Using Peers and Other Community Support to Meet Unmet Needs in Diabetes

Michele Heisler, MD, MPA
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December, 2011
William

DM
COPD
GERD

Cares for wife

Severe symptoms
Leticia

DM
Asthma
OA

LEP
low health literacy

Goes to FQHC
Angela

DM
HA
HF

Widowed

Avid computer user

Daughter two states away
Struggling with Self-Management
Overview

• The Challenge
• Peer Support Models
  • Community Health Worker
  • Peer Mentor
  • Reciprocal Peer Support
• Web-Based Peer Support Tools
“...assist the individual ... to implement and sustain the ongoing behaviors needed to manage their illness.”

Difference in A1c Levels After Diabetes SM Training

Norris, Diabetes Care 2002
How to Sustain Gains from Training?

We need low-cost programs that are:

• tailored

• linked to outpatient care processes

• flexible
Health Team-Based Outreach Programs

- Other Patients
- Informal Caregivers
- Patient
- Care Managers
- Primary Providers
- Pharmacy
Other Patients

Informal Caregivers

Patient

Care Managers

Primary Providers

Pharmacy

Peer Support

• “Support from a person with experiential knowledge of a specific behavior or stressor and similar characteristics as the target population”

Dennis, 2003
Possible Mechanisms of Peer Support

• Sharing experiences with others undergoing the same medical tasks

• Assimilating new knowledge and skills through mutual exchange of experiences
Inescapable Social Distance between Doctors and Patients

"It helps me empathize."
Prior Research

- Face-to-face peer-led group visits and training sessions can improve outcomes (Wagner, 2001) (Lorig, 2001, 2009)

- Effective models include proactive peer outreach (Smith, 2011) and are linked to structured training and support programs (Heisler, 2008)

- Two Cochrane reviews called for the need for high-quality evaluations of peer support models (Dale, 2008) (Doull, 2005)
Overview

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Meta-Analysis of Community Health Workers in Diabetes

• Studies through 2004

• Roles and duties of CHWs varied
  – Direct involvement in patient care to
  – Providing assistance in health professional-led education sessions

• Improved knowledge, self-care, and physiological outcomes

• Variable quality of studies

(Norris, Diab Med 2006)
Specific Peer Worker Roles in Chronic Disease Care

Wide range of roles:

1) strengthening linkages to clinical care
2) individualized assessment and support
3) patient-centered collaborative goal setting
4) education and skills training,
5) ongoing follow up and support, and
6) linking patients to community resources

Brownson C and Heisler M, 2009
Two Successful RCTS of Community Health Worker-led 6-Month Self-Management Program

- Based at a health center serving low-income, inner-city community in Detroit
Key Components of Six-month CHW Program

(Spencer, AJPH, 2011) (Heisler, AJPM 2010) (Heisler, D Care, 2009) (TwoFeathers, AJPH, 2008)

• **Journey to Health/El Camino a la Salud**: 11 two-hour, culturally tailored group diabetes self management classes

• **One-on-One Support**: behavioral goal setting and follow-up (“action plans”), social support, linkage to resources

• **Clinic visits**: accompany clients to at least one provider visit, provide help navigating the health care system
Mean A1c Values at Baseline and Six Months Follow-Up

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<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 Months</th>
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<tbody>
<tr>
<td>Treatment</td>
<td>8.70</td>
<td>7.80</td>
</tr>
<tr>
<td>Control</td>
<td>8.6</td>
<td>8.3</td>
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</table>
Problem Areas in Diabetes (Polanski, 1995 and 1996) #: p < .05;

Age-Adjusted Mean PAID Score

Baseline
- Treatment: 24.8
- Control: 27.5

6 Months
- Treatment: 17.9
- Control: 25.6
Overview

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RCT of 15 months of peer-led drop-in weekly groups and telephone outreach

- Peer leaders are patients who completed diabetes SM training
- 24 hours of training in group facilitation and communication (Tang, 2011) (Tang, 2010)
A RCT of Peer Mentoring vs. Financial Incentives vs. Usual Care

- Peer mentoring may be particularly effective in minority groups with higher distrust of the health care system
  - Innately culturally sensitive

- Financial incentives may be particularly effective in lower income populations
  - Magnitude more than to someone with greater financial resources

Long et al, (NIA)(NIDDK R01)
Aim

1. Test the relative effectiveness of peer mentoring, financial incentives, and usual care in improving glucose control
Design

- 6 month RCT
  - African American adults, 50-70 years old
  - Enrollees: persistent poor DM control
    - Last two A1c > 8% with last measure within 3 months of enrollment
  - Mentors: Prior poor but now good DM control
    - A1c of > 8% in the past 3 years and an A1c ≤ 7.5% within 3 months of enrollment
Intervention Procedures

**Mentor Arm**
- Matched by gender and age (+/-10 years)
- Mentors:
  - 1 hour one-on-one training
  - Provided with mentee’s phone number
  - Called monthly to reinforce training
  - $20 per month if talked at least 4 times in month

