III. ENHANCING NUTRITION EDUCATION

WIC has always provided nutrition education and counseling to clients, often in the form of one-on-one counseling and lecture-style classes. In recent years, WIC programs across the country have taken steps to reinvigorate and update their approaches to nutrition education. Moreover, as described in Chapter I, FNS has encouraged these efforts through its RQNS grant program and revised Nutrition Services Standards. Programs in three of our five key areas of interest—obesity prevention, preventive health care, and staff training—are all examples of strategies to strengthen and broaden the nutrition education and counseling provided through WIC.

In looking at these and other programs that offer enhanced nutrition education, we discerned some common themes:

- ***New Methods for Working with Clients.*** Staff are learning to use approaches such as facilitated group discussions and motivational interviewing to help clients change their behavior. We highlight a training program in Michigan focused on facilitated group discussion but also note that these techniques have been incorporated to some extent into the Oklahoma and Pennsylvania obesity prevention initiatives.

- ***Updated Education Content.*** Programs are working to include nutrition messages related to today's main nutrition-related health concerns, in a positive framework of healthy eating and lifestyle choices. Relevant programs include those related to obesity prevention and healthy lifestyles for young children (including physical activity), preventive dental care, and screening for alcohol problems for prenatal participants. We describe three initiatives related to obesity prevention (in Oklahoma, Florida, and Pennsylvania), one related to dental health (in Alabama), and one related to alcohol screening (in Los Angeles).

- ***Broader Target Audience.*** WIC nutrition education has traditionally focused on mothers, but initiatives are increasingly targeted to young children and the family as a whole. For example, both the Oklahoma and Alabama initiatives include activities for children, such as puppet shows and reading children's books related to the theme of the initiative. Another way in which WIC agencies seek to reach a broader audience is to find better ways to serve non-English speakers, such as the Wisconsin training program (discussed below) that trains bilingual support staff to provide nutrition education.

- ***More Staff Training.*** Many of the programs discussed in Sections A and B (and in Chapter II) involve special training. In Section C, we highlight three very different programs that all have state agencies providing special training to local agency staff: one focused on methods, one focused on content, and one focused on improving services for non-English speakers.

A. OBESITY PREVENTION INTERVENTIONS

Overweight and obesity among children have been growing over time; in particular, obesity (defined as a BMI greater than the 95th percentile on standard growth charts) among children 6 to 11 has tripled from 5 to 15 percent since the late 1970s (National Center for Health Statistics 2003). Policymakers are increasingly concerned with the issue, because of the negative health consequences of obesity. WIC is a natural setting in which to implement preventive strategies, as poor eating habits may begin to develop during the preschool years. Parents tend to think that a child being overweight (as measured by growth charts) is not a concern at preschool age (Baughcum et al. 2000; Jain et al. 2001). Parents are more receptive to programs that focus on healthy eating behaviors and physical activity. To fulfill the program's preventive mission, materials need to target all families, not just those with overweight children.

In this section, we describe two comprehensive obesity prevention programs and one with a very focused message:

- The Oklahoma Get Fit With WIC program includes lesson plans for parents and children, incentive items, activities for children, staff training, and modifications to the food package, which were developed using special WIC funding.
- The Pennsylvania Obesity Prevention Modules are steps in a similar direction, but without special funding. Pennsylvania state WIC staff developed lesson plans for encouraging healthy eating and materials for training staff to use the plans, but they have left it to local nutrition education coordinators to conduct the training.
- Florida's Mooove to Lowfat or Fat Free Milk Campaign focused on a specific message that is very salient to WIC—use low-fat or fat-free milk for children age 2 or above. It is interesting in part because this campaign was a joint effort of a number of state programs. The campaign included waiting room displays, flip charts, and props to use during nutrition education contacts, interactive activities such as taste tests, and (on a voluntary and pilot basis) modified food coupons.

At the same time as this study was in progress, the FIT WIC study tested a range of approaches to obesity prevention among children in five states. An implementation report from this study is now available (U.S. Department of Agriculture 2003), but it was not available at the time our programs were selected.

GET FIT WITH WIC[1]
OKLAHOMA

OVERVIEW

Location: Statewide

Start Date: November 2001

Target Population: WIC infants and children, and by extension, their parents and caregivers

Purpose: To provide a unified nutrition education message for children, primarily regarding overweight and obesity prevention, that focuses on (1) reducing consumption of sweet drinks; (2) consuming less than six ounces of fruit juice a day; (3) using low-fat or nonfat milk for children older than age 2; (4) increasing consumption of water, fruits, and vegetables; (5) increasing daily physical activity; and (6) encouraging breast-feeding as the preferred method of feeding infants.

Services: Get Fit With WIC (GFWW) uses a multifaceted approach, including group nutrition education classes for adults and children ages 1 to 5, individual counseling in clinics with a small caseload, staff training, and revision of the WIC food package.

Funding: $501,210 from operational adjustment funds.

Why Program Was Chosen: Nutrition education in Oklahoma's WIC program addresses healthy eating, but it also emphasizes physical activity and how the two are related to overweight and obesity prevention. This is a focused, statewide campaign that is integrated into everything that WIC does while giving local staff flexibility in nutrition education delivery. In addition, nutrition education is directed, in part, to 1- to 5-year-olds through the Kids Club.

Key Challenges: Nutrition educators are not always comfortable with the new approaches and sometimes lack time to prepare or conduct the new lessons. Adequate space for activities and for storing intervention tools can also be a challenge. In addition, it is hard to both encourage flexibility and ensure quality in a statewide program.

[1] Telephone interview, April 9, 2003; site visit, September 22-23, 2003.

BACKGROUND

State Characteristics. Oklahoma has a population of about 3.5 million, based on an estimate for 2001. In 2000, about eight percent of the population was American Indian or Alaskan Native, higher than the U.S. average. That same year, about eight percent of the population was African American and six percent Hispanic, both lower than the nation as a whole. The number of people living below poverty is higher in Oklahoma than the U.S. average—approximately 15 percent versus 12 percent, respectively.

WIC Program Background. The Oklahoma State Department of Health (OSDH) oversees 142 WIC clinics in 77 counties, serving about 90,000 clients per month, on average, for all categories of participants. There are approximately 50 nutritionists on staff at the local level. The Oklahoma WIC program has Program Consultants for each of the eight service areas. These are state-level nutritionists who function as liaisons between the local agencies and the state office in Oklahoma City to transfer information and policy change.

Program History and Objectives. Obesity is widespread in America, and the evidence clearly shows that trying to prevent obesity early in the life cycle is more productive than trying to treat the condition later. GFWW has responded to the need for prevention through a multifaceted program designed to promote healthy food choices, lifetime activity, and parental involvement in all nutrition education efforts. The initial planning for the campaign began in 2000. At that time, the Oklahoma State WIC program was identifying ways to revitalize nutrition education. Until that point, WIC nutrition education had varied considerably from local agency to local agency. State and local staff members admit that, before GFWW, nutrition educators in WIC lacked direction and focus. Staff members and clients often found nutrition education boring. In turn, staff members were not very energized and motivated. Clients attended classes because they had no other choice, not because they enjoyed being there. The lesson plans available from the state for local educators were also limited in number and not very innovative or creative.

The GFWW platform provided an opportunity to change how WIC conducted nutrition education. It enabled local agencies to focus on physical activity and obesity prevention, two topics that had not received much previous attention. It was clear from the beginning, however, that the initiative needed to address obesity without targeting the obese. In addition, the state saw it as important for the campaign to promote "healthy weight" terminology consistently among local agencies rather than calling a child fat, overweight, or obese or making negative statements about obesity.

The challenge during the planning phase was developing a unified nutrition message for the state. However, getting input from the Nutrition Education Focus Group (NEFG) and coordinating progress at the state level facilitated this process.[2] According to the Director of Nutrition, Education, and Training Division, the main goal of GFWW is to standardize the state's nutrition education messages to focus on six behaviors intended to reduce childhood

[2] The NEFG is a group of local agency nutrition education staff who meet quarterly to provide feedback to state staff.

obesity rates. WIC nutrition educators learn to emphasize the following objectives for young children: (1) reducing consumption of sweet drinks; (2) consuming less than six ounces of fruit juice a day (per the American Academy of Pediatrics' recommendation); (3) using low-fat or nonfat milk for children older than age 2; (4) increasing consumption of water, fruits, and vegetables; (5) increasing daily physical activity; and (6) encouraging breast-feeding as the preferred method of feeding infants (since some research suggests a connection between breast-feeding and reducing childhood obesity).

Target Population. GFWW is aimed at WIC children of all ages, even infants, and consequently, the parents and caregivers of these children. While program officials hope that families will be inspired to eat better and exercise more, they primarily hope that children will adopt good habits that will continue throughout their lives. Importantly, the messages of the initiative are for all WIC children, not just those who are overweight or obese, or who have overweight or obese parents. Some nutrition education classes target caregivers. Kids Club is a nutrition education class for children 1 to 5 years old. All clients have been introduced to the themes of the GFWW initiative to some degree.

PROFILE OF INNOVATIVE PROGRAM

Services Provided. GFWW is the overriding theme of Oklahoma's WIC program; it is not considered a separate program. However, lesson plans and activities are classified as GFWW if they fall under any of the six objectives. Although WIC staff members all work on the same nutrition messages, local agencies implement these messages differently. The state provides the focus and parameters for the initiative. Because of demographic and cultural differences at the local level, however, the initiative must be flexible to meet the needs of a diverse clientele and special needs of a particular geographical location. The initiative focuses on "fun" so that participants will want to attend a nutrition education class and staff members will enjoy their work.

The state has a list of state-approved lesson plans that can be used in nutrition education efforts (see Table). Each clinic has a manual containing these lesson plans. Local staff members review the list of lesson plans to determine what will work best in their clinic. In addition, local staff members find that certain activities or lessons are better received than others among their clients, so they tailor the lesson plans to meet their clients' needs. Established lesson plan topics include increasing fruit and vegetable consumption, increasing whole grain consumption, increasing physical activity, using nonfat or low-fat milk for children 2 years of age or older, increasing water consumption, using the food guide pyramid, and reducing the fat content of foods. Local staff members may develop their own lesson plans or use ones from other states, but their Program Consultant must first approve these plans. Sometimes staff members will inform the state of the need for a lesson plan on a particular topic. Typically, the state Education and Training Coordinator will develop a draft of such a lesson plan and make revisions based on feedback from the NEFG.

The components of the lesson plans can vary. All the lesson plans include objectives, an activity, discussion questions, and lists of intervention tools and resources. Often, the lesson

STATE-APPROVED LESSON PLANS
(AS OF MAY 2003)

Coordinating Children's Book	Lesson Plan	Target Audience
	2003	
	Get Fit with WIC	Children
I Want My Banana	I Want My Banana	Children
	Milk and Cheese Are Sure To Please	Children
	Have Fun with WIC Foods	Children
	2001 Pecos Pyramid and the Food Group Gang	
	Billy the Bread	Children
	Soda Pop Sam Says . . . Not Every Day!	Children
	Pecos Pyramid	Children
	Charlie Cheese and Judge Roy Bean Round Up Protein	Children
	Bronco Broccoli and Citrus Sue Fly to Mars	Children
	2000	
	Quick Meals from Your Pantry	All
	Let's Do Lunch	All
	Eat Your Vegetables	All
	Foods at the Tip	All
What's for Supper	Don't Be a Square: Planning Meals the Pyramid Way	All
	Packed with Protein	All
	1999	
	Maintain or Improve Your Health	All
	Where is Your Milk Mustache?	Children
	Babies Need Calcium, Too!	Infants
Cheerio's Play Book	Move for the Fun of It	Infants/Children
	Safe and Healthy Eating	All
	Folate: An Ingredient in the Recipe for Wellness	All
	Holiday Low-Fat Leftovers	All
	1998	
What's for Supper	Don't Be a Square: Planning Meals the Pyramid Way	All
	Quick Meals from Your Pantry	All
	Fruits and Vegetables for Babies	Infants
	How to Pack 5 A Day for Children	Children
	Begin with Breakfast	All
	Feeding the Right Way	Infants

LESSON PLANS *(continued)*

Coordinating Children's Book	Lesson Plan	Target Audience
Elmo's World - Food	Smart Snacking for Kids	Children
	Holiday Survival Tips	All
	1997	
	Infant Anemia	Infants
	Meat for Kids	Children
	Milk: Strong Bones and Teeth	Infants
	Calcium: Feed Your Bones	Children
	Fruits for Fun	Children
	Starting Fruits	Infants
	Veggies for Babies	Infants
I Want My Banana	Picky Eaters	Children
	Food Safety and You	All
	Breast-Feeding Classes	
	The Joy of Breast-Feeding	Breast-feeding/ prenatal women
	The Case for Breast-Feeding	Breast-feeding/ prenatal women
	Special Classes	
	Teens: Eating for Two (Nutrition During Pregnancy: <18 years)	Prenatal teens
	Pregnancy Weight Gain: Too Much or Too Little? (Weight Gain During Pregnancy)	Prenatal women
	Help Your Child Grow Healthy (Underweight/Overweight Children)	Children
	Iron Deficiency	All
	No Milk or Cheese, Please (Lactose Intolerance)	All
	A Healthy Weigh to Live (Weight Management)	All women

plans incorporate games and the Food Group Gang puppets.[3] Some lessons plans have a literacy component, which extends the learning to the home (see box). Households are often given the book that is read and discussed during a nutrition education class. The nutrition education classes rotate topics, so households often eventually receive several different books. Nutritionists will often read a book to the children as a means of modeling to caregivers. Some caregivers may not be able to read very well or at all. Sometimes, after hearing the story, they can "read" to their children by telling the story from memory or making up their own story.

As mentioned before, physical activity had not been a focus of nutrition education efforts in the past in Oklahoma. Now, all the nutrition education protocols used at certification

BOOKS FOR REFERENCE, CLASSES, AND INTERVENTION TOOLS

Books for reference for nutritionists:
Baby Play & Learn by Penny Warner, Meadowbrook Press © 1999
Preschool Play & Learn, by Penny Warner, Meadowbrook Press © 2000

Books that are read as part of a nutrition education lesson:
I Eat Fruit! by Hannah Tofts and Rupert Horrox, Zero to Ten © 2001
I Eat Vegetables! by Hannah Tofts and Rupert Horrox, Zero to Ten © 2001
Oliver's Fruit Salad by Vivian French and Alison Bartlett, Orchard Books © 1998
Oliver's Milkshake by Vivian French and Alison Bartlett, Orchard Books © 2001
Oliver's Vegetables by Vivian French and Alison Bartlett, Orchard Books © 1995

Books that are read and distributed to households as part of a nutrition education lesson:
The Cheerios Play Book by Lee Wade, LITTLE SIMON © 1998
Food (Elmo's World) by John E. Barrett and Mary Beth Nelson, Random House © 2000
I Want My Banana (English and Spanish), by Mary Risk, Lone Morton, and Alex de Wolf, Barron's Educational Series © 1998
Snacktivities! by MaryAnn F. Kohl and Jean Potter, Robins Lane Press © 2001
Vegetable Friends by Tony Lawlor, Bruce Kociemba, and Barry Duncan, Gazelle Inc. © 1999
What's For Supper (English and Spanish), by Lone Morton, Mary Risk, and Carol Thompson, Barron's Educational Series © 1998

Books that will be read and distributed to households as part of a nutrition education lesson in 2004:
Feast for 10 by Cathryn Falwell, Houghton Mifflin Co. © 1993
I Will Never NOT Ever Eat a Tomato by Lauren Child, Candlewick Press © 2000
LUNCH! by Denise Fleming, Henry Holt & Company, Inc. © 1998

[3] The Food Group Gang is a set of characters developed by the Oklahoma WIC Program. Characters include Pecos Pyramid, Judge Roy Bean, Charlie Cheese, Citrus Sue, Billy the Bread, Bronco Broccoli, and Soda Pop Sam.

appointments include an emphasis on daily physical activity for all WIC categories. Brochures will be available in 2004 that address the importance of physical activity for infants and children. In time, questions related to physical activity will be incorporated into the certification computer program to better establish measurable trends and evaluate progress toward increasing activity goals. In addition, the lesson plans that focus on physical activity make it clear that physical activity is not just about organized sports or membership in a fitness club, but also about age-appropriate play. Nutrition educators often use the "It's Toddler Time" (by Carol Hammett and Elaine Bueffel, KIMBO®) cassette tape with its fun songs and accompanying activities to get children moving during a class. The state also provided nutrition educators with reference books on age-appropriate play, and they can photocopy pages to give to clients as appropriate.

To get people back into the kitchen, the state WIC office is currently working on a series of "Cooking with WIC" live distance education broadcasts. These broadcasts use videoconferencing technology and will provide food demonstrations using WIC foods. The overall purpose of "Cooking with WIC" is to present nutrition education concepts using methods, such as field trips and cooking demonstrations, that are not feasible in a clinic setting. Specific objectives include improving how WIC supplemental foods are used; improving skills in food purchasing, meal planning, and preparation of nutritious meals and snacks; including children in food purchasing, meal planning, and food preparation activities; and improving dietary behaviors. Based on client feedback, five topics have been selected: Snacktivities, Quick & Easy Meals, Nature's Original Fast Foods—Fruits & Veggies, Breakfast for Everyone, and Making Fast Food Fit. The format of "Cooking with WIC" will involve a live introduction assisted by the receiving site's nutrition educator in a facilitated discussion. Key points will be introduced live, followed by a previously recorded food preparation segment that details purchasing information and shopping tips when applicable. A videotape with the live broadcast and food preparation segments will then be distributed to the clinics with a lesson plan for future use. The packet will include talking points, discussion questions, recipes, and other handouts. For the first lesson, each family will receive the "Snacktivities" book, whether viewing the partially live or taped broadcast. Subsequent nutrition intervention tools include a magnetic shopping list, chop chop cutting board, cereal bowls, and food guide pyramid magnet.

Intervention tools are essential for the GFWW campaign. The nutrition education lesson plans designate which intervention tools should be distributed during the class. Intervention tools include GFWW beach balls, Frisbees, sippy cups, chop chop boards, infant spoons, magnets with the Food Group Gang characters, and books. The WIC staff members also have GFWW mouse pads, nametags, and lanyards. Before October 2003, intervention tools were distributed through an annual drop shipment based on caseload. It was often difficult for local staff members to find room to store the large volume of materials and to plan well enough in advance so that they would not run out of materials. Some local staff members would need to exchange intervention tools with other clinics. For example, one clinic might have had more success with the Frisbees than with the beach balls, but the reverse might have been true in another clinic. In such a situation, the Program Consultant would facilitate the exchange of tools between the clinics so that both had what they needed instead of being oversupplied with unused materials. Now, the state will allow local WIC clinics to order intervention tools through the state by a minigrant process. In this way, local agencies get what they need for their clientele.

Many clinics also have learning tables, which offer WIC children a constructive diversion while they are waiting for their appointments. Tables are painted with fruits and vegetables, and have toys attached that address healthy eating. The tables have activity stations that are bolted to the table and have attached pieces so that the activities and pieces do not get lost or stolen. The stations involve counting, spatial arrangements, or working an item through a maze.

To reinforce the GFWW messages, the WIC food package has been modified to meet the American Academy of Pediatrics juice recommendation of no more than four to six ounces of fruit juice a day. This modification also included adding vegetable juice to the WIC food package. Although participants can choose any type of milk, the WIC staff members encourage nonfat or low-fat milk for children older than age 2. In addition, clients who have a high body mass index do not receive both cheese and peanut butter in the same month.

