

GOING HI-TECH in Diabetes Care

By Dr Yau Teng Yan, Chief Medical Officer, Holmusk

The use of digital health tools has increased in recent years—44 per cent of consumers in Singapore use mobile health applications (apps), according to the 2015 Accenture Health survey¹. Mobile apps have the potential to effectively deliver health services and education, while empowering patients to actively manage their own health.

Specifically for diabetes, there are several apps that function as electronic logbooks to track all your diabetes information on your phone. Some of these apps also guide diabetes self-management, provide education and can even calculate the dose of insulin to inject. Compared to the traditional paper logbook for recording glucose levels, such mobile apps are more convenient, may reduce the probability of human error and can even provide immediate feedback and motivation on making changes to our behaviours. They can provide helpful ways to look at our glucose levels and share it with our healthcare team. Indeed, small studies have shown that the use of digital tools can lead to better glucose control, improved frequency of glucose self-monitoring, better patient satisfaction, moderate weight loss, and medication adherence².

However, there are many diabetes-related apps in the App and Google Play Store—more than 1,000 at last count. Many of them may not be well-designed, practical or clinically relevant. How do you then decide which one you should use? There are several factors to consider:

1

How reliable is the app? There are many free apps that are developed by programmers with very limited knowledge and expertise on diabetes—these can be potentially dangerous to use. Due to limited funding, some of these free apps may stop updating and you can lose all your stored information if there is a bug. A reliable app is one that has been designed with input from doctors, nurses and patients with diabetes, and is being used by many people.

2

Does the app have features that are useful for your self-management? For example, you may want to track your medications and should use an app that allows you to set medication reminders. Or if you are interested in understanding your eating habits, look for an app that has an intuitive food tracking feature and a large food database.

3

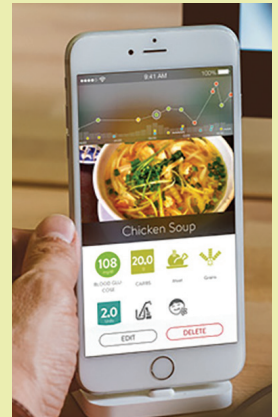
Is the app free to use or does it require payment? Paid apps generally offer more features and a better standard of service. Most of them offer a free trial that allows you to experiment to see if it suits your needs. That being said, some free apps are quite comprehensive and can be good enough for your purposes.

As part of my work and interest, I have tested many different mobile apps for diabetes in order to find the ones that can be most useful for my patients living with diabetes.

Here are my four favourite apps:

mySugr logbook (<https://mysugr.com>)

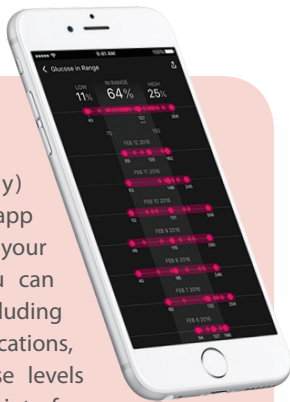
This mobile app that allows you to record all your diabetes data in one place—including glucose, food, exercise, insulin and medications. It has a colourful and playful interface, in line with its goal of “making diabetes suck less”. The central mascot in the app is the diabetes monster, which talks, moves and changes colour based on your glucose logs. You can set reminders, for example, for a post-meal glucose check or to take your medications. There are daily challenges you can complete, such as ‘Vampire’, where you get points for checking your glucose levels seven times within 24 hours. These features make it particularly appealing to those who use insulin as part of their diabetes treatment. It is available on both iPhone and Android phones.



One Drop

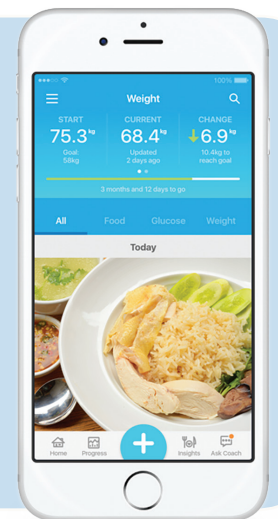
(<http://onedrop.today>)

This is another mobile app that helps you to track your health information. You can enter your food (including carbohydrates), medications, movements and glucose levels in a simple-to-use interface. Particularly, if you enjoy reviewing your health data regularly to understand how you're doing, the app automatically provides you with statistics like average glucose levels, percentage highs and lows. One fun feature is the community element, which allows you to view the glucose and food records of other people using the same app (anonymously, of course), and give them stickers or likes to encourage them further. It has an export function, which allows you to download and share your report with your doctor or nurse educator. It is currently available only to iPhones users.



Glyco Leap (<https://glycoleap.com>)

This app is a smart coach for people with type 2 diabetes, that supports you in developing healthier habits to keep your glucose and weight in control. Like mySugr and One Drop, you can track your health data with a simple-to-use diabetes logbook. One unique feature about Glyco Leap is that on signing up, you get a real-life health coach assigned to you. She will guide and motivate you to eat better and be more active, via text messaging in the app. There are also interactive online lessons that provide practical tips on modifying your habits. The app is available to iPhone and Android phone users.

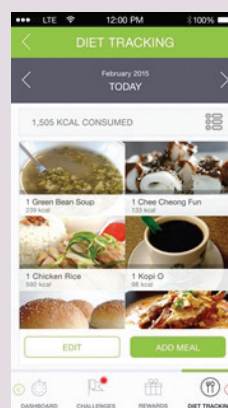


To summarise, there is promise that mobile apps can help people with diabetes manage their condition effectively and conveniently. While there is still a need for larger studies to evaluate their long-term impact on clinical outcomes, it is worth trying them to see if an app can help you manage your health better. However, mobile apps cannot replace regular visits to your doctor or nurse—whom you should always follow up with for your diabetes management issues.

Healthy 365

(www.healthhub.sg/apps/25/healthy365)

While this app by the Health Promotion Board is not specifically for diabetes, it allows you to track your daily step counts, food and drinks intake and the calories consumed, making it useful for anyone looking to track their eating habits and exercise. It has a food database with over 1,000 local dishes and drinks. More importantly, this app is used for the National Steps Challenge which allows you to redeem rewards like vouchers based on your step count using the HPB fitness tracker. Season 1 of the National Steps Challenge has ended, and season 2 begins in October 2016. It can be downloaded on both iPhone and Android phones.



References

1. Accenture Consulting. <https://www.accenture.com/sg-en/insight-new-sg-patient-engagement-survey>
2. Viral N.Shah, Satish K.Garg. Managing diabetes in the digital age. Clinical Diabetes and Endocrinology Dec 2015.