New tech for old folk

Ageing is often associated with a decrease in independence, but new technology is helping the elderly cope better with challenges, allowing them to continue living at home safely and comfortably instead of having to go to a care home. This is especially important as the old-age support ratio here has been on a steady decline: There were nine residents aged 20 to 64 years to one over 65 in 2000 but that has almost halved to 5.1 to one last year. **Felicia Choo** looks at the experiences of three seniors.

Madam Sitee Marnoor with a door sensor. A similar one was mounted on the frame of her main door in September. Since then, it has sent out three alerts. PHOTO: GIN TAY FOR THE STRAITS TIMES

SHINESENIORS

What: Motion detectors
What they do: Alert call centre when they fail to detect senior's movement for a period of time.
Cost: $250 to $1,350 (depending on sensors used)

Sensors keep close eye on seniors who live alone

Every time Madam Sitee Marnoor, 76, enters and exits her rented one-room flat in Tampines where she lives alone, she is being "watched".

A motion sensor near her main door silently tracks her movements. If the door is not opened for more than 24 hours, it will send an alert to call centre Care Line.

There are other motion sensors in Madam Sitee's bedroom, bathroom and living room.

The presence of the sensors and the Care Line operators are reassuring, said Madam Sitee, who has been living alone since her husband died four years ago.

Madam Sitee, who worked as a cleaner before retiring six years ago, seldom goes out due to knee pain. She has six children, but does not live with them as they do not get along. However, she contacts two of her sons to take her to medical appointments.

The sensors are part of an ongoing project called SHINESeniors that was started in October 2014. It aims to find out how technology can enable elderly people who live alone to remain in their homes while receiving community care.

The study is led by researchers from the Singapore Management University-Tata Consultancy Services (SMU-TCS) iCity Lab in collaboration with the Agency for Science, Technology and Research's (A*Star) Institute of High Performance Computing and Eastern Health Alliance. It is expected to end in June.

The 18 seniors involved in the door sensor trial, which started last September, also have a "friendship button" that lets them request a chat with a Care Line operator.

Care Line, which is run by the Eastern Health Alliance, operates round the clock.

"We adopted a similar approach to the yellow-flag system in Japan, but use a door sensor instead," said Associate Professor Tan Hwee Pink, academic director of the SMU-TCS iCity Lab.

"If the yellow flag is not present, it means that the elderly person has not opened the door for a while, and the community will then check on (them)."

Since the trial started, three alerts for Madam Sitee have been sent to Care Line, although only one was because of a health condition.

She had been having a bad backache and did not open the door while resting at home after seeing the doctor that month.

The other two times occurred when she had not felt like going out or had stayed with her younger son for a period.

Prof Tan said a possible improvement to the sensor system would be to personalise the amount of time the door is unopened for the alarm to be activated so that it fits in with each elderly person's habits.

After more data has been collected from the door sensor trial, the team will use artificial intelligence to learn the "door opening/closing behaviour" of the elderly person and investigate if this is linked to other patterns such as the friendship button activation and call content, he added.

More than 90 elderly people living in estates like Bedok, Marine Parade and Bukit Merah are involved in the project, which trials different combinations of the sensor system.

Prof Tan estimates that the cost of a sensor system ranges between $250 and $1,350.

feliciac@sph.com.sg