

Development, Adaptation, and Implementation of a Cardiovascular Health Program for Alaska Native Women

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Southcentral Foundation's Traditions of the Heart program is an innovative cardiovascular disease prevention program for women designed to build on the strengths of the Alaska Native culture as a way to support and encourage positive lifestyle behaviors that focus on healthy eating, active living, stress management, and tobacco cessation. After conducting assessments of existing intervention programs and formative data collection, we adapted two existing programs, Native Nutrition Circles and A New Leaf . . . Choices for Healthy Living, to develop the Traditions of the Heart program. We implemented and evaluated a pilot intervention study to determine the program's acceptance among Alaska Native women. We used the evaluation results to further refine our study protocol. This article describes the adaptation of these programs to the cultural needs and strengths of Alaska Native women and the results of the formative evaluation used to improve the program design. The complete pilot study outcomes will be published separately.

Keywords: cardiovascular disease prevention; cardiovascular health; Alaska Natives; lifestyle interventions; women's health, nutrition; physical activity; tobacco; WISEWOMAN; stress management; Traditions of the Heart

The traditions of the Alaska Native people emphasize the importance of family, an active subsis-

tence lifestyle, and a spiritual connection with the earth. As recently as 50 years ago, diseases of the heart were not a major cause of death among Alaska Natives (Alaska Department of Health and Social Services [AKDHSS], 2000). However, the traditional way of life has changed drastically during the past century with the influx and influence of many other ethnic groups into the state (Kawagley, 1995).

Traditionally, Alaska Natives have had low rates of cardiovascular disease (CVD); however, these rates have risen to surpass rates of Alaska Whites (AKDHSS, 2000). The purpose of this article is to describe the development, adaptation, and implementation of a CVD intervention program to meet the unique needs of Alaska Native women by providing guidance, education, and support for developing healthy lifestyles.

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► CVD RISK FACTORS

The increase in risk factors for CVD such as obesity, hypertension, high cholesterol, and diabetes in Alaska Natives reflects urbanization and lifestyle changes (Alaska Division of Public Health, 1997; Ebbesson, Schraer, Nobmann, & Ebbesson, 1996; Ebbesson, Schraer, & Risica, 1998; Schraer, Adler, Mayer, Halderson, & Trimble, 1997). Self-reported data indicate that 44% of Alaska Natives smoke, compared to 23% of Alaska non-Natives, 26% lead a sedentary lifestyle versus 20% of Alaska non-Natives, and 18% eat five or more fruits and vegetables a day, whereas the national average is 23% (AKDHSS, 2000).

Few studies on lifestyle behaviors and CVD risk factors in Native populations have been conducted. Native populations across North America have a high risk for CVD because of high rates of diabetes, obesity, smoking, and inactivity (Anand et al., 2001; Harris et al., 2002; Scavini et al., 2003; Thompson et al., 2002; Welty et al., 2002). No previous research focused specifically on Alaska Native women.

► CULTURAL CHANGE

The introduction of Western culture in Alaska Native villages and cities has had a definite impact on Native people. Alaska Natives found their traditions and heritage were less accessible in urban settings, making sustaining traditional lifestyles increasingly difficult and leading many to adapt to modern culture (Kawagley, 1995). Alaska Native women may have been particularly affected given their role in maintaining traditions and providing food for their families. Westernization brought many options that were not aligned with the traditional way of life and were often at odds with a healthy lifestyle. Traditional subsistence foods were less available than commercially produced and processed foods (Adler, Boyko, Schraer, & Murphy, 1996; Murphy et al., 1995). Activity levels of Native women declined as subsistence activities decreased with Westernization (Kawagley, 1995).

► BACKGROUND

Southcentral Foundation, an Alaska Native owned and managed tax-exempt regional health corporation operating under the tribal authority of Cook Inlet Region, Inc., works to improve the health and well-being of Alaska Natives and American Indians through the development and implementation of comprehensive, relationship-based, health-related services that meet changing needs and empower individuals and families to take charge of their lives. Southcentral Foundation operates the outpatient health care services for Alaska Natives and American Indians living in the south central region of Alaska including the city of Anchorage and more than 55 villages, many accessible only by air or water travel.

