

## ► **Telemedicine: Healthcare In Times Of High Technology**

Dr Mingmar Gyelzen Sherpa is a man of modern vision. As a director of Logistics Management Division at the Department of Health Services under the Ministry of Health, Dr Sherpa has started a fresh venture under the Government of Nepal's initiative: telemedicine.

With Patan Hospital as the headquarter for the telemedicine project, Dr Sherpa said that the approximately Rs 20-million project will fully function within a month, adding a new dimension to healthcare in terms of accessibility.

"We need to think broadly," Dr Sherpa said. "Nepal doesn't only mean Kathmandu. We should envision about people in rural areas and plan how to make healthcare accessible to them."

During his years in Solukhumbu, his base for 24 years, he initiated projects like the "Village Ultrasound Project" under which healthcare professionals carried a mobile ultrasound machine to examine pregnant women to diagnose complications at early stage.

After relocating base to Kathmandu, Dr Sherpa brought into effect the Logistic Management Information System at the Ministry of Health, which keeps a logistic and stock of medicines in different villages and at health centers across Nepal.

And today, through telemedicine, the government reaches 25 districts including Bajhang, Darchula, Humla, Jumla, Rolpa, Pyuthan, Dolpa, Mugu, Okhaldhunga, Sankhuwasabha and Solukhumbu.



The following are the excerpts from an interview with Dr Sherpa.

### **What is telemedicine?**

Telemedicine is providing healthcare from one place to another through the electronic medium. In Nepal, the word is new but the concept isn't. When a patient seeks advice from their doctor via phone, this can also be said as telemedicine. But today, due to the Internet, telemedicine has progressed a lot. This technology has established a medium for early diagnosis of diseases and to seek suggestions and advice from specialists on regular basis, especially in rural places.

### **How does telemedicine work?**

When patients are admitted to the hospital, their record is put in a database that is connected through the Internet to the main center at Patan Hospital. That data can thus be accessed at Patan Hospital. From there, specialists examine the online report and advises the patients.

The basic equipment required for this is a computer and reliable Internet. But with computer, we also need scanners and digital cameras since we need to take pictures and upload them. We also have developed software that records the patients' basic information along with their X-ray reports, lab tests and ultrasound reports. In districts, we also train people to use the equipment.

All these districts that we're working in currently didn't have Internet connectivity. Using landline and CDMA technology didn't prove feasible. Now we use Ku-Band VSAT technology.

The specialists at Patan Hospital will specify two hours a day especially for telemedicine.

We also have developed a toll-free line (1660-01-23455) at Patan Hospital where people from all over the country can ask health related queries. This will start when the telemedicine project commences.

### **How is this technology relevant in Nepal's case?**

In remote places, there is a lack of specialists because of less population and/or it could be expensive to station a specialist and create infrastructures. So the specialists can provide some service, if not all, through this project.

In Nepal, it's very difficult to have specialist services in the districts. People in all parts of the country need proper healthcare. There is the utmost need but we don't have an immediate solution to that. Through this new technology, reaching to a wider population is a possibility. We can't guarantee 100 percent healthcare coverage but at least reach around 70 to 80 percent of the population. Surgeries and complex examinations are difficult but some common diseases can be diagnosed and treated in a timely manner. And follow-up treatment is made easier by this technology. Patients don't have to come to Kathmandu from remote villages to do their follow-ups. They can do it through telemedicine.

Also, in a country like ours, where there are very remote and less developed places with limited access to roads and poor infrastructure, telemedicine can be taken as an alternative form to going there and treating people until the time we [government] can provide proper healthcare. At the district level, many diseases can be diagnosed and cured since people get specialists' advice through telemedicine.

### **Is this project the first of its kind in Nepal?**

This can't be called a pilot project. I started it in Solukhumbu when I was there. I started Rural Health Online Nepal there as a local NGO. But after coming to Kathmandu, I thought it would be beneficial to expand it to other places. The Ministry of Health already had a concept, and we worked together.

### **Were there any challenges for this project, and what does the future hold?**

The biggest challenge that we've faced is Internet connectivity. We could've started this project a long time ago but then there was poor connectivity and it was also expensive. When I started the project in Phaplu in 2005, the connectivity was unreliable. But now, due to proper Internet facilities, it can be improved and expanded.

Currently, the service is available in 25 districts and it will be further implemented in other districts. And furthermore, the government's vision is to expand it from district hospitals to health centers in villages where healthcare professionals are stationed.

### **INTERVIEW**

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