

I. COVER PAGE

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II. Project Abstract

Corazon Contento: A Model for Cardiac Risk Reduction used bilingual, bicultural community health workers (Promotoras) to identify Hispanics in the community who had one or more risk factors for heart disease. The project presented educational programs at The Way of the Heart (WHPI) which helped these individuals learn the steps needed to reduce the risk of heart disease and stroke (i.e., diet, exercise, smoking cessation, and the need for monitoring physical indicators of poor cardiac health such as blood pressure, lipid/cholesterol screening and screening for other diseases that may cause cardiac problems (diabetes, cancer treatment, etc.). If needed, project staff worked with the individual and the family to access the limited health care system in the county, or they were offered peer counseling, or access to a support group.

The project focused on three of the health status disparities identified in Healthy People 2010. They were (1) Heart Disease and Stroke, (2) Nutrition and Overweight, and (3) Physical Activity and Fitness. The primary objective of the program was to enable Hispanics of all ages in our service area to learn how to avoid heart disease by a conscious, active effort that includes a healthy diet, physical activity, and fitness as a daily way of life. The program plan included the use of current community resources such as public service announcements and programs on local Hispanic radio stations, articles and public service announcements in local newspapers. Local markets were asked to place free heart-healthy recipe cards in the check out lines, and staff performed cooking demonstrations on a regular basis in the largest supermarkets and the food bank.

In year one, *Corazon Contento* staff organized a celebration called Happy Heart Day, or *El Dia Del Corazon Contento*, which included competitive and fun runs and walks, demonstrations of heart healthy cooking and recipes, demonstrations of cardio pulmonary resuscitation, aerobic competitions for all ages, health screenings such as blood pressure and cholesterol checks, and tables that contained age-appropriate brochures and knowledgeable staff to answer questions. In year two, staff educated restaurant owners in heart healthy recipes and then brought them together for a gala event where each restaurant showed off their new menu items to the public and local media.

Several “platicas” or neighborhood “parties” focused on cardiac health, nutrition, and ways to fit physical activity and fitness into busy lives. Longer presentations on different aspects of cardiac health were given by guest speakers once a month. These presentations occurred at the Way of the Heart: The Promotora Institute and were open to the public.

Evaluation included the use of pre and post intervention surveys based on the *Salud para su Corazon* Initiative materials of the Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH). These surveys helped chart the changes in knowledge, attitudes, and practices of each individual client. Further, with additional funding from Joseph’s Hospital in Phoenix, Arizona the project was able to study 87 individuals on a monthly basis for six months to chart changes in 4 indicators of health, i.e., blood pressure, cholesterol, weight, and waist circumference. An extra 58 clients

began the study, but did not complete the six month follow-up. Their results are covered separately in this report.

The study consisted of three groups. Group number 1 was comprised of 29 clients who received a 20-hour course based on the curriculum, *Your Heart, Your Life (Su Corazon, Su Vida)* provided by NHLBI. Group number 2, comprised of another 29 clients received the same 20-hour class based on the NHLBI curriculum given by the same Promotora instructor as in group number 1, but additionally received exercise 3 times a week on site at The Way of the Heart. Group number 3 comprised of another 29 individuals received the same 20-hour course given by the same Promotora, added exercise 3 times a week, and also added nutrition counseling and skill building including trips to the supermarket, and cooking demonstrations. All 3 groups were given pre and post intervention tests, measured for 4 health indicators, and followed for 6 months after the end of the 20-hour course with measurements taken once a month.

Results show that of the three study groups, group number 3 had the best results both in the pre and post intervention surveys, and changes in measurements of blood pressure, cholesterol, weight and waist circumference.

In the pre and post surveys group number 1 had an average of 9 percent overall improvement in their knowledge, attitudes, and practices. Group number 2 had an average of 14 percent, and Group 3 showed a 17 percent improvement overall. The indicator measurements also followed the same pattern. For cholesterol, for instance, group number 1 lost 3 points on average. Group number 2 lost 13 points, and group number 3 lost 17 points on average. (See Appendices B, C & D)

At the end of year one, and into year two volunteers recruited in the study learned to teach others the material covered in the NHLBI course they had completed. Of the first 25 volunteers each taught an average of 2 or more individuals to give the course in the community. As indicated in the work plan those 55 individuals then spread out to the four corners of the community to teach housewives and families about cardiovascular health.

The results of the pre and post intervention surveys for the volunteers were significantly lower than the results of the Promotora's intervention. Compared to the Promotoras volunteers saw a 21 point negative difference overall between the two trainer groups. Overall there was a negative 8 percent post test response for the volunteers, compared to the positive 13 percent post test results attributed to the Promotoras.

These results seem to suggest two things. First, that an unpaid volunteer is not likely to commit as much to transferring information to his/her neighbors as a paid community outreach worker/Promotora. Second, results from the study indicate that the more the client spends integrating the lessons learned into the flow of their daily lives the better the results. Logically, those clients who were beginning to act out the lessons learned in the 20- hour course through exercise and nutrition counseling would answer the post survey

more positively than those to whom the knowledge was merely intellectual, and not yet practiced.

The compliance rate of the study group to the six month follow-up also bore interesting results. The biggest drop off in participation was in group number 1 at 35 percent who only came in once a month for their measurements, but had no other contact with the Promotora. Group number 2 had a better response at 80 percent compliance, but group number 3 had a 95 percent compliance rate with follow-up. One could postulate that commitment to behavior change increases with the commitment to the coach, in this case a Promotora. This project further suggests that time with the coach/Promotora has a direct relationship with the client's positive changes in knowledge, attitudes and practices.

PART II A: Project Narrative

Nogales, Arizona is the seat of Santa Cruz County and home to 66% of its residents (20,878). According to the 2000 Census, Nogales is 93.6% Hispanic with a per capita income of \$10,178 as compared to the Arizona per capita income of \$20,275¹. It is estimated that the sister city of Nogales, Sonora, Mexico has ten times the population of the Arizona side, but it lacks the infrastructure to support the large numbers of migrants who come from the interior of Mexico in search of better lives. As a "border town", Nogales, Arizona experiences a daily influx of Hispanic migrants, whether day-trippers, immigrants, or undocumented aliens (est.40,000/day). This migration not only challenges the minimal extant healthcare resources of this largely rural county, but it challenges local government to keep pace with the increasing needs for housing, water and sewage systems, infectious disease control, education, environmental controls, and law enforcement. Collectively, the sister cities are known as Ambos (Both) Nogales reflecting the interdependent nature of the two cities, the sharing of their culture and language, and the spillover of issues of concern, particularly those related to health care.

Poor economic conditions, coupled with serious, documented and continuing environmental degradation in many areas are associated with the high incidence of certain types of cancer and an above average incidence of lupus in Nogales, Arizona – all recorded by the Arizona Department of Health Services in collaboration with the Arizona Cancer Center of the University of Arizona. Nogales, Arizona and Santa Cruz County are "medically underserved" and "health personnel shortage areas" based on Federal government classification. The unemployment rate in Santa Cruz County is consistently high (18.4%) compared with the State of Arizona (3.4 % according to 1999 figures). These figures can best be understood when placed in the context of a primarily rural county where long distances separate towns and villages from each other and from the county seat of Nogales where most opportunities for employment occur. Additionally, language and educational barriers prevent access to positions that would help residents break the cycle of poverty. Accordingly, it is not surprising that more than 30.8% of the population of Nogales is below the Federal poverty guidelines and that 46% of the population between the ages of 18 and 44 is uninsured or underinsured^{2,3}. These figures are relevant to the public health of our nation because Hispanics are the fastest growing ethnic minority group in the United States and are expected to constitute 24% of the total US population by 2050⁴.

Barriers resulting in health care disparities for low-income Hispanics include: language, poverty and lack of employment opportunities, little or no health insurance, little formal education, lack of health information, lack of transportation, a belief system that focuses on the common good rather than individual needs, a belief in preordained destiny resulting in fatalism, and past negative experiences with providers in the health care system.

Language is one of the principal barriers for Hispanics who need access to health care from predominantly English speaking providers⁵. Lack of transportation is another major barrier to access to quality health care. The transportation offerings throughout Santa Cruz County are patently nonexistent. In many areas of the county one must travel 60 or 70 miles to the nearest large metropolitan area (Tucson) to receive life saving, advanced health care. Often Medi-Vac helicopters are the first line of quick emergency transportation. As a result, and coupled with lack of insurance and funds, Hispanic consumers in Santa Cruz County often access the health care system in a critical or crisis situation and at that time, the emergency room becomes the point of entry to the system⁶. Understandably, the cost of health care precludes any type of preventive services or behaviors for the uninsured and for those for whom putting food on the table and having a roof over one's head are the financial priorities. For example, one study reported that cost was the fundamental reason why preventive and diagnostic tests such as mammography are not done. Cost was also reported as a factor for consumers not filling or taking prescribed medications at the recommended frequency and duration⁷.

