

Startup links with hospitals

HCO partners with South African group for devices

By KERRY FELTNER



Photo courtesy of Health Care Originals Inc.

University of Rochester startup Health Care Originals Inc. has partnered with South African hospital group Areta Health in a multimillion dollar, three-year partnership to deploy 80,000 of the firm's respiratory management wearable devices.

The partnership has been in the works for the past six months, officials said. It is the largest deal for Health Care Originals to date.

"The efficacies and improvements in health care that can be generated by having easier access to health care in remote communities is tremendous," said Sharon Samjitsingh, co-founder of Health Care Originals. "Areta is run by a team of great professionals and veterans of the industry, well-backed and making a difference in health care outcomes. That's an effort that goes to the core of our mission, and one we're happy to support."

In South Africa, Areta Health is creating a patient-centric network of interconnected specialist day hospitals, supported by remote clinics and patient in-home monitoring, the health system said.

Health Care Originals has five employees, including co-founders and spouses Jared Dwarika and Samjitsingh.

The idea for the respiratory monitoring devices began in 2013 among a team of graduate students—including Samjitsingh—at UR who believed the technology would work best as a mobile application. A year later Dwarika joined the team and helped transition the idea into a wearable device. The research for the technology was done at UR.

The company licenses the technology—one patent—from UR. The firm also has developed technology for which three more patents are pending.

The company's monitoring devices are placed inconspicuously on a patient's torso, stressing privacy for people with chronic illnesses.

The company is not generating revenues yet, however the company has received over \$1 million in funding from two seed rounds; roughly 75 percent of investors are Rochester-based.

The firm has some 200 devices committed, although none are in the market as it is completing its production run.

Health Care Originals has won multiple awards, including the 2016 Innovator of the Year and Overall Winner in the Health & Wellness Category in Innovation World Cup by Wearable Technologies. Health Care Originals was selected from a field of 450 entries from over 60 countries by experts in the field for this award.

Other awards include the inaugural 2016 Named Breakthrough Innovation by HP Tech Ventures at Tech Crunch NY



Photo courtesy of Health Care Originals Inc.

Leaders of Health Care Originals, a University of Rochester startup, take a break for dinner.

and this year the firm was named one of the Top 4 Medical IoT technologies in the world by Wearable Technologies, an international global leader in the wearable technology industry.

Locally funded

Health Care Originals has a new office based at 1 Pleasant St. The firm had been based at High Tech Rochester Inc.'s incubator in Henrietta.

"Ours wasn't an easy technology to visualize—when we first started, most people weren't as aware of wearables as they are now. So it was great to find visionaries who could share our vision of the future," Samjitsingh said. "Going forward, we're obviously going to grow, and increase our employment, as well as increase manufacturing presence here."

Dwarika said the team at Areta Health is forward-thinking.

"They have the wherewithal to execute a project like this," he said. "What (Areta Health) did was—instead of trying to do the same thing—look at something that will have a big impact. They, just like us, recognize wearables are the future, so when they first started to work with us it's like they're doing a leap of faith."

"That is the difference with them—they recognize this is the direction we have to head in and they go that way rather than wait to follow somebody else who is going to do it," he added.

Areta Health is ready for a high-tech solution to support its efforts, the health system's CEO Marc Slabbert said.

"Areta Health has recently expanded significantly in the out-of-hospital and virtual health care space and has identified (itself) as a niche medical service provider in Africa," he said. "The fit was perfect. We watched as (Health Care Originals) proved us right as being the partner of choice and we are ecstatic to be working alongside them."

Areta Health's connections to universities and government in South Africa were some of the reasons why Health Care Originals was drawn to collaborate, officials said.

"We decided, let's make this into something solid rather than just a supply agree-

ment," Dwarika said. "If we can iron out a true partnership then they have a vested interest and we can kick-start adoption (of the wearables) in the universities by physicians and then adoption for telemedicine."

When the devices are deployed successfully by Areta Health, the goal is to expand to other health systems within Africa.

Chronic illnesses

Some 500 million people worldwide suffer from a variety of chronic respiratory illnesses, including 25 million asthmatics in the U.S.—7 million of whom are children.

Health Care Originals is ready to help those patients understand their chronic illnesses better.

The company has three products: ADAMM, for asthma-only patients; ADAMM-RSN, for general respiratory patients; and ADAMM-SM, for sports applications. In March, the company had one person using the ADAMM-SM, a professional athlete.

Areta Health will use 80,000 ADAMM-RSN devices under the partnership.

The wearable devices collect data on coughing, wheezing, respiratory rate, heart rate, skin temperature and activity level.

"What we collect with our product, no one product does it right now," Dwarika said. "You get to see the relationship between each symptom, each body function with the other, and that's the value of the insight we bring. The device collects it unobtrusively and has the information there so the physician they can just see what is happening at a glance."

"Everybody is so busy now...it's so easy to throw these symptoms aside and ignore them," he added.

Before a device like ADAMM, doctors were left with guesswork based on how well patients kept track of their respiratory illnesses.

"We believe HCO and Areta Health will hopefully change the way at-risk asthmatic patients are managed in the future," Slabbert said. "(HCO is) going to change asthma management for the better globally."

Wearables are projected to become an \$18 billion to \$20 billion industry by 2020, HCO officials said. By 2020, the firm expects to have over 1 million users. Officials also expect to be a well-known leader in the industry.

"In the next three years we want to be at least the beginning of being a household name in monitoring for any application, whether it's a chronic illness or whether it's your telemedicine device that you have in your home, just like a thermometer," Dwarika said.

The company uses all New York vendors to make its products, including two local manufacturers.

"We're looking forward to deepening our relationship with the manufacturing community here," Samjitsingh said. "We think it's a great Rochester story; a great Upstate N.Y. story. Generating products for export from Rochester is good for business, and good for manufacturing."

The challenge now is growth and a long lead time for parts.

"The biggest challenge is growing the company with the correct infrastructure to support the fantastic market fit we're getting," Dwarika said. "The Internet of Things—this product falls in that category so we all share quite a lot of components with other gadgets."

The future of health care wearables is bright, especially for those with chronic illnesses, but not exclusively, Dwarika said. He envisions a patient being tracked after surgeries with a wearable device.

He sees wearables heading to prominent place in chronic illness monitoring, Dwarika said.

He also envisions his company helping the city now and into the future.

"We're now seeing a product like this being deployed in an application that is just going to get bigger and bigger. Years from now you can say one of the early telemedicine devices came from Rochester," he said. "For Rochester it means yet another opportunity to be the way it was in the past; global technology (created here) that makes everyday life better."

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