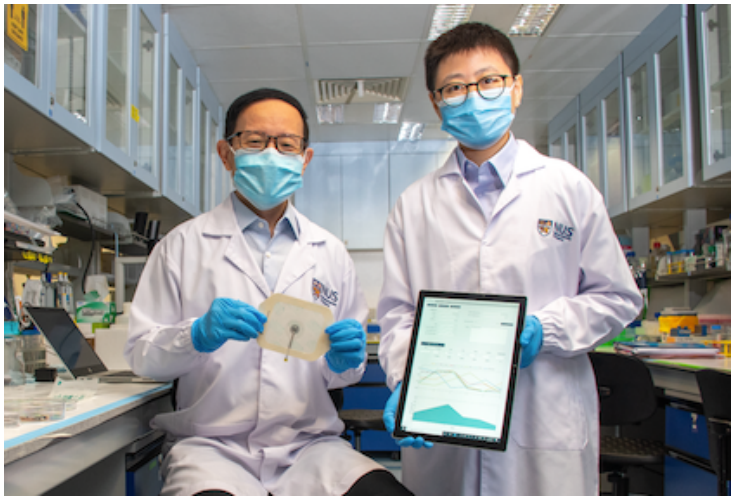
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ASIA EDITION

Singapore develops wearable sensor to detect multiple chronic wound biomarkers

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World's first smart bandage that detects multiple biomarkers for onsite chronic wound monitoring



A research team led by Professor Lim Chwee Teck from the National University of Singapore's (NUS) Department of Biomedical Engineering and Institute for Health Innovation & Technology (iHealthtech), in collaboration with clinical partners from Singapore General Hospital, has developed a smart wearable sensor that can conduct real-time, point-of-care assessment of chronic wounds wirelessly via an app.

A world's first, the novel sensor technology can detect temperature, pH, bacteria type and inflammatory factors specific to chronic wounds within 15 minutes, hence enabling fast and accurate wound assessment. VeCare is a wound assessment platform consisting of a wound sensing bandage, an electronic chip and an app.

The VeCare platform and mobile app enable doctors to monitor the condition of patients' chronic wounds remotely, reducing the hassle for patients to travel to a clinic. The bandage complements the patient's existing medical treatment while facilitating timely medical intervention for wound healing processes.

The next step for the research team is to further develop VeCare to meet safety, regulatory and mass production considerations. The team will explore the incorporation of other appropriate biomarkers suitable for other wound types and utilise data in existing clinical workflows to improve diagnosis and treatment.

They hope to test the technology on a larger prospective randomised clinical trial with different types of non-healing chronic ulcers such as diabetic foot and pressure ulcers.