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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.

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## Evaluation of Selfhelp Community Services' Virtual Senior Center

### *Categories*

Prolonging Independence/Aging in Place, Quality of Life, Health Outcomes

### *Organization Name*

Selfhelp Community Services

### *Organization Types*

Large not-for-profit senior services organization offering a broad range of programs.

### *Other Partners*

Consumer Technology Association Foundation, Wright Medical Center on Aging, NSLIJ CareConnect, Guggenheim Museum, MOMA, Museum of Tolerance, New School: Institute for Retired Professionals, NY Hall of Science, NY Philharmonic, the Jewish Museum, New York City Council, UJA-Federation of New York, and many volunteers.

### *Organization Description*

Selfhelp Community Services, Inc. (Selfhelp) has been caring for New York City's most vulnerable and dependent populations since it was founded in 1936 by refugees from Western Europe. Today, Selfhelp serves more than 20,000 individuals from diverse ethnic backgrounds each year, with a strong emphasis on programs that enable poor and underserved elderly to remain in their homes and active in their communities.

Selfhelp's programs include: independent, affordable senior housing, Naturally Occurring Retirement Communities (NORCs), social adult day care, senior centers, home care, case management, enhanced case management for Holocaust survivors, community guardianship, and client-centered technologies. These programs provide the supports that enable Selfhelp's clients to remain independent as they age.

The majority of Selfhelp's clients are low-income. For example, in order to qualify for Selfhelp's Independent Housing, the 1,350+ senior applicants were required to prove their low-income status. Two million hours of homecare services are provided annually across all Selfhelp homecare services, of which 70,000 hours are to dual eligible (Medicare and Medicaid programs) seniors. Additionally, Selfhelp's senior centers' clients enrolled in the case management services and community guardian programs are also mostly low-income older adults.

## Selfhelp's mission:

*Selfhelp is a not-for-profit organization dedicated to maintaining the independence and dignity of seniors and at-risk populations through a spectrum of housing, home health care, and social services and will lead in applying new methods and technologies to address changing needs of its community. Selfhelp will continue to serve as the “last surviving relative” to its historic constituency, victims of Nazi persecution.*

## Project Description

Selfhelp's Virtual Senior Center (VSC) Program seeks to enrich the quality of life of socially isolated homebound seniors. It accomplishes this goal through a technology-driven program whereby homebound older adults use touch-screen computers with webcams to participate in interactive classes on a wide range of topics including: current events, history, exercise, well-being, music, and museum tours. The participants can see, hear, and talk with each other during the classes in a discussion format, where the facial expressions and body language enhance the overall connectedness among participants, thanks to the system's audio-visual connectivity.

## System Type

As a technology initiative, the VSC uses the following components:

- All-in-One touchscreen computers, including a webcam, speakers, and a microphone.
- Volunteer facilitators, who lead the discussion-oriented classes.
- An intuitive and easy-to-use web service that is adapted to the needs of older adults. This service provides both the interface that participants see on their All-in-One devices, and the location for class facilitators and administrators to manage classes and administer the program. The service also provides easy access to the Web, email, games, and Skype, and can be individualized to meet the specific content desires of the participants.
- Functionality to help family caregivers manage homecare services, with a care plan checklist that either the family member or homecare attendant can complete each day, as well as a calendar to track doctor visits and other appointments.
- Ongoing discussion with participants and key stakeholders about what additional functionality

should be incorporated into the service. Soon, social games will be available where participants can see, hear, and speak with each other while they play card games on a virtual card table.

## Describe System Embodiment

When participants of the VSC Program turn on the device, it loads right to the VSC interface, bypassing the operating system and creating a special-purpose device. Participants can then view the classes that they want to attend. Many review the calendar that displays the forthcoming week's classes to determine how they will manage their time. A “Today's Schedule” screen displays the activities of the day and lists all the available classes.

The classroom environment can handle up to 20 video streams/participants who participate in active discussion. After capacity is reached, additional participants are placed into a “Spectators” area where they can see and hear what is happening in the class, and can participate if they “raise their hand” and the facilitator “acknowledges them” – much like a lecture hall. During the classes, the facilitators describe events, stories, or exercises which the participants comment on or participate in. There is a screen-sharing component that facilitates the museum tours as well as the computer training classes.

