



Participants in the colloquium

PHOTO: AMRAN HOSSAIN

Preparing a comprehensive healthcare information system



Dr Ali H. Rashidee

STAFF CORRESPONDENT

BAKLANDESH should identify its current and future health needs to prepare a comprehensive healthcare information system for taking medical facilities to the doorsteps of people in a more effective way, a leading health expert said yesterday.

"The country should create a matrix of what is available here and in international stage, where are the gaps and how could we narrow those, as health is becoming international faster," said Dr Ali Rashidee, president and chief executive of InformaticaHealth, a California-based medical informatics company working on telemedicine.

"It is not simple. Bangladesh

needs to work on many domains. The way things are going, Bangladesh will find itself in troubled waters if it does not start now," he said.

Rashidee's observation came at a technical session on the sidelines of the two-day The Daily Star Leadership Colloquium styled "ICT in Healthcare" at The Daily Star Centre in the capital.

In recent years, the health ministry has made a significant progress with respect to developing information systems both at administrative centres and community levels in healthcare sector.

But health experts say that Bangladesh still remains at the initial stage of data and process interoperability in the health information sector, with major policy and logistical bottlenecks.

During his presentation, Rashidee said it is not easy to standardise data. "Technology is a huge incentive for the country to do something. It is true that technology does not solve all problems, but it solves part of a problem and assists public health sector."

He said in the world's health information system, the first 10 years were full of mistakes. "Then the things started to roll in the right direction. Now the whole system is standard. Bangladesh should take a comprehensive look into what is there. Once we manage to standardise data, we will be able to move

to electronic medical record."

Dr Faheem Hussain, assistant professor of quantitative reasoning at Asian University for Women at Chittagong, said there is no standard in Bangladesh in terms of data entry.

"Data exchange among the public and private health systems is also costly and is mostly done on ad hoc basis. There is no policy on the issue," he said, adding that there should be a unique identification number for patients to bolster eHealth movement.

S M Ashrafur Islam, a joint secretary of the health and family welfare ministry, said nobody can build a public health system without adequate information.

"We have taken up a number of steps to establish eHealth in the country. We have introduced data collection system in government offices at grass roots level."

He said the government has installed a software system at all of its hospitals in upazila level and union healthcare centres to monitor the presence of physicians and nurses at their offices.

"As a result, our attendance rate has soared to 90 percent," he said, adding that introduction of unique ID card is not a dream anymore, it is going to be a reality soon.

M Nazrul Islam Khan, national project director of Access to Information Programme under the Prime Minister's Office, said there are many organisations in the coun-

try that collect information.

"But we do not use all the information. It will also not be easy to collect health data and use them," he observed.

Khan said Bangladesh should have a proper population registration at first, since the existing database prepared by the election commission cannot relate a person with his relative, and also does not cover the population below the age of 18.

"We are now planning to prepare a population registration. We are now doing its [population registration] design work," he said, adding that it would be better to prepare the department-wise database.

Khan said there should be a change in our mindset while preparing a national database. "There are many people who do not want to support. Also, the cost is an issue."

"We experience a lot of problems in the health sector. I think there should be a unique personal identification number for all patients," he observed.

During the discussion, a participant said it would be a tremendous job to digitise the existing system from the analogue one.

"We still do not have data on the country's actual population. We also do not have any supporting data on why a medical college is being set up in a particular district or when a 100-bed hospital is being upgraded to a 200-bed one," she said.

Reaching excellence to the poor

STAFF CORRESPONDENT

WITH limited resources, Prof K Siddique-e-Rabbani developed an artificial hand for a 10-year-old under privileged girl. Guess how.

He bought a hand of a mannequin from a cloth store and worked on it for a fortnight. Finally, he transformed it into something that gave the poor girl a support which she could not even dare to dream of. The girl had lost her hand from the wrist when a bomb abandoned along a road went off.



Prof Siddique-e-Rabbani

The prosthetic hand fitted so nicely that it blew the girl away. And her mother, a scavenger who looks for used paper in Dhaka University area, paid the professor the best way, with her tears of gratitude. She does not cry for her girl's hand anymore.

"I decided to make the hand after I had come to know that a standard artificial hand cost Tk 22,000. So I went for improvisation. The prosthetic hand cost me only Tk 1,500," said Prof Rabbani, chairman of Department of Biomedical Physics and Technology, Dhaka University (DU), in the Leadership Colloquium organised by The Daily Star.

He presented a paper in the "Health Technologies for the Future" session of the colloquium featuring some of his inventions that promise the potential to contribute to medical technology for the poor. One of his most significant inventions is the prosthetic hand that can function taking command from the brain. This inspiration came from Rabbani's encounter with the poor girl.

He also briefed the audience his idea about how to develop a prosthetic hand with almost the same reflex that humans are born with. The endeavour may sound ambitious, but those who are interested in inventing using local technologies and limited resources, Rabbani can be their inspiration.

