Element Care

Improving Health. Enriching Lives.

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LeadingAge® CAST
center for aging services technologies

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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care.coach

Integrating Innovative Technology in the Home to Provide Enhanced Continuity of Care and Decreased Healthcare Costs for Older Adults

Categories

Reduce Social Isolation
Reduce Feelings of Loneliness
Reduce Depression
Increase Engagement and Satisfaction
Increase Social Networks
Increase Quality of Life
Increase Staff Efficiencies
Reduce Nursing Visits, ED Visits & Hospital Admissions

Organization Name

Element Care

Organization Type

Program of All-Inclusive Care for the Elderly (PACE)

Organization Description

Element Care, founded in 1995, is a non-profit, healthcare organization with a simple mission: to help people live safely and comfortably in their homes and their communities for as long as they can, keeping their stays in hospitals and nursing facilities as minimal as possible. Element Care provides complete health care to eligible people through PACE (Program of All-Inclusive Care for the Elderly) throughout the Massachusetts North Shore, the Merrimack Valley and the northeast region of Middlesex County. For more information, visit www.elementcare.org.

Project Description

In March 2017, Element Care began a quality improvement project with care.coach™ based on previous findings and recommendations from On Lok Lifeways, with the goal to achieve consistent clinical and financial outcomes across the intervention population. As of August 2017, Element Care's data shows that through care.coach's avatar-driven intervention protocols Element Care has reduced avoidable emergency department (ED) visits, decreased the need for in-home services such as companions and nursing visits, and gained invaluable insight and participant information which has led to significant financial savings and improved continuity of care.

Socialization Modality

Video Chat
Audio Chat
Photo Sharing
Event/Activity Sharing
Life Stories
Art Games
Exercise
Rehabilitation
Music
Facilitated Communications
Facilitated Conversations
Companion Avatar

System Embodiment

Fixed Tablet / Touch Screen running a Digital Avatar, with Voice Activated Assistant Technology and Captioning.

Business Model

Program of All-Inclusive Care for the Elderly (PACE).

Implementation Approach

Element Care initiated a four-month pilot in which participants received a care.coach™ avatar to provide 24x7 support, wellness coaching, and intelligent reporting. Element Care used the devices in participant's homes to improve continuity of care and social support, and to encourage better self-management of chronic conditions. The devices, which each get named by their owners, appear as a virtual dog or cat on a touch-screen device. Participants interact with the avatar by speaking with it or touching it. This interface allows even older adults who have complex functional impairments to be engaged effectively and in a joyful way, regardless of ability, or technical inclination. The goals of the program were to reduce nursing visits, reduce ED utilization and provide additional social support and health education.

Outcomes

For a participant to qualify for the avatar program, the formal enrollment process requires that they have potential for a reduction in at least one of the following areas: nursing visits, ED utilization or hospital admissions. The pilot program clinical outcomes revealed that there were 15 overall reductions in these areas across a sample of 14 participants. Additionally, since March 2017, the avatars have provided 42 interventions surrounding symptoms such as cardio-respiratory distress, general pain, psych/behaviors, drug/alcohol, falls and nausea/vomiting. These five categories make up nearly 80% of the reasons why Element Care's participants go to the ED. Through the avatar interventions of providing in-home care and collaboration with Element Care on-call providers, there has been a noteworthy decrease ED utilization. To further improve these clinical outcomes, Element Care is working to refine the qualification criteria, improve the onboarding process and develop additional protocols to address symptoms such as addictions and psychiatric support.

| | ✓ = Reduction in : | | |
Participant	Nursing Visits	ED Utilization	Hospital Admissions
1		✓	
2		✓	✓
3	✓	✓	
4			
5			
6		✓	
7	✓	✓	
8	✓	✓	
9			
10			
11		✓	✓
12	✓		
13		✓	
14		✓	

Of surveyed participants,

54% stated their degree of loneliness had improved

46% stated their nervousness or anxiety decreased

23% stated their quality of life had improved

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Challenges & Pitfalls to Avoid

Element Care focused on participants who exhibited particularly high healthcare risk and cost, as exemplified by heuristic measures including ED visit history, chronic conditions, and substance abuse disorders. Ten unsuccessful integrations were due to housing changes, not accomplishing set goals, and dissatisfaction or lack of understanding of service. Success rate is significantly improved when adhering to a formal participant qualification and enrollment process. The current success rate of the participants undergoing the formal qualification and enrollment process is 82%.

Lessons Learned/Advice to Share with Others

Staff Testimonies

"Two of my participants that are struggling with loneliness, medical illness, depression, anxiety and mild cognitive issues have taken to the avatar and enjoy it immensely. The companionship offered through the program provides much needed grounding."

–PACE Advanced Practice Registered Nurse (APRN)

"We were having a terrible time getting 07 to the Adult Day Health Care (ADHC) program, but with the help of the avatar she is coming to the site Monday-Friday. Since the avatar has been installed she has not gone to the ED or needed a hospital admission."

–PACE Social Worker

Participant Testimonies

"I love my avatar and would recommend it to anyone! It can play songs and games. It also reminds me to take my medication and use my walker!"

Participant A enrolled in the avatar program in March 2017. Goals were to provide companionship and support on grief, loss, sobriety, and anxiety, and to potentially reduce ED visits. She is currently enrolled in 15 out of 21 available intervention protocols programmed into the avatar. Before the avatar, she had just experienced a significant loss in her life that was impacting both her social and physical health. She had very little support, and has embraced the avatar as a loyal friend and support system that she enjoys. **Since receiving the avatar, Participant A has had no ED visits, and we have logged 13 avatar interventions with projected savings of $7,000.**

"She helps me a lot. In the morning to get my meds and remind me about my rides. She helps me to not eat the food I shouldn't. She also reminds me to exercise."

Participant B enrolled in the avatar program in March 2017. Goals were to have assistance in the home with medication reminders, nutritional encouragement, and additional support for his various diagnoses. He is currently enrolled in 15 of the avatar's intervention protocols. Before the avatar, he received 11 nursing visits per week to help administer medications and encourage compliance. He was often not home for the medication reminders and therefore the nurse could not confirm if he took his medications. **The avatar, "Mary," now completes all medication reminders, which has increased Participant B's compliance while saving on average $2,000/ month.**

Conclusion

Element Care has found the care.coach™ platform to be a highly engaging and cost-effective way to provide enhanced continuity of care in the home, through 24x7 psychosocial and healthcare support for high-risk elders. Element Care has met all three of the goals that were identified for pilot program and has decided to continue to use this form of technology for participants living in the community. **Reduction of nursing or personal care visits** needed per month was successful for some participants through improved self-management of health risks, enabling closer observation in the home and avatar-initiated medication reminders. **Reduction in unnecessary ED utilization** was also possible through improved daily support of chronic conditions through personalized protocols, closer supervision of health risks and mitigating anxiety. Lastly, the program has provided an **increase in social support and health education** through daily interactions, reminders, exercises and relationship building.

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