KIDS GET FIT WITH WIC

Kids Get Fit With WIC (KGFWW) is an annual event that typically takes place during National Nutrition Month in March. This initiative has taken the place of Team Nutrition efforts.[4] State WIC office staff, including nutritionists and support staff, conduct this event targeting Head Start children, families, and their teachers. The two- to three-day event goes to a different region each year and puts on two to three health fairs a day. All the regions have been visited. In 2003, more than 300 Head Start children, their caregivers, and their teachers attended the event. During KGFWW events, Head Start children visit five different stations featuring (1) the Tooth Fairy, a dental health game; (2) the Wheel of Food, a game that helps children identify members of different food groups; (3) a puppet show featuring Citrus Sue and Bronco Broccoli, discussing good sources of vitamins A and C and the benefits of physical activity; (4) a Food Tasting Table, where children are encouraged to taste fruits and vegetables; and (5) the Pyramid Hat Table, where children choose cutouts of their favorite foods and glue them to a construction paper hat. The children also participate in a group version of the "The Hokey Pokey" to demonstrate how much fun moving to music can be. In addition, the state staff members dress up in adult-sized costumes of Pecos Pyramid and the Food Group Gang. The activity features Pecos Pyramid, Judge Roy Bean, Charlie Cheese, Citrus Sue, Billy the Bread, Bronco Broccoli, and Soda Pop Sam in a skit about variety and moderation in food choices. Each of these characters is represented as a hand-sized puppet in all of the local clinics and incorporated into nutrition education and Kids Club classes to complement the lesson plans and books.

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[4] Team Nutrition is a USDA program that provides training and technical assistance in promoting healthy eating to programs such as Head Start that participate in the Child and Adult Care Food Program.

Coordination and Collaboration. In some counties, the Expanded Food and Nutrition Education Program (EFNEP)[5] conducts general nutrition education classes in the clinics using GFWW lesson plans. Oklahoma State University's EFNEP program is working with the state WIC office on the "Cooking with WIC" videoconference telecast. GFWW was presented at the 2003 Oklahoma Public Health Association conference, and there are plans to present the campaign at the Oklahoma Dietetic Association conference in 2004. Other agencies identified as stakeholders include the National WIC Association, OSDH, Head Start, Turning Point,[6] and the various state-level task forces that Program Consultants participate in.

Publicity and Outreach Efforts. Messages for GFWW are primarily intended to be introduced during nutrition education classes, but local agencies can incorporate them into the WIC certification process, bulletin boards, and waiting rooms. Some sites introduce elements of the initiative to their clients during certification, because there is such a small caseload that there are never enough incoming clients at one time to have a group nutrition education class. In these sites, nutrition education is more individualized. In addition, the intervention tools are also a means of advertising. Clients see what nutrition education class participants receive and are told by WIC staff members that they can only receive the intervention tools if they come to class. In addition, the OSDH WIC Approved Food Card has a GFWW message on the back panel with Pecos Pyramid, as well as the six objectives of the initiative.

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. The Director of Nutrition, Education, and Training Division and the Education and Training Coordinator assume responsibility for the annual Nutrition Educators Seminar and for conveying the statewide GFWW nutrition messages to WIC staff. The Education and Training Coordinator disseminates lesson plans and intervention tools to the local WIC agencies, facilitates the quarterly NEFG meetings, and addresses questions and concerns that come from the local staff. The role of the Director of Nutrition, Education, and Training Division is administrative; she is responsible for the operational adjustment funds. Program Consultants, as well as the NEFG members, channel questions and input about nutrition education between the state and local staff. The State WIC Director sees himself as a cheerleader for the campaign. He participates in nutrition education trainings, often providing opening remarks to show top management support of local nutrition education efforts. His

[5] EFNEP is a U.S. Department of Agriculture (USDA) program that helps those with limited resources acquire the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets. Implemented at the local level, EFNEP delivers services through group classes, one-on-one teaching, mailings, and mass media. EFNEP often collaborates with local food stamp and WIC programs to enhance community nutrition education efforts.

[6] Turning Point is a national initiative of the W.K. Kellogg and Robert Wood Johnson Foundations to transform and strengthen public health infrastructures. Turning Point starts at the local level to generate community support and participation in public health goal setting and action. In Oklahoma, Cherokee, Tulsa, and Texas counties were awarded Turning Point grants.

responsibilities are similar to those in the planning phases of the initiative—providing support and resources so that the initiative can move forward.

Non-nutritionists can teach general nutrition education classes if there is no nutritionist available or if the nutritionist has designated a non-nutritionist to teach. The staff person teaching a class must be either a nurse or Certified WIC Nutrition Technician (CWNT).

The NEFG is made up of 13 WIC nutritionists, nurses, and other staff members representing county health departments and independent clinics across the state. The mission of the NEFG is to "serve as an advisory and sounding board in the development and implementation of nutrition education and training initiatives to enhance and promote quality service provided to the WIC participant." The first NEFG meeting took place at the first Nutrition Educators Seminar in February 2002. The NEFG holds quarterly meetings at the state agency office in Oklahoma City. Program Consultants were charged with identifying staff members from their region to serve on the NEFG.

Participation in the NEFG does not affect members' responsibilities in the clinics. NEFG members know of the meeting schedule far enough in advance so that they can plan accordingly. The meetings are typically from 10 A.M. to 2 P.M. on Fridays, a day when staff members have set aside time for office work. The meetings are productive, and NEFG members do not usually leave with tasks to accomplish afterward, unless they volunteer to do so. Typically, the Education and Training Coordinator takes on the follow-up tasks and write-up responsibilities.

Training and Quality Assurance. The state held its first WIC Nutrition Educators Seminar in February 2002, and the second one in February 2003. These annual seminars in Oklahoma City began, in part, as a memorial to Laura K. Savage, the Nutrition Education Coordinator who was killed in a car accident while on a site visit at a local agency. During these two-day sessions, state WIC officials bring local staff members together and communicate Oklahoma's nutrition education goals for the upcoming year. WIC nutrition educators attend the seminars, including WIC nutritionists, nurses, and CWNTs. While attendance is not mandatory, a majority of agencies send at least one staff member, and approximately 150 participants attend the seminars each year. In 2004, clerks will also be invited to the seminar.

The Nutrition Educators Seminar includes a poster session so that local staff members can share best practices in nutrition education. The winner of this poster session, receiving the Laura K. Savage Creativity Award in Nutrition Education, then competes in the poster session at the National WIC Association meeting. The NEFG assists the state staff in identifying training needs and potential topics that should be addressed. Moreover, the seminar provides an opportunity to introduce and demonstrate new lesson plans. Motivational speakers and presentations to increase general knowledge are also included. The trainers for the event include outside experts, county nutritionists, Program Consultants, and state-level program officials.

The first Nutrition Educators Seminar in 2002 included teaching WIC nutritionists and other relevant staff members about the GFWW campaign's goals, intervention methods and tools, and

the stages of change model.[7] The guest speaker discussed childhood obesity. In 2003, a child development instructor and author of *Baby Play & Learn* and *Toddler Play & Learn* discussed the stages of infant and toddler development. Staff learned how they and parents or caregivers could incorporate books, play, and physical activities into on-site nutritional counseling and in the home.

The strengths of the Nutrition Educators Seminar include the opportunity to bring all staff members together, which can lead to greater consistency across the state. The seminar brings in quality speakers that are nationally recognized rather than just relying on state WIC staff. The training energizes and motivates staff members to try new things and share ideas, and it provides the opportunity to network with peers across the state. The training also tries to address staff member attitudes, morale, and customer service. Local staff members point out that the demonstrations, time for questions, networking, poster sessions, and the high quality of speakers are valuable. They also appreciate the State WIC Director's opening remarks that show top administration support.

There are several challenges in attracting staff members to this training event. It is difficult to close the WIC clinics for such a long time; staff members need significant advance notice so that they can plan accordingly. Some county administrators may not send staff members because of fears of losing too much clinic time. Travel can be a challenge for staff members who do not live near Oklahoma City, and the time commitment can be a challenge for participants with children.

In addition to the Nutrition Educators Seminar, the CWNTs receive training and program updates through video teleconferences, memorandums, and the CWNT Online Training Program.[8] A supervising nutritionist trains CWNTs using the online training curriculum. CWNTs also observe other CWNTs and nutritionists facilitating nutrition education classes. The nutritionist in the local agency and/or the Program Consultant will then observe and provide feedback to CWNTs until they are ready to teach on their own.

To assure the quality of the many GFWW activities, the state WIC office asks a nutritionist from each WIC site to complete a Nutrition Education Plan for the upcoming year. Program

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[7] The stages of change model is based on the premise that behavior, and consequently behavior change, is a dynamic process unfolding over time in five predictable stages: (1) precontemplation, (2) contemplation, (3) preparation, (4) action, and (5) maintenance. Precontemplation represents the stage where an individual has no interest in making changes within the next 6 months. Contemplation is when the individual is thinking about making changes within the next 6 months. The preparation stage is when the individual plans on making changes in the immediate future (1 month) and may have had some behavior change in the past year. In the action stage, the individual has made a specific overt change within the past 6 months and is becoming more consistent with it. In maintenance, the individual has maintained a new behavior for more than 6 months and is working to prevent relapse.

[8] The CWNT Online Training Program is an online training tool for CWNTs that allows staff members to train at their own pace without having to leave the clinic.

Consultants review the Nutrition Education Plan. It details a tentative schedule of classes, lesson plans that are going to be used, the staff members who will be facilitating the classes, certification codes, and how the clerks will know how to schedule participants. The staff members can use lesson plans distributed at the Nutrition Educators Seminars or developed in previous years and approved by the state. Any lesson plans that are included in the Nutrition Education Plan that were developed by a local staff member or another state must be approved by the Program Consultant before being implemented.

In addition, the eight Program Consultants monitor activities in their regions by observing nutrition education classes. These observations are a required part of the bi-annual clinic review. The state staff also communicates the initiative's parameters during the Nutrition Educators Seminar. Distance education offerings include a videoconference on a quarterly basis called "What's Up With WIC" that communicates policy changes and other items of interest and that helps keep everyone on the same page. Furthermore, local WIC nutritionists stay abreast of what is going on in the classes facilitated by CWNTs since the CWNTs are under their licensure. It is possible that CWNTs stray from the lesson plan, but it is unclear as to how often this occurs because the CWNTs are not monitored regularly. However, when it is clear that someone is being inaccurate or straying from the lesson, nutritionists make sure the individual gets back on track.

Record Keeping and Data Systems. There has been no change or addition to the record keeping or data systems as a result of GFWW. However, program officials intend to add questions about physical activity to the certification process soon.

Funding. Nutrition ranked number eight in fiscal years (FYs) 2003 and 2004 for the OSDH Budget Request Priorities. Nutrition was not ranked in the top 10 in FY 2000, 2001, or 2002, indicating the increased emphasis on nutrition in the state. Funding for GFWW comes from the yearly operational adjustment dollars. The initiative was allocated one percent of the total WIC budget ($50,121,046), or $501,210 in FY 2003. Nutrition Services and Administration (NSA) funds are used for state staff time spent on GFWW. For lesson plans involving food, local staff members use their own money to purchase the food or ask a local grocery store for a donation.

ASSESSMENT AND LESSONS LEARNED

Program Strengths. Overall, GFWW has been a well-received campaign among clients and staff members. According to the Director of Nutrition, Education, and Training Division, GFWW's greatest success is the fact that the initiative tries to make nutrition education fun. Much of the success stems from the clinics having ownership of their own nutrition education efforts. The variation and flexibility at the local level allows staff members to meet the specific needs of clients. The intervention tools allow learning to continue at home and encourage participants to return. In addition, the Kids Club nutrition education classes provide services directly to the children. The state and local staff have identified secondary outcomes of the campaign, including getting *families* more physically active and eating healthier diets, and helping *families* work with children early in their development to promote lifestyle changes. The initiative provides an affordable and doable means of achieving these outcomes in the WIC population.

From a quantitative analysis standpoint, the program officials need to reconsider how to evaluate their efforts. In the planning stage, they decided to measure nutrition educator knowledge and skill. Therefore, at the Nutrition Educators Seminar in 2002, a survey was distributed to staff members as a means of evaluating GFWW and other nutrition education efforts. The survey first asked about participant satisfaction with the training. The survey then inquired about the usefulness of the presented topics and asked clients if they were already applying the information presented in the topics prior to the training. The topics the survey covered were WIC clients' readiness to change, putting stages of change models into practice, connecting with WIC clients, adult learning, getting WIC clients to participate, and making nutrition education fun. The survey responses were intended to be matched in a post-survey, but there was no need to conduct a post-survey since the responses indicated that there was no room for improvement. Staff rated the topics as useful and claimed to be regularly applying the information. Currently, they are considering using body mass index as a means of measuring program impact.

The participation and "re-show" rates for classes have increased. Based on informal feedback, clients have been receptive and positive about WIC's nutrition education efforts. However, because GFWW is so integrated into the WIC culture, clients do not necessarily see a distinction between WIC and GFWW. Clients appreciate the intervention tools and books and comment that it is worthwhile to come to the classes just for them. Caregivers often leave classes with an idea that they want to try, and children enjoy coming to the health department because it is seen as a fun place rather than a place to receive shots. The Kids Club is very well received; however, some caregivers are hesitant or resistant to the physical activity classes because they believe this is WIC's way of saying their child is "fat" or "heavy."

GFWW has made the nutrition classes more fun and enjoyable for staff members. Program Consultants see that staff members are more excited, satisfied, and motivated in their work, in part because they have more resources to work with. The FISH! Philosophy[9] of promoting a more supportive and energized place to work "fits into everything that [we are] doing with GFWW." In addition, many staff members have reevaluated their own lifestyles and initiated health behavior changes so that they "walk the talk." Finally, the NEFG members, who feel empowered and valued by the state, bring the local perspective to the campaign and help local staff members buy in to the initiative, both of which have a tremendous impact.

Key Challenges. At the clinic level, it can be a challenge for nutrition educators to do nutrition education in a way that is different from what they are used to or comfortable with. Some nutrition educators are more comfortable one-on-one than in a class setting. Others struggle in teaching a wide age range of children or in being flexible enough to handle the unexpected. The time needed for class preparation to coordinate the intervention tools and

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[9] While not an integral part of the GFWW initiative, state officials introduced the FISH! Philosophy at the WIC Nutrition Educators Seminar. The goal is to improve customer service for clients by improving the work environment for staff. Seminar organizers screened the FISH! video, a nationally known tool that demonstrates the importance of having fun at work and how this can improve the services that the organization provides.

materials with a particular lesson plan can be more extensive than the time needed to simply "show up" with handouts. The Nutrition Educators Seminar tries to address these barriers by providing breakout sessions where staff members can share their concerns and ideas. In addition, some clinics have indoor and outdoor space limitations, making classroom activities, outdoor play, and intervention tool storage difficult. Space limitations are exacerbated as the class show and "re-show" rates increase as clients have more fun with nutrition education. This increase in participation is desirable, but overcrowding requires staff members to quickly adapt to last-minute space limitations.

OSDH provides the resources and support necessary for GFWW to be in the clinics. Getting support from these internal financial advisers and leaders is a challenge because they are not responsible for the success of the initiative, but will be responsible for the failure if they do not permit the program to move forward with adequate resources. Along similar lines, communication between state staff and local nutrition educators can also be a challenge. More specifically, the state tries to make it clear that the intervention tools should only be distributed as part of a nutrition education class, but some local staff members do not follow these instructions consistently, thinking of the tools as "freebies" or "incentives" rather than tools that are incorporated into a lesson to enhance learning. Appropriate intervention tool distribution is addressed at the Nutrition Educators Seminar and through internal memorandums.

The Nutrition Education Plans and Program Consultant site visits provide some quality assurance over nutrition education, but because efforts are not monitored regularly, there are concerns about local staff members having so much freedom that they lack consistency. Because the state has no intention of "policing" GFWW efforts, quality assurance is difficult. The Program Consultants are not direct supervisors of local staff, so they can only make suggestions. Variation and flexibility at the local level also add to the challenge of coordinating a statewide training that will meet everyone's needs. Along similar lines, it is a challenge to develop lesson plans and select intervention tools that will be widely accepted and used appropriately.

Lessons Learned. Program officials believe they are doing something that works. They are using a client-centered, simple, back-to-the-basics approach. Other agencies can successfully implement GFWW with this in mind, even if they do not replicate all of the elements. It is critical to present nutrition education in an enjoyable, as well as informative, way so that WIC participants will want to come to the classes. The program officials also suggest collaborating with sister agencies, such as child nutrition and food stamps, to promote physical activity and healthy eating so that clients are receiving a consistent message. Finding a means to measure success is important as well, possibly by bringing in a statistician during the planning phase. The Director of Nutrition, Education, and Training Division suggests an evaluation strategy that documents nutrition education success as well as body mass index.

The initial kickoff must include everyone so that there is a clear understanding of the initiative's goals. Moreover, local staff members need clear, repeated communication regarding the appropriate distribution of intervention tools. To prevent misuse, it is helpful to hold training on new intervention tools and lesson plans before they are used. During this time, it is important to have staff members model lesson plans so that those in attendance can learn by example. It is also essential to conduct a needs assessment to identify client needs and interests, as well as the needs of the local staff. An NEFG is an excellent way to collect ideas from the local level and weave them into a statewide nutrition plan. Ideas can be shared with other parts of the state, yet

local agencies are encouraged to be creative and identify or design lesson plans that work for their specific clients.

At the clinics, local staff members need, and want, to make purchasing decisions for their intervention tools because they know what works and does not work with their clients. Program officials in Oklahoma recognize this and no longer recommend having an annual drop shipment of materials. The local staff members would like to see even more intervention tools so they have a greater assortment and variety available for distribution. Finally, local staff members suggest designing lesson plans for one-person delivery that last no longer than 20 minutes.

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OBESITY PREVENTION MODULES[10]
PENNSYLVANIA

OVERVIEW

Location: Pennsylvania

Start Date: The modules were developed in 1999–2000, and made available to local Nutrition Education Coordinators in June 2000, with the understanding they would train their staff over a two-year period.

Target Population: First-level: WIC staff who do nutrition education—Second level: Parents of low-risk children age 2 or older

Purpose: Provide staff with nutrition education materials and methods targeted at behavior changes that will prevent or reduce childhood obesity.

Services: Materials include guidance for local Nutrition Education Coordinators in how to train staff to work with parents, lesson plans, and handouts to review with parents for each topic.

Funding: Regular WIC nutrition services funding.

Why Program Was Chosen: This program is an example of a comprehensive, yet realistic, obesity prevention initiative, and several other states have already adapted its materials.

Key Challenges: Local staff sometimes feel it is difficult to cover the modules in the limited time they have with clients. It has also been challenging for some staff to understand that the modules are preventive materials that target all parents, not just parents of those already overweight. State agency staff regretted that funds were not available for centralized training.

BACKGROUND

State WIC Program Background. Pennsylvania's WIC program has 25 local agencies serving 67 counties. Throughout the state, there are 348 active Competent Professional Authorities (CPAs), including nutritionists and other health professionals and trained paraprofessionals, who can evaluate the nutritional risk status of WIC clients. The state's caseload has generally been between 230,000 and 240,000.

[10] Telephone interview, April 9, 2003.

Although Pennsylvania has several large metropolitan areas, much of the state is rural, and WIC clients in rural areas often find transportation to be their major barrier to receiving services. State staff note that people in the rural areas tend to feel decisions about their personal lives are private matters, so are sometimes not receptive to discussion of issues such as breast-feeding. State WIC staff also perceive support from the medical community as lacking in some cases, particularly for addressing child obesity, but hope that will change as the issue receives more national attention.

