Fit WIC: Programs to Prevent Childhood Overweight in Your Community

Final Report

FNS USDA
Food & Nutrition Service

United States Department of Agriculture | Food and Nutrition Service

May 2005
Special Nutrition Programs
Report No. WIC-05-FW

Fit WIC: Programs to Prevent Childhood Overweight in Your Community
Final Report

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This report is available on the Food and Nutrition Service website: *http://www.fns.usda.gov/oane.*

Suggested Citation:
"Fit WIC: Programs to Prevent Childhood Overweight in Your Community," Special Nutrition Program Report Series, No. WIC-05-FW, Project Officer: Ed Herzog. U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis, Nutrition, and Evaluation, Alexandria, VA:2005.

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Acknowledgements

The Food and Nutrition Service is grateful to the many individuals who contributed to this project and the production of this final report.

The final report was edited by Monica Schaeffer, Ed Herzog, Kelly Moore, and Pat Crawford. The report is based on reports provided by the five Fit WIC state agencies- California, the Inter Tribal Council of Arizona; Kentucky; Vermont; and Virginia. Members of each project team are listed in Appendix B.

We also thank the WIC staff and participants who participated in data collection and Fit WIC activities in each of the five states. This project would not have been possible without their cooperation and support.

Executive Summary

Childhood obesity has reached epidemic proportions in the United States, increasing dramatically in recent decades. The predicted consequences of this epidemic of obesity, both for our nation's health and for our economy, have stimulated a concerted effort by health researchers to understand its causes and work toward its prevention.

In 1999, the Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA) funded a childhood obesity prevention initiative called *Fit WIC.* The purpose of this project was to find ways in which the FNS administered program, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), could respond to this epidemic. FNS recognized that WIC has widespread access to young children from low-income families, a population at great risk for obesity, and that reaching very young children is critical to preventing the problem before it begins.

Five WIC State agencies were funded by FNS through a competitive grant process to participate in *Fit WIC*. The agencies chosen were California, the Inter Tribal Council of Arizona, Kentucky, Vermont, and Virginia. Concerned and motivated staff in the State agencies partnered with social scientists from local universities to assess their respective WIC environments and to develop and pilot overweight prevention programs.

During the assessment phase, the five *Fit WIC* teams learned a great deal about how childhood obesity and related issues impact WIC participants, staff, and their communities. Some important findings include:

- Many parents of overweight preschool children did not see their children as overweight, nor were they particularly concerned about their children's weight.
- Parents were eager to receive information on ways to promote healthy behaviors in their families.
- WIC staff members wanted to reach parents more effectively. They wanted new knowledge and skills to improve their education sessions with participants.
- Community groups were eager to work toward the prevention of obesity, but were sometimes uninformed about the issue of childhood overweight or about how the WIC program could complement their efforts.

Utilizing the information gained during the assessment phase, each *Fit WIC* project team developed and implemented an intervention appropriate for their specific setting and population. Their successes indicate that WIC does indeed have potential to impact national efforts to prevent obesity in young children. WIC can implement immediate changes to educational protocols in local clinics to better address weight issues with families, and can link with community groups to strengthen local efforts. With additional funding, WIC can position itself as a leader in the prevention of overweight and can meaningfully work with families and

communities to stem the increasing rates of childhood obesity. The five *Fit WIC* projects provide a sound basis for designing and evaluating future intervention programs in WIC.

Based upon their experiences and conclusions, the five *Fit WIC* teams have made recommendations for change in the WIC program. These recommendations, if adopted, would allow WIC to contribute significantly to the national effort to prevent childhood obesity. The *Fit WIC* teams recommend that the WIC program:

1. Develop and encourage the use of participant-centered assessment and education procedures.
2. Adopt physical activity as an essential element of nutrition assessment and education.
3. Foster the potential of WIC staff members to be role models for healthy behaviors.
4. Change the focus of participant education from *weight* to *healthy lifestyle*.
5. Expand and update training for WIC staff.
6. Provide wellness opportunities at work for WIC staff.
7. Establish partnerships with community agencies to develop comprehensive community-wide interventions.
8. Be allocated additional funding for increased staffing levels in WIC so that more staff time can be devoted to individual counseling and group education.
9. Fund additional research to evaluate the impact of obesity prevention initiatives in the WIC setting.
10. Fund research to study ways to change the WIC food package.

The following report examines the current childhood obesity epidemic, describes the *Fit WIC* assessment findings, outlines the five *Fit WIC* obesity prevention programs, and expands on the above recommendations for future action.

FINAL REPORT

Fit WIC: Programs to Prevent Childhood Overweight In Your Community

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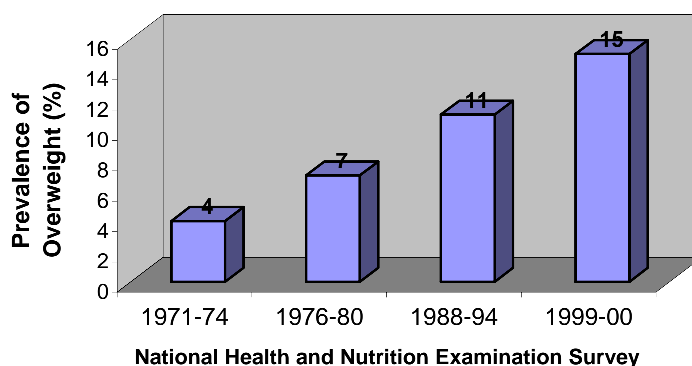
The Problem of Childhood Obesity—Why Act Now?

The prevalence of childhood obesity is increasing.

American children are gaining weight—more children and more weight than ever before. The problem is everywhere—no matter which neighborhood, state, or region you visit, American children are gaining weight faster than at any other point in our nation's history.[1] In recent testimony given before the United States Senate, Eric M. Bost, USDA Under Secretary of the Food, Nutrition and Consumer Services, said: "In the past 20 years, the percentage of children who are overweight has doubled and the percentage of adolescents who are overweight has more than tripled."[2]

The magnitude of this problem is illustrated in Figure 1. In 2000, 15% of children in this country aged 6-11 years were overweight:[3] more than 3 times the prevalence shown in the early 70's. Rates of overweight in preschool children enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) were similar, ranging from 10-16%, depending on age or ethnicity (see Figures 2 and 3).

