

**Title:** 18-Month Outcomes from a Community Health Worker and Peer Leader Diabetes Self-Management Program for Latino Adults

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## Abstract

**OBJECTIVE.** To evaluate the effectiveness of a community health worker (CHW) diabetes self-management education (DSME) program followed by two different approaches to maintain improvements in HbA1c and other clinical and patient-centered outcomes over 18 months.

**RESEARCH DESIGN AND METHODS.** 222 Latino adults with type 2 diabetes (T2DM) and poor glycemic control from a federally-qualified health center were randomized to (1) a CHW-led, 6-month diabetes self-management education (DSME) program; or (2) enhanced usual care (EUC). After the six-month program, participants randomized to the CHW-led DSME were further randomized to either (1) 12 months of CHW-delivered monthly telephone outreach (CHW-only); or (2) 12 months of weekly group sessions delivered by PLs with telephone outreach to those unable to attend (CHW+PL). The primary outcome was HbA1c. Secondary outcomes were blood pressure, lipid levels, diabetes distress, depressive symptoms, understanding of diabetes self-management, and diabetes social support. Assessments were conducted at baseline, 6, 12, and 18 months.

**RESULTS.** Participants in the CHW intervention at six-month follow-up had greater decreases in HbA1c (-0.45, 95% CI=-0.87, -0.03,  $P<.05$ ) and in diabetes distress (-0.3, 95% CI=-0.6, -0.03,  $P<.05$ ) compared to EUC. CHW+PL participants maintained HbA1c improvements at 12 and 18 months, and CHW-only participants maintained improvements in diabetes distress at 12 and 18 months. CHW+PL participants also had significantly fewer depressive symptoms at 18 months compared to EUC (-2.2, -4.1, -0.3,  $P<.05$ ). Participants in CHW-led DSME had significant improvements in diabetes social support and in understanding of diabetes self-management at 6 months relative to EUC, but neither of these intervention effects were sustained at 18 months.

**CONCLUSIONS.** This study demonstrates both the effectiveness of a six-month CHW intervention on key diabetes outcomes, and of a volunteer PL program in sustaining key achieved gains. These are scalable models for health care centers in low-resource settings for achieving and maintaining improvements in key diabetes outcomes.