Program History and Objectives. In 1999, nutrition educators at the state WIC agency recognized the need to do something about the childhood obesity problem. They believed that WIC's role would be more beneficial if it had a preventive focus rather than a focus on interventions after weight problems had started. They also saw the need to give people more concrete suggestions on how to make changes in their behavior. Obesity prevention was a state-level initiative because state staff realized that local nutrition educators did not have time to develop obesity prevention materials on their own.

The state Nutrition Education Coordinator at that time developed most of the materials with input from other state-level WIC Public Health Nutrition Consultants and local agency Nutrition Education Coordinators. The current Chief of Nutrition Services wrote the final two modules after she started working at the state agency in November 2000. The Nutrition Education Coordinator had previously developed nutrition education modules on other subjects for local agencies, and she drew on this experience.

The state Nutrition Education Coordinator started by devising a set of survey questions for parents, then developed the modules around them (one module for each question). She used the basic format of previous modules, but the obesity prevention modules were more detailed. She also developed one or more handouts to be given to the parents for each module, as well as materials on how to train local staff to use the modules.

In June 2000, the Nutrition Education Coordinators at each local agency were given the modules and told that, over the next two years, they were responsible for training their local agency's staff on how to use them.

Target Population. The modules target parents of WIC children age 2 or older. However, they are not to be used if the child has other, more pressing risks that need to be discussed during nutrition education contacts. Because the modules are meant to be preventive, they are intended for use with all children, not just those who are already overweight or at risk of becoming overweight. The training materials include a discussion of how to adapt the modules if the child is already overweight or at risk of becoming so.

PROFILE OF INNOVATIVE PROGRAM

Content of Modules. Pennsylvania WIC developed seven Obesity Prevention Modules (see box) and a document entitled "Preventing Childhood Obesity—Introduction," which provides a general overview of the obesity issue and training materials for staff on how to discuss their child's growth with parents of overweight children.

Materials for each module include a curriculum for training local WIC staff (for local Nutrition Education Coordinators to use); a "Staff Reference Sheet," which provides staff with background information on the topic discussed in the module; the module itself—a nutrition education lesson plan to discuss with parents; and one or more handouts to give the parents. Each module is built around a question on the Nutrition Education Plan Survey, which the parent is asked as a way to start the discussion. The eight-question survey was kept in the child's chart as a way to document use of the modules, but now is documented online in the state WIC data system. The specific questions are not asked all at once—each question is asked in preparation for the relevant lesson plan.

The training materials encourage staff to ask open-ended questions, provide interactive counseling, and give clients ideas about how to change their behavior. Training for local staff involves reviewing the nutritional basis for each recommendation (also covered in the "Staff Reference Sheet"), reviewing the module and handouts, and observing and practicing role-playing presentation of the material—both as the nutritionist and the participant.

For example, training for the module on "Eating More Fruits and Vegetables" first involves review of the food guide pyramid and the reasons for eating at least five fruits and vegetables per day. Each staff member is asked to complete a food frequency questionnaire on their own diet and to discuss barriers they face in reaching the goal of five a day. Next, the module and handouts are reviewed and the group discusses issues such as what to do if they think the participant is not answering the questions honestly. The trainer then asks a member of the audience to role-play the participant and she presents the module to them. Afterward, the

Module Number	Topic	Handouts
1	Increasing Physical Activity/Reducing TV Viewing	Get Them Moving! Children and TV Easy Ways to Get Active
2	Teaching Children Positive Attitudes About Food	Teaching Your Child to *Enjoy* Mealtime!
3	Choosing Healthy Snacks	Snacks for Kids
4	Limiting Juice Intake	Hey Mom, I'm Thirsty
5	Choosing Fast Foods Wisely	Happy Meal, Healthy Child? Fast Food Restaurant Guide
6	Increasing Fruits and Vegetables	Hey Mom, Give Me Five! Color Your Plate to Health
7	Reducing Fat Intake	The Facts on Fat Fats in Foods Cut Out Fats to Cut Back Calories Changing Recipes to Reduce Fats

audience is asked to evaluate what was effective about the contact and what was less effective. Finally, the group divides up and does more role-playing, taking turns being the nutritionist and the participant. When conducting local training, the training curriculum is sometimes copied and given to WIC staff, but sometimes the Nutrition Education Coordinator hands out only the staff reference sheets.

Each module involves asking parents open-ended questions, then following up with relevant information. Followup may involve changing parents' ideas where not correct or addressing barriers to change that they identify. Each module ends with the question, "Which ideas will you try?" The participant's response is noted in the chart for future followup.

Each module is accompanied by handouts. For example, the module on fruits and vegetables has two handouts: "Hey Mom, Give Me Five!" addresses barriers to eating more fruits and vegetables with concrete suggestions. "Color Your Plate to Health!" presents the idea of eating fruits and vegetables from a variety of color groups to achieve good nutrition. Parent handouts are available in English and Spanish.

Training in, and Implementation of, the Modules. As noted, local Nutrition Education Coordinators were expected to use the modules and accompanying materials to train their staff. The trainers had a lot of flexibility in how they did the training. Usually, they held in-service trainings or did the module training during a staff meeting. Training for one module took about 1.5 to 2 hours. The state agency recommended that all staff be trained on the modules, because sometimes clients talk to clerical staff or someone other than the staff responsible for nutrition education. However, it is the professional and paraprofessional nutrition education staff who use the modules with clients.

This flexibility resulted in some initial confusion in how to schedule the training and the use of the different modules. Some agencies decided to train their staff on one module at a time in staff meetings. Staff used the module they had just learned for the next three months, then were trained to use another module and used it for three months, and so on. Other agencies chose to train staff on two or three modules at a time, while others were not successful even in starting the training process. Thus, initial implementation was uneven. At the end of the two-year period, some agencies were adept at using the modules, while others were not, and there was a lot of variability in the ways that the materials were being used.

Related Staff Training. There was no statewide training on implementation of the modules. However, Pennsylvania WIC has held several related trainings in the past few years as part of its effort to (1) shift the focus of nutrition education contacts from information dissemination to behavior change, and (2) target obesity and overweight prevention.

In 2001, Pennsylvania WIC held a statewide Nutrition Services meeting for WIC staff. The meeting focused on training staff in overweight and obesity issues, including the prevalence of overweight, and on the importance of physical activity. The meeting's keynote speaker was Bettylou Sherry of the Centers for Disease Control and Prevention (CDC). She used data from the Pediatric Nutrition Surveillance System, which is largely collected by WIC clinics, to describe the increasing problem of obesity nationally and in Pennsylvania. Additional sessions were offered on anticipatory guidance materials, social marketing, and studies related to early

childhood eating habits and feeding practices. Approximately one-third to one-half of WIC professional staff attended the conference.

In 2002, the Chief of Nutrition Services held regional in-services with local agencies and introduced the ideas of anticipatory guidance, facilitated group discussion, and motivational interviewing, to help staff figure out how they could make these techniques work for them. She discussed with staff their lack of time with clients and how they could use at least some of the techniques even when time is limited. Given that they can only spend a short time with clients, she discussed with staff how to determine the appropriate times to bring up the topic of weight and use the modules.

Refinements to Implementation of the Modules in 2003. For fiscal year (FY) 2003, the state set as a goal that local agency staff provide to the state a protocol to ensure the continued use of and continued training on the modules. The protocol was to be part of the annual nutrition education plans submitted by each agency. The state Nutrition Education Coordinator is currently evaluating the nutrition education plans submitted this year, so state staff cannot yet assess how this has worked out. The state agency will either approve the plans or ask for revisions.

In addition, state WIC staff developed new materials for local agencies related to the modules. First, they provided quizzes that can be used to assess staff's competency in each of the modules. A quiz might ask, for example, what a WIC staff member would do to approach a parent with an overweight child. The focus of the quizzes is less on knowing the facts presented in the module than on staff's competency in handling situations with clients. The state agency also developed a checklist to help assess whether a contact with a client is effective or not. This tool is sometimes used during performance reviews to ask staff whether they are using specific techniques when they meet with clients. For example, the checklist includes introducing oneself to the client and making eye contact.

Coordination with Other Agencies. Pennsylvania WIC partners with other health and advocacy organizations around obesity and overweight education and prevention, although not the modules specifically. However, as word about the modules has spread, other organizations in Pennsylvania involved in nutrition education have asked state WIC staff to give presentations on the modules. Cooperative Extension asked the former Chief of Nutrition Services to speak about the modules, and the current Chief of Nutrition Services recently spoke about them at a Maternal and Child Health Advisory Panel meeting. The former Nutrition Education Coordinator also provided the modules to the Maternal and Child Health Consultants who work out of Pennsylvania's State Health Centers.

In addition, the modules are available on the WIC Works Website, and several other states are adapting them for their use (see more discussion below).

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. In Pennsylvania, the Nutrition Services Section, which supervises WIC, is made up of the Chief and four Public Health Nutrition Consultants. One of these consultants now functions as the State Breast-Feeding Coordinator, one is

designated as the State Nutrition Education Coordinator, and the others have other areas of expertise. The Nutrition Education Coordinator and the Nutrition Services Chief are the primary staff members who worked on developing the modules, and the Nutrition Services Chief is the main person monitoring implementation of the modules and providing technical assistance to local agencies as needed.

In addition, the local agency Nutrition Education Coordinators have contributed to this process. In particular, several local agency Nutrition Education Coordinators participate as members of the Nutrition Education Committee, which holds monthly conference calls to strategize statewide initiatives.

Record Keeping and Quality Control. Nutrition educators document use of the modules in clients' charts, using either the survey or the Nutrition Education Plan form that was used before the implementation of the modules. Nutrition education contacts typically occur every three months. If a child stays in WIC, each child's caregiver should be exposed to all of the modules eventually.

Responsibility for quality control is primarily at the local level. The checklists and quizzes for the local agencies should help with this process. At the same time, as in other states, the four consultants conduct annual program reviews. Each fiscal year, 13 local agencies are reviewed, and the 2 largest agencies have clinics reviewed each year. An integral part of the reviews is to observe nutrition education delivery in the clinics, including the implementation of the Obesity Prevention Modules.

Funding. This initiative did not receive any special funding; it was paid for out of WIC Nutrition Services and Administration funds.

ASSESSMENT AND LESSONS LEARNED

Program Strengths. The Obesity Prevention Modules address an area previously not targeted by WIC with a set of clear messages for parents of children age 2 and older, and specific suggestions for behavior change in response to each message. At the same time, they present the message in a client-centered discussion format.

Although implementation has been challenging, the state Chief of Nutrition Services feels that the local agencies have gone further than she originally expected in adopting the modules and using them consistently. Overall, staff have reacted favorably to the new approach, as they feel that the modules make it easier for them to target what they want to talk about with WIC clients. After some initial resistance, they seem to find a more behavior-focused approach rewarding.

As noted above, the modules have been posted on the WIC Works Web site, and the state WIC agency has received positive feedback. Several other states are adapting the materials for their use. Hawaii, for example, will be using the modules to train staff at their statewide conference, and then will implement the modules in nutrition education contacts. Florida took the lessons of the modules, turned them into flip charts, and added some graphics. The state now uses them in its clinics.

Key Challenges. A major challenge for staff in implementing the modules is the limited time they have to spend with clients—10 to 15 minutes at most. The state staff tried to be sensitive to this in developing the modules and working with local staff on implementation.

Another challenge has been getting local staff to understand this is a preventive program for all children, not an intervention for those who are overweight. Staff turnover is also a concern in Pennsylvania, as staff may leave by the time they are trained in all the modules and comfortable using them, and then the agency needs to start over. Although it would be helpful for all staff to have the same understanding of the goals of the program, this has been a challenge because Pennsylvania WIC did not have the resources to do regional training sessions.

State staff hear that client reactions to the new approach have been mixed. Some clients fear that WIC staff are going to “get on their case” about their child being overweight. However, some clients feel that the information in the modules is more useful than nutrition education they received from WIC in the past. Although staff are specifically trained in how to deal tactfully with parents of overweight children, some parents will still be concerned about what they perceive as criticism.

Finally, Pennsylvania WIC introduced a new data system in 2002. This distracted staff attention from implementation of the modules for some time.

Lessons Learned. This approach is promising in adopting a small number of very specific messages, offering interventions that can be completed in short amounts of time, and helping staff develop skills for more interactive counseling.

In retrospect, state staff wish they had had the resources to do regional staff trainings. Another option could have been to do a centralized “train the trainer” session for the Nutrition Education Coordinators. In addition, the state agency could have avoided some initial confusion by providing more guidance about scheduling the introduction of the modules, but it wanted to be flexible, as local agencies face very different constraints.

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To obtain materials:
http://www.nal.usda.gov/wicworks/Sharing_Center/statedev_PAmodules.html

MOOOVE TO LOWFAT OR FAT FREE MILK CAMPAIGN[11]
FLORIDA

OVERVIEW

Location: Statewide

Start Date: March 2002

Target Population: All adults and children over 2 years old in Florida.

Purpose: The statewide nutrition education initiative aimed to help reduce the incidence of overweight and obesity in Florida by encouraging all adults and children over 2 years old to drink lowfat (1 percent) or fat free (skim) milk.

Services: Specialized educational and outreach strategies that convey the benefits of lowfat and fat free milk

Funding: The campaign used Nutrition Services and Administration (NSA) dollars; total WIC expenses were about $12,000, exclusive of staff time and other in-kind contributions.

Why Program Was Chosen: The Mooove to Lowfat or Fat Free Milk Campaign was the first Florida-wide nutrition education initiative that encompassed multiple state agencies. It is a broad-based social marketing campaign that uses creative approaches delivered through a wide range of organizations. Other WIC agencies have mounted similar campaigns, but the extent of coordination with other agencies in Florida may be unique. Furthermore, for those WIC agencies not familiar with the campaign, the materials could easily be adopted at little cost. Moreover, it is an example of an obesity prevention intervention with a focused behavior change message that is very salient in the context of the WIC food package.

Key Challenges: The WIC Bureau was unable to gain active support from local grocery stores in promoting the campaign's message, despite approval from store executives. Moreover, program staff were surprised by the myths that WIC participants believed about milk and its nutritional content.

[11] Telephone interview, April 8, 2003.

BACKGROUND

State Characteristics. Florida is the fourth-most-populous state in the country, with 15,982,378 residents. Of those, 65.4 percent are white but not of Hispanic or Latino origin, 16.8 percent are Hispanic or Latino, and 14.6 percent are African American. Almost a quarter of the population over 5 years of age speak a language other than English at home. In 2002, 13.0 percent of the state lived below the federal poverty line (American Community Survey 2002). According to the U.S. Department of Agriculture (USDA), 19.6 percent of all Florida children under 18 are overweight, which is 3.5 percentage points higher than the national average for children (Community Nutrition Research Group 2003).

WIC Program Background. At present, 42 WIC agencies serve 67 counties statewide. The average number of participants per month for fiscal year 2003 was more than 350,000.

The Mooove Campaign was the first of three interagency nutrition education initiatives. For the second year's campaign, the Bureau of WIC and Nutrition Services, in collaboration with two other bureaus of the Department of Health (Child Nutrition Programs and Chronic Disease Prevention), launched a statewide nutrition education campaign in March 2003. The theme for 2003 is *3 + 2 = 5 A Day the Florida Way!* The 2004 theme will be Healthful Nutrition (with an emphasis on healthy snacks) and Physical Activity.

Program History and Objectives. The Mooove to Lowfat or Fat Free Milk Campaign (Mooove Campaign) began as a WIC initiative, was then adopted by another Department of Health group (the Bureau of Child Nutrition Programs), and gradually expanded into a state interagency effort. Many of its materials and lesson plans were adapted from the "1% or Less Campaign," launched by the Center for Science in the Public Interest (CSPI) in 1996. The Mooove Campaign encourages Florida adults and children over 2 years old to drink lowfat or fat free milk to help reduce the incidence of overweight and obesity. According to data from the Behavioral Risk Factor Surveillance System (BFRSS) [www.doh.state.fl.us/family/obesity], nearly 1 in 5 Florida residents were obese in 2002, whereas only 1 in 10 were obese in 1986. State health officials hope that this initiative will influence people to drink less-fattening milk, and thus help decrease the incidence of obesity.

In 2001, the Bureau of WIC and Nutrition Services of the Florida Department of Health received state funds for a limited marketing effort to promote good nutrition. WIC and Nutrition staff decided to focus on drinking healthier milk and so enlisted the Department of Health's full-time graphic artist to design educational materials to promote this message. She created a cow cartoon figure that became the "mascot," or logo, for the campaign and designed a colorful and informative display. The Bureau used the funds to put together two displays that were lent to local WIC agencies that chose to promote the lowfat or fat free milk message. Each display contained a banner, as well as instructions for conducting milk taste tests, an instructional flip chart, and promotional stickers. In addition, cow print tablecloths and aprons were included with each display. At this stage, the Mooove Campaign operated on a very small scale. The two displays were offered to all local WIC agencies to borrow, and seven local WIC agencies used one for three months at a time. The Bureau received positive feedback about the display and its accompanying materials. Moreover, the Bureau of Child Nutrition Programs used the cow logo to design its own materials to launch a Mooove Campaign in all its affiliated day care centers.

The next step toward the statewide Mooove Campaign came from the Florida Interagency Food and Nutrition Committee (FIFNC), a nutrition task force founded more than 20 years ago, which has as its purpose to coordinate efforts to provide effective nutrition, food security, and food safety programs and services to Floridians. FIFNC members are representatives from a variety of state agencies whose missions and goals are related to providing effective food and nutrition services.[12] Over the years, this committee has provided a valuable mechanism for coordination, advocacy, and outreach activities for food and nutrition services in Florida.

The FIFNC concluded that the cow mascot/logo would be an effective marketing tool to use for promotional materials for an interagency campaign, and decided to launch the statewide nutrition education initiative—Mooove to Lowfat or Fat Free Milk—in March 2002 (March is National Nutrition Month).

Target Population. The statewide initiative targeted all adults and children 2 years of age and older. Although the Mooove Campaign began with a set of publicity materials that were originally developed for the WIC program, these materials were soon adapted to meet the needs of the other targeted groups. For example, the Department of Education marketed lowfat and fat free milk in all public schools—kindergarten through 12th grade—with a specially designed stand-alone "skating cow" display, which was placed near the milk section of school cafeterias throughout Florida. The Department of Elder Affairs ensured that its senior centers, congregate meal sites, adult day care centers, and area aging agencies were supplied with the colorful poster designed for the campaign.

PROFILE OF INNOVATIVE PROGRAM

Services Provided in WIC. The FIFNC developed nutrition education materials and activities that local WIC staff could offer in clinics to raise awareness about the benefits of lowfat and fat free milk. Generally, services promoting the Mooove messages and activities took place in WIC waiting rooms and nutrition education classes. The campaign was designed to last one year, and activities could be spread out over the year so that the nutritional messages would be continuously reinforced in fun, educational ways.

All WIC sites (along with other agencies and organizations affiliated with the FIFNC) were provided with the campaign kit, which contains a press release, lesson plans for all ages, taste test instructions, consumer handouts, an article to be used in professional newsletters, and evaluation forms. The most popular item developed for the campaign was the poster, which was

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[12] FIFNC agencies that participated in the Mooove Campaign were the Florida Department of Education; the Florida Department of Elders Affairs; the Florida Department of Health; the Florida Department of Children and Families; the University of Florida Institute of Food and Agricultural Sciences Extension Programs; the U.S. Food and Drug Administration (Florida District, Southeast Region); and the Suwannee River Area Health Education Center. The only FIFNC agency that did not participate was the Florida Dairy Council, which could not endorse the initiative since its policy is not to promote one type of milk over another.

available in both English and Spanish. In addition, the state WIC office developed additional materials, which included a Mooove display, bulletin boards, buttons, grocery store placards, "envelopes" to hold WIC checks, and tent cards. In summer 2002, a tabletop display with test tubes depicting the fat amounts in each type of milk was distributed to all WIC nutritionists to use with clients.

