The Research and Education Network of Uganda powers surgical operations in the country

When Dr. Michael Marin, a vascular surgeon and Chief of Surgery for the Mount Sinai Health System in New York, USA, thought of extending Mount Sinai's surgical knowledge and care to other parts of the world, he did not expect the beneficiary facility would enjoy reliable high-speed internet connectivity to facilitate the transfer of such knowledge in Uganda.

Thanks to the Internet connectivity provided by the Research and Education Network of Uganda (RENU), Mount Sinai can offer remote surgical services assistance to the Kyabirwa Surgical Facility Centre in the East African Nation.

Dr. Marin heralded the establishment of the surgical facility, as one way of extending surgical services to millions of people around the world that are in dire need of surgical services.

"*The initiative is focused on sharing surgery knowledge from one part of the world to another efficiently. Currently, over 5 billion people around the world do not have access to safe and affordable surgery. After considerations, we opted to build a surgical center in Kyabirwa, Uganda due to the stability of the country and the presence of many NGOs working in healthcare in the area*", says Dr. Marin.

According to Dr. Marin, building the surgical center involved heavy participation of the community, which the surgeon says helped instil a sense of ownership of the facility in the local people.

"*Building and development were very much based on the community. Some people did not have skills, but they were taught. Everything was built by hand, even the bricks were made locally. The design is unique and has already won the 2020 AIA healthcare design award – a very prestigious architectural award. The idea was to have a facility that the community would take pride in, and that would fit in the rural landscape of the village*"

Since the surgical centre opened in November 2019, the facility has performed close to 450 surgeries with remote assistance from Mount Sinai in New York and attended to over 1000 patients in need of surgical services.

RENU Network

To be able to share the knowledge and skills between Mount Sinai in New York and Kyabirwa in Uganda, there needed robust and high-speed internet connectivity and the hunt for a reliable Internet provider commenced.

"*During the planning phase, one of our colleagues brought on the program a Ugandan IT expert to help set up the cloud-based infrastructure. Looking into ISPs, RENU's name came up, and RENU has been a game-changer in providing the internet connectivity as well as the network contacts to make the program come true*", adds Dr. Marin.

Connection to the RENU network is enabling Kyabirwa to conduct live surgical operations in partnership with surgeons from the Mount Sinai, a feat Dr. Marin agrees would not be feasible in the absence of such a strong internet provision.

"*Having US surgeons coming down to Uganda for 2-3 weeks and then going back to the US could not provide a stable service. We needed Ugandan surgeons to take care of Ugandan patients. With access to a high-speed internet, there is no need to bring down skilled surgeons and support personnel to Uganda from NY, which is very expensive and not always done timely. Our Internet connection allows teaching and tutorials online, physicians from NY can host online training for Ugandan doctors (as long as the doctor's hands are visible on the screen, this is enough for knowledge share, but it won't work if there is a delay) – hence the need for high-speed internet*"

Dr. Joseph Okello, a resident surgeon at Kyabwira Surgical Centre agrees that RENU's Internet connectivity has made operations at the facility smoother and easier.

"*Our internet has been our most important asset here at Kyabwira; luckily we have reliable internet connectivity from RENU that allows for many important transactions, including live surgical operations. We can send live feeds from here to our colleagues at Mount Sinai who are very experienced and have a lot of knowledge crucial for our operations. The internet connection we have hardly drops and is always available. So far we are also able to carry out live endoscopy operations with our colleagues from New York.*"

RENU is one of the National Research and Education Network (NREN)s connected to the UbuntuNet Alliance, a Cluster 1 implementer of the AfricaConnect project which is co-funded by the European Commission and aims at creating a Pan-African Research and Education Network.