Figure 1. Increasing Prevalence of Overweight in Children Aged 6-11 Years with Time[4]



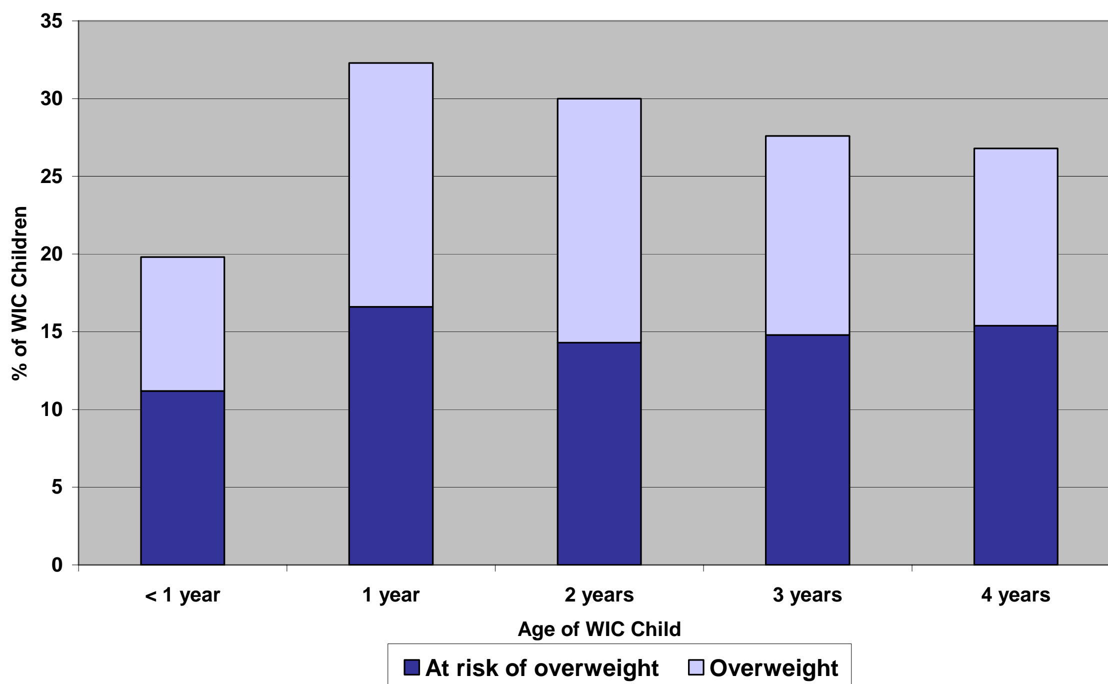
[1] For a list of some important scientific articles describing the prevalence of childhood overweight, see Appendix A. When cited in this document, they are referenced by author and year of publication in the footnotes.

[2] Eric M. Bost, Under Secretary, Food, Nutrition and Consumer Services; testimony before the Subcommittee on Agriculture, Rural Development, and Related Agencies on April 14, 2005. http://www.fns.usda.gov/cga/Speeches/CT041405-a.html

[3] In this report, we will use the terms "overweight" and "obesity" interchangeably. "Obesity" is a lay term commonly used to describe this epidemic. The term "overweight" is used by the scientific community because it can be precisely defined by using the calculated value, Body Mass Index (BMI): body weight in kilograms divided by height (or length) in meters squared. BMI is more highly correlated with body fat than any other indicator of height and weight. Because of childhood differences in body fatness with growth and gender, no single value of BMI can be used to define the limits of healthy weight in children, as can be done for adults. To evaluate weight status in children, "BMI-for-age" is plotted on gender specific growth charts published by the CDC. Using those percentile growth charts, "overweight" is defined as a BMI-for-age at or above the 95th percentile; "at risk of overweight" is defined as a BMI-for-age from the 85th up to but not including the 95th percentile of the CDC Growth Charts. For details, see http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm (accessed 3 June 03).

[4] CDC, NCHS. "Prevalence of overweight among children and adolescents: United States, 1999-2000." http://www.cdc.gov/nchs/products/pubs/pubd/hestats/overwght99.htm (accessed 3 June 03).

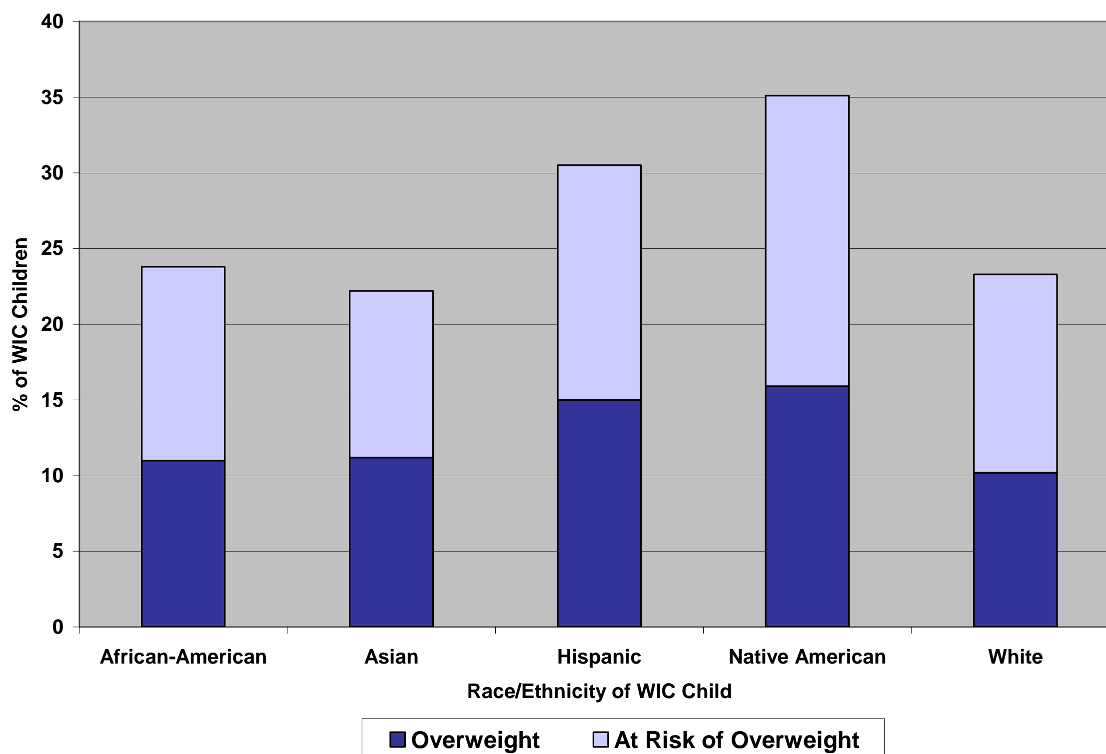
Figure 2. Prevalence of overweight and overweight risk by age in WIC children in 2000[5]



Also of concern from a public health point of view is the number of children, especially preschoolers, who are *at risk* of becoming overweight: 11-19% of children enrolled in WIC fall into the *at risk* category depending on age or ethnicity (Figures 2 and 3). Although overweight is increasing in all groups, rates of overweight vary by families' income and ethnicity, and age of child. Among children enrolled in WIC, Hispanic and Native American children have higher rates of overweight compared to other racial/ethnic groups (Figure 3).

