



JOINT NEWS RELEASE

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NTU Singapore graduate students expand free telehealth services to include monitoring for mental well-being amid the pandemic

Following a successful pilot, a free health monitoring initiative led by graduate students from **Nanyang Technological University, Singapore (NTU Singapore)** has been expanded to the residents of Bukit Gombak, in partnership with South West Community Development Council (CDC).

The **Community Telehealth Service (CTS)** now aims to provide free health screening to 2,000 people, doubling its target from the pilot in January 2021, which took place in Punggol. The service is conducted at easily accessible locations and is targeted at Singaporeans above 50 years of age, as well as those who have had their regular health check-ups deferred due to the COVID-19 pandemic.

The second phase of CTS also includes monitoring for mental well-being, which has been a recent area of concern. A new study by the Institute of Mental Health pointed to a likely increase in mental health issues in Singapore amid the COVID-19 pandemic.

CTS's second phase is run by nine students from the NTU Lee Kong Chian School of Medicine (LKCMedicine) and the Interdisciplinary Graduate Programme. Additionally, 15 student volunteers from NTU and 50 more from the public were recruited to help.

The check-ups take place in specially constructed telemedicine booths that leverage the latest health technologies to test for chronic conditions via retinal scan, diabetes, as well as obesity. In addition, the student volunteers administer a questionnaire to help assess the mental well-being of participants.

The AI eye health screening system is provided by Singapore start-up **EyRIS** with camera support provided by **Mandarin Opto-Medic Co.** Called **EyRIS SELENA+**, it uses an automated camera to take several images of a person's eye and its artificial intelligence-powered system then processes the retinal images to examine for three types of eye disease - diabetic retinopathy, glaucoma suspect, and age-related macular degeneration.

The second phase for the Community Telehealth Service is being held until 27 March 2022 at the space beside REACH Senior Centre @ Bukit Gombak Vista, a facility operated by **REACH Community Services Society**, a social service agency that works with families, couples, youth, and seniors. The venue was provided by the Chua Chu Kang Town Council.

The South West CDC played the role of a resource aggregator by bringing all relevant partners in this collaboration.

Commenting on the student-led initiative, **Mayor of South West District, Ms Low Yen Ling** said: “In the last two years of the pandemic, health screening has taken a back seat for many, especially the seniors. This ground-up initiative with NTU graduate students and REACH, will bring free telehealth screening and mental wellness checks, to elderly Bukit Gombak residents in the comfort of their estate. We hope the new and convenient service will encourage the seniors to have their health checked, as some may have missed or delayed their healthcare appointments due to COVID-19. This youth-led collective effort is heartening, as we see our young people take ownership and boosting our community resilience with their care for older Singaporeans.”

Ms Yichi Zhang, a PhD candidate from NTU’s Interdisciplinary Graduate Programme, Graduate College, who is one of the leaders of the initiative, said: “We were inspired to take on a lead role in the second phase of CTS, having volunteered in the pilot. We are grateful for the help of our community partners to help expand our service to more locations to benefit more people. This has given us opportunities to include additional services, such as a mental well-being questionnaire, as well as improve our service, and further strengthen safety measures. We hope to sustain our efforts to continue beyond the pandemic.”

Encompassing mental wellness in health monitoring

The mental well-being questionnaire was implemented with the expertise of researchers from the **Ageing Research Institute for Society and Education (ARISE) at NTU**, a pan-university institute focussed on ageing-related research, programmes, and activities to address the demands of an ageing population.

The questionnaire is based on the World Health Organisation’s Five Well-Being Index (WHO-5), which has been shown to be effective in screening for depression. NTU faculty advised on the implementation of the questionnaire and trained volunteers on how to best conduct it.

One of the researchers involved, **Associate Professor Ringo Ho, Associate Chair (Faculty) of the NTU School of Social Sciences and Deputy Director at ARISE**, an applied psychologist, said: “The mental well-being of seniors in Singapore has

become of larger concern, as the disruptions caused by COVID-19 may have led to fear, anxiety and a sense of helplessness among them. The questionnaire aims to assess their psychological and social well-being and extend the necessary aid to them as they cope with these trying times, as they are among the most vulnerable in terms of not only physical health, but also their mental well-being.”

If any concerns are detected during the screening, the users will be referred to REACH, who will conduct further screening and assessment for treatment and make any arrangements.

REACH’s Community Resource Engagement and Support Team (CREST) team has been conducting outreach and mental health screenings for senior residents in the community. The CREST team has also been assisting CTS with their outreach to the senior residents and aiding in garnering sign ups. The findings from the mental well-being questionnaire will also be used for further research by ARISE.

