Cultural adaptation of an evidence-based diabetes self-management education intervention for priority populations

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Type 2 Diabetes (T2D)

- 30.3 million people have diabetes (9.4% of the U.S. population) – 90%-95% is T2D
- Insulin resistance - cells are not able to absorb glucose
- Excess abdominal fat is a major risk factor, in addition to family history, age, and lifestyle behaviors
- Until early 1990s, no evidence that management of diabetes had a beneficial impact on the incidence of vascular complications (e.g., nerve, eye, kidney problems)
Early Diabetes Research

- The Diabetes Control and Complications Trial (DCCT) - intensive glycemic control reduces the incidence and progression of microvascular complications (retinopathy, nephropathy and neuropathy) in type 1 diabetes.
- The United Kingdom Prospective Diabetes Study (UKPDS) – Does improved glucose control reduce the incidence of complications? What are the effects of differing treatments?
- Largest and longest study ever undertaken in diabetes
- 5102 participants
- Median follow-up 10 years
Lowering A1C levels reduces the risk of diabetes complications in people with type 2 diabetes

UKPDS: 37% decrease in the risk of microvascular complications and 21% risk reduction per 1% absolute decrease in A1C levels (p<0.0001)
American Diabetes Association
Clinical Guidelines

- A1C <7%
- Blood Pressure >130/80 mmHg
- Lipids
  - Total Cholesterol <200
  - triglyceride levels <150 mg/dL
  - LDL <100 mg/dL
  - HDL cholesterol >40 mg/dL for men, >50 mg/dL for women
Community-Engaged Translational Research

✓ Co-learning process
✓ Focus Groups to inform program development and implementation
✓ Hire and train community members to implement interventions
✓ Offer programs in community settings
✓ Offer best evidence available
✓ Disseminate study results to communities
Strong in Body & Spirit

- Nonrandomized community-based lifestyle intervention
- Healthy eating and physical activity for glycemic control
- 1993-1997 in 8 New Mexico Rio Grande Pueblo communities

http://www.laplaza.org/health/dwc/nadp/
Strong in Body & Spirit

- Participants identified through local diabetes registries with Indian Health Service

Eligibility Criteria:
- Native American women and men with physician-diagnosed type 2 diabetes,
- aged 18 years or older,
- physically and mentally able to participate, and
- who resided in one of the eight communities
Measures

Baseline and 1 year follow up

- A1C measured with DCA 2000
- Blood pressure
- Height
- Weight
- Demographics
- Stages of change diet and exercise
Strong in Body & Spirit

- 8 bilingual community members
- Written materials
- Five 2-hour sessions: Get more exercise, Eat less fat, Eat less sugar, Together we can, and Staying on the path
- Delivered every 6 weeks over 10 months
- Story - Through the Eyes of the Eagle

https://www.orau.gov/cdcynergy/web/DB/Content/activeinformation/resources/DB-Through_the_Eyes_of_the_Eagle.pdf
Strong in Body & Spirit

- Materials written in conversational tone, plain language
- Skill-building, role play
- Social support
- Goal setting
- Hands-on activities – food and physical activity demonstrations
- Incentives – colander, stress ball, stretch bands
- Delivered to small groups to encourage social interaction and support
Great Spirit,

Thank you for another day in which I can spread my wings like the eagle, gathering wisdom and strength to make life’s changes for a healthier tomorrow, through working the body and taking the time to enjoy each other and passing time.

Great Spirit,

Thank you for the sweet rewards that come from the soil that we work with our hands.

May the rewards be plentiful as our families grow healthier, to live longer and healthier lives.

Great Spirit,

And thank you for each and every day that we can enjoy the blessings that you have given to us.

Amen.

Great Spirit,

Thank you for our family and friends.

May we continue to grow as one community for a healthier tomorrow, through supporting and sharing in times of need and joy.

Great Spirit,

Thank you for your blessings that have provided the healthy foods to nourish our bodies.

