



Central Valley Health Network's (CVHN) Nutrition Education Non-profit Demonstration Project

A CASE STUDY REPORT

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Nutritionist speaking with clients and physician at Family HealthCare Network in Tulare County.

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"We work with the community based on their needs. Improved diet is extremely important to the overall health of individuals and a community. A major accomplishment has been our success working with various types of funders to make this work [nutrition education] possible. We have found ways to combine funding, ferret out money that's appropriate, allowing everyone the opportunity to pay for what is the right thing to do. We have an obligation to patient health."

— Dr. Temetry Lindsey, CEO, Inland Behavioral & Health Services, Inc. (IBHS)
Board President, Central Valley Health Network (CVHN)

I. Introduction

California's Obesity Prevention Plan identifies health care providers and insurers as a major sector for helping to create the shift to healthy eating and active living. Examples of specific leadership actions health centers can take include

- promoting prevention as the first step in responding to the obesity epidemic rather than surgery and pharmaceuticals that are interventions of last resort,
- supporting new mothers in prolonged and exclusive breastfeeding which protects against childhood obesity,
- adopting and implementing preventive standards of care that promote regular physical activity and healthy eating in a manner sensitive to culture, age, and abilities, and
- ensuring the availability of healthy choices and maximizing the use of fresh and regional foods in food service operations in health care facilities¹.

Showing the way are the community health centers participating in the Central Valley Health Network's (CVHN) nutrition education demonstration project with the *Network for a Healthy California (Network)*.

CVHN's community health center member organizations represent a strong, coordinated and large scale infrastructure with outreach to low-income residents of the Northern Sacramento, San Joaquin Valley and San Bernardino regions. CVHN's member health centers' commitment to providing quality health services to the medically underserved has led them to innovate and implement an array of nutrition education strategies for the promotion of healthy diets and physical activity that will contribute to chronic disease prevention.

The purpose of this case study is to document the experience of CVHN's member health centers through its *Network* nutrition education project in order to:

- highlight accomplishments and factors that contribute to their achievement
- generate recommendations for future collaboration and discover possible areas for project strengthening
- improve prospects for replication.

The case study draws upon several sources, including regular project documents such as CVHN's progress reports, an on-line survey completed by representatives of the participating health

¹ California Obesity Prevention Plan Summary- A Vision for Tomorrow, Strategic Actions for Today
<http://www.dhs.ca.gov/CAObesityPrevention/Obesity-Summary.htm>

centers, as well as site visits and in-depth interviews with three health centers. It also incorporates results from small group discussions and surveys conducted with health center clients by nutrition education staff during regularly scheduled nutrition education activities. The case study's principal intended audience is persons who are associated with CVHN's nutrition education project. A secondary audience is the larger community of persons interested in the barriers faced by health center clients, promotion of healthy eating practices and physical activity among community health center clients, promising nutrition education strategies, challenges faced and recommendations for future activities.

II. Background and Overview of the *Network* and CVHN's Nutrition Education Project

"We have highly skilled educators, most of whom are bilingual, which allows for appropriate information to be disseminated." – Health Educator, Clinica Sierra Vista in Kern and Inyo Counties

Established in 1996, the mission of the *Network* is to create innovative partnerships so that low-income Californians are enabled to adopt healthy eating and physical activity patterns as part of a healthy lifestyle. The *Network* and *Fruit and Vegetable Campaign* facilitate the efforts of a wide range of organizations to promote healthy eating and physical activity by increasing access to tested social marketing interventions, fostering partnerships, stimulating community development initiatives, and encouraging new interventions by Local Incentive Awardees (LIAs). Principal funding for the *Network* and *Fruit and Vegetable Campaign* is made possible by in-kind contributions from local governments that qualify for Federal Financial Participation dollars from the U. S. Department of Agriculture's Food Stamp Program, Food Stamp Nutrition Education (FSNE).

The majority of *Network* contractors are public entities such as school districts, local health departments, city governments and/or parks and recreation departments. In federal fiscal year 2004, CVHN became one of only two non-profit LIAs. The overall goal of the project is to enhance and expand the nutrition education provided by CVHN's member health centers so that they can carry the *Network's* messages to 1) eat the recommended amount of fruits and vegetables daily, 2) engage in the recommended amount of physical activity daily and 3) promote the Food Stamp Program to likely eligible non-participants. CVHN is a consortium of federally qualified community health centers that provide an array of health services to low-income and medically underserved people, regardless of the patient's ability to pay.² As a membership organization, CVHN undertakes activities and initiatives to support the respective missions of its affiliated 13 community-based health centers serving 19 counties in the the northern, Central Valley and Inland



² This description is drawn from CVHN's website <http://www.cvhnclinics.org>.

Empire areas and having a combined area of more than 45,000 square miles – nearly one-third of the total area of California (see map). The member health centers share similar patient populations and a common “natural political geography” since the Central Valley is commonly designated as one political and economic “region”.

CVHN’s member organizations have tremendous outreach. In 2006, they provided medical, dental and related health and support services at 102 clinical locations to almost a half million patients through over two million encounters. Member health centers’ primary revenue sources are state and federal programs for the uninsured and medically underserved, such as the MediCal (Medicaid) program and the section 330 federal grant program. Funding is also received from state and local organizations, foundations, as well as patient payments, based on sliding fee scales. All CVHN members have community-based representative boards of directors.

In the demonstration project’s first year, 12 of CVHN’s member health centers participated in the *Network* nutrition education project (see Table 1). Participating health centers had already secured from \$1 to \$1.5 million in non-federal funding for general nutrition education and physical activity promotion referred to as “state share”. This amount was eligible for the FSNE federal participation reimbursement mechanism. The CDPH allocates ten percent of the federal reimbursement dollars to CVHN, 50 percent to the participating health centers and 40 percent to support related state_ costs such as *Network* and campaign operations, education materials, media and communications, research and evaluation, and trainings.

Table 1: Growth in CVHN’s Nutrition Education Project

	Actual FY2004	Actual FY2005	Actual FY2006	Actual FY2007	Budgeted FY2008
Health Centers’ “State Share” [non-federal dollars]	\$1,363,557	\$1,403,254	\$1,057,527	\$1,121,905.85	\$1,790,984
Number of Participating Health Centers	12	9	9	9	12

CVHN’s Program Director, a Registered Dietitian with a Master’s in nutrition education, plays a critical role overseeing and managing the project. She provides technical assistance and coordinates training and opportunities for sharing best practices with the participating health centers including:

- creating and maintaining a binder of *Network* approved education materials;
- facilitating the approval of any additional or newly developed education materials;
- convening quarterly coordinator workshops at a member health center site;
- producing a bimonthly client-focused nutrition education newsletter;
- compiling and submitting all programmatic and financial reporting to the *Network*; and
- facilitating access to *Network* materials and trainings.

