Are Low-Income Peer Health Coaches Able to Master and Utilize Evidence-Based Health Coaching?

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ABSTRACT

PURPOSE A randomized controlled trial found that patients with diabetes had lower HbA_{1c} levels after 6 months of peer health coaching than patients who did not receive coaching. This paper explores whether the peer coaches in that trial, all low-income patients with diabetes, mastered and utilized an evidence-based health coaching training curriculum. The curriculum included 5 core features: *ask-tell-ask, closing the loop, know your numbers, behavior-change action plans,* and *medication adherence counseling*.

METHODS This paper includes the results of exams administered to trainees, exit surveys performed with peer coaches who completed the study and those who dropped out, observations of peer coaches meeting with patients, and analysis of in-depth interviews with peer coaches who completed the study.

RESULTS Of the 32 peer coach trainees who completed the training, 71.9% lacked a college degree; 25.0% did not graduate from high school. The 26 trainees who passed the exams attended 92.7% of training sessions compared with 80.6% for the 6 trainees who did not pass. Peer coaches who completed the study wanted to continue peer coaching work and had confidence in their abilities despite their not consistently employing the coaching techniques with their patients. Quotations describe coaches' perceptions of the training.

CONCLUSIONS Of low-income patients with diabetes who completed the evidenced-based health coaching training, 81% passed written and oral exams and became effective peer health coaches, although they did not consistently use the techniques taught.

Ann Fam Med 2015;13(Suppl_1):S36-S41. doi: 10.1370/afm.1756.

INTRODUCTION

Health coaching is the process of engaging patients with chronic conditions in their care by increasing their knowledge, skills, and confidence to the point that they become informed, active participants in the management of their conditions.[1] Patients trained as peer health coaches can provide health coaching to other patients. A recent randomized controlled trial found that patients with poorly controlled diabetes had significantly reduced hemoglobin A_{1C} (HbA_{1c}) levels after 6 months of peer coaching compared with patients who did not receive peer coaching.[2] This paper reports on the characteristics and training experiences of these peer coaches.

The peer coaches were low-income patients with diabetes who had backgrounds similar to those of the patients they coached. The process that transformed these ordinary patients into effective peer coaches was training and mentoring using the Evidence-Based Health Coaching curriculum developed by 2 of the authors (A.G. and T.B.).[3] The core features of evidence-based health coaching are described in the Methods section.

This paper addresses the question, did the low-income patients with diabetes recruited to become peer coaches master and utilize the evidence-based health coaching curriculum?

Conflicts of interest: authors report none.

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METHODS

The peer coaches described in this paper were part of a randomized controlled trial comparing peer coaching to usual care for patients with poorly controlled diabetes, conducted in conjunction with the Peers for Progress World Health Organization (WHO) global initiative.[4] The study protocol and results, showing that patients who received peer coaching had a significantly greater reduction in their HbA_{1c} levels, are described elsewhere.[2,5] Peer coaches were low-income English- and Spanish-speaking patients with diabetes whose HbA_{1c} levels were 8.5% or lower and who were recommended by staff or clinicians from the clinic at which they received their care. Candidate peer coaches underwent a 36-hour training session in evidence-based health coaching followed by written and oral exams. Those who passed the course were paired with patients and met in monthly mentoring sessions with the program director to discuss their patient interactions and receive refresher training. Those who did not pass the exams were given a second chance, but they did not serve as peer coaches if they were unable to pass the written and oral exams the second time. The peer coaches were paid $25 per month up to 6 months for each patient coached. They were also paid $150 for the training whether or not they passed the exams. The coaches interacted with an average of 6 patients each.[2]

Evidence-based health coaching is based on 5 core principles. These principles were developed by compiling best practices from 5 years of experience in training patients, medical assistants, nurses, and physicians in health coaching and studying the literature on health coaching and self-management support.