May we learn to appreciate and not take for granted all that we now know to make us healthier. May we be open to accept change that will benefit not only ourselves but our children as well.

Great Spirit,

Thank you for our family and friends.

May we continue to grow as one community for a healthier tomorrow, through supporting and sharing in times of need and joy.

Great Spirit,

Thank you for the sweet rewards that come from the soil that we work with our hands.

May the rewards be plentiful as our families grow healthier, to live longer and healthier lives.

Great Spirit,

And thank you for each and every day that we can enjoy the blessings that you have given to us.

Amen.

Georgia Perez

Nambe Pueblo
Strong in Body & Spirit

- 159 participants enrolled
- 42 participants (26%) dropped out
- 13 participants incomplete data (8%)
- Total number of evaluable participants was 104 (65%)
- 3 groups
  - Family and friends
  - One-on-one
  - Usual care
Post intervention change in adjusted mean A1C for Family & Friends (FF) and One-on-One (OO) intervention arms and the Usual Care (UC) control arm at 1 year.

<table>
<thead>
<tr>
<th></th>
<th>FF</th>
<th>OO</th>
<th>UC</th>
<th>FF&amp;OO</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1c</td>
<td>0.5%↑</td>
<td>0.2%↑</td>
<td>1.2%↑</td>
<td>0.4%↑</td>
</tr>
</tbody>
</table>

P=0.05

P=0.02
Dissemination - SBS Team Training

- Implementation training developed for community health representatives

- November 1998-1999
  - 4 regional trainings – 39 teams, 159 individuals
Partners in Care

- Development 1997-1999
- American Diabetes Association clinical guidelines for A1C, blood pressure, lipids, nutrition, physical activity
- Social cognitive theory
- Relevant images, local foods and activities
- Not evaluated
Adaptation for African Americans and Latinos in Detroit, MI

Strong in Body and Spirit       The Journey to Health       El Camino a la Salud
Journey to Health
El Camino a la Salud

REACH Detroit (AA and Latino) 2001 - 2003
Journey to Health

- Focus on healthy eating and physical activity to control glucose
- Primary outcome: A1C
- Pre-post study design with matched group
- 10 Family Health Advocates (FHA)
  - Reviewed curriculum materials
  - Chose curriculum symbols
  - Adapted “Through the Eyes of the Eagle,” by Georgia Perez
  - African American and Latino English language versions and Spanish language version
Journey to Health

Meetings delivered by FHAs
June to October 2002
(5) 2-hour group meetings once/month
- Meeting One: Finding Balance in Life
- Meeting Two: Move More, Sit Less!
- Meeting Three: Eat More Fiber, Fruits, and Veggies!
- Meeting Four: Eat Less Fat and Sugar!
- Meeting Five: Staying on the Path
Journey to Health Participants
## Process Evaluation

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Research Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant attendance list</td>
<td>Participation &amp; retention</td>
</tr>
<tr>
<td>Participant feedback form</td>
<td>Relevance &amp; Acceptability</td>
</tr>
<tr>
<td>Observation form</td>
<td>Implementation of curriculum</td>
</tr>
<tr>
<td>FHA focus group</td>
<td>Relevance, acceptability, &amp; enabling factors and challenges to implementation</td>
</tr>
<tr>
<td>Participant post intervention focus groups</td>
<td>Relevance &amp; Implementation of theory components</td>
</tr>
</tbody>
</table>
### Intervention Outcome Evaluation

