Vivir Mejor!

Lay Leader Development Guide

Prepared For:

Mariposa Community Health Center

Prepared By:

University of Arizona Prevention Research Center

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Purpose

This manual is intended to support community health workers (CHWs), CHW supervisors, and CHW organizations seeking to extend evidence-based disease prevention programming using community-based volunteers (referred to as lay leaders). To this end, we present guidelines developed by CHWs for recruiting, training, and supporting lay leaders. Recommendations are intended to be non-content specific, equally applicable to any disease prevention focus.

Context

The burden of chronic diseases in the US-Mexico border region is significant. *Platicamos Salud*, the health promotion arm of Mariposa Community Health Center (Mariposa), based in Nogales, Arizona, has been offering clinic-based CHW-led disease prevention programming for over 25 years. Evidence-based curricula administered in community settings that are designed to teach healthy lifestyle skills are the staple of Mariposa's CHW-led disease prevention interventions. While community members at large are welcome to attend education sessions free of charge, the majority of clients are clinic patients.

In order to more broadly promote healthy behaviors, *Platicamos Salud* developed a plan to extend Mariposa CHW-led disease prevention programming beyond the clinic using volunteer lay leaders to better provide peer support to community members. Lay health leaders, trained and supported by clinic-based CHWs, enable *Platicamos Salud* to expand the scope of disease prevention education to the wider community.

Methods

The recommendations in this report are drawn from experiences of Mariposa's health education coordinator and lead disease prevention CHW (referred to as trainers). Trainers were tasked with selecting, training, and supporting three volunteer lay leaders to deliver a diabetes self-management and prevention curriculum to the wider (non-clinic) community in Nogales, Arizona. An Arizona Prevention Research Center (AzPRC) evaluator gathered information through observations of and interviews with trainers and lay leaders, who then reviewed and revised the manual to better reflect what they saw as the essential elements of their success.

Overview

We divide lay leader development guidelines into three sections: selection, training, and support. Each segment includes general recommendations for developing a lay leader model (summarized in table 1), as well as concrete examples from Mariposa's yearlong lay leader development process. We also include reflections from trainers and the program's original volunteers. Readers will find specifics of Mariposa's lay leader development process throughout this manual in the orange boxes.

Table 1: Lay Leader Training Guidelines

Selection	Training	Support
• Utilize current programming to identify and develop lay leaders	• Nest lay leader training in existing CHW-led programming	• Ensure access to support and mentoring from experienced CHWs
• Recruit passionate and dedicated volunteers	• Emphasize hands-on training	• Hold regular face-to-face check-ins
• Ensure volunteers have excellent interpersonal skills	• Encourage lay leaders to engage family and friends	• Provide opportunities for ongoing training
• Be clear about the commitment		

Part 1: Recruiting Lay Leaders

Recruiting the right volunteers is the single most important step in developing a successful lay leader program. It should be the highest priority and involve the greatest investment of time. We recommend the following steps to help find the right individuals to serve as volunteer lay leaders:

1. Utilize established CHW-led programming to identify and develop lay leaders. Current CHW programs are an excellent opportunity to scout for, become familiar with, and mentor participants interested in spreading the message of healthy lifestyles in their communities. Community members who have regularly attended programming for some time make great candidates for a lay leader program.

Mariposa Lay Leader Recruitment: Where to Start?

Dating back more than two decades, Mariposa has offered a variety of CHW-led evidence-based health promotion programs to educate patients and community member. For more than ten years, Mariposa's health education coordinator and lead disease prevention CHW (lay leader trainers) have co-facilitated a variety of Spanish-language healthy lifestyle curricula. As a result, they were able to recruit volunteer lay leaders who had been participants in their classes for years. Trainers came to know these individuals long before recruiting them to serve as lay leaders.

2. Consider passion and dedication above all. We found passion and dedication were the most important qualities to look for in potential lay leaders. As a volunteer position requiring a significant, long-term time commitment, lay leaders who are passionate about promoting health in their communities will be more likely to sustain their involvement. We identified three signs of passionate and dedicated volunteers:

- *Personal connection to a health issue.* Whether a health condition affects them personally or a family member, lay leaders are motivated by an intimate view of the effects of a disease.

- *Proven interest.* Whether by consistently attending prior healthy lifestyle programs or regularly volunteering at health promotion events, lay leaders have clearly displayed interest in promoting health in their community.

- *Go the extra mile***.** When given the opportunity to volunteer, lay leaders are happy to help. They possess a spirit of service and actively look for opportunities to contribute. Lay leaders view volunteering not as a selfless duty but a meaningful activity that makes them happy.

Mariposa Lay Leader Recruitment: Choosing the Right People

For Mariposa CHWs tasked with selecting and training lay leaders, the biggest clue as to which community members possessed the prerequisite passion and dedication were those who consistently volunteered to lend a hand at community events Mariposa CHWs needed extra help with.

"I look at it as helping people. And it's not difficult for me, or work. Rather, I enjoy it. I enjoy it because I think I'm going to help. And if I'm going to help people, I'm happy." *-Lay leader*

3. Ensure volunteers have excellent interpersonal skills.
Because lay leaders interact with vulnerable populations, it's important they are able to respectfully and compassionately connect with others. We found the most effective lay leaders are:

"Persons with diabetes are very sensitive...That's the most important thing. Sometimes you can say something wrong and it will be OK. But if you say something that hurts them, it will not be OK." *- Mariposa CHW/ Lay leader trainer*

- *Empathetic:* They naturally put themselves in the place of others; people feel respected.
- *Good Listeners:* People feel understood, not judged, when sharing personal information.
- *Skilled Communicators:* They articulately express feelings and thoughts; they are engaging.