Participants can also navigate to a series of self-directed activities, such as email, Internet links, games, and Skype.



## *Business Model*

Grant income has predominately supported the VSC to date. This year, New York City Council provided funding, which we hope will become permanent, and Selfhelp commenced an earned-income strategy. Through this strategy, Selfhelp expects to earn income from subscription dues paid to access the service. Feedback from current subscribers suggests this form of expansion will eventually grow significantly.

## *Advantages to the Approach*

There are no other technology-based programs that provide homebound, socially isolated seniors with the engagement, socialization, and content that is provided by Selfhelp. While recruiting and developing classes may be labor intensive, the classes provide an engagement and enrichment factor that demonstrates technology is not to be feared, but that it serves as a practical and beneficial service that improves their quality of life. It is Selfhelp's strategy that once participants are comfortable with the device, additional services can be added to further ensure that older adults can live comfortably and safely within their home.

## *Outcomes*

Selfhelp conducted survey research among 200 of its participants between 2013 and 2014. Data was collected on study and control groups in Chicago, New York, and San Diego. The results confirmed three assumptions that Selfhelp held about the impact of the project.

1. Will the VSC reduce a person's sense of social isolation? This was proven by participants reporting an 85% reduction in their feeling of isolation, 60% reduction in their feeling very disconnected from family & friends, and 60% reduction in their feeling a lack of companionship.
2. Will the VSC make a health impact? An important statistic in determining a person's consumption of health resources is their self-reported health status. The percentage of intervention group members who reported good, very good or excellent health status increased by 51%. Furthermore, Selfhelp conducted a micro-pilot within this study with a geriatrician who customized a Chronic Disease Selfhelp Management program for our homebound participants. The results from survey research on this activity showed an improved confidence in managing their treatment, better communication skills with their healthcare

team, and greater willingness to share personal problems related to their health condition to receive a more holistic treatment program. Future research is anticipated with claims data where we seek to understand the economic impact the VSC can make in healthcare.

3. Could frail, homebound elderly learn, if not master, a computer and enter the digital age? The indicator that best confirms this hypothesis was the number of hours participants used the device: 107,785 total hours (equaling over 522 hours per participant), suggesting more than an average of 1 hour a day either in class or accessing the self-directed activities. We believed this was a significant accomplishment given the average age of our participants is 83.
4. Finally, when participants were asked if they agree with the statement, "Because of the VSC, my quality of life improved." 97% of them agreed!

## *Challenges and Pitfalls to Avoid*

One difficulty of the program is selecting candidates who will become active participants. We are still determining what defines engagement with the service, but there is a wide range of participant usage. Given the health challenges of this population, it is not surprising that some users decline over time in their usage, but we are building new services, such as the social games and caregiving checklist, that will further institutionalize the VSC into the daily routine of participants.

## *Lessons Learned*

We were originally concerned about the quality of programming we could develop with volunteer facilitators, but we've been delighted to see that our participants enjoy the classes that we offer, rating them on average 4.3 out of 5 (with 5 being the highest). Additionally, the question of providing a sufficient number of classes arose as the program grew. However, the issue was short-lived, as Selfhelp currently provides between 25 and 35 classes per week, with 2,339 classes provided in FY 2015.

Selfhelp also learned the importance of creating a quality "onboarding" program for participants. There is a need to engage the seniors with participation in the activities within the first few days/weeks in order to help them adjust their daily routine to include the VSC. Selfhelp developed a specific onboarding program to accomplish this.

Growing the technology has been an important part of Selfhelp's development. A significant amount of time was spent designing the interface initially to support growth. That design effort has paid off as there have been few complaints about the enhancements made to the technology over time.

### *Advice to Share with Others*

Social isolation is debilitating and a root cause for many chronic health conditions. But technology has a role to play in reducing this burden on individuals, families, and the overall healthcare system. We would encourage others to explore how their technology can be made "extremely easy to use," so that the oldest of the older adults can use it as well. Universal design is an important element to include, but one should delve further to follow adult learning theories and make the design intuitive for older adults to use. Navigating from one location to another should be easy to understand for the most elementary user. When designers confirm their intuitive navigation with a wide range of older adult users, they should find, as we did, that users aren't afraid of the technology, they rather embrace it.