In 1995, the Centers for Disease Control and Prevention developed the Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN) program to offer screening and intervention for obesity, inactivity, high blood pressure, high cholesterol, and poor dietary habits—all risk factors for heart disease—to uninsured and underinsured women (Will et al., 2001). The primary goals of the WISEWOMAN program are to identify women with screening values indicative of higher risks for heart disease (high cholesterol, blood glucose, and blood pressure values) and to develop and test culturally appropriate interventions that might help reduce these risk factors (Centers for Disease Control and Prevention [CDC], 2003). Initial results from the North Carolina and Massachusetts WISEWOMAN programs indicate that enhanced intervention groups realized a greater decline in 10-year estimated coronary heart disease death rate than minimum intervention groups (Rosamond et al., 2000).

Experts have recognized the need to develop culturally appropriate interventions for ethnic and racial minority groups to increase the salience of the intervention and address appropriate issues related to behavior change (Kumanyika et al., 2003). Research has shown

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that interventions must take the culture of the population into account to be effective (Cassidy, 1994).

In 1999, Southcentral Foundation applied for funding to initiate a WISEWOMAN program in Anchorage and surrounding communities. In this article, we describe the development and pilot testing of Traditions of the Heart, a CVD intervention program that focuses on the cultural needs and traditions of Alaska Native women.

METHOD

Review of Existing Interventions

Our primary program development team consisted of a nurse practitioner, a registered nurse, three dietitians, and an exercise specialist. We reviewed the literature for existing interventions and were unable to find any that met all of the needs of the Alaska Native population. After extensive research into behavioral change intervention programs, we identified two programs that could be adapted to address the strengths and needs of Alaska Native women: Native Nutrition Circles, operated by the Center for American Indian Research and Education (CAIRE) at the University of California, Berkeley (Hodge, Fredericks, et al., 1999), and A New Leaf . . . Choices for Healthy Living (Ammerman, Samuel-Hodge, et al., 1998) developed for the North Carolina WISEWOMAN program.

Native Nutrition Circles

Native Nutrition Circles, a 12-week program emphasizing nutrition, started each session with a traditional Native story. Professional staff led the intervention sessions in a clinic setting. The format was that of a talking circle with each client given a turn and encouraged to participate. We included the program format and similar nutrition topics in Traditions of the Heart; however, we expanded the substantive portions of sessions to include physical activity, stress management, and tobacco information to offer a more holistic approach to total wellness.

A New Leaf

A New Leaf is a structured nutrition and physical activity assessment and counseling program for CVD risk reduction among low-income individuals. The program, which primarily focuses on women, was designed to: identify positive as well as atherogenic dietary behaviors (e.g., high-fat diet, low intake of fruits and vegetables); assess types and levels of physical activity; assess smoking habits and desire to quit; identify individual barriers to lifestyle modification; guide counseling by nonspecialist health care and lay providers; serve as a self-help guide or tool for group discussions; and facilitate goal setting and self-monitoring.

A New Leaf was originally developed for low-income adults with limited literacy skills residing in the southeastern United States. The principal tool of the program was a lifestyle assessment and counseling manual that emphasized practical strategies for change. The 60-page manual was written at approximately a 6th-grade reading level, in a user-friendly format that includes numerous graphics and visuals; highlights dietary habits common in the southeastern United States; features an 88-page cookbook with low-fat "southern-style" recipes; and includes a physical activity section tailored to middle-aged and older women who lack easy access to exercise facilities.

A New Leaf originated as a nutrition intervention and included a dietary assessment tool and corresponding nutrition health tips. The Dietary Risk Assessment, a brief food frequency instrument tailored to a Southern diet, has been validated (Ammerman, Haines, et al., 1991). In previous studies, the nutrition intervention has been associated with reductions in cholesterol levels and improved dietary intake among low-income men and women in rural North Carolina (Keyserling, Ammerman, Atwood, et al., 1999; Keyserling, Ammerman, Davis, et al., 1997). The physical activity intervention component of A New Leaf resulted in a modest but statistically significant increase in physical activity among African American women with type 2 diabetes (Keyserling, Samuel-Hodge, et al., 2002). Although A New Leaf offered many positive elements in terms of assessing and promoting behavior change among high risk, low-income women, the emphasis on southeastern culture was clearly inappropriate for Alaska Native women. Therefore, Southcentral Foundation staff used formative data collected from Alaska Native women to adapt the intervention.

