

New simulation centre to train surgeons and medical students

Facility's simulators mimic the conditions for endoscopic and heart procedures

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Surgeons and medical students can now tap a new simulation centre to pick up and refine the latest techniques in cardiothoracic and vascular surgeries.

The Cardiac, Thoracic and Vascular Surgery Simulation Centre, run by the National University Heart Centre, Singapore (NUHCS) with the support of National University Hospital and the NUS Yong Loo Lin School of Medicine, was inaugurated on Friday.

Equipped with more than 20 types of digital and mechanical simulators to mimic the conditions for endoscopic and minimally invasive heart procedures, the facility aims to provide a training ground for specialist clinicians.

NUHCS declined to reveal how much it cost to set up the centre.

Professor Theodoros Kofidis, head of the department of cardiac, thoracic and vascular surgery at NUHCS who is leading the simulation centre, said that to pick up new surgical techniques, surgeons typically go through supervised and structured step-by-step training on real patients.

"We tend to say you have to train 10,000 hours to become an expert in anything. Thankfully now, the surgeons don't have to train those 10,000 hours on patients but on simulators.

"It abbreviates the learning curve so that the surgeon becomes more comfortable to carry out modern types of surgeries in no time," he added.

An example of an advanced sur-



Professor Theodoros Kofidis, head of the department of cardiac, thoracic and vascular surgery at the National University Heart Centre, Singapore, demonstrating the use of the Maastricht endoscopic mitral simulator at the new Cardiac, Thoracic and Vascular Surgery Simulation Centre on Friday. ST PHOTO: GAVIN FOO

gery that can be mastered at the centre is minimally invasive mitral valve surgery. The mitral valve is one of the four valves of the heart. Surgeons will need to learn where to position the surgical tools, how to use a camera in the chest and how to turn the heart in the chest.

Devices at the centre include the Maastricht endoscopic mitral simulator, which gives feedback on

how well the surgeon is performing, and a tele-simulator, which allows training to take place virtually.

More than 1,000 specialist clinicians from over 20 countries such as Vietnam, Malaysia and Indonesia have been trained since 2018 using the simulators under a pilot.

With the opening, the centre plans to train up to 100 clinicians a

year. It is also open to students from the NUS Yong Loo Lin School of Medicine.

Adult cardiac surgeon Komang Adhi Parama Harta from Bali's Sanglah Hospital, who is at the centre for a two-day workshop, hopes to pick up minimally invasive surgery techniques as he is unable to get access to similar facilities in Indonesia. "The simula-

tions available in my country are more simple, and what's at the centre is more lifelike. This will allow young surgeons to learn as soon as possible how to do cutting-edge surgery," he said.

The NUHCS carries out over 100 minimally invasive heart surgeries a year.

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