[5] See footnote 3 for definitions of overweight and overweight risk. Data in the chart are from an internal FNS analysis using participant information collected from State WIC agencies in April 2000 for the report, "WIC Participant and Program Characteristics 2000", WIC-02-PC, by Susan Bartlett, Ramona Olvera, Nicole Gill, and Michele Laramie. Project Officer, Julie Kresge. U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis, Nutrition and Evaluation Alexandria, VA: 2002. http://www.fns.usda.gov/oane/MENU/Published/WIC/FILES/pc2000.pdf (accessed 3 June 03).

Figure 3. Prevalence of overweight and overweight risk by ethnicity in WIC children in 2000[5]



The consequences of childhood obesity are long lasting and detrimental to the public health. Childhood obesity is one of the most complex health problems currently confronting the nation, with serious medical and financial implications for the future.[6] "One of the most significant concerns from a public health perspective is that we know a lot of children who are overweight grow up to be overweight or obese adults, and thus at greater risk for some major health problems such as heart disease and diabetes," said Centers for Disease Control and Prevention director Dr. Julie Gerberding.[7] The consequences of childhood obesity include physical, psychological, and social problems, as well as complications associated with obesity continuing into adulthood.

Certain chronic conditions that were once thought to affect only adults are now seen in overweight children. It has been estimated that by 5-10 years of age, 60% of overweight children have at least one biochemical or clinical cardiovascular risk factor associated with obesity and 25% have two or more.[8] The problems overweight children may experience include:

- High blood pressure
- Hyperlipidemia (the presence of an abnormally large amount of fat in the blood)

[6] For a list of some important scientific articles describing the consequences of childhood overweight, see Appendix A. When cited in this document, they are referenced by author and year of publication in the footnotes.

[7] "Obesity Still On The Rise, New Data Show", News Release, Oct. 8, 2002. CDC/NCHS Press Office. U.D. Dept. of Health and Human Services http://www.dhhs.gov/news/press/2002pres/20021008b.html (accessed 3 June 03).

[8] Freedman et al., 1999, as cited in "National Center for Chronic Disease Prevention and Health Promotion, Nutrition and Physical Activity", http://www.cdc.gov/nccdphp/dnpa/growthcharts/training/powerpoint/slides/028.htm (accessed 3 June 03).

- Stress on weight bearing joints
- Type 2 diabetes (also called "adult-onset" diabetes)
- Breathing difficulties
- Low self-esteem
- Social discrimination

The persistence of overweight into adulthood may be the greatest health risk for overweight children. According to the Surgeon General of the United States, if the high rate of obesity in this country persists, obesity may soon cause as much preventable disease and death as cigarette smoking.[9] Obesity in adulthood is associated with an increased rate of morbidity and mortality from:

- Hyperlipidemia
- Cardiovascular disease
- Type 2 diabetes
- Certain forms of cancer

The economic consequences of the obesity epidemic for the health care system in the United States are substantial. As reported by the Surgeon General[9], direct and indirect costs related to obesity and overweight were estimated to be $117 billion in 2000. This represents an 18% increase from obesity-related costs in 1995. Costs will undoubtedly continue to increase if the prevalence of obesity increases in this country.

The Surgeon General issued a "Call to Action" in 2000.

In 2000, in recognition of and in response to the growing epidemic of obesity, the Surgeon General of the United States made a strong statement of concern and determination to address this national problem; he issued a "Call To Action To Prevent and Decrease Overweight and Obesity."[10] The Surgeon General expressed a commitment to develop new communication and action strategies directed at reducing the prevalence of overweight and obesity in this country. Two of the principles to which the Surgeon General's "call to action" was committed were:

- ➢ To identify effective and culturally appropriate interventions to prevent and treat overweight and obesity
- ➢ To develop and enhance public-private partnerships to help implement this vision

The Surgeon General expressed the conviction that "…taking action to address overweight and obesity will have profound effects on increasing the quality and years of healthy life and on eliminating health disparities in the United States. . .. Many people believe that dealing with overweight and obesity is a personal responsibility. To some degree they are right, but *it is also a community responsibility* (italics added)."

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[9] U.S. Department of Health and Human Services. "The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity." [Rockville, MD]: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; [2001]. Available from: US GPO, Washington. http://www.surgeongeneral.gov/topics/obesity/ (accessed 3 June 03).

[10] U.S. Department of Health and Human Services. "The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity." [Rockville, MD]: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; [2001]. Available from: US GPO, Washington. http://www.surgeongeneral.gov/topics/obesity/ (accessed 3 June 03).

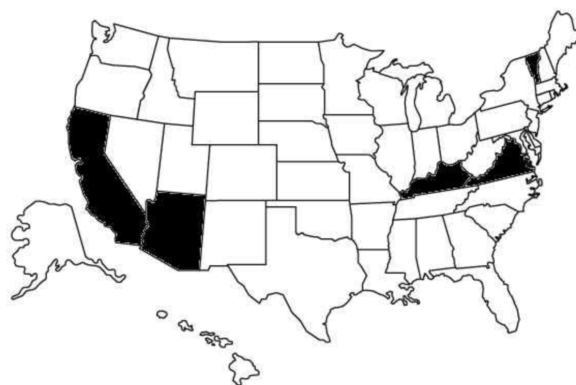
The Food and Nutrition Service Responds to the Urgent Need for Solutions—The WIC Call to Action

The Food and Nutrition Service (FNS) was among the agencies to respond early to the increasing prevalence of childhood overweight with its own "call to action." Recognizing the important role that FNS programs could potentially play in stemming the epidemic, the agency acted well before this issue was in the national spotlight and before the Surgeon General issued his "Call To Action."

