SGH, DUKE-NUS TO STUDY EFFECTIVENESS

Mobile app helps Type 2 diabetes patients adjust insulin dosage

SINGAPORE – One of the hardest things to manage for a Type 2 diabetes patient is knowing exactly how much insulin to inject at the right time. To overcome this problem, the Singapore General Hospital (SGH) and Integrated Health Information Systems have created a mobile application to help patients calculate the correct insulin dosage when it is time to take it.

The SGH Diabetes Pal app informs patients of the required dosage of insulin based on their fasting blood sugar reading, which must be taken and input every morning.

Based on the data and the patients’ prescribed treatment plan, the app will calculate the insulin dosage they need to achieve optimum blood sugar levels. The app also generates graphs from the daily readings so patients can better manage their diabetes.

An administration function allows doctors to monitor their patients’ progress online, and there are also safety features on the app, such as a preset maximum dose of insulin based on the patients’ body weight. The patients can also set daily reminders so they will not forget to test their blood sugar levels and enter the readings.

Usually, patients are given a set of instructions to help them adjust their insulin dosage on their own. But doctors say most patients are reluctant to do so. Director of the Diabetes Centre at SGH Bee Yong Mong said: “They lack the self-confidence to adjust the dosage, and there is a fear of getting a low blood glucose level, hence they often rely on the doctors or nurses to adjust the doses.

“They end up having a long duration of exposure to high glucose levels, which may, in the long run, lead to more diabetes-related complications.”

To study if the app can help patients achieve good glycaemic control, the SGH and the Duke-NUS Graduate Medical School are conducting a study to determine its effectiveness, which will be the first such clinical trial involving mobile apps in a hospital setting. SARA GROSSE

The SGH Diabetes Pal app informs patients of the required dosage of insulin based on their fasting blood sugar reading, which must be taken and input every morning. Based on the data and the patients’ prescribed treatment plan, the app will calculate the insulin dosage they need to achieve optimum blood sugar levels.