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If his support worker isn't on the way out the door by 9 p.m., John Mogan might encourage the exit. That's when his alone time starts. The 50-year-old gets to sleep, watch television or listen to music without someone watching over him.

No one in his home, anyway.

Ali Rahimi monitors Mogan remotely, by way of video cameras, sensors and other devices. Rahimi can dim lights, lock doors, play relaxing songs and, most importantly, see when Mogan needs in-person help.

Mogan has developmental disabilities and mental illness. Those conditions make it all but impossible for him, and for thousands of other Ohioans, to safely manage day-to-day life without assistance.

"John used to have staff with him 24/7," said Rahimi, founder and CEO of Medforall, a company based in Grandview Heights. "We've been able to cut that in half."

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Although its use is still far from widespread, "supportive technology" is emerging as an answer to some of the disability community's most pressing issues. Advocates see it as a means to help people gain greater independence and reduce reliance on the direct-support workforce, which is struggling under low wages, a shortage of employees and alarmingly high turnover rates.

"I truly believe that what we're doing will save the industry," Ken Smith of Rest Assured, a telecare and remote support company out of Lafayette, Indiana, said during a meeting with state officials last week. "It can't continue this way. We don't have the bodies."

As governor, John Kasich signed an executive order last year that made Ohio the first state to formally emphasize expanding access to technology for people with developmental disabilities.

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"The kind of entrepreneurship, passion and commitment we have is just phenomenal," said Jeff Davis, director of the Ohio Department of Developmental Disabilities.

Rahimi, 37, is an Iranian immigrant and Ohio State University graduate, a computer scientist and engineer who didn't exactly dream of being a trailblazer in the field of disability services. The seed grew after a chance meeting 16 years ago, when he interviewed social worker Patti Ruble for a college assignment.

Ruble, who is now 76, lost almost all her mobility to polio at age 12. Rahimi was astounded that she had gone on to earn two degrees and establish a career.

"I guess I had preconceived notions," he said. "It was a positive shock, really. It got my brain firing."

Rahimi couldn't stop pondering the frustrations and limitations of Ruble's wheelchair, apartment and unreliable support providers. He could barely contain all the ideas he had to make things easier for her. And — this is the most important part, Rahimi said — he quickly grew to care for Ruble.

He considers Mogan a friend, too.

"It's that human element that's making this happen," he said. "I'm an engineer, so as much as I want to give credit to the technology, that's not it. It's wanting to help make someone's life better."

Solving problems

Rahimi and his staff in the tiny lab at Medforall mix off-the-shelf hardware such as smartphones and Amazon Alexa with custom designs, programs and even 3-D-printed devices.

Offerings range from relatively simple smart-home features — Ruble's University District apartment has several — to specialized video that protects privacy in bedrooms and bathrooms. There are sensors that notify workers when a client gets out of bed, gaze-activated screens, and visual and voice prompts when medications are due.

"Pretty much everything we do, we just start from solving one problem," Rahimi said.

One cutting-edge development underway uses augmented reality to create a calming, interactive model that looks like a young client's father, for example. "Imagine that there is an invisible person on the couch, but only the phone can see it," said Medforall animator Jesse Cutrell.

The pace of advances is breathtaking, Ruble said. "Ali doesn't even know where a lot of this stuff is going to lead him."

She remains most impressed, however, with his compassion. "He's a son to me," she said.

Even before Medforall took off, Rahimi sought to help Ruble obtain more responsive support staff members. In 2011, he started Ohio At Home, a health-care agency now connected to the supportive-technology business he founded in late 2015.

"I was fearful," Rahimi said. "I remember the first person we hired. I said, 'Patti, what are we doing?' And now we have 64."

Rahimi hires Ohio State students, most of whom are majoring in health- and social-service fields. "They're pre-conditioned," he said. "I don't have to teach them why this work matters."

Increasing numbers

According to the state, about 420 people in Ohio have remote support as part of their disability services, and approximately 480 are using assistive-technology devices. Some opt for both.

Disabilities officials have a plan to increase the total to 2,150 this year, which still would be just a fraction of the 44,000 Ohioans whose Medicaid funding can be used to pay for support workers, tech-based care and other community services.

"Getting the manpower out there to talk about it is a challenge," said Adam Shoemaker of THS Remote Support Services in the Cincinnati area. "There's a lot of education to be had."

Incorporating technology typically requires cooperation with paid support providers, and that can raise questions about expectations and billing, risk and liability.

Ohio's county disability boards need to become more aware of the technology so that case coordinators can explain options, advocates said. But families shouldn't be made to feel as if they are being pushed to agree to technological support as a means of saving money.

"It's not a good fit for everybody," Shoemaker said.

Costs vary widely, depending on the service or device. But Shoemaker said a client who switches from in-person support to remote monitoring for even a few hours each week could easily reduce spending by thousands each year. He'd like to see some of the savings go toward boosting wages for support workers, [few of whom earn more than $12 an hour](#).

John Mogan's father, Pat, admits to "some trepidation" about the family's decision more than a year ago to trust that technology could help his son regain time on his own in his West Side apartment.

The Franklin County Board of Developmental Disabilities had recommended around-the-clock support a few years ago after Mogan suffered a series of injuries. That change raised expenses and, at times, Mogan's stress level. A case coordinator told his father that while it was obvious that Mogan couldn't be on his own, "he can still be independent, and this is how we can do it."

Mogan, whose speech is severely affected, said he likes his home and doesn't mind the cameras. He's clearly fond of Rahimi.

"Ali comes to John's at all hours of the night," Pat Mogan said. "If they notice something, or if John is restless, he'll be right there."

Rahimi is among a handful of technology vendors communicating with the state about progress and problems. He can't help but laugh when he considers where he started.

When he first built a technology "hub" for Ruble, he didn't even know he could get paid for providing such services. "We had no idea," Rahimi said.

He just figured that, based on his skills and her needs, it was the right thing to do.

"The home health-care model is not going to be the same," Rahimi said. "Everything is changing. But what technology is not going to be able to take over is love and compassion."rprice@dispatch.com [@RitaPrice](#)