FNS made available $1.8 million in fiscal year 1999 to fund cooperative agreements between FNS and five WIC State agencies to develop new, innovative strategies to prevent overweight in children, specifically targeting WIC program participants. This three-year project was called *Fit WIC*,[11] and had the following goals:

- To identify changes that State agencies and local WIC operations could make to become more responsive to the problem of childhood overweight
- To develop intervention programs for the WIC setting based on assessments of their WIC sites
- To create an Implementation Manual, based upon the states' experiences in the three-year program, to guide State and local WIC clinics and other interested health professionals and organizations in their own implementation of the programs developed[12]

Figure 3. WIC State agencies participating in Fit WIC



Through a competitive grant process, five WIC State agencies (California, the Inter Tribal Council of Arizona, Inc. (ITCA), Kentucky, Vermont, and Virginia) were provided funds to participate in the project (see Figure 3). Together, the five projects formed *Fit WIC* and worked

[11] FNS originally called this project *The WIC Childhood Obesity Prevention Projects*; it was renamed *Fit WIC* by the project teams.

[12] The Implementation Manual and the project materials developed by the five states have recently been made available to State and local WIC agencies and other health professionals across the country. The manual and materials are available online at the WIC Works Resource System: http://www.nal.usda.gov/wicworks/

closely with each other and with staff from FNS and the Centers for Disease Control and Prevention. Each State agency established project teams consisting of State agency staff and social scientists from local universities.[13] Each project team conducted a needs assessment of their WIC environment, clients, and staff, then developed and implemented an overweight prevention program responsive to the identified needs.

> *Fit WIC was a consortium of WIC State agencies and social scientists, cooperating to develop childhood obesity prevention programs responsive to the needs of local WIC agencies and their participants.*

[13] See Appendix B for the list of WIC and academic professionals participating in *Fit WIC*.

The Problem of Childhood Obesity--Why Act Through WIC?

WIC is in the right place at the right time.
The Special Supplemental Nutrition Program for Women, Infants and Children (WIC), administered by the Food and Nutrition Service of the USDA, provides nutrition information, supplemental nutritious foods, and referrals to other health, welfare, and social service agencies to about 8 million low-income pregnant women, infants, and children up to age five every month. WIC participants come from all race and ethnicity groups, and include those most at risk for childhood overweight. WIC services are available throughout every state in the United States, on Indian Reservations and in U.S. territories. WIC has a positive reputation among its participants: The great majority of WIC participants indicate they are "very satisfied" with services they receive from WIC.[14]

> *WIC has widespread access to preschool children in low-income families. These children are among those at greatest risk of overweight.*

Acting to prevent overweight is the best approach.
It is well known that overweight is a very difficult problem to treat. Once individuals have become overweight, it is expensive and time consuming for them to attempt weight loss, and frequently impossible for them to sustain their weight loss. Therefore, it is critical to *prevent* weight problems before they begin.

> *Since it is difficult to lose weight and maintain weight loss, early prevention of excessive weight gain is critical.*

Early childhood is the best time to prevent childhood overweight.
Many children, especially children in low-income families, are already overweight when they reach school age. School based programs aimed at reducing overweight, while important, may come too late to effectively prevent long-term weight problems. Moreover, it has been reported

[14] U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis Nutrition and Evaluation, "National Survey of WIC Participants, 2001 Final Report", by Nancy Cole et al.; Project Officer, Julie Kresge. Alexandria, VA: 2001. This report is available on the Food and Nutrition Service website: http://www.fns.usda.gov/oane/ (accessed 22 July 03).

that preschoolers are more likely than school-aged children to modify lifestyle behaviors.[15] Reaching parents and children when they are developing eating patterns and relationships can help prevent overweight and ensure the development of healthy habits.

> *Reaching parents of young children is key to children developing healthy eating and physical activity habits.*

[15] Davis and Christoffel, 1994.

The *Fit WIC* Response—The Development of the *Fit WIC* Programs

What Was Already Known About the Causes of Overweight

At the outset of the project, the five *Fit WIC* teams reviewed and summarized current information regarding the causes and development of overweight among children.[16] Some well-documented factors included:

1. ***Genetics versus environment***
   Although genetics play a very important role in weight gain, rapid increases in the prevalence of childhood obesity over the past few decades point to the important role also played by environmental factors. An increase in childhood obesity of the current magnitude and speed cannot be due to genetic changes alone. Rather, the increase points to an environment that promotes the development of obesity. The physical and social environments in which children live influence their lifestyle, health habits and, ultimately, their weight.

2. ***Physical activity***
   Low levels of physical activity have been linked to increased overweight among children.[17] Opportunities for physical activity are very limited in many communities. Physical activity has been cut from many school schedules. Communities are developed around the automobile. Safety concerns and childcare schedules keep children in their homes during playtime. As reported by the CDC, walking and bicycling by children aged 5–15 years dropped 40% during the last two decades.[18]

3. ***Sedentary behavior***
   Direct observation of preschool physical activity has shown that substantial portions of free playtime are spent engaged in sedentary behavior.[19] Children are spending more time than ever before with computers and video games. A relationship of prolonged television viewing and some other sedentary behaviors to weight status in childhood has been reported.[20] Young children who watch more than 5 hours of TV per day were up to five times as likely to be overweight as those who watch 0-2 hours per day.[21] Television time has been positively correlated with children's requests for advertised foods and to overall caloric intake.[22] Research indicates that the impact of increased sedentary behavior may be independent of the impact of decreased physical activity.[23]

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[16] For a list of some important scientific articles describing the causes of childhood overweight, see Appendix A. When cited in this document, they are referenced by author and year of publication in the footnotes.
[17] Obarzanek et al., 1994; Sallis, 1993.
[18] National Center for Chronic Disease Prevention and Health Promotion. "Physical Activity. Promoting Better Health: A Report to the President", http://www.cdc.gov/nccdphp/dash/physicalactivity/promoting_health/background.htm (accessed 3 June 03).
[19] DuRant, 1994.
[20] Dietz and Gortmaker, 1985; Hernandez et al., 1999.
[21] Gortmaker et al., 1996.
[22] Taras et al., 1989.
[23] Salmon et al., 2000.