III. Health Center Clientele

“Many clients are monolingual Spanish speakers. There are deep cultural reasons why people eat what they eat.” — Nutrition Educator, Inland Behavioral & Health Services, Inc. in San Bernardino County

Overall, CVHN’s health centers serve a predominately Hispanic/Latino, low-income clientele although there is tremendous diversity in their clients’ cultures, ages and, of course, health issues. The cultural competency and multi-lingual capacity of health center staff is an essential strength of CVHN’s member organizations. CVHN estimates that almost half of the patients served by member health centers are seasonal and migrant farmworkers. As described by CVHN, “in addition to low wages, farmworkers and their families often live in poor housing conditions and may be exposed to pesticides and other dangerous chemicals.”

Health centers participating in CVHN’s project have between 5,000 and 77,000 clients. Table 2 summarizes clients’ income status. Overall, 74 percent of the participating health centers’ clients live at or below the poverty level.

Table 2: Participating Health Center Clients’ Income as a Percent of Poverty

Health Center and County Served	Health Center Population	100% of Poverty & Below	% of Total
Clinica Sierra Vista (CSV) —Kern and Inyo	77,105	63,713	83%
Darin M. Camarena Health Centers, Inc. (DMCHC) —Madera	24,702	16,239	66%
Del Norte Clinics, Inc. (DNCI)— Butte, Colusa, Glenn, Sutter and Yuba	56,471	22,523	40%
Family HealthCare Network (FHCN) —Tulare	76,861	56,109	73%
Golden Valley Health Centers (GVHC)— Merced and Stanislaus	68,812	58,589	85%
Inland Behavioral & Health Services, Inc.(IBHS) San Bernardino	5,720	4,174	73%
Livingston Medical Group (LMG)— Merced and Stanislaus	11,126	7,968	72%
National Health Services, Inc. (NHSI) —Kern	46,480	40,546	87%
Sequoia Community Health Centers (SCHC)— Fresno	35,877	27,537	77%
Valley Health Team, Inc. (VHT) —Fresno	9,076	6,248	69%
TOTAL	409,998	305,301	74%

Source: Uniform Data System Report, 2006

Almost three quarters (72 percent) of the participating health centers’ clients identified themselves as Hispanic/Latino with the highest percentage (85%) among clients of the Livingston Medical Group (LMG) clinic sites in Livingston. On average, 18 percent of clients identified themselves as Caucasian (non-Hispanic) with the highest percentage (46%) among Del Norte Clinics, Inc. (DNCI) located in Yuba City. Five percent, on average, identified themselves as African American with the highest percentage (32%) among Inland Behavioral & Health Services, Inc. (IBHS) clients in San Bernardino.

IV. Barriers to Fruit and Vegetable Consumption

“Fruit and vegetables are very expensive.” — health center client

“We are not accustomed to eating vegetables.” — health center client

“I work and I don’t have time to prepare.” — health center client

“I only buy a little because my children and husband don’t eat it...” — health center client

Health educators participating in CVHN’s project conducted 19 small group discussions with nutrition education participants to explore barriers to fruit and vegetable consumption. More than 116 women and 31 men participated in these discussions at six of the member health centers. Facilitators introduced the discussion topic by reviewing the dietary guidelines for fruit and vegetables and informing the participants that many people eat less than the recommended amount. Participants were asked to rank their reasons for not eating more fruit and vegetables from the most to the least important factors. The major categories of reasons mentioned by at least seven of the groups are listed below in declining order of frequency:

- expensive/lack of money
- not accustomed to eating/not serving
- lack of time
- I don’t like or we don’t like
- others in family don’t like (most often children or husband)
- do not know how to prepare
- alternatives are easier, more available or liked better

Mentioned less often, but by at least three of the discussion groups, were the following categories of reasons (again, in declining order of frequency):

- fruit and vegetables spoil
- lack of availability in U.S./seasonality
- problem with teeth and chewing
- no obstacles
- not aware of the importance
- access (store too far away or lack transportation)

The diversity of responses underscores both the variety of issues that need to be addressed and the clear opportunities for nutrition education with health center clients.

V. “Best” or Most Promising Practices

CVHN’s member health centers are working to promote the *Network’s* nutrition education messages in a tremendous variety of venues and through a wide range of formats (see Section VI). Staff from these health centers were asked to identify what nutrition education strategies seemed most effective to them and why, as well as what aspect of their work seemed most exciting and promising to them.

EDUCATION MATERIALS

“They love the recipes from 5 a Day [the Network] in particular, since they include foods which are generally low cost and easy to find.” – Nutrition Educator, Clinica Sierra Vista in Kern and Inyo Counties

The nutrition educators working with the various health centers generally agreed that the educational materials from the *Network* and USDA, among others, compiled by CVHN’s program coordinator were helpful. The *Network*’s Latino Campaign recipe book was especially popular as were materials with the following characteristics:

- *“Pamphlets, brochures and recipe books addressing the importance of making life-style changes. They must provide practical changes or recommendations and be culturally sensitive at the same time.”* – Nutrition Educator, Sequoia Community Health Centers in Fresno County
- *“Brochures that are language appropriate and at a lower literacy level, since most of our clients have a limited education.”* – Nutrition Educator, Clinica Sierra Vista in Kern and Inyo Counties
- *“Material that gives information on food portions and serving sizes. Using visuals like measuring cups, helps clients to comprehend food portions.”* – Nutrition Educator, Livingston Medical Group in Merced and Stanislaus Counties
- *“Recipes and activity/exercise tips. This allows patients more control over what they are doing.”* – Nutrition Educator, Del Norte Clinics, Inc. in Butte, Colusa, Glenn, Sutter and Yuba Counties
- *“Materials that emphasize healthy eating can prevent chronic disease later in life.”* – Nutrition Educator, National Health Services, Inc. in Kern County
- *“For some clients, having enough food is really an issue. It is important to be able to direct parents to community resources such as places where they can get day-old bread, food banks, school lunch and breakfast programs, the Food Stamp Program (FSP).”* – Nutrition Educator, CVHN Program Coordinators’ Workshop
- *“Information about the types of canned fruits and vegetables distributed through the commodities programs. Sometimes these are new to people or they come in a new form so people won’t use them unless they know how.”* – Nutrition Educator, CVHN Program Coordinators’ Workshop

Clinica Sierra Vista staff believes one of their most effective strategies is the Healthy Child Kit they compiled for distribution at the health center and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) offices, as well as health fairs and local community events. The kit includes recipes, MyPyramid information, a nutrition and physical activity video and Food Stamp Program information.

Nutrition educators at Del Norte Clinics, Inc. (DNCI) and Family HealthCare Network (FHCN) also said they appreciated having access to the *Network*’s Nutrition Education Reinforcement Items (NERI) such as pedometers, aprons, recipe books, and cutting mats.