**Incentive Arm**
- Lump sum if achieve goal at 6 months: $100 for 1 point improvement, $200 for 2 point improvement or A1c of 6.5%
Analysis

- Intention-to-treat
- Main outcome: change in A1c
- Adjusted for baseline A1c and variables not evenly distributed across groups (any DM co-morbidity, time between tests)
Baseline and Follow-up HbA1c

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<tr>
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<tbody>
<tr>
<td>Control</td>
<td>9.9</td>
<td>9.8</td>
</tr>
<tr>
<td>Peer Mentors</td>
<td>9.8</td>
<td>8.8</td>
</tr>
<tr>
<td>Financial Incentives</td>
<td>9.5</td>
<td>9.1</td>
</tr>
</tbody>
</table>
Conclusions

- Peer mentors improved glucose control in a population with persistently poor control

- The peer mentor training was short and straightforward

- Now embarking on larger, longer study with financial incentives tied to shorter range targets
Overview

• Peer Support Models
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  • Peer Mentor
  • Reciprocal Peer Support

• Family and Caregiver Models

• Web-Based Peer Support Tools
Other Possible Mechanisms for Peer Support

- Providing support to others can lead to health benefits comparable to—or greater—than receiving support.

- A key mechanism by which peer support may be effective is to ‘activate’ patients by encouraging them both to give and receive support.
RCT Comparing Reciprocal Peer Support with Usual Nurse Care Management in Diabetes

- Reciprocal Peer Support=Participants both give and receive support to each other
- 234 patients with diabetes and A1c>7.5%
- Exclusions of active substance abuse, severe depression, hearing loss, or terminal illness
Components of 6-Month Intervention

At initial group session, informed consent, survey, blood pressure and A1C tests, and randomization

**Intervention**
- 3-hour group session facilitated by a care manager and RA
- Participants told to call peer partner weekly
- Optional 1.5 hour group sessions at months 1, 3, 6
- Peer workbook and DVD

**Control**
- 1.5 hour session to review A1c, BP, and LDL and educate on care management
- Contact information on assigned case manager
- Written educational materials
Peer Support to Complement and Reinforce More Structured Program
Study Outcomes

• Change between baseline and six-month A1C (primary outcome)

• Insulin starts

• Self-reported changes in medication adherence, diabetes distress, and diabetes social support
Change in A1c Levels over Six Months

![Graph showing A1c levels over six months for intervention and control groups.](image-url)
Among participants with A1c > 8.0, mean A1c difference of 0.88
Other Results

• The Peer Support group had more insulin starts (8 vs. 1) and greater increases in reported diabetes social support

• No differences between groups in other measures
Discussion

- Statistically and clinically significant improvements in A1c, insulin starts, and diabetes social support

- From staff perspective, far less time-intensive than other tested programs:
  - The 46% of participants who attended the initial, 1 and 3-month group sessions had 4.5 hours in face-to-face meetings more over 6-months than control
Patient Perceptions of Peer Support Calls

“A lot of old people with diabetes like us sit around at home and look out the window. We feel sick and pretty useless. I learned things I could be doing to take care of my diabetes from [my peer partner]. But I also felt that I helped him. I enjoyed talking to him on the phone, and it made me feel inspired to do more.”
Patient Perceptions of Peer Support Calls 2

“Ever since I’ve been in this program, I’ve done much better. I don’t want to have to admit to this guy that my blood sugars are up—it’s peer pressure.”

“I knew that he would be calling me in a few days, so I would either lie to him or would get up on that treadmill and start walking.”
Perception of Group Sessions

“This time is the time I can take out for myself, and it’s nice to be able to be heard instead of having to listen all the time.”
Implications

Reciprocal peer models can be an effective and efficient approach for helping diabetic patients help each other and themselves.
Lots of Unanswered Questions

• How most effectively to train peers?

• Cost-effectiveness, sustainability, integration of peers into health and social service delivery systems, and recruitment and support of peers

• What are most effective models for different populations and conditions?
Overview

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Web and Email-based Peer Support Programs

• Internet-based support groups and discussion boards (Zrebiec, 2005)

• Internet versions of successful self-management programs (Lorig, 2006)

• E-community (peer support) components to Internet-based interventions (Richardson, 2008)
Angela

Avid computer user
LEP
low health literacy
Web-Based Tools to Support Peer Mentoring

(AHRQ R18, Heisler)

iDecide
- Assessing the use of a web-based, interactive, tailored decision tool in improving diabetes health outcomes

Decido
- Evaluando el uso de un herramienta de decisión en mejorar los resultados de la salud en pacientes con diabetes
Different Potentially Effective Peer Support Models
Peer Support Can Address Different Needs:
One I Could Sure Use

“Hi. My name is Barry, and I check my E-mail two to three hundred times a day.”
Thank You