4. Be clear about the commitment. Passion and dedication are paramount. Still, there are practical considerations to take into account when recruiting lay health leaders. The biggest consideration is time. Potential lay leaders need to have the space and flexibility in their schedules to be able to recruit participants, prepare for, and lead programming. Being able to deliver quality programming on a regular basis is vital.

Part 2: Training Lay Leaders

Selecting passionate and dedicated volunteers is the foundation of a successful lay leader program. The next step is to ensure that volunteer lay leaders possess the skills they need to lead effective health promotion programming. In addition to sufficient content knowledge in the health area of focus, volunteers should become competent group facilitators. In order to sharpen these abilities, we suggest the following steps:

1. Nest lay leader training in an existing CHW program. Nesting training in an existing CHW program is a good way to expedite lay leader development. Any already established CHW-led programs—classes or support groups, for example—are learning opportunities for lay leaders in training. Experiencing CHW-led programming as a participant helps future lay leaders by:

- Building content knowledge in a given health topic,
- Providing potential lay leaders opportunities to observe experienced CHWs and take note of positive facilitator-participant dynamics,
- Strengthening relationships between future lay leaders and experienced CHWs.

Figure 1. Nested Model of Lay Leader Training

Mariposa utilized existing clinic-based CHW-led programming to identify and develop future lay leaders.

Mariposa Lay Leader Training Part 1: Diabetes Education Class Participation

By the time Mariposa trainers selected the program's initial lay leaders, each volunteer had a solid base of diabetes prevention and self-management knowledge. Prior to recruitment, lay leaders attended a trainer-led diabetes self-management and prevention curriculum as clients. The curriculum consisted of eight weekly one-hour classes and exposed lay leaders to key concepts for controlling diabetes, including proper nutrition, exercise, and self-management techniques. Volunteers had also previously attended a variety of other CHW-facilitated programs as participants, including *Pasos Adelante*, a chronic disease prevention curriculum. That lay leaders possessed a firm grasp of diabetes knowledge allowed Mariposa trainers to focus on developing facilitation and teaching skills during training.

2. Emphasize hands-on training. Developing the skills needed to facilitate a support group or lead a class is just as important as acquiring knowledge of a health issue. During training, lay leader should gain experience leading and facilitating actual programming, under the guidance of experienced CHWs. Such hands-on preparation builds confidence by helping lay leaders:

- Gain practice speaking and presenting to groups;
- Become familiar with the interactive, give-and-take dynamics of group learning;
- Strengthen group facilitation skills, including pacing (e.g. when and how to check for understanding, move on to present new material, and reinforce information) and participant engagement (e.g. fostering a balance of talking and listening between members);
- Learn from mistakes in a supportive environment.

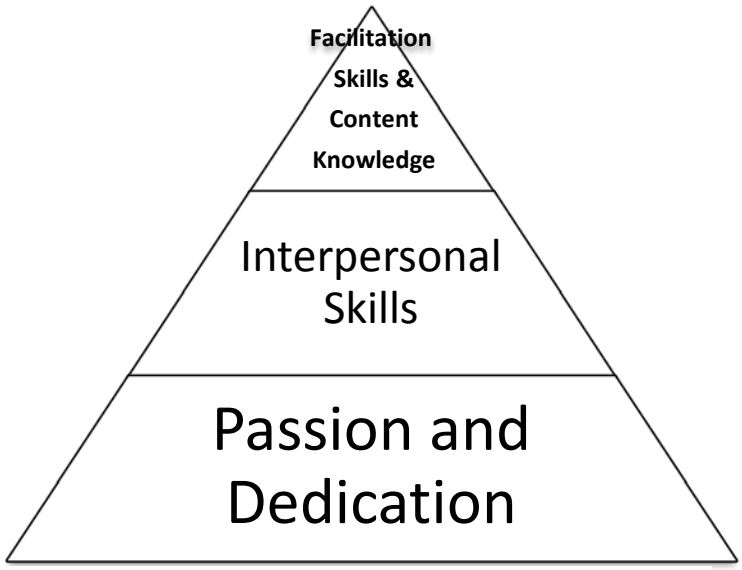

Figure 2. Qualities of an Effective Lay Leader

Mariposa Lay Leader Training Part 2: Training Workshops

Having attended Mariposa's CHW-led diabetes self-management and prevention classes as clients, lay leaders next practiced facilitating the curriculum.[1] To this end, Mariposa's lead disease prevention CHW and health education coordinator held three 4-hour workshops in which lay leaders simulated delivering the eight-lesson curriculum to trainers.
These workshops consisted of two elements: at-home preparation and workshop activities.

"…For as many papers as you give me to study, if I don't stand up in front of a crowd, I'll never do it."
-Lay leader

At-home preparation

Trainers assigned each lay leader a portion of the curriculum to present for the following workshop. Lay leaders studied these materials[2] at home and came to the following workshop ready to present.

Workshop activities

During workshops, volunteers took turns presenting. When guidance was necessary — a point of clarification or advice regarding the flow of the class, for example— trainers paused the lesson and provided presenters with feedback. Trainers also played the role of class participants, enacting challenging 'what-if' scenarios lay leaders would likely find themselves in while leading classes. In particular, trainers designed role-plays and discussions to build lay leaders' skillsets in three areas: presenting information in engaging ways, managing group dynamics, and answering questions.

Presenting information in engaging ways

Mariposa trainers worked with lay leaders to make each session highly interactive. Trainers emphasized using concrete, real-life examples drawn from the experiences of facilitators and participants to create interesting discussions. Trainers also stressed using visual aids, such as food props to illustrate serving sizes, canned goods to practice reading labels, and handouts of all material presented.