“I’m excited about giving patients nice cookbooks and useful handouts. [These are] included in all patient education sessions.” – Nutrition Educator, Family HealthCare Network in Tulare County

CLIENT CENTERED APPROACH

“Ninety percent of the nutrition materials we use come from the Network approved binder but really [the] focus is how to use these materials to work with people. Need to work with people “at eye level” not as an authority figure looking down. People need to feel supported. A client centered approach emphasizes the client as a participant in their own wellness not a recipient.” – Nutrition Educator, Inland Behavioral & Health Services, Inc. in San Bernardino County

Many of the health educators’ observations of effective strategies pertained not to specific education materials or messages but to approaches they found worked best for promoting positive behavior change among their clients. As described in the quote above, one of these is a “client centered approach” whereby participants are actively engaged and the educator’s responsibility is to provide the tools clients need to achieve their own goals. A client centered approach has many reinforcing features.

- **Think, Feel and Act:** Nutrition education is seen as a process that aims to make a small shift in the way that the client thinks, feels and acts in regard to their own health and health oriented behaviors (also referred to as Cognition, Affect and Behavior). This approach emphasizes positive choice and focuses on helping people to be more aware of how they think, feel and act. The goal is to encourage small shifts that can open the way for other change. The importance of setting personal goals and objectives is also emphasized.
- **Support and Self-esteem:** Several of the health educators emphasized the need to build clients’ self-esteem and positive body and self-image, especially among the young. The importance of social support was also emphasized. Because people with health and/or weight issues often “feel bad” educators explained it is important to “let them know they are beautiful”, “talk about the positive things they can do” and “emphasize the positive”.

Some educators thought the group format was especially effective because it allowed the best forum for this type of encouragement; others thought the confidentiality of the one-to-one sessions worked best. For children and adolescents, a family-oriented approach was also identified as especially important. Others emphasized the importance of getting patients into the “right” learning environment for them, whether it be one-to-one or group settings so that they can get the most out of the time spent with them.

- **Practical Options:** The health educators also emphasized the importance of tangible and practical options. They point out that nutrition education really has to do with change and these changes have to be feasible and grounded in people’s real situations. For example, the economic benefits of eating well, as well as strategies for saving time and money, are emphasized.

“We encourage buying fruits and vegetables that are on sale and in season or buying frozen to save money.” – Nutrition Educator, Sequoia Community Health Centers in Fresno County

“Teaching them about the benefits of eating fruits and vegetables for their health with an outcome of saving money with less visits to the doctor, less medications, not buying junk food and less eating out.” – Nutrition Educator, Family HealthCare Network in Tulare County

“We discuss quick ways to incorporate fruits and vegetables that do not involve a lot of preparation.” – Nutrition Educator, Clinica Sierra Vista in Kern and Inyo Counties

“Do just a little exercise. Just 15 minutes and take the kids.” – Nutrition Educator, National Health Services, Inc. in Kern County

“It’s important to share practical options. For example, how to add fruits and vegetables to existing meals. The commodity distributions often included canned fruit. We show them how to strain and rinse off the extra sugar and we provide a strainer as a reminder and practical aid for doing this.”
– Nutrition Educator, CVHN Coordinators’ Workshop

Staff of several health centers also mentioned the value of offering participants the opportunity to sample fruits and vegetables that they might not have tried before. A health educator from Livingston Medical Group specified that they provided fruit and vegetable samples “spiced with lemon juice and chili powder”.

- **Culturally Appropriate:** Staff of each health center interviewed mentioned the importance of culturally sensitive or culturally appropriate materials. This refers to more than simply materials translated into the appropriate language. For example, one nutrition educator explained that she begins her nutrition classes by asking people to talk about their favorite traditional meals. Sharing these memories helps people to connect and relate to one another.

“Hispanics prepare food in a certain way. Instead of using lard, we encourage other more healthy oils. I am excited that we are trying to change Hispanic people’s lifestyle to help them to be healthier. It is a challenge, culture and health. People are afraid to let go of traditions.” – Nutrition Educator, National Health Services, Inc. in Kern County.

Health educators at DMCHC work with a farmworker advisory committee and *promotores(as)*, which they believe contribute to the cultural appropriateness of the education provided by the health center.

*“I’m excited about the *promotores(as)* program, about the practical, good information they provide with cultural aspects. They blend traditional knowledge with medically accurate knowledge.”* – Nutrition Educator, Darin M. Camarena Health Centers, Inc. in Madera County

The farmworker advisory committee meets periodically to exchange information and advise the health center of patient issues. Health educators use the group as a sounding board for educational initiatives they are planning. A *promotores(as)* program evolved from the farmworker advisory committee. *Promotores(as)* are trained outreach workers who work for the health center on a voluntary basis. They blend traditional knowledge with medically accurate information. Typically, natural leaders themselves, the *promotores(as)* are skilled communicators who connect well with clients to help spread and personalize nutrition messages. Over a half dozen women have been trained to work as *promotoras* with the health education staff on a voluntary basis. Staff meet with the *promotores(as)*, at least monthly, to solicit their feedback on specific education materials and activities. *Promotores(as)* also provide education and outreach at community events, such as health fairs and farmers’ markets.

Similarly, for their work at the junior high school, staff also train and involve peer educators who they credit with the introduction of healthier snacks like 100% fruit rolls and string cheese into the offerings sold by the school at lunch.

DNCI promotes good nutrition through the *Network's* Latino Campaign curriculum in their “*Poder Popular-Promotores*” program which promotes healthy lifestyles through community empowerment. *Promotores(as)* in collaboration with DNCI staff, use the curriculum to illustrate how to prepare ethnic foods in a healthy manner, while emphasizing pride in the Mexican culture. DMCHC also benefits from the assistance of *promotores(as)* who provide, for example, nutrition education at a farmers’ market in Madera.

VI. Nutrition Education Strategies and Experience

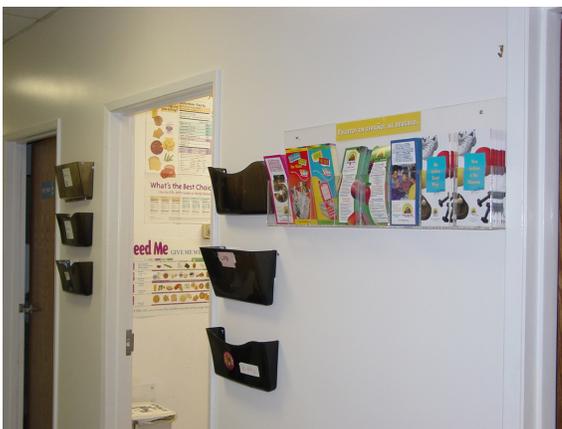
“Nutrition education is being integrated into everything we do. We all know the need to hear messages multiple times and we can reach people multiple times and at multiple levels.” – Nutrition Educator, Darin M. Camarena Health Centers, Inc. in Madera County

The health centers participating in CVHN's demonstration project employ a tremendous range of nutrition education strategies at the health centers and in their communities. From promotional posters on the waiting room wall to more in-depth individual or group sessions, health center clients are exposed to the importance of healthy diet and physical activity. This section summarizes the major strategies CVHN member health centers are using to integrate nutrition education into existing clinic operations, as well as expand into the surrounding community.