Formative Data Collection

To ensure that the Alaska WISEWOMAN intervention was designed by and for Alaska Native women, to identify topics of interest, and to understand effective ways to reach Alaska Native women with health messages, we collected extensive formative data regarding diet and physical activity habits, preferred learning styles, and barriers to lifestyle change. We gathered information from several sources, including Alaska Native and American Indian researchers, Alaska Native staff members, and community members to ensure that all program components were designed with an understanding of and emphasis on Alaska Native cultures.

To ensure that the intervention was designed by and for Alaska Native women and to understand effective ways of reaching Alaska Native women with health messages, we asked eligible women what they thought of the ideas we were considering adapting. We surveyed 43 Alaska Native women aged 40 to 64 years in outpatient clinic waiting rooms over a 4-week period. We asked questions regarding topics of interest in nutrition such as recipes and shopping tips, and in physical

TABLE 1
Lessons Taught in the Traditions of the Heart 12-Week Intervention Program

<i>Physical Activity</i>	<i>Nutrition</i>	<i>Traditional Wellness</i>	<i>Tobacco Information</i>
1. Introduction to physical activity	Heart-healthy eating	What is stress?	The effects of smoking
2. Stretching exercises	Your cholesterol number	Dealing with stress	What happens when I quit?
3. Safety tips for exercise	The food guide pyramid	Physical effects of stress	The risks of smoking with R-I-S-K-Y Bingo
4. Checking your heart rate	Reading the food label	Stress and illness	The benefits and rewards of quitting with I-Q-U-I-T Bingo
5. Strength exercises with Therabands(r)	Spice it up without salt!	Warning signs of stress	A story of cessation
6. Using a pedometer	Good food choices	What is relaxation?	What will work for me?
7. Making a plan for physical activity	Eating when you're not at home	Relaxation techniques	Video: It's Your Life (Hodge, Cummings, et al., 1992)
8. The activity pyramid	Budgeting fun on the run	Time management	Alaska Tobacco Control Alliance's Trail Guide to Being Smoke-Free*
9. Chair exercises	Helping others make healthy food choices	Positive thinking	
10.		Supportive relationships	
11.		Using traditional activities to reduce stress	

*SOURCE: Alaska Department of Health and Social Services (2001).

NOTE: All four components were not presented every week. We concentrated on gathering data with questionnaires during the 1st and 12th weeks. One week of the intervention was devoted to nutrition and one to physical activity; we did not present tobacco information during these weeks.

activity such as overcoming barriers and preferred activities. We also identified convenient meeting times, locations, and methods of information delivery preferred.

Survey responses indicated that Alaska Native women felt strongly that the new program should be sensitive to Alaska Native culture, including dietary habits, physical activity practices, and modes of intervention delivery. Formative survey results indicated women would attend small group gatherings, preferably in the evening, and would favor receiving messages in an interactive format rather than lecture. The survey results combined with information derived from research and A New Leaf were used to further develop the nutrition and physical activity assessments and classroom components.

Informal surveys of Alaska Native staff provided data to develop a list of the most frequently eaten Native foods. In addition, nutrition professionals experienced in working with Alaska Native women were asked to review the list and make suggestions for additions and omissions. A list of 29 most frequently eaten Native foods was compiled and used to conduct a telephone

survey among 84 Alaska Native women aged 35 to 65 years over a 2-week period in the winter and 2 weeks in the spring. Survey respondents were given the opportunity to add foods not listed that they ate frequently. Survey respondents included Alaska Native women who recently migrated from rural villages and Alaska Native women who had lived all their lives in urban settings. Through these surveys, we gathered information about frequency of use of subsistence and traditional foods such as berries, dried fish, bird eggs, muktuk, agutuk, seal oil, smelt, and wild greens to include in the dietary assessments, program lessons, and recipes.

The information gathered in the outpatient clinics and through telephone surveys was used to adapt the Native Nutrition Circles and New Leaf intervention programs to develop Traditions of the Heart.

Several staff members had years of experience working with Alaska Native women in women's health, community health, and social work programs. Through their observations and experiences, we identified a need to address the stressors Alaska Native women were experiencing and developed a stress management component for the intervention.