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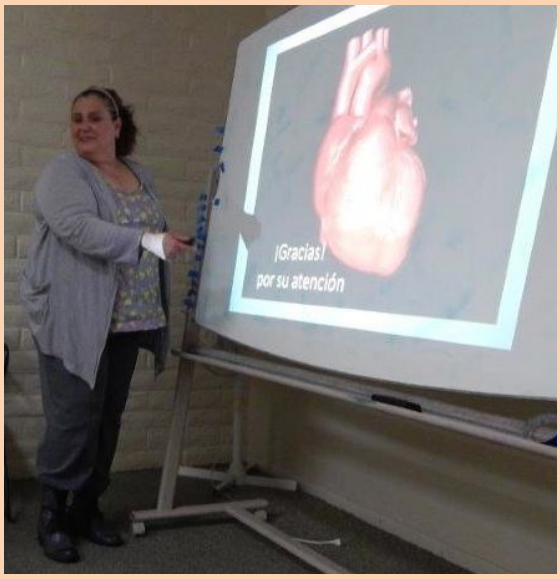
[1] Mariposa CHWs and lay leaders used an eight-lesson diabetes curriculum adapted from *Pasos Adelante*, an evidence-based chronic disease prevention and control curriculum. Mariposa staff modified *Pasos* in two major ways: First, they tailored the curriculum specifically to address diabetes prevention and control; second, they expanded the focus on self-management skills by including a nutrition activity from the chronic disease self-management curriculum *Tomando Control de Su Salud*.

[2] Lay leaders studied material from two sources: 1) Gateway Community Health Center's *Control Propio de La Diabetes* Curriculum and 2) PowerPoint slides adapted from *Pasos Adelante* to specifically address diabetes.

Managing group dynamics

Engaging, interactive content fosters energetic participation and discussion. At times, however, lay leaders would need to refocus group members. Trainers emphasized doing so respectfully, by increasing proximity to talkative participants or employing a refocusing phrase to get the group back on the same page. Trainers also challenged lay leaders by taking on the role of participants who monopolized group discussions. Lay leaders practiced listening respectfully before inviting the participants to continue the conversation after class.

"It's not a class. It's a conversation."
-Lay leader



Answering questions

Trainers frequently interjected with questions for lay leaders to field on the fly. Lay leaders practiced politely informing participants with unrelated questions they would be happy to speak with them after class. When lay leaders did not know an answer, trainers instructed them to tell participants so—and to investigate when appropriate. Most importantly, when questions involved medications or required medical expertise, trainers made sure lay leaders did not offer advice, except to inform participants that they should consult their doctor.

Mariposa Lay Leader Training Part 3: Supervised Pilot Classes

For the final component of training, three lay leaders co-facilitated eight weekly diabetes self-management and prevention classes for nine community members, under trainer supervision. Following each class, trainers and lay leaders discussed how the class had gone and provided feedback.

"It was [the pilot classes] where I got the confidence to teach my classes now."
-Lay leader

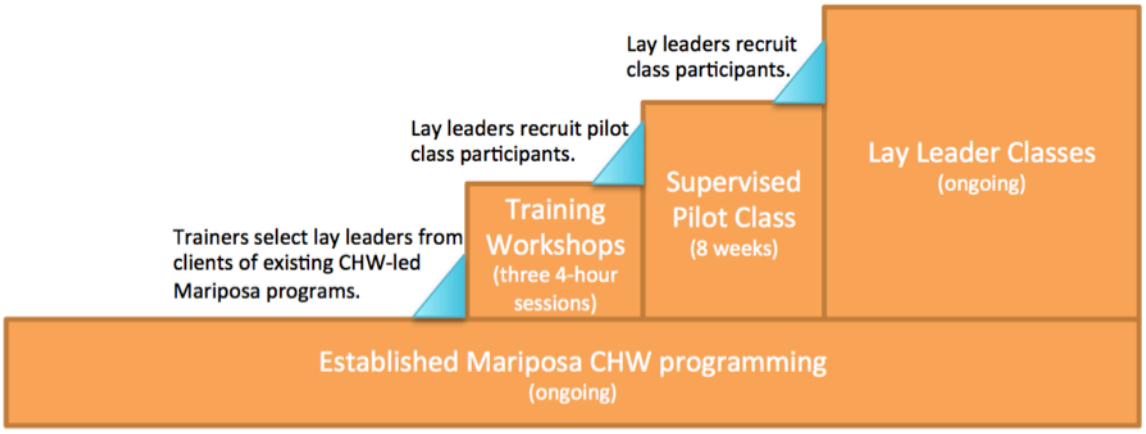
The experience also gave lay leaders practice in recruiting program participants. Before beginning these pilot classes, lay leaders spent several hours over three days knocking on doors in the community. Accompanied by Mariposa trainers, lay leaders informed residents about diabetes classes and signed up participants.

3. Start with family and friends. Recruiting family and friends as participants is a good way for lay leaders to build confidence during their first independently led classes following training. Lay leaders gain additional practice presenting material and facilitating group discussions in a low-pressure situation.

Mariposa Lay Leader Classes: Starting with Family and Friends

Mariposa lay leaders discovered that demand for diabetes education among friends and family was high. While some had diabetes, all had diabetic relatives and friends. Remembering how she recruited participants for her first series of diabetes talks, one lay leader reported: "I talked with my sister-in-law, and she talked with her friends, and I talked with my family—she did, too. And that's how we did it." In total, seventeen friends and family members attended her first round of eight weekly diabetes prevention and self-management talks. She explains, "They were friends. And family. So they got really involved in the discussion and it was more relaxed. It was more relaxed because everybody was laughing They were all very happy." Another lay leader facilitated her first round of eight weekly diabetes talks with a group of friends. Twelve family members attended her second round of classes.

