Working to improve peer support for diabetes along the U.S.-Mexico border: *Puentes hacia una mejor vida*

Guadalupe X. Ayala, PhD, MPH
Associate Professor, San Diego State University
Co-Director, San Diego Prevention Research Center
Overview

• The context

• The study

• The key functions of peer support
Imperial County, California, USA

- 166,874 residents
- 77% are Mexican origin
- 67% speak other than English
- 41% did not complete high school
- Median HH income $33,576
- 22% live below poverty level

Darker = more economically stressed
U.S.-Mexico border communities

2,000-mile US-Mexico border
- 4 states in US and 6 in Mexico
- □ 12 million people\(^1\)

16% have type 2 diabetes\(^2\)
- □ 1.2 million people
- 58% live on the U.S. side of the border\(^3\)

\(^1\)US Census, 2009
\(^2\)PAHO, 1998
\(^3\)McEwen et al., 2009
Rural communities

Diabetes more prevalent in rural vs. urban communities\textsuperscript{1}

– Among the top priorities for Rural Healthy People 2010.

Socio-economically disadvantaged\textsuperscript{2}

– High poverty rates
– Limited access to insurance, specialty care, and emergency service
– Longer distances
– High rates of health illiteracy

\textsuperscript{1}Krishna et al., 2010
\textsuperscript{2}Massey et al., 2011
Hispanic/Latino community

Prevalence of diabetes

2004-06 BRFSS data

Non-Hispanics
Hispanics
Cubans
Mexican-Americans
Puerto-Ricans

2004-06 BRFSS data
Convergence of risk factors
Border x Rural x Hispanic

But the situation is not all negative
High social capital\(^1\) in the form of...
Strong social networks
Trusted organizations

Formal ties and sense of community are important for intervention involvement in rural communities\(^2\)

\(^1\)Onxy & Bullen, 2000
\(^2\)Liu & Besser, 2009
Puentes hacia una mejor vida/
Bridges to a better life
Objectives

• To test a peer support intervention to improve diabetes control among rural low-income Mexican immigrants/Mexican-Americans living in Imperial County, CA.

• Peer supporters (líderes [leaders]) identified from Clinicas de Salud del Pueblo, Inc., a federally-qualified health center.

• Patients (compañeros) randomly sampled from CDSDP patient roster.

• Primary outcome is HbA1c.
Study Design

Randomly sample 336 patients from clinic roster and conduct baseline assessment.

Randomly assign to condition:

- **Intervention (n=168)**: 12 months of peer support
- **Usual care (n=168)**

6 month assessment

12 month assessment
Líderes

- Identified from among graduates of a diabetes education program, referred, or self-identified
- Screened via an application form and an interview
- Trained to provide peer support
- Volunteers
  - Gas cards
  - Recognitions
Intervention

Each líder is assigned to 6 patients:

- **Goal:** Help improve diabetes self-management behaviors in multiple contexts (home, clinic, community)

- **Dose:** Minimum of 8 contacts in first 6 months; less frequent contact in subsequent 6 months

- **Modes:** Home visits, small groups, and clinic tours
Key functions of peer support

1. Assistance, consultation in applying management plan in daily life
2. Ongoing social and emotional support
3. Linkage to/assistance in gaining access to clinical care
4. Ongoing availability of support; proactive contact
1. Individual

**Assistance in daily living:**
1: Knowledge and skill building
2: Healthy control of social and physical home environment
4: Problem solve community-level social and physical barriers to management

**Ongoing social and emotional support**
1: Depression and diabetes
2: Eliciting family support
4: Walking and cooking groups

**Linkages and assistance with clinical care AND other resources**
3: Provider communication; facilitate use of clinical resources
4: Resource awareness
**Líder training (40 hours)**

1. Introduction to *Puentes*
2. Introduction to peer support
3. Diabetes and nutrition
4. Diabetes and physical activity
5. Diabetes and emotional health
6. Medical management of diabetes
7. Conducting home visits
8. Conducting visits to the clinic
9. Conducting support groups
10. Monitoring your support

**Goal**
Becoming a volunteer peer supporter

[Logo: Casa + Clínica + Comunidad Puertas]

[Website: www.peersforprogress.org]
Volunteerism research:

- Volunteers motivated by opportunities for personal and professional growth, as well as opportunities for giving back to their community

- Volunteers more satisfied with their experience if motivated for personal and professional growth (assuming experience matches expectations), compared with motivation to help community.

Cleary et al., 1998
Líder training (40 hours)

1. Introduction to Puentes
2. Introduction to peer support
3. Diabetes and nutrition
4. Diabetes and physical activity
5. Diabetes and emotional health
6. Medical management of diabetes
7. Conducting home visits
8. Conducting visits to the clinic
9. Conducting support groups
10. Monitoring your support

Goal
Help your peers learn how to manage diabetes across multiple contexts.
**Líder training**

### Building your foundation

**El método del plato**

Para poder comer saludable, debe verificar que su plato tenga lo siguiente:

- ¼ del plato para carbohidratos, por ejemplo, fideos, arroz, elote, o fruta;
- ¼ del plato para carne, por ejemplo, pollo, pavo, pescado, carne de res o de puerco;
- ½ del plato para verduras, por ejemplo, ensalada u otros vegetales.

