



**SLIENT WATCH:** Mr Ivan Teo and fellow former student Yin Yin (foreground) working on the Elderly Monitoring System installed in Madam Sim Suk Buzi's home works.

# If she falls, they will know

**Wheelchair-bound woman has Elderly Monitoring System installed in Madam Sim Suk Buzi's home works.**

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EVERY day, with much difficulty, she wheels herself into the bathroom and heists herself onto the toilet bowl just to take a shower. Occasionally, she falls off her wheelchair, moody when she tries to pick something up from the floor.

When she falls, she usually uses her arms to drag herself back onto the wheelchair again, resulting in bruises on her limbs.

In August, she hit her head at least once. So, what if one day, after she falls, 85-year-old Miss Sim Suk Buzi is unable to get back up by herself?

What if the elderly woman, who lost the use of her legs several years ago, gets knocked unconscious?

Fears of being injured and home alone in her one-room rental flat in Mei Ling Street have never been too far from her mind.

But now, she can feel more secure.

That's because she is one of two elderly residents whose flats are now fitted with an alert system that has been on trial since last December.

The Ngee Ann Polytechnic's Elderly Monitoring System, designed by the polytechnic's staff and students, tracks the movement of an elderly resident and sends an SMS to a caregiver if it detects unusually long peri-



THE NEW PAPER

## Project Helping Hands

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ods of inactivity. (See infographic.)

Miss Sim was chosen because two types of senior citizens – the physically active and the less mobile – were needed for the trial. Miss Sim fitted the latter profile.

The designers wanted to find out if the technology would work for seniors with different lifestyles.

Initially, Miss Sim was not open to the idea of letting strangers into her home to set up the gadget.

It took the staff of voluntary welfare organisation Lions Befrienders Service Association two weeks to persuade her to take part in the pilot project after they were approached by the electrical engineering division of the polytechnic late last year.

When The New Paper on Sunday visited Miss Sim's home – which was cluttered with old plastic mugs, paper bags, boxes, clothes and drink cans – in August, she said she is a very private person.

After seeing black bed bugs scuttling across her mattress – stained with her blood – this paper's team offered to help clean up her flat.

No, thank you, she said. She has rejected similar offers from Lions Befrienders volunteers on many occasions in the past.

So what changed her mind about letting the polytechnic students into her home?

Mr Eric Cheong, 46, the centre manager for the Lions Befrienders Seniors Activity Centre (Mei Ling), said, "We explained to her that the success of the trial will bring benefits to many other senior citizens."

Miss Sim is glad to have opened her home for the trial.

She said in Hokkien: "I feel safer with (the system) fixed in my home. If I ever fall and I can't get up for a long time, at least someone else will know."

Madam Molly Zhou Yamei, 79, is the other senior citizen whose flat was installed with the system. She lives in the same block as Miss Sim.

Madam Zhou was widowed about 12 years ago and lives alone instead of with her daughter and two grandchildren.

She said in Mandarin: "My daughter is very busy and my other relatives seldom visit, so I have few visitors."

**Trial users** help busy with housework, and flat has in-space and again.

She also feels more secure with the alert system in place.

She was chosen for the trial as her daily routine fits the profile of a senior with an active lifestyle. She likes to take long walks around the neighbourhood.

Over the last 10 months of the trial, neither Miss Sim

## North East CDC offers to recruit volunteers

SINCE Project Helping Hands was launched last Sunday, more than \$14,000 in donations have come in from the public.

While this is still a long way from the \$1 million required to fix the alert system in 1,000 hours of needy elderly residents, the project has gathered strong support from the community.

Mr Teh Thien Yew, general manager of the Singapore Kindness Movement, and Mr Gerard Ee, chairman of the Council for Third Age, have applauded the project.

Now, Mr Teo Ser Luck, the senior parliamentary secretary for the Ministry of Community Development, Youth and Sports, and the Ministry of Transport, has stepped forward to lend his support after reading about it in The New Paper.

Mr Teo, 62, said The New Paper on Sunday: "I'm glad to know this technology has been harnessed to help the elderly. It is important for the aged to get such assistance, especially when they are living alone."

Mr Teo, who is also the mayor of the North East Community Development Council, added that his CDC is willing to work with the Lions Befrienders Service Association to recruit volunteers for the project.

"Right now, there are many different parties such as

voluntary welfare organisations and government agencies working together to provide assistance for the aged. The CDC may be a suitable organisation to coordinate and work with these organisations to assist the elderly residents in the respective districts," he said.

"Somebody needs to follow through with the residents during the process of getting help."