4. ***Eating behavior***
   Certain eating patterns have been associated with childhood obesity: a low intake of fruit and vegetables;[24] a high intake of sweetened beverages, such as soft drinks;[25] and a high intake of fast foods and of high-fat snack foods.[26] Food consumption away from home, including fast food consumption, has increased, resulting in a higher consumption of fat and calories.[27] Certain meal-related parenting techniques also contribute to childhood nutrition problems. For example, when parents use food as a reward, or restrict or coerce a child's food intake, children may develop eating patterns conducive to overweight.[28] Conversely, excessively permissive child-feeding practices, such as allowing children to snack at will, may result in overeating.[29]

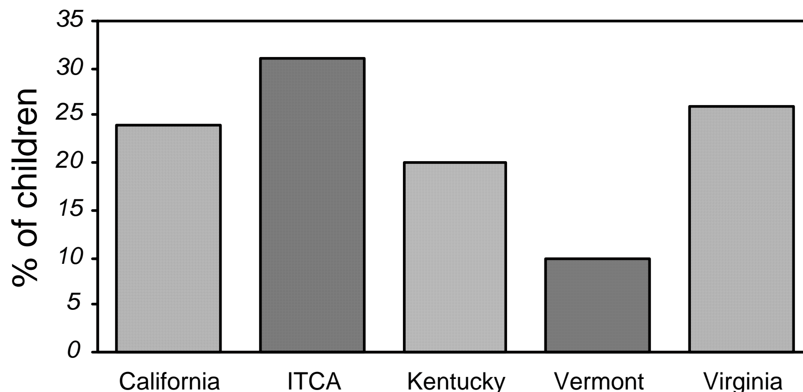
Parenting choices may influence nutrition, physical activity, weight gain and the prevalence of childhood overweight.

What the *Fit WIC* Project Teams Learned In Their Assessments of WIC Sites

During the first year of the project, each *Fit WIC* project team conducted assessments to help shape the development of intervention strategies. Teams collected information from WIC participants, staff and communities in their region, using interviews, surveys, and focus groups, to gauge attitudes and beliefs surrounding the issue of childhood overweight. Much of the research used qualitative techniques and the results must be interpreted accordingly. Despite differences in geography, population, and race/ethnicity of staff and participants at the five project sites, common themes emerged in the information gathered. The insights learned by the project teams about their WIC participants, staff and communities are summarized below.

[24] Müller et al., 1999; Neumark-Sztainer et al., 1996.
[25] Ludwig, Peterson and Gortmaker, 2001.
[26] Müller et al., 1999; Tanasescu et al., 2000.
[27] US Department of Agriculture, Agricultural Research Service. "What and where our children eat – 1994 nationwide survey results." Research news press release. http://www.barc.usda.gov/bhnrc/foodsurvey/Kidspr.html (accessed 29 May 2003).
[28] Birch, Fisher, and Grimm-Thomas, "The development of children's eating habits." In: HL Meiselman (ed.), Food Choice, Acceptance, and Consumption. Glasgow, England: Blackie, 1996; Birch 1999.
[29] Birch and Fisher, 1995.

Figure 4. Prevalence of Overweight in Children in Fit WIC State Agencies[30]



Insights Learned From WIC Participants

1. ***Parents did not perceive overweight as a problem for preschool children.***
   Although the actual prevalence of overweight among the children at *Fit WIC* sites was high (see Figure 4) and comparable to the nation as a whole, most parents[31] were not worried about overweight for their preschool children. They believed that overweight was a problem for preschoolers only when it affected a child's activities, caused unhappiness, or was accompanied by other medical conditions. In fact, many parents, particularly recent immigrants, felt that a little extra weight indicated good health in a child. Some parents were more concerned about perceived underweight in their children than with overweight. Most parents of overweight children did not think their child was even "a little" overweight, and most also had difficulty identifying other heavy children as overweight, except in the most extreme cases.

> *Parents cannot be motivated to solve a problem if they do not recognize it as a problem.*

2. ***Parents were knowledgeable about WIC's health messages, but struggled to put knowledge into practice.***
   Although parents did not seem concerned about overweight, they did express concern about the health and welfare of their children and were interested in learning skills to help them lead healthier lives. When asked to think about how young children might become

[30] Overweight prevalence in *Fit WIC* participants was reported by VA (ages 2-4 years). Overweight prevalence in the entire State WIC agency was reported by CA (ages 1-4 years), ITCA (ages 1-4 years), KY (ages 2-4 years), and VT (all infants and children enrolled in WIC). Definition of overweight varied by project team: a weight for height >90th percentile for CA, > 95th percentile for VT and ≥90th percentile for ITCA and KY. VA defined overweight as a BMI greater than 95th percentile.

[31] We use the term "parents" to describe the individuals who were interviewed or surveyed during the course of this project. While a majority of these "parents" were biological mothers, other care giving adults—fathers, foster parents, grandparents, adoptive parents, and other relatives – were also included.

overweight, parents generally blamed genetics and behaviors such as inadequate physical activity and consuming too much food or the "wrong" foods. Lack of self-control, poor parenting, stress in the family, and inadequate attention from parents were identified as potential causes of overweight. Many WIC parents reported having a basic understanding of nutrition and exercise, and they acknowledged the importance of establishing good eating habits in their children at an early age.

WIC parents talked freely about the many challenges they face in adopting healthy habits and expressed a desire to receive more in-depth and *how-to* information from WIC to help them overcome those barriers.

> *Parents are motivated to learn about techniques for healthier lifestyles.*

3. ***Parents lacked information about desirable activity levels for their families.***
While most WIC parents believed that physical activity was important to the health of their children, few could define adequate physical activity. Many WIC parents said that their child was "always doing something" or "always running around," to describe what they thought was adequate exercise. Other parents felt that their child would benefit from more exercise, but had difficulty defining *how much* exercise was sufficient. Most WIC parents felt that their own level of activity was "normal" regardless of the frequency or duration of activity, indicating a lack of information or knowledge as to desirable levels of activity for adults as well as children.

> *Parents recognize the importance of physical activity, but have trouble identifying what and how much activity is appropriate.*

4. ***WIC families face social and economic barriers to a healthy lifestyle.***
WIC families struggle with a variety of issues that hinder their ability to promote a healthy lifestyle within their families. Many parents have overextended schedules, leaving little time and energy to devote to a healthy diet and exercise. WIC families often live in areas that are unsafe or lack adequate play-space or programs.

Many WIC parents complained that their attempts to provide healthful foods and physical activity for their children were hampered by other adults living in the household. For example, some mothers said that their husbands had poor eating habits, which made it very difficult to feed their children healthfully. Others said that they could not turn off the TV, because another adult living with them insisted on keeping it on at all times. Consequently, parents expressed interest in WIC activities that involve the entire family, so that other family members could learn and provide support for a more healthful lifestyle.

Some WIC parents were more worried about running out of food altogether than about the types of food that they chose. Almost half of the surveyed California *Fit WIC* participants, for example, reported being worried about running out of food at some time during the month.

> *Healthy lifestyle recommendations must take into account the cultural and socioeconomic environment in which WIC clients live.*

5. ***WIC families receive conflicting health messages from health care providers***. Parents complained of receiving conflicting health messages from providers such as physicians, WIC, and other organizations. For example, some parents were told by their pediatrician that their child was overweight but not to worry, and then were told by a WIC provider that they needed to address the issue. Conflicting messages are frustrating for parents and make it challenging for WIC staff to address these issues, since many parents would prefer to ignore the possibility that their child may be overweight.