Ask-tell-ask. Asking patients what they wish to learn and what they are willing to do is an effective way to involve patients in their care. Several studies demonstrate that active participation by patients—achieved by asking them what they think and what are their goals—is associated with better outcomes than telling patients what to do, which makes them passive bystanders in their care.[6-10]

Closing the loop. Fifty percent of patients leave the physician visit without understanding the physician's recommendations. A method to assess patient understanding involves asking patients to state the physician's recommendations in their own words; this is called "closing the loop" or "teach-back." Physicians' use of teach-back for patients with diabetes has been associated with improved glycemic control.[11]

Know your numbers. Most patients with diabetes do not know their actual HbA_{1c} number or their HbA_{1c} goal. A randomized controlled trial found that patients with diabetes who are taught their actual HbA_{1c} level and their HbA_{1c} goal improve their glycemic control more than a control group.[12]

Behavior-change action plans. In a study of patients in diabetes self-management support groups, patients were randomly assigned to traditional patient education or to goal setting with concrete behavior-change agreements called action plans.[13] The group doing action plans had a significant reduction in HbA_{1c} compared with the patient education group, whose HbA_{1c} levels did not change.

Medication adherence counseling. Effective strategies for optimizing medication adherence are based on coaching techniques that include eliciting the patient's feelings about taking the medication (ask-tell-ask), ensuring that the patient understands the instructions (closing the loop), and customizing the regimen in accordance with the patient's wishes (ask-tell-ask and behavior-change action plans).[14] Peer coaches were taught to engage patients in medication reconciliation, which included finding out whether patients were taking their medications as prescribed, eliciting the barriers to adherence, and suggesting strategies to overcome those barriers.

These 5 principles were taught to the peer coach trainees through scripted dialogs and role-playing performed by trainee dyads with feedback and discussion. Trainees also learned how to clearly explain the essentials of diabetes to patients, including the complications, the basics of healthy eating and physical activity, the common medications, medication reconciliation, and the essentials of managing depression and stress. Peer coach trainees were carefully instructed in patient confidentiality and in the limitations of their scope of activities.

The written and oral examinations were administered to the peer coach trainees at the end of the training. The written exam included basic questions about diabetes; for the oral exam, trainees had to demonstrate to a trainer that they knew how to close the loop and negotiate a behavior-change action plan with a patient.

The data for this paper comes from several sources: (1) demographic information on the peer coach trainees obtained at the beginning of the study; (2) the trainees' attendance rates and the pass rates of the written and oral exams administered at the end of the training, (3) an exit survey of peer coaches who completed the study and of those who dropped out of the study, with questions using a Likert scale to measure satisfaction with training and the coaching experience, (4) a convenience sample of observations by the study team of 13 meetings between 13 different peer coaches and patients, using a checklist to assess implementation of coaching skills, and (5) in-depth semi-

structured interviews with all 17 peer coaches active at the time, using iterative methods based on grounded theory (detailed elsewhere[15]), with examples focusing on the training experience.

RESULTS

Of the 37 peer coach trainees recruited to the study, 32 (86.5%) completed the training, and 26 of those (81.3%) passed the written and oral post-training examinations. Those who passed the exams had higher attendance at the training sessions than those who failed to pass (Table 1). Of the 26 who passed the exams and became peer coaches, 17 completed the study, 6 dropped out after starting to meet with patients, and 3 dropped out before meeting with patients. Only 28.1% of those completing the training had a college degree, and 25.0% did not graduate from high school (Table 2). Trainees who did not complete the study cited reasons such as being too stressed by their own diabetes (35.7%) and lacking confidence in their ability to coach (21.4%).

Survey responses from 15 of the 17 peer coaches who completed the study showed that coaches were generally satisfied with the training and mentoring they received and felt comfortable coaching the patients they worked with (Table 3).

Observations made by the study team of 13 different peer coaches meeting with patients found that the coaches did not regularly utilize the coaching principles taught during the training (Table 4). While coaches utilized most components of ask-tell-ask in most meetings, they utilized the procedures they had learned to engage patients in medication

Table 1. Training Experience of Peer Coach Trainees

Status	n	Written Exam Score (%)	Oral Exam Score (%)[a]	Training Sessions Attended (%)
Completed study	17	83.2%	86.0%	93.2%
Passed exam but dropped out after training and during study	9	88.3%	91.2%	91.8%
Completed training but did not pass exam	6	61.6%	22.1%	80.6%
Dropped out during training	5	N/A	N/A	20.0%
All trainees	37	80.6%	75.5%	80.9%

[a]Oral exam scores averaged only for English-speaking coaches; Spanish-language oral exam scores were not recorded.

