

# Technology: Changing the future

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# New tools improve dementia care quality

Emerging options are helping providers do a better job of meeting the needs and interests of residents with memory impairment and other cognitive challenges, often in ways that are all but imperceptible.

By John Andrews

**M**ore than 5.4 million Americans now have Alzheimer's disease. And forecasts call for huge increases in the years and decades ahead.

Dementia takes a great physical and mental toll on both victims and caregivers. It is also expensive. One recent study placed the five year Medicare cost for people with dementia at \$287,038.

While there is no cure in sight, technology-based tools are helping the afflicted and their caregivers better deal with this fatal disease. Some of the most promising new products were on display in April at the 2016 AARP Innovation@50+LivePitch contest. There, 10 healthcare-focused startup tech companies pitched their businesses.

Texas-based Penrose Senior Care Auditors of Dallas took the venture capitalist judges award for Penrose Check-Ins, its system of app and technologies that combine with home visits by auditors. The audience favorite was Los Angeles-based SingFit. The company's app and music software stimulates the minds of dementia patients and helps caregivers provide a better body-mind workout.

## Seal of approval

In another recent development,



Photo: Lannis Waters/ZUMApress/Newscom

researchers relied on a robot to interact with memory care residents at seven Front Porch senior living communities in California. The robot in question deviates from popular perception – PARO is a therapy robot created in the likeness of a baby harp seal and is designed to provide comfort and enhanced socialization.

Developed by Japanese engineer Takanori Shibata at the MIT AgeLab after years of research, PARO is equipped with different types of sensors and can respond to various stimulations given by users.

It is certified as a type of neuro-

logical therapeutic device by the Food and Drug Administration and includes a caregiver's manual for robot therapy.

PARO is designed as a baby harp seal because people are generally interested in interacting with robots modeled after non-familiar animals. The concept has been used with "positive and promising results since 2003," researchers say, after trials in Japan, Denmark, Italy, Canada and the U.S.

But that is just the tip of the proverbial iceberg. Tech innovations for people with dementia and their caregivers include things like reminder messages, clocks, GPS location and tracking devices, picture phones and electrical use monitoring, just to name a few.

## Web-based model

Thanks to a \$10 million federal grant, the University of California San Francisco and the University

Socially assistive robots can provide comfort along with enhanced socialization.

of Nebraska Medical Center are creating a new Web-based model of dementia care. It will provide around the clock consultations for patients and their families, online education and, for a subset of patients, remote monitoring with smart phones and home sensors.

"Our hope is this is going to radically improve the way dementia patients are cared for," said Katherine Possin, Ph.D., who is an assistant professor of neuropsychology at UCSF.

"We hope we'll show this works, and that it can be adopted nationwide," she adds.

While the Dementia Care Ecosystem will not replace clinicians, it will bring educational resources developed over the last decade by the UCSF Memory and Aging Center (MAC) to patients and their families. The project will also let clinicians monitor their patients from afar. ■

## Three Tips

- 1 Use inexpensive tech options to supplement caregiving efforts.
- 2 National trade shows can be a great place to find new options.
- 3 Different horses for different courses: Tech tools can be used in a variety of ways to help achieve various caregiving goals.

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