> *Due to conflicting messages from health providers, parents may not recognize that their child is overweight.*

Insights Learned From WIC Staff and Communities

1. ***WIC staff had concerns about addressing childhood obesity with their participants.*** Unlike the WIC parents surveyed, most WIC staff members were concerned about the prevalence of overweight among the children served by WIC. They felt that inappropriate diet and feeding approaches, and inadequate physical activity, including too much TV, were contributing factors to the obesity they observed in WIC children.

   Despite their concern, many staff members were uncomfortable talking to WIC parents about childhood obesity. They felt that the limited nutrition education time available was inadequate to deal with this complex and sensitive problem. Staff perceived parents to be in denial of the problem, and sometimes even offended when the topic was discussed. Some staff were concerned that educating a mother about childhood obesity might make her feel guilty or might interfere with the rapport between educator and participant. Therefore, working with staff to overcome these obstacles is critical to the success of any counseling efforts.

Adding to the complexity of the staff-participant relationship is the fact that up to 50% of the staff in each state reported that they themselves were overweight. Consequently, some felt themselves to be poor role models and were uncomfortable counseling WIC parents about overweight issues.

2. ***Staff expressed a need for additional training on topics related to childhood overweight.***
   Staff members wanted more training and resources to address the issue of childhood overweight more effectively. Some staff requested better educational materials for parents, and specific training for themselves on topics such as:
   - The causes of and treatments for childhood overweight
   - Age-appropriate dietary and physical activity approaches to the problem
   - Ways to open a discussion with parents about overweight
   - How to deal with resistant parents and motivate and empower them
   - How to identify family barriers
   - Assessing and discussing long-term risks associated with early obesity

> *Staff need special training and resources if they are to effectively educate clients in an obesity prevention program within the framework of WIC.*

3. ***Staff identified institutional barriers to effective obesity education within WIC.***
   Staff members most often mentioned two particular institutional barriers to effective obesity prevention in the WIC setting:

   a) Inadequate resources
   Many staff members felt that they could do a better job counseling about weight issues if they had more time to work with parents one-on-one. Additionally, parents said they would like more time with a WIC dietitian. Unfortunately, within the current structure of WIC, the dietitian's participant contact time is usually spent with a limited number of high-risk individuals. Overweight children may not be identified as high risk and thus may not receive education from dietitians.[32]

   b) The WIC food package
   Several staff members expressed frustration that the WIC foods currently available to participants are inconsistent with an obesity prevention message. Staff members felt that the WIC foods were too high in fat and not reflective of current nutrition recommendations for children. They felt that the WIC food package does not reflect the current standards on which WIC's nutrition education is based: the Food Guide Pyramid

[32] Criteria used for designation of high-risk participants are at state discretion and vary from state to state.

developed by the USDA; the recommendations of the American Academy of Pediatrics regarding children's juice consumption (no more than 4-6 oz per day); and the American Cancer Society's 5-A-Day fruit and vegetable campaign. The WIC food package does not include whole fruits or vegetables, and it provides 9 oz of juice per child each day. Food package changes, as recommended in a recent report by the Institute of Medicine (IOM)[33], are currently under consideration by the USDA.

4. ***Limited community resources influence lifestyle choices of WIC participants.***
Some of the *Fit WIC* project teams examined broader community factors, which impact families' abilities to adopt a healthier lifestyle. Many WIC communities lack resources for physical activity and convenient access to nutritious foods and/or fresh produce. Further, many communities lack any organized effort to address these issues.

   Many of the community groups and individuals with an interest in the issue of childhood overweight had limited knowledge of the local WIC programs. Most community stakeholders surveyed were uncertain about the services WIC provides. They recognized a need to have more consistent health messages delivered by agencies serving their communities, and were eager to work with WIC towards this end.

[33] WIC Food Packages: Time for a Change (2005). Committee to Review the WIC Food Packages, Food and Nutrition Board, Institute of Medicine of the National Academies. The National Academies Press; Washington, DC.

The *Fit WIC* Response—The Five *Fit WIC* Intervention Programs

Each project team used the information collected during the first year assessment to develop an intervention appropriate to their situation. While each project team developed a unique intervention, several key concepts, which emerged from the first year of assessment, formed the basis of the interventions. Those key concepts were as follows:

- Parents were eager to receive information on how to live healthier lifestyles, even if they were not concerned about their children's weight
- Staff members were interested in learning how to deliver that information to parents more effectively; they wanted new knowledge and skills to improve their education sessions with participants
- Community groups were concerned about the rising rates of childhood overweight and were responsive when leadership was offered by WIC

The following pages summarize the five *Fit WIC* programs. The summaries include information about the demographics of the respective WIC State agency, the goals of the particular *Fit WIC* program, and a brief description of how the program worked and what it accomplished.

Each program is also described in detail in the manual entitled "*Fit WIC*: Programs to Prevent Childhood Overweight in Your Community".[34] This manual was prepared by the *Fit WIC* project teams for use by WIC administrators, clinicians, and educators as a step-by-step guide for the implementation of the five *Fit WIC* programs. It was distributed to all WIC State agencies and is available online at the WIC Works Resource System.

[34] See Appendix C for a more detailed description of the Implementation Manual and the associated materials produced by the *Fit WIC* projects and how to obtain them.

THE STATE OF CALIFORNIA
A Multifaceted, Community-Based Approach to Overweight Prevention

California served nearly 1.3 million WIC participants each month at 650 sites throughout the state in 2002. Most of California's WIC participants are Hispanic (70%); the remainder is a diverse mix of other racial and ethnic groups.

Goals
The goals of the California *Fit WIC* project were to:
- ✓ Engage WIC participants in practical, effective, learner-centered educational experiences to prevent childhood overweight
- ✓ Incorporate physical activity promotion into all aspects of WIC services
- ✓ Provide staff with the tools, support, and information they need to become nutrition and physical activity role models for participants
- ✓ Develop community coalitions to support community-wide, environmental policy, and organizational changes to prevent childhood overweight

Methods
California's *Fit WIC* project was based upon a multi-faceted community-based model called the Spectrum of Prevention,[35] which outlines six levels on which to intervene in order to address complex public health issues. The approach of the California team acknowledged the importance of individual education and sharing of information, but also recognized the critical importance of simultaneously working with communities and coalitions, changing organizational practices, and examining local and legislative policies that affect the social and physical environments in which people live.