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Method of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dietary and Exercise Knowledge</td>
<td>Baseline &amp; post intervention self-report questionnaire (BRFSS)</td>
</tr>
<tr>
<td>Dietary and Exercise Behaviors</td>
<td>Baseline &amp; post intervention self-report questionnaire (BRFSS)</td>
</tr>
<tr>
<td>Self-monitoring blood glucose</td>
<td>Baseline &amp; post intervention self-report questionnaire (BRFSS)</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>Baseline &amp; post intervention self-report questionnaire (PAID-2)</td>
</tr>
<tr>
<td>A1C</td>
<td>Lab report</td>
</tr>
</tbody>
</table>
### Baseline demographic and clinical characteristics of REACH Detroit participants (n=111)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td>58.5 (14.5)</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>79%</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>African Am</td>
<td>64%</td>
</tr>
<tr>
<td>Latino</td>
<td>36%</td>
</tr>
<tr>
<td><strong>A1C</strong></td>
<td>8.4 (2.3)</td>
</tr>
<tr>
<td>&lt;7</td>
<td>29%</td>
</tr>
<tr>
<td>&gt;7</td>
<td>71%</td>
</tr>
<tr>
<td><strong>BMI</strong></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>7%</td>
</tr>
<tr>
<td>Overweight</td>
<td>19%</td>
</tr>
<tr>
<td>Obese</td>
<td>74%</td>
</tr>
</tbody>
</table>

Data are means ± SD or %
Process Evaluation Results - Participant attendance of intervention meetings (%) (N=111)
Participant Feedback

- High satisfaction w/content, format and delivery
- Information and activities were relevant and acceptable to participants
- Reported ways they were able to use information and activities
Fidelity - Class Observations (n=10 classes)

• High fidelity observed - Implementation of curriculum and theory components

• Participants understood materials

• Questions pertaining to topic asked
FHA Focus Group (n=10)

FHA reported **facilitators** to implementation:
- Participants appreciated the program; verbal reports of improved mental and physical health (e.g., BP, weight loss, having more energy)
- What worked well: starting class w/exercise, extra handouts, incentives, meeting in groups, having the curriculum written in a conversational tone so it could be read

FHA reported **challenges** to implementation:
- Too much writing required of participants.
- 2 hours too long; repetition.
- Competing demands of participants, particularly younger, working participants; transportation.
Participant Focus Groups (n=32)

Participants reported:

- increased understanding and awareness of the relationship between food and blood sugar.
- healthful changes in food consumption and preparation methods.
- inclusion of family in healthy eating and physical activity.
- enjoyed meeting in groups; 2-hour meetings sufficient, review of key points helpful.
- enjoyed activities: dancing, role-playing, problem-solving, label reading.
- Evidence of use of program strategies for behavior change (theory components).
- Requested more label reading, meal planning activities, videos, and time to talk as a group.
## Dietary and Exercise Knowledge

<table>
<thead>
<tr>
<th></th>
<th>Pre-intervention N (%)</th>
<th>Post intervention N (%)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dietary Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all/Somewhat</td>
<td>26 (30)</td>
<td>13 (15)</td>
<td>.013</td>
</tr>
<tr>
<td>Well/Very well</td>
<td>62 (70)</td>
<td>75 (85)</td>
<td></td>
</tr>
<tr>
<td><strong>Exercise Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>96 (88)</td>
<td>84 (96)</td>
<td>.035</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>13 (12)</td>
<td>4 (4)</td>
<td></td>
</tr>
</tbody>
</table>
## Pre- and post intervention dietary changes (n=111)

<table>
<thead>
<tr>
<th></th>
<th>Pre-intervention</th>
<th>Post intervention</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pour fat off meat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>67 (60)</td>
<td>100 (97)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>No</td>
<td>24 (22)</td>
<td>8 (7)</td>
<td></td>
</tr>
<tr>
<td>Whole grain bread</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1 times/week</td>
<td>35 (32)</td>
<td>27 (24)</td>
<td></td>
</tr>
<tr>
<td>2-4 times/week</td>
<td>24 (23)</td>
<td>47 (42)</td>
<td></td>
</tr>
<tr>
<td>5-7 times/week</td>
<td>50 (45)</td>
<td>36 (34)</td>
<td>.004</td>
</tr>
<tr>
<td>Beverages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1 times/week</td>
<td>43 (39)</td>
<td>84 (85)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>2-7 times/week</td>
<td>67 (61)</td>
<td>15 (15)</td>
<td></td>
</tr>
</tbody>
</table>
Baseline and Post intervention change in mean A1C