The WIC Bureau also developed newsletters in English and Spanish and suggested activities that clinics could offer. WIC clinics used a variety of these activities, and they were popular with both staff and clients. For example, WIC staff mimicked the milk mustaches from the Got Milk?™ ad campaign, took photographs of everyone, and displayed them in the waiting room during the first few months of the initiative. Other activities in WIC clinics included children's art contests, recipe contests, door prize contests, and the setting up of displays demonstrating the importance of calcium.[13] Clinics also provided taste tests to staff and clients, which were very successful in changing attitudes and opinions about lowfat and fat free milk.[14]

The degree to which local agencies implemented the Mooove Campaign varied from agency to agency. The WIC public health nutrition consultant noted that one county health department WIC coordinator "went all out," incorporating the activities described above as well as making cow print aprons for the entire staff, painting cow prints on tennis shoes, and wearing cow earrings. The coordinator conducted ongoing milk taste tests with clients, and also developed a teaching tool display of milk container lids showing the lid colors that are used on lowfat and fat free containers in every grocery store in the county.

Participation. While the Mooove Campaign was a statewide initiative, state WIC officials did not mandate that all agencies participate. Rather, local staff could incorporate as much or as little of the materials into their routine services as they chose. However, the WIC health educator estimated that 90 percent of the 42 local agencies conducted some outreach and nutrition education related to healthier milk choices.

Since the Mooove Campaign targeted multiple audiences, the FIFNC could not determine the number of Floridians that the nutrition messages reached. For example, a WIC client's clinic may have elected not to use any of the materials, but her child might have attended a day care center that focused on promoting lowfat or fat free milk and had a strong parent education component that encouraged healthy drinking practices at home. As this example illustrates, it is possible that WIC clients were exposed to the promotional materials from multiple sources.

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[13] Staff place chicken bones in glass jars full of vinegar and in separate jars containing water. The bones in vinegar lose calcium in the form of calcium crystals, which causes them to weaken and bend or break easily. After a few weeks, WIC staff dry the bones and show clients that the ones in vinegar became brittle. This activity is borrowed from the National Dairy Council.

[14] The milk taste test is an interactive hands-on experiment that compares whole, reduced-fat (2 percent), lowfat, and fat free milk. Clients are blindfolded and then taste the four different types of milk from small cups, trying to guess which type of milk is in each cup.

Coordination and Collaboration. The Mooove Campaign is very collaborative in nature. For example, the state WIC public health nutrition consultant conferred with a staff member from CSPI about adapting its "1% or Less" materials for WIC's Mooove Campaign, and the request was approved**.**

Members of the FIFNC developed the campaign kit. Each agency contributed to the kit in ways that focused on its own clients, but also developed components that could be used by other FIFNC agencies and other programs as well. For example, a professor from the University of Florida developed activities for elderly people and wrote an article that could be submitted to professional newsletters. WIC nutrition consultants developed materials specific to the WIC clinics, but at the same time worked with the Department of Health's graphic artist to create the cow mascot that was used to identify the entire campaign. They also assisted with the development of the Mooove Website.

Publicity and Outreach Efforts. WIC clinics used a number of promotional materials to convey the message to drink lowfat or fat free milk. Clients were given newsletters that (1) explain the health benefits of drinking lowfat and fat free milk, and (2) present nutritional labels for the four types of milk. In addition, materials presented in nutrition education classes or waiting rooms (see the box on materials) informed clients about the Mooove Campaign and educated them about healthier milk. State officials also used marketing and educational materials at special nutrition awareness events and conferences to promote the campaign. Press releases and an article for professional publications helped disseminate information to the entire community. The Mooove Website makes many of these materials available to other interested agencies. A Mooove display was exhibited at the Food and Nutrition Service (FNS)/USDA Nutrition meeting in Washington, DC, in February 2003 and won a participant award.

Educational and outreach materials are available free on the Florida Department of Health's Website [www.doh.state.fl.us/family/mooove/milk.html], including:

Sample newsletter to parents
Sample press release
Literature review about the benefits of lowfat and fat free milk
Article for a professional newsletter
Lesson plans and activity sheets for preschoolers
WIC clinic activities
Milk taste test instructions
WIC nutrition education newsletter
Cow graphics
Mooove Campaign posters in English and Spanish
Handouts for health fairs and other community events
Milk-related Websites

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. While the Mooove Campaign fell under the umbrella of the FIFNC and its members jointly developed certain materials, each participating agency assumed responsibility for tailoring the initiative to its programs and clients. While there was no formal training for the Mooove Campaign, the state public health nutrition consultant organized a conference call with all local WIC agencies to inform them about the initiative and to discuss how to implement various activities in their clinics. Local WIC staff did not have to assume any responsibility for producing materials, unless they chose to do something extra for their clients. State officials encouraged local WIC staff to be creative and tailor the campaign to their clients.

Funding. The cost of the educational and outreach materials comprised the majority of expenses associated with the Mooove Campaign. The state-level staff time spent on the initiative was considered an in-kind contribution. A graphic artist from the Florida Department of Health designed the cow mascot and publicity items, and the FIFNC developed the lesson plans and other materials. In addition, the state public health nutrition consultant and a volunteer produced the test tube displays, administrative and support staff were trained to make cow buttons during "down time," and a secretary assembled the campaign kits.

WIC's portion of the Mooove Campaign was funded with NSA dollars. Aside from the in-kind contributions of WIC staff for materials development, the state WIC office spent about $12,000, primarily for the printing costs of the Mooove promotional materials. Total costs to WIC *and* FIFNC were about $21,000, which once again does not include in-kind contributions from the FIFNC members. State officials consider the Mooove Campaign to be very cost-effective. Assuming that the initiative's message reached all WIC clients throughout Florida to some degree, costs were pennies per client.

ASSESSMENT AND LESSONS LEARNED

Evaluation and Outcomes. The desired outcomes for the Mooove Campaign were that more Floridians will begin to choose lowfat or fat free milk instead of reduced fat or whole milk. The WIC Bureau wanted to see as many WIC participants as possible engage in healthier behavior by changing their milk-drinking habits.

Initially, state officials did not conduct an evaluation that could examine WIC outcomes in isolation. However, the Mooove Website offered an on-line survey that collected information from FIFNC staff members on Mooove activities that they conducted in their local agencies, feedback and suggestions for future nutrition-related campaigns, and results of taste tests. In addition, clients completed a short survey in which they were asked questions about their milk-drinking habits.

Implementation Successes. The state health educator remarked that the campaign has been successful because "everyone—WIC staff and clients—loves the cow." (In fact, the cow mascot appeals to all clients, regardless of their age, who are served by FIFNC agencies.) She noted that many activities were visual and hands-on, reinforcing nutrition education in an original and innovative way. These strategies, including use of the chicken bones in vinegar, milk taste tests, and test tubes comparing the different fat content of milk types, effectively conveyed the core

message to clients. Local WIC staff reported that the test tubes with various fat contents and the taste tests were powerful, as was a display that read: "Do you know that these 2 donuts have the same artery-clogging fat content as one glass of whole milk?" "Do you know that 3 pieces of bacon have the same artery-clogging fat content as one glass of whole milk?" State officials observed that these comparisons were a "real eye-opener" for WIC staff and clients.

Local agency staff very much appreciated the fact that state-level FIFNC members developed the entire Mooove campaign kit (including lesson plans, taste test instructions, buttons, and press releases) and clearly explained how to implement the initiative. The materials "were all there for them, ready to go." Informal feedback revealed that the prepared materials allowed some agencies to do even more than they would have if they had been asked to develop the materials themselves. Another key component for success was administering the taste test to

LOWFAT OR FAT FREE MILK VOUCHERS: A PILOT

As a supplement to the statewide nutrition education initiative, the Florida WIC program decided in September 2002 to pilot test WIC checks that specified only lowfat or fat free milk could be purchased. The Martin County WIC Project was chosen as the pilot county due to its high obesity rates. Specific project goals included (1) reinforcing the Mooove message, (2) determining if retail grocery stores had issues with lowfat milk-only checks, (3) determining the number of clients who chose to continue with the lowfat milk-only checks, (4) determining the acceptability of the checks among clients, (5) determining the number of clients who chose to continue with the lowfat milk-only checks, and (6) monitoring the body mass index (BMI) of the pilot children. The clients in Martin County were given the choice of the new lowfat milk-only checks after they were counseled by the nutritionist. Participation by clients was voluntary. At any point, the WIC client could return to reduced-fat or whole milk, and some did. Ten percent of clients accepted the specialized checks; they received promotional items as incentives, including pens, book marks, literature, and stickers.

The pilot continued until March 2003. Results of the pilot study showed that 80 percent of families who participated will continue to choose the lowfat-milk-only checks, 97 percent encountered no problems using the checks in grocery stores, and 93 reported that stores were adequately stocked with lowfat or fat free milk. Preliminary results of monitoring the BMIs of the pilot children indicated that 38 percent had lower BMIs six months after receiving the lowfatmilk-only checks, 31 percent had no change in their BMIs, and 31 percent had BMIs that increased between 1 and 2 percentage points.[15]

[15] In June 2003, the lowfat-milk-only check option was made available statewide. As of August 2003, more than 2,500 low-fat-milk-only food packages had been assigned. In addition, a state WIC office report has been developed that tracks the number of WIC children over 2 years old who are overweight or at risk being so, by county. Figures are collected quarterly.

local WIC staff before administering it to the clients. State officials knew that agencies would promote the Mooove Campaign more effectively if WIC staff believed in the initiative.

Key Challenges. A few operational challenges emerged during the planning phase of the Mooove Campaign. First, the WIC Bureau did not succeed in its efforts to solicit help from the grocery stores in promoting the campaign's message. State officials obtained permission from all the major grocery chains in Florida to place on their dairy cases a cow placard promoting lowfat or fat free milk. They also sent letters to WIC vendors asking that they display Mooove Campaign placards in their stores for one month. Unfortunately—despite permission from food executives—most stores did not display the placards. While some managers were enthusiastic and posted the placards, the WIC Bureau did not achieve the statewide presence it anticipated in grocery stores. Ideally, state officials would have tracked milk sales by store to see whether sales of lowfat and fat free milk increased because of the placards. It was impossible, however, to obtain price scan reports, since grocery stores are reluctant to divulge proprietary data.

In addition, staff in local agencies were surprised by some nutritional myths that they heard expressed by clients. During the first six months, WIC nutritionists repeatedly heard clients say that reduced-fat milk is the same as lowfat milk. To combat this myth, WIC staff produced tent cards that could be easily displayed on a clerk's window or counselor's desk that read, "2% milk is NOT lowfat." Staff were also surprised that some clients thought they could not use regular WIC checks for milk to buy lowfat or fat free milk. This misconception led the state WIC office to add to WIC checks, under "Health Tips," the following statement, "For those over the age of 2, choose lowfat or fat free milk—same great taste, just less fat and calories." The health tips on the checks reinforced the message of the Mooove Campaign and reminded clients that they can use WIC checks to buy lowfat or fat free milk.

Lessons Learned. Overall, the WIC Bureau has been very pleased with the Mooove Campaign. It promoted a targeted nutritional message: choose lowfat or fat free milk to support better health. This simple, clear theme was appealing because various organizations and agencies could easily endorse the mission. The state health educator also stressed that the campaign has begun to dispel some milk myths held by WIC clients, such as considering reduced-fat milk to be the same as lowfat. Further, the cost was quite small. However, data are not really available to track the effects of the program.

Yet despite the campaign's good reception, state officials wish they had done several things differently. First, they would have reconvened the local agencies after the initial conference call to monitor how the campaign was being implemented at the local level. Such a debriefing would have enabled WIC staff to share ideas and discuss concerns or challenges.

Second, program planners would have approached outreach differently for clients who are lactose-intolerant. As the campaign got under way, WIC staff began to hear staff and clients in this subgroup say that they did not have to be concerned about the different types of milk since they were lactose-intolerant. Unfortunately, the campaign did not address the fact that lactose-reduced milk is also produced in lowfat and fat free forms that could have been promoted just as easily as regular milk. If the Mooove Campaign is reintroduced, this matter will be addressed.

Finally, the nutrition consultant and health educator would have preferred that the Mooove Campaign be a multiyear effort. Even so, although the campaign officially ended in February 2003, most local WIC agencies continue to display posters and tent cards. In addition, WIC clients are still reminded of the milk initiative in a special "health tips" section on their WIC checks. According to the state public health nutrition consultant, many agencies still use the test tube displays as teaching tools, conduct taste tests, and "actively promote lowfat or fat free milk." Furthermore, the WIC Bureau and the FIFNC plan to reemphasize the milk campaign during the third statewide nutrition education initiative (scheduled to begin in March 2004), which will highlight the benefits of physical activity and healthy snacks. State officials hope that agencies will continue to use the Mooove materials, and that they will reintroduce the cow mascot with future outreach efforts to promote healthy nutrition. Other partners, such as schools and day care centers, also continue to use campaign materials.

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B. PREVENTIVE HEALTH INTERVENTIONS

Adding preventive health interventions or other services to WIC's menu of services has long been controversial, particularly as such mandates have sometimes come without additional funding, which places added strain on the often limited time that WIC staff can spend with clients. In this section, we focus on initiatives that are at the margins of WIC's responsibility and seem appropriate to characterize as "WIC Plus." Furthermore, these initiatives received outside funding and were developed in part outside the WIC program. However, both initiatives offer promising strategies for supplementing WIC and seem worthy of further study (as long as the services have appropriate funding):

- Alabama's program to prevent early childhood caries among WIC children (particularly those age 2 or younger) builds naturally on the connection between infant and toddler feeding practices and early tooth decay. A range of materials have been designed to be useful with minimal staff time. This team effort is an interesting example of collaboration, as WIC worked with the Department of Health's Oral Health Branch and several university researchers.

- At clinics run by Public Health Foundation Enterprises Management Solutions in the Los Angeles area, a demonstration tested both a new method of screening prenatal WIC clients for alcohol use and a brief intervention to use with those who reported drinking alcohol during their pregnancy. Screening and referrals for alcohol abuse are part of WIC's mandate, but intervention arguably is not. This initiative offers a way to reach prenatal clients more effectively, with little or no increase in staff time.

WIC NUTRITION EDUCATION MODEL FOR THE PREVENTION OF EARLY CHILDHOOD CARIES[16,17] ALABAMA

OVERVIEW

Location: Statewide

Start Date: October 2002

Target Population: The initiative targets pregnant and postpartum women, infants, and children up to age 5 years enrolled in WIC.

Purpose: To promote good dental practices for WIC families, using a culturally sensitive, low-literacy nutrition education model, and ideally to reduce the rate of early childhood caries (ECC) in Alabama, which before the initiative was 6 percent above the national rate (27 versus 21 percent).

Services: Educational tools, including video, flip chart, tip cards, and posters, are used in group classes or one-on-one sessions. Staff distribute a referral list of dentists who charge fees on a sliding scale and/or accept Medicaid participants. Additional services that fall under the two-year state nutrition education plan include adult and pediatric toothbrushes, toothpaste, and dental floss, along with other incentive items like coloring books, crayons, and stickers that promote good oral health.

Funding: Funding from a U.S. Department of Agriculture (USDA) infrastructure grant[18] and the Alabama Department of Public Health's WIC Division and Oral Health Branch totaled $160,330. This does not include in-kind personnel and travel expenses.

Why Program Was Chosen: Through a collaborative partnership with the Oral Health Branch, the University of Alabama at Birmingham (UAB) School of Dentistry, and the UAB School of Public Health, the WIC Division incorporated dental health education, an area in which WIC does not traditionally engage, into routine services.

Key Challenges: Logistical problems prevented a planned staff training video from being produced and delayed completion of a video for clients. Local staff wished they had received more training. In addition, lack of dentists who accept Medicaid or offer sliding fees and also serve young children made referrals difficult.

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[16] Caries is the medical term for tooth decay, which includes baby-bottle tooth decay.

[17] Telephone interview, April 14, 2003; site visit, June 25-26, 2003.

[18] Infrastructure grants are from a pool of funds allocated by the Secretary of Agriculture to improve WIC infrastructure and for selected other purposes.

BACKGROUND

State Characteristics. In 2000, the population of Alabama was 4,447,100. Whites (71.1 percent) and African Americans (26.0 percent) make up the bulk of state residents. About 16 percent of Alabama's population lived in poverty in 1999, and the median household income was $34,135.

WIC Program Background. The state WIC program is divided into 11 public health areas. All counties have WIC sites within the county health departments, though a few local private agencies also operate WIC clinics. In May 2003, 26,566 women, 28,057 infants, and 54,156 children were enrolled in WIC, and participation rates were 87.5 percent, 90.1 percent, and 88.2 percent, respectively. Of those enrolled, 52.1 percent were white, and 39.4 percent were African American.[19]

Before the WIC Nutrition Education Model for the Prevention of Early Childhood Caries initiative, WIC had engaged in limited dental health education. For the most part, nutritionists talked with clients about the importance of weaning the baby and preventing ECC. To this end, they typically passed out tear-off sheets on caries, pictures of babies suffering from caries, and a weaning pamphlet during one-on-one nutrition education sessions or group classes, as well as referred families to dentists who used a sliding fee scale. Staff targeted dental health education to parents with children who were 9 to 12 months old.

Program History and Objectives. The development of the ECC initiative stemmed from the collaborative efforts of two departments at UAB and the WIC Division and Oral Health Branch under the health department's Bureau of Family Health Services. All four stakeholder groups—the WIC Division, the Oral Health Branch, the School of Dentistry, and the School of Public Health—appreciate the detrimental effects that poor dental health can have on young children. Dental caries is the single most common chronic childhood disease (Crall et al. 2000). Severe pain can limit a child's ability to eat and talk, and can interfere with later success in school. According to the National Governors' Association, more than 51 million school hours are lost each year to dental-related illness (Krause 2002). Partners in the ECC project aim to reduce the caries rate among the WIC population through education and prevention activities.

In 2000, the southeastern regional Food and Nutrition Service (FNS) office began notifying state-level officials about "a new push in WIC to provide dental education with an emphasis on the nutritional aspects of good dental care." Around the same time, the Chair of the Department of Pediatric Dentistry at UAB, who also serves as a consultant to the state health department, expressed an interest in developing, through the health department, a program focusing on the prevention of ECC. He has a history of serving the dental needs of low-income populations and

[19] Participation data are not stratified according to Hispanic origin or Spanish speakers. However, local program staff report that the number of Spanish speakers in certain areas is growing. For example, the nutrition area coordinator for public health area 5 (northeastern Alabama) estimated that 40 percent of WIC clients are Hispanic, and the coordinator for public health area 2 (north-northeastern Alabama) noted that one-third of statewide Hispanic caseloads—about 10,000 total—are in her service region.

is interested in learning about new ways to improve dental care among children. At that time, the chair of the department knew little about the specific components of the WIC program.

Before the initiative, the Oral Health Branch partnered with the dental school to conduct a needs assessment of the WIC population in Alabama in 1999. Dentists examined a small sample of 136 WIC children ages 18 to 48 months from several clinics. The exams revealed a pediatric dental caries rate of 26.7 percent, about 6 percentage points higher than the national average.