Three local WIC clinics were chosen to participate in the project. *Fit WIC* staff members in each clinic were provided with a variety of training sessions, which focused on how to talk with parents about weight and feeding issues, and how to help families increase physical activity. Training and support activities also promoted the wellness of WIC staff, strengthening the position of staff as role models for participants. Finally, each clinic developed new, interactive group-education classes to promote prevention of overweight. Topics included cooking, gardening, and the importance of physical activity.

In addition to the activities within the local WIC clinics, *Fit WIC* staff in each clinic organized a task force of local community leaders, organizations, and individuals. Task force groups met monthly and worked toward identifying and implementing interventions to increase physical activity and improve the nutritional status of families in their communities.

Accomplishments
As a result of the intervention, staff members at *Fit WIC* sites reported being more physically active than their peers at control sites. Staff members also were significantly more likely to report:
- Feeling that their workplace supported their efforts to be physically active and make healthy food choices

[35] A community action model developed by the Prevention Institute of Berkeley, CA: http://www.preventioninstitute.org/index.html (accessed 3 June 03).

- Noticing a change in the types of foods served during staff meetings and snacks at their worksite
- Feeling that physical activity had become a higher priority at their worksite
- Feeling very comfortable encouraging WIC parents to do physical activities with their children
- Making positive changes in the way they talk with parents about weight issues

Staff members acknowledged the benefit of the new the trainings and reported positive impacts on their lives--both at work and at home.

Fit WIC participants rated the new classes highly. They were significantly more likely to report helping their child to watch less television in the past year, were significantly more likely to see WIC as a resource to help them be more physically active with their children, and were somewhat more likely to report helping their child to be more physically active in the past year.

The *Fit WIC* community task forces garnered a great deal of local support and were successful in:

- Advocating for a state bill to improve school nutrition programs
- Certifying a local farmers' market and implementing the WIC Farmers' Market nutrition program
- Securing more than $300,000 in grant funding to implement a local community garden project
- Training local medical providers, childcare providers, and parks and recreation staff in obesity prevention issues
- Participating in numerous community activities, festivals and events

At the end of the project, community agencies saw WIC as a leader in efforts to prevent childhood overweight. All community task force members surveyed reported interest in continuing their efforts to combat childhood overweight in their communities.

Implications

The California *Fit WIC* project demonstrated the power of working on many levels simultaneously to achieve a desired result. The project demonstrated that WIC staff members who model healthy behaviors feel more effective in their work. The project showed that WIC can be a powerful community leader in preventing childhood overweight. With an investment in time in the beginning, sustainable changes can be achieved in WIC programs as well as in the greater communities served by WIC.

THE INTER TRIBAL COUNCIL OF ARIZONA
A Clinic-Based Approach to Overweight Prevention in American Indian Children

The Inter Tribal Council of Arizona, Inc. (ITCA) served 9,000 WIC participants each month in 2002; 75% were Native American. Overweight is the most prevalent nutrition problem for the over 5,000 children enrolled in the ITCA WIC program, with over 40% of the children ages 2-4 identified as overweight or at risk for overweight.[36]

Goals

The goals of the ITCA *Fit WIC* project were to:

- ✓ Improve the staff's comfort level with providing nutrition and physical activity education to overweight participants
- ✓ Re-focus nutrition education sessions to emphasize the parent-child feeding relationship rather than the specific foods consumed
- ✓ Increase the opportunities for physical activity for preschoolers and introduce them to good nutrition

Methods

To help staff members feel more comfortable in discussing weight issues with WIC participants, staff members were supported in their efforts to develop and meet personal goals for nutrition and physical activity. Staff participated in regularly scheduled small group meetings in which they received supporting information, discussed obstacles, and set and tracked their goals.

Staff also received training and tools to help them teach participants about mealtime parenting strategies. A new care plan and questionnaire was developed to elicit information about feeding relationship issues from WIC caregivers. This information was then used in conducting the participant's education sessions.

Staff learned new skills to lead discussion groups on important nutrition topics with adult WIC participants. Guidelines to assist staff in conducting these facilitated discussion groups were developed. Additionally, new classes and activities for children were developed. These included involving children in reading stories about food, helping to prepare a healthy snack, and participating in enjoyable physical activities.

Accomplishments

Successes were realized in all project focus areas. Staff members who participated in project activities reported more positive changes in their own lifestyle, such as an increase in exercise, a change in diet, or watching less television, than did staff in the control group. They also demonstrated improvement in knowledge surrounding feeding-relationship issues. Staff were more likely to discuss physical activity with participants, and more likely to feel successful and competent in their counseling skills. Some staff members who facilitated group activities with caregivers or children felt unprepared for their role initially, but ultimately, were gratified by and enjoyed the experience and felt the sessions were effective. Parents and other caregivers who participated in group activities expressed an appreciation for this approach as a supplement to

[36] From the Pediatric Nutrition Surveillance System (PedNSS) of the Centers for Disease Control and Prevention, 2001, http://www.cdc.gov/nccdphp/dnpa/pednss.htm (accessed May 22, 2003).

individual counseling and welcomed the opportunity to interact with other WIC participants during their WIC visit.

The newly developed classes for children were particularly successful. The children participated enthusiastically in the story sessions, physical activities and in preparing and eating the snacks. Parents expressed appreciation for the opportunity to bring their child to a class in WIC and many asked if they could bring children of friends or relatives. Staff members especially enjoyed providing the classes to children and were most eager to implement this part of the program.

Implications

The Inter Tribal Council of Arizona *Fit WIC* project demonstrated that WIC could successfully implement obesity prevention programs in a Native American setting. Staff training resulted in more confident and competent staff and more satisfied and engaged participants, both children and adults. Encouraging and supporting WIC staff in their efforts to improve their own health habits was critical to improving their confidence and competence. Incorporation of physical activity as an educational element was a key element in promoting prevention of childhood overweight in this setting. Creative curricula and programmatic changes provided opportunities for WIC children to learn about nutrition and physical fitness.

THE STATE OF KENTUCKY
Beyond Nutrition Counseling: Reframing the Battle Against Obesity

The Kentucky WIC Program served 113,000 participants each month during 2002, about 70% of whom lived in rural areas. Most participants are non-Hispanic whites (85%), 11% are African Americans and 3% are Hispanics.