Overall Program Approach

Based on the formative data, we decided to draw on A New Leaf for diet, physical activity, tobacco use assessment, and counseling tools and use the supplemental materials to help create curriculum guides for class sessions. A New Leaf materials were adapted to coincide with the 12-week intervention concept adopted from the Native Nutrition Circles program. The intervention format consisted of initial lifestyle assessments followed by interactive nutrition, physical activity, stress management, and tobacco use lessons and three individual goal setting sessions (see Table 1). Each week, a team-taught intervention was presented to groups of 8 to 12 women. The information presented was available in the program manual for future reference and clarification. We created corresponding display boards to enable participants to visualize all components of the lessons.

Program Name

It was quickly determined that A New Leaf or the concept of "turning over a new leaf" was not a commonly used idiom in the Alaska Native population. Because of this and the strong interest among participants in building on Alaska Native culture and heritage, we changed the name to Traditions of the Heart, a title well received by the Alaska Native community.

Program Insignia

We needed a symbol that represented our unique program and attached meaning to the name by illustrating what these traditions were. A Native woman and staff member used background information on our program to create a symbol illustrating health-promoting Native traditions specifically for Traditions of the Heart. The symbol is an original heart-shaped monochromatic drawing incorporating traditional foods and women from many of the Alaska Native tribes. It depicts a Native woman and her granddaughter weaving a birchwood basket, emphasizing the importance of family and carrying on traditions. A wood-carved salmon represents regions of Alaska where paddles and homes are adorned with these carvings. Other traditional activities including picking cranberries, blueberries, and salmon berries; collecting goose eggs; fishing; hunting; and drying fish, representing hunting and gathering activities. The design tells a story of Alaska Native women and traditional ways that the Traditions of the Heart intervention program aimed to preserve (see Figure 1).



FIGURE 1 Traditions of the Heart Program Insignia Designed and Illustrated by Native Artist Yolanda Talbert, RN

Cultural Adaptation of New Leaf Materials

A multidisciplinary work group composed of registered dietitians, nurse practitioners and a registered nurse, an exercise specialist, and a graphic artist adapted A New Leaf to the Alaska Native population. Formative data were used to modify the dietary risk assessment tool from New Leaf to reflect the culturally important foods of Alaska Natives, develop a stress management component, and adapt the tobacco-use section to reflect the use of smokeless tobacco. Surveys and interviews identified the many differences in dietary habits, physical activity opportunities, and stressors in Alaska compared to the southeastern United States.

Nutrition

Some foods not relevant to Alaska Natives such as grits, biscuits, and hush puppies were removed whereas dairy products common in Alaska such as canned and powdered milk were added. References to special occasions were changed from picnics to potlatches. Nutrition lessons were modified from A New Leaf, and interactive lesson plans, involving food models, cooking

demonstrations, and mix-your-own salt-free spices were created to match the manual. Because of the high cost of fresh fruits and vegetables, Traditions of the Heart emphasized the healthfulness of canned and frozen fruits and vegetables and traditional foods such as berries and ferns.

We compiled a cookbook that contained 100 recipes and featured heart-healthy food preparation with recipes using subsistence foods and easily obtainable foods, similar to that used with A New Leaf. Nutritionists analyzed the nutrient content of each recipe using the Nutrition Basics(r) software program.

Physical Activity

How Active Are You?, a modified version of A New Leaf's physical activity assessment, addressed occupational, household, leisure, and recreational activities during a typical day or week in the past 4 weeks. Many examples of each type or level of activity were expressed in each question to help respondents gauge intensity and to facilitate activity participation recall. Examples of activities were modified from A New Leaf with information on more common Alaska Native activities that was gathered from clinic surveys.

We developed four new sections, not included in A New Leaf, for the physical activity component including lessons titled Checking Your Heart Rate, Using Your Pedometer, Making a Plan for Physical Activity, and The Activity Pyramid. Other sections, including stretching, strengthening, and chair exercises, were modified. In addition, we created lesson plans to go with each section of the manual and provided an opportunity for activity and for participants to practice what they had learned during each intervention session.

