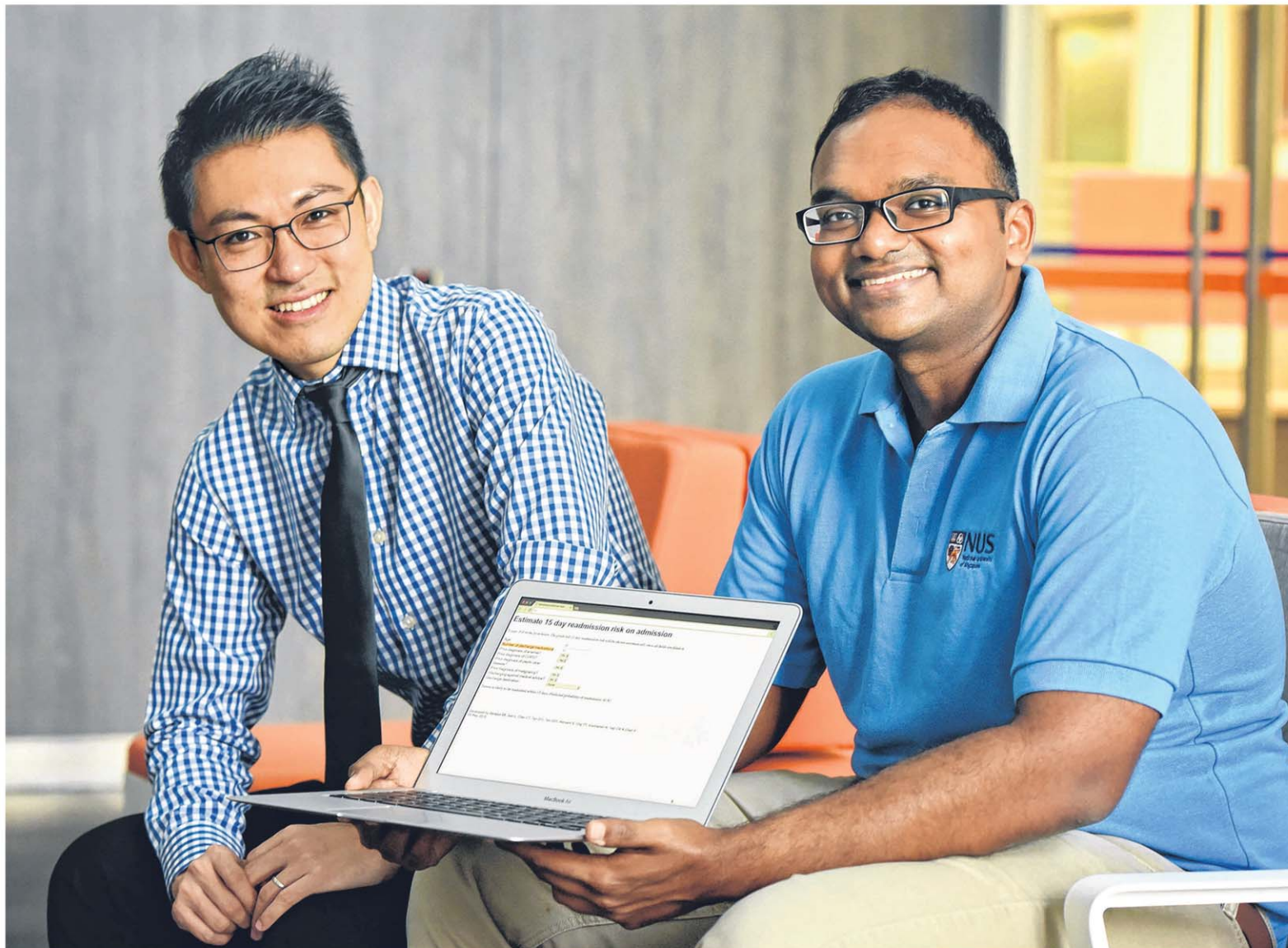


Associate
Professor
Alexandre Chan
and PhD
candidate
Sreemanee Raaj
Dorajoo with the
Web tool that
can predict a
person's risk of
ending up in
hospital again.
ST PHOTO:
FELINE LIM



REDUCING STRAIN ON THE SYSTEM

Hospital readmissions place immense strain on the healthcare system. By cutting down the number of preventable readmissions, hospital-related healthcare costs can be significantly reduced.