"As it goes in the present, technology is not free of cost. We need to enhance human capacity to make and repair complicated machines. Once a machine imported goes out of order we need to bring experts from another corner of the world to repair it since we don't have the expertise," Rabbani said.

"My philosophy is not to patent any invention as this barrier deprives the poor of the benefits," he continued, "We make equipment for the people and intend to spread the benefits."

Rabbani is one of those few qualified technologists who are developing medical equipment for the poor. It shocked him when he learned that 80 percent of the world population live in the least developed countries and of them, only one percent

have the access to modern healthcare and diagnosis, like ECG and X-Ray.

While presenting the keynote paper in the session, Rabbani named a few equipments he has developed and invented so far with the help of his students. His inventions include locally improved computerised ECG machine, muscle and nerve stimulator and bone density measurement machine. He also developed a method of disinfecting water using sunlight.

Under a telemedicine project of the government, Rabbani and his team have also developed digital ECG, colonoscope, stethoscope, and microscope, with which patients can be diagnosed from far through internet.

The UK, Norway and Korea have already started using some of his inventions on an experiment basis. However, our government turned deaf ears to his urge to market the equipments locally.

Rabbani is also working to develop nerve disease scanning process and gadgets for hearing impaired and blind people.

"Within a decade our technology of scanning process would become popular across the globe," said an optimistic Rabbani, adding that we need to gradually get rid of the tendency of getting equipments and machineries from the rich countries.

Austin Mustafizur Rahman, director of Technology Development and Support of Hunger Orthopaedic & Group, also presented a paper following that of Rabbani's. Rahman lauded Prof Rabbani's spirit and dedication.

"The world is changing and we need to get on board too. Prof Rabbani has already started contributing to this changing process," said Rahman.

The audience of the colloquium were spell bounded as Rabbani presented his paper. They showered complements and inspiration when he finished his presentation.

"We can also fly high and I want to spread this message all over the third world countries," Rabbani responded.

Doctors need sufficient data about patients

STAFF CORRESPONDENT

DOCTORS should have enough intuitive data about patients to analyse diseases, a leading health expert said yesterday, urging the physicians to be proactive rather than reactive to their patients.

"There should a system so that doctors and patients can communicate with each other easily," said Kazi I Ahmed, a non resident Bangladeshi living in the United States.

Ahmed has developed a software for patients' record management solution that is being used over 400 hospitals and clinics across the USA.

He is the founder president, chief executive officer and chairman of NuMedics, Inc at the USA.

Ahmed presented the details of the software yesterday at a technical session on the sidelines of the two-day The Daily Star Leadership

Colloquium styled "ICT in Healthcare" at The Daily Star Centre in the capital.

He delivered his lecture from the USA through a video conferencing and also responded to the audiences' queries.

His local representative Sheikh Mohsinuddin, senior strategist at HP Software, moderated the session.

Ahmed said in Bangladesh, healthcare related works are still based on paperwork including patient's examination report, prescriptions, and history.

But all these data can be incorporated in an automated system using a software, he observed.

At the same time, non-disease data of the patients such as age, contact numbers and professions can be included in the software, he said.

Sometimes patients lose their papers but the software system can permanently preserve data, Ahmed said.

The software that Ahmed has



Kazi Ahmed (video conferencing)

developed can streamline data collection and demonstrate quality healthcare. A patient need not to fill up forms more than once if the system is introduced in the hospital system. Even there will be no need to fill up forms at laboratory, he said.

Ahmed said pharmacies can also be connected through the software so that they can get the electronic prescription and deliver medicine.

Mohsinuddin said if the soft-

ware is installed, the hospital authority would be able to provide service to the patients. It will also be used to establish communication among nurses, doctors and patients.

At the same time, the software can establish contact with patient's guardian as well. It is not the hospital management software rather it is a solution for patients' record management system, he said.

Mohsinuddin said the software has been developed in such a way that it can connect to different devices that can read blood pressure, diabetes, fever, cholesterol-level of patients and provide these information to doctors directly.

In case of video conferencing, the software can help doctors communicate directly with patients, he said.

Patients would get information, advice or electronic prescription through short message service or e-mail, if needed through phone or mobile also, said Mohsinuddin.

Responding to the audiences, he said that they have facilities at their Gulshan office in Dhaka to train doctors on the uses of the software. At the same time, they have special offer for Bangladeshi hospitals and clinics for procuring the software.

Price will depend on the design of the software and the number of people who will get benefit from it, said Mohsinuddin.

He said the system has the potential to let the doctor visit more patients in less time. Doctors can communicate with patients within 2 to 5 minutes. Clinics would be able to operate with less manpower.

The system's data security is in-built. The software is unified and can be incorporated in different hospitals, he said.

During the session, Global Med, a US based company, demonstrated their telemedicine equipment kits which can be connected with the software.