BioSpectrum ASIA EDITION
the business of Bio & Health Sciences

Singapore uses robots to alleviate manpower shortage of chronic low back pain therapists

February 14, 2023 | News

AI-powered massage robot to start product evaluation in the US and clinical trial in Singapore



Singapore robotics firm AiTreat will be embarking on a new product evaluation in the United States for their massage robot powered by Artificial Intelligence (AI) at Mayo Clinic, USA.

At the same time, a randomised controlled trial (RCT) comparing the efficacy of the massage robot with existing therapies such as manual Tuina – a massage used in Traditional Chinese Medicine (TCM) – in managing chronic low back pain is also being planned in Singapore. The RCT will be jointly led by the Biomedical Sciences and Chinese Medicine programme at Nanyang Technological University, Singapore (NTU Singapore) and Singapore General Hospital (SGH).

The above two research projects will be using EMMA – short for Expert Manipulative Massage Automation – the flagship product of AiTreat, a startup incubated by NTU Singapore through its innovation and enterprise company, NTUitive. EMMA aims to alleviate the manpower shortage of skilled massage therapists and possibly to augment the work of physiotherapists in managing less complex cases in Singapore and other countries, thus helping bring down treatment costs while providing consistent high-quality treatment to every patient.

AiTreat hopes to enroll about 180 patients for the proposed RCT by the end of 2023. If the trial results are positive, it will pave the way for a robotic solution of an integrative East-West approach in the management of low back pain, to be accepted as part of musculoskeletal intervention in mainstream healthcare.

Using the clinical treatment results gathered through the new trials and deployments, AiTreat will improve the AI algorithms and performance of its robot, and it seeks to launch the next-generation EMMA in Singapore, US and China markets by 2024.