

Aging-in-Place

Daniel Beer 19 April 2016

As the United States' elderly population is expected to double by 2050 to be the third largest in the world behind China and India, the strain on Medicare, Medicaid and other public health tax ventures continues to grow as well. But what pundits call the aging crisis, one technology company calls the aging opportunity.

Chaired by a former IBM semiconductor executive and led by a veteran of the housing industry, network infrastructure pioneers at Opterna International have launched into the public health space with an innovative technology designed to provide daily lifestyle and health benefits to the aging population within the home. Utilizing a combination of low-cost sensors and networked devices, Opterna has developed a platform that enables the elderly to "age-in-place" in their beloved homes and communities.

This technology consists of passive devices that measure the activities of daily living and provides services for social well-being. For instance, sensors report that the front door, the refrigerator or the stove has been open for too long. Sensors in the bed track sleep and wake patterns to measure quality of rest. Medication management, emergency response and activity tracking are all part of what Opterna calls the Relyance system.

None of these features have been developed in a vacuum. With a long career across the public, private and social sectors, Opterna president Rey Ramsey believes that a successful solution requires the involvement of various interest groups. To explain this, Ramsey drew a series of circles on the whiteboard: Opterna is one, advocates for the elderly in another, financiers the third, housing entities the fourth and R&D and software partners comprise a fifth. The circles interlock, and in the middle, Ramsey explains, is the north star: "We're bringing this table together to enable the aspirations of the elderly we care about — the mothers, grandmothers, fathers, grandfathers — to be happier, healthier and safer as they age."

To ensure that the technology served true needs, Opterna brought Albert Shar onboard, former VP at the Robert Wood Johnson Foundation and long-time expert on the intersection of health and technology. Shar has been a consistent sounding board and product driver throughout the development process. The Opterna team notes that his first step was to build a focus on companionship and community, as well as control and privacy. "This is about quality of life," Shar notes. "The elderly increasingly feel isolated from the social networks around them — people young and old — and from the families they care so much about. But they also don't want to be burden to those loved ones."

Shar led the writing of a white paper describing the use-

cases and the solution, and brought together a council of the top health technology and elderly population experts to review and critique the assumptions underlying the system. The white paper took both the elderly tenant and their primary caregivers (normally family) into account, describing the use-cases and the functionality of the software and hardware products.

After reviewing the initial comments, Opterna broke out their product development into stages, with focus on execution and implementation and keeping in mind that first use-cases must be defined well and executed seamlessly. From there, Opterna built out a longer-term product development program which systematically adds new use-cases and coordinating technology to support them. "This is not a one-off opportunity. In order to be a value-added player in the ecosystem for the long-term, product strategy has to walk a line: execute on the reality of today, and keep the other eye watchful for innovation that can be made concrete," says Shar.

Opterna's method for availability and accessibility of the technology is through affordability. A long-time housing industry leader, Ramsey is laser-focused on utilizing low-income housing tax credits (LIHTC). Low-income housing tax credits are distributed by the federal government to give investors a dollar-for-dollar reduction in their federal tax liability in exchange for building housing with rents that are below market rate and accessible for low-income families. The tax credit market is a complex public-private

ecosystem, with a majority of the credits (low-income housing builders, owners and managers held by a relatively small amount of syndicators or financiers). By partnering with these centralized asset holders, Opterna's bundle can be implemented in millions of homes throughout the United States with minimal trickle-down cost. Aging-in-place delays or completely eliminates the incredibly expensive move to assisted living. The elderly population is incredibly price sensitive, with the median income of a 75-year-old person hovering at \$156,000, inclusive of home equity. This financing and distribution mechanism may be the channel for a better future. The point would be missed if, as Ramsey says, "we didn't focus on reaching the elderly who need this most."

Cost, efficacy, value and vision. Opterna is using the company's history and capacity in order to take a technology solution found only in concept drawings, test labs or sci-fi books, and make it very real for millions of elderly Americans. Ramsey notes, "The innovation ecosystem of health technology today — hardware and software — is moving at a breakneck pace. We won't build everything, and we shouldn't. We are the infrastructure bundle, the channel to the customer, the platform for interoperability. A way to work together."

The message is clear: Join Us. The future of the aging population can be brighter than assisted living. And it can happen, to the comfort of both the primary caregivers (sons, daughters, grandsons and granddaughters) and

the government programs, at far less cost.

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