

New technology attends to seniors' health, quality of life

December 7 2017, by Nancy Dahlberg, Miami Herald

Who hasn't worried about elderly family members and wished it was easier to keep up with them from afar?

Now there's technology that offers better care for the seniors and peace of mind for the family caregivers, employing advances in [artificial intelligence](#), big data and voice technologies.

One company has a solution that tracks and analyzes a senior loved one's activity and routines and will alert caregivers when something is out of the ordinary. Another startup supplies "grandkids on demand" to help with transportation, chores and companionship. Still other companies have rethought the daily phone call, supplied elder-friendly multilingual hospital discharge instructions and matched up the elderly with others who have room in their homes. Yet another enhanced alerts for when your elder falls and can't get up.

It's a large and growing market. More than 50 million Americans are over 65, and 10,000 more reach that age every day. While that age group is now about 13 percent of America's population, it will jump to 19 percent by 2030 - about 72 million people - according to a U.S. Census Bureau report. About \$1.2 trillion is spent on health care for American seniors each year, according to government estimates.

Perhaps most important, this technology can keep seniors safe and independent, allowing them to live in their homes - their overwhelming preference, according to surveys. Some of the technology could also

prevent life-changing injuries caused by falls. The big vision is to empower the elderly to live more safely on their own while easing the worries of their loved ones.

Through its mobile app, website or 800 number, Miami startup Papa provides assistance and socialization to seniors through young and enthusiastic team members called Papa Pals. It's like grandkids on demand, said CEO Andrew Parker.

Parker came up with his startup idea from a personal need. Andrew Parker's grandfather had been diagnosed with early onset of dementia that progressed into Alzheimer's disease. As a family, the Parkers had a lot of difficulty managing his daily needs and supporting his primary family caregiver, Andrew's grandmother.

Papa started as a simple concept, said Parker, who previously worked at telemedicine provider MDLIVE, which was founded by his father. "Our grandfather and grandmother need support; others must as well. There is a huge senior population that continues to grow on a daily basis. There are also a lot of amazing college students who want to become future nurses, doctors and other leaders. Let's connect these inter-generational groups and I bet something amazing happens."

So Parker gathered a small team and started Papa to support his grandfather, whom he called "Papa," and other seniors. The service now has about 150 Papa Pals on board. Most are college students earning extra money.

Recently, Papa Pal Valeria Sosa, a Broward College student, took Olga DeMartino, 92, to her weekly hair appointment. After Sosa walked with her to the car and buckled her in, they chatted and joked about each other's families.

Regina DeMartino, Olga's daughter-in-law, said before they found Papa on social media, family members took turns taking time off work to take her to her appointments.

"She loves them [?] she finds them all really interesting and loves being with younger people," Regina said of the Papa Pals. They walk her out of her appointment and always have an umbrella so her hair won't get wet, she said. "If she needs help around the house, they do that too."

On Valentine's Day last year, a Papa Pal brought Olga a rose. "How sweet is that?" Regina DeMartino said.

Like Papa, Room2Care also leverages the sharing economy but in a different way. The Miami startup is creating a network of vetted private caregiver homes, which provide less expensive and more personalized care than assisted living, said Richard Ashenoff, who founded the company with Dr. Todd Florin.

Room2Care is licensed and doing business in five states—Florida, West Virginia, Texas, Arizona and California—and has over 5,000 users and is growing daily, Ashenoff said.

While Room2Care and Papa use tech to connect seniors with humans for companionship, assistance and caregiving, technology steps in to help at other times, too.

CarePredict, an elder-care platform powered by artificial intelligence, makes bracelets that help track an elderly resident's every activity. Currently it is available only to large group senior-living facilities and home care agencies, but the company hopes to offer the device directly to consumers in the future.

In an office space above a Boston Market in Plantation, more than a

dozen engineers and data scientists are working on computers in an office adorned with large portraits of senior citizens. In the next room, another worker is carefully assembling the devices.

Founder and CEO Satish Movva keeps a portrait of his parents near his office as a reminder of his mission. His parents, who are now 90 and 80, live just 10 miles away. Still, despite frequent calls and visits, he couldn't trust the answers he was getting from them about their health.

"No matter how many times I would call them during the week, when I showed up on Saturday I'd find new things I didn't know about. It was frustrating," Movva said. "I wanted a wearable device that would answer all the questions I have about them every day."

Changes in activity and behavior patterns show up well before the underlying issues manifest into medical conditions, said Movva, who has been an innovator in healthcare technology for 23 years. He wanted a system to observe his parents continuously but privately, so he could be alerted to changes early enough to intervene. After finding the existing technologies inadequate, he set out to develop CarePredict in 2013.

The idea is to monitor daily activities like eating, drinking, walking, bathing, cooking, sleeping, Movva said. "We couple that with contextual cues to surface insights like self-neglect, for example, due to depression." The data can also help predict falls or suggest malnutrition, dehydration or infections before the senior or another person reports them.

Angel, an artificial intelligence- and voice-powered virtual nurse assistant, can play a similar role. She reaches out via low tech but clinically intelligent phone conversations, said Wolf Shlagman, founder and CEO of Care Angel.

"You look at the aging market and 90 percent or so choose to age at home ... managing themselves the best they can," he said. "Angel is meant to be an assistant that will help [family caregivers](#) by being able to simply call mom just as a nurse would, asking a series of questions."

Angel asks a series of questions such as "how did you sleep last night?" "did you take your medication today?" and "what was your glucose reading today?" If it detects cause for concern, Care Angel alerts caregivers via app, text message or phone. "Our mission is to help millions of people take better care of their families for a fraction of the cost of anything else out there," Shlagman said.

A basic version Care Angel is available free for AARP members and through other partners such as health insurers. A premium version will be available next year for about \$9.95 a month.

In a recently finalized study with a Humana Medicare Advantage population, Care Angel received high marks from recipients and also had a substantial effect on clinical and financial outcomes. Results showed engagement of about 83 percent, a reduction of 63 percent in hospital readmissions and \$496,000 in savings, Shlagman said.

MobileHelp, founded in 2006 and headquartered in Boca Raton, took the "I've fallen and I can't get up" personal emergency response system idea pioneered by Life Alert and turbocharged it. Help can be summoned at the touch of a button worn around the neck or on the wrist; unlike the first-generation systems designed for use only in the home, MobileHelp's products can be used on the go since they don't require landline phone connections. The device also detects falls so help can be summoned without a button being pressed. Its app also provides verbal medication notifications and a tracker that monitors activity levels for reports that go to caregivers.

SpeechMED is designed to demystify medical instructions. It was started by Susan Perry after her mother-in-law died because she could not understand post-surgery instructions given by the hospital. The application operates in 16 languages, offering patients and their caregivers the instructions in the spoken word and in text in the language they understand. There's an accompanying caregiver app, too.

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Citation: New technology attends to seniors' health, quality of life (2017, December 7) retrieved 26 April 2024 from <https://phys.org/news/2017-12-technology-seniors-health-quality-life.html>

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