Figure 3. Mariposa Lay Leader Training Process



Mariposa CHW-led programming was the foundation of the health center's lay leader development process. Mariposa CHWs used these programs to identify especially dedicated and passionate individuals to train as lay leaders. Lay leaders, for their part, stayed connected to one another and their CHW mentors/trainers, and received ongoing training by attending weekly Mariposa CHW-led diabetes education classes.

Part 3: Sustaining a Lay Leader Model

Having a framework in place to support lay leaders is critical. The more closely lay leaders stay connected to experienced CHWs and one another, the better their chances of sustained involvement. In order to create a system of support for volunteer lay leaders, we suggest the following steps:

1. Ensure access to support and mentoring from experienced CHWs.
Mentors provide emotional support and content expertise to lay leaders. We found two qualities were especially important in CHW mentors:

- *They're trusted.* Lay leaders know their mentor is a skilled CHW who cares about their well being. They know they can come to their mentor with any issue and receive a helpful response based on experience.

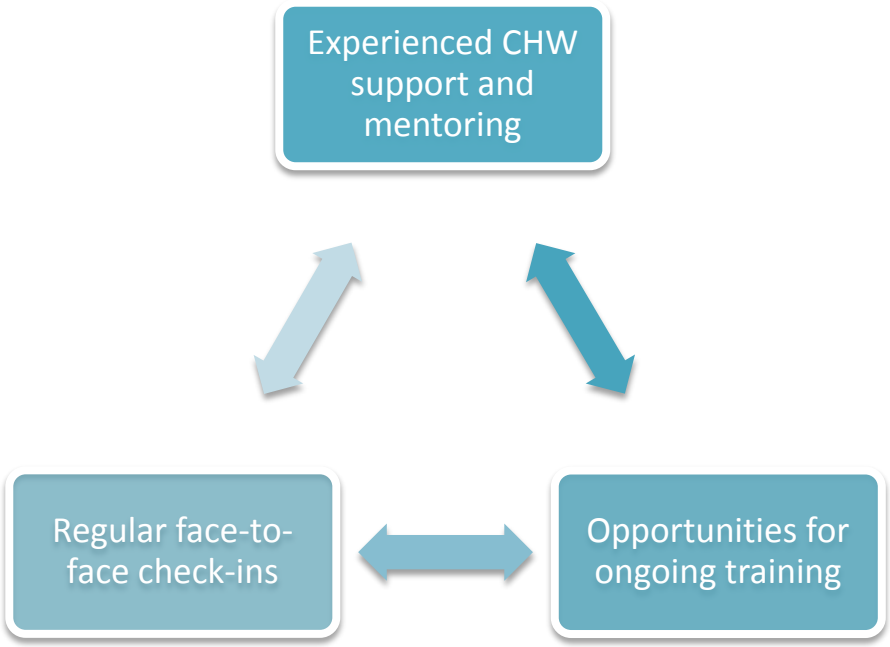
- *They're accessible*. Lay leaders feel comfortable reaching out to their mentor for help. They know they can easily get in touch with their mentor to ask a question, seek advice, or simply feel supported.

"It's a lot of support…I know someone's got my back, that [my CHW mentor] is there. Anything that's got me stuck, she gave us her telephone number—her home number. She tells me, 'At whatever hour you need me…if you think of something, call me.'"
-Lay leader

2. Hold regular face-to-face check-ins. This is a regularly scheduled time and place for lay leaders and their mentors to get together. In person check-ins keep lay leaders connected with one another and their mentors after the official training period is over. It's an opportunity to celebrate successes and share setbacks. Most importantly, regular in-person gatherings strengthen the ties of peer and professional support essential to sustaining lay leader involvement.

3. Provide opportunities for ongoing training. Ongoing training opportunities hone lay leaders' skills while keeping them connected to peers and experienced CHWs.
They are more likely to offer sustained and effective health programming in their communities.

Figure 4. Elements of a lay leader support framework



Mariposa Lay Leader Support: Having a Home Base

Mariposa's lay leader trainers offer diabetes self-management and prevention classes each Tuesday morning from 9:30-10:30am. A free yoga class follows. This Tuesday morning routine serves as the home base for lay leaders: It's an opportunity to visit with one another, check-in with their CHW trainers/mentors, and receive ongoing diabetes education. It rolls the three elements of the lay leader support framework into one weekly event.

Referring to this Tuesday morning get-together, one trainer said: "We told them, 'If you need anything...if you want us to be [at your classes] anything you need you just call us, and we'll be there. But we keep seeing them [on Tuesday mornings] because they keep going to the [diabetes] classes. They keep going to the classes because they say they keep learning And they keep asking us little things."

Summary

When developing a lay leader program, planners should address three questions: how to recruit skilled and dedicated volunteers, how to ensure quality programming, and how to support volunteers once in the field. In terms of recruiting qualified lay leaders, implementers should recognize clients of existing programs are ideal candidates to be future teachers. To ensure quality programming, we recommend a hands-on training process, in which volunteers gain teaching and facilitation skills. Finally, regarding lay leaders support, implementers should provide opportunities for experienced CHWs to mentor volunteers, set up regular in-person check-ins, and offer ongoing training.

Appendix A. Mariposa Lay Leader Training Activities

Table A highlights the activities Mariposa trainers utilized throughout the three-stage lay leader development process.