The value Hispanic culture places on their relationship to the afterlife, the Church, and its saints is often at odds with traditional "Western" theories of the prevention, transmission, progression, and management of disease. For example, Milagros (little icons representing parts of the body) are offered to patron saints in hopes of a cure. Such beliefs strengthen ties between family members, the community, and the overall culture, but they do little to promote healthy behaviors, which are based on the individual rather than the family or community as a whole. Common expressions are heard such as "que sea lo que Dios quiera," meaning conditions are as God wishes them to be. As a result, the importance of others over self and a belief in a preordained destiny are prevalent. This belief system often leads to dire consequences. Screening examinations are avoided because "whatever is going to happen will happen regardless of what we do to prevent it. "Que sera, sera." (Whatever will be will be.)

Many social and cultural characteristics, however, can be drawn upon to improve Hispanic disparities in the utilization of health care services. These social and cultural characteristics can be defined as strong family support through the many interdependent ties of the extended family and the network of comadres and compadres (co-mothers and co-fathers), which are considered part of the family unit. The strength of these "family ties" can actually help or hinder efforts to improve health behaviors because information shared by the family is believed over that of a health care professional. For example, one study reported that Hispanics rarely turn to health care professionals for health-related information, but instead seek out peers or authority figures within their own social networks⁸. Therefore, if misinformation is held by a figure of respect within the family

network, it is likely that it will be passed on to others, thereby reinforcing the misinformation and resulting in negative consequences on the current and future health status of the family.

Promotoras are effective disseminators of health information and act as the bridge between the health care system and the communities they serve⁹. The promotora model is based on previous research and pilot interventions that establish its validity. Successful examples of community health worker models in the United States are the Navajo Community Health Representatives and the migrant farm worker programs of the 1950s and 1960s, respectively. Internationally, the World Health Organization's Declaration of Alma-Ata in 1978 stated that a key strategy for the delivery of basic health care services is the use of community health workers¹⁰.

PART III B: Objectives

Studies in the 1990s^{11, 12} indicated that cardiovascular disease is the leading cause of death in the population overall, but it is also the leading cause of death for Hispanics. Studies also indicated that the Hispanic population tends toward problems with weight control (ex. 47.9% of Mexican-American women are overweight), and that there is little comprehension regarding the connection between heart health, diet and exercise.

The purpose of "*Corazon Contento: A Model for Cardiac Risk Reduction*" was to identify low-income Hispanics in the community who had one or more risk factors for heart disease; provide them with cardiovascular information to reduce the risk of heart disease and stroke, impress upon them the need to monitor physical indicators of poor cardiac health, and improve a healthier lifestyle through diet and exercise. Project staff also referred project participants to appropriate medical and ancillary services; offered peer counseling and support groups; and trained a cohort group to impart the same information to others in the target population, i.e., the poor.

The project presented educational programs on 3 levels in order to fit the needs of the participants. First was the *platica*, organized as a health education party in a neighborhood home. The *platica* was an overview of heart healthy concepts in a short 50-minute format. The second was a **presentation** of 1.5 to 2 hours in length that covered the need to reduce the risk of heart disease and stroke through diet, exercise, smoking cessation, and the need for monitoring physical indicators of poor cardiac health such as blood pressure, lipid/cholesterol screening, and weight control. The third was a **20-hour course** that included skill-building techniques, such as how to read food labels, how to shop for food, hands-on cooking demonstrations, and sample exercises. The curriculum for this course was provided by the National Heart, Lung, and Blood Institute (NHLBI.)

The program plan used community resources such as public service announcements and programs on local Hispanic radio stations, and other media outlets to get the word out, as well as community events such as the Pick Your Path to Health Walk, the *Corazon Contento* (Happy Heart) Day, and the Heart Gala. The Happy Heart Day involved staff, program graduates and volunteers to organize competitive and fun runs, demonstrations

of heart healthy cooking and recipes, aerobic competitions for all ages, blood pressure screenings, and tables that contain culturally appropriate brochures and knowledgeable staff and/or volunteers to answer questions for the community.

In addition to continuing the prevention education, screening and community activities outlined in the work plan of year 1, year 2 took the 25 volunteers already trained in Year 1 to train another cohort to increase information dissemination regarding heart health in all sectors of the community.

This strategy increased the number of volunteer neighborhood leaders to 55 who then provided cardiovascular information in neighborhoods across the County in 14 teams of 4. Each volunteer leader was responsible for a task, i.e., diet, exercise, heart information, or data collection in their neighborhood sector. The goal of each team was to train at least one group of 6-10 people before the end of the project period. At a minimum 200 low-income Hispanic residents were to be trained by the volunteers. The volunteers surpassed this goal.

B2: No changes were made to the original objectives, though adjustments to the methodology were made in some cases. First, a course correction was made when the Happy Heart Day did not bring out many participants. Instead, staff piggy-backed on an annual children's event for the two years of the project, and a Heart Gala was added as well. Home visits were pared down as it became easier and more efficient for project participants to come into the WHPI office for their monthly measurements, instead of the Promotoras traveling to each person's home. Home visits were reserved for problem cases, and group 3, the study group that added nutrition counseling. Also modifications had to be made for the volunteers so that they could fulfill the objectives as outlined in the project work plan.

B3: CUMULATIVE REPORTING PERIOD FOR OBJECTIVES July 1, 2003 – June, 2005

Project Activities

Objective: To increase awareness in Hispanics on the Arizona/Mexico border on how to keep a healthy heart on both an individual and community level.

Activity: Staff and Volunteer Training

Increase the number of trained Promotoras (community health workers) in order to expand knowledge and life-enhancing practices regarding heart health, diet and exercise. Develop volunteer leaders to organize their neighborhoods around heart health.

RESULTS

Staff was trained in *Your Heart, Your Life (Su Corazon, su Vida)*, a curriculum developed and field-tested by the National Heart, Lung, and Blood Institute for Promotoras.

STAFF

Maria Antonieta Balbuena Ana Delia Garza Alejandra Orozco Leonor Sestega
Veronica Velasco

Three of the staff trainees, Ana Olea, Haydee Cabrera, and Laura Rebeil passed the information portion of the curriculum, but not the role-play, or student teaching portion of their training. However, they remained with *Corazon Contento* as volunteers.

Of the 193 community members that participated in the *Corazon Contento* course in year one, 25 agreed to be volunteer neighborhood leaders. These volunteers completed their role-play, or shadow visits by the end of the first project year. Thirty (30) other volunteers were recruited and trained to pass out flyers, go door to door in low-income neighborhoods, answer basic questions at health fairs, and speak as guests on the radio about the *Corazon Contento* project. This made the volunteer number a total of 55 over the project period. (See Appendix E for the training checklist for both Promotoras and volunteers.)

The original target number for volunteer trainers was 60.

Activity: Prevention and Education

Schedule 1) bi monthly classes at WHPI, and 2) community presentations on heart health, diet, and exercise.

RESULTS

In order to accommodate the community and its diverse needs, 3 levels of presentations were offered by the 2 Promotoras assigned to the *Corazon Contento* program: 1) platicas, 2) presentations, and 3) the 20-hour NHLBI course. At the end of the course a certificate of completion was given at a graduation ceremony.

The educational strategies used in this project were based on the educational levels of the participants. Demographic information in the pre-test revealed participants completed:

- Some grade school (44)
- Finished grade school (63)
- Some high school (91)
- Completed high school (112)
- GED (49)
- Some vocational or trade school (24)
- Some university (6)
- Completed university (3)

Because the majority of the clients (198) in *Corazon Contento* had not completed high school, low literacy educational materials were used with lots of drawings and cartoon like figures. Information was covered verbally and major conceptual blocks reviewed with the client before continuing. By using these strategies a person with low literacy received the information without causing undue stress. The Way of the Heart, as an institution, primarily uses participatory education techniques because these allow the facilitator (promotora) to gauge immediately what the participant knows, what additional training is necessary, and who the natural leaders/teachers are. By having the participant repeat the information back to the facilitator, we encourage memory retention. Practice and role-play reinforces knowledge, and encourages mastery and confidence over the material.

A total of **4,168 clients received cardiovascular and nutrition information**. This number far exceeded the 950 originally planned for in the work plan.

***Corazon Contento* participants per category:**

Bimonthly Presentations at The Way of the Heart: 184

Community Presentations: 910

Platicas: 336

Workshops: 76

Cooking Demonstrations/Community: 1358

Cooking Demonstrations/Supermarkets: 1149

Restaurant Education: 23

Supermarket Trips/Choosing Healthy Food Skill Building: 29 (not included in count)

Subtotal: 3,776

Additionally, 87 people completed the 20-hour course using the National Heart, Lung and Blood Institute's community outreach Promotora curriculum. Another 58 completed the course, but did not finish the six month follow-up. 247 people were reached by the volunteer trainers using the same curriculum, teaching materials, and handouts used by the Promotoras.