With evidence that there was a problem with dental caries among WIC children in Alabama, stakeholders needed to determine the best course of action. At the time, the state had a very small Oral Health Branch and did not have a full-time dental director. Because its staff was small, the branch was somewhat limited in how much it could contribute to any project. Because WIC staff have experience in working with young children and in nutrition education, and because diet has a significant impact on dental health, it was a perfect opportunity to form a partnership between the Oral Health Branch and WIC, along with people at the university.

State officials then invited behavioral scientists to incorporate behavior modification into a dental education model. An epidemiologist from the UAB School of Public Health designed focus groups and surveys for WIC staff and parents to gather information that would be used to guide the development of the education materials. State and area WIC staff, along with dental staff, helped shape the focus group and survey questions, and suggested clinics to visit statewide.[20] These surveys enabled program planners to learn more about staff and client awareness, knowledge, behaviors, and interest levels in dental-nutrition education. They were especially interested to find out whether WIC staff thought that dental health education could fit easily into routine nutrition education activities, which they did. Regarding topics for the parent focus groups, two School of Public Health researchers were interested in learning about whom clients identify as credible sources of information, optimal methods of receiving information (for example, brochures versus videos), barriers to dental care and social services in general, the knowledge gaps for good oral health, and current dental care practices. They collected input from clients at nine ethnically and geographically diverse clinics and through a survey of 20 WIC coordinators.

During the focus groups, several misconceptions emerged that confirmed for program planners that the WIC population needed better dental health education. For example, a large portion of parents were unfamiliar with ECC and how often they needed to brush their children's teeth. Many did not know that milk and formula contain sugar that bacteria use to cause tooth decay and that children should start to see the dentist after they turn 1 year old; they had assumed that they could wait until the children were 4 or 5. Parents were very interested in learning more about appropriate practices to prevent ECC.

With this information, university representatives developed—in consultation with state health department, WIC, dental, and graphic design staff—several teaching tools, including a

[20] Because state officials wanted to develop a culturally sensitive model, various ethnic groups from the WIC population participated in focus groups, including African American, Native American, Hispanic, and Vietnamese program participants.

video, flip charts, tip cards, and posters. Because they wanted to minimize staff burden, they abandoned the notion of time-intensive counseling and opted instead for an easy-to-read flip chart that WIC staff could use with participants, posters for the clinics, a dental referral sheet, and other intervention materials that clients could review at home.

After the USDA infrastructure grant was approved, the state WIC office presented the ECC project to the Nutrition Area Coordinators, who are responsible for selecting the statewide nutrition education plan every two years. For the coordinators, it was a timely project, since WIC staff knew that caries was a pervasive problem, particularly since adequate dental care is often not available in rural parts of the state. Moreover, they had been familiar with the program's development since (1) the assistant state dental director, at the 1999 WIC Nutrition Education Workshop, presented an overview of what caries is, how it develops, and how it can be prevented; (2) WIC staff completed the surveys that influenced the grant application at this workshop; and (3) UAB representatives presented their findings from the participant focus groups to nutritionists and nurses at the 2001 Annual WIC Training Conference in September 2001. The coordinators approved ECC prevention as the focus of the two-year plan from October 2002 through September 2004.

Target Population. The ECC initiative is intended to reach pregnant and postpartum women, infants, and children who are enrolled in WIC. For the statewide 2002–2004 nutrition education plan, however, Nutrition Area Coordinators chose to focus specifically on WIC clients from infancy through 2 years of age, when good oral health practices are established and when infants and toddlers are at the highest risk for developing ECC. Although the initiative formally targets ages 0 to 2, state officials encourage clinics to provide ECC education to prenatal women and all children in the program, including three-, four-, and five-year-olds. The extent to which staff actively deliver services to older children varies from clinic to clinic.[21]

In designing the ECC model, program planners recognized the importance of developing a pedagogical model that was ethnically and culturally appropriate to the WIC population. For example, some focus group participants revealed that African Americans often view a maternal figure as a credible source of information and guidance. Therefore, program planners used an older African American woman as the narrator for the video. Other actors in the video and in models for the flip charts represented a range of ethnic groups so that the educational tools reflected the WIC clients to whom they are targeted. All materials have been produced in English and Spanish.

PROFILE OF INNOVATIVE PROGRAM

Services Provided. Because the teaching preferences and learning environments vary among different sites, state officials wanted to grant local agencies the flexibility to select which supplies and activities to implement. Therefore, the characteristics of service delivery for the ECC initiative vary from site to site. Under its second objective, the statewide nutrition

[21] A group of nutrition area coordinators believed that many clinics give the incentive items, such as toothbrushes and stickers, to older siblings.

education plan states that "dental health education materials may include the following: toothbrushes and toothpaste, dental floss, a large model of a mouth with toothbrush, pamphlets, flip chart, video, and posters." The flip chart explains (1) the importance of baby teeth, (2) the seriousness of ECC in dental health, (3) the causes of tooth decay, (4) the ways proper oral care can prevent caries, (5) some important feeding tips, and (6) the importance of regular dental visits starting at age 1.[22]

The video shows the proper way to clean an infant's mouth and the way to brush and floss a child's teeth, covers general nutrition education information, and recommends how often children should see a dentist. The Oral Health Branch also purchased and distributed large-toothed puppets that staff could incorporate into education classes to make them fun and appealing for young children. Dental screenings are not a part of this initiative, though for years some clinics have had dentists come on site to do screenings. WIC staff do, however, provide a dental referral sheet of local low-cost dental services. One side contains information on how to find Medicaid dentists and provides toll-free numbers, and the other contains a list of low-cost, non-Medicaid community health centers that are federally funded. The following paragraphs illustrate the range of services between two local agencies.

A clinic in Jefferson County provides one-on-one dental education sessions with clients every six months on any weekday. Staff switched to individual sessions as opposed to group classes several years ago because (1) clients are more comfortable discussing confidential issues in private, (2) clients are no longer pulled out of classes for a scheduled appointment, and (3) there is adequate staff to deliver individualized contacts. Specific ECC services shift according to the sequential contact (for example, first versus second visit) and age of the child. During the primary contact, one nutritionist may talk about bottle use and weaning, and the importance of scheduling the first dental appointment when the child turns one. If a mother is reluctant to decrease or eliminate bottle use, she shows them a color postcard or "tip card" that depicts a mouthful of caries, a potential result of poor oral health. During the next appointment, the nutritionist distributes adult and pediatric toothbrushes, toothpaste, the tip card (see box), and the video to keep and watch at home, and also discusses proper brushing techniques.[23] She might ask the parent about how much sugar, juice, and milk the child is consuming, and talk to her about ECC. After asking whether the client is on Medicaid, she can refer the parent to several dentists who accept Medicaid participants or to the dental clinic in the health department.[24] At the third session, clients receive dental floss, crayons, and coloring sheets

[22] Audiotapes and compact discs are available for Hispanic clients who do not speak English and cannot read Spanish, so that they can follow along in the Spanish flip chart without having to rely on a translator. Tapes and discs contain the spoken version of the Spanish flip chart.

[23] For clients who do not have a videocassette recorder, equipment is available at all WIC sites throughout the state.

[24] On the first floor of the Central Medical Center, there is a dental clinic that takes patients on a walk-in basis. To qualify, patients must live in the county. This clinic is an invaluable resource, because WIC nutritionists can immediately send clients downstairs for a dental appointment.

TIP CARD

1. Baby teeth are important.
2. Mom's teeth are important.
3. Clean teeth and gums every day.
4. Only formula, water, or breast milk in bottle.
5. No bottle or breast when sleeping.
6. Give juice in a cup only.
7. Trade bottle for cup by the first birthday.
8. Give healthy snacks.
9. Baby's checkups start at age 1.
10. See white spots? See the dentist.

that focus on flossing. (Staff downloaded these sheets, which are aimed at two- to three-year-olds, from the Internet.)

In contrast, a clinic in Calhoun County prefers to deliver most (75 percent) dental education contacts through group classes. All group nutrition classes take place at 8:30 A.M. and again at 1 P.M. on Mondays, Tuesdays, Thursdays, and Fridays, and dental classes are scheduled four times a month. Classes last about 15 minutes and are divided roughly into three age groups. The 4- to 5-month-old class might focus on stressing the importance of cleaning gums every day with a washcloth and water. For the 10-month-old class, nutritionists discuss weaning, offer tips for preventing caries, and distribute a list of local dentists who accept Medicaid clients. During a typical class for those with children 1 to 5 years old, the format is primarily lecture-based but also elicits feedback and personal experiences from clients. Topics for the session, entitled "Something to Smile About," included examination of a picture of dental caries, the causes of caries, baby bottle tooth decay and the consequences of long-term bottle use, plaque and unlikely sources of sugar, a step-by-step progression of tooth decay and early warning signs, and serious—albeit rare—medical effects of poor oral health.[25] The nutritionist then discussed the 10 important steps that families should take to prevent ECC (see box), and demonstrated appropriate brushing techniques and the adequate amount of toothpaste. At the end of the class, clients received a bag (one bag per child or prenatal client) that contained (1) a pediatric toothbrush, (2) toothpaste, (3) mint floss, (4) crayons, (5) an *ABCs of Good Oral Health* coloring book, (6) a colored postcard of severe childhood caries on one side and a list of important tips on the other, (7) a two-sided Oral Health Fact Sheet developed by the Department of Public Health, (8) an information sheet on the Medicaid dental program that lists 20 reduced-fee dental clinics throughout the state, (9) a referral list of dentists, and (10) a Medicaid information booklet.

[25] This is a PowerPoint version of the flip chart. It is available for the few clinics equipped to use it.

Prenatal mothers sometimes have their own class; sometimes they join one of the other classes. If clients miss a scheduled class, their charts are forwarded to the service rooms,[26] and they can be seen for a one-on-one session at any point during the day when they come to the clinic. All service rooms contain bilingual dental flip charts nutritionists can refer to. Staff occasionally show the video in the waiting room, where it is rotated with other nutrition videos.

Participation. All 115 WIC sites throughout Alabama must incorporate some elements of the ECC model into their two-year nutrition education plan. The average monthly caseload for fiscal year 2003 was 119,463 total participants. In looking at the targeted population as defined by the Nutrition Area Coordinators as part of the statewide plan, WIC estimates that 100,000 children aged 0 to 2 will be served over the two years. As described above, specific services vary across the state. Beyond September 2004, the English and Spanish education materials and the dental referral sheet that were developed as part of the ECC initiative will continue to be used routinely in providing education about ECC for pregnant women, infants, and children up to age 5 who are enrolled in WIC.

Coordination and Collaboration. The ECC project has been a collaborative effort of the Alabama Department of Public Health (WIC Division and Oral Health Branch), the UAB School of Dentistry, and the Department of Health Behavior within the UAB School of Public Health. Drawing upon each other's strengths, and with substantive input from clients and local staff, these stakeholders worked together to develop a nutrition education model for the prevention of ECC in order to promote and cultivate proper oral health practices among WIC families.

One interesting partnership that emerged after the ECC prevention initiative began is between the WIC program and Head Start. Over the past few years, there has been more of an emphasis at the state level on WIC clinics collaborating with other agencies in providing nutrition education. One nutrition area coordinator teaches a class about ECC prevention at local Head Start centers. The class counts as a secondary nutrition education contact for those children enrolled in the WIC program and is a way to encourage good dental health among other families with limited resources. Parents sign a form on the day of the class granting permission for their children to attend; this documentation also allows WIC to count the class as a secondary nutrition education contact for children participating in WIC.[27] Since it would be difficult in terms of scheduling for local nutritionists to travel off site to Head Start centers, the coordinator assumed responsibility for teaching the classes. The Oral Health Branch covers the cost of distributing dental supplies and other incentives in the Head Start centers.

The first class took place in May 2003 at a Head Start center in Cleburne County, a rural area that contains only one part-time dentist. On that same visit, the nutrition area coordinator also showed the video to a group of parents representing about 25 families. It soon became clear

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[26] This WIC clinic has multiple service rooms (which resemble exam rooms at medical clinics), and staff rotate from room to room.

[27] The nutrition area coordinator estimated that 32 percent of children in these classes are also enrolled in the WIC program.

that raising awareness about healthy dental practices was an important mission for WIC in working with Head Start.

The central educational tool in the Head Start classrooms is an alligator puppet with large teeth and a foot-long toothbrush. The coordinator talks to the class about brushing regularly and eating healthy snacks, and each child gets a chance to practice brushing the alligator's teeth while the coordinator coaches their technique as needed. Children receive new pediatric toothbrushes, toothpaste, stickers, and a yellow chart (6 by 8 inches) entitled "Have you brushed your teeth today?" with spaces for each day of week that children can check off for four weeks.

As of July 2003, the nutrition area coordinator had conducted only three classes at two centers and a local nutritionist had conducted a class at a center in Randolph County; they served a total of about 65 children. However, the collaboration is relatively new. The area coordinator taught two more classes at a Head Start center in September and described her efforts at the statewide Annual WIC Training Conference that same month. Moreover, the coordinator, a nutritionist, and a WIC clerk visited this Head Start center twice to certify a total of 11 children for WIC. It is unclear, however, how many other public health areas in Alabama will begin partnering with Head Start. Service delivery will have to be done on a case-by-case basis, depending upon available staff time and client caseloads.

Publicity and Outreach Efforts. As a part of the statewide nutrition education plan, each local WIC site is required to conduct at least one outreach activity related to ECC prevention over the two-year period. Outreach activities vary from site to site. Clinics prepare a bulletin board; write articles for local newspapers or other publications; create a display for the clinic's lobby; host a poster session for a community health fair where staff talk about the WIC program, good oral health practices, and affordable dental services; meet with local dentists to raise awareness about the ECC initiative and promote access to dental care for WIC clients, or some combination.

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. During the program planning phase, the Chair of the Department of Pediatric Dentistry spent 20 percent of his time participating in a needs assessment and writing the grant proposal. Representatives from the School of Public Health conducted focus groups and administered surveys that shaped the development of the flip chart, the video and accompanying script, and other educational materials. They modified the content with feedback from other partners involved in the development of the project. UAB representatives will likely be involved in a future evaluation of the ECC project.

In most cases, nutritionists and nurses conduct group dental classes and individual ECC sessions for WIC clients. Local staff also assume responsibility for outreach activities surrounding the education initiative. The 11 nutrition area coordinators ensure that the nutrition education plan is implemented in their agencies and send progress reports into the state office every six months. The state WIC nutrition coordinator and the assistant state dental director are responsible for disseminating dental supplies, flip charts, posters and videos to local agencies; tip

cards are ordered directly from the warehouse. The state officials also serve in an overall support role for local agencies, and will be involved in any evaluation.

Training. Training for the two-year nutrition education plan was not as extensive as state officials had originally planned. They intended to introduce the educational tools in a training video and even designed a script to accompany it. However, delays in production of the dental video for clients and a backlogged work schedule for the health department's video communications division forced program planners to devise an alternative training format.

As a result, the WIC state nutrition education coordinator and assistant state dental director drafted and distributed a memorandum with attachments to nutrition area coordinators, county WIC coordinators, and private local agencies, which covered all information contained in the flip chart. The attachments explained all the materials and supplies that local agencies would receive, and expanded on the information in the flip chart to give WIC service providers additional details about ECC and its prevention. State officials relied on the nutrition area coordinators to train their respective WIC county coordinators, who then trained their clinic staffs on the ECC model and on how to use ECC education materials. Most local in-service sessions lasted no more than an hour and generally took place during the regularly scheduled monthly clinic meetings. Nutritionists and nurses could use the attachments as a "quick refresher" for easy reference. (The nutrition area coordinators and clinic WIC coordinators oriented local WIC staff to the Nutrition Education Plan in October 2002.)

Funding. Expenses for the ECC initiative were covered through a combination of funds from a USDA infrastructure grant ($37,038), the WIC Division ($52,889), and the Oral Health Branch ($70,413). Most of the funding from the state oral health program went toward toothbrushes and toothpaste. Salaries and travel costs for the WIC state nutrition education coordinator, the assistant state dental director, and the pediatric dentist from the dental school,[28] as well as other miscellaneous personnel costs, were considered in-kind. A subcontract with representatives from the School of Public Health was paid for by a portion of the USDA infrastructure dollars.

ASSESSMENT AND LESSONS LEARNED

Evaluation and Outcomes. The primary objective of the ECC initiative is a reduction in the ECC rate among the WIC population, although the state plan did not specify a formal goal (such as a reduction of 5 percent after two years). Program officials intend to reexamine WIC children in the same age group as the initial 136 children examined during the planning phase to gauge the relative degree of oral health. The chair of the Department of Pediatric Dentistry noted that it will be important to calibrate the examiners and then compare the caries rate with the baseline rate of 26.7 percent. In addition, he recommends a follow-up survey of local WIC

[28] The chair of the Department of Pediatric Dentistry at UAB has served as a consultant for the Alabama Department of Public Health for several years; the contract stipulates that he spend one day a week on state grant tasks. The ECC project falls under the scope of this position.

staff and would also like to visit a sample of clinics to interview staff and observe service delivery.

To meet state tracking requirements for the two-year education plan, WIC staff in each clinic review a sample of participant records every six months to determine the number of participants in the targeted groups who received education on ECC, the number of children weaned by 15 months of age, and the number weaned between 16 and 24 months of age. The clinic WIC coordinator then reports this information, along with the clinic's outreach activities over the previous six months, on a clinic progress report to the nutrition area coordinator. Finally, the nutrition area coordinators collect these reviews and prepare progress reports that are submitted to the state WIC office every six months.

Implementation Successes. All stakeholders, including program planners, local WIC staff, and clients, perceive the ECC initiative as an effective and successful endeavor for several reasons. First, the initiative has brought the importance of good oral health to the forefront for the WIC population and those who serve them. Partnering with the UAB School of Dentistry and School of Public Health provided the opportunity to disseminate effective teaching tools and information to promote healthy dental practices. This has been especially important in rural areas where dentists—particularly those who accept Medicaid patients—are few and far between. As state officials observed, children cannot have healthy teeth without good oral hygiene *and* healthy eating habits, which is why focusing on dental health education was a logical partnership for WIC. Local nutritionists and nurses report that parents have been very interested in the ECC education and materials, particularly since many are unfamiliar with common causes of ECC (such as insufficient cleaning of infant gums). Some parents reported to staff that their pediatricians never discussed preventive practices for ECC, and many parents did not realize the importance of dental care before 2 to 3 years of age.

The ECC initiative has also enabled WIC staff to provide clients with concrete tools that permit them to follow through and act upon the knowledge they receive at nutrition education contacts. Clients enjoy receiving free items like toothbrushes, toothpaste, and dental floss, and theoretically they have the materials and knowledge to start good dental care at home right away. Front-line staff say that "these little items really make a difference," and children enjoy the puppets. Moreover, referral lists naming area dentists that provide free services to Medicaid participants or services on a sliding fee scale for those families who do not qualify for Medicaid have increased awareness that affordable dental care is available in certain communities.[29]

Finally, program designers purposefully created engaging educational materials that would appeal visually to clients. One WIC nutritionist noted that the colorful materials, such as the postcard depicting a severe case of childhood caries, help a lot in conveying what can happen to teeth without good-quality oral health care. Nutrition area coordinators reported that line staff like the fact that the nutrition education plan on the prevention of ECC is "more fun and interactive" than previous two-year plans and that they have many teaching materials at their

[29] As the challenges section describes, there is a shortage of dentists who accept Medicaid patients or offer inexpensive services throughout Alabama.

disposal. Local agencies and nutrition area coordinators also seem to appreciate that it has not been difficult to incorporate ECC education into the daily routines in the clinics. Families are given copies of the video to watch at home, and information contained in the flip chart and accompanying audiotapes and compact discs is succinct and simple. The materials are available in English and Spanish, which is important since some clients have low literacy skills or are not fluent in English.