Between group $P=0.0001$
Baseline and post intervention change in A1C category

P = .035
Positive change but not significant

- Physical Activity
- Fruit consumption
- Fried food consumption
- Sweet food consumption
- Quality of Life score

Participant Celebration
Adaptation for Native Hawaiians and Pacific Islanders in Honolulu, HI

Strong in Body and Spirit

The Journey to Health

El Camino a la Salud

Partners in Care
Partners in Care Hawaiʻi
Partners in Care

- 2010-2012 Native Hawaiian, Pacific Islanders, and Filipino adults with type 2 diabetes
- Curriculum materials:
  - provide basic information about diabetes self-management,
  - encourages participants to work with their diabetes team and ask questions when they have them, and
  - emphasizes American Diabetes Association clinical guideline goals for blood glucose and A1C, blood pressure, and lipids.
Partners in Care

- Focus groups - Native Hawaiian, Pacific Islanders, and Filipino adults living with T2D
- Social cognitive theory
- Stories and analogies to convey information
Eligibility Criteria

- Self-reported Native Hawaiian, Pacific Islander, or Filipino ancestry
- ≥18 years of age
- ≥7% baseline hemoglobin A1C
- Physician-diagnosis of type 2 diabetes
- English speaking
- Resident and/or client of three participating communities
Partners in Care

- Meetings delivered by trained community peer educators
- 2 community clinics, 1 Native Hawaiian homestead
- March – May, 2011
- RCT – intervention and waitlist control groups
- (12) 1-hour group meetings delivered in community setting once/week
Measures

- Demographics
- Clinical - A1C, lipid panel, blood pressure, height, weight
- Behavioral
  - Dietary and physical activity behaviors
  - Diabetes Care Profile
  - Summary of Diabetes Care Activities
  - Problem Areas in Diabetes
Outcomes

Primary Outcomes

- A1C
- Understanding of DMSM
- Performance of self-care activities

Secondary Outcomes

- Lipids, blood pressure
- Diabetes-related distress (Problem Areas in Diabetes)

CONSORT diagram of participation

Assessed for Eligibility (n=91)

- Excluded (n=9)
  - Did not meet inclusion criteria

Randomized (n=82)

Wait List Control (n=34)

- Assessed at 3 months (n=31)
  - Lost to follow-up:
    - Could not be reached for reason for withdrawal (n=3)

Intervention (n=48)

- Intervention delivered to wait list control group

- Assessed at 3 months (n=34)
  - Lost to follow-up:
    - Competing demands of work/family (n=8)
    - No time (n=2)
    - Could not be reached for reason for withdrawal (n=4)