**¡EL PLATO DE T... TIENE DE TODO!**

### Putting it into practice

**Ahora que usted ha aprendido acerca de alimentación saludable, ¿qué puede hacer para apoyar la alimentación saludable de sus compañeros en el hogar, en la clínica y en la comunidad?**

#### CUIDADO EN EL HOGAR

How can you support your peers’ healthy eating at home?

#### CLÍNICA

How can you help your peer obtain additional information about healthy eating?

#### COMUNIDAD

How can you help your peer make healthier decisions when eating out?

[www.peersforprogress.org](http://www.peersforprogress.org)
Líder training (40 hours)

1. Introduction to *Puentes*
2. Introduction to peer support
3. Diabetes and nutrition
4. Diabetes and physical activity
5. Diabetes and emotional health
6. Medical management of diabetes
7. Conducting home visits
8. Conducting visits to the clinic
9. Conducting support groups
10. Monitoring your support

Goal
How to use various modalities of peer support
### Visit 4: Activity: Identifying your support

**Obteniendo apoyo de amigos y familiares**

Obteniendo apoyo de amigos y familiares requiere que sus compañeros identifiquen qué tipo de apoyo necesitan y quienes se los pueden dar. Después de identificar que tipo de apoyo necesitan y quienes se los pueden dar, sus compañeros luego tienen que aprender cómo pedir apoyo de ellos.

1. ¿Qué tipo de apoyo necesito?
2. ¿Quién me lo puede dar?
3. ¿Cómo puedo pedir que me den apoyo?

---

**Visit 4: Sources of support**

**Visit 4: Activity: Identifying your support**

- **HABlar**
  - con su familia acerca de su salud.

- **MODificar**
  - el entorno en el hogar eliminando carbohidratos, y apegando a sus hijos a una dieta saludable.

- **ABRazar la vida**
  - Una buena vida con sus amigos.

- **REPeatarse a sí mismo**
  - y llevar a cabo los cambios en servicios de salud.

---

**Suggested outline for six home visits**

- **Visit 1:** Presentaciones, evaluación
- **Visit 2:** Obtener apoyo familiar
- **Visit 3:** Mejorando su hogar
- **Visit 4:** Obtener apoyo de amigos y familiares
- **Visit 5:** Técnicas efectivas para enfrentar desafíos
- **Visit 6:** Evaluando el progreso
Where are we now?
## Líder characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N=34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (SD)</td>
<td>44 (9)</td>
</tr>
<tr>
<td>Female</td>
<td>97% (33)</td>
</tr>
<tr>
<td>Foreign born (in Mexico)</td>
<td>82% (28)</td>
</tr>
<tr>
<td>Married or living as married</td>
<td>79% (27)</td>
</tr>
<tr>
<td>Employed full or part-time</td>
<td>53% (18)</td>
</tr>
<tr>
<td>High school educated</td>
<td>59% (20)</td>
</tr>
<tr>
<td>Other volunteer activities</td>
<td>38% (13)</td>
</tr>
</tbody>
</table>
Peer (*compañero*) characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N=336</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (SD)</td>
<td>57 (12)</td>
</tr>
<tr>
<td>Female</td>
<td>63% (212)</td>
</tr>
<tr>
<td>Foreign born (in Mexico)</td>
<td>74% (250)</td>
</tr>
<tr>
<td>Married or living as married</td>
<td>60% (201)</td>
</tr>
<tr>
<td>Employed full or part-time</td>
<td>25% (84)</td>
</tr>
<tr>
<td>High school educated</td>
<td>47% (157)</td>
</tr>
</tbody>
</table>

Recruitment rate: 70%

Compared with the *líderes*:
- Older
- More males
- Less likely to be
  - Married
  - Employed

www.peersforprogress.org
Process Evaluation

• Participant – reach, recruitment, dose received, core functions of peer support

• Líderes - dose delivered, type of support delivered and intervention fidelity

• Volunteerism - nature of volunteer peer support in a Mexican origin community

• RE-AIM - to assess potential to sustain and disseminate program
Outcome evaluation
(Common across all 8 evaluation sites)

• Primary outcome: HbA1c

• Secondary outcomes:
  – Diabetes self-management
  – Medication adherence
  – Depression
  – Diabetes distress
  – Quality of life
  – Chronic illness resources – San Diego only
Lessons learned to-date

Unanticipated consequences
• Concurrent changes in the health care system

Challenges
• Measurement of dose delivered and dose received with a group of volunteers
• Distances needed to reach peers
Acknowledgements

**Co-Investigators**
- Leticia Ibarra, MPH  
  Director of Programs & External Affairs, Clinicas de Salud del Pueblo, Inc.
- John P. Elder, PhD, MPH  
  San Diego State University
- Ming Ji, PhD  
  San Diego State University
- Andrea Cherrington, MD, MPH,  
  University of Alabama at Birmingham
- Mark Snyder, PhD  
  University of Minnesota

**Staff**
- Lucy Horton, MPH, MS, Project Mgr.
- Humberto Parada, MPH, Data Mgr.
- Maria Belen Luna, Coordinator
- Cecilia Cota, Diabetes education

**Funder**
**Peers for Progress**
American Academy of Family Physicians
SOOII24OIGEL (02/01/09-09/30/11)
Thank you!

¡Gracias!