Tobacco Use

We incorporated the A New Leaf questionnaire on smoking in its entirety into the Traditions of the Heart assessment packet. We added three questions pertaining to smokeless tobacco because the use of smokeless tobacco by Alaska Native women is well documented (Kaplan, Lanier, Merritt, & Siegel, 1997). Tobacco information was not included in the program manual because a separate tobacco cessation guide tailored for Alaskans already existed; however, lessons were dedicated to sharing information with participants during 8 of the 12 intervention sessions. These lessons involved Bingo games for learning the risks of tobacco use and the benefits of quitting, true/false exercises with statements about smoking, and guest speakers telling their "stories of quitting."

Stress Management

We included self-efficacy and cultural adaptation questions in the social support assessment. Questions were selected from existing questionnaires and adapted

to meet the needs of Alaska Native women. We developed a stress management component for the intervention, also referred to as Traditional Wellness, with an emphasis on using traditional Alaska Native methods for dealing with stress. The group leader used storytelling, imagery, drumming, and relaxation methods to guide women in managing their own daily stress.

Graphic Redesign

We wanted to focus on cultural traditions when promoting healthy foods and activities and to develop a manual with which Alaska Native women could easily identify. The Traditions of the Heart manual features photographs of readily accessible foods and photos of Alaska Native women performing exercises that replaced computer graphics used to depict foods and exercises in A New Leaf. We gathered popular and traditional foods including pilot bread, berries, fiddlehead ferns, salmon, and herring and took still photos of them for use in the manual. Other affordable and available foods representing healthy choices such as applesauce, canned fruits, and frozen vegetables were used. The manual illustrated the food guide pyramid with photographs of local foods and brands.

Native staff members volunteered as models and were photographed to illustrate the activity portion of the Traditions of the Heart manual that depicted women performing activities including walking, bicycling, and stretching. Sections describing stretching, strengthening, and chair exercises included photographs of Native women performing each individual exercise. The activity pyramid depicted typical Alaska Native activities including fishing, kayaking, hiking, and berry picking.

Implementation—the Pilot Study

A 12-week pilot intervention was implemented to test the effectiveness of the program format, materials, and content. Forty-four apparently healthy women who enrolled in the study and were randomized to the intervention group were called over a 2-week period by program staff and offered a choice of four weekly meeting times: one morning, one afternoon, and two evening options. We asked participants to select a day and time that fit their schedule and to attend the same meeting time throughout the 12 weeks. The meetings were held in a hospital conference room, and women were offered taxi vouchers if they needed transportation. Of the 44 women, 37 attended at least two intervention sessions, 28 attended at least six, and the average number of sessions attended was eight. Seven participants declined the intervention, had scheduling conflicts, or could not be contacted. The average age of intervention participants was 52.4 years.

Facilitators presented the same information using the same methods and lesson plans in each of the four groups. The program manual was used as a guide, and

four facilitators, including a nutritionist, exercise specialist, registered nurse, and traditional wellness leader, involved participants in all learning. Participants often shared stories and life experiences. Class leaders received training in facilitation and individual counseling through role-playing.

Participants received weekly reminder calls about the group sessions. They received several incentives for participation including pedometers, tote bags, a program manual and cookbook, Therabands(r), food and activity logs, water bottles, travel mugs and T-shirts. Door prizes were awarded most weeks using random drawings and consisted of gift certificates to local grocery stores, heart-healthy cookbooks, and insulated lunch bags.

Following the intervention, we assessed behavior change based on pre- and postintervention assessment responses. Outcome results from the pilot study identifying areas of behavior change will be published separately.

Evaluation

Following the pilot intervention program, we asked participants to evaluate their experiences and provide information to assist us in making changes to further improve the program. Fourteen of the 28 (50%) participants who completed at least six intervention sessions completed an anonymous evaluation form and provided many positive responses as well as criticisms that enabled us to further refine the program. Participants responded on a 4-point Likert-type scale; 1 being the *worst* and 4 being the *best*.

In an effort to determine whether the prescribed length of the intervention was acceptable, we asked questions regarding the 12-week sessions and 2-hour gathering times. Of participants, 83% thought the 2-hour gathering times were "just right"; 72% found the 12-week intervention lengths to be "just right" while 17% thought they were "too long" and 11% "too short."

