



## PROGRAM SPOTLIGHT

# PEER SUPPORT, PRIMARY CARE & HEALTH DISPARITIES

## Peer Health Coaches Reach High-Risk Diabetes Patients, Greatest Benefits for Patients with Low Self-Management and Medication Adherence



The Center for Excellence in Primary Care was created in 2005 to respond to the challenges facing primary care in the United States. The mission of the Center is to catalyze the transformation of primary care at the regional, national, and international level.

To advance this mission, the Center aims to:

1. Disseminate primary care innovation
2. Inform and advocate for policy changes to produce greater investment in primary care
3. Transform primary care at the regional level and create a model for nationwide reform
4. Evaluate primary care innovations

The demand for primary care services is rising. Rising rates of chronic diseases, an aging population, and the expansion of health insurance through the Affordable Care Act are straining the capacity of the primary care system to deliver high quality and cost-effective healthcare to all Americans. Stretched thin, primary care practices are unable to provide the time-consuming counseling, education, and ongoing support needed to improve diabetes management and diabetes outcomes. To meet this growing demand, peer support is emerging as an effective strategy to extend and enhance primary care for diabetes.

As a patient's first point of entry into the healthcare system and the continuing focal point for health care services, primary care is essential for the prevention and management of diabetes. Strengthening the primary care system is expected to improve health outcomes and lower spending for everyone, but the greatest benefits will be experienced by minority and low-income populations. These populations carry a disproportionate burden of diabetes, but access to primary care can potentially reduce these health disparities.

In 2009, Thomas Bodenheimer and colleagues at the Center for Excellence in Primary Care (CEPC) set out to study the impact of peer coaching on clinical outcomes and self-management skills in low-income diabetes patients. Amireh Ghorob, Director of Training at CEPC, defines health coaching as "helping patients gain the knowledge, skills, tools, and confidence they need to become active participants in their care so that they can reach their self-identified health goals."

Supported by a grant from the American Academy of Family Physicians and Peers for Progress, Dr. Bodenheimer's team carried out a randomized controlled trial that enrolled diabetes patients from 6 public health clinics in San Francisco. Patients with poorly managed diabetes were randomized into the health coaching arm (n=148) or the usual care arm (n=151). 23 patients with HbA1c levels of less than 8.5%, completed a 36-hour health coach training course, and served as peer coaches.

Peer health coaches were trained to help patients develop and implement action plans for diabetes self-management. A total of 26 peers completed and passed the training course. When it came to matching patients with health coaches, 80% of patients selected their own peer coach based on a brief profile and the rest were assigned coaches based on availability.

## PROGRAM RESOURCES



[Study Protocols](#)



[Peer Health Coach Training Curriculum](#)

## STUDY DESIGN

### Patient Eligibility Criteria

- Spoke English or Spanish
- HbA1c > 8.0% within past 6 months
- Identified from EMR

### Patient Sample

- 148 patients received health coaching
- 151 patients received usual care

### Peer Coach Eligibility Criteria

- Spoke English or Spanish
- HbA1c < 8.5% within past 6 months
- Recommended by primary care physician, clinic staff, or responded to flyers

### Peer Coach Cohort

- 26 completed and passed training
- 2 dropped out before starting coaching

### Peer Coach Training

- 36 hours of training over 8 weeks
- Curriculum developed by study team and revised with trainee feedback
- Instructional modules
  - Active listening and nonjudgmental communication
  - Helping with diabetes self-management skills
  - Providing social and emotional support
  - Assisting with lifestyle change
  - Facilitating medication understanding and adherence
  - Navigating the clinic
  - Accessing community resources
- Training approaches
  - Small group didactics
  - Role-playing
  - Observed practice coaching sessions

### Peer Coach – Patient Matching

- 80% of patients selected coach from a brief profile
- Remainder were assigned based on coach availability

### Peer Coach – Patient Interaction

- Schedule of contact determined by coach and patient
- Contact goals
  - Telephone contact 2 times per month
  - 2 or more face-to-face contacts over 6 months
- Coaches helped patients set goals and design action plans around them

### Primary outcome

- Change in HbA1c levels at 6 months

### Secondary outcomes

- Percent of patients whose HbA1c level dropped by 1% or more
- Percent of patients with HbA1c level <7.5%