Key Challenges. Limited training from the state and the lack of dentists who accept Medicaid participants or offer a sliding fee system and who also serve children under 2 or 3 years old are two primary challenges that the ECC initiative has faced. Initially, state officials had planned to produce a training video, but logistical obstacles prevented this. Nutrition area coordinators and local staff who deliver services would have preferred more direction than the training memorandum. Although a training video was not available, some nutritionists would have welcomed such resources as (1) instructions for families that clearly outline proper brushing and flossing techniques, and (2) a satellite conference call convened by state officials to review training materials with regional coordinators.

While not a challenge that program officials have any control over, several nutrition area coordinators and local staff commented on the lack of accessible, affordable dentists for the WIC population. Many families do not live near care providers who accept Medicaid or offer reduced fees for needy patients.[30] (Program officials estimated that 50 percent of WIC clients do not even qualify for Medicaid in Alabama.) No dentists accept Medicaid enrollees in public health areas 2 and 5, and only one dentist does so in public health area 6. Most WIC participants in these regions must travel at least an hour (some as many as 100 miles one way) to find an appropriate dentist in Birmingham; pediatric dentists are even rarer. Because of transportation barriers, some families opt not to go to the dentist at all. Even if parents can gain access to an affordable provider, many dentists, even in large cities like Birmingham, refuse to serve children before they turn 3 years old and tell parents that it is not necessary. For many years, the Academy of Pediatric Dentistry recommended that children should first see a dentist upon turning 2, and in 2000 it reduced its recommendation to 1 year of age. However, given the protocols of many dental care practitioners, WIC program officials are concerned that parents have a difficult time finding a dentist who will take patients at 2 years old, let alone when infants turn 1. It is very frustrating for nutrition staff to convince parents of the importance of good dental care and of taking one-year-olds to the dentist, equip them with oral care supplies, and then learn that parents cannot find an affordable dentist or one who will accept infants and toddlers.

During the planning phase, state officials encountered some problems with the production of the video. They collaborated with the Video Communications Division in the health department but could not—for financial reasons—hire professional actors to be in the video. Instead, they used WIC clients on a voluntary basis. It was challenging (1) to ensure that they had a representative sample of volunteers, (2) to work with volunteer "actors," and (3) to handle

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[30] State officials remarked that many dentists are not willing to forgo a portion of private practice time to serve low-income families, because income from appointments would decrease.

logistics. For example, one picnic scene involved feeding 40 people, and some children did not cooperate in scenes at the dentist's office. Overall, it took six months to produce the video, a delay they had not anticipated. It was challenging for state officials to juggle this with all their other responsibilities. Furthermore, officials encountered delays in getting the videos translated into Spanish, and local agencies did not receive the Spanish version until October 2003.

Lessons Learned. Stakeholders agreed that the ECC prevention model could be replicated in other states. In fact, program planners intended to design a project that could be replicated, and program materials are available on the WIC Works Website. The initiative took some time to develop, so other states could benefit from their efforts. Nonetheless, other state WIC programs or local agencies could decide to supplement what has been accomplished in Alabama or to modify the tools to meet their own service population. For example, educational materials could be translated into a language besides Spanish. One nutrition area coordinator observed that special methods may be needed for delivering dental education on Indian reservations.

In addition, collaboration between different kinds of partners—in this case the WIC program, the Oral Health Branch, the School of Dentistry, and the School of Public Health—is critical when a program seeks to expand into nontraditional WIC topics. Partners can benefit from each other's expertise. In this case, a program that is, at its core, a supplemental food and nutrition education program chose to select ECC as a special initiative. The university was able to take the lead on collecting data, performing a needs assessment, and providing the knowledge about good dental care. Working with the health department's state dental office and the dental school at UAB brought valuable information to WIC, which had very limited dental education services before the ECC began.

Program planners also suggested that WIC programs in other states collaborate with any other stakeholders that have an interest in improving dental health, such as the Medicaid program. As an example of cross-program collaboration, the ECC project has demonstrated a promising partnership with local Head Start centers. The state WIC nutrition education coordinator noted that partnering with Head Start is an effective way to increase the number of secondary education contacts.

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CEASE ALCOHOL RELATED EXPOSURE (CARE)[31]
LOS ANGELES AND ORANGE COUNTIES, CALIFORNIA

OVERVIEW

Location: Los Angeles and Orange counties, California

Start Date: 2000 (research phase), 2003 (agency-wide rollout)

Target Population: Prenatal WIC clients in Public Health Foundation Enterprises Management Solutions (PHFE) WIC centers in Los Angeles and Orange counties.

Purpose: To improve the detection of prenatal alcohol use and to conduct a brief intervention for women who report current post-conception use. The ultimate goal is to improve birth outcomes by eliminating or reducing prenatal alcohol consumption.

Services: A five-question self-administered alcohol-screening tool is administered to all prenatal women at PHFE WIC centers. For those who report current alcohol consumption, WIC staff use a 10-minute Health and Behavior Workbook to motivate behavior change.

Funding: Almost $1 million in funding was awarded to the University of California, Los Angeles (UCLA) by the National Institute of Alcoholism and Alcohol Abuse (NIAAA) for a three-year research project, $282,000 of which went to WIC. The March of Dimes (MOD) gave $58,577 in 2003 for an agency-wide rollout.

Why Program Was Chosen: This initiative is a straightforward and effective means of detecting and addressing prenatal alcohol use, and it addresses the WIC requirement to counsel pregnant women about drug and alcohol use. The model could easily be replicated in other agencies. Because few women meet the criteria for the brief intervention, the cost in additional staff time is modest.

Key Challenges: Some staff resisted the additional responsibilities at first, particularly with the extra paperwork required by the research, but recognition of staff contributions helped. Staff felt they may not be reaching seriously addicted women, but the intervention is not really targeted to this group, as they need more intensive services.

[31] Telephone interview, April 15, 2003.

BACKGROUND

Community Characteristics. Los Angeles (LA) County in California has a population of over 9.5 million people based on 2001 estimates. In 2000, 31 percent of the population was white, lower than the state average. In the same year, 45 percent of the population was Hispanic, 12 percent Asian, and 10 percent black, all higher than the state average. Over half the population speaks a language other than English in the home. About 18 percent of the county population lives below the poverty level, compared to the state average of 14 percent.

Orange County has a population of almost 2.9 million people based on 2001 estimates. In 2000, 51 percent of the population was white, higher than the state average. In the same year, 31 percent of the population was Hispanic, and 14 percent Asian. About 41 percent of the population speaks a language other than English in the home, which is comparable to the state average of 40 percent. About 10 percent of the county population lives below the poverty line.

WIC Program Background. The PHFE-WIC program serves about 290,000 LA County WIC participants each month, and an additional 30,000 participants in Orange County. About 11 percent of the PHFE-WIC participants in LA and Orange counties are prenatal women. At PHFE-WIC, only nutritionists, not paraprofessionals, see prenatal women. The PHFE-WIC program has 48 clinics in LA County and 7 in Orange County.

Program History and Objectives. WIC is mandated to screen prenatal WIC clients for alcohol and drug use, and to provide annual training to staff members on these issues. The research on prenatal alcohol use indicates that as little as a few drinks a week can have serious implications for the child. In addition to decreased gestation, birth weight, length, and head circumference, there are also long-term effects like hyperactivity, response inhibition, poor coordination, poor habituation, depression, poor social judgment, and learning and memory problems. There is no known safe level of alcohol consumption during pregnancy; thus, WIC's message is to avoid alcohol consumption while pregnant, as recommended by the Institute of Medicine (1996). If a pregnant woman drinks at high levels and is unable to quit, she should at least reduce consumption. WIC staff make it clear that this is a short-term restriction that lasts only for the duration of the pregnancy, unless the woman chooses to breast-feed.

The California WIC program uses self-reports to assess alcohol use. Clients are asked, "When did you last drink alcohol?" Those reporting post-conception alcohol consumption are asked about drinking frequency and quantities, and whether they want to stop drinking. These responses are recorded in a central database, and women reporting post-conception alcohol use are given a special alcohol risk code in the database. About 5 percent of PHFE-WIC's clients reported consuming alcohol post-conception in 1999 based on this sequence of questions, but other reports in the literature have prevalence rates of 10 percent, which suggests that WIC may not be detecting half the cases. Underreporting could be a result of client embarrassment or shame, particularly as alcohol use is communicated orally and directly to a WIC staff member. A more sensitive assessment tool would help in targeting interventions.

Two investigators from the UCLA Fetal Alcohol Syndrome clinic, one of whom worked part-time at PHFE-WIC, wrote a grant to the NIAAA to develop, implement, and evaluate the CARE initiative.[32] They were awarded the grant in September 1999. In general, CARE is intended to bridge research and practice, and to provide a stronger foundation for WIC to address prenatal substance abuse, particularly with alcohol. CARE includes a self-administered screening tool, an intervention tool called the *Health and Behavior Workbook,* and staff training on administering these tools and on prenatal alcohol use. The investigators developed the five-question self-administered screening tool that allows pregnant women to respond anonymously to questions about alcohol use. They also adapted the brief intervention model developed by NIAAA into a WIC Health and Behavior Workbook, a 10-minute intervention for those found to consume alcohol. The UCLA investigators collaborated with PHFE-WIC on a three-year research study of the screening tool and/or Health and Behavior Workbook comparing 12 CARE intervention sites (10 in LA County and 2 in Orange County) to 12 control sites that used verbal screening. Six of the CARE intervention sites used the screening tool with the intervention; the other six used only the screening tool. The research project began in May 2000.

Because of the success of the research project, and thanks to funding from the MOD, CARE is being rolled out in all PHFE-WIC centers in LA and Orange counties. According to the investigators, measurable objectives of the project are as follows: (1) by August 31, 2003, 90 percent of WIC staff that attend the Alcohol Prevention During Pregnancy training will be able to name 2 fetal effects of alcohol use during pregnancy and identify the proper alcohol screening protocol for pregnant WIC women; (2) by March 31, 2004, the detection rate of pregnant WIC women using alcohol during pregnancy will double (from 5 percent to 10 percent); and (3) by March 31, 2004, at least 1,700 women will be individually counseled by WIC nutritionists (using the Health and Behavior Workbook) on the risk of alcohol use during pregnancy and their plan to manage their alcohol consumption.[33]

Target Population. Prenatal WIC clients in the PHFE-WIC program of LA and Orange counties are being targeted for the CARE screening tool and Health and Behavior Workbook.

PROFILE OF INNOVATIVE PROGRAM

Services Provided. CARE includes a self-administered alcohol screening tool for prenatal women and an intervention using the Health and Behavior Workbook for those reporting post-conception alcohol consumption. CARE also includes staff training on administering these tools and on prenatal alcohol use. All CARE materials are available in English and Spanish.

Every month during the research project, all prenatal WIC women at the 12 CARE centers received the screening tool from a paraprofessional and completed it privately in the waiting room before their appointment. In 2003, the screening tool was incorporated into the WIC

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[32] Information about the research project comes from Whaley and O'Connor (2003).

[33] Excerpt from the original project proposal, updated in personal communication from Shannon Whaley, November 2003.

prenatal questionnaire that clients complete once every trimester at the centers. The tool contains five questions. The first two ask about drinking habits before the woman knew she was pregnant. It has been found that women are more likely to be honest about current consumption if asked first about drinking habits before pregnancy. The third question asks about binge episodes of three or more drinks on one occasion. Some women are more likely to report a binge episode, because it is something that they can say happened only once. It is often more difficult to admit drinking habitually. The fourth and fifth questions inquire about the quantity and frequency of current use. Either the nutritionist or a paraprofessional scores the screening tool.

A nutritionist sees all prenatal women and reviews the screening tool. For women who were drinking but stopped after they found out they were pregnant, nutritionists congratulate them for stopping and remind them of the reasons to stop during pregnancy. Nutritionists review the Health and Behavior Workbook with those who are still drinking.

The 11-page Health and Behavior Workbook takes about 10 minutes to review with a client. It provides facts about the problems an infant can have due to alcohol exposure in utero, and reminds the client that she can have a healthier baby if she stops drinking while pregnant. There is also information on risky circumstances that can lead women to drink (she is depressed, bored, or angry, smoking, or attending a celebration), and the means of coping with these situations (for example, taking a walk, talking to a friend, reading a magazine, grabbing a snack). The workbook also defines a standard drink (12 ounces of beer, 5 ounces of table wine, 1.5 ounces of hard liquor). Toward the end of the workbook, the woman sets a goal for the next month—either to stop drinking alcoholic beverages or to cut back by a specific amount. About 98 percent of clients say they will stop. For those who choose to cut back, the workbook provides strategies to reduce consumption (such as measuring drinks, watering down drinks, sipping drinks, eating food with a drink). At the end of the intervention, the client is given the workbook for review later. The nutritionist has a form to document reactions and the goal that was set. Clients also receive MOD's "Alcohol Use & Pregnancy" brochures and fact sheets.

The screening tool is administered again in the next trimester, and if the woman is still drinking, the Health and Behavior Workbook is readministered. However, 95 percent of women report that they have stopped drinking by the second time they complete the tool.

As standard WIC protocol prior to CARE, if a woman is drinking three or more drinks three or more times a week, she completes a referral questionnaire inquiring further about drinking habits (including drinking first thing in the morning, drinking while driving). If there are more than three positive responses, the woman is to be referred to a physician or inpatient treatment. However, even without answering the referral questionnaire, clients consuming that much are referred elsewhere. Nutritionists use a book of substance abuse resources in the community to make referrals.

Participation. PHFE-WIC conducted the research project in 12 intervention and 12 control sites in LA and Orange counties in 2000–2002. Sites were randomly assigned to intervention or control status. The 12 control sites did not use the screening tool or the Health and Behavior Workbook. With MOD funding, PHFE-WIC expanded the program to include all 55 LA and Orange County PHFE WIC clinics in 2003. These 55 clinics serve 35,000 prenatal women a month and have 600 staff.

Coordination and Collaboration. PHFE-WIC and UCLA collaborated on the research project.

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. The research project investigators are both from UCLA's Fetal Alcohol Syndrome clinic, and one works part-time for PHFE-WIC. A Research Assistant, who also works part-time for PHFE-WIC, was funded by the NIAAA and MOD grants for her time on CARE. PHFE-WIC staff members implement the screening tool and/or the Health and Behavior Workbook.

Training and Quality Assurance. In the research project, the investigators and research assistant developed and conducted the training. In general, WIC staff members were trained so that they understood the study purpose, protocols, and consent forms. Paraprofessionals were trained to score the screening. Nutritionists are the only WIC staff who provide counseling and administer the Health and Behavior Workbook to prenatal clients. They participated in ongoing training three or four times a year at PHFE-WIC's central office. The same 25 to 30 WIC nutritionists attended all the two- to three-hour meetings. The initial training addressed the problem of Fetal Alcohol Syndrome, information about the research project, WIC staff's role in the project, using the training manual, tracking clients, and using the research protocols. Subsequent trainings addressed the status of the project and participant questions or concerns.

As agency-wide rollout began, the information specific to the research study was removed from the training manual. The manual details the use of the screening tool and the Health and Behavior Workbook. All 175 nutritionists received training in early August 2003 in a two-hour session that focused on three aspects of the rollout: (1) screening, (2) intervening, and (3) documenting. Nutritionists who missed the August training were trained in October 2003. Nutritionists then trained their staff to help with the screening. No further full-staff trainings are planned; instead, the 13 managers who oversee the 55 sites assess the project regularly.

Record-Keeping and Data Systems. A nutritionist rating form is sent in for each workbook completed. This form allows program officials to track the number of interventions and record information such as intervention duration, how much women are drinking, and client reactions to the intervention. Since the screening tool is incorporated into the WIC prenatal nutrition questionnaire that is distributed each trimester, it is kept on file.

Funding. NIAAA funding was close to $1 million for the research project. Of that amount, $282,000 went to WIC, who served as UCLA's subcontractor, and the other portion went to UCLA for designing the research and analyzing the data. PHFE-WIC received $58,577 in MOD funding to expand the intervention, not the research, to all PHFE-WIC sites in 2003. The grant paid for the Health and Behavior Workbook reproduction, integration of the screening tool into the WIC prenatal form, MOD "Alcohol Use & Pregnancy" brochures and fact sheets, and investigators' labor. During the research phase, the NIAAA grant paid for the 10 minutes of staff time for every intervention. With the expansion, WIC is assuming that cost, because the number of women per center per month who need the intervention is fairly small. The

investigators have submitted additional grant proposals to NIAAA for evaluation of the expansion and longitudinal followup.

ASSESSMENT AND LESSONS LEARNED

Program Strengths. An important strength of the program is that it was rigorously evaluated and outcomes were positive. In the research study, UCLA targeted a sample of 300 women in the intervention sites to follow during their pregnancy. Half were in the six clinics that provided the screening tool and the Health and Behavior Workbook, and half were in the six that provided the screening tool and strong verbal messages to avoid alcohol during pregnancy. In both groups, most women stopped drinking. However, only 23 percent of the women who were administered the workbook continued to drink, compared to 50 percent in the group that received the standard verbal warning. Further, as of the third trimester visit, most women in the intervention group had maintained their abstinence, whereas most women who received only the standard verbal message had not. Thus, any message helped, but the Health and Behavior Workbook seems to have had a greater impact both immediately and throughout pregnancy.

Screening outcomes were also compared between the 12 intervention sites and the 12 control sites. Investigators concluded that the self-administered screening tool increased the reporting of prenatal alcohol use, which is an essential first step in reducing or eliminating it. Specifically, in 1999, before the CARE initiative, about 5 percent of all pregnant women in PHFE-WIC were reporting alcohol use based on the verbal standard of care. With the new screening method, the rate was closer to 15 percent in the 12 intervention sites, compared to about 5 percent at the 12 control sites. If the investigators receive additional NIAAA funding, they will be able to follow up with the sample members when the children are 3 or 3.5 years old and to evaluate long-term alcohol use.

Key Challenges. The investigators suspect that CARE may be missing mothers who are seriously addicted. The project was a research study that involved consent forms, which those with severe problems may not have signed. In general, the Health and Behavior Workbook is not going to work well with addicted women, who need intensive assistance. Unfortunately, there are not many community resources for treating alcohol abuse in pregnant women.

It is important for agencies that might implement such an initiative to determine a strategy for motivating staff to support the effort. Often, special projects entail more work for staff. Even though such projects are consistent with "core" WIC services, they can increase the staff workload. This project did not mandate that WIC staff work extra hours, but it did require that they counsel pregnant women more thoroughly about alcohol use. They also needed to keep track of paperwork that was specifically for the evaluation. Therefore, incentives such as clinic pizza parties and movie tickets for nutritionists who intervened with the most women were effective and appreciated. Also, program-wide recognition of the 12 sites involved in the research project was well received.

Lessons Learned. Program officials believe that this low-cost, straightforward initiative can be replicated in other agencies, particularly at the state level or in large agencies. All that is

necessary to implement the initiative is to incorporate the screening tool into prenatal forms, make the Health and Behavior Workbook available, and train staff to use these tools, which takes just a few hours.

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C. STAFF TRAINING: IMPROVING METHODS, NUTRITION KNOWLEDGE, AND CULTURAL SENSITIVITY

States are increasingly trying to improve the quality of nutrition services by providing specialized training to local staff. Although many states have annual conferences and all provide regular updates on policy changes, some states have developed additional training sessions, often lasting a day or more, on specific topics. The types of training initiatives they have developed are quite diverse, as illustrated below. In some instances, states have used "train-the-trainer" or videoconferencing approaches to reduce the costs of training. Sometimes training materials are adapted from other programs or developed by an outside consultant, while other projects develop these resources internally. Nutrition education committees on which state and local staff work together were important arenas for developing and/or testing new curricula in several of the state initiatives described here.