Activity: BP and Cholesterol Screenings

Objective: Screen low-income community members for high blood pressure and cholesterol.

RESULTS

One thousand five hundred eight (1508) community members were screened for hypertension, well over the 800 projected in the work plan. These screenings were held at health fairs, community presentations, neighborhood platicas, and as walk-ins to WHPI. This number does not reflect the study participants, but are an additional amount screened. The study participants were measured at baseline and for a total of 6 months afterwards, both for blood pressure and cholesterol.

Because of the cost of the cholesterol strips, cholesterol screenings were reserved only for study participants. The cost for the cholesterol test strips was covered by a grant given by St. Joseph's Hospital in Phoenix.

Activity: Happy Heart Day (*Dia del Corazon Contento*)

Objective: To hold a health fair dedicated to cardiac health for all ages.

RESULTS

The Happy Heart Day was preceded by a Pick Your Path to Health Walk (Office on Women's Health, DHHS) organized by The Way of the Heart: The Promotora Institute. The Pick Your Path to Health Walk was held on February 27, 2004 with approximately 200 participants. The Walk began at WHPI and continued for a mile down towards the U.S./Mexico border. At the border, the *Corazon Contento* participants met up with Mexican colleagues who had walked from a plaza a mile south of the border until they reached us. A joint binational convocation was held with exercises, sharing of heart healthy tips, and simple ways to increase physical activity in our daily lives. Pedometers were given away as prizes.

Happy Heart Day, February 28, 2004, began with a community fair decorated with red balloons, and manned by information tables, games, blood pressure screenings, CPR demonstrations, exercises, and a healthy cooking demonstration. The fair was organized by the youth volunteers, staff, course graduates, the Nogales Fire Department, National Guard, ROTC, and the Baptist Church. Unfortunately, due to cold weather and hail only 78 community members joined the event. The original work plan projected 1,000 participants which we did not meet.

The mid course correction the project staff decided on was to piggy-back on the *Dia de los Ninos* (Day of the Children) annual event held on April 30, 2004 and 2005 during the project period. In both years participants numbered close to 3,000 people. A Happy Heart tent was erected at the entrance to the event to capture as much traffic as possible. In 2004, sign in sheets logged 710 visitors. In 2005 logs showed 653.

The Happy Heart tent included health education models of arteries, cholesterol, sodium contents of favorite foods, and fat globs. Recipes were available for the parents, and cut out hearts for the children were pinned on each child by volunteers. Volunteers and staff gave brief presentations throughout the 4 hours of the event, as well as free blood pressure screenings. Exercises were held with the help of Ronald McDonald throughout the day. Fresh fruit donated by the local produce companies was given away to anyone who signed in at the tent.

Activity: Heart Gala

The Heart Gala held on August 27, 2004 brought together over 200 people to celebrate heart health in the community. The Gala began with presentations by the American Heart Association and the Mexican Department of Health. Later the teen and adult volunteers modeled red dresses while the mistress of ceremonies described risk factors for heart disease and solutions to reduce these factors. At the same time a multi media montage was projected on the walls of the salon. The meal for the Gala consisted of menu items prepared by local restaurants who had participated in our education program. (See Appendix H for more information regarding this event.) The Heart Gala was sponsored by the Office on Women's Health in the Department of Health and Human Services.

To educate the restaurants staff put together a compilation of heart healthy recipes published by the American Diabetes Association, the National Cancer Institute, the National Heart, Lung, and Blood Institute, among others. Armed with this "cookbook" the Promotoras then approached every restaurant in Nogales that was privately owned, that is, not part of a franchise. The Promotoras asked to speak with the owner and the chief chef, presented them with the cookbook and made a presentation on modifying recipes for better heart health. Their presentation included how to reduce sodium content, and saturated fats, such as lard. One popular restaurant added one of the recipes offered through the program to their menu, and others modified their recipes. Seven of these restaurants brought their new menu items to the Heart Gala.

Activity: Community-Focused Media

Objective: To increase knowledge and awareness of risk factors, reducing the risk, and prevention-oriented lifestyles on a community systems level in order to further support the knowledge gained by the participants of this project.

RESULTS

- In addition to the presentations made in community locations, project overview presentations were made at 2 Rotary Club meetings, with 51 members.
- A total of 6,012 recipes were distributed to the customers of Food City, Safeway, Veteran's Market, and Garrett's IGA supermarket in Nogales and Rio Rico, Arizona, as well as the Food Bank in Nogales. The majority of these recipes were obtained through the Arizona Department of Health Services' Five a Day program. Favorites, such as stuffed bell peppers with tomatoes and squash, were typed, printed, and distributed. The heart healthy recipes of the restaurants represented at the Heart Gala were also given out.

Radio:

- Half-hour programs, dedicated to cardiovascular health, were held on KNOG 91.1FM, Radio Manantial on October 2, November 13 and December 4, 2003, to inform the public about the cardiovascular program and invite participation for those interested in learning how to prevent heart disease and establish a heart healthy lifestyle. On July 10, July 31, and August 7, 2003 5-minute interviews were held with the Project Director describing *Corazon Contento*, its staffing needs, and a job description.
- On 4/22, 4/29, 5/6, 5/13, 5/20, 5/27, 2005 *Corazon Contento* staff were regular guests on Radio Xeny to discuss various aspects of cardiovascular health and answer questions from the public. Topics included smoking, dietary fats, portion sizes, reading food labels, exercise, stress, understanding the numbers, symptoms and treatment of heart disease.
- Public Service Announcements (psas) were made on an ongoing basis on local stations, Radio Manantial and La Maxima, to inform the public about the cardiovascular program, nutrition and exercise classes. Forty-eight (48) psas were logged in January, February, and March, 2004 on the 2 stations.

Television:

- The local public access channel ran our *Corazon Contento* project description, schedule, and contact information every 5 minutes, 24 hours a day, every day for 9 weeks. This media outlet was by far the most successful in getting the word out about the project, its cardiovascular program, including the nutrition and exercise classes. It was much more effective and less expensive (free) than the 4,500 newspaper inserts we had distributed at the project's inception.
- For one week the local public access channel covered the logistics and recruitment of participants of the binational Pick Your Path to Health walk.

Flyers:

- A total of 6,026 flyers were distributed door to door throughout low-income neighborhoods in Santa Cruz County and The City of Nogales, Arizona.

For the Happy Heart Day outreach included:

- The youth volunteers spoke at the Nogales City Council meeting held on February 11, 2004 regarding both the PYPATH Walk and the Happy Heart Day.
- 2,000 flyers were distributed at several restaurants, Water Mart, 99cent Store, Stage Department Store, Radio Shack, Fashion Bug, Footlocker, Greenbacks, Ross, Cinderella Department Store, Safeway, Nogales High School, Wade Carpenter Middle School, and Calabasas Middle School.

- Public Service Announcements ran the week prior to Happy Heart Day. Twenty (20) psas were logged during this period on both sides of the US/Mexico border, in February, 2004.
- Interviews of staff, participants, and volunteers were held on January 15, and February 12, 2004 to publicize the two-day Happy Heart event.

For the Heart Gala outreach included:

- Personal and written invitations to City and County officials, the American Heart Association, medical professionals, middle and high schools, *Corazon Contento* graduates and volunteers, and the public.
- A special half-hour radio program was dedicated to heart health, and the listening audience invited to the Gala.

Activity: Support Groups

Objective: To provide a safe environment for group sharing, process, and support when faced with cardiovascular disease.

RESULTS

Thirty five (35) people joined the support group. Pensamientos (thoughts), dichos (folk sayings), affirmations, handouts, and journals were used to supplement the work done with the group and/or peer facilitator. The number of participants originally projected for support groups were 25.

Activity: Home Visits (One-on-one Interventions)

Objective: Provide focused interventions to project participants when group settings are not enough.

RESULTS

One hundred thirty eight (138) visits were made in participant's homes. This falls short of the 520 projected home visits in the original work plan. Participants did not require the home visits, and were more likely to come out for the bimonthly presentations, or the Pick Your Path to Health Walk, or the Heart Gala where the Promotoras could meet with them afterwards. The home visits that did occur were in the homes of the participants of study group 3 that included nutrition counseling. A baseline inventory of the participant's pantry was taken, and then checked again mid-project. Home visits, however, were offered to everyone.

Activity: Exercise

Objective: Provide daily exercise classes to participants and other community members at WHPI.

RESULTS

Two hundred and forty three (243) participants came to the exercise classes starting in late September of 2003. The original number projected were 120 for the project period.

These classes consisted of low impact aerobics, weights, Pilates, walking, and balance exercises.

