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Tech trial to quickly detect falls at home and alert caregivers

About 150 seniors given Net-enabled tablets that work with radar sensors to track falls

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Madam Ng S.C., 76, was alone at home when she suffered a stroke in March that caused her to fall in the bedroom of her three-room flat in Ang Mo Kio and hit her head.

Help arrived only several hours later, when her husband returned home that day and found her on the ground. Her face was drooping and she could not swallow food or water.

Madam Ng was taken to hospital, but because of the hours-long delay in seeking treatment, she lost the ability to move the left side of her body and now needs intensive rehabilitation.

Technology that automatically detects falls and alerts caregivers is now on trial to help seniors like Madam Ng.

The Government Technology Agency (GovTech) and the Agency for Integrated Care (AIC), which are behind the project, are exploring the use of radar sensors to detect seniors falling at home.

These sensors identify a human-shaped object and detect falls by looking at the object's angle and speed, and can be programmed to automatically alert the next of kin or a caregiver when falls are detected.

Under the trial, about 150 seniors living in Marine Parade, Bedok South and Ang Mo Kio will be provided Internet-enabled touch-screen tablets for free, The Sunday

Times has learnt. The tablets will work with a radar to track any falls within their radius.

The devices will also allow seniors with mobility issues to consult polyclinic doctors via video conferencing, and act as a "digital concierge" by sending automated reminders to seniors to take medication, eat healthily or exercise regularly, GovTech and AIC said.

This project is part of measures

83,000

Estimated number of seniors who will be living alone by 2030; about 100,000 will require assistance with at least one activity of daily living, according to data from the Ministry of Health.

to boost preventive care, a priority under the Ministry of Health's 2023 action plan.

Staff at active ageing centres supported by AIC can push messages through the tablets to remind seniors to attend day activities at the centres. There are 19 such centres islandwide, but they are set to double to 220 by 2025.

"The project is in the early study phase. The operational knowledge and user feedback gained from this trial will help GovTech engineers assess how useful various technological solutions are to seniors," said GovTech and AIC.

"More importantly, the tablet must also be paired with good support services in the community. This is why GovTech and AIC are co-creating the solution with seniors, as well as taking in feedback from community care providers and healthcare professionals."

Sociologist Paulin Straughan from the Singapore Management University (SMU) suggested pairing seniors who are not so tech-savvy with those who are, and forging tie-ups with neighbouring schools to encourage students to regularly visit and offer seniors tech assistance.

"Seniors with social support do very well. But if the support person is missing, tech becomes a burden," said Professor Straughan, who is director of the Centre for Research on Successful Ageing at SMU. Even for telemedicine, seniors like to see a regular face such as a family physician online, she added.

GovTech called a tender in De-

cember 2022 for contractors to supply and maintain the tablets, including to update the system and roll out security patches remotely.

When there is no usage or if the device has not been switched on for more than three working days, the contractor will need to alert GovTech and AIC, and may also need to visit the homes to check on the health of the devices.

In late February 2023, the tender was awarded to telecommunication firm Singtel. ST understands that GovTech will be designing the software and the tablet interface.

The tech initiative comes amid Singapore's rapidly ageing population.

A similar trial in 2020 involved installing personal alert buttons in 53 one-room rental blocks across the island to manage emergencies involving elderly people who live alone. When the system is triggered, an alert is sent to a senior activity centre.

By 2030, one in four people here will be aged 65 and above. An estimated 83,000 seniors will live alone and about 100,000 seniors will require assistance with at least one activity of daily living, according to Ministry of Health data.

When Madam Ng, who is undergoing intensive rehabilitation in a community hospital, found out such fall-detection technology was available, she asked in Mandarin: "When will this be rolled out?"

She may not have to wait long if the trial, which ends later in 2023, is successful.

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