



Mr Foong Yee Kong, 76, who has cataracts, using the Automated Visual Acuity machine, which measures the eye's ability to distinguish shapes at a distance, at the launch of the new Centre for Innovation and Precision Eye Health at the National University Health System on Saturday. ST PHOTO: NG SOR LUAN

Eye-care kiosks for glaucoma, cataract tests to be rolled out at more polyclinics

Eye-care kiosks will be set up at more polyclinics to make them the first stop for common eye diseases like glaucoma and cataracts.

Functioning like self-checkout kiosks in supermarkets, these eye-care booths will collect data about a patient's eyesight before sending it to an ophthalmologist off-site for diagnosis, helping to save time and cost.

The kiosk is being piloted at Pioneer Polyclinic, but is expected to be rolled out to two or three more polyclinics by the end of the year.

It was one of several initiatives announced at Saturday's launch of the new Centre for Innovation and Precision Eye Health at the National University Health System (NUHS).

The initiatives aim to make diagnosis and treatment of eye diseases more accessible and affordable.

The centre's focus ranges from the detection and treatment of common age-related diseases such as glaucoma to genetic degenerative eye diseases that may afflict only one in 30,000 people.

About 180,000 people above 60 have some kind of visual impairment, said Professor Cheng Ching-

Yu of the Yong Loo Lin School of Medicine (NUS Medicine) in the National University of Singapore.

With Singapore's ageing population, this figure is expected to double by 2030.

Prof Cheng, who is the centre's director, said these impairments often end up undiagnosed as most Singaporeans are unaware of eye diseases.

Some patients may also be put off by the inconvenience of requiring a referral from a polyclinic before waiting to be assessed by an eye specialist.

"Our goal is to implement and improve ocular health screening in

the community, and we want to detect and treat in a timely way patients who are not aware that they're losing their sight," said Prof Cheng.

To do this, the centre will develop new technologies to bring specialist diagnosis to the community, for example, by tapping software powered by artificial intelligence (AI) that can diagnose patients through photographs of their eyes and other indicators, such as eye pressure.

Associate Professor Victor Koh, head of the Department of Ophthalmology at NUS Medicine, said that one of the challenges of bringing specialist diagnosis to the community is the cost involved and the space an eye centre requires.

Even ordinary eye centres require at least a room or two, which is not space that a regular polyclinic or optometrist can often provide.

Prof Koh's team has shrunk the size of the testing equipment to about half an office table, which makes it easier for polyclinics or optometrists to accommodate.

While patients' data from these machines will still need to be as-

sessed by a specialist, Prof Koh hopes that the AI software will eventually be integrated into the machines at the kiosks so that diagnosis and monitoring of existing eye conditions can be even more efficient.

The new centre, started by NUS Medicine and NUHS, will also further research into treatment of rare genetic eye diseases to give hope to patients such as Ms Huang Hanying, an information technology professional.

The 41-year-old was in 2011 diagnosed with Stargardt disease, which leads to the progressive death of light-sensing retina cells, eventually leading to blindness. She has blurry vision in the day and has trouble seeing in the dark.

The genetic condition afflicts just 2,500 people in Singapore.

The centre is working on stem cells grown from Ms Huang's body tissues to find a gene therapy that might be able to cure her condition.

Ms Huang said: "I'm beginning to see some light at the end of the tunnel... the hope that my condition will eventually be cured."

Gena Soh

180,000

Approximate number of people above 60 in Singapore who have some kind of visual impairment, according to Professor Cheng Ching-Yu of the Yong Loo Lin School of Medicine in the National University of Singapore. This figure is expected to double by 2030.