To make it easy for the participants to get 3 hours of exercise a week, classes were initially given 4 times a week, twice in the morning and twice in the evening. By November of 2003, there were so many people exercising that larger venues were

needed. The Boys and Girls Club, located next door to WHPI graciously lent the space for the morning classes, and a community center called, More For Kids, lent us their location for the evening classes. (More For Kids is about a half a mile from WHPI.) When the project grew out of More For Kids, the exercise classes moved to Mexicayotl Charter school, also a short distance away from WHPI.. Now classes are offered 10 times a week due to the overflow of clients wishing to participate.

There were 19,620 signatures on the sign in sheets from July 1, 2003 to June 30, 2005, indicating an average of 81 exercise sessions per participant. (Many of these signatures reflect returning clients, but some were not. The exercise program was open to the public.)

PART III C: Program Plan

The program utilized *Salud Para Su Corazon Bringing Heart Health to Latinos: A Guide For Building Community Programs*,¹² a guide developed by NIH's, National Heart, Lung, and Blood Institute (NHLBI.) The Promotoras, trained by NHLBI, recruited members of the community who had one or more risk factors for heart disease, and taught them the 20-hour NHLBI course over a period of several weeks. These participants were divided by interest and risk factors into the 3 study groups already described in this report. From this group of 145 graduates, 25 came forward to be the initial group of volunteer trainers. Under the guidance of the two Promotoras, volunteers were trained to teach the same NHLBI course. This first group of trained volunteers then trained a new cohort of volunteers. The full group of 55 volunteers then went out into the community, and into people's homes to impart the cardiovascular information, and skills they had learned either under the Promotoras, or the volunteer trainers.

The program plan included platicas, presentations, workshops, and health fairs that helped the project reach many more people than would have with the study alone. Along the same lines the program used community resources such as public service announcements and programs on local Hispanic radio stations, articles and public service announcements in local newspapers to help create a community norm. Local markets were asked to place free heart-healthy recipe cards in the check out lines, and staff performed cooking demonstrations on a regular basis in the largest supermarkets, the local food bank, and other community locations. (See Appendix F.)

1. Personnel:

The first month of the project period was dedicated to recruiting suitable candidates for staff positions. Presentations and the distribution of flyers were made throughout the County, as well as at non-profit organizations, churches, and service clubs. Radio job lines were used for a period of 3 weeks from July 7 – July 26, 2003. On July 10, July 31, and August 7, 2003 5-minute interviews were held with the Project Director describing *Corazon Contento*, and the job requirements for Project staff.

Three people were hired, but did not meet minimum training standards. Recruitment continued until early August when the team leader, Veronica Velasco, was hired. Mrs. Velasco had 3 years experience in administering other federal grants, including a health disparities project for the Border Health Foundation's field office in Nogales. Later, WHPI rehired a staff member, Maria Antonieta Balbuena, who had been

trained by NHLBI, and had run WHPI’s cardiovascular education program from 1999 – 2002. A third person, Alejandra Orozco, was hired in October, 2003 under another grant award, specifically from St. Joseph’s Hospital in Phoenix, Arizona, to provide the exercise classes and assist with the nutrition sessions and cooking demonstrations.

Project Structure: Description of Staff Roles and Responsibilities

NAME	TITLE	START DATE	RESPONSIBILITIES	SITE
Maria Gomez-Murphy .50FTE IN-KIND	Executive Director	6/99	The director ensures the goals and objectives of the health disparities project are met, oversees the operations of the project as described in the program plan, and monitors the budget. The director is responsible for the data analysis in order to write the progress and final reports. Is responsible for the community-based media component of the project.	The Way of the Heart: The Promotora Institute Homes, churches, schools, retail stores. Also service clubs, health fairs and other community events
Leonor Sesteaga .30FTE IN-KIND	Operations Coordinator	6/99	Organizes and maintains master schedule of group presentations and trainings, supervises field work, schedules meetings, makes health fair assignments, ensures data quality, organizes activities within and between program areas, and maintains project files.	The Way of the Heart: The Promotora Institute Homes, churches, schools, retail stores. Also service clubs, health fairs and other community events
Maria Antonieta Balbuena and Verónica Velasco OMH funded	Promotoras (2)	6/99 8/03	Cardiovascular. Topics covered are signs and symptoms of heart disease, lifestyle changes for heart health, diet and exercise. Promotoras will conduct limited cholesterol tests to the extremely poor, as evidenced by lack of housing, potable water, and access to care. Blood pressure checks will be offered to all project participants.	Homes, churches, schools, retail stores. Also service clubs, health fairs and other community events, The Way of the Heart: The Promotora Institute
Alejandra Orozco .30FTE St. Joseph’s Hospital, Phoenix	Promotora	2/04	Exercise. Teach stretching, warming up, cardio workout, cooling down. Proper breathing and meditation techniques will be included. A “buddy” system will be organized for the establishment and maintenance of a regular exercise routine for participants.	The Way of the Heart: The Promotora Institute

2. Identification and Selection: Participants were recruited by word of mouth, distribution of 4,500 newspaper inserts on 2 separate circulation days, 1,026 flyers distributed door to door in low-income neighborhoods, and on the radio. Other outreach was at Wal-Mart, Kmart, 3 supermarkets, Blockbuster, JC Penney, Housing Authority, Apartment Complexes, Trailer Parks, Chicanos Por La Causa, County Complex, Board of Supervisors, County Schools, County Health Department, Department of Economic

Security, US Post Office, Workforce Development Program, and the City of Nogales, among many others.

3. Referrals and Follow-up: When problems came up staff referred participants to an appropriate professional. An example of this was the 8 people in the study who increased their cholesterol levels during their participation. The concept of a well-balanced diet was reviewed. All were referred to their doctor. If a medical home was not available, a list of available doctors was given. If cost was an issue, and the client was eligible for public assistance, arrangements were made, forms filled out, and appointments made with the Arizona Department of Economic Security in order to secure health care for the client. In some cases we bartered for services.

4. Modifications: (See number 5 below.) Initially home visits were to occur with all participants, but as the number of project participants increased, and continuing recruitment for the study was necessary due to non-compliance with follow-up that strategy became an impossibility. It became easier and more efficient for the participants to come in to WHPI for their monthly measurements than for the Promotoras to go out to each participant's home.

5. Problems and Barriers: The volunteer portion of the project started out well with the first 36 clients in neighborhood homes, but soon we saw a drop off in attendance of the volunteers to their own scheduled community presentations. Morale dropped in the volunteer team members and staff was asked to intervene and provide the instruction. This could not be, or we would have had no information to compare the effectiveness of using promotoras against trained volunteers. Thus, the work plan had to be modified so that we would be able to collect pre and post intervention data on the volunteer's clients. The course was whittled down so that the time commitment of the volunteers was greatly reduced. Data collection was handed off to the promotoras since this aspect of the volunteer effort seemed to cause much anxiety, and staff began to accompany each volunteer to their presentation for moral support. Staff promotoras were told not to intervene or answer questions before the post survey was administered, but were allowed to stay and provide further information later in the home or at The Way of the Heart. Nonetheless, 247 community members were given an education on heart health by trained project volunteers.

PART III D: EVALUATION

1. All 392 participants were administered a baseline knowledge, attitudes, and practices (KAP) survey regarding cardiovascular health at intake. This evaluation tool was developed by the *Salud para su Corazon* Initiative of the National Heart, Lung and Blood Institute (NHLBI) of the National Institutes of Health. This data was collected a second time after the end of the 20-hour NHLBI course. Monthly interviews with each participant measured changes in knowledge, attitudes, and practices (KAP) over a period of 6 months, post educational intervention. For the second part of the project role-play assessed the ability of the volunteer trainee to teach accurately and effectively. Role-play was both peer and supervisor reviewed. The training component consisted of home visiting techniques, communication skills, and educational strategies for maximum information retention. Also, 4 hours of shadow visits with an already trained promotora were required. (See Appendix E for the training checklist.)

Reports were compiled in two areas. Reports of group classes included sign-in sheets, satisfaction surveys/evaluations, and pre and post tests of the material covered. Second, measurements of blood pressure and cholesterol screenings, weight, and waist circumference were taken at baseline, and each month thereafter in order to measure change, if any, over time.

For quality assurance and continuous quality improvement, satisfaction surveys were administered at regular intervals. Data collection was done by the promotoras and the volunteer neighborhood leaders, data quality control by the Operations Coordinator, and interpretation by Maria Gomez-Murphy, the Project Director and Executive Director of the Way of the Heart: The Promotora Institute. (See Appendix A for the satisfaction surveys.)

