



"I want to be able to provide health screening, hospital visits, and treatments at a cost affordable to anyone, even in areas with limited access to medical services," says Sako.

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# Health for All through Innovative Examination System and Remote Healthcare

A young Japanese woman has set up a medical venture in Bangladesh that utilizes AI as well as ICT to create a system that makes healthcare accessible to anyone, even residents of regions with a shortage of medical services

**M**ari Sako, CEO of the medical venture miup, Inc., will never forget a telephone call she received from a resident of a farming village in Bangladesh who had taken one of the company's medical tests. Because miup had been providing health screenings in his neighborhood, he learned that he had developed a chronic disease, and left untreated, it could have taken his life. Without the medical test, his life and his family's life would have been thrown into chaos. "Afterwards, out of gratitude for having been saved by our medical test, he phoned me personally.

In that instant, the vital nature of the service our company provides became clear to me," Sako recalls.

In her student years, motivated by a desire to help developing countries, Sako studied agriculture and life science, but felt there were many hurdles when trying to apply academic findings to the real world. She came up with the idea of starting her own business, to use research findings from the developed world and apply them. After discussing the idea with a university friend who had studied medical AI and bioinformatics, they

co-founded miup in 2015 and began operating a health-related business in Bangladesh. It was selected as the first country to start the business because, despite maintaining an economic growth rate of around 6% each year, it has been experiencing widening disparity in healthcare access. Having grown up in a family of a long line of doctors, Sako reacted against the assumption that she, too, would naturally pursue a medical career. As fate would have it, her chosen path led her to a different way of contributing to people's health.

There is the perception that in



While preparations are underway in rural areas for the deployment of a healthcare system using AI and remote healthcare technology, in urban areas, miup operates a more advanced delivery-type health screening service.



Bangladesh, many people suffer from acute diseases such as infections, but with economic growth, the incidence of chronic diseases is on the rise as lifestyles become more affluent. Unlike infections and other acute diseases that are easily known by their symptoms, chronic diseases require medical testing for diagnosis. The lack of such tests is a serious problem in some parts of the world. "In rural Bangladesh, where 70% of the population lives, there is an overwhelming shortage of doctors—a ratio of only one for every 15,000 people. It is quite common for people to medicate themselves without seeing a doctor or having a proper prescription. Given this situation, we thought we should provide medical treatment that draws on sophisticated use of medical data and technology."

The shortage of medical services can only be resolved by tremendous amounts of money over a long period of time, but miup is trying to solve the problem with a different approach that uses AI and remote healthcare. Using data comprised of easily-measured blood pressure

and pulse rate, photographs and medical interviews, miup's AI-based system will screen for risks. People who fall into a high-risk category will be recommended to consult a doctor remotely using an Internet-accessing device such as a tablet. Through this system, healthcare can be provided far more efficiently, and residents living in areas lacking medical services will be able to receive health examinations at an affordable price. Currently, miup is conducting large-scale medical tests to improve the accuracy of AI diagnostics and remote healthcare

software, with the idea of having a commercial version available as early as one or two years from now.

"Similar problems are common around the world. Once our health screening model is successfully running in Bangladesh, I would like to make it available to more countries," says Sako. The year of miup's launch, 2015, was also when the United Nations established Sustainable Development Goals (SDGs), which assert the importance of universal health coverage to protect the health of everyone. Both concepts resonate harmoniously with each other. \*

## Mari Sako

Sako majored in agriculture and life science at the University of Tokyo Graduate School and researched ways to assist developing countries. In 2015, she teamed up with a friend from university to found the medical venture miup, Inc. Her goal is now to realize an AI-based service that delivers medical care to areas lacking medical services.



"Because they don't have the well-established systems enjoyed by developed countries, developing countries can more quickly adopt and popularize new technologies to solve social problems," says Sako.



Bangladeshi doctors and consultants sympathetic with miup's vision have been collaborating in the program even before miup was established. (Sako shown in the center)