3 month Follow-up (n=65)
## Baseline Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Partners in Care N=48</th>
<th>Control N=34</th>
<th>Group differences (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age, years, mean (SD)</strong></td>
<td>53 (12)</td>
<td>55 (10)</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Female (%)</strong></td>
<td>63</td>
<td>62</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>Education, &lt;High School (%)</strong></td>
<td>83</td>
<td>62</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Marital Status (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently Married</td>
<td>60</td>
<td>58</td>
<td>0.82</td>
</tr>
<tr>
<td>Never married/divorced/widow</td>
<td>40</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td><strong>Employment Status (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working</td>
<td>31</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Looking for Work</td>
<td>13</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other (Retired, student, homemaker)</td>
<td>56</td>
<td>62</td>
<td>0.31</td>
</tr>
<tr>
<td>**Age first told you had diabetes, years, mean (SD)</td>
<td>38 (18)</td>
<td>39 (16)</td>
<td>0.73</td>
</tr>
<tr>
<td><strong>Previously taken a diabetes class (%)</strong></td>
<td>48</td>
<td>58</td>
<td>0.12</td>
</tr>
<tr>
<td><strong>Currently following a diet or meal plan (%)</strong></td>
<td>23</td>
<td>53</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Prescribed diabetes pills (%)</strong></td>
<td>69</td>
<td>76</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Prescribed insulin (%)</strong></td>
<td>56</td>
<td>46</td>
<td>0.32</td>
</tr>
</tbody>
</table>
## Baseline Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Partners in Care N=48</th>
<th>Control N=34</th>
<th>Group differences (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A1C, mean (SD)</strong></td>
<td>9.9 (2.0)</td>
<td>9.8 (2.2)</td>
<td>0.80</td>
</tr>
<tr>
<td><strong>Systolic Blood Pressure, mean (SD)</strong></td>
<td>190 (27)</td>
<td>208 (35)</td>
<td>0.02</td>
</tr>
<tr>
<td><strong>Diastolic Blood Pressure, mean (SD)</strong></td>
<td>113 (23)</td>
<td>119 (22)</td>
<td>0.30</td>
</tr>
<tr>
<td><strong>Lipids, mean (SD)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cholesterol</td>
<td>189 (51)</td>
<td>195 (51)</td>
<td>0.56</td>
</tr>
<tr>
<td>LDL</td>
<td>101 (38)</td>
<td>105 (44)</td>
<td>0.73</td>
</tr>
<tr>
<td>HDL</td>
<td>36 (10)</td>
<td>35 (12)</td>
<td>0.78</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>270 (167)</td>
<td>272 (135)</td>
<td>0.94</td>
</tr>
<tr>
<td><strong>Body Mass Index, kg/m², mean (SD)</strong></td>
<td>36 (12)</td>
<td>38 (8)</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>Problem Areas in Diabetes Score, mean (SD)</strong></td>
<td>31 (29)</td>
<td>24 (24)</td>
<td>0.30</td>
</tr>
<tr>
<td><strong>Diabetes Care Profile, mean (SD)</strong></td>
<td>30 (9)</td>
<td>33 (11)</td>
<td>0.16</td>
</tr>
<tr>
<td><strong>Summary of Diabetes Self-Care Attitudes, mean (SD)</strong></td>
<td>19 (5)</td>
<td>20 (5)</td>
<td>0.45</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th>A1C</th>
<th>Baseline M (SD)</th>
<th>3 month M (SD)</th>
<th>Change ±SE</th>
<th>Group Differences (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention-to-treat</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partners in Care (n=48)</td>
<td>9.9 (2.0)</td>
<td>8.9 (1.7)</td>
<td>-1.1 ±0.2</td>
<td>0.001</td>
</tr>
<tr>
<td>Control (n=34)</td>
<td>9.8 (2.2)</td>
<td>9.4 (2.2)</td>
<td>-0.3 ±0.2</td>
<td></td>
</tr>
<tr>
<td><strong>Effect Size</strong></td>
<td>0.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Complete cases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partners in Care (n=34)</td>
<td>9.7 (2.1)</td>
<td>8.2 (1.1)</td>
<td>-1.6 ±0.2</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Control (n=31)</td>
<td>9.8 (2.3)</td>
<td>9.4 (2.2)</td>
<td>-0.3 ±0.2</td>
<td></td>
</tr>
<tr>
<td><strong>Effect Size</strong></td>
<td>0.22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th>Diabetes Care Profile</th>
<th>Baseline M (SD)</th>
<th>3 month M (SD)</th>
<th>Change ±SE</th>
<th>Group Differences (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention-to-treat</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partners in Care (n=46)</td>
<td>30 (9)</td>
<td>43 (14)</td>
<td>13.1 ±1.5</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Control (n=34)</td>
<td>33 (11)</td>
<td>34 (11)</td>
<td>1.8 ±1.8</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td><strong>Effect Size</strong></td>
<td></td>
<td></td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td><strong>Complete cases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partners in Care (n=33)</td>
<td>32 (10)</td>
<td>50 (9)</td>
<td>18.8 ±1.5</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Control (n=29)</td>
<td>31 (10)</td>
<td>33 (11)</td>
<td>1.5 ±1.5</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td><strong>Effect Size</strong></td>
<td></td>
<td></td>
<td>0.53</td>
<td></td>
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</tbody>
</table>
## Results