Table A. Mariposa Lay Leader Training Activities

Training Activities	Purpose	Example
Trainer modeling[1,2]	Observe experienced instructors facilitate group-learning processes.	Lay leaders attended trainer-facilitated diabetes education classes as clients.
At-home preparation and planning[2,3]	Master core diabetes prevention and self-knowledge concepts.	Lay leaders reviewed the material they were to present for the following workshop at home.
Role-plays[2]	Practice managing challenging situations in a structured environment. Trainer feedback followed role-plays.	Trainers played the role of distracted participants. Lay leaders re-engaged them by directing questions their way (e.g. "What do you think about that?") and increasing proximity to them.
Situational scenarios[2]	Practice thinking through and discussing delicate situations with trainers.	Trainers asked lay leaders how they should respond to a participant's question about his medication dosage.
Simulated presentations[2]	Present core diabetes prevention and self-management concepts in an engaging way.	Lay leaders showed mock participants (trainers) how to read food labels using canned food from the local supermarket.
Simulated group activities[2]	Gain experience facilitating hands-on learning experience to help participants solidify knowledge.	Lay leaders guided mock participants (trainers) in designing breakfast, lunch, and dinner menus that satisfied nutrition standards for individuals with diabetes.
Simulated group discussions[2]	Practice facilitating group discussions by eliciting participants' opinions, experiences, reactions, and questions relating to core diabetes prevention and self-management information.	Lay leaders asked mock participants (trainers) what obstacles they encountered in their daily lives that made getting enough physical activity challenging.
Reflection and feedback[2, 3]	Encourage reflection in order to refine communication, teaching, and facilitation skills; hone skills with the aid of trainer feedback.	Following a simulated presentation about diabetes complications, trainers asked the presenter how she thought it had gone and provided feedback.
Pilot class recruitment[3]	Talk to community members about diabetes; invite community members to participate in a diabetes prevention and self-management curriculum.	Together with trainers, lay leaders knocked on doors, talked to people about diabetes, and invited community members to attend an eight-week diabetes education curriculum.
Pilot classes[3]	Gain additional practice presenting core diabetes knowledge and facilitating group learning in a real world setting.	Under trainer supervision, lay leaders co-facilitated a series of eight weekly, one-hour diabetes education classes for community members.

[1] Training part 1: diabetes education program participation as a client
[2] Training part 2: teaching and facilitation workshops
[3] Training part 3: pilot classes

Appendix B. Mariposa Lay Leader Training CHW Competencies

The National Community Health Advisory Study[6] has identified eight core competency areas for CHWs. These core competency areas are: knowledge base, communication, teaching, organization, interpersonal skills, service-coordination, capacity building, and advocacy. Core competency areas are further broken down into skills. For example, communication includes three skills: listening, using language confidently and appropriately, and written communication. Tables B1-B3 describe how each of the three stages of Mariposa's lay leader training addressed these CHW competencies.

Table B1. Mariposa Lay Leader Training Competencies, Part 1

Lay Leader Training Component	CHW Core Competencies Addressed	Competency Skills Built	Training Activities	Example
Part 1: Program participation as a client Future lay leaders participated in a variety of CHW-led chronic disease prevention curricula (including an eight-week diabetes-education curriculum) as clients. Time: 3+ years	Knowledge Base	Knowledge about specific health issues	Program attendance/ Trainer modeling	Future lay leaders attended diabetes education classes about nutrition, complications from diabetes, and the benefits of exercise.
	Communication	Use language confidently and appropriately		By attending Mariposa classes, lay leaders were able to observe experienced CHW present information, lead discussions, and communicate with clients over an extended period of time.

[6] Rosenthal, E. L. "A summary of the national community health advisor study." *Tucson, Arizona: University of Arizona* (1998).

Table B2. Mariposa Lay Leader Training Competencies, Part 2

Lay Leader Training Component	CHW Core Competencies Addressed	Competency Skills Built	Training Activities	Example
Part 2: Teaching and facilitation workshops Lay leaders simulated presenting core diabetes prevention and self-management information and facilitating group discussions Time: Three, 4-hour sessions	Communication	Listening	• Role-plays/situational scenarios • Reflection and feedback	Lay leaders practiced respectfully listening to, not interrupting, and acknowledging mock participants (trainers) who monopolized simulated class discussions or made off-topic commentaries during role-plays.
		Use language confidently and appropriately	• Simulated presentations and group discussion • Reflection and feedback • Pilot classes	Lay leaders simulated presenting core diabetes information to trainers. Trainers made sure volunteers used neutral versus judgmental language (e.g. saying overweight instead of fat).
	Knowledge Base	Knowledge about specific health issues	• At-home preparation and planning	Lay leaders studied core diabetes prevention and self-management content at home. Training materials included Gateway Community Health Center's *Propio Control de la Diabetes* curriculum and printouts of trainer-created PowerPoint slides.
	Teaching	Ability to master information/ ability to plan classes		
		Ability to lead classes	• Simulated presentations and group discussions • Reflection and feedback • Pilot classes	Lay leaders and trainers discussed ways to make presentations and group discussions more effective.
	Organizational Skills	Abilities to set goals and plan	• At home-preparation and planning	Lay leader set aside time before each workshop to prepare and review material they were to present for the upcoming week's simulated diabetes education class.

Table B3. Mariposa Lay Leader Training Competencies, Part 3

Lay Leader Training Component	CHW Core Competencies Addressed	Competency Skills Built	Training Activities	Example
Part 3: Pilot classes Under trainer supervision, lay leaders co-facilitated a diabetes prevention and self-management curriculum for community members Time: Eight, one-hour classes.	Interpersonal	Relationship building	• Participant recruitment • Pilot classes	Lay leaders knocked on doors to meet, inform, and invite community members to attend diabetes prevention and self-management classes.
	Knowledge Base	Knowledge about specific health issues	• At-home preparation and planning	Lay leaders reviewed core diabetes content they were to present for the following class at home.
	Teaching	Ability to master information/ ability to plan classes		
		Ability to lead classes	• Reflection and feedback • Pilot classes	Lay leaders facilitated group discussions about how to apply core diabetes prevention and self-management principles to participants' lives.
	Organizational Skills	Abilities to set goals and plan	• At home-preparation and planning	One lay leader set aside time each Sunday to prepare and review material she was to present for the upcoming week's diabetes education class.