2. The study consisted of three groups. Group number 1 was comprised of 29 clients who received a 20-hour course based on the NHLBI curriculum, *Your Heart, Your Life (Su Corazon, Su Vida)*. Group number 1 received a pre and post intervention survey, and was measured each month in the four health indicators for a period of 6 months after the end of their educational intervention. Group number 2, comprised of another 29 clients received the same 20-hour class given by the same Promotora instructor, but added exercise 3 times a week on site at The Way of the Heart, or at one of its community partner's sites. Pre and post intervention surveys were also administered to this group, and measurements taken on a monthly basis for a total of 6 months. Group number 3 comprised of another 29 individuals received the same 20-hour course given by the same Promotora, added exercise 3 times a week, and also nutrition counseling/skill building that included trips to the supermarket, an inventory of the participant's pantry, and cooking demonstrations. The members of group number 3 received the same pre and post intervention surveys, and were followed for 6 months after the course ended. One hundred forty five (145) participants were recruited, 87 completed the course and the 6 month follow-up. (See Appendix B for the NHLBI KAP tool. See Appendix A for the satisfaction survey.)

Surveys: 600 general surveys were returned, another 180 surveys were specific to nutrition for a total of 780 surveys. Complete survey results are in Appendix A.

GENERAL

1. In general how would you rate the workshop you attended today?

excellent	good	regular	poor
495	60	0	0
No answer = 45			

2. In general how would you rate the quality of the information you received today?

excellent	good	regular	poor
522	77	0	0
No answer = 1			

NUTRITION

3. In general how would you rate the workshop you attended today?

excellent	good	regular	poor
115	63	0	0

No answer = 2

4. In general how would you rate the quality of the information you received today?
- | | | | |
|------------|-----------|----------|----------|
| excellent | good | regular | poor |
| 112 | 65 | 0 | 0 |
- No answer = 3**

Pre and post tests results for the 87 participants who finished the 20-hour NHLBI course broken down by group: (See Appendix B.)

group #1, (course only) = 9% improvement rate;
group #2, (course & exercise) = 14 % improvement rate
group #3, (course, exercise & nutrition) = 17% improvement rate.

Pre and post tests for the 58 participants who did not complete the 6 month follow-up, or missed 1 or more classes = **(-)8 % improvement rate.**

Pre and post tests for the 247 participants who were taught by the volunteers = **(-)12% improvement rate.**

HEALTH INDICATOR MEASUREMENTS

**GROUP
1**

	WEIGHT	WAIST	B/P	CHOLEST
BASELINE AVERAGE	180.3	39.0	130.5/79.38	206.0
CHANGE AVERAGE	179.5	38.0	131/80.17	203.0
CHANGE DIFFERENCE FROM BASELINE	(-) 0.8	(-)1.0	0.50/0.79	(-)3.0
RISK FACTORS				
OVERWEIGHT	25			
HIGH BLOOD PRESSURE	13			
CHOLESTEROL	14			
DIABETES	7			
SEDENTARY	18			
SMOKE	4			
AGE	13			
FAMILY HISTORY	4			
TOTAL RISK FACTORS	98			
AVERAGE RISK FACTORS	3.4			

**GROUP
2**

	WEIGHT	WAIST	B/P	CHOLEST
BASELINE AVERAGE	161	36	125.45/79.21	209
CHANGE AVERAGE	157.0	34.0	120.42/75.3	196.0
CHANGE DIFFERENCE				
FROM BASELINE	-4.0	-2.0	(-)5.03/3.91	-13.0
RISK FACTORS				
OVERWEIGHT	22			
HIGH BLOOD PRESSURE	11			
CHOLESTEROL	17			
DIABETES	3			
SEDENTARY	18			
SMOKE	6			
AGE	17			
FAMILY HISTORY	3			
TOTAL RISK FACTORS	98			
AVERAGE RISK FACTORS	3.4			

**GROUP
3**

	WEIGHT	WAIST	B/P	CHOLEST
BASELINE AVERAGE	175.0	38.0	127.0/82.17	209.0
CHANGE AVERAGE	170.0	36.0	118.14/75.96	193.0
CHANGE DIFFERENCE				
FROM BASELINE	-5.0	-2.0	(-)8.86/6.21	-17.0
RISK FACTORS				
OVERWEIGHT	24			
HIGH BLOOD PRESSURE	13			
CHOLESTEROL	14			
DIABETES	6			
SEDENTARY	17			
SMOKE	3			
AGE	16			
FAMILY HISTORY	4			
TOTAL RISK FACTORS	97			
AVERAGE RISK FACTORS	3.3			

3. The only projections not met were home visits and the participation at the “Happy Heart Day” Because of the low numbers at the health fair, staff piggy-backed on a well attended, existing annual event, and the Heart Gala was developed. In all other cases, *Corazon Contento* exceeded expectations.

4. No changes were made to the project as a result of evaluation.

PART III E: Program Results & Outcomes

Results show that of the three study groups, group number 3 had the best results both in the pre and post intervention surveys, and changes in measurements of blood pressure, cholesterol, weight, and waist circumference.

In the pre and post surveys group number 1 had an average of 9 percent overall improvement in their knowledge, attitudes, and practices. Group number 2 had an average of 14 percent, and group 3 came in with 17 percent improvement overall. The indicator measurements also followed the same pattern. For cholesterol, for instance, group number 1 lost 3 points on average. Group number 2 lost 13 points, and group number 3 lost 17 points on average.

The results of the pre and post intervention surveys for the volunteers were significantly lower than the results of the Promotora's intervention. Compared to the Promotoras volunteers saw a 21 point negative difference overall between the Promotoras and volunteers. Overall there was a negative 8 percent post test response for the volunteers, compared to the positive 13 percent post test results attributed to the Promotoras.

These results seem to suggest two things. First, that an unpaid volunteer is not likely to commit as much to transferring information to his/her neighbors as a paid community outreach worker/ Promotora. Second, results from the study indicate that the more the client spends integrating the lessons learned into the flow of their daily lives by practice the better the results. Logically, those clients who were beginning to act out the lessons learned in the 20-hour course through exercise and nutrition counseling would answer the post survey more positively than those to whom the knowledge was merely intellectual, and not yet practiced.

The compliance rate for the study group bore interesting results. The biggest drop off in participation was in group number 1 at 35 percent. These participants only came in once a month for their measurements, but had no other contact with the Promotoras. Group number 2 had a better response at 80 percent compliance, but group number 3 had a 95 percent compliance rate with follow-up. One could postulate that commitment to behavior change increases with the commitment to the coach, in this case a Promotora. This project further suggests that time with the coach/Promotora has a direct relationship with the client's positive changes in knowledge, attitudes, and practices.

One alarming feature of the study and the community screenings were the high numbers of participants who had blood pressure values of more than 140/80 mg/dl. Thirty one percent (31%) of study participants had higher than normal numbers. The community screenings revealed an even higher number at 35%.

The high percentage of hypertension in our target population can be accounted for by the lack of access to health care for the poor and working poor, poor dietary habits due to low-cost carbohydrates, canned and packaged goods, and the bias inherent in the deliberate recruitment of community members who have one or more risk factors for heart conditions. To that end, the results of the risk inventory taken of the *Corazon Contento* participants were 3.4 risk factors for each of the 392 enrolled.

PART III E: Program Results & Outcomes continuation Grant No: D54MP03005

**PART I
NUMBER OF PERSONS RECEIVING SERVICES
07/01/03-06/30/05**

Demographic Characteristics of Persons Receiving Service	Number of Persons Receiving Services By Health Issue Area				Total Number of Persons
	Health Issue Code (12)	Health Issue Code (19)	Health Issue Code (22)	Total All Health Issues	Unduplicated Count
<u>Racial/Ethnic Group</u> Hispanic/Latino	1638	2536	243	4417	4145
<u>Gender</u> Male Female	232 1406	305 2231	3 240	540 3877	536 3609
<u>Age Group Age Range</u> Adolescents (13 to 19) Adults (20 to 64) Elderly (65 & over)	216 1314 108	19 2304 213	1 238 4	236 3856 325	4145

**PART II
SCREENING PROGRAM DATA**

Screenings <u>Community Blood Pressure</u> <i>HEALTH ISSUE AREA</i> (1 of 3)						
Demographic Characteristics of Individuals Receiving Service	Screenings Number of Persons		Results Number		Referrals	Follow-up
	Initial	Repeat	Positive	Negative	Number	Number
<u>Racial/Ethnic Group</u> Hispanic/Latino	1508	0	531	977	1182	60
<u>Gender</u> Male Female	149 1359	0	86 445	63 914	116 1066	10 50
<u>Age Group Age Range</u> Adolescents (13 to19) Adults (20 to 64) Elderly (65 & over)	6 1489 13	0	0 524 7	6 965 6	6 1163 13	0 47 13

Screenings <u>Blood Pressure/Corazon Contento</u> <i>HEALTH ISSUE AREA</i> (2 of 3)						
Demographic Characteristics of Individuals Receiving Service	Screenings Number of Persons		Results Number		Referrals Number	Follow-up Number
	Initial	Repeat	Positive	Negative		
<u>Racial/Ethnic Group</u> Hispanic/Latino	392	96	123	269	123	230*
<u>Gender</u> Male Female	49 343	6 90	2 121	47 222	2 121	4 226
<u>Age Group Age Range</u> Adolescent (13 to 19) Adults (20 to 64) Elderly (65 & over)	40 314 38	0 89 7	0 114 7	0 238 31	0 116 7	0 210 20

*Some participants received more than one follow-up.