Professor Theng Yin Leng, Associate Provost (Faculty Affairs), Executive Director at ARISE at NTU, and Director at Centre for Healthy and Sustainable Cities (CHESS) at the Wee Kim Wee School of Communication and Information, said: “ARISE is excited to provide support and advise the CTS team on their latest instalment, as they continue to scale up their efforts to extend their health screening offering to more seniors across Singapore in these trying times. Working with CTS is also an ideal testbed to see whether tech-enabled solutions, such as telehealth screenings, work for the elderly. It also represents ARISE’s aspirations to translate our research efforts and innovations into the community to impact society.”

A heartening response to the initiative’s pilot

The pilot scheme of the initiative, which took place from 9 January 2021 to 28 February 2021 at Punggol 21 Community Club, received over 700 registrations, with over 600 resident Singaporeans benefiting from the free telehealth monitoring.

The average age of participants during the pilot was 57, with the oldest being 90 years old. Nearly 200 participants were referred to further check-ups at SingHealth polyclinics or hospitals.

Mr Wee Soon Keong, a PhD candidate at NTU’s LKCMedicine, who is also a leader of the initiative, said: “Our pilot CTS phase had positive feedback and encouraging responses from our residents and volunteers on how this reimaged model of care would benefit the community in the long run. This motivated us to do more and improve on the services provided by learning from the lessons and challenges faced from the pilot project.”

The event organisers stress that the telehealth screening is meant for personal monitoring and does not replace the usual doctor appointments or annual check-ups. If any abnormalities are detected during the screening, the users will be referred to a GP or polyclinic for a follow-up.

The organisers of the telehealth initiative are ensuring that the health screening adheres to safe management measures, as stipulated by the Singapore government.

The CTS team is already working on plans to ramp up their efforts to deploy more telehealth monitoring booths in other heartland districts, such as at the recent addition at Chai Chee, in partnership with the SATA CommHealth Uttamram Medical Centre in Bedok and Kembangan-Chai Chee grassroots organisations.

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About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,000 undergraduate and postgraduate students in the Engineering, Business, Science, Humanities, Arts, & Social Sciences, and Graduate colleges. It also has a medical school, the Lee Kong Chian School of Medicine, established jointly with Imperial College London.

NTU is also home to world-renowned autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI) and Energy Research Institute @ NTU (ERI@N).

Ranked amongst the world's top universities by QS, NTU has also been named the world's top young university for the last seven years. The University's main campus is frequently listed among the Top 15 most beautiful university campuses in the world and it has 57 Green Mark-certified (equivalent to LEED-certified) building projects, of which 95% are certified Green Mark Platinum. Apart from its main campus, NTU also has a campus in Singapore's healthcare district.

Under the NTU Smart Campus vision, the University harnesses the power of digital technology and tech-enabled solutions to support better learning and living experiences, the discovery of new knowledge, and the sustainability of resources.

For more information, visit www.ntu.edu.sg

About the South West Community Development Council

The South West Community Development Council (CDC) was formed on 24 November 2001, with the mission to Assist the Needy, Bond the People and Connect the Community.

Through local help programmes, the South West CDC provides assistance to help the less fortunate in our community. The South West CDC also organises projects and programmes to promote community bonding and social cohesion. The South West CDC adopts the "Many Helping Hands" approach to encourage community ownership among residents, community partners and corporations to realise its vision of "Owning Your Community".

Ms Low Yen Ling was appointed the Mayor of South West District on 27 May 2014. Ms Low is also the Minister of State, Ministry of Culture, Community and Youth (MCCY) & Ministry of Trade and Industry (MTI) & Adviser to Chua Chu Kang GRC.

For more information, please visit: www.cdc.gov.sg/southwest

About REACH Community Services Society

REACH Community Services Society was founded in 1998 by Grace Assembly of God to help the Least, the Lost, and the Lonely in the community. REACH was registered as a charitable organisation in 1999 and has been an approved Institution of Public Character (IPC) since 2009.

REACH offers community programmes and services through our six touchpoints. We strive to inspire hope and empower change in vulnerable families, distressed couples, at-risk youths, and lonely seniors through our four core pillars: Family Service, Counselling Service, Youth Service and Senior Service.

We aim to support families through financial assistance, casework, and counselling; build lasting marriages through marital counselling; empower at-risk youths through mentoring sessions and engagement programmes; and aid our elderly to age gracefully through community projects. To find out more about the work REACH does, please visit <https://www.reach.org.sg/>.