Appendix C. Review of Diabetes Peer Support Literature

The demand for diabetes prevention and self-management education is widespread. Such programs, however, are commonly confined to clinical settings, aimed at patients with elevated hemoglobin A1C scores, and use medical professionals to refer participants.[1]

Using non-health professional volunteer peer supporters to deliver in-person, group-based diabetes self-management and education (DSME) curricula is one approach to expand support for diabetes. According to Dennis,[2] peer supporters (alternatively referred to as peer educators, peer leaders, lay leaders, lay health advocates, lay health advisors, *promotores*, and community health workers) are members of the same social networks and share the same cultural and socioeconomic characteristics as the people they support. Additionally, they possess experiential knowledge of the behavior or stressor about which they educate.[2] For example, a peer supporter facilitating a diabetes education curriculum might be a diabetic or care for a diabetic family member.

Recruiting Volunteer Peer Supporters

To date, models using non-health professional volunteer peer supporters to facilitate group diabetes education curricula have recruited instructors and participants from both clinical and community settings. Of the twelve studies Tang et al.[3] included in a systematic review of volunteer peer supporter-led DSME interventions, seven were in-person programs delivered to a group. Of the interventions delivered in-person, Tang el al.[3] found that peer supporters were recruited from ads in diabetes-specific magazines,[4] diabetes care centers,[4] primary care practices,[5] community and clinic-based healthy lifestyle programs,[6, 7, 8] community presentations and advertisements,[1, 6] and by word-of-mouth.[6] For *Project Dulce,*[9] health care professionals identified individuals with diabetes thought to be 'natural leaders' from community health center patient populations to deliver an in-person, group-based DMSE curriculum in San Diego. In another study examining the development of a volunteer peer support model,[10] doctors and nurses in primary care practices identified patients with diabetes they believed would effectively facilitate a nine-session group-based diabetes DMSE curriculum.

Tang et al.[3] identified a variety of criteria programs used to identify volunteer peer supporters, including having the time necessary to complete training and deliver the intervention,[5, 6] having good interpersonal and communication skills,[6] and being able to motivate others.[6] While peer supporters with diabetes led a number of in-person DMSE groups,[5, 6] Comellas[6] involved facilitators who lived with or cared for individuals with diabetes.

Training

According to Tang et al.,[3] training for peer supporters leading face-to-face, group DSME programs varied in duration, from a two and a half day workshop[8] to eighteen 90-minute sessions plus a practicum component in which peer supporters led 33 simulated classes under trainer supervision.[4] Trainers included specialist health professionals/providers,[4] certified diabetes educators,[6] and study investigators.[7] Components of peer supporter trainings included diabetes education content knowledge,[4, 5, 6, 11] teaching principles[1, 7] group dynamics and

facilitation,[1, 6, 7, 8, 9] motivational techniques,[4, 6] and interpersonal skills such as active listening.[4] *Project Dulce*[9] training occurred over four months and involved attending an 8-week DMSE curriculum as participants, then facilitating the series with an experienced educator. Volunteers in Paul et al.'s peer supporter-led intervention[9] attended two training sessions. A general practitioner and nurse led the sessions, which focused on diabetes knowledge.

Results

Tang et al. [3] assessed the results of peer supporter-led in-person DSME interventions in terms of clinical and behavioral outcomes. Lorig[1] found that a volunteer peer-led support group improved glycemic control when compared to a usual care group. Tutor-Locke[8] reported improvements in BMI for participants in volunteer peer-led interventions when compared to groups facilitated by health care professionals.[3] Investigators found *Project Dulce's* peer supporter-led DMSE program lowered participants' HbA1c levels, blood pressure, and cholesterol.[9] Finally, Tang et al. [3] found in-person, volunteer peer supporter-led interventions improved health behaviors, including increased physical activity[1, 6, 11] and fruit and vegetable consumption.[6]

References

[1] Lorig K, Ritter PL, Villa FJ, Armas J. Community-based peer-led diabetes self-management: A randomized trial. *Diabetes Educ*. 2009;35(4):641-651.

[2] Dennis C. Peer support within a health care context: A concept analysis. *Int J Nurs Stud*. 2003;40(3):321-332.

[3] Tang TS, Ayala GX, Cherrington A, Rana G. A review of volunteer-based peer support interventions in diabetes. *Diabetes Spectrum*. 2011;24(2):85-98.

[4] Baksi A, Al-Mrayat M, Hogan D, Whittingstall E, Wilson P, Wex J. Peer advisers compared with specialist health professionals in delivering a training programme on self-management to people with diabetes: A randomized controlled trial. *Diabetic Med*. 2008;25(9):1076-1082.

[5] Cade JE, Kirk SFL, Nelson P, Hollins L, Deakin T, Greenwood DC et al. Education and psychological aspects: can peer educators influence healthy eating in people with diabetes? Results of a randomized controlled trial. *Diabet Med.* 2009;(26):1048–1054.

[6] Comellas M, Walker EA, Movsas S, Merkin S, Zonszein J, Strelnick H. Training community health promoters to implement diabetes self-management support programs for urban minority adults. *Diabetes Educ*. 2010;36(1):141-151.

[7] Lorig K, Ritter PL, Villa F, Piette JD. Spanish diabetes self-management with and without automated telephone reinforcement: Two randomized trials. *Diabetes Care*. 2008;31(3):408-414.

[8] Tudor-Locke C, Lauzon N, Myers AM, et al. Effectiveness of the first step program delivered by professionals versus peers. *J Phys Act Health*. 2009;6(4):456-462.

[9] Gilmer TP, Philis-Tsimikas A, Walker C. Outcomes of project dulce: A culturally specific diabetes management program. *Ann Pharmacother*. 2005;39(5):817-822.