CLINIC SETTINGS: WAITING AND EXAMINATION AREAS

Nutrition information and promotional materials, such as the Fruit and Vegetable Campaign posters and the USDA's MyPyramid, are visible in virtually all the participating health center clinics. Most of the clinics have display areas for written materials, such as pamphlets, brochures and recipe books, available to clients in the waiting or examination areas.

Many of CVHN member health centers use the waiting room to show videos, such as one developed specifically for parents with young children which emphasizes nutrition messages and family-centered physical activity. CSV health educators also provide nutrition-oriented activities, such as nutrition-related coloring sheets, for children (10 and under) in the waiting room. LMG and Golden Valley Health Centers (GVHC) routinely offer interactive nutrition education sessions to clients in the



NHSI's Taft Community Medical Center



Medical assistants' intake room.

waiting rooms. Valley Health Team, Inc. (VHT) clients have the opportunity to join in on “Nutrition Bingo” while waiting to be seen. Several CVHN member health centers offer transportation to their clients. VHT health educators use this travel time for nutrition related travel games that the youngest clients especially enjoy.

INTAKE AND ENROLLMENT

“What we really try to do is show we really care about what we are giving them—eating well even if you don’t have the money. If they have more questions, I can refer them to Jelita” (the registered dietitian). – Medical Assistant, Taft Community Medical Center, National Health Services, Inc. in Kern County.

The community health centers are using the routine interactions with clients as an opportunity to disseminate nutrition information and promote physical activity.

Medical Assistants Distribute Monthly Nutrition Theme Packets

Every month, NHSI nutrition and health education staff selects a specific theme and compiles packets of related nutrition education materials in Spanish and English for their clients.

NHSI’s medical assistants (MAs) give each patient the nutrition education packet when conducting the routine intake process, and they take a few moments to review the materials with them. Example themes include food storage, food safety and specific fruits and vegetables. They have 11 clinic sites with a total of 25 MAs. In any given month, the education packets are given to thousands of patients.

According to one of the MAs, the types of questions patients ask about the education materials show they are interested in the topics. However, because people are coming to the clinic when they are sick or injured, she notes that learning about nutrition or looking at the brochures is not always a priority for patients. She emphasizes the usefulness of the information as encouragement for the client to take a closer look at home. Also, for clients who have more specific nutrition or diet-related questions, the MA can refer them to the health center’s registered dietitian for an individualized appointment.³



Medical assistant with NHSI

“Medical assistants can give patients a “prescription” for fruit and vegetables. They write fruits and vegetables on a mock prescription pad and give it to the patient.” – Nutrition Educator, Darin M. Camarena Health Centers, Inc. in Madera

At DMCHC, 33 MAs also distribute nutrition information, including mock prescriptions for fruits and vegetables, to patients in the waiting room. Similar to NHSI, each month a theme is selected – such as the importance of breakfast, cooking with less fat or a featured fruit or vegetable with specific recipes. MAs distribute education materials on the theme to approximately 4,000 people each month.

³ FSNE covers general nutrition inquiries. Alternative funding covers disease-specific questions.

INSURANCE ENROLLMENT AND NUTRITION EDUCATION

Insurance enrollment is another routine step, especially for patients who are new to the community health center. The DMCHC enrollment worker provides nutrition information (on topics such as fruit and vegetables and how to read food labels) when determining a patient's eligibility for insurance programs such as MediCal and Healthy Families. They also provide information about nutrition assistance programs including WIC and FSP.

Dental Health and Nutrition Education

"People don't commonly associate dental and nutrition education, but it is very effective to link general nutrition with dental care" – Educator, Darin M. Camarena Health Centers, Inc. in Madera County

Many of CVHN's member community health centers also provide dental care. At the DMCHC dental clinic(s), general nutrition education is also provided by the dental health educators. A sequence of information and fliers is prepared to correspond with the pre-visit and following three appointments. The staff believes the dental clinics are especially good venues for nutrition education. They explain that patients are more open to prevention-oriented education during a dental visit than a health clinic visit when they are more likely to be preoccupied with an acute illness. At the dental clinic patients are "already on a behavior change path". In addition, the dental clinic is more likely to have repeat visits with the same client over a relatively short period and it is easier to sequence and track which information topics have already been covered from one visit to the next. VHT takes the opportunity to discuss the importance of good nutrition with clients who visit their mobile dental unit. DNCI's children's dental disease program coordinator integrates nutrition education into all elementary school presentations.

"Good nutrition is an integral part of dental care" - Educator, Del Norte Clinics, Inc. in Butte, Colusa, Glenn, Sutter and Yuba Counties

ONE-TO-ONE NUTRITION EDUCATION

"I work with clients from 3 to 76 years. We use a client centered approach to give patients the skills to reach their own goals. Especially for children, it is a family effort. I provide the information and they provide the work." – Nutrition Educator, Inland Behavioral & Health Services, Inc. in San Bernardino County

Virtually all participating health centers have degreed nutritionists or dietitians on staff who work more intensively with individual clients over a period of time, such as three to six months, meeting weekly or bi-weekly. Typically, these clients are referred by doctors or nurses on the basis of high body mass index (BMI) measures or specific diet- or nutrition-related issues for Medical Nutrition Therapy (MNT). MNT is not an activity eligible for FSNE funding (see Box 1). Separate from the MNT session, the nutritionist or dietitian may take the opportunity to educate the client on topics such as the



CSV registered dietitian and client reviewing USDA's MyPyramid.

importance of fruits and vegetables or food safety. This general nutrition education session would be considered an allowable FSNE activity.

Box 1. Medical Nutrition Therapy (MNT) Services

As described in the FSNE guidance, MNT Services “means the assessment of the nutritional status of patients with a condition, illness, or injury (such as diabetes, hypertension, gout, etc.) that puts them at risk”. This includes review and analysis of medical and diet history, laboratory values, and anthropometric measurements. Based on the assessment, nutrition modalities most appropriate to manage the condition or treat the illness or injury are chosen and include the following:

- Diet modification and counseling leading to the development of a personal diet plan to achieve nutritional goals and desired health outcomes.
- Specialized nutrition therapies including supplementation with medical foods for those unable to obtain adequate nutrients through food intake only; parenteral nutrition delivered via tube feeding into the gastrointestinal tract for those unable to ingest or digest food; and parenteral nutrition delivered via intravenous infusion for those unable to absorb nutrients.

Medical Nutrition Therapy Services are not allowable FSNE costs. Typically, these services are billed to insurers, paid out-of-pocket, or covered as a clinic service.

http://www.nal.usda.gov/foodstamp/guidance08/Final_2008_Guidance.pdf

NUTRITION EDUCATION GROUP SESSIONS OR CLASSES

Most of the participating health centers also provide general nutrition education through classes or group sessions at the health center either by incorporating nutrition education into an existing group session or by convening a special nutrition education class. These are often led by a registered dietitian or nutrition educator.

