# Text messages provide support for people with diabetes

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An innovative University of Auckland trial using text messages has proven a success in getting people to manage their diabetes better.

Academics at the University's National Institute for Health Innovation (NIHI), part of the Faculty of Medical and Health Sciences, developed a text message based self-management programme. The Self-Management Support for Blood Glucose (SMS4BG) was designed to address the behaviours required for successful diabetes self-management.

The results of the trial, Effectiveness of text message-based diabetes self-management support programme (SMS4BG): A randomised controlled trial, have recently been published in the *British Medical Journal* (*BMJ*).

The SMS4BG intervention was developed with Waitemata DHB to address the need for innovative solutions to support self-management in adults with poorly controlled diabetes. Clinicians, patients and a Māori Advisory Group were integral in developing the programme. The individually tailored intervention provided information and support designed to motivate a person to make positive changes in their lives to improve their health long-term.

The randomised controlled trial assessed the effectiveness of SMS4BG compared to usual care alone in 366 adults with diabetes from around New Zealand. The participants ranged from 16 to 80 years old with a mean age of 47. The group was 52 per cent male and 48 per cent female. Sixty-five per cent had type 2 diabetes and 35 per cent had type 1.

Ethnically, 23 per cent identified as Māori, 13 per cent as Pacific, 5 per cent as Asian and 49 per cent as New Zealand European.

The group was split into two, and one set received a tailored package of text messages, or SMS4BG, for up to nine months in addition to usual care. The study found that those who received the SMS4BG programme had a greater improvement in their HbA1c, or the measurement of sugar levels in their blood, compared to those in the other group that only received their usual care.

Text messages were tailored to each individual patient and included diabetes education, reminders to eat well, exercise, manage stress, and to monitor blood glucose levels.

Of the people who received the SMS4BG programme, 95 per cent say they found it useful, and 97 per cent say they would recommend it to others.

Lead author Dr. Rosie Dobson, of the Faculty of Medical & Health Science's National Institute for Health Innovation, says the results are important given the rise in diabetes in New Zealand, with an estimated 200,000 adults living with the disease.

"Supporting people to effectively manage their diabetes is essential to reduce the risk of complications of the condition and maximise their quality of life. The flexibility of mobile phones and their adoption into everyday life mean they are an ideal tool in supporting people with diabetes whose condition requires constant management."

"Text messaging has the potential to make personalised support accessible to people when it is most needed within their daily lives. By utilising simple and widespread technology we can make this type of diabetes support accessible to nearly all people with diabetes with

minimal barriers."

Dr. Robyn Whittaker, the study's Principal Investigator at NIHI and the Clinical Director of Innovation at Waitemata DHB, says the programme could be of benefit to a large number of New Zealanders living with diabetes.

"The growing prevalence of diabetes is considered to be one of the biggest global health issues. In New Zealand Māori and Pacific experience greater rates of diabetes and increased rates of complications."

"Diabetes complications can be prevented or delayed with good blood glucose control, which is not only advantageous for a person's quality of life but will substantially decrease healthcare costs associated with treating or managing the complications."

The study findings have provided valuable feedback on how the SMS4BG programme can be improved and it is hoped that this might be made available to people with diabetes in the future.

**More information:** Rosie Dobson et al. Effectiveness of text message based, diabetes self management support programme (SMS4BG): two arm, parallel randomised controlled trial, *BMJ* (2018). DOI: 10.1136/bmj.k1959

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