[10] Paul G, Smith SM, Whitford D, O'Kelly F, O'Dowd T. Development of a complex intervention to test the effectiveness of peer support in type 2 diabetes. *BMC Health Serv Res*. 2007;7:136.

[11] Klug C, Toobert DJ, Fogerty M. Healthy changes for living with diabetes: An evidence-based community diabetes self-management program. *Diabetes Educ*. 2008;34(6):1053-1061.

Appendix D. Mariposa Lay Leader Round 1 and 2 Results

Two Mariposa-trained lay leaders began independently facilitating Spanish-language diabetes education classes to friends, family members, and acquaintances in February 2014. The curriculum is an adapted version of the research-tested chronic disease prevention curriculum, *Pasos Adelante*, which Mariposa's health education coordinator and lead chronic disease prevention *promotora* tailored specifically to address diabetes prevention and control. One lay leader facilitated the series of eight 1-hour classes in her home while another did so at a friend's house.

Evaluation Methods

Pre- and post-tests measure changes in participants' health knowledge and behaviors resulting from diabetes education classes. Specifically, the pre- and post-tests collect information related to knowledge about diabetes and diabetes management, and health behaviors and self-efficacy for managing the disease. Lay leaders administer pre- and post-tests to clients and assist with filling out forms to ensure that all clients understand the questions and fully complete the questionnaires. All items missing a response at pre- or post-test are dropped. We consider participants who attend five or more diabetes education classes to have completed the series. Thus, lay leaders administer the post-test to participants only if they attend five or more classes. We present data from these 42 individuals below.

Demographic Information

From February through June 2014 (the end of *Vivir Mejor!* Year 2), a total of 42 individuals completed at least five diabetes education classes. Eighty-one percent of clients were female (n=42). The average age of participants was 37, with a range of 11 to 78 years of age. Twenty-six percent of clients (n=38) reported being patients at Mariposa. Six of 42 respondents (14%) reported having diabetes.

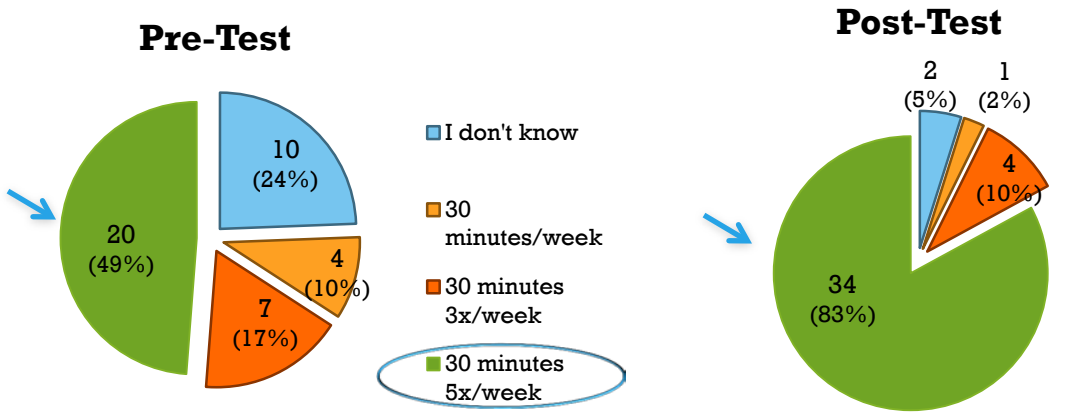
Table D1. Lay Leader Diabetes Education Client Demographics, February-June 2014

Attended 5 or more classes	**42**
Average age	37
Female	34/42 (81%)
Patient at Mariposa	10/38 (26%)
Doctor or nurse diagnosed diabetes	6/42 (14%)
Family member with diabetes	19/41 (46%)
Referred to diabetes education by doctor	0/37 (0%)
Referred to diabetes education by family member	12/37 (32%)
Referred to diabetes education by "other" (%)	25/37 (68%)
Attended with at least 1 family member (%)	26/42 (62%)

Diabetes Management Knowledge

The Centers for Disease Control and Prevention (CDC) recommends that adults complete 150 minutes of moderate physical activity per week, or 30 minutes of activity five times per week. Among clients who answered at pre- and post-test (n=41), there was a statistically significant increase ($p<0.001$) in the number of respondents who chose the correct answer, "30 min. 5x/week," from 20 (49%) to 34 (83%). Similarly, there was a significant increase ($p<0.001$) in the number of clients who answered "yes" to the question: "Do you know what an A1c is?" The number of participants who responded affirmatively increased from six (15%) at pre-test to 28 (70%) at post-test.

Figure D1. "How much physical activity should you get each week?" (n= 41)