ASSOCIATE PROFESSOR ALEXANDRE CHAN, who supervised the research.

training or placing patients on a home visit programme.”

Researchers developed the tool by looking at the data of about 300 patients aged 21 and older from Khoo Teck Puat Hospital (KTPH) who were readmitted within 15 days, as well as more than 300 others who were not readmitted at all.

They identified the factors that placed these patients at risk of readmission, and validated the information with data from a separate group of 621 patients from KTPH and Singapore General Hospital between August and September 2015.

Generally, those who were being prescribed more medications and those discharged to nursing homes were found to be at higher risk of being readmitted.

Prescribing medications for discretionary use could add to confusion and potential errors when taking drugs, said Prof Chan.

Each additional medication prescribed pushes up the risk of a hospital readmission within 15 days by about 6 per cent, he added.

The research team is in talks with some local hospitals to see how the online calculator can be used with intervention programmes to lower readmissions.

Dr Tiffany Tang, a consultant medical oncologist from the National Cancer Centre Singapore, said awareness of the fact that certain patients may have a higher risk of early readmission may prompt the medical team to make sure all aspects of discharge and home care are looked into and sorted out thoroughly before sending the patient home.

Mr Lew Kwang Ping, 49, who was admitted to Singapore General Hospital last Friday for gallbladder inflammation, said the Web tool would be helpful, especially for the elderly.

“I’m 49 and considered medically savvy... But for those who fall into the age group of 70s to 80s, this tool will be good for them,” said Mr Lew, the chief executive of an investment company.

kcarolyn@sph.com.sg

Web tool spots patients at risk of being readmitted to hospital

Targeted intervention, during admission or after discharge, could cut readmission rate

Carolyn Khew

More than one in 10 patients are readmitted to hospital within 30 days of being discharged, and this places a strain on the healthcare system and drives up costs.

To tackle this problem, researchers here have developed an online “calculator” that can predict a person’s risk of ending up in hospital again. It is hoped that the Web tool can help to lower the number of readmissions.

By keying in details like a patient’s age, prescribed medications

and prior diagnoses of medical conditions such as cancer, doctors will be able to find out whether the person is at risk. Healthcare staff can then take pre-emptive steps to reduce the chances of readmission.

The tool has an accuracy rate of about 65 per cent.

Researchers say it will be made available to the public once they have worked with hospitals to come up with intervention programmes to be used with the tool.

“Hospital readmissions place immense strain on the healthcare system. By cutting down the number of preventable readmissions, hos-

pital-related healthcare costs can be significantly reduced,” said Associate Professor Alexandre Chan, from the National University of Singapore’s (NUS) pharmacy department, who supervised the project.

The tool can help healthcare teams reduce readmission cases by identifying high-risk patients for targeted intervention, either during admission or after they are discharged, he added.

According to figures from the Ministry of Health, the rate of hospital readmissions has been on the rise.

In 2011, the readmission rate for patients within 30 days of discharge from public hospitals was 11.7 per cent; it was 12.2 per cent in both 2012 and 2013.

What raises risk of readmission?

- Age; the older a person is, the higher the risk
- A previous diagnosis of anaemia, chronic obstructive pulmonary disease, cancer or peptic ulcer disease
- Discharged from hospital against medical advice
- Number of medications prescribed on discharge
- Discharge destination, such as home, nursing home or community hospital; those discharged to a nursing home are at higher risk

Prof Chan estimates that it would take at least five years for the tool to be ready for hospitals.

If successfully adopted by hospitals, it would be the first to hit the market, said Prof Chan, who added that previous models developed overseas had an accuracy rate of up to 60 per cent.

The tool would be helpful also in easing the bed crunch in public hospitals, said Mr Sreemanee Raaj Dorajoo, a PhD candidate from the NUS pharmacy department who conducted the study.

“Our model helps to identify patients who are at high risk of an early readmission,” he added.

“These patients are most likely to benefit from interventions such as specialised discharge planning, medication counselling, caregiver