increasing physical activity, maintaining an optimal body weight and adopting a healthy diet are other significant lifestyle strategies to optimize the health of individuals with cardiovascular disease. Wearable devices and mobile devices and applications play an important role because they can assist individuals in monitoring and tracking health behaviors and heart disease risk factors, referred to as the AHA's Life's Simple 7, to reduce their risk of a cardiac event and achieve ideal cardiovascular health."

In the 60 and older age group, the research indicates that the ease of using a program or app is a significant factor in this group's willingness to use a device, service or program. In the studies where participants reviewed apps, over half of the users reported they were easy to operate. However, the statement authors point out that many of the studies enrolled a small number of people, and the apps were geared to a very specific use, thus limiting external validity.

There were some other limitations in the research reviewed. Although the results for studies with a text messaging component were positive, it did not focus solely on older adults, making it hard to determine the impact of text messaging specific to older adults with [heart](#) disease. Additionally, differences among groups based upon race, ethnicity, sex or age were not measured. Few of the identified studies made a comparison between behavioral interventions with mobile health technology versus behavioral interventions with no technology, so the results relative to traditional interventions are unknown.

The statement writing committee notes there are challenges and barriers to mobile health use among older adults. People in underrepresented racial and ethnic groups are less likely to use technology, and some older adults have concerns over security, costs and privacy issues. There may also be cognitive, physical, visual and hearing limitations that could impact an older adult's ability to use technology. Some older adults prefer in-person visits with health care professionals, as technology may be considered isolating. Yet, research has shown adults who engage in technology can actually become more connected to others and make small, yet meaningful lifestyle and behavior changes that can help improve their health.

Schorr added there are still important questions to answer about which mobile health interventions and technology would be most effective and accepted, and how best to use them to see clinically meaningful changes in secondary cardiovascular prevention in older adults. "Answering these questions is critical to identify and implement effective, widely accepted, cost-effective and time-efficient mobile interventions that improve [health](#) outcomes for older adults," she said.

More information: *Circulation: Cardiovascular Quality and Outcomes* (2021). [DOI: 10.1161/HCQ.000000000000103](https://doi.org/10.1161/HCQ.000000000000103) , www.ahajournals.org/doi/10.1161/HCQ.000000000000103

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