Food Consumption

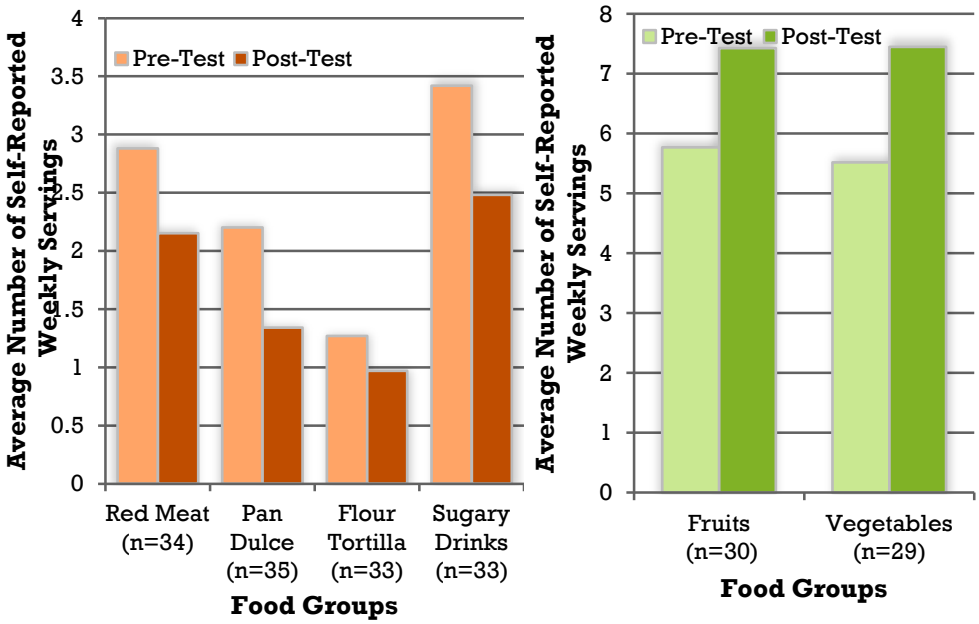
Pre- and post-tests measure food consumption as self-reported servings per week of various healthy and unhealthy food groups. Unhealthy food groups include red meat*, pan dulce*, flour tortillas, and sugary drinks; healthy food groups include fruits and vegetables. Among all respondents through Round 2 of lay leader classes, there were statistically significant decreases in the average number of self-reported weekly servings of all but one unhealthy food group and a statistically significant increase in the number of weekly servings of fruits and vegetables (Table D2). Of note, participants reduced the number of sugary drinks they consumed each week from an average of 3.42 to 2.48, and 11 of 33 respondents (33%) decreased the number of sugary drinks they consumed each week. For fruit consumption, 12 of 30 (40%) respondents reported increasing their weekly servings while 13 of 29 (45%) respondents reported increasing their vegetable intake.

Table D2. Changes in Self-Reported Food Consumption

Food Group	Average number of self-reported weekly servings		
	Pre-Test	**Post-Test**	**Change**
Red Meat (n=34)	2.88	2.15	-0.73**
Pan Dulce (n=35)	2.20	1.34	-0.86**
Flour Tortilla (n=33)	1.27	0.97	-0.30
Sugary Drinks (n=33)	3.42	2.48	-0.94**
Fruits (n=30)	5.77	7.43	1.66*
Vegetables (n=29)	5.52	7.45	1.93**

*p<0.05
**p<0.01 (highly significant)

Figure D2. Average Number of Self-Reported Weekly Servings of Healthy and Unhealthy Foods



Physical Activity

The pre-and post-test measures physical activity with two items: “Do you take walks?” and “If so, how many times per week do you walk for 30 minutes or more?” Of those clients who responded at pre-and post-test to item one (n=38), there was a statistically significant increase ($p<0.01$) in the number of respondents who reported taking walks, from 27 (71%) to 35 (92%). Of those clients who reported weekly number of walks (30 minutes or more in duration) at pre- and post-test (n=29), the number of participants taking at least one such walk increased from 19 (66%) to 26 (90%). A Wilcoxon Signed-Rank test indicated this was a statistically significant change ($p<0.02$). Figure (?) shows the changes in the number of participants taking walks of 30 minutes or more from pre- to post-test.

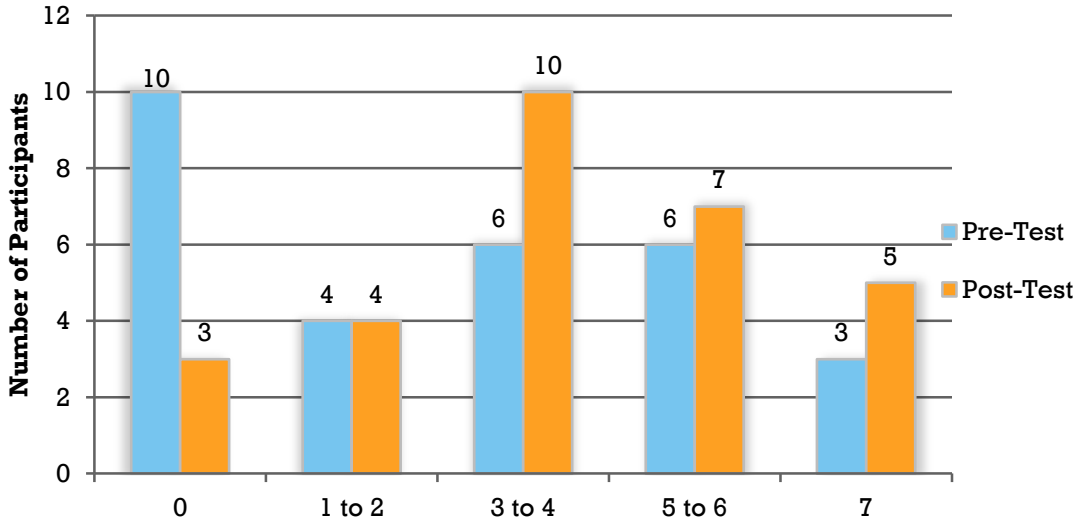


Figure D3. Self-Reported Number of Walks (30 minutes or more) Per Week (n=29)

Changes in Diabetes Management

The final post-test question is open response and asks: "How has the program, *Vivir Mejor!*, changed the way you manage your diabetes?" While only six of 42 clients had diabetes, comments indicated that participants enjoyed the classes and felt more informed about preventing diabetes. Comments included:

- "I don't have diabetes but this program has taught me how to prevent and all the organs that are affected by diabetes. I've changed the way I consume food and increased my exercise."
- "To start to walk, schedule my meals."
- "I'm prediabetic and I'm taking more care of myself. I learned to take care of myself better."

"…I learned to live better and eat healthy and act preventatively for my own health and for my family."

-Lay leader diabetes education client