Table 2. Peer Coach Demographics

Coach Characteristic	Completed Study No. (%)	Did Not Complete Study No. (%)	Total No. (%)
Sex (n = 37)			
Female	10 (58.8)	15 (75.0)	25 (67.6)
Male	7 (41.2)	5 (25.0)	12 (32.4)
Primary language (n = 37)			
English	12 (70.6)	15 (75.0)	27 (73.0)
Spanish	5 (29.4)	4 (20.0)	9 (24.3)
Other	0 (0.0)	1 (5.0)	1 (2.7)
Born in United States (n = 33)			
Yes	7 (41.2)	6 (37.5)	13 (39.4)
No	10 (58.8)	10 (62.5)	20 (60.6)
Self-reported race/ethnicity (n = 33)			
Black/African American	6 (37.5)	8 (53.3)	14 (45.2)
Latin/Hispanic	6 (37.5)	4 (26.7)	10 (32.3)
White/Caucasian, non-Hispanic	2 (12.5)	1 (6.7)	3 (9.7)
Asian/Pacific Islander	1 (6.3)	1 (6.7)	2 (6.5)
Native American	1 (6.3)	0 (0.0)	1 (3.2)
Other	1 (6.3)	2 (13.3)	3 (9.7)
Married/Long-term relationship (n = 31)			
No	11 (68.8)	8 (53.3)	19 (61.3)
Yes	5 (31.3)	7 (46.7)	12 (38.7)
Education level (n = 32)			
Did not graduate from high school	2 (12.5)	6 (37.5)	8 (25.0)
High school graduate or "GED"	5 (31.3)	1 (6.3)	6 (18.8)
Some college	4 (25.0)	5 (31.3)	9 (28.1)
College graduate	5 (31.3)	4 (25.0)	9 (28.1)
Employment status (n = 31)			
Full-time paid (>30 hours/week)	3 (18.8)	1 (6.7)	4 (12.9)
Part-time paid (<30 hours/week)	3 (18.8)	4 (26.7)	7 (22.6)
Retired	5 (31.3)	3 (20.0)	8 (25.8)
Unemployed	3 (18.8)	4 (26.7)	7 (22.6)
Other	2 (12.5)	1 (6.7)	3 (9.7)
Annual income (n = 32)			
<$5000	5 (31.3)	4 (25.0)	9 (28.1)
$5000-10,000	2 (12.5)	4 (25.0)	6 (18.8)
$10,000-$20,000	6 (37.5)	6 (37.5)	12 (37.5)
>$20,000	3 (18.8)	2 (12.5)	5 (15.6)

Table 3. Responses From 15 of 17 Coaches Who Completed the Study

Exit Survey Statement	Scale Average (Strongly Disagree = 1; Strongly Agree = 5)	Coaches who "Agree" or "Strongly Agree" (%)
I am interested in serving as a peer health coach in the future.	5.00	100.0
Those in charge of the program (study staff) supported my work as a peer coach.	4.87	100.0
The role-play activities during the training sessions helped me prepare for health coaching patients.	4.80	100.0
I felt comfortable providing information I learned in training to patients.	4.80	100.0
I was satisfied with the content of the training sessions (training from instructor, training booklet and tools given to assist with patients).	4.73	100.0
Overall, I was satisfied with my experience as a peer coach.	4.73	100.0
I felt comfortable coaching patients who receive primary care from clinics other than the clinic I attend to receive care.	4.70	100.0
The content of the monthly meetings helped me be a better health coach.	4.67	93.3
Peer coaching helps patients control their diabetes.	4.60	100.0
After the training, I felt confident in my ability to serve as a peer health coach.	4.60	93.3
The training sessions were effective in preparing me to coach patients.	4.60	86.7
I felt like most of my patients appreciated working with me as their health coach.	4.47	93.3
I was satisfied with the monthly meetings overall.	4.40	93.3
I felt the clinic supported my work as a peer coach.	4.40	86.7
The support of other coaches helped my work as a peer coach.	4.13	80.0
I approached other coaches for advice about my patients.	3.93	66.7
I felt comfortable tracking my encounters with the patients I coached.	3.87	66.7
I interacted with other coaches outside of trainings and monthly meetings.	3.67	66.7
I felt like most of my patients were willing to change behaviors to improve their diabetes during the time we worked together.	3.53	53.3