Many of the state initiatives already discussed include extensive training, such as the Texas Peer Counselor train-the-trainer sessions and the Nutrition Educators Conference in Oklahoma. This section discusses three state efforts in which training is the major activity. First, we discuss a "train-the-trainer" program on facilitated group discussion in Michigan, a method for achieving behavior change that was not previously used in the state. Other states have also emphasized facilitated group discussion in their staff training. However, the Michigan program stands out because it may be the only one with a train-the-trainer approach. Its materials are also very readable, and could easily be adopted by others.[34] Second, we discuss a content-focused California program to provide training, reference materials, and technical assistance to WIC registered dieticians so that they can keep up with changes in available infant formulas and other pediatric nutrition issues. Finally, we present a Wisconsin program that trains bilingual support staff to provide nutrition education and sometimes certification for non-English-speaking clients, with the goal of getting key nutrition messages to clients more effectively by reducing language barriers.

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[34] Initiatives in other states that have used facilitated group discussion include the FIT WIC programs. A manual on facilitated group discussion developed by researchers at Pennsylvania State University is available on the FIT WIC Website: www.nal.usda.gov/wicworks/Sharing_Center/statedev_FIT.html.

LEARN TOGETHER APPROACH: MICHIGAN[35]

OVERVIEW

Location: Michigan, statewide

Start Date: Planning began in 2000; two rounds of training were held in 2001, with a third round in 2003.

Target Population: Training program for WIC staff, for use with adult WIC clients or parents of WIC infants and children.

Purpose: To provide WIC staff with tools needed to conduct nutrition education sessions for adults through facilitated group discussions, which are seen as more likely to be successful in reaching adult learners and producing behavior changes.

Services: A "train-the-trainer" curriculum in nutrition education through facilitated group discussion was developed, and local WIC leaders were trained. Nutrition education modules have been developed at the local level, using a format taught in the training. The training curriculum and sample nutrition education modules are available on the Web.

Funding: The curriculum development and training were funded largely by the state WIC program and through registration fees paid by local WIC agencies. The train-the-trainer format was used to keep costs low.

Why Program Was Chosen: The use of a train-the-trainer approach for teaching about facilitated group discussion is innovative. In addition, the training materials and lesson plans are well written and widely applicable.

Key Challenges: After the first session, staff needed to shorten the training to enable more staff to attend. Because of limited travel funding, they also needed to offer it in various locations.

[35] Telephone interview, May 14, 2003.

BACKGROUND

State WIC Program Background. Michigan is in the U.S. Department of Agriculture (USDA) Midwestern region. Its 2001 population was just under 10 million. Michigan had fewer Hispanics (3.3 percent) and a lower 1999 poverty rate (10.4 percent) than the nation as a whole (12.5 percent Hispanic and 12.4 percent in poverty), but it is similar to the nation in median income (from Census QuickFacts). The Michigan WIC program served 215,989 people a month in fiscal year (FY) 2002, which made it the ninth-largest program in the nation (see [www.fns.usda.gov/pd/wifypart.htm]). There are 50 local WIC agencies, including some tribal agencies; most are county or district (multi-county) health departments, but some are health care providers or community-based organizations. The local WIC agencies range greatly in size; the Detroit area is home to the largest program (operated by the Detroit City Health Department—serving nearly 70,000 a year) and several other sizable programs. However, some specialized medical centers and rural health departments have very small programs (see www.mdch.state.mi.us/wicenroll/state_ag.asp).

Program History and Objectives. The idea for the program arose in 2000, when the state was making plans for revitalizing nutrition services. The use of facilitated group discussion was the approach they decided to pursue. Based on what state staff saw during management evaluations of local agencies, they felt that nutrition education in Michigan was fairly stale—most of it was in a lecture format, which was not really suited to the needs of the adult learner. Two state agency staff had attended a conference where Susanne Gregory gave a presentation. The state WIC agency decided to hire her to develop a training curriculum and conduct the initial training. Susanne Gregory is an expert in facilitated group discussion who had provided training for WIC staff in several states. However, she had not used a "train the trainer" approach before she worked on the Learn Together Approach with Michigan staff.

Target Population. The training is intended for WIC staff who provide nutrition education or for their supervisors. They in turn are expected to train any of their staff who provide nutrition education but could not attend the state-sponsored training. WIC participants are the ultimate target population, as the goal is to improve nutrition education for adult WIC participants and parents of child participants. As discussed further below, the training was also designed to be used in training Michigan State University Cooperative Extension (MSU-E) staff who provide nutrition education to low-income families.

PROFILE OF INNOVATIVE PROGRAM

Development of Training and Materials. In fall 2000, state staff worked with Suzanne Gregory to develop a proposal for the program, including a contract with Suzanne to develop the training materials and conduct the initial training. They then submitted the proposal to management at the Department of Community Health. One reason it was approved was that this type of training is less expensive than having the state train all staff who provide nutrition education. The cost for the contract was only about $6,000. (Most likely, the low cost partly reflects the fact that Ms. Gregory had materials from elsewhere to build upon.) Ms. Gregory drafted the training materials, and the state staff reviewed drafts and provided comments. The materials were completed in the spring of 2001.

Trainings Held. The first training, in June 2001, was led by Suzanne Gregory. It was held in Lansing, the state capital, near the center of the state. The session was limited to WIC and MSU-E staff. Attendees had to fill out an application describing their experience as nutrition educators. Local WIC staff also needed a signed statement from their WIC Coordinator saying she would support the attendee in implementing the Learn Together Approach. In addition to local WIC staff, several state-level WIC staff (including those who would run future training) attended the initial training. About five MSU-E staff attended.

A second round of training sessions, taught by state WIC staff, was held in October 2001, in four different regions of the state, in an effort to reach more WIC agencies. Michigan WIC opened the training to staff who worked in programs other than WIC and MSU-E (see more below). They no longer required the WIC Coordinator to sign off on the applications.

A third training was held in Lansing in April 2003. The major goal was to reach WIC staff who had joined WIC since the earlier training.

The initial training lasted two days, but the training was then cut to one day. Training sessions were limited to 24 persons, so that all could participate fully. Over 100 WIC staff have been trained across all the sessions.

Training Curriculum and Sample Nutrition Education Modules. The Learn Together Approach is a train-the-trainer model of training in facilitated group discussion. Training was very hands-on. After presenting the idea of facilitated group discussion, the trainers led a sample discussion to model the approach (with some of the trainees playing the role of clients).

Next, trainees developed a nutrition education module for a facilitated group discussion (at the two-day training; they used existing modules at the one-day training). They were trained to use a template for developing a nutrition education discussion module around a specific topic, such as introducing new foods to picky eaters. A key idea was that, in a particular discussion, the leader should leave people with three ideas they could apply in their daily lives, and no more. The discussion should start with an icebreaker to get everyone talking. The leader should have prepared three or four open-ended questions for discussion on the topics to be covered. The module also should include a question to use at the end, asking all participants to sum up what they have learned or what new behavior they are going to try. In addition to training staff on developing these modules, the training also covered techniques for correcting incorrect information and moving the discussion along.

Trainees then split into groups of about five. One led the discussion, one observed and evaluated the leader, and the rest acted the part of participants. These “practice sessions” were repeated several times, so each trainee could experience all three roles. (Staff reported the “clients” were often hard on the discussion leaders—probably more than real WIC clients would be.)

Last, the training moved to how to set up a session to train others at their local agencies in facilitated group discussion; this covered the materials needed and key steps; the training manual provides step-by-step instructions on what to do. The one-day version of the training covered this in less detail than the two-day version.

All trainees received a comprehensive training manual and sample forms and materials to use in training local staff and in planning facilitated group discussions. The Michigan WIC program has also posted these materials on the WIC Works Website. Responsibility for developing nutrition education modules was left to the local WIC agencies, but after the first training, the state staff gathered some of the best ones to post on the Web and use in later training sessions.

Nutrition education modules came from various sources. Some were adapted from materials that previously had been presented in a lecture format. In 2002, Michigan WIC sponsored a statewide training on the feeding relationship ideas of Ellyn Satter.[36] State staff incorporated some of her infant-feeding ideas into sample modules used in the 2003 Learn Together Approach training. Another module, on picky eaters, uses as a "hook" asking WIC clients to try dried seaweed—a strange food to most of them (and they are not told in advance what it is). Clients then use this experience to consider how their children might feel when asked to try new foods and to share strategies that are successful.

Training Logistics. The first training was conducted by Suzanne Gregory, and the later training was conducted by the three WIC agency staff (two nutritionists and a psychologist) who had worked most closely with her on developing the materials. All three participated in the first regional training, and then two led the later training. It is important to have at least two people so that it is possible to split into smaller groups.

Trainers collected evaluations at each training and made changes in response—one key change was cutting the training from two days to one day, because it was difficult for WIC staff to get away for two days. In addition, it was difficult for local agencies to pay for overnight accommodations. Local agencies paid a registration fee for their staff to attend the training (see discussion of funding).

Collaboration with Other Agencies. The state WIC agency works often with MSU-E on nutrition education training. MSU-E was included in this initiative from the start and sent some of their staff to each training. MSU-E contributed one-third of the funding for the first training.

When the four regional training sessions were conducted in fall 2001, the state WIC office did outreach to local health departments, Head Start, and Indian Tribal Organization (ITO) WIC agencies in the state. WIC and MSU-E staff had priority for the training slots, but staff from some of these other agencies participated in the training.

Publicity for the Training. The Michigan Department of Community Health regularly contracts with the Michigan Public Health Institute, and used them for this project to create the flyers, send out mailings, and handle conference arrangements for each training, including

[36] Ellyn Satter is a nutritionist known for providing advice on developing positive feeding relationships between parents and their infants and toddlers. Her books include, *Child of Mine: Feeding with Love and Good Sense* (2000).

lodging (for the first training), registration, and setup of the meeting rooms. The training was also publicized through the Nursing Forum, which is part of the state Department of Community Health; members of this group publish a newsletter that is sent to their colleagues. The state's WIC Nutrition Education Working Group, on which state and local WIC staff are represented, helped to get the word out. MSU-E sent information about the training to their staff.

One important way to attract participation in the training was to obtain continuing education credits. State WIC staff found this to be challenging for the first training, because the process most frequently used was to submit through the Michigan Nurses Association (MNA), which requires significant lead time. They obtained continuing education credits through one of the other categories of allowable credits by the Michigan Board of Nursing for the first training. They received the credits through MNA for subsequent training.

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. As noted, state WIC staff worked with an outside consultant to develop the training, and with another consultant to handle outreach and logistics. Four staff members at the state agency were initially involved with the project, and three worked on the regional training sessions. Two of the four conducted the 2003 training; the others have left the agency.

Record Keeping and Quality Control. One issue is how well the state WIC agency can follow up to learn whether the training is indeed being implemented at the local level. One important change that they made was to add to their management information system a code for "facilitated group discussion" as a type of nutrition education contact. The state staff can track the code in the computer to find out whether an agency is using facilitated group discussion either alone or in combination with some lecture-style nutrition education. However, this would require creating an "ad hoc" report, which so far has not been done.

In December 2001, they conducted a survey to follow up on the training, and found that 28 of 50 agencies were using facilitated group discussion, at least to some extent. Local agencies also report on nutrition education in their annual "Nutrition Services Plan." State staff monitor the plan's implementation during management evaluations, which include observations of nutrition education in the agency. In agencies' Nutrition Education Plans for FY 2003, 54 percent (27 of 50 agencies) indicated they were using facilitated group discussion. In addition, 64 percent (32 of 50 agencies) indicated they were using a combination of lectures and facilitated group discussion.[37] Further, the WIC Nutrition Education Workgroup meets every two months—it includes state and local staff from all over the state—and members report on what is happening at the local level. The state agency tends to use them as a "focus group."

The state agency has not systematically tracked whether participants have trained others in their local agencies in the Learn Together Approach, and has not had the resources to collect this

[37] Multiple responses were allowed concerning modes of nutrition education—it is not clear how much these two categories overlapped.

information. It would be interesting to know if the train-the-trainer aspect of the training proved useful.

Funding. The training was funded from state WIC Nutrition Services and Administration (NSA) funds and registration fees. In addition, MSU-E contributed funding for the first training. The major costs included the cost of Susanne Gregory's contract, the cost of the contract with the Michigan Public Health Institute, the cost of the time of the four state agency staff involved, and costs for printing of materials. There was also a cost for applying for continuing education units. The state WIC agency also paid for some of the travel and lodging for the trainings, but these costs were covered mostly by local agencies (and were not much of an issue except for the June 2001 training, the only two-day training). The registration fee was $25, which paid for the materials; it was covered by the local agencies for most local WIC staff, and by MSU-E for their staff. Overall, the costs for developing the materials and conducting the five trainings were less than $20,000 (not counting the labor costs for state agency staff).

The state WIC agency viewed the costs as very reasonable when compared to the cost of having a central training for all state WIC staff who do nutrition education. Of course, state costs do not include costs incurred by local agencies to send their staff to the state-sponsored trainings or to do local training, but those would probably not be too large.

ASSESSMENT AND LESSONS LEARNED

Program Strengths. The Learn Together Approach seems a useful method for teaching how to lead facilitated group discussions at reasonable cost. In training evaluations, participants responded positively. The state staff observed that trainees seemed very excited and motivated. Some staff were uncomfortable with the approach at first, because they felt they should be conveying more information, or because they feared losing control of the group or having people leave with erroneous ideas. During the training, they tried to show trainees multiple approaches to acknowledging client contributions but still correcting any incorrect beliefs.

Our state contact felt the major strengths of this training are that it helps people to realize that:

- Nutrition education can be fun
- Lectures are not a good approach to adult learning
- Clients have varied experiences and can learn best when they can relate the content to their own experiences

She felt the approach was "freeing" for many. They were relieved to hear it is enough to share a few good ideas and have clients make a commitment to a specific behavior change.

Another strength of this training is the materials available on the Web are comprehensive and easy to read, so that they could be readily applied elsewhere.

Key Challenges. In implementing the Learn Together trainings, one challenge staff faced was making the training accessible to local staff, by choosing the appropriate locations and length of training. Some other areas in which the program might be strengthened include monitoring the extent to which trainees conduct local training (to determine whether the train-the-trainer focus is indeed useful), and developing methods for sharing training modules developed at the local level with other local agencies.

Lessons Learned. The Learn Together Approach to training the trainers in facilitated group discussion seems widely useful, particularly in large states or other areas where funding constraints make it infeasible to train all local WIC nutrition educators. The materials could be adapted by other agencies with few or no changes.

Michigan staff recommended to other states that would be interested in such a program that they work with a professional experienced in the field, so they can see the approach modeled by someone with experience. It is also important to realize that the approach is not suited to all topics. In particular, it is not appropriate for anything with a "psychomotor" component, such as teaching nursing mothers how the baby should latch on to the breast. However, many of the skills involved can also be used in one-on-one counseling—for example, asking open-ended questions and affirming the client's experience.

The WIC programs in many states are moving to increased use of facilitated group discussion techniques for nutrition education. It would be useful to conduct further research to determine whether these approaches are more likely to produce increased knowledge and behavioral change than traditional lecture-based classes.

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WIC RD: ADJUNCT TO PEDIATRIC HEALTH CARE
PEDIATRIC NUTRITION TRAINING AND SUPPORT FOR WIC RDs[38]
CALIFORNIA

OVERVIEW

Location: Statewide

Start Date: 2001

Target Population: WIC Registered Dietitians (RDs), and by extension, WIC nutrition assistants, other program staff members, and the clients they serve.

Purpose: To provide formula and pediatric nutrition training and technical assistance to WIC RDs and other health professionals. In turn, clients are given accurate information on infant feeding, as a means to decrease symptoms of infant formula intolerance and allay parental anxiety.

Services: Intensive formula and pediatric nutrition training, Formula Guidebook (professional educational material), and technical assistance over the telephone regarding complex pediatric nutrition matters.

Funding: State Nutrition Services and Administration (NSA) funding covers program costs, but savings from the program in reduced use of non-contract formulas outweigh the costs.

Why Program Was Chosen: Although WIC promotes breast-feeding, there is a state staff position dedicated to providing training and support to local staff on infant formula and pediatric nutrition issues. State officials recognize that although breast-feeding is best, most WIC mothers choose formula, so staff must be able to determine which type of formula to give.

Key Challenges: Keeping the manual and training up-to-date is demanding, because of frequent changes in the formulas available and in knowledge about pediatric nutrition. Another challenge is finding the resources and staff time to regularly train new staff and retrain other staff.

[38] Telephone interviews, May 1 and May 6, 2003.

BACKGROUND

State Characteristics. California is the most populous state, with 34 million residents. In 2000, about 47 percent of the population was white, 32 percent Hispanic, 11 percent Asian, and 7 percent African American. Almost 40 percent speak a language other than English in the home. California's poverty rate is higher than the U.S. average, 14.2 percent versus 12.4 percent.

WIC Program Background. California has the largest state WIC program in the country, with 81 local agencies serving 1.3 million participants at 660 local clinics. About 10 percent of participants are pregnant women, 7 percent breast-feeding women, 6 percent postpartum non-breast-feeding women, 23 percent infants, and 54 percent children. The WIC caseload is diverse: 73 percent of participants are Latino, 12 percent white, 7 percent African American, and 6 percent Asian. California WIC is proud that diverse WIC staff members interact effectively with and assist the WIC population. Staff provide effective communication and understand different cultures, thereby serving as a "gateway" to other preventive health programs and health care.

Program History and Objectives. The emphasis of WIC, the American Academy of Pediatrics, and the medical community has been on promoting breast-feeding. The reality is that many WIC mothers use formula or combination feedings (both formula and breast milk). Specifically, in September 2003, only 10.6 percent of California's 293,014 WIC infants were exclusively breast-fed. Many mothers initiate breast-feeding in the first one to two weeks after birth, but by two to three months of age, more than 90 percent of California infants are on formula, either exclusively or in combination with breast-feeding. The short breast-feeding durations are due, in part, to the availability of formula in hospitals, advertising and promotion by formula companies, and the ease of using formula for women returning to work or school.

In addition, the Integrated Statewide Information System (ISIS) provides data indicating that the WIC population is becoming more complex in its ethnic, cultural, social, and health care needs. California WIC has seen an increase in pediatric morbidity and rates of medical conditions that require special formula or special feeding practices. At the same time, formula choices are becoming more complex. Issues with formula include reformulation, changes in can size, allergies and other medical conditions, types (cow, soy), nutritional quality, and new additives. When changes in these areas occurred before 2001, it took several months to communicate the changes to the 660 WIC clinics throughout the state.

State WIC officials recognized that local WIC agencies struggled in addressing infant formula and feeding, especially since no specific resources were available from the state. Officials also recognized that WIC would benefit from a cost standpoint if more formula-fed infants consumed a contract formula. Therefore, WIC staff members needed the skills, knowledge, and resources to counsel caregivers on formula use and recommend the appropriate formula for an infant. A Pediatric Nutrition Specialist with neonatal intensive care unit (NICU) experience was selected to address these issues, update the state WIC policy on formula, and provide training and technical support to local agencies and clinics.

It is difficult for practitioners to know how to treat all cases and stay abreast of current information. Therefore, the Pediatric Nutrition Specialist applied an RD training and support

model used at the University of Washington at Seattle, where a Maternal and Child Health grant funded one-week training sessions for nutritionists working in pediatric environments. After this training, ongoing support was provided through a closed listserv where nutritionists could post questions about cases and policy issues. The university provided answers and references that nutritionists could use to gain additional information and expand their pediatric practice.