We used evaluations to determine whether participants found the program materials and intervention components acceptable and to identify areas of interest not covered in the intervention. Of participants, 44% found the assessments to be "hard" or "a little hard," while 55% thought they were "easy" or "very easy." More than three fourths of participants thought the program manual was very useful and would continue to use the manual and cookbook at home following the 12-week intervention. One woman wrote, "I could not think of all of the stuff we learn(ed) but we still have our book to fall back on." Seventy-two percent found the individual counseling and goal setting to be very helpful. Other topics of interest identified in the evaluations included information on the functions of the heart, recognizing a heart attack, menopause, and family activities. The most enjoyable topics in the intervention program were, in order of preference: exercise, nutrition,

and stress management while the least enjoyable was tobacco information.

During each of the 12 sessions, participants sampled a recipe from the Traditions of the Heart cookbook. Of participants, 89% felt the taste testing was "very helpful" while 67% thought the recipes were "very good." The recipe sampling was included to encourage women to use the recipes and the ideas in the cookbook to modify favorite recipes at home. One participant wrote on her final evaluation, "I have enjoyed all segments of the Traditions of the Heart program. I will treasure the cookbook!"

The 12 weeks of gatherings developed into social support groups for the participants. Many women attended for the camaraderie; learning about healthy lifestyles was a bonus: "I liked the way we all share stories and ourselves with each other, it brings our group closer." "There was something about the setting that was making me willing to change for the better." "I have especially enjoyed the sharing and laughter of the other group members." When asked, "What topics did you enjoy most?" one woman responded, "The women in the group." Women found that the groups gave them the confidence and knowledge they needed to make lifestyle changes. Comments from participants indicated that incentives such as the "water bottle, rubber exercise bands, and step counters helped reinforce health improvement as the program goal."

Participants also provided feedback on the program insignia designed to incorporate many Alaska Native traditions in diet and activity. One woman said, "I liked the design because it shows what we do and mean to others in this world."

We used the information collected in the overall evaluations to make final changes to the intervention materials and to modify program structure to better meet the needs of Alaska Native women. We reviewed and simplified the assessment tools. We added components describing the heart as a muscle and information on warning signs for heart attack and stroke to the physical activity portion and incorporated community and family resources for all four components.

> DISCUSSION

Lessons Learned

The pilot study for the Traditions of the Heart program allowed us to make changes before full implementation. The following six concepts surfaced as lessons learned that may be helpful to others designing intervention programs for specific populations.

1. Adaptation is more efficient than invention. A New Leaf and Native Nutrition Circles provided excellent foundations for the development of Traditions of the Heart. By adopting the 12-week program structure and traditional storytelling from Native Nutrition Circles, we established a guideline for

developing the program lesson plans and consistently focused on the importance of Alaska Native traditions. Because the A New Leaf manual and assessment formats were already tested and successful, we were confident in using them. Collaboration with North Carolina WISEWOMAN project organizers regarding development methods and logistical concerns saved time and effort.

2. Participation from Alaska Native women and staff experienced in working with Alaska Natives were important assets. Input and guidance from Alaska Native women were invaluable in creating a program especially for Alaska Native women. Staff members acknowledged from the beginning that we needed and valued input from Alaska Native women and by doing so created a program that Alaska Native women were willing to try. The importance of knowing the cultural needs and interests of the target population was achieved by enlisting experienced staff members and gathering information from the intended audience through surveys and comments on materials at each stage of development. Using photographs of local foods and Alaska Native women, incorporating commonly eaten, obtainable, and affordable foods and including activities specifically available in Alaska helped Alaska Native women relate to the materials. The program is serving numerous communities within the largest urban area in the state. It serves women from villages across Alaska who have migrated to the city center within the past year and women who have lived their entire lives in the city and have few ties to traditional Alaska Native ways. Traditions of the Heart provides a common ground for Alaska Native women to join together, experience traditions, and learn healthier ways of living by incorporating traditions and minimizing modern conveniences in their lifestyles.
3. Qualitative follow-up data suggest that the use of traditional wellness concepts appeared to help improve attendance. The acknowledgement of traditional wellness concepts and the Alaska Native culture, exemplified by the inclusion of storytelling and relevant information in each session, was key to retaining participant interest and creating a safe, supportive environment. As the 12 weeks progressed, women became supportive of each other and developed friendships among themselves. They began asking where other participants were if they missed a session. One participant commented, "The leaders were very thoughtful to what the group wanted and sensitive to the Native way. Everyone was made to feel welcome and it was easy to talk."
4. Participants reported that incentives helped reinforce behavior change. Incentives such as pedometers, spice mixes, low-fat cookbooks, and food and activity logs gave participants the tools they needed to make changes in their lifestyles and complemented the weekly lessons. Incentives may be more effective in enhancing participation if they were advertised. Although participants received several incentives for participation, the incentives were not advertised and therefore not expected in return for attendance. If participants were notified about the