Table 4. Observations of Coaches During Meetings with Patients

Observed Skill	Health Coaches Demonstrating the Skill (%; n = 13)
Greeting	
Coach is friendly and greets client.	92.3
Coach asks client about his or her overall health, day, etc.	69.2
Agenda setting	
Coach asks client what he or she wants to talk about.	38.5
Coach asks client if it is OK to talk about things coach wants to talk about.	23.1
Ask-tell-ask	
Coach listens to client in a respectful manner (doesn't interrupt, isn't judgmental, doesn't scold).	92.3
Coach asks client questions relevant to the topic at hand.	61.5
Coach provides information ONLY when client asks or client doesn't know.	30.8
Coach provides accurate information.	53.8
Coach did not know the information and said, "I don't know, but I will find out and get back to you."	23.1
Medication reconciliation: Coach asks…	
Name of medication	53.8
Dose of medication	23.1
What medication is for	30.8
How often to take medication	46.2
If patient takes it as prescribed	30.8
If not, why not	15.4
Refills	7.7
Coach goes over medications one at time.	8.3
Action plan	
Coach asks client what he or she wants to work on.	30.8
Coach helps client troubleshoot barriers.	30.8
Coach asks when client wants to start.	30.8
Coach asks client about confidence.	23.1
Coach sets date/time to follow up.	33.3
Closing the loop	
Coach makes sure client understands what was said by closing the loop in a respectful manner.	25.0

adherence counseling and in behavior-change action plans in only about 30% of meetings and closing the loop in 25%.

In addition to observing whether the peer coaches were using the 5 evidence-based health coaching elements in their meetings with patients, the observer of

these meetings also noted that coaches utilized other techniques learned in their training. Coaches almost always greeted the patient in a friendly manner, thereby building a relationship with the patient. They usually asked patients open-ended questions about how things were going, they almost always listened to patients in a respectful and non-judgmental manner, and they volunteered information and feelings about their own diabetes. It appeared from the observations that the patients appreciated not being told what to do about their diabetes, but being engaged in a collaborative process.

The in-depth interviews with 17 of the peer coaches who completed the study provide insights into how they felt about the training (Table 5). In general, they liked the training curriculum and methods but felt that the training did not truly prepare them for the surprises they encountered in coaching patients.

DISCUSSION

Many health professionals would doubt that patients with diabetes could effectively improve glycemic control in other diabetic patients. Yet the patients trained as peer coaches, many with low educational achievement, who are described in this paper were able to significantly reduce HbA_{1c} levels in patients with diabetes compared with patients who did not receive peer health coaching.[2] A previous article analyzed some characteristics of coaches whose patients had the greatest improvement in HbA_{1c}. [16] These characteristics included the coach having a HbA_{1c} below 7%, having lower levels of depression, and—interestingly— having personal challenges with their own self-confidence regarding the self-management of their diabetes. It may be that lower coach self-confidence might encourage empathy, approachability, and development of coping strategies useful for sharing with patients.

The peer coach trainees were a selected group, nominated by their care teams in their primary care clinic. Of this group, only 17 of 37 (45.9%) were able to complete the study as peer coaches. Yet 81.3% of those who completed the training passed the written and oral exams, showing that they were able to grasp the information and principles presented in the evidence-based health coaching training. Those who completed the study stated that they felt comfortable with what they