Screenings <u>Cholesterol/Corazon Contento</u> <i>HEALTH ISSUE AREA</i> (3 of 3)						
Demographic Characteristics of Individuals Receiving Service	Screenings Number of Persons		Results Number		Referrals Number	Follow-up Number
	Initial	Repeat	Positive	Negative		
<u>Racial/Ethnic Group</u> Hispanic/Latino	196	52	47	149	47	49
<u>Gender</u> Male Female	7 189	2 50	2 45	5 144	2 45	2 47
<u>Age Group Age Range</u> Adults (20 to 64)	196	52	47	149	47	49

**PART III
STAFF AND VOLUNTEERS TRAINED**

Demographic Characteristics of Staff and Volunteers Trained	Number of Staff and Volunteers Trained				Total Number Trained
	<u>Cardiovascular Health</u> <i>HEALTH ISSUE AREA</i>				
	Agency Staff	Peer Counselors	Volunteers	Board Members	Unduplicated Count
<u>Racial/Ethnic Group</u> Hispanic/Latino	7	0	55	0	62
<u>Gender</u> Male	0	0	4	0	62
Female	7	0	51	0	
<u>Age Group Age Range</u> Adolescents (13 to19)	0	0	18	0	62
Adults (20 to 64)	7	0	36	0	
Elderly (65 +)			1		

**PART IV
MAJOR ACTIVITIES CONDUCTED**

Type of Activity for Individuals by Health Issue Area <u>Cardiovascular Health</u> <i>HEALTH ISSUE AREA</i> (1 of 3)					
Demographic Characteristics of Persons Served	Case Management /Follow-up	Counseling	Home visits	Educational Courses	Unduplicated Count
<u>Racial/Ethnic Group</u> Hispanic/Latino	334	33	118	195	392
<u>Gender</u> Male	49	2	0	49	49
Female	285	31	118	343	343
<u>Age Group Age Range</u> Adolescents (13 to 19)	40	1		40	392
Adults (20 to 64)	256	25	115	314	
Elderly (65 & over)	38	7	3	38	

Type of Activity for Individuals by Health Issue Area <u>Nutrition</u> HEALTH ISSUE AREA (2 of 3)					
Demographic Characteristics of Persons Served	Case Management /Follow-up	Counseling	Home visits	Educational Courses	Unduplicated Count
<u>Racial/Ethnic Group</u> Hispanic/Latino	35	20	20	47	35
<u>Gender</u> Male	1	0	0	1	1
Female	34	20	20	34	34
<u>Age Group Age Range</u>					
Adults (20 to 64)	34	19	19	35	35
Elderly (65 & older)	1	1	1	1	1

Type of Activity for Individuals by Health Issue Area <u>Exercise</u> HEALTH ISSUE AREA (3 of 3)					
Demographic Characteristics of Persons Served	Case Management /Follow-up	Counseling	Home visits	Educational Courses	Unduplicated Count
<u>Racial/Ethnic Group</u> Hispanic/Latino	243	2	0	10,620	243
<u>Gender</u> Male	3	0	0	3	3
Female	240	2	0	240	240
<u>Age Group Age Range</u>					
Adolescents (13 to 19)	1				1
Adults (20 to 64)	238	2	0	185	238
Elderly (65 & over)	4				4

PART IV (Continued)

Type of Activity for Groups of People by Health Issue Area <u>Cardiovascular Health</u> HEALTH ISSUE AREA		
Type of Activity (Group)	Number of Activities	Number of Participants
Access and Educational Interventions:		
Transportation Services	<u>110</u>	<u>71</u>
Support Groups	<u>45</u>	<u>35</u>
Outreach Activities:		
Health Fairs	<u>7</u>	<u>1778</u>
Community Based Workshops	<u>4</u>	<u>76</u>
Health Forums	<u>0</u>	<u>0</u>
Informational Presentations	<u>40</u>	<u>1094</u>
Other (Platicas)	<u>41</u>	<u>336</u>
(Cooking Demonstrations)	<u>32</u>	<u>2507</u>
(Restaurants)	<u>23</u>	<u>23</u>
Media Exposure:		
TV - Local public access channel	<u>every 5 minutes</u>	
Radio	<u>loop, 9 weeks</u>	
(psas)	<u>15</u>	
Newspaper (insert)	<u>68</u>	
Speaking Engagements	<u>4,500</u>	
Other (Specify)	<u>3</u>	<u>73</u>
Information Dissemination		
Publications Distributed (Recipes)	<u>6,012</u>	
Publications Distributed (American Heart Assoc.)	<u>900</u>	
Brochures/Flyers Distributed	<u>8,026</u>	
Video Tapes	<u>5</u>	
Hotlines	<u>0</u>	
Other (Specify)	<u>0</u>	
Need Assessment	<u>392</u>	

PART III E: Results & Outcomes continued

2. Health Disparities Impact: The project sought long-term impact by changing the community norm as it relates to cardiac disease to a sense of self determination and empowerment brought about by overall changes in diet, physical activity and exercise, and the knowledge gained about heart health. The project was successful. Reductions were seen in 3 focus areas of Healthy People 2010. They were (1) Heart Disease and

Stroke, (2) Nutrition and Overweight, and (3) Physical Activity and Fitness. Although each study group had different results, all reduced their health disparities.

3. Future: The capacity building inherent in the design of this project will enable the community to sustain the momentum of *Corazon Contento* for a long time to come. Results of the evaluation in Year 2 indicated that the volunteer neighborhood leaders were not as effective as the Promotoras of The Way of the Heart: The Promotora Institute, but we will look for ways to sustain the cadre of leaders with support, quarterly meetings, and supervision as part of its mission. Funding will be secured to determine what is necessary to raise the neighborhood volunteer's effectiveness to comparable staff levels, if indeed that is possible without financial rewards for the volunteers.

By using the target population to share information and encourage behavior change, *Corazon Contento* reached the people from the inside out. This project was targeted directly to the consumer who needs the information the most, and was imparted by the people who have the most influence over their daily health habits --- neighbors and friends.

4. Replication: This model can be replicated in any community of color because it uses health workers, i.e. promotoras, who share the cultural, linguistic and socio-economic status of the target population. Therefore, the format for this project will produce results in any site, neighborhood, city, county, state, or region.

PART III F: Dissemination of Results

An attempt will be made to publish the findings of the study in an appropriate health journal. Other dissemination strategies include presenting at national, state and local conferences. The Project Director will present the findings at the joint PAHO/NHLBI meeting in Santiago, Chile on October 17 – 18, 2005.

PART III G: Products

The Heart Gala Program is included in Appendix H. Flyers, and other copy created under this project have already been submitted in previous reports.

PART IV: Appendices

Appendix A PARTICIPANT SATISFACTION SURVEY

Surveys: 600 surveys were returned.

1. In general how would you rate the workshop you attended today?

excellent	good	regular	poor
495	60		0

2. In general how would you rate the quality of the information you received today?

excellent	good	regular	poor
522	77		0

3. What impacted you the most in this workshop?

- | | |
|-----------------------------------|---|
| -Risk for heart disease | -What we need to know about salt and sodium |
| -Risk factors for heart disease | -To eat less fat and saturated fat |
| -High blood pressure | -Maintain a healthy weight |
| -Cholesterol | -The importance of reading food labels |
| -The function of the heart | -Sodium in canned goods |
| -Smoking, & second hand smoke | -Food pyramid |
| -Location of heart | -Realize how badly I eat |
| -Eating breakfast is so important | -That canned tuna has high sodium content |
| -Food portions | |
| -Organizing weekly meal plans | |

4. Is there anything you would change to make this workshop better?

Yes	No
37	583

What would you change?

One hundred and thirty (130) no response; Would like to take all the information learned into practice; Would like to continue with much more information and take all the information learned and practice; Start the class on time; Be more punctual.

Other comments or suggestions

- | | |
|--|--|
| <ul style="list-style-type: none"> • More time to learn • We are learning a lot • It's very helpful to come and learn • Continue with the sessions • It is excellent • Keep preparing with much more topics to keep teaching us • I like it, it is very relaxing, we laugh and learn new things • More emphasis on natural foods | <ul style="list-style-type: none"> • It motivates us to love our self • It is excellent • Congratulate the Promotoras to continue this session for our own good • Very important everything that we have learned • Very happy with the sessions and exercises • Promote the exchange of recipes between participants |
|--|--|

APPENDIX B

PRE-TEST / POST TEST Código Promotor(a) _ _ _ _ _

Estas preguntas son para obtener información acerca de usted. Por favor llene esta hoja antes de la capacitación y solicite ayuda si lo necesita.

