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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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## Improving Medication Compliance, Quality of Life, and Peace of Mind through Voice Assistant Technology

### Categories

- Reduce Social Isolation
- Reduce Feelings of Loneliness
- Reduce Depression
- Increased Resident Engagement and Satisfaction
- Increased Social Networks
- Increased Quality of Life
- Increased Staff Efficiencies (Anticipated benefit moving forward)
- Optimize Care Management
- Improve Medication Adherence
- Enhance Independent Living
- Reduce costs
- Improve data Collection

### Organization Name

Libertana Home Health

### Partner

Orbita Voice

### Organization Type

Housing and Healthcare-State Waiver Programs (Note: “Money follows the Person Program”)

### Organization Description

Libertana Home Health of Sherman Oaks, CA is one of many Libertana Home Health sites. For more than 15 years, Libertana Home Health has provided professional home health services (both non-medical care and medical care) to thousands of individuals. The largest manager of California-based health and housing waivers, Libertana Home Health collaborates with public and private agencies to help find housing for homeless persons and for individuals experiencing complex medical and behavioral health conditions, and to help them live independently within community settings. Libertana provides care coordination/management, assisted care services to manage daily living, and clinical services for

intermittent skilled nursing care and rehabilitation therapies. For more information, please visit [www.libertana.com](http://www.libertana.com).

### *About Orbita*

Orbita helps organizations leverage voice assistants as the next digital frontier to improve patient monitoring, care management, medication adherence, patient education, and to lessen social isolation, etc. Orbita's voice experience platform is used to design, build and manage next-gen voice assistants based on Amazon Alexa, Google Assistant, and other voice application services. Developers can enable anyone, regardless of technical skill, to create intelligent conversational experiences. For more information, please visit [www.orbita.ai](http://www.orbita.ai).

### *Project Description*

Libertana Home Health leveraged Orbita's voice experience platform to create digital voice assistants based on Amazon Alexa technology. Residents in community-based housing environments are more effectively engaged by using Orbita-powered Amazon Echo Dots as conversational voice agents. Residents are prompted to take more active roles in managing their daily schedules, self-care tasks, and medications, while home care professionals are more effectively informed when triaging care is needed so they can arrange for care delivery.

### *Socialization Modality*

Voice app for care management, event/activity sharing, etc.; community app; facilitated communications and conversations, companion app.

### *System Embodiment*

Voice assistant technology running off an Amazon Echo Dot device in the client's home.

### *Business Model*

MediCal (California Medicaid program) State Waiver Programs- Housing and Healthcare (Note: "Money follows the Person Program")

### *Implementation Approach*

Libertana has tested Orbita-powered Amazon Echo Dots with a select group of residents who use the voice assistant to report vital data, such as weight, blood pressure or blood sugar levels; medication reminders

and exercise reminders; request help from home care professionals; coordinate transportation; and learn about social and recreational activities.

"In our efforts to empower individuals to live independently, Libertana has had significant success with out-of-the-box approaches. We see great value in the capabilities of voice to address a full range of health and living needs for seniors and disabled individuals," said Jonathan Istrin, Libertana executive director. "Loneliness, for example, is a huge variable impacting health. At a minimum, if a digital assistant can help break the loneliness cycle, we come out ahead. Beyond this, the possibilities seem nearly endless."

By enhancing engagement and compliance, voice experiences can contribute to improved outcomes, said Debra Harrison, RN, Libertana's public subsidized housing manager. "Voice assistants overcome challenges for individuals who, due to physical limitations, cannot use a keyboard or touch screen. They also improve patient satisfaction with more natural, engaging experiences. The client is able to use the voice-activated device at their discretion, offering companionship and support on a requested basis. Finally, they reduce costs by keeping patients at home and away from more costly institutional care settings."

"Voice is the next user interface, and home healthcare is arguably the most important frontier for its application," said Orbita CEO, Bill Rogers. "Libertana's application is an excellent use case for voice technology and we're extremely pleased with how fully they've embraced our technology."

### *Outcomes*

The outcomes that have been achieved during this pilot project include:

- Reduced Social Isolation
- Reduced Feelings of Loneliness
- Reduced Depression
- Increased Resident Engagement and Satisfaction
- Increased Social Networks
- Increased Quality of Life
- Better Support for Independent Living
- Improved Medication Adherence
- Optimized Care Management
- Minimizing redundancy with voice charting.

Anticipated outcomes as the voice assistant program is extended and enhanced include:

- Increased Staff Efficiencies
- Cost Reduction (keeping the elderly in a home setting).

The principal outcomes of the initial voice assistant deployment are improved medication compliance, and increased participant peace of mind and quality of life. Medication compliance is improved through the use of reminders. With the voice assistant program, Libertana caregivers are able to be more immediately responsive to their clients' needs, with enhanced peace of mind and quality of life achieved because participants are more closely and rapidly connected with their caregivers, and because they feel more engaged. Program participants also report that they are less worried about experiencing a fall because they can request help when feeling weak or unsteady thereby mitigating the likelihood of a fall.

Having a voice assistant helps the elderly, who have been experiencing a diminishment of their senses and motor skills, regain some of their independence. Program participants found that they do not have to call for assistance as often, as they're able to activate monitors and take care of other tasks on their own. And the voice assistant also provides a sense of companionship.

Family members and other caregivers outside the home also benefit from the voice assistant program. They can be looped into communications about the patient's activities – hearing or seeing, for example, that their loved one took meds in timely fashion, got out of the house for a walk, has reduced pain, etc.

In the next implementation phase, Libertana anticipates that, with the addition of record updating capabilities, staff efficiency will be increased. In the long run, the ability to keep the elderly in a home setting will result in tremendous cost savings.

### *Challenges & Pitfalls to Avoid*

Make sure that the clients will be able to take advantage of voice assistance technology. Among things to look out for are those from cultures/backgrounds where they might be reticent to speak out loud to a device. Also, those who typically have their television or fan turned on high may not be able to successfully use a voice assistant, as there is too much background noise that may affect the device's performance. Ambient noise should be considered.

The Libertana app must be opened by the client to gain the benefits. As such, users should be given reinforcements and reminders about this in the first few weeks until standard practice is achieved.

### *Lessons Learned/Advice to Share with Others*

While Libertana anticipated that many of the older adults would be uncomfortable using technology, the ease of use of the Orbita voice assistant mitigated this concern. The principal lesson learned is that, while the vast majority of individuals will be successful with a voice assistant, there will be those who are not able to use it.

NOTE: The project was highlighted in a story that aired on CNBC. See: <http://nbc.com/2017/08/09/techs-healthcare-ambitions/>