

## All's well that starts well

Budding medics and techies came together in a medical college in Calcutta to find solutions to healthcare problems in India, reports **Prasun Chaudhuri**

PIC: SAMRAT DUTTA



The 'Doc Assist' team devised a robot fitted with sensors to check a patient's vital signs (blood pressure, pulse rate, and so on), and beam the data wirelessly to the doctor

Imagine a walking stick that buzzes whenever there is danger ahead. Of course, it's not the stick that alerts users, but a device that sits atop it and emits ultrasonic beams to help people scan the surroundings.

This is exactly what a bunch of budding engineers, doctors and entrepreneurs was trying to create at Crosshack, a medical technology hackathon at the RG Kar Medical College and Hospital in Calcutta. The prototype of the device — looking more like a contraption with

dangling wires — can turn into a sonar stick to guide the visually impaired through the busy streets of India.

Like most hackathons, participants had collaborated to code for 48 hours at a stretch, through night and day. On Monday morning, as many as 17 teams pored over their proposals amid the debris of development boards, sensors, kits, components, boxes of Pizzas and energy drinks.

Among the participants were members of the Asia-Pacific Medical Students' Association (AMSA) compris-

ing would-be doctors from Taiwan, Indonesia, Australia and India.

By Tuesday evening, all the teams came up with proof of concepts or prototypes of innovative healthcare products aimed at rural people. A neonatal temperature monitoring system developed by a team would check a newborn baby's temperature continually and emit radio signal alerts.

In case of hypothermia, an abnormally low body temperature that kills thousands of neonates every year in rural India, the doctor or

healthcare worker will receive quick messages on their mobile phones.

"If implemented in a primary health care centre, this can bring down infant deaths," says Soumya Mukherjee, one of the innovators from Jadavpur University. Another project on display was a nursing assistant designed to give timely reminders to a nurse in a public hospital about medication to be given to patients.

Call for Life, a software ap-

plication, will store and manage patient records in a database, locate and call doctors or an ambulance in an emergency and even locate hospital beds in your locality.

"It's kind of a healthcare aggregator service on the lines of Uber," says Chris Lin, Chung Shan Medical University, Taiwan, one of the developers.

Pregatrack, a mobile phone application, can help a healthcare worker track a pregnant woman's health status and keep a tab on every single child in pre-natal and post-natal stages. "A device like ours can check infant mortality in the developing world," says Kenneth Beyner, a medical student from University of Airlangga, Indonesia.

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## Life hacks

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The team that came runners-up devised 'Doc Assist', a robot fitted with sensors to check a patient's vital signs (blood pressure, pulse rate, body temperature, and so on), and beam the data wirelessly to the doctor. "Even a semi-skilled healthcare worker in a rural hospital will be able to operate the device," says Mohammed Masud Sarkar, one of the innovators from the Meghnad Saha Institute of Technology, Calcutta.

The winner of the hackathon was the team that devised the sonar walking stick (see pic). "We really worked hard for two days skipping meals and staying up at night," says Manas Das, a third-year medical student at the RG Kar Medical College. Das teamed up with a group of students from the Netaji Subhash Engineering College, Calcutta.

Ravi Ranjan, manager of the IT body Nasscom's initiative for startups in eastern

India, is impressed by the ideas presented at the meet. He says, "This was the first hackathon in the healthcare domain. We have many more such events lined up to help turn students' ideas into reality." Nasscom plans to support such ventures so that these can be developed into useful devices.

"We got to see a wonderful interface where budding medics and techies came together to design solutions for pressing healthcare problems in India," says Dr



Sandip Halder, a professor at the RG Kar Medical College and Hospital. "This was a one-of-a kind idea hack in the city," sums up Prasad Mitra, a students' union leader of the college who helped organise the meet.