Lugar de clase: The Way of the Heart: The Promotora Institute Fecha: _____

Nombre: _____

Dirección: _____

Ciudad: _____ Estado: _____ Código: _____

Teléfono: _____ Correo electrónico: _____

Fecha de nacimiento: _____ Lugar de nacimiento: _____

¿Cuál es el último año que completó en la escuela? (en los Estados Unidos o en su país de origen)

Marque un círculo alrededor del que corresponda:

- a. Algo de escuela primaria b. Completó primaria c. Algo de escuela secundaria
d. Completó la escuela secundaria/GED e. Algo de escuela técnica o vocacional
f. Algo de universidad g. Completó universidad

¿Cuál fue su área de estudio? _____

Idioma que prefiere: ___ español solamente ___ inglés solamente ___ ambos

¿Ha trabajado como promotor (a) de salud? ___ Si ___ No ¿Por cuánto tiempo? ___ años ___ meses

Para cada pregunta, indique una sola respuesta marcándola con un círculo.

1. ¿Qué se entiende por presión arterial alta?
 - a. La presión arterial alta es agregarle a su edad 100 puntos
 - b. Lo mismo que tensión nerviosa o ansiedad
 - c. Cuando el cuerpo circula más sangre dependiendo en su estatura
 - d. La presión arterial alta es cuando la presión en las arterias permanece alta todo el tiempo

2. Para mantener la buena salud debe estar físicamente activo:
 - a. Una vez por semana
 - b. Todos los días por 30 minutos
 - c. 3 ó 4 veces por semana
 - d. Cuando se come gran cantidad de harinas y azúcares

3. La presión arterial alta puede ser afectada si:

- a. Coma gran cantidad de sal y alimentos enlatados salados
- b. Toma la medicina sólo cuando no se siente bien
- c. No se mantiene físicamente activo
- d. Todo lo antes mencionado

Los hábitos de mi familia: PRE TEST

¿Qué tan seguido su familia hace lo siguiente?

SAL Y SODIO

1. Compran verduras frescas o congeladas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
2. Compran verduras enlatadas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
3. Compran ajos frescos o en polvo en lugar de sal con ajo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
4. Compran los alimentos con etiquetas en las que se lee: “bajo contenido de sodio,” “sin sodio” o “sin agregado de sal.”	Nunca	Pocas veces	Casi siempre	Todo el tiempo
5. Comen las frutas sin sal.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
6. Cuando se cocinan frijoles, arroz, fideos y verdura, les ponen poca sal o nada de sal al agua.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
7. Usan carnes ahumadas, curadas y elaboradas como: jamón, mortadela o chorizo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
8. Ponen el salero en la mesa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
9. Llenan el salero con una mezcla de hierbas y especias en vez de sal.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
10. Comen frutas y verduras en lugar de bocadillos salados como papitas (chips).	Nunca	Pocas veces	Casi siempre	Todo el tiempo

COLESTEROL Y GRASA

11. Toman la leche sin grasa o con 1% de grasa	Nunca	Pocas veces	Casi siempre	Todo el tiempo
12. Comen el queso sin grasa o con poca grasa	Nunca	Pocas veces	Casi siempre	Todo el tiempo
13. Usan un rociador (“spray”) de aceite para cocinar Rocía las sartenes en lugar de usar gran cantidad de manteca para engrasarlas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo

14. Leen las etiquetas de los alimentos para elegir los que tienen bajo contenido de grasa, grasa saturada y colesterol.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
15. Cortan la grasa de la carne. QUITAN el pellejo y la grasa al pollo o al pavo antes de cocinarlo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
16. Cocinan la carne molida y escurren la grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
17. Enfrían la sopa y le quitan la capa de grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
18. Usan mayonesa, aderezos y crema agria sin grasa o bajos en grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
19. Usan pequeñas cantidades de margarina en lugar de mantequilla.	Nunca	Pocas veces	Casi siempre	Todo el tiempo

PESO

21. Leen las etiquetas para elegir los alimentos con menos calorías.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
22. Cocinan el pescado al horno en lugar de freírlo	Nunca	Pocas veces	Casi siempre	Todo el tiempo
23. Comen verduras y arroz con una pieza de pollo en lugar de comer tres piezas de pollo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
24. Sirven porciones pequeñas de comida.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
25. Dejan de desayunar, almorzar o cenar a propósito	Nunca	Pocas veces	Casi siempre	Todo el tiempo

LA ACTIVIDAD FÍSICA

Hacen alguna actividad física por 30 minutos.
Si no se tiene tiempo, se hace en tres períodos de 10 minutos cada una.

26. ___ Madre	Nunca	Pocas veces	Casi siempre	Todo el tiempo
27. ___ Padre	Nunca	Pocas veces	Casi siempre	Todo el tiempo
28. ___ Hijos	Nunca	Pocas veces	Casi siempre	Todo el tiempo
29. ___ Otros _____	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Usan las escaleras en lugar del ascensor.				
30. ___ Madre	Nunca	Pocas veces	Casi siempre	Todo el tiempo
31. ___ Padre	Nunca	Pocas veces	Casi siempre	Todo el tiempo
32. ___ Hijos	Nunca	Pocas veces	Casi siempre	Todo el tiempo
33. ___ Otros _____	Nunca	Pocas veces	Casi siempre	Todo el tiempo

Se bajan del autobus una o dos paradas antes y caminan.

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 34. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 35. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 36. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 37. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Estacionan el auto o carro unas cuadras antes y camina por 10 minutos.

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 38. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 39. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 40. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 41. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

¿ QUE HACE LA FAMILIA PARA ESTAR FÍSICAMENTE ACTIVA?

Caminan

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 42. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 43. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 44. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 45. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Bailan

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 46. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 47. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 48. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 49. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Pedalean en una bicicleta estacionaria

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 50. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 51. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 52. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 53. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Trabajan en el jardín

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 54. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 55. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 56. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 57. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Hacen ejercicios aeróbicos

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 58. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 59. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 60. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 61. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Juegan al fútbol (soccer)

- | | | | | |
|---------------------|-------|-------------|--------------|----------------|
| 62. ___ Madre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 63. ___ Padre | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 64. ___ Hijos | Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 65. ___ Otros _____ | Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Otras actividades:

EL HÁBITO DE FUMAR - ¿HAN HECHO LO SIGUIENTE?

Hablan con sus hijos desde muy temprana edad acerca del daño que le hace a su cuerpo el hábito de fumar.

Lo Hacen No lo hacen

¿Alguien fuma en su familia?

Quien: _____ No fuman

La persona que fuma quiere dejar de fumar

Lo desea No lo desea No fuman

Permiten que las personas fumen en su casa (o ponen un aviso que dice: "Gracias por NO FUMAR.")

Lo hacen No lo hacen

Practica con mi hijo(as) cómo decir NO a los cigarrillos.

Lo hacen No lo hacen
¿Se compartió la información?

1. Con quién compartió la información. (Marque lo que crea necesario e indique que tema compartió)

	Sal, Sodio Presión Arterial	Colesterol Grasa	Actividad Física	Hábito de Fumar
<input type="checkbox"/> Con mis vecinos	_____	_____	_____	_____
<input type="checkbox"/> Amistades en otras ciudades	_____	_____	_____	_____
<input type="checkbox"/> Los parientes en los USA	_____	_____	_____	_____
<input type="checkbox"/> Amistades en mi país de origen	_____	_____	_____	_____
<input type="checkbox"/> Las personas con quien trabajo	_____	_____	_____	_____
<input type="checkbox"/> Otras (especifique)	_____			
<input type="checkbox"/> No comparti información	_____	_____	_____	_____

GRACIAS

.APPENDIX C

HEALTH INDICATOR MEASUREMENTS

APPENDIX D

STUDY COMPARISONS

APPENDIX E

APPENDIX F

**BIMONTHLY PRESENTATIONS AT THE WAY OF THE HEART (WHPI)
1 HOUR FORMAT**

DATE	LOCATION	NUMBER OF PARTICIPANTS
SEPTEMBER 13 03	WHPI Classroom	10
OCTOBER 20 03	WHPI Classroom	7
NOVEMBER 14 03	WHPI Classroom	9
DECEMBER 16 03	WHPI Classroom	13
JANUARY 5 04	WHPI Classroom	15
21 04	WHPI Classroom	9
FEBRUARY 16 04	WHPI Classroom	14
26 04	WHPI Classroom	18
MARCH 4 04	WHPI Classroom	15
16 04	WHPI Classroom	14
APRIL 22 04	WHPI Classroom	14
MAY 4 04	WHPI Classroom	16
JULY 8 04	WHPI Classroom	11
AUGUST 23 04	WHPI Classroom	19
TOTAL	14	184