Nutrition Education and Substance Abuse Recovery Program

“Working with these groups, you need to be relaxed, not rushed, meet people where they are at. Good nutrition is very important to drug recovery and people are interested in food. You need to personalize the information.” Nutrition Educator, Inland Behavioral & Health Services, Inc. in San Bernardino County

IBHS in San Bernardino was originally established in the late 1970s as a substance abuse clinic. While the organization has evolved into a multi-site federally qualified health center providing an array of medical services, it continues to provide first-time drug offenders a treatment program alternative to incarceration⁴. Mandatory group meetings are held daily at the health center with 6-8 groups of approximately 8-12 members each. The nutrition educator meets several times with each group and provides 20-40 minute sessions on nutrition education and physical activity promotion such as:

- knowledge and reaction to the dietary and physical activity recommendations,
- link between good nutrition and sobriety,
- tips for incorporating healthy food and fruit and vegetables into daily diet,
- how and where to shop, and
- tips for incorporating physical activity into daily life.

Throughout the session, the educator provides opportunities for participants to personalize the information and share their experiences.

Nutrition Education Incorporated into Perinatal Care and Breastfeeding Promotion

IBHS also has a very comprehensive Perinatal Care Network program with lifeskills, parenting, and recovery education for pregnant women and mothers with substance abuse problems. Classes are held Monday through Friday. Nutrition education and physical activity promotion are incorporated into the curriculum.

CSV has used their participation in CVHN's *Network* project to expand the nutrition and breastfeeding education they provide to new mothers. At the county hospital, health center educators visit mothers who have recently delivered to promote breastfeeding and provide nutrition information. A packet of approved breastfeeding guides, *Network* and WIC materials as well as nutrition information, such as USDA's MyPyramid, are reviewed with and given to the mothers.

LMG's staff has incorporated nutrition education into every Lamaze class. These groups are generally large, and the health educators use the social support of the group to increase knowledge, brainstorm solutions and praise each others' efforts.

Nutrition Education Classes

"Across all the education we are doing, I think the adult classes are most effective because people start sharing and communicating personal issues. I get people to open up and share and then we can talk about options for healthy eating, new ideas, the information in the brochures, exercises, etc." – Nutrition Educator, National Health Services, Inc. in Kern County

Several of the health centers have organized nutrition education classes either for adults or families. The classes are promoted at the health center and in the community.

- NHSI and United Health Centers of the San Joaquin Valley selected lessons from the *Network for a Healthy California—Latino Campaign's Fruit, Vegetable, and Physical Activity Toolbox for Community Educators*.
- LMG implemented Merced County Department of Public Health's *Food and Fitness for Families* curriculum over four sessions for parents and children with an additional follow-up phone call midway through the course.

These classes demonstrated positive results among participants. Although the sample size was small (less than 30 people), participants' knowledge and behaviors promoted by the classes showed improvement when measured by pre- and post-surveys. For example, at the beginning of NHSI's classes, only 21 percent of the participants knew the fruit and vegetable daily recommendation and 46 percent knew the physical activity daily recommendation compared to 96 percent and 93 percent, respectively, following the classes. After the class, participants were also much more likely to know 3 health benefits of eating fruit and vegetables (18 percent compared to 79 percent) and to know 3 health benefits of physical activity (14 percent compared to 61 percent).

⁴ As of January 1, 2005, California opted out of the lifetime ban on food stamp benefits for convicted drug felons that was part of the 1996 Federal Welfare Reform Act. California law allows for Food Stamp Program eligibility for persons convicted of certain drug felonies who participate in a government-recognized drug treatment program.

Participants in the Food and Fitness for Families classes, provided by LMG, also reported increased consumption of fruits and vegetables from the pre- to post-survey periods. Again, although the sample size was small (less than 30 people), after participating in the classes participants were significantly more likely to:

- “always” or “often” eat more than one kind of fruit daily;
- “always” or “often” eat more than one kind of vegetable daily; and
- “always” or “often” eat fruits or vegetables as snacks.

A major challenge has been to sustain participation over multiple meetings and in some cases to generate sufficient interest and attendance at even a single session class.⁵ Nutrition educators at NHSI are considering whether a more appropriate class time or location can be found that would increase participation. Since most health center clients are working, evening classes might be better attended, especially if childcare or child orientated activities are also provided.

Darin’s Eat and Read Club for Young Children

Health education staff at DMCHC have merged the principles of literacy programs, such as *Reach Out and Read* or *Reading Is Fundamental*, with nutrition education with their Eat and Read Club. On the third Friday of each month, the club meets to engage in reading and other activities that incorporate fruit and vegetable promotion. Some children are “regulars” while others who attend are already at the clinic with a family member. Parents are also encouraged to attend. A variety of activities are organized – art, memory games, coloring, reading, discussion – that incorporate nutrition education messages and fruit and vegetable promotion.



“Lunch with the Doctor”

Once every two months IBHS organizes a lunch with one of their physicians for health center clients and members of the surrounding community (one of IBHS’s clinics is located in a low-income housing project). A question and answer session follows the lunch time lecture. Nutrition education and physical activity promotion have been among the topics addressed. Health education staff also credit their nutrition education efforts with improving the healthfulness of the lunch menu.



Teen Movie Night at the Health Center

Through a grant focused on preventing teen pregnancy, DMCHC hosts a monthly movie night at the health center. The health educators use this opportunity to disseminate other health-oriented information, including nutrition and physical activity promotion. Staff also credits the health center’s

⁵ The literature suggests multiple education contacts are needed before genuine behavior change can be expected. As a result, the *Network* encourages contractors to attempt to measure change only when clients have been exposed to at least five education interactions. However, there is general agreement among *Network*, CVHN and health center staff that this is not feasible for health center classes unless there is a pre-existing program already requiring multi-session participation, as is the case for IBHS.

expanded nutrition education activities with inspiring them to improve the healthfulness of the snacks offered at the teen movie night.

COMMUNITY SETTINGS

Each of the participating health centers also provides nutrition education and physical activity promotion at a great variety of community venues. These efforts expand the reach of this type of education, as well as spread the word about the health center services.

Box 2. Allowable Food Stamp Nutrition Education (FSNE) Community Venues

FSNE funding is solely for Food Stamp participants and other likely or potentially eligible low-income people. All *Network* contractors must demonstrate that at least 50 percent of those participating in their nutrition education activities have household incomes at, or below, 185 percent of the Federal Poverty Level (FPL). CVHN's participating health centers' clientele exceed this requirement.

To be allowable for FSNE funding, community-based nutrition education must be provided at qualified sites, such as Food Stamp Program offices, public housing, food banks, food pantries/ soup kitchens or venues serving low-income populations based on income and when it can be documented that the location serves generally low-income persons where at least 50% have gross incomes at or below 185% of poverty guidelines/thresholds such as low-income census tracts (50 percent or more of residents having incomes at or below 185% FPL), low-resource schools (50 percent or more of the students are eligible for free or reduced price meals); sites with categorically eligible persons, such as those participating in WIC, Head Start and stores either located in eligible census tracts or having average monthly FSP redemptions of \$50,000 or more.

