

Supervised self-monitoring improves diabetes control in clinical trial

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For people with diabetes not treated with insulin, unsupervised self-monitoring of blood glucose levels has not been found effective at improving glycaemic control. In a randomised trial published this week in *PLOS Medicine*, Sarah Wild, Brian McKinstry and colleagues from the University of Edinburgh, Scotland report on a strategy where patients submit their home blood glucose results to a website which is monitored by a nurse or physician who responds to guide patients. The researchers show this supervised approach, which includes adjusted treatment or reinforcing lifestyle changes when needed, to be effective in controlling diabetes.

In this investigator-blinded, controlled trial (Telescot) the researchers randomly assigned 321 participants with diabetes or elevated glycated haemoglobin (HbA1c) from 4 regions of the UK to one of two treatment arms. Half received the supported telemonitoring intervention, and half received usual care consisting of annual visits plus reviews for participants with poor glycaemic control or elevated [blood pressure](#). The primary outcome of the trial was to assess levels of glycated haemoglobin in these 2 arms after 9 months. Participants in the intervention arm were provided with Bluetooth-enabled monitoring devices for blood pressure, [blood glucose](#) and weight. They were asked to submit fasting and non-fasting blood glucose readings twice weekly and blood pressure and weight readings weekly.

Better glycaemic control and lowered glycated haemoglobin levels, as well as reduced blood pressure, were seen in the intervention arm

(compared to those who receive usual care). Weight at follow up was not significantly different between the two arms.

Limitations include potential lack of representativeness of trial volunteers compared with the overall population, and inability to conceal randomized treatment assignment from participants and health professionals.

This relatively low cost intervention appears effective at improving glycaemic control in a group of patients that previously showed poor [control](#). In addition, the approach does not significantly add to physicians' workloads. It will be interesting to know if similar results can be sustained over a longer period using this promising approach.

More information: Wild SH, Hanley J, Lewis SC, McKnight JA, McCloughan LB, Padfield PL, et al. (2016) Supported Telemonitoring and Glycemic Control in People with Type 2 Diabetes: The Telescot Diabetes Pragmatic Multicenter Randomized Controlled Trial. *PLoS Med* 13(7): e1002098. [DOI: 10.1371/journal.pmed.1002098](https://doi.org/10.1371/journal.pmed.1002098)

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