### Additional clinical markers

- Systolic blood pressure
- Body mass index
- LDL cholesterol
- Diabetes self-care activities
- Medication adherence
- Diabetes-related quality of life
- Diabetes self-efficacy
- Depression

## RESULTS (6 MONTH FOLLOW-UP)

### Dose Delivered

- Coaches worked with a median of 7 patients
- Coached patients had a median of 5 interactions with peer health coach
- 83% of patients had at least 1 interaction
- 76.6% of interactions were by telephone
- 23.9% of interactions were in person

### Primary Outcome

- Decrease in HbA1c level was significantly greater for coached patients (1.07% vs. 0.30%;  $p = 0.01$ )

### Secondary Outcomes

- Decrease in HbA1c level of 1% or more was seen in 49.6% of patients in coaching arm vs. 31.5% in usual care ( $P = 0.001$ )
- 22% of patients in coaching arm achieved an HbA1c <7.5% vs. 14.9% in usual care ( $P = 0.04$ )
- No significant differences in LDL cholesterol, systolic blood pressure, or body mass index

You can read the original [protocol paper](#) for the full study design and download the peer health coach training curriculum developed by the research team. The study design and results are summarized on this page.

The primary outcome was the difference in change in HbA1c levels at 6 months. Secondary outcomes were the percent of patients whose HbA1c level dropped by 1% or more, and the percent of patients with HbA1c level <7.5%. Clinical values (HbA1c, LDL cholesterol, and blood pressure) and self-reported diabetes self-efficacy and self-care activities were measured at baseline and after 6 months for patients and coaches. Peer coaches were assessed again at 12 months.

Baseline characteristics of the patients in the coaching arm revealed that 45.9% spoke a primary language other than English, 47.3% were born outside the United States, 86.5% had annual incomes below \$20,000, 35.6% had less than a high school education, and 76.4% were Hispanic or African American.

At follow-up, [Thom et al. \(2013\)](#) reported that the decrease in HbA1c levels was significantly greater for coached patients compared to usual care. This finding suggests that peer coaching can reach and engage low-income and minority populations. At a time when primary care capacity is stretched, this intervention demonstrates that peer coaches can take some pressure off of primary care practices and provide effective, individualized diabetes self-management support.

The authors caution that peer coaching may not decrease costs in the short run because improving access to primary care may increase healthcare utilization and medication adherence. Over time, however, improving glycemic control in high-risk populations will result in fewer hospitalizations and complications from poorly controlled diabetes.

### **Greatest Benefits for Patients with Poor Self-Management and Medication Adherence**

Building on these findings, the team wanted to investigate whether peer coaching had any differential effects on patient subgroups. [Moskowitz and colleagues \(2013\)](#) conducted a secondary data analysis to investigate whether the effect of peer coaching was modified by patient characteristics associated with glycemic control.

In this paper, change in HbA1c was used as the dependent variable. The investigators selected independent variables that have previously been shown to be associated with diabetes control and grouped these into three domains: demographic, psychosocial, and behavioral.

From the data analysis, two independent variables had statistically significant interactions with change in HbA1c: self-management and medication adherence. Compared to patients in usual care, patients benefitted the most from health coaching if they had lower self-management or poorer medication adherence scores at baseline. Thus, within this low-income, minority population, peer coaching was able to help the patients that had the most difficulty managing their diabetes. This study represents the first step toward directing peer support interventions for patients that are most likely to benefit.

For a more in-depth discussion on this article, please visit [our blog](#).

Thanks to Dr. Bodenheimer's project in San Francisco, we have evidence that peer support can reach diabetes patients that need the most help. Peers for Progress is excited that peer support is helping high-risk patients improve their diabetes self-management while increasing access to primary care and addressing health disparities.

### **References**

- [Ghorob et al. \(2011\). The effectiveness of peer health coaching in improving glycemic control among low-income patients with diabetes: protocol for a randomized controlled trial. BMC Public Health;11\(208\).](#)
- [Ghorob et al. \(2013\). Health Coaching. Virtual Mentor;15\(4\):319-26.](#)
- [Moskowitz et al. \(2013\). Peer Coaching to Improve Diabetes Self-Management: Which Patients Benefit Most? J Gen Intern Med; Feb 13. Epublished ahead of print.](#)
- [Thom et al. \(2013\). Impact of Peer Health Coaching on Glycemic Control in Low-Income Patients With Diabetes: A Randomized Controlled Trial. Annals of Family Medicine;11\(2\):137-144.](#)