Health Fairs and Farmers' Markets

All member health centers participate in a variety of community health fairs and farmers' markets. Nutrition educators typically staff tables offering interactive activities and written nutrition information. Health centers such as FHCH offer nutrition classes conducted under a tent at health fairs. These are often broadcast live over a local Spanish radio station. LMG health fairs include activities such as a fruit and vegetable guessing game using cards from the *Latino Campaign's Fruit, Vegetable, and Physical Activity Toolbox for Community Educators*. Farmers' markets give the health centers the



DMCHC table at a farmers' market.



Vendors at a farmers' market in Madera

opportunity to present fruits and vegetables in a new way. For example, offering taste tests of raw eggplant as a creative and easy way to add vegetables to your diet. These markets are a forum for education on seasonality and variety. For example, in October, they can educate attendees on the many different types of apples that are available to enjoy.

Community Garden

VHT in San Joaquin is experimenting with a community garden at a health center site. With non-FSNE funds, raised beds have been planted with a variety of vegetables. The garden can be especially useful in conducting hands-on activities with children and for nutrition education in general.



Low-Resource Schools

Several of the health centers also provide nutrition education at local schools:

- DMCHC nutrition education staff conducts presentations during lunch time at a local junior high school.
- CSV's staff provides nutrition education at local elementary schools.
- IBHS nutrition education staff conducts presentations at the local high schools especially to sports teams, bands, and participants of after school programs.
- SCHC's dietitian provides nutrition education in a classroom setting to middle and high school age students.
- LMG offers nutrition education through school sponsored camps.

Other community sites:

- Churches: LMG and IBHS staff provide nutrition education to church groups.
- Preschool: DMCHC and NHSI staff offers nutrition education at Head Start sites and nursery schools.
- Family agencies: IBHS staff provides nutrition education at a variety of child and family agency programs, such as a domestic violence shelter and foster parents program.
- Food banks: NHSI staff offers nutrition education materials and flyers for food bags distributed by a food bank in Bakersfield. VHT is a distribution site for the food bank.
- Farm field worksites: CSV and NHSI partner with local growers to provide nutrition information to migrant farmworkers in the field.

VII. Impact of Participation in CVHN's nutrition education demonstration project

According to the nutrition educators, participating in CVHN's *Network* program impacted, in a variety of ways, the nutrition education the health centers are able to offer their clients and other low-income people in their communities. All the health centers were already providing nutrition education, but participating in CVHN's program allowed them to augment their services, expand staff, reach new groups with nutrition information, and access additional educational materials.

- *"It has made us aware of the importance of addressing the issues of obesity, childhood obesity and physical inactivity"* — Nutrition Educator, Sequoia Community Health Centers in Fresno County
- *"We have been able to obtain more education materials to hand out and have received positive feedback from our patients. We've noticed more of a willingness from our clients to make healthy eating a priority."* — Nutrition Educator, Del Norte Clinics, Inc. in Butte, Colusa, Glenn, Sutter and Yuba Counties
- *"With Network funding, we've been able to add an additional staff position. As a result, [we are] better able to get nutrition education information out to the community. Nutrition education at the center is now more cohesive. We've been able to amplify and expand the program."* — Nutrition Educator, Inland Behavioral & Health Services, Inc. in San Bernardino County

VIII. Recommendations

CVHN member health centers provide their clients with a tremendous range of nutrition education opportunities. At each of the participating health centers, staff commitment, skill, and enthusiasm are evident and truly impressive. For health centers, as well as community health-oriented agencies, the importance of healthy eating and physical activity are issues of growing concern and priority.

Several of the health centers described plans to expand their nutrition education activities or expressed a desire to augment the number of nutrition professionals on staff. The challenge of funding for preventive services was mentioned frequently. Staff from multiple community health centers explained that until payment—through MediCal and/or other standard payers—is provided for nutrition services such as classes, it will continue to be very difficult to sustain or augment these efforts. As a result, the participating health centers overall expressed an appreciation for the opportunity to participate in CVHN's demonstration project. Several health centers identified the support they received through the *Network* as a factor in their organizations' success in providing effective preventive nutrition education services.

This case study also helped identify recommendations for strengthening the demonstration project especially in terms of nutrition education strategies, training/technical assistance and information systems.

RECOMMENDATION 1: CONTINUE AND AUGMENT TRAINING AND NETWORKING OPPORTUNITIES FOR PARTICIPATING HEALTH CENTERS

Health education staff of participating health centers expressed an appreciation for the training opportunities provided through CVHN's *Network* project. Individuals' comments indicated these trainings should continue and specific topics were suggested. Some comments included:

- Let program coordinators know about upcoming trainings and conferences planned throughout the state.
- Hold in-services closer to their particular health center so more staff can participate.
- Invite staff from other healthcare facilities to participate in a "Nutrition Day Out" to share ideas and materials.

While CVHN organizes its quarterly coordinators workshops at member health centers as a way of limiting inconvenience and travel time, the overall territory reached by member health centers is very large. The *Network* also sponsors statewide trainings and collaborative groups that can be a resource for member agencies. For example, a number of state-sponsored trainings are held on a variety of topics from youth engagement, to the "art of training", media spokesperson training, and community health leadership training. In addition, the state is divided into 11 Regional Networks that also provide trainings and collaborative meetings. While health center staff are certainly pressed for time, these Regional Networks can be another source of inspiration, resources and partnership. Participating health centers, such as IBHS, have been very active in their Regional Network, serving as a regional media spokesperson and on various working groups; other health centers have not been as involved.

Health educators might also become more familiar with additional local resources, such as food banks and food pantries and/or walking clubs, as referral options for their clients. In addition, other *Network*-funded contractors whose work is particularly applicable to CVHN and its member health centers include:

- UC Berkeley's Farmworker Food Security Local Food and Nutrition Education project in Fresno County;
- California Medical Association Foundation Physicians Champions Project; and
- California Association of Food Banks' Food Stamp Outreach statewide project.

Networking with these organizations would likely lead to sharing materials and experiences that would benefit both organizations and most importantly low-income clients.

RECOMMENDATION 2: PROVIDE ADDITIONAL TRAINING AND RESOURCE MATERIALS ON FSNE ALLOWABILITY

A specific area for training that several relatively new participating staff expressed an interest in learning more about is FSNE allowability and, specifically, what can and cannot be done with the *Network* funding.

One health educator requested a resource binder of allowable activities that describes what all participating health centers are doing with FSNE funding. Some specific topics of particular relevance include the selection and documentation of community sites reaching FSNE-eligible clients and general nutrition education provided by dietitians, separate from MNT.

