University collects medical samples via drones in Madagascar

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In this July 27, 2016 image made from a video provided by Vayu, Inc., residents from Ranomafana, Madagascar, watch before a drone containing medical samples takes off on a test flight from their remote village, which can only be reached on foot. Long Island's Stony Brook University, which has been working in the Indian Ocean island nation off eastern Africa for nearly three decades and maintains a research station there, has teamed with Michigan startup company Vayu, Inc. to ship laboratory samples via drone for analysis. Stony Brook officials say this is one of the first efforts involving the small unmanned aircraft that can land and takeoff. (Stony Brook University/Vayu Inc. via AP)

A suburban New York university is using drone technology to improve the health care of people in remote parts of Madagascar.

Stony Brook University, which has been working in the island nation off the coast of Africa for nearly three decades, has teamed with a Michigan startup company called Vayu Inc. to transport medical samples by drone for laboratory analysis.

The team made its first successful run of the drone technology in late July.

Diagnosis of ailments, like tapeworm disease, which causes life-threatening seizures and contributes to malnutrition in villages on the island, can now be completed within a few hours, said Dr. Peter Small, founding director of Stony Brook's Global Health Institute.

The drones are about the size of a large picnic table and have two sets of wings. They take off and land like helicopters and have a flight range of about 40 miles. Blood and other medical samples can be secured in small compartments in the body of the aircraft.

Drones are being used in other parts of the developing world to deliver medications and other supplies to remote areas, but Stony Brook officials say theirs is one of the first efforts involving a small unmanned aircraft that actually lands in remote villages and returns quickly to a laboratory.

In this July 27, 2016 handout image from a Vayu, Inc. video, a laboratory worker unpacks blood and stool samples collected from rural Madagascar villagers at Stony Brook University's Madagascar-based Centre ValBio research station after they were delivered in a test drone flight from Raomafana, a five-to-nine hour distance on foot. The Long Island based university, which has conducted research in the Indian Ocean island nation off East Africa for nearly three decades, has teamed up with a Michigan drone maker Vayu, Inc. to deliver laboratory samples and distribute medicine to rural villages in a more timely fashion. Stony Brook officials say the quick delivery system could ultimately help save lives.(Stony Brook University/Vayu, Inc. via Associated Press)

To reach these villages, medical workers have had to travel on foot—there are no roads—a trip that takes five to nine hours each way. By drone, they can dispatch the medical samples back to Stony Brook's Centre ValBio research station and get lab results within an hour or two, said Patricia Wright, the station's executive director.

"Blood samples have a shelf life, especially in the tropics," she said.

"This is such an extraordinary thing, to see these people who have been suffering have hope for the future. Some of my best friends have died senselessly. The dying will not happen in the future because these things are preventable with the help of the drones."

Ultimately, the plan is to deliver the proper medications in a timely manner.

Small said villagers who live as they did centuries ago were coached by Stony Brook personnel ahead of time so they would not be frightened by the drones. "That was the biggest unknown, seeing how they would react," Small said, adding that "they didn't throw rocks at it."

In this July 27, 2016 handout image from a Vayu, Inc. video, a drone carrying medical samples flies during a test flight from the remote village of Ranomafana, Madagascar, which can only be reached on foot, to a Long Island university's Centre ValBio research station for analysis. Diagnosis of ailments

like tapeworm disease, which causes life threatening seizures and contributes to malnutrition, can now be completed in a few hours, according to Dr. Peter Small, founding director of Stony Brook's Global Health Institute. While drones are being used in other parts of the developing world to deliver medications and other supplies to remote areas from the sky, Stony Brook officials say this is one of the first efforts involving the small unmanned aircraft that can land and takeoff. (Stony Brook University/Vayu, Inc. via Associated Press)

In this July 27, 2016 handout image from a Vayu, Inc. video, a drone is shown on the roof of Stony Brook University's Centre ValBio research station in Madagascar after a test flight from rural Ranomafana to deliver blood and stool samples collected from villagers suffering from diseases such as tapeworm, which can cause life threatening seizures and malnutrition. The Long Island-based university has been working in the Indian Ocean island nation off eastern Africa for nearly three decades. Stony Brook officials say teaming up with the Michigan startup company has helped solve the problem of delivering laboratory samples for analysis and medicines in a timely fashion. (Stony Brook University/Vayu, Inc. via the Associated Press)