

Be mindful when using apps to monitor diabetes: Study

Local researchers find that only three out of 24 'best' apps had all five essential diabetes management functions

Felicia Choo

If you are diabetic, you might be using a mobile app to monitor your blood sugar level or diet.

But a new study by local researchers has urged people to be mindful when using apps, as not all have features that enable comprehensive diabetes management.

Putting themselves in the shoes of a patient who would turn to the Internet for information, researchers from the Lee Kong Chian School of Medicine at Nanyang Technological University (NTU) Googled "best diabetes apps 2017" and looked at 24 that topped search results.

Despite being listed as some of the "best" or "most popular" dia-

betes apps, only three had all five essential diabetes management functions – for medication, blood glucose level, physical activity, diet and weight, according to Associate Professor Josip Car, a senior author of the study.

These aspects of diabetes management are based on guidelines by the American Diabetes Association and the United Kingdom's National Institute for Health and Care Excellence.

The most common feature was a nutrition or diet function (found in 79 per cent of the apps), followed by blood glucose management (67 per cent), physical activity tracking (58 per cent) and weight tracking (33 per cent).

Less than half of the apps (46 per cent) had medication management

features like those that track insulin use or calculate the insulin dose. Getting people to improve any of these aspects is helpful, according to Prof Car, director of the Lee Kong Chian School of Medicine's Centre for Population Health Sciences.

But the problem arises when people are misled into thinking that just a few of these functions are enough when controlling diabetes needs an all-round approach.

It is symptomatic of a larger issue that plagues the more than 325,000 health apps in the market – many are developed without input from healthcare professionals.

This is down to two main reasons – to reduce app development costs and the time it takes to get these apps on the market, as those that offer medical advice will fall under regulations for medical devices.

The fact that many of these apps are targeted at diabetes is because it is a major global health issue, and

the main part of diabetes management is lifestyle, which involves things a person can change himself.

"There is very little evidence on the effectiveness of these apps for people with diabetes," said Prof Car, who is a family physician. "To the best of our knowledge, not a

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single app in the world is formally recommended by any diabetes society."

The study was conducted from April to August, and published in September in the Journal Of Medical Internet Research mHealth uHealth. It is part of a larger, ongoing study to evaluate the quality of diabetes apps, which started in December last year.

The Health Sciences Authority has expressed interest in the larger study to better support the development of health apps in future.

Prof Car said the team is planning to study how widely people in Singapore use health apps, besides just those for diabetes.

Dr Seow Cherng Jye, a consultant at Tan Tock Seng Hospital's Department of Endocrinology, encourages his patients to use diabetes apps.

His advice to those new to such apps is to download the data and discuss it with their healthcare team to ensure that the information is reliable and the action they are going to take is safe and appropriate.

"Do not be passive and use the apps merely as a means to replace paper and pen," he added.

"Instead, be proactive, analyse the data and think of how you can make use of the information to improve your health."

feliciac@sph.com.sg