In some cases, health educators' comments indicated that they understood that an activity was not allowable, but they recommended that it be made allowable. For example, staff of one health center specifically recommended that physical activity—exercise within group sessions—be allowed, not simply physical activity demonstrations, as is currently the case. While the *Network* is interested in contractor's suggestions for programmatic improvement, federal guidelines dictate what is FSNE allowable.

FSNE is a funding source with many specific parameters that program coordinators must understand and apply to their health centers' context and work. To assist program coordinators in this, CVHN provides all participating health centers with the *Network's* approved allowable and unallowable guidelines.

RECOMMENDATION 3: CONTINUE TO UPDATE AND AUGMENT NUTRITION EDUCATION MATERIALS AND REINFORCEMENT ITEMS

CVHN's Program Director plays a critical role in securing *Network*-approved nutrition education materials and reinforcement items. Health educators' comments indicate they appreciate these materials, and some expressed an interest in specific types of additional materials.

- Additional age-appropriate materials: Because the health centers provide education to such a diverse range of clients, they require materials for all age groups from preschool to senior citizens. The current resource binder includes some age-specific materials. For example, compiling bilingual nutrition activities and materials for young children was a focus in previous years. Additional age-specific materials for older children and seniors would be valuable.
- Interactive media for patient waiting areas: One health educator expressed a desire for additional interactive media or an informational kiosk with a computer for accessing USDA's MyPyramid.

In addition, CVHN has made excellent use of the regular program coordinators' workshops to introduce *Network*-developed materials. For example, Regional Nutrition Network staff working with the *Network's* Latino and PowerPlay! (targeting fourth and fifth graders) Campaigns have been invited to coordinator workshops to present and demonstrate nutrition education activities and materials. Additional *Network*-developed materials might be of interest to the health centers and may include:

- **Network Worksite Campaign:** The purpose of the Worksite Campaign is to empower low-income workers to consume the recommended amounts of fruits and vegetables and enjoy physical activity every day through resources such as the California Fit Business Kit and Take Action! Employee Wellness Program. The Worksite materials might be useful for health centers' collaborative work with local employers or possibly for ideas for the health centers' own worksite wellness programs.
- **Harvest of the Month (HOTM) – Growing Healthy Children Tool Kit:** After several years of varied local implementations, HOTM has been introduced and made available statewide. The toolkit features 12 California grown fruits and vegetables, one for each month, and is comprised of four key elements: Educator Newsletters, Family Newsletters, Menu Slicks and Press Release Templates. Following the Featured Produce Cycle helps to more effectively saturate the HOTM

message statewide – in the classroom and cafeteria, at home, and in the community. Especially for health centers that are already convinced of the benefits of taste-testing opportunities, HOTM could be adapted to the health center setting.

Given the tremendous outreach and creativity of CVHN’s participating health centers, select health centers might be well positioned to document, in a curriculum format, the “learning sessions” they have developed around the approved nutrition education materials. A recent assessment of free USDA nutrition education materials, available online, concluded that many fell short in terms of cultural appropriateness to “minority” audiences and relevance to low-income clients’ food security issues.⁶ Health educators with CVHN’s participating health centers have considerable expertise and personal experience with approaches that incorporate the relevant motivations and considerations so important to effective behavior change strategies.

RECOMMENDATION 4: IMPROVE OUTCOME/IMPACT EVALUATION

As with many multi-faceted educational programs, assessing the impact of the health centers’ education efforts has been challenging. From their interactions, health educators believe the nutrition education activities are valued by clients and staff and are making a difference. As documented by this case study report, participating health centers are already making changes with the potential for positive impact through a variety of different pathways e.g. institutional and environmental changes as well as direct nutrition education with health center clients. However, without systematic assessment it is difficult to know which approaches are reaping the greatest return and/or how much difference the education is making.

While the issues are many, two questions need to be resolved or balanced to move forward in this area.

- *Impact on whose behavior/health?* Each health center is engaged in a great variety of nutrition education activities using various formats with different audiences both at the health centers and in the community. The decision must be made whether to: a) evaluate the impact of the combined efforts among a random sample of health center clients with comparison ideally to a similar health center site not engaged in nutrition education; or, b) evaluate only a portion of the overall nutrition education activities focusing on those having enough repeated “exposure” with clients to expect impact. With this second approach, the health center educators will need to consider how best to schedule and organize nutrition education activities to help maximize participation. The possibility of follow-up phone contact and/or home-based activities might also be explored.
- *What are the most appropriate, simple, non-threatening and ideally empowering evaluation approaches?* One of the health centers recommended that complicated written pre- and post-tests should be avoided in favor of less intimidating methods. This is an extremely well taken point. One option would be to utilize validated nutrition evaluation surveys such as the Fruit and Vegetable Behavior Checklist that is quite short, uses photos and is designed for a low-literacy, Spanish speaking audience. Another option would be to employ a more participatory,

⁶ Tolma, ET et. al, Evaluation of United States Department of Agriculture—sponsored Consumer Materials Addressing Food Security. In American Journal of Health Promotion. January/February 2007, Vol. 21, No. 3.

non-formal approach for evaluating the impact that directly involves the participants. While perhaps less established than conventional, quantitative survey evaluation, participatory evaluation is gaining increasing popularity as it demonstrates its usefulness both for enhancing participants' own evaluative skills as well as improving interventions. However, despite its many benefits, participatory evaluation often requires an even greater commitment of participants' time than conventional approaches.

RECOMMENDATION 5: IMPROVE PROGRAM REPORTING

- Look for opportunities for streamlining programmatic reporting

The *Network's* reporting requirements, especially the daily activity logs and financial documentation requirements, are an issue for several of the participating health centers. Staff of one health center felt the *Network's* reporting requirements were excessive and employed "old-time" information systems and accounting requirements. Because nutrition education is integrated into a variety of programs and activities, they found it very difficult to pull out the percentage time dedicated to allowable nutrition education activities, assign the education topics to discrete categories, or determine clear distinctions between time allocated to direct delivery versus administration. The staff explained that the reporting took a lot of time and created "mental exhaustion" since the health centers' existing system does not provide the required information.

Because Food Stamp Nutrition Education (FSNE) is a federal program with very specific guidelines, there is, at this time, no flexibility in certain aspects of the reporting requirements. However, the *Network* and CVHN staff should work with the health centers' staff to identify opportunities for streamlining, simplifying and/or automating, where ever possible. A good example is Golden Valley Health Centers. They participated in the first year of the program but withdrew, in large part, due to challenges with documentation and tracking of program activities. While the *Network* provides Excel and Word data collection forms, these were not compatible with the health centers' existing systems. Also, the type of computer software desired by the health center management for collecting and aggregating the required data was not provided by the *Network*.

This past year, Golden Valley Health Centers rejoined the program as an active participant, due in large part, to adaptations they were able to make to their management information system. They identified a software system for tracking activities that was capable of interfacing with their existing management system, and they adopted the use of scantrons to easily enter this information. The impact of these changes was profound. They are now able to produce time logs electronically for the health educators to confirm and sign. Overall, Golden Valley Health Centers' staff reports that they are very pleased with these changes, and that they have made being a part of this project more enjoyable.

