


Diabetes chronic disease management support

▶ Intervention in brief

<p>High and rising risk:</p>	<p>Diabetes chronic disease management support refers to programs that aim to help patients manage their diabetes in the long-term. Programs take different forms, but are usually based in the outpatient space and often incorporate an aspect of peer support through mentoring or group medical visits. The goal is to help patients self-manage their diabetes and lower their baseline HbA1c levels.</p>
<p>Strength of evidence</p>	 <p>High</p>
<p>Impact</p>	<ul style="list-style-type: none"> • Decreased cost: Not demonstrated • Decreased utilization: Not demonstrated • Improved quality, clinical outcomes: <ul style="list-style-type: none"> • Insignificant change in HbA1c compared to control at 3-12 months (0.5-1.07 percentage points); increase in percent of patients with HbA1c level at or below target compared to control (9-14%) • Lower total cholesterol at four months (2.5 mg/dL) and 10 months (4.8 – 7.2mg/dL) • Lower LDL cholesterol at four months (2.3 mg/dL) and 10 months (0.9-8.1 mg/dL) • Higher HDL cholesterol at four months (0.9 – 1.4 mg/dL) and 10 months (1.6 mg/dL) • 4x less likely to have diabetes regimen-related distress • Increased access: Not demonstrated • Improved stakeholder satisfaction: Improved patient activation, satisfaction, self-efficacy, self-management
<p>How to succeed</p>	<p>To develop and maintain an effective diabetes management program:</p> <ul style="list-style-type: none"> • Develop a cross-continuum screening strategy by keeping PCPs engaged, establishing screening protocols, and partnering with community organizations • Leverage care team members to allow for system-wide top-of-license practice and support physicians across care settings • Formalize collaboration expectations across system-wide staff and standardize care pathways through coordinated referral processes to minimize gaps in care • Focus education on skill development tailored to patient characteristics to promote self-efficacy and ongoing self-management • Refer patients to ongoing support options in- and outside the system, connecting them with community resources to smooth the graduation process <p>To learn more about developing an evidence-based approach, check out our Auditing Your Diabetes Program brief here.</p>

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▶ Demonstrated impact

Literature review summary

Title: Integration and Utilization of Peer Leaders for Diabetes Self-Management Support: Results From Project SEED (Support, Education, and Evaluation in Diabetes)

Publication: The Diabetes Educator

Date: 2018

Type: Randomized controlled trial

Study population: 221 patients (63.8% female, mean age of 63 years, 28.5% at or below the poverty level, 32.5% using insulin, 54.2% with HbA1c above 7%) with diabetes across six primary care practices

Major findings: Patients were randomized to diabetes self-management education (DSME) with peer leader-led (PL) diabetes self-management support (DSMS) or to enhanced usual care (EUC) and traditional DSMS with no PL. Patients were 4.3x less likely to have diabetes regimen-related distress in the DSME-PL group. HbA1c levels increased during DSMS for both intervention groups.

Source: Full article [here](#).

Title: Evaluating the Impact of Year-Long, Augmented Diabetes Self-Management Support

Publication: Population Health Management

Date: 2019

Type: Randomized controlled trial

Study population: 446 English or Spanish speaking adults between 21-85 years old diagnosed with type 2 diabetes with an HbA1c level above 8 at enrollment

Major findings: Patients in the telephonic support group experienced no significant differences compared with the control group.

Source: Full article [here](#).

Title: Effectiveness of a public dietitian-led diabetes nutrition intervention on glycemic control in a community setting in China

Publication: Asia Pacific Journal of Clinical Nutrition

Date: 2015

Type: Randomized controlled trial

Study population: 128 patients ages 35-70 with type II diabetes living in two communities in China

Major findings:

- Intervention group saw a greater decrease in HbA1c after one year as compared to the control group: 0.48 percentage points
- Greater increase in the proportion of participants at or below the target HbA1c of 6.5% after one year as compared to the control group: difference of 13.8 percentage points

Source: Full article [here](#).

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Title: Prospective Randomized Controlled Trial to Evaluate Effectiveness of Registered Dietitian–Led Diabetes Management on Glycemic and Diet Control in a Primary Care Setting in Taiwan

Publication: Diabetes Care

Date: 2010

Type: Randomized controlled trial

Study population: 154 adults with type II diabetes attending specific primary care clinics in Taiwan. Patients in the intervention group received on-site diabetic self-management education quarterly for one year.

Major findings: Patients in the intervention group with baseline HbA1cs greater than or equal to 7% saw a greater decrease in HbA1c after one year as compared to the control group: 0.5 percentage points

Source: Full article [here](#).