Target Population. The primary target population for the training and technical assistance is WIC RDs. Other WIC staff members, hospital RDs, and other medical providers are sometimes involved. In turn, these practitioners have the knowledge, skills, and resources to improve service delivery to an increasingly complex WIC population.

PROFILE OF INNOVATIVE PROGRAM

Services Provided. The Pediatric Nutrition Specialist conducts staff training on infant formulas and pediatric nutrition, provides technical assistance to local staff on formulas and pediatric nutrition, and updates the Formula Guidebook. (All clinics have the Formula Guidebook, which contains information from the American Academy of Pediatrics as well as nutrition information on various formulas.) If this book cannot assist the local staff members, they call the state WIC branch for technical assistance from the Pediatric Nutrition Specialist or another RD.

At the request of a local clinic or agency, the Pediatric Nutrition Specialist travels to the local clinic or agency to conduct formula training for WIC RDs, hospital RDs, or other professionals with a four-year degree in nutrition. Other pediatric medical providers are often invited, as are some WIC Nutrition Assistants and CPAs. Local agency RDs have also taken on the direct trainer role for their respective agencies. This requires less travel time for the Pediatric Nutrition Specialist, who provides technical assistance to the local trainer. In particular, the Pediatric Nutrition Specialist reviews trainer educational materials, examines formula and pediatric nutrition training presentation materials, and discusses education and treatment strategies related to difficult cases that are used for case studies.

The five- to six-hour formula training, developed by the Pediatric Nutrition Specialist, includes the following topics: WIC's goals and desired outcomes, public health principles, tools available to RDs, formula choices, the nutritional value of formula, pre-term babies and their nutritional needs, feeding issues and problems (such as reflux or constipation), cow- versus soy-based formulas, contract versus non-contract formulas, allergies and hypoallergenic formulas, the Formula Guidebook, the California WIC formula policy, health plans that will or will not cover formula, how to work with health care providers, WIC screening forms, and case studies for a group activity. Once an RD or agency director is trained, they are to pass the knowledge along to other staff in their organization. The training is not mandatory, but it is one of the few RD support systems that California WIC has to offer.

California WIC plans to extend RD education through teleconferencing, which can easily be accessed by local agencies. The teleconferences will discuss and review complicated case studies, a natural extension of the technical assistance already provided by telephone.

Participation. About 90 percent of local agencies have staff that have participated in the formula training.

Coordination and Collaboration. When the Pediatric Nutrition Specialist goes to local agencies or clinics to conduct trainings, she invites pediatric medical providers and RDs from area hospitals to attend. In this way, participants can learn about other services and resources in the community and identify opportunities for collaboration.

Publicity and Outreach Efforts. A letter is distributed to local agencies and clinics about formula changes and information. The availability of formula trainings is announced at the annual WIC conference and during site audits, and is listed in WIC's training manual.

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. The Pediatric Nutrition Specialist, the primary contact for the initiative, conducts the training and oversees technical assistance. Another specialist works with her directly. Three other RDs in the state WIC branch provide technical assistance to local agencies that call with questions or concerns. These three spend about 25 percent of their time on infant-feeding questions related to formula.

Record Keeping and Data Systems. California WIC devised two communication forms, to be completed by WIC RDs, to share WIC nutrition screening results with medical providers prescribing formula for medical conditions. Both the "Infant Screening and Medical Justification Form for Formulas for Medical Conditions" and the "Child Screening and Medical Justification Form for Formulas for Medical Conditions" include information on a client's feeding history, feeding practices or behaviors, medical history, and screening results, as well as the WIC RD's recommendation. The form is either given to the parent or caregiver to share with the medical provider or faxed directly to the medical provider. The medical provider completes the bottom portion, which describes the medical diagnosis, formula recommendation, recommended duration of formula, and feeding instructions. The back contains an abbreviated version of WIC policy regarding contract formula and formula for medical conditions.

Funding. The main costs for this initiative are the Pediatric Nutrition Specialist's salary, telephone calls, travel (about two trips a month), and the development, reproduction, and distribution costs associated with the Formula Guidebook. These expenses are covered in the general WIC budget.

ASSESSMENT AND LESSONS LEARNED

Program Strengths. The state is meeting the training needs of RDs through intensive training in formula and pediatric nutrition. The attitude before was that RDs are professionals who should take responsibility for reviewing the latest research and gaining knowledge on their own, but the training evaluations revealed that RDs need and want ongoing training. With increased knowledge, support, and resources, RDs have more confidence. In turn, these RDs are providing better customer service for mothers who choose to use formula. These mothers, as well as fathers, partners, and other caregivers, are getting assistance early in the feeding process

so they can successfully feed their infant, avoid future eating disorders or problems, and parent positively and effectively.

Furthermore, California's rate of non-contract formula use has decreased. In January 2002, 4.7 percent of formula used in California WIC was non-contract. In October 2003, that figure was down to 1.7 percent. This reduction in non-contract formula use may be, in part, due to the program. RDs and local agencies have more support, and thus may be more convincing with participants in recommending contract formula. According to the Pediatric Nutrition Specialist, "the savings obtained from inappropriate formula choices far outweigh the costs for technical assistance." Specifically, California WIC estimates $250,000 in monthly savings as a result of decreased use of non-contract formula. (This change cannot be attributed definitively to the training and the Formula Guidebook, but they seem likely to have played a part.)

Key Challenges. The project is evolving, as evidenced by the interest of local agencies in doing their own training, with technical support. The challenge is keeping up with future needs using an efficient educational format. In addition, budget constraints that limit staffing and time pose a challenge for program officials, as does the high local staff turnover, which results in an ongoing need for training.

Lessons Learned. The Pediatric Nutrition Specialist believes that if California, with the largest and one of the most complex WIC programs in the country, can put this kind of support system into place, other states can as well. California's program started out as a single staff position and has expanded to include a few additional staff giving support to the RDs in the state. Smaller state agencies may not be able to afford this level of staff, but may perhaps form consortia with other states (particularly if they join together on infant formula contracts). The apparent cost savings achieved in California suggests that such training is cost-effective.

Other states may not be able to implement this type of training, but they can take other steps to help their RDs keep up to date. Related strategies would be to encourage RDs to stay abreast of current information, whether through state or national trainings, classes, listservs, or other media. WIC branches could identify ways of sending RDs to national training for practitioners interested in pediatric nutrition, and give RDs time for professional development activities.

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BILINGUAL TRAINING PROGRAM[39]
WISCONSIN

OVERVIEW

Location: Statewide

Start Date: 2001

Target Population: Bilingual Hmong and Hispanic WIC staff and, by extension, the Hmong and Hispanic WIC clients they serve.

Purpose: To provide more effective and culturally appropriate nutrition services to non-English-speaking Hmong and Hispanic WIC clients.

Services: Bilingual Hmong and Hispanic WIC staff receive training to become bilingual translators, certifiers, or educators for at-risk Hmong and Hispanic clients, and bilingual translators for high-risk Hmong and Hispanic clients.

Funding: In fiscal year (FY) 2003, the program received $43,000 in funding: $39,000 from the State WIC Program and $4,000 from the Wausau Health Foundation.

Why Program Was Chosen: This program is innovative in that it trains bilingual staff members, or "bilinguals," to provide nutrition education and certification services to WIC participants who are of the same culture yet do not speak English. The training curriculum and certification program can serve as a model for other programs trying to address the cultural needs of a diverse clientele.

Key Challenges: Staff have worked hard to gain acceptance for the bilingual paraprofessionals, in the face of the attitude that only professionals should provide nutrition education. In some settings, the need for bilingual professionals who can train and monitor the paraprofessionals could be a challenge.

[39] Telephone interview, April 17, 2003.

BACKGROUND

State Characteristics. Based on a 2001 estimate, the population of Wisconsin is more than 5 million. About 9 percent live below poverty, compared to the national average of 12 percent. In 2000, about 87 percent of the population was white, 6 percent black, 4 percent Hispanic, and 2 percent Asian. Most of the Asian community in Wisconsin is Hmong, with 0.63 percent of the state's total population Hmong (University of Wisconsin Extension and Applied Population Laboratory 2002). Wisconsin's Hmong population increased by 106 percent from 1990 to 2000.

WIC Program Background. The Wisconsin WIC Program serves more than 108,000 clients each month in 69 projects (the Wisconsin name for local WIC agencies) in 5 regions. About 24 percent of clients are infants, 52 percent children, 11 percent pregnant women, 7 percent non-breast-feeding postpartum women, and 5 percent breast-feeding women. About 4.5 percent of participants are Asian, and 18.5 percent are Hispanic. The Milwaukee/Southeast Region has about one-third of the state's total caseload and has the largest Hispanic population of the five regions. The Northeast Region, particularly Brown County (Green Bay area) has many Hispanic clients as well, as does the Southern Region (Madison, Rock County, and Walworth County). The Hmong participants are concentrated in four of the five regions.

The program provides basic WIC services, and the Farmers' Market Nutrition Program is implemented in most counties. Most of the Competent Professional Authorities (CPAs) in Wisconsin are nutritionists and dietitians, but there are also some Dietetic Technicians (DTRs) and nurses. The trainees involved in the Bilingual Training Program are usually program support staff or health screeners, not professional or paraprofessional staff members.

Program History and Objectives. State and local program officials recognized that bilingual nutrition education was necessary to meet the needs of the Hmong and Hispanic participants in the state. When a non-English-speaking client received nutrition education, a nutritionist and an interpreter were both needed, which was costly and not very effective. The nutritionist and the client could not communicate directly, and thus lost the personal interaction so critical in counseling. Several years ago, in a pilot project to promote breast-feeding among the Hmong population, WIC trained bilingual Hmong women who had breast-fed to become peer counselors. This program was very well received, and breast-feeding rates increased as mothers received support from women of the same culture. Therefore, state and local program officials decided that bilingual Hmong and Hispanic WIC staff, who were primarily in program support and health screener roles, would be trained to provide bilingual nutrition services.

Two local WIC directors developed and started bilingual nutrition education training in 2001. They worked closely with an advisory board of Central Office State WIC staff and Regional Nutritionists, which was responsible for providing insight into project development, curriculum design, planning, and implementation. The goal of the program is to provide quality and effective nutrition services that are culturally appropriate. Program officials believe that a client is more likely to make improvements in diet by working with someone of the same culture. Also, training bilingual staff could be more cost-effective than hiring interpreters to translate between English-speaking nutritionists and non-English-speaking participants.

Target Population. Bilingual Hmong and Hispanic WIC staff can participate in the Bilingual Training Program. Most participants are WIC program support staff or health

screeners. The Hmong and Hispanic clients that these bilinguals serve receive more effective and culturally appropriate nutrition services as a result of the training.

PROFILE OF INNOVATIVE PROGRAM

Services Provided. The Bilingual Training Program is provided for bilingual Hmong and Hispanic staff in Wisconsin. Until 2003, participants were primarily program support staff and health screeners from WIC clinics, all of whom have a minimum of a high school education. To enroll in the training, local WIC projects submit a registration application form with the name(s) of employee(s) who are either Hmong or Hispanic and are interested in participating in the training. In 2003, as part of the Wausau Health Foundation grant, the training was expanded to include Hmong and Hispanic staff from local health departments, Head Start, Family Resource Centers, Community Action Agencies, and day care providers.

A Hmong Registered Dietitian (RD) conducts the training for Hmong students, and a Hispanic RD trains the Hispanic students. Both trainers are, or have been, local WIC Nutritionists. The two trainings are held concurrently every 18 months. The training lasts 8 days, and sessions are held in a central location so that all staff members can attend at once. In 2001, the training was held in three 2-day sessions and two 1-day sessions. In 2002 and 2003, there were four 2-day sessions. The training usually takes place over a 4- to 6-month period.

The Session 1/Translator training addresses basic nutrition, counseling and interviewing techniques, Hmong and Hispanic eating patterns, and confidentiality. The last three 2-day sessions are divided into nutrition education and WIC certification. After each session, participants have a take-home test and follow-up assignments to complete, and they must practice doing certifications and providing secondary nutrition education, with supervision from an RD at their local agency.

After this work in the clinic, either the Hmong or the Hispanic trainer visits the local clinic to observe the trainee providing secondary nutrition education and/or WIC certifications, depending on how the local agency uses the trainee's new expertise. If the trainer is satisfied with the trainee's performance, the trainee receives a certificate of completion and is authorized to provide secondary nutrition education and/or to certify selected low-risk participants. The trainees must complete this certification process within 1 year, but it usually takes 9 months.[40]

Trainees can become translators, educators, and/or certifiers. A participant who attends the first two days of training, the translator section, can earn a functional translator certificate. A participant who attends the entire training, completes the assignments, and is approved by a

[40] Most trainees from non-WIC organizations complete assignments after the training as well. In these cases, the homework has been individualized. In some cases, the person works for a non-WIC agency, but the local WIC project may contract with that person for some translator or educator time. For these people, it is an essential part of the training to do the same homework as the WIC staff. A trainee who works for another program (such as Head Start) will use Head Start Program regulations and materials to complete the homework.

trainer, can become a CPA with the knowledge and skills necessary for WIC certifications and nutrition education for low-risk Hmong and Hispanic infants, children, and women. A trainee has the option of taking the entire course, but only completing the assignments for the translator or educator role, not the certifier role. Along similar lines, a trainee who attends only the translator session and then the sessions on, for example, children and infants, can be tested on the children and infants sections and work with only those populations in the WIC clinics as a translator and nutrition educator, not as a CPA. Trainees who miss a training session can be tested on the completed sections and then finish the remaining section(s) when the course is offered again.

Bilinguals are not qualified to certify high-risk clients, but are trained to identify such clients, who must be seen by an RD. For high-risk cases, they function as an interpreter. In addition, bilinguals can provide certification services only to Hmong or Hispanic clients, not to other groups of WIC participants.

In some of the more rural local projects, the bilingual may be in the project only one or two days during the month, and the Hmong/Hispanic participants are scheduled for those days. In larger projects, the bilingual is usually a full-time employee. Most bilinguals were initially hired as program support staff or health screeners; thus, if they achieve CPA certification, they have two roles. On some days they function as a CPA, on others, in their initial role of program support staff or health screener.

Participation. As of 2003, the program has trained 29 certifiers, 17 educators (14 from agencies other than WIC), and 24 translators. Twenty local agencies have sent staff to the training.

Coordination and Collaboration. In 2003, the Wausau Health Foundation provided funding for the program. For the program to receive this grant, the training had to be available to staff in organizations other than WIC. The curriculum was broadened to meet this need.

Publicity and Outreach Efforts. The two trainers and the Regional Nutritionists, who were on the advisory committee, promote the training at the local and state level. WIC staff promote the program throughout the year and at statewide conferences. The initiative is also publicized in the "Monthly Update," a newsletter for nurses, nutritionists, and other professionals in WIC, breast-feeding, and maternal and child health programs. In addition, flyers were distributed in 2003 to reach out to other organizations.

ORGANIZATION AND MANAGEMENT

Staff and Organizational Structure. The State Office and Nutrition Coordinator provide general oversight for the initiative, while the Program Coordinators plan, manage, and evaluate the program. The two trainers are responsible for the development and provision of the materials; both are RDs with extensive experience in staff training and educational activities.

Training and Quality Assurance. Quality assurance is limited at this point, but it is under consideration by program officials. Charts are completed in English and reviewed by an on-site dietitian. If the staff member becomes a CPA, the project's nutritionist oversees the member's

activities through chart audits and discussions with staff. At the annual state WIC meeting, previous graduates of the training program are invited to attend a two-hour workshop on issues in maternal and child nutrition to update their knowledge.

Funding. For FY 2000 and FY 2001, the program received $128,000 in funding through a WIC Infrastructure Funds Grant. In addition, in FY 2001, about $40,000 was used from WIC Nutrition Services and Administration (NSA) funds. The FY 2000 and FY 2001 budget included the costs of planning, developing the curriculum and materials, providing training for those two years, trainee lodging and travel, and labor. In FY 2002, about $75,000 of state WIC funding was used for the program, including training and ongoing monitoring. In FY 2003, program officials received a grant from the Wausau Health Foundation for $4,000, as well as $39,000 from the state WIC office to fund the program. In FY 2004, the state WIC office anticipates providing $20,000. Program officials are considering partnerships with other agencies to streamline the cost of training.

ASSESSMENT AND LESSONS LEARNED

Program Strengths. In 2001, the state agency conducted a program evaluation that had three components: (1) a written survey of 12 local WIC Directors who had sent bilingual paraprofessionals to the 2001 training, (2) a written survey of the 16 bilinguals that completed the 2001 training, and (3) telephone interviews conducted by the Hmong and Hispanic trainers of 42 participants served and 37 participants not served by the bilinguals.[41]

Nine of the 11 local WIC Directors who responded are using their bilinguals as nutrition educators, with 6 of these 9 having their bilingual paraprofessionals functioning as both certifiers and nutrition educators. Most felt that the bilinguals had a better understanding of WIC after the training, and were better able to explain nutrition and health concepts. In addition, the WIC Directors noted that the bilinguals are more enthusiastic and satisfied with their work, and that other WIC staff members appear more confident in the bilinguals' abilities.

The 10 bilinguals that responded to the survey felt the training helped them develop new ways of explaining nutrition and health concepts. All but one enjoyed their jobs more, particularly the closer contact with WIC families.

The telephone interviews of Hmong and Hispanic clients who worked with bilinguals indicated that they were more aware of why they were eligible for the program, more comfortable sharing health information, and more honest and open compared to similar clients who did not work with a bilingual. The bilingual certifiers and other WIC certifiers were comparable in listening to client concerns and in clients' perceptions of certifiers' knowledge.

An important caveat is that program officials would like to study the program further. In particular, they would like to compare the costs of training the bilinguals to the costs of using

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[41] The 2003 evaluation is complete, but the data were not available in time for inclusion in this report.

interpreters. In addition, when program officials reviewed data for the Hmong clients who had met with the bilinguals, the duration of bottle-feeding appeared higher than among WIC clients who had met with non-Hmong staff. It is possible that Hmong women were more honest in reporting their behavior with bilinguals. Therefore, program officials plan further monitoring of the amount of time children remain on a bottle following nutrition education with a Hmong or non-Hmong staff member.

Key Challenges. In the beginning, WIC RDs had reservations about bilinguals, who did not have professional training, providing nutrition education and certifying participants. Historically, RDs, nutritionists, and DTRs provide nutrition education in Wisconsin, and even nurses are not always well received by nutrition professionals. Helping local clinics see the value of having bilinguals deliver nutrition education was challenging but essential to the training's success. The advisory board and the project directors that have used bilinguals helped ease these concerns and gain buy-in from the local RDs.

Another challenge has been cultural differences. For example, among some immigrant families, it is not customary for women to travel alone to attend the training sessions and stay overnight. Some husbands were not supportive of this arrangement and wanted to accompany their spouses.

Lessons Learned. Program officials believe this initiative can be replicated. Their curriculum could be used with Hmong or Hispanic populations, or revised for different ethnic groups. Staff feel it is critical to find competent bilingual trainers who know the WIC Program and to form an advisory committee to help implement the project and gain buy-in at the local level.

Overall, this training program is a creative approach to serving pockets of non-English-speaking clients from a particular group. It seems worthy of further study. As noted, the main concern is whether it is possible for nutritionists to monitor adequately the services bilinguals provide in another language. The use of English charts and frequent discussions of cases seem like promising approaches to solving the problem, however.

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