

# Smartphone app may help older adults manage serious mental illness and chronic health conditions

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The use of new technologies in geriatric psychiatry shows promise for advancing personalized medicine and improving patient care. A new study in the *American Journal of Geriatric Psychiatry* describes the successful adaptation of an integrated medical and psychiatric self-management intervention to a smartphone application for middle-aged and older adults with serious mental illness.

Care of middle-aged and older [patients](#) with serious [mental illness](#) is complicated. Often these patients suffer from other medical conditions and are at increased risk of premature death. They have two to three times higher health costs than individuals in the general population. In order to help patients cope with their [illness](#), researchers from Dartmouth developed a smartphone-based [intervention](#) using an adaptive systems engineering framework and principles of user-centered design. They found that even patients with limited technical abilities could use this App successfully. The App and intervention protocol were developed using commercially available products from Wellframe.

"The use of mobile health interventions by adults with serious mental illness is a promising approach that has been shown to be highly feasible and acceptable," explained lead investigator Karen L. Fortuna, PhD, of the Dartmouth Centers for Health and Aging and the Geisel School of Medicine at Dartmouth. "These technologies are associated with many advantages compared with traditional psychosocial interventions,

including the potential for individually tailored, just-in-time delivery along with wide dissemination and high population impact. Nevertheless, the process of adapting an existing psychosocial intervention to a smartphone intervention requires adaptation for a high-risk group with limited health and technology literacy."

Following multiple design iterations, investigators tested the App's usability. Ten participants (mean age of 55.3 years) with serious mental illness and other chronic health conditions reported a high level of usability and satisfaction with the [smartphone application](#).

The App takes patients through 10 sessions over a period of approximately three months, covering topics such as stress vulnerability and illness, medication adherence and strategies, and substance and medication abuse. Physicians can remotely monitor App use, and intervene when problems are detected, facilitating telemedicine for less accessible populations.

According to Dr. Fortuna, "Smartphone applications also potentially facilitate patient engagement in participatory, personalized, and preventative care. As the healthcare industry increasingly embraces prevention and illness self-management, it is important for physicians and patients to be actively involved in designing and developing new technologies supporting these approaches."

The use of smart devices is poised to revolutionize how we think about clinical information and facilitate personalized interventions in a way that could not have been conceptualized before these technologies came into existence. This study is part of a special issue of the *American Journal of Geriatric Psychiatry* that captures an important moment in the evolving relationship between technology and the clinical care of [older adults](#).

"It has often been noted that with the pace of technology development being so rapid, research may not be able to keep up. While this may be true in the most literal sense, this set of nine papers represents a major step in developing a body of research to guide how technologies can interface with clinical care," noted guest editor Ipsit V. Vahia, MD, McLean Hospital, Belmont, MA, and the Department of Psychiatry, Harvard Medical School, Boston, MA.

These papers highlight the potential of technology based-approaches, provide direction on how this area of work needs to develop, and put a spotlight on the major pitfalls that the field must consider in order for technologies realize their full potential. They also address the relative lack of evidence to date supporting use of these technologies and the lack of clarity on data security and privacy related to use of these devices.

Dr. Vahia continued, "While the potential of [technology](#) to impact [geriatric psychiatry](#) care in this manner has long been recognized, this issue provides substantial evidence to demonstrate that this potential is translating into reality. Simultaneously, it also makes clear that the work is just getting started."

**More information:** Karen L. Whiteman et al, Adapting a Psychosocial Intervention for Smartphone Delivery to Middle-Aged and Older Adults with Serious Mental Illness, *The American Journal of Geriatric Psychiatry* (2017). [DOI: 10.1016/j.jagp.2016.12.007](https://doi.org/10.1016/j.jagp.2016.12.007)

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