weekly incentive or door prize prior to the group meeting, it may increase the regular attendance rate.

5. A multidisciplinary team created a holistic intervention. From the beginning, nutritionists, nurse practitioners, an exercise specialist, a registered nurse, and a graphic designer worked together to adapt and develop the Traditions of the Heart program. By integrating specialties and maintaining open communications, we ensured a focus on the whole self. This reflected the Alaska Native way of approaching life holistically and led to the integration of all health components.
6. Materials developed for specific cultures are acceptable and easily understood. By using photos of Alaska Natives participating in activities and featuring foods and recipes using subsistence and traditional foods, Alaska Native women were able to relate to the materials. We used the data collected through formative research and our knowledge of Alaska Natives to identify the strengths of the culture and build on them while establishing the program. The Southeast Alaska Regional Health Consortium, another Alaska Native health corporation with a WISEWOMAN program headquartered in Sitka, Alaska, used our materials in their entirety. They realized the importance of emphasizing the subsistence lifestyle and tailoring a program to the needs of Alaska Native women. Alaska Native women from Southeast Alaska were able to relate to the Traditions of the Heart materials because they referenced subsistence foods and available physical activity.

➤ CONCLUSIONS

Southcentral Foundation staff dedicated extensive time and effort to the development and adaptation of Traditions of the Heart program materials and intervention design to be culturally relevant for Alaska Native women. We found that many women shared information with their families and friends, therefore extending the impact beyond the targeted gender and age group. The adaptation and development of Traditions of the Heart provides a model and resource for other programs in Alaska by emphasizing the healthfulness of traditional foods and activities. Because Traditions of the Heart is sensitive to traditions and Native ways, the program manual and format could be adapted to other Native groups across the country by not only incorporating photos, traditional activities, and foods from the region in which it would be used but also considering the strengths of the community and building the framework of a program around these strengths.

We recently expanded the program by offering an intervention session in a community outside the city center. The service area of Southcentral Foundation spans across 55 villages in the south central region of Alaska. We plan to further develop the program by working with rural communities in this region and tailoring the intervention to meet the needs of women living in these areas.

Planning and development for Traditions of the Heart occurred during 2000, and the program was fully implemented in Southcentral Foundation's Anchorage Native Primary Care Center in 2001. We currently have more than 700 women enrolled in the study, and more than 200 have participated in the intervention program. We are evaluating the effectiveness of the intervention sessions using pre- and postintervention self-report assessments and annual physiologic and anthropometrical measures. A manuscript with complete pilot study outcomes was published separately (Witmer, Hensel, Holck, Ammerman, & Will, 2004).

APPENDIX

An Overview of the Traditions of the Heart Intervention Program

- Team-taught, 12-week intervention program with an emphasis on nutrition, physical activity, traditional wellness, and tobacco information in an interactive learning environment.
- Each participant completed a battery of self-reported questionnaires in the 1st and 12th week of the program.
- Participants received individualized counseling based on their responses to the assessments and set goals using the Traditions of the Heart manual during the 2nd, 5th, and 11th week of the program.
- Participants received the Traditions of the Heart manual and cookbook in the 2nd week of the program. Each topic in the manual was covered in a classroom session, and hands-on activities were used to deliver the information.
- Display boards were used to provide a visual method of presenting information.
- Door prizes and incentives including tote bags, pedometers, water bottles, Therabands(r), gift certificates to local grocery and variety stores, and cookbooks were given to participants to encourage attendance as well as to promote healthy lifestyles.
- Participants were enrolled in a maintenance program immediately following the conclusion of the intervention. They received monthly newsletters and were invited to quarterly reunion gatherings.

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