Project Helping Hands is an example of how the media can gather the different stakeholders and inform the public about the direction of a community project.

But Mr Teo emphasised that it is also important for people in the neighbourhood to do their part.

"Neighbours and grassroots leaders could also be the helping hands to link the residents, including the elderly, for assistance should there be a need," he explained.

With the number of those aged 60 and above and living on their own projected to rise from 35,000 last year to 83,000 in 2030, Mr Teo said it is most important for Singapore to get itself ready by the ageing population.

He said: "We cannot wait till 2030. We must prepare in advance. In all areas, such as town planning and transport planning, the needs of the elderly have to naturally come to mind."

### HOW THE SYSTEM WORKS

Magnetic door sensor detects opening and closing of the door.

Motion sensors help detect movement.



Wireless module powers the sensors and communicates wirelessly with the controller.

The controller gathers data from the sensors wirelessly. It comes with a module and will send an SMS to alert the caregiver if there's no motion detected for a period of time.

5 sensors mounted on the ceiling overlap one another to provide full coverage of the area. The sensors cannot detect motion through walls.

ne Madam Zhou faced any emergency situation that required an immediate response.

But through the project, the effectiveness of the motion sensors was tested and refined.

The design team also managed to study the motion patterns of Miss Sim and Madam Zhou. This helped them in forming motion profiles of elderly residents, which will be taken into account when applying the system on a larger scale.

More than 10 students from different batches of Ngee Ann Polytechnic's electrical engineering division were involved with the project, which was conceived three years ago.

It was originally designed to detect an elderly resident falling. But for practical reasons, the alert system was modified two years ago to detect the movements of the elderly residents.

The final version of the Elderly Monitoring System was produced late last year.

Most of the students involved in the research have graduated over the past two years.

One of them is Mr Ivan Teo Choon Hong, 21, who is about to receive his National Service.

He said: "Miss Sim and Auntie Anny are very friendly. They are like family members."

Ms Lek-Lan Gook Choo, 51, the deputy director of the polytechnic's electrical engineering division, has been supervising the project from its inception, and is granted to show how far it has progressed.

She believes that the alert system will increase the elderly's chance of survival in the event of an accident or illness.

"Even in the worst-case scenario, at least the body of an elderly person who has passed away will not be left unattended for days, emitting a stink in the block. We must protect their dignity," she said.

Lions Befrienders have shortlisted another 1,000 elderly people living alone who have expressed an interest in having the system fixed in their homes.

But for that to happen, donations and volunteers are needed. (See report on facing page.)

## Help us reach out to them

To help the elderly who are living alone, The New Paper has partnered the Lions Befrienders Service Association and Ngee Ann Polytechnic in Project Helping Hands.

### THE PROJECT DESIGN

Installers installing wireless motion sensors in the apartments of senior citizens living alone.

The system tracks the resident's movements and sends an SMS to a caregiver or volunteer if it detects unusually long motionless periods – for example, if the resident stops moving due to an injury or illness.

This technology, known as the NE's Elderly Monitoring System, was developed by the staff and students of Ngee Ann Polytechnic.

Lions Befrienders has shortlisted 1,000 needy elderly Singaporeans living in one-room flats as potential beneficiaries.

**IMPLEMENTATION**

To get the best use out of the project, up and running, at least \$1 million is needed by the end of the year – \$1 million for every home.

Equally important is the heartwarming. Volunteers are needed to assist seniors living on their own.

Their main responsibility is to receive and act on the SMS alerts that will be automatically sent out if the sensors detect any unusually long motionless periods.

### HOW TO HELP

Any amount is welcomed. A donation of \$1,000 will provide for sensors to be installed in one flat. You can donate more if you wish to support more than one household.

We hope students in the same class, colleagues in a department or neighbours on the same street or community group will come together to support a home.

Checks of any amount, made payable to "Lions Befrienders", can be mailed to:

Lions Befrienders Service Association (Singapore)  
B1K 130, Bukit Merah View, #01-356, Singapore 150130

Please indicate on the back of the cheque:

- Project Helping Hands
- Your flat name
- NRIC number
- Address
- Contact number

Corporate donors should also indicate their company's name (as registered with ACRU) and their business registration number.

Donations can also be made by cash at the Lions Befrienders' office during office hours (10am-5pm) on weekdays.

All donations are tax exempt.

### HOW TO VOLUNTEER

To sign up as a volunteer, please call 1800-373 8000 or visit [www.lionsbefrienders.org.sg](http://www.lionsbefrienders.org.sg)

All funds raised for the project will be handled and disbursed by Lions Befrienders.