Goal
The goals of the Kentucky *Fit WIC* project team were to increase the awareness of WIC staff of:

- ✓ How WIC families perceive the problem of childhood overweight
- ✓ Challenges faced by WIC families, particularly in the area of parenting, as they try to prevent or manage overweight in their children
- ✓ The methods they themselves currently use with participants in education sessions about this problem

Methods
Qualitative research conducted in Kentucky WIC prior to *Fit WIC* suggested that the dialogue that occurs between WIC health professionals and parents during nutritional counseling sessions often fails to create an effective partnership in preventing or treating obesity. Communication barriers between WIC health professionals and participants included differing views on how to define obesity, what causes it, when it becomes a problem, the context in which it occurs, and what to do about it.

To address these barriers, the Kentucky project developed a documentary-style video entitled *"Beyond Nutrition Counseling: Reframing the Battle Against Obesity."* The video documented the daily challenges WIC families face in feeding their children. The video also exposed the gap between the reality of the WIC families' lives and the way in which they are provided with information in the WIC setting. The provocative content of the video was designed to make health professionals reflect on their own counseling techniques, on the current structure of WIC, and on how both might be changed to improve WIC's responsiveness to the problem of childhood obesity.

The intervention developed by the Kentucky *Fit WIC* team consisted of showing the video to a group of WIC health professionals and then immediately conducting a facilitated discussion with the group about the video's content. The video exposed barriers to effectively working on weight issues in WIC, and the discussion was designed to help the discussants generate ways to overcome those barriers in their work.

Accomplishments
An evaluation of the *Fit WIC* Kentucky intervention was conducted with 150 health care professionals attending the Kentucky Maternal and Child Health Conference in 2001. The video was well received: Viewers felt that the video powerfully illustrated the challenges of addressing weight issues in the WIC program. After viewing the video and participating in the facilitated group discussions, viewers were better able to identify barriers and solutions suggested in the video. The intervention (video plus facilitated group discussion) produced positive, measurable, short-term changes in perceptions of health care professionals about barriers and solutions to the problem of overweight in low-income preschool children.

Implications

Altering perceptions of WIC staff about the barriers that families experience in WIC and in their own lives to achieving healthy lifestyles is a first step in helping staff and participants find solutions to those barriers. Using the *Fit WIC* Kentucky videotape in conjunction with facilitated discussion provides an innovative approach to altering perceptions of health care professionals and can be used in other health-care settings as well.

THE STATE OF VERMONT

The Fit WIC Activity Kit: Tools for Overcoming Barriers to Active Physical Play

The Vermont WIC program served nearly 16,000 participants each month in 2002. Most Vermont WIC participants are white and most live in rural areas. Vermont's WIC food packages are home-delivered to participants weekly—a structure that differentiates Vermont from the other *Fit WIC* State agencies.

Goal

The primary goal of the Vermont *Fit WIC* project was to increase active physical playtime and decrease sedentary time for three- and four-year olds through a family-based intervention.

Methods

Vermont WIC parents told the *Fit WIC* project team that they valued physical activity, but were unsure about the types or amount that would be appropriate for their preschool-aged children. To respond to this uncertainty, the Vermont *Fit WIC* project team developed a "*Fit WIC* Activity Kit," using the concepts of social cognitive theory as a framework.[37] The Activity Kit contained written materials and other items specifically selected to overcome barriers to, and increase opportunities for, active physical play. To build behavioral capability and self-efficacy, the kit included an instructional notebook for parents that provided messages about the importance of physical activity, ideas for everyday activities, skill building games, a community directory of recreational facilities, and an activity calendar. To support the transition from knowledge to behavior, the kit also contained specific active play items: a beach ball; beanbags; and a cassette tape of children's songs. Maps and public transportation schedules were also provided.

The Activity Kit was distributed to all three- and four year old WIC participants, regardless of weight status, giving WIC staff a venue in which to interact positively about the topic of physical activity with all preschool-aged participants. This approach served as a preventive measure for normal weight children, and also facilitated the more sensitive task of addressing the topic of childhood obesity with parents of overweight children.

Accomplishments

The *Fit WIC* Activity Kit was very well received by the participating families and by the WIC staff at the *Fit WIC* sites. Ninety–five percent of WIC mothers reported using the Activity Kit, with 71% using it more than 4 times during the first 2 weeks. Three to five months later, at the time of follow-up, usage had dropped somewhat but was still frequent. Ninety-seven percent of mothers reported they would use the *Fit WIC* materials again in the future. Compared to a control group of Vermont WIC mothers who did not receive the *Fit WIC* intervention, mothers who used the *Fit WIC* Activity Kit reported an improvement in their child's active play skills, and in their own ability to teach play skills to their child.

Additionally, mothers responded that the Vermont *Fit WIC* Activity Kit helped them connect with their child, inspired new parent-child activity ideas, and reminded them of the importance of physical activity and play. Many mothers who had children of varying ages said the Activity Kit was adaptable to a wide range of family ages and interests.

[37] According to social cognitive theory, people learn not only through their own experiences but also by observing the actions of others and the results of those actions. This theory is often used as the framework for behavioral interventions.

Implications

Providing parents with physical activity resources and information in the kit format utilized by the Vermont project team is an effective approach to overweight prevention and health promotion within the current structure of the WIC program.

THE STATE OF VIRGINIA
An Anticipatory Guidance Model for Physical Activity and Nutrition

Virginia served nearly 130,000 WIC participants each month during 2002. The state's WIC participants are ethnically diverse, and come from a mix of urban, rural, and suburban settings.

Goals
The goals of the Virginia *Fit WIC* program were to:

- ✓ Incorporate the concept of anticipatory guidance[38] into the individual and group education sessions conducted by WIC nutritionists
- ✓ Foster parental role modeling of healthy behaviors to WIC children
- ✓ Encourage staff to present themselves as co-participants and role models in making nutrition and physical activity changes
- ✓ Use a multi-front, community effort to ensure that WIC participants receive consistent and reinforcing messages in their communities

Methods
The Virginia *Fit WIC* team developed six "key" health messages related to obesity prevention to promote in the WIC site and among partnering community agencies. The messages included: 1) encourage your child to get moving every day, 2) take time to eat together and talk with your family, 3) limit television viewing to one hour per day, 4) serve water at snacks, 5) offer your child 5 fruits and vegetables each day, and 6) play with your kids.

A variety of strategies were used to promote these key messages. First, individual education sessions were developed using new tabletop displays of low-literacy guidance cards. The guidance cards helped the WIC staff identify the needs and concerns of the WIC parent regarding the child's activity, nutrition and growth. In addition, the guidance cards helped to guide the participant in setting realistic personal goals related to the key message being discussed.

Second, group education sessions were designed around the six key messages. Participants engaged in discussion and goal setting at the WIC site, recorded healthy behaviors at home, and were reinforced for their positive efforts at their