COMMUNITY PRESENTATIONS - 1.5 TO 2 HOUR FORMAT

DATE	LOCATION	NUMBER OF PARTICIPANTS
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JANUARY 20 04	WHPI Classroom	7
MARCH 5 04	Valdez family residence, Nogales	15
18 04	Food Bank, Nogales	66
19 04	Head Start, Rio Rico, AZ	27
23 04	WHPI Classroom	10
APRIL 2 04	Presbyterian Church, Nogales	6
MAY 31 04	Methodist Church, Nogales	9
JUNE 3 04	Presbyterian Church, Nogales	7
AUGUST 27 04	Diamond House, Nogales	222
SEPTEMBER 9 04	Community Center, Nogales	66
SEPTEMBER 23 04	Juntos Unidos, Nogales	15
30 04	Wilson-Batiz Food Bank, Nogales	66
OCTOBER 10 04	Teyechea Park Festival, Nogales	16
OCTOBER 18 04	Baptist Church, Nogales	25
OCTOBER 21 04	Head Start, Rio Rico	27
NOVEMBER 26 04	Food City Store, Nogales	100
JANUARY 14 05	Head Start, Nogales	13
FEBRUARY 2 05	Senior Center, Nogales	36
FEBRUARY 10 05	Mexicayotl Charter School, Nogales	44
14 05	Community Center, Nogales	32
18 05	Head Start, Nogales	30
18 05	Head Start, Rio Rico	15

MARCH 15 05	HIPPI Program, Nogales	11
16 05	Methodist Church, Nogales	16
JUNE 13 05	Community Center, Nogales	15
16 05	Senior Center, Nogales	14
SUBTOTAL	26	910

PLATICAS – 50 MINUTE FORMAT

DATE	LOCATION	NUMBER OF PARTICIPANTS
JANUARY 20 04	Polanco family residence, Rio Rico	7
MARCH 9 04	Lopez family residence, Nogales	6
11 04	Mountain Point Apts., Nogales	6
16 04	De la Rosa family residence, Rio Rico	6
16 04	Loma Linda Apts., Nogales	7
17 04	Santa Cruz County Building, Nogales	5
22 04	Mi Casa Trailer Park, Nogales	6
APRIL 2 04	Thomas family residence, Nogales	6
23 04	Pazos family residence, Nogales	6
30 04	Pazos family residence, Nogales	6
MAY 31 04	Balbuena family residence, Nogales	6
JUNE 1 04	Garcia family residence, Nogales	7
10 04	Thomas family residence, Nogales	5
31 04	Head Start, Nogales	14
AUGUST 7 04	Castro family residence, Nogales	9

10 04	Araujo family residence, Nogales	7
17 04	Castro family residence, Nogales	12
24 04	Caballero family residence, Nogales	10
OCTOBER 1 04	Estrada family residence, Nogales	17
2 04	Agosttini family residence, Rio Rico	7
6 04	Valdez family residence, Nogales	15
8 04	Buelna family residence, Nogales	9
9 04	Jimenez family residence, Nogales	6
15 04	Spiner family residence, Nogales	14
17 04	Preston Trailer Park, Nogales	5
22 04	Caballero family residence, Nogales	9
28 04	Castro family residence, Nogales	10
NOVEMBER 5 04	Estrella family residence, Nogales	5
12 04	Garcia family residence, Nogales	10
12 04	Mountain Point Apts., Nogales	6
16 04	Community Center, Nogales	7
17 04	Saucedo family residence, Rio Rico	6
25 04	Loma Linda Apts., Nogales	7
DECEMBER 2 04	Mi Casa Trailer Park, Nogales	6
9 04	Head Start, Nogales	14
JANUARY 28 05	Salazar family residence, Nogales	7
FEBRUARY 11 05	Berny family residence, Nogales	14
MARCH 15 05	Castillo family residence, Nogales	14

23 05	Pete Kitchen Trailer Park, Nogales	4
APRIL 6 05	Pete Kitchen Trailer Park, Nogales	4
JUNE 15 05	Community Center, Nogales	9
SUBTOTAL	41	336

WORKSHOPS – 3 HOUR FORMAT

DATE	LOCATION	NUMBER OF PARTICIPANTS
FEBRUARY 17 2004	WHPI- Guest speaker, Dr. Amilcar Ruelas Director of Health Promotion, State of Sonora, Secretaria de Salud Publica. Topic: cholesterol	19
FEBRUARY 23 2004	WHPI – Guest speaker, Dr. Lorenzo Arias Universidad Iberoamericana. Topic: well- balanced diets	24
OCTOBER 8 2004	WHPI – Guest speaker, Dr. Monica Martinez, Asociacion de Diabetes Mexicana. Topic: heart disease and diabetes	17
MAY 4 2005	WHPI – Guest Speaker, Dr. Jose Garcia – Gonzalez, Hospital de Socorro. Topic: cerebrovascular disease and stroke	16
SUBTOTAL	4	Participants 76

COOKING DEMONSTRATIONS/COMMUNITY

DATE	LOCATION	NUMBER OF PARTICIPANTS
FEBRUARY 10 04	Nogales Neighborhood Center	33
MARCH 1 04	Nogales Neighborhood Center	19
8 04	Head Start, Nogales,	19
18 04	Food Bank, Nogales	66
31 04	Head Start, Nogales	14
APRIL 14 04	Food Bank, Nogales	100
28 04	Food Bank, Nogales	101
MAY 12 04	Food Bank, Nogales	101
26 04	Food Bank, Nogales	103
JUNE 16 04	Food Bank, Nogales	100
JULY 14 04	Food Bank, Nogales	100

AUGUST 4 04	Food Bank, Nogales	100
OCTOBER 13 04	Food Bank, Nogales	100
DECEMBER 8 04	Food Bank, Nogales	100
JANUARY 18 05	Food Bank, Nogales	100
MARCH 3 05	Food Bank, Nogales	101
APRIL 7 05	Food Bank, Nogales	101
TOTAL	17	Participants 1358

COOKING DEMONSTRATIONS/SUPERMARKETS

DATE	LOCATION	NUMBER OF PARTICIPANTS
FEB 10 04	Safeway, Nogales	54
MARCH 9 04	Safeway, Nogales	73
25 04	Food City, Nogales	100
APRIL 6 04	WalMart, Nogales	76
MAY 11 04	Safeway, Nogales	80
JUNE 22 04	Garrett's Supermarket, Rio Rico	75
AUGUST 3 04	WalMart, Nogales	82
OCTOBER 19 04	WalMart, Nogales	102
NOVEMBER 16 04	Safeway, Nogales	87
JANUARY 17 05	Garrett's Supermarket	46
MARCH 10 05	Garrett's Supermarket, Rio Rico	69
17 05	Food City, Nogales	89
31 05	Garrett's Supermarket, Rio Rico	78
APRIL 22 05	Garrett's Supermarket, Rio Rico	72
MAY 9 05	Food City, Nogales	66
TOTAL	15	Participants 1149

DATE	LOCATION	NUMBER OF PARTICIPANTS
FEBRUARY 11,12, 17,18, 19, 24, 25 04	Safeway, Food City, Garrett's IGA, Veteran's Market	13
SEPTEMBER 24, OCTOBER 1, 5, 13, 19, 20, 26, 27 04	Safeway, Food City, Garrett's IGA	16
SUBTOTAL	14	Participants 29
TOTAL		Participants 3753

SUPERMARKET TRIPS/CHOOSING HEALTHY FOOD SKILL BUILDING

APPENDIX G

Volunteers & Volunteer Cohort

Youth Volunteers, ages 14-18 years

Abbey Caballero	Betsy Lopez	Janelle Bachelier
Palomer Valenzuela	Dianna Atayde	Roxanna Diaz
Filypia Valenzuela	Adeline Renteria	Cathy Garcia
Evelyn Cuen	Yamie Gomez	Adelice Legleu
Blanca Eliz. Palomeya	Evelyn Moreno	Danitza Morales
Montse Cazares	Lizette Tapia	Jesusita Ley

Adult Volunteers, ages 20-64 years

Roberto Huerta	Laura Rebeil	Ana Olea
Alma Diaz	Haydee Cabrera	
Maria Nunez	Maria Amavisca	Rosa Elia Martinez
Rosario Vargas	Josefina Merino	Aracely De La Rosa
Carmen Rivera	Patricia Baca	Lupita Guevara
Luz Esther Anaya	Monica Morales	Michelle Romero
Ma. Trinidad Puig	Celfa Maldonado	Belia Quintero
Carmela Larrañaga	Maricela Estrella	Ana Yepiz
Diana Nunez	Mary Parra	Dolores Knapp
Amalia Ojeda	Frances Avila	Nora Leon
Lupita Estrella	Oscar Leal	Jesús Martinez
Alejandra Castro	Gloria Aguilar	Jesús Parra
Dora Parra		

Adult Volunteers, ages 65-80 years

Socorro Burbion

APPENDIX H

APPENDIX I

APPENDIX J