Table 5. Peer Coaches' Evaluation of Their Training

Peer Coaches' Overall Evaluation	Quotations From Peer Coaches
Use of evidence-based health coaching	
The peer coaches did not perceive the training as teaching them the 5 principles of Evidence-Based Health Coaching and did not always utilize the coaching techniques emphasized in the training. Some felt that the training was not sufficient to prepare them for the reality of coaching other patients.	I actually learned way more about diabetes talking with those patients than I ever did in the class, and you realize how limited the class really is, once you go in and actually see what the nurse or the doctor is actually saying to the patient.
	Most of the people that they're dealing with, they have a very limited education. And just to get some very basic points about getting them to understand what an A_{1c} is, what the numbers mean, why your blood pressure should be this way, that in itself is a challenge.
Of the 5 principles of Evidence-Based Health Coaching, the trainees appeared to have a reasonable grasp of behavior-change action plans, though there was some discomfort that the behavior change was too small to make a difference.	So all of a sudden this was thrown at me, and I didn't know anything about how the action plan worked. I learned the living-with-diabetes [part] a whole lot more. So let's go for the long-term goal, with short-term goals in the meantime.... But if that long-term goal isn't understood, it isn't going to stick for people. It's sort of like, the little accomplishment is a good goal, and I get a star, and everybody's happy with me, but once you get the star, it goes away.
Training methods	
The trainees generally appreciated the interactive nature of the training and the tests at the end of the training, but questioned whether they were truly prepared to coach patients.	The role-playing was one of the better things. You know, everybody hates role-playing. But it actually worked. Because they make you go home and say, well, I know we're going to role-play tomorrow....They did this really great thing, when they would have questions—we used to play games at the end of the sessions—and people would be broken into teams. And then we would go through all kinds of questions about the material that was covered that day.
	They did have some times where they did role-playing. But that isn't anything like when you're dealing with a real patient. It doesn't give you a clue what to say and do with a real patient.
	We really have to know the information so well, or know where to get it...but on the final test, it wasn't there. And that final test should have been nasty. It should have been really hard. Because we knew it was coming. It's like, you've got to study for it, you've got to know it, because the next person you're going to talk to is a patient.
Scope of practice	
The trainees took seriously that they had a responsibility to do right by their patients and provide accurate information.	We don't know everything, so there's a limitation as a peer coach. We cannot just tell them, "Oh, don't take this medicine." We can only say what we know. And in the training that we have, they told us...if you don't know anything, just tell no instead of saying something that you don't know and it will hurt your patient.
Maintenance of knowledge	
The monthly mentoring sessions were generally felt to be important to refresh their knowledge and solve problems.	Our coach group meetings, it kind of helps to reinforce, and we learn, I think, a little more each time, because of discussions with different things, so I think that helps a lot....And the meetings help, because then, like I said, it's an exchange of different things and possible solutions to anything we might run into.

had learned in training and responded positively to the training and mentoring sessions. Not all the coaches, however, utilized the evidence-based coaching principles with every patient. Thus some of the peer coaches' success may have been related to their building trusting relationships with their patients as much as their imparting knowledge, skills, and confidence to their patients.

One study has reviewed some peer coach training examples but did not provide details on the trainees.[17] Other researchers described a peer leader training program for diabetes and found that all 9 trainees, African-American patients with diabetes, were able to pass competency exams. Seventy-five percent of the trainees had a college degree or higher.[18,19] Our study extends this latter work by recruiting 37 patients with diabetes, including 10 Hispanic patients, 9 of whom received their training in Spanish. Moreover, in our study, only 28.1% of the coach trainees had a college degree and 25.0% did not graduate from high school. Our study demonstrates that an evidenced-based curriculum can be mastered by the majority of low-income patients with limited education.

Limitations of our study include missing data, with not all coach trainees participating in the observations of their meetings with patients, the post-study survey, or the in-depth interviews. Only 13 observations of peer coach interactions with patients were conducted and these were chosen as a convenience sample, though they did involve 13 different coaches; thus analysis regarding the content of the coach-patient interactions is suggestive but not conclusive.

CONCLUSION

Of the 32 patients who completed peer coach training, nearly one-third of whom were Spanish speaking and a quarter of whom had less than a high school education, 81.3% were able to pass exams indicating that they understood the principles and information contained in an evidence-based health coaching curriculum. The 17 peer coaches who went on to coach patients over the course of the study were able to significantly improve the glycemic control of the patients they coached. These results show that diabetic patients from disadvantaged communities, including non–English-speaking patients and patients with limited education, can be trained to successfully serve as peer coaches for other patients with diabetes.

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Key words: coaching; self-management support; peer support; diabetes

Submitted August 14, 2014; submitted, revised, November 25, 2014; accepted December 16, 2014.

Funding support: Funding for this research was provided by the American Academy of Family Physicians Foundation through the Peers for Progress program with support from the Eli Lilly and Company Foundation.

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