

Research: Many programs to help diabetics manage their health do work

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A new study has found that programs aimed at helping people prevent or manage diabetes are most successful if they are directed at the patient or the health care system. Programs aimed at physicians were only successful for patients with poorer diabetes control.

Such interventions also work best for diabetics in poorer health than those who are managing their illness well, the study found.

The study--a comprehensive review of 142 [clinical trials](#) involving more than 123,000 patients-- by Dr. Andrea Tricco, a scientist at the Li Ka Shing Knowledge Institute of St. Michael's Hospital, appears in *The Lancet*.

Dr. Tricco said that despite evidence showing improved clinical outcomes for diabetics who received various preventive and therapeutic interventions, many patients do not receive them.

"The gap between ideal and actual care is not surprising in view of the complex nature of diabetes management, often needing coordinated services of primary care physicians, allied health practitioners and subspecialists," she said. "Moreover, it is a challenge to change patient behavior and encourage healthy lifestyles."

She said that with the increasing prevalence of diabetes and the burgeoning cost of managing patients with this disease, improving the efficiency of diabetes care is an important goal.

According to the Canadian Diabetes Association, more than nine million Canadians have diabetes or prediabetes. By 2020, it's estimated that diabetes will cost the Canadian healthcare system \$16.9 billion a year.

"Although clinicians, managers and policy makers expend significant time and resources attempting to optimize care for patients with diabetes, the optimum approach to improving diabetes care and outcomes remains uncertain," Dr. Tricco said.

Her review of clinical trials found:

- For patients with high levels of HbA1c – the average blood sugar level over three months – strategies that target the [health care system](#) are quite effective, especially team changes and case management. High levels of HbA1c indicate patients are in poorer health than those with low levels. Team changes programs are those that add another health care worker to a patient's team, such as an endocrinologist or nutritionist. Case management programs require someone other than the primary physician, such as a nurse, to coordinate care in a clinic. The review found these strategies had a positive impact on cardiovascular risk factors such as LDL cholesterol and blood pressure after 12 months
- Strategies that target patients are effective regardless of their HbA1c levels
- Strategies aimed at physicians are not as effective, especially not for people who are already controlling their diabetes well

Dr. Tricco said the findings of the study could help [physicians](#) decide which patients would benefit from which programs. Those who are not controlling their [diabetes](#) well, for example, might benefit from some of the more costly programs, such as team changes and case management. Yet that might not be a good use of resources for patients who are

managing their illness well.

Overall, the use of quality improvement strategies—clinical reminders, clinical education, patient behavior, patient education-- resulted in a 0.37 per cent reduction of HbA1c after an average follow-up of one year. The meta-analysis did not find a statistically significant improvement in the use of statins (drugs that reduce cholesterol), hypertension reduction or smoking cessation. The interventions did play an important role in increasing the use of aspirin and antihypertensive medication over a median follow-up of 13 months. They also were associated with an increase in retinopathy (inflammation of the eye), screening, screening for renal disease and foot screening over a median follow-up of 12 months.

Dr. Tricco said wide implementation of such strategies could have important benefits, as research has shown that a 1 per cent reduction in mean HbA1c results in 21 per cent fewer deaths, 14 per cent fewer myocardial infarctions and a 37 per cent decrease in microvascular complications.

"Further research is needed to identify which interventions and combinations of QI strategies will optimally improve important outcomes in [patients](#) with [diabetes](#) at an acceptable cost to aid health-system planning."

Provided by St. Michael's Hospital

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