### Summary of Diabetes Self-Care Activities

<table>
<thead>
<tr>
<th></th>
<th>Baseline M (SD)</th>
<th>3 month M (SD)</th>
<th>Change ±SE</th>
<th>Group Differences (p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intention-to-treat</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Partners in Care (n=47)</td>
<td>19 (5)</td>
<td>24 (4)</td>
<td>4.9 ±0.6</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Control (n=34)</td>
<td>20 (5)</td>
<td>21 (5)</td>
<td>1.4 ±0.7</td>
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</tr>
<tr>
<td><strong>Effect Size</strong></td>
<td></td>
<td></td>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td><strong>Complete cases</strong></td>
<td></td>
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<tr>
<td>Partners in Care (n=35)</td>
<td>19 (4)</td>
<td>26 (3)</td>
<td>6.6 ±0.6</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Control (n=26)</td>
<td>19 (5)</td>
<td>21 (6)</td>
<td>1.8 ±0.7</td>
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</tr>
<tr>
<td><strong>Effect Size</strong></td>
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<td></td>
<td>0.30</td>
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</table>
### Problem Areas in Diabetes

<table>
<thead>
<tr>
<th></th>
<th>Baseline M (SD)</th>
<th>3 month M (SD)</th>
<th>Change ±SE</th>
<th>Group Differences (p value)</th>
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</thead>
<tbody>
<tr>
<td><strong>Intention-to-treat</strong></td>
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<tr>
<td>Partners in Care (n=48)</td>
<td>31 (29)</td>
<td>23 (24)</td>
<td>-7.2 ±2.1</td>
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<tr>
<td>Control (n=34)</td>
<td>25 (24)</td>
<td>24 (22)</td>
<td>-2.9 ±2.5</td>
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</tr>
<tr>
<td><strong>Complete cases</strong></td>
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</tr>
<tr>
<td>Partners in Care (n=35)</td>
<td>31 (31)</td>
<td>20 (22)</td>
<td>-10.2 ±2.5</td>
<td>0.04</td>
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<tr>
<td>Control (n=30)</td>
<td>24 (23)</td>
<td>23 (21)</td>
<td>-2.7 ±2.6</td>
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<tr>
<td><strong>Effect Size</strong></td>
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<td>0.02</td>
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</table>
Sustained Implementation

Integrated into usual care at 3 Honolulu community health clinics; reimbursable in ADA recognized DM programs

Train the trainer in Saipan (2016)
Adaptation for Latinos in Seattle, WA

Strong in Body and Spirit

The Journey to Health

El Camino a la Salud

Partners in Care

Compañeros en Salud
Compañeros en Salud
Compañeros en Salud

- 20 urban Latinos randomized into:
  1. Compañeros en Salud DSME, or
  2. Compañeros en Salud DSME plus CGM
- 3-month study at Valley Medical Center
- Eligibility: age 21 years or older who have physician-diagnosed type 2 diabetes and A1C ≥ 8%; English speaker
- Trained promotora, Latina endocrinologist

Funded by the UW Center for Latino Health pilot funding
Continuous Glucose Monitor
Compañeros en Salud

- Primary outcome: A1C
- Secondary outcomes:
  - Patient-centered measures - diabetes-related distress, understanding of diabetes self-management, performance of self-care activities, patient activation
  - CGM data
  - Diet
  - Physical activity
  - Blood pressure, body mass index
- Measurement at baseline and 3 months
- $50 incentive for each assessment

Funded by the UW Center for Latino Health pilot funding
THANK YOU!

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kaimi.sinclair@wsu.edu