

Fancy a neck rub? A robot can do the job



Singapore's first robot masseur Emma specialises in back and knee massages, at a massage demonstration during its official launch at NovaHealth TCM clinic, Raffles Place. Photo: Koh Mui Fong/TODAY

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SINGAPORE — That knot in your back may someday be rubbed out by a robot.

ADVERTISING

Just like human masseurs, Emma the robot has a "palm" and "thumb" made of silicone – heated to mimic human hands – to soothe tense muscles. What it may be able to do better than humans is massaging each sore point with precision, and charge less.

A Traditional Chinese Medicine (TCM) clinic in the city centre has become the first in Singapore to deploy the million-dollar robot for "tuina", Mandarin for acupoint massage.

Emma, short for Expert Manipulative Massage Automation, "started work" on Monday (Oct 9) at NovaHealth TCM clinic in One Raffles Place, focusing on treating customers with stiff backs or strained knees.

With Emma, the clinic is staffed by just one physician, one customer service officer, and one massage therapist – two fewer than typical. The physician spends a brief five minutes with a customer to find out the problem before using a computer to mark out acupoints for Emma to massage.

The human masseur focuses on neck, ankle or wrist massages, as Emma is charged with massaging knees and backs.

Hiring a massage therapist costs between S\$3,000 and S\$5,000 a month, depending on their experience. Tuina is the most labour-intensive part of TCM treatment, as compared with acupuncture and cupping.

Emma was created by AiTreat, a startup incubated at the Nanyang Technological University, over two years. More than S\$1 million was spent developing it.

It is programmed to apply a force of up to 50 Newtons, equivalent to roughly half the maximum force the typical human can exert, according to Mr Zhang Yizhong, 34, chief executive officer of AiTreat.

Emma usually starts with a force of 40 Newtons, and its strength can be adjusted 10 Newtons up or down according to the patient's needs, said Novahealth physician Calista Lim, 29.

A 40-minute massage by Emma for lower back pain costs S\$68 at NovaHealth. A human masseur charges S\$60 to

S\$150 for a 20-minute session. The charges include a consultation and acupuncture, for both packages.

Property agent Ken Tay, 31, who was one of the first to try out Emma to ease his knee and back pain on Monday, said he did not feel a difference between Emma's massage and what he would have gotten from a human masseur.

"I don't like to talk to anyone during a massage. In fact, I am more comfortable with Emma because it doesn't talk. It's so good I fell asleep," Mr Tay told reporters.

More than 20 companies operating 1,000 over clinics around the world have expressed interest in Emma, and AiTreat is in the midst of diversifying the robot's use to cover the treatment of Charcot-Marie-Tooth disease, a nerve disorder requiring a daily massage to slow down muscle degeneration, among others.

When enough data is collected, Emma will be able to tap on artificial intelligence by computing each patient's values of muscle stiffness before and after a massage to deliver the optimal pressure to reduce the next patient's muscle stiffness, said Mr Zhang.

AiTreat, which is staffed by 11 people, has a valuation of S\$10 million after completing its seed round funding, supported by Venture Capitalists from Singapore, China and the United States, including Boston's Brain Robotics Capital.