IX. Conclusion

CVHN member health centers provide their clients with a tremendous range of nutrition education opportunities. Commitment, skill and enthusiasm are truly impressive and evident among participating health center staff. For health centers, as well as community health-oriented agencies, the importance of healthy eating and physical activity are issues of growing concern and priority.

Several of the health centers described plans to expand their nutrition education activities or expressed a desire to augment the number of nutrition professionals on staff. The challenge of funding for preventive services was mentioned frequently. Staff from multiple community health centers explained that until payment—through MediCal and/or other standard payers—is provided for nutrition services such as classes, it will continue to be very difficult to sustain or augment these efforts. As a result, the participating health centers overall expressed an appreciation for the opportunity to participate in CVHN's demonstration project. Several health centers identified the support they received through the *Network* as a factor in their organizations' success in providing effective preventive nutrition education services.

Appendix 1: Race/Ethnicity of Participating Health Center Clients

Health Center	Hispanic/ Latino	Caucasian	African American	Asian	Pacific Islander	American Indian	Refused to Report
Clinica Sierra Vista	73%	20%	4%	0%	<1%	0%	2%
Darin M. Camarena, Inc.	84%	13%	2%	<1%	<1%	0%	1%
Del Norte Clinics, Inc.	42%	46%	2%	5%	<1%	1%	3%
Family HealthCare Network	74%	21%	1%	2%	<1%	0%	1%
Golden Valley Health Centers	78%	15%	3%	2%	<1%	0%	2%
Inland Behavioral & Health Services, Inc.	45%	20%	32%	1%	2%	1%	1%
Livingston Medical Group	85%	9%	0%	2%	<1%	0%	3%
National Health Services, Inc.	74%	22%	1%	<1%	1%	0%	2%
Sequoia Community Health Centers	80%	8%	7%	2%	<1%	0%	3%
Valley Health Team, Inc	80%	6%	<1%	<1%	5%	0%	9%

Source: Uniform Data System Report, 2006

Appendix 2: Small Group Discussion Results

FREQUENCY RANKING - Health Center Clients' Barriers to Adopting F/V Recommendations from Most to Least Frequently Mentioned (19 small group discussions—116 women and 31 men interviewed)

Rank	Category	Descriptions from small group discussion participants	Number of Groups Identifying this Barrier
1	Expensive/ Lack of Money	For not having money/ I don't make myself and are expensive most of the time/Sometimes I don't have money/The price/Very expensive/ I don't have much money, I like fruits but can be very expensive/ Income - can't have every day/Veg and fruits are very expensive/ Veg and fruits can be very expensive/I like them, but they can be expensive/Expensive/No money/ Too expensive/ Some fruit & veg are too expensive/Not able to afford it/Expensive produce/High cost	13
2	Not accustomed to eating / Not served	Parents don't serve it/I'm not used to eating them/We are not accustomed to eating vegetables /I'm not accustomed to eating fruits/We don't usually eat them/ We are not accustomed/They are not prepared in my house/I don't usually eat them/Veg are not so common, it is rare when we eat veg/We need them but we don't eat them/They are not accustomed to eating veg.In the hometown of Mexico, fruits and veg were not readily avail./Just not used to eating f/v, Hispanic tend to eat more fruit than veg.	12
2	Lack of time	Need time to prepare/ I don't have time to prepare/I work and I don't have time to prepare to take to work/ Need time to prepare and eat/ I don't have time to buy the ones I like/I don't have time/I don't have time due to work, children and housework/Don't have time to eat them - can't eat during work time/I don't have time to prepare them/ came from work to eat/No time to go grocery shopping/No time to shop for fresh fruits and vegs/ Have to work and we prepare what's fast and easy for lack of time	12
3	I don't like or we don't like	I don't like them much/I don't like and they don't like/I don't like veg much/I don't like fruit/I don't like them/Fruit very sweet and I don't like sweets/We don't eat them in the house because we don't like them/I don't like fruits and veg that much/Don't like the taste or smell of veg- they are boring/fruits are too sweet/Don't like the taste of some fruits// We don't like green veg/ They are gross/They are mushy and yucky/ Too bland or too sweet/Veg tastes awful/smell	11
4	Others in family don't like	I only buy a little because my children and husband don't eat so I end up eating it alone/My husband doesn't like them and my kids don't want them/I'm the only one who eats them/My kids don't like/Family prefers certain veg hard to get them to eat them/My husband doesn't like veg/My kids don't like them/My kids don't like veg/Ever since my child has been to school he hasn't wanted to eat veg/Some fruit & veg kids do not like/Kids & men in the family refuse to eat veg/Children just don't like them	9

4	Do not know how to prepare	I don't know how to prepare/I don't like to prepare b/c ends up in same form/I don't know how to prepare/I don't know how to cook veg/I don't have many ideas to prepare veg w/ other foods/Not having different recipe options on preparing veg to offer their families/Don't know how to prepare/No time and don't know how	9
5	Alternatives are easier, more available or like better	Sometimes I don't have time and it is much easier to eat chips and Cheetos/Other things to eat around the house/We prefer candy/Prefer Cheetos, hamburgers and chips/ My child prefers chips/Abundant fast food that is cheap/It's cheaper to purchase non-nutritious food/ more for the money, and can buy in bulk (i.e. buy one get one free)/Some prefer greasy, fast food	7
6	Fruit and veg spoil	Sometimes fruits go bad before I can eat it - because I only buy once per week/Not shopping often enough for fresh F/V / Fruits spoil after a week/Vegetables and fruit go bad/Fruit & veg spoil too fast	5
6	Availability/ Seasonality	I always look for the ones that are in season, but it is a challenge/ Favorite fruits not in season/Can't order in drive thru/Vegetables I like aren't here/Lack of fruits & veg in neighborhood stores/Only want fruit in season/ Not the same available as in Mexico, more fresh in Mexico/	5
7	Problem w/ teeth and chewing	Too hard to chew/don't have many teeth/ Veg are hard and I don't have many teeth/	4
7	No obstacles	No obstacles- I like lots of F/V/no obstacles/	4
8	Not aware of the importance	Haven't thought about how important this is/They did not understand the benefits of veg & fruit consumption/People may think that fruits have too much sugar	3
9	Access	Store too far/I do not have a car, hard to find a ride/One car per family and cost of gas	3
10	Poor Quality	Poor quality produce in local neighborhood/It's dirty	2
11	Diabetes	I'm Diabetic and my Dr. told me not to eat much fruit	2
12	Allergic	I'm allergic to fruits and vegetables/Digestive problem, allergy	2
13	Other	I am single, not home much//In-store marketing/I don't cook, lazy/I always have fruit at home, but I don't eat them, I forget/Parents haven't done a good job in teaching children that f/v are healthy for their development/I gag/It's dirty/Madera has the same fruits	each mentioned by 1 group

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Central Valley Health Network