New robotic tech for ultrasound with doc at arm's length

FROM A SAFE DISTANCE: Tele-robotic ultrasound system allows radiologists to manipulate ultrasound probe from a distant location

TIMES NEWS NETWORK

New Delhi: Researchers from IIT Delhi and AIIMS have developed a tele-robotic system that can help conduct ultrasound remotely.

In a routine ultrasound setting, the doctor stands in close contact for long durations with the patient, which was less of a problem until the Covid-19 pandemic hit the world.

During the pandemic, Dr Chadrashekhara from AIIMS said they realised that close proximity with patients increased the risk of exposure to Covid-19, and, therefore, they approached IIT Delhi to explore the possibility of a robotic system that could help conduct ultrasound remotely. IIT Delhi has a tie-up with Addverb — a robotics company.

It took all the researchers and the company seven to eight months to design the tele-robotic ultrasound, said Dr Chandrashekhara, additional professor, department of radiology, AIIMS. "There are some refinements needed before the system can be used for patient services," he added.

Chetan Arora and Subir Kumar Saha, both professors, were the principal investigators of the project from IIT Delhi.

The tele-robotic ultrasound allows radiologist to manipulate the ultrasound probe remotely from a safe distant location. The images from the patient are transmitted to the monitors at the doctor's end through a WiFi network. The doctor can communicate with the patient and visualise all the images being acquired.

"The control architecture has been developed to tele-operate the ultrasound probe attached to the robotic arm, while ensuring safety of the patient and the quality of ultrasound images. Our research paper has been accepted at International Symposium on Medical Robotics 2021 at Georgia Tech University, Atlanta, USA. The improved version of this system is under development," said IIT Delhi PhD student Deepak Raina, lead developer of the system.

A DOCTOR SAYS

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In the future, the researchers said, this technology, once successful, could be utilised for ultrasound services in remote areas. "Tele-robotics is an emerging area in medicine and adoption of this technology will pave the way for Addverb to contribute to the upcoming revolution of medical robotics in India," said Suvayan Nandi, lead contributor from Addverb.

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District Resource Centres Buzzi

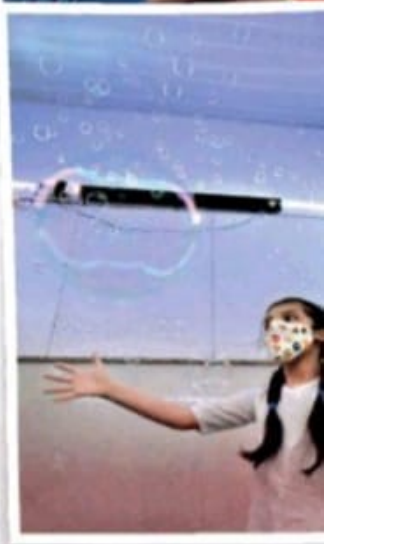
Shradha.Chettri
@timesgroup.com

New Delhi: Private therapy centres do not normally have 3D-tiled rooms with bubble dispensers, soothing music or even trampolines and swings. But these could be conducive when children with special needs (CWSN) are involved. The district resource centres, inaugurated on Wednesday, are now buzzing with activities. The centres each have a sensory integration room with glowing 3D tiles, an occupational and physiotherapy room, another for speech therapy and a fourth for psychological interaction.

At each centre, 16 children are receiving speech therapy, physiotherapy, occupational therapy and psychological assistance from 9am to 4pm every day, the routine formatted in such a way as to enable four children from four schools to come to the centre for a particular session. The work at the centres is outsourced to Orkids, a specialised foundation.

At Shaheed Hemu Kalani Sarvodaya Bal Vidyalaya in Lajpat Nagar, which houses one of the resource centres, Khushi, a child with Down syndrome, was engaged in speech therapy on Friday. The parents had dropped her at her school, from where special educators accompanied her to the centre.

Mamta Chaudhary, Khushi's special educator at Sarvodaya Kanya Vidyalaya in Molar Band near Badarpur, said, "The parents would have wanted this therapy for their daughter but they cannot afford the expense. So, they are more than



NDMC bags + cer

Vibha.Sharma@timesgroup.com

New Delhi: New Delhi Municipal Council claims to have become the first civic body in the city to obtain the Water+ certificate from the Union housing & urban affairs ministry. To achieve this, NDMC adopted several initiatives for the treatment of wastewater, safe discharge of sewage from community/public toilets and residential or commercial areas, cleaning using mechanised equipment and installing sewer treatment plants.

The Water+ certificate is given by the ministry under the Swachh Bharat Mission. NDMC claimed to use 100% utilise unfiltered water for horticulture and non-potable purposes. The certification implies that all wastewater created by households and commercial establishments is treated to a satisfactory level before discharge in the environment.

"We worked on numerous factors to meet the requirement of the certification, such as ensuring 100% separation of sewerage and drainage, their