



Contributor:

Alex Kent, MPH

Program Director



The LeadingAge Center for Aging Services Technologies (CAST) is focused on accelerating the development, evaluation and adoption of emerging technologies that will transform the aging experience. As an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives, CAST works under the auspices of LeadingAge, an association of 6,000 not-for-profit organizations dedicated to expanding the world of possibilities for aging.

For more information contact:

Zohra Sirat, Project Manager, CAST
zsirat@LeadingAge.org
(202) 508-9438
LeadingAge.org/CAST



Using Technology to Reduce Social Isolation and Depression in Homebound Older Adults

Categories

Reduce Social Isolation
Reduce Feelings of Loneliness
Reduce Depression
Increased Social Networks
Increased Quality of Life

Organization Name

Care at Home NJ

Organization Type

A not-for-profit organization, associated with Vanguard Medical Group that provides resources to support the homebound and their families and caregivers.

Organization Description

- Placing customized, large-screen computers in the patient's home, which helps our patients stay connected with loved ones and with the Care at Home NJ staff. Our social worker conducts weekly outreach via video conferencing, also known as Skype visits.
- A comprehensive Resource Guide on our website that lists medical, social, and community services, including those providers who make house calls to the homebound older adults.
- A monthly Caregiver Support Group, held on the second Thursday of each month, offered in both the afternoon and evening session.
- An online Discussion Forum, moderated by our social worker, which provides a place for our patients and their families to connect with others to find the services they need, like housing, in-home care, medical services, or food and transportation.

Project Description

In 2014, CAHNJ sought to study the use of technology by homebound older adults as a way to facilitate socialization and access to medical care. Criteria for the study also included candidates who are unable to drive, and have a limited support network. Older adults who are selected for the study are initially evaluated for their perceived social isolation and emotional depression. Additionally, during the course of the study, participants are reevaluated for these parameters, along with the impact of the interventions deployed on overall health status, degree of social frailty, and improved support for both the older adults and their caregivers. Social frailty is defined as a continuum of being at risk of losing, or having lost, resources that are important for fulfilling one or more basic social needs during the life span. In considering a technology solution for their homebound older adults, CAHNJ has chosen a touchscreen computer device, Telikin, designed specifically for seniors, to provide easy accessibility to video chat, email, internet, and other software applications using a custom user interface. Older adults assessed to be good candidates for a technology solution use the Telikin computer to communicate with CAHNJ personnel, as well as family and friends.

Socialization Modality

Participants receive the easy to use, Telikin touchscreen computer designed for older adults. The customized easy to use interface with its large menu buttons includes a built in video chat feature, using skype. A social worker helps set up a video chat session to include family members, the primary care provider, and other older adults participating in the study. The social worker schedules and leads a regular online session to engage the participants in the use of the device and to develop a social network. Participants are encouraged to contact each other and any family directly through the computer. The Telikin computer provides an easy email program to help older adults connect with family and friends and the staff. It also offers web browsing capabilities with short cuts to popular sites, including Facebook, You Tube and Twitter. Telikin also provides an easy photo sharing feature, making it easy to receive and manage photos, a contacts feature organized like a traditional address book, built in Kindle reader and games. The built-in calendar helps older adults and their families stay organized and up to date with events and appointments.

System Embodiment

Telikin computers are available in two sizes of all-in-one desktop models, as well as a laptop model. All are touchscreen and come fully loaded with software built on a protected Linux platform.

Business Model

CAHNJ is a non-profit, funded by a foundation that was created to improve the quality of life for socially isolated seniors. CAHNJ's 3 social workers also provide social service help related to housing, transportation, access to food, and medical and behavioral health referrals. The heart of CAHNJ is its use of technology: eligible seniors receive a free, senior-friendly laptop or desktop computer, or tablet set up with an email and Skype account. Study participants' video chat with one of our Social Workers once a week to give them a friendly voice to talk to.

Implementation/Response Approach

Each participant's baseline measures of perceived social isolation and emotional depression are assessed and then the impact of the interventions deployed on overall health status, degree of social frailty and improved support for both the elderly and their caregivers are evaluated.

Older adults assessed to be good candidates for a technology solution are provided with the Telikin computer to communicate with CAHNJ personnel, as well as family and friends. Email and skype accounts are set up if needed and participants learn how to use the computer from remote training sessions provided by Telikin U.S.-based support agents and directly in their homes from the CAHNJ staff. The Social Worker sets up a video chat session to include family members, the primary care provider, and other older adults participating in the study. The Social Worker leads a regular online video chat session to engage the participants in the use of the device and to develop a social network. The study participants are encouraged to contact each other and any family directly through the computer. Participants are evaluated on six month intervals during the study period, which has been ongoing since 2014.

Outcomes

Overall, the data collected from October 2014 through September 2017 shows a significant reduction in social isolation and depression among the study participants.

Since receiving their devices, 69% of our participants showed improvement in the Social Isolation scale. In this age group, the number of family and friends can decline as friends and family pass away, so sometimes the shrinking of the social pool is inevitable.

On the Patient Health Questionnaire, PHQ-9, a 9 question depression screening tool, 57% of our group improved, suggesting that our effort to improve their socialization is reducing depression and isolation.

Participants become more comfortable with computer technology and enjoy many features including email, video chat, games and web browsing, including Facebook.

Testimonial

Marianne C. is a 67 year old woman who lives alone and has a history of chronic mental illness as well as significant anxiety. She has described her Telikin device as a "godsend" and when expressing gratitude, her computer is at the top of her list. She goes on the internet to look up news and weather, Skype with her social worker, sends and receives e-mails, does word processing, watches TED talks, watches/ listens to lectures on mental health issues, goes on the PBS site, looks up inspirational quotes and magazine articles, and uses the online calendar for all of her appointments. She has stated on multiple occasions how the computer has changed her life, increased the quality of her days and elevated the level of connectedness she feels towards others.

Challenges and Pitfalls to Avoid

As with any computer, internet access is needed in order to use programs such as video chat, email and web browsing. Some participants already had internet service. A few participants had challenges with affording internet service. For those participants who cannot obtain internet access, CAHNJ provides a 4 G/LTE tablet for use.

Some participants have stated that they were limited in space for a desktop model. Care at Home began utilizing the Telikin Freedom touchscreen laptops for some participants.

Some of the participants had never used a computer.

Along with the easy to navigate software designed for seniors, Telikin provides U.S.- based support and remotely assists in account set ups and tutorials on using the computer. Participants also receive in home training from the Care at Home staff in order to help participants become comfortable with using the computer. Participants enjoyed different capabilities including playing games, web surfing, email and video chat. However, a few reported that learning technology was daunting. With continued encouragement and support, some people become more comfortable and see the benefits of technology for their lives.

Changes in Skype's video chat interface resulted in some challenges requiring participants and staff to relearn how to use the video chat screen and resulted in staff spending additional time helping clients and utilizing support for assistance. Video chat quality with skype is related to the quality of the internet connection and this can be variable. As with any computer, a wired Ethernet connection will provide a more consistent performance.

To date, we have had 30 people drop out of the study due to death, move to a living facility where having a computer is impractical, ill health, or lack of interest.

Lessons Learned/Advice to Share with Others

When selecting participants for study, criteria should include selection of patients who express interest in learning technology, and have the ability to use the technology. Patients also must be willing to commit to the weekly sessions and subsequent study evaluations.