TCC: Remote Monitoring for Virtual Care

UNSW SYDNEY

UNSW Tyree Foundation Institute of Health Engineering

TeleClinicalCare (TCC) is an evidence-based remote patient monitoring platform that leverages connected health technologies to deliver enhanced post-discharge continuity of care.

TCC-COVID: Connected Health in the Pandemic

Amidst the challenges of the COVID-19 pandemic, a pioneering smartphone app and clinician monitoring portal was developed, offering isolated COVID-19 patients the power of virtual monitoring by an experienced medical team. TeleClinical Care – COVID-19 (TCC-COVID) monitors a patient's blood oxygen levels and pulse rate at least twice a day. Patients receive a pulse oximeter, used to measure blood oxygen saturation and pulse rate, along with access to the smartphone app. They are instructed by the medical team on how to use it and enter their data. Collected data across patients with the South East Sydney Local Health District is remotely analysed at Prince of Wales Hospital.

The system automatically sends daily symptom questionnaires and alerts for patient deterioration. It also triggers alerts if a patient doesn't submit data for over 24 hours.

Safely monitoring patients in the community preserves hospital resources for critical cases. The technology transitions patients from hospital to home, enabling self-management, reducing re-hospitalisations, and improving overall well-being.

TCC-COVID at a glance

The App has been rolled out to over **8000** patients.

Over **150** clinicians and medical students were trained and supported to operate the remote monitoring platform.

The app has been translated into **five** languages.

"A key challenge during the COVID-19 pandemic was to monitor large numbers of cases safely and efficiently, while managing any additional demands that might be placed on emergency and inpatient services.

The TCC-COVID system aimed to help address these needs, linking community-based patients with hospital specialists."

A/Prof Sze-Yuan Ooi
Director of the Coronary Care Unit
Senior Staff Cardiologist at Prince of Wales Hospital