Title: Peer-Led Diabetes Education Programs in High-Risk Mexican-Americans Improve Glycemic Control Compared with Standard Approaches

Publication: Diabetes Care

Date: 2011

Type: Randomized controlled trial

Study population: Mexican-American, diabetic patients at a federally-funded community health center with baseline HbA1c levels greater than 8%. A majority of participants were female, middle-aged, obese, low-income, uninsured, and had less than an eighth grade education.

Major findings:

- Patients receiving culturally-competent diabetes education from a peer educator saw a mean decrease in HbA1c levels at four months (1.71 percentage points) and at 10 months (1.5 percentage points).
- Participating patients saw an increase in HDL cholesterol at four months (1.4 mg/dL) and 10 months (1.6 mg/dL).
- Participating patients saw a decrease in total cholesterol (-7.2 mg/dL) and LDL cholesterol (-8.1 mg/dL) at 10 months.

Source: Full article [here](#).

Title: Utilization of a Cloud-Based Diabetes Management Program for Insulin Initiation and Titration Enables Collaborative Decision Making Between Healthcare Providers and Patients

Publication: Diabetes Technology Therapeutics

Date: 2016

Type: Randomized controlled trial

Study population: 40 patients ages 18 and older with poorly-controlled type 2 diabetes as determined by having an HbA1c level between 9-14%. Patients were all beginning a basal insulin therapy program, had internet connectivity, and were English-proficient.

Major findings:

- Decreased HbA1c levels as compared to a control group: difference of 1.2 percentage points.
- Significant improvement in patient satisfaction as compared to the control group: increased by 25 percentage points more than the control group on the Diabetes Treatment Satisfaction Questionnaire.

Source: Full article [here](#).

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Title: Impact of Peer Health Coaching on Glycemic Control in Low-Income Patients With Diabetes: A Randomized Controlled Trial

Publication: Annals of Family Medicine

Date: 2013

Type: Randomized controlled trial

Study population: 299 diabetic patients who attended any of six health clinics in San Francisco. Participants were all low-income, spoke English or Spanish, and had HbA1c levels greater than or equal to 8%.

Major findings:

- Greater reduction in HbA1c level after 6 months compared to the control group (0.77 percentage points)
- Significant increase in likelihood to experience a drop in HbA1c level of 1% or more (18.1); significant increase in likelihood to achieve an HbA1c of less than 7.5% (9.1%) as compared to control.

Source: Full article [here](#).

Title: Peer Mentoring and Financial Incentives to Improve Glucose Control in African American Veterans: A Randomized Trial

Publication: Annals of Internal Medicine

Date: 2012

Type: Randomized controlled trial

Study population: Black/African-American male veterans ages 50-70 with uncontrolled diabetes and at least one comorbidity. Patients all attended the Philadelphia VA Medical Center.

Major findings: Patients receiving peer mentorship experienced decreased HbA1c levels compared to the control group: mean difference of 1.07 percentage points.

Source: Full article [here](#).

Title: Effects of Self-management Support on Structure, Process, and Outcomes Among Vulnerable Patients with Diabetes: A Three-Arm Practical Clinical Trial

Publication: Diabetes Care

Date: 2009

Type: Randomized controlled trial

Study population: 339 adult type II diabetics in the Community Health Network of San Francisco. All patients spoke English, Spanish, or Cantonese, had at least one primary care visit in the year leading up to the study, and had an HbA1c level at or above 8.0%.

Major findings: Patients that participated in group medical visits saw greater improvement in self-management (effect size 0.30-0.62 as measured by a validated instrument) and diabetes-specific self-efficacy (effect size 0.41 as measured by the Diabetes Quality Improvement Program) than the control group.

Source: Full article [here](#).

Title: Community-Based Peer-Led Diabetes Self-management

Publication: The Diabetes Educator

Date: 2009

Type: Randomized controlled trial

Study population: 345 adults with type II diabetes

Major findings: Patients participating in the diabetes self-management program showed significant improvements in self-efficacy (increase of 0.495 on the diabetes self-efficacy scale) and patient activation (increase of 4.52 on a Patient Activation Measures (PAM) short form) at 6 months. The intervention group also saw significant improvements in depression: -1.51 on the PHQ-9.

Source: Full article [here](#).

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Appendix

- Piatt GA, et al., "Integration and Utilization of Peer Leaders for Diabetes Self-Management Support: Results from Project SEED (Support, Education, and Evaluation in Diabetes)" *The Diabetes Educator*, (2018), <https://journals.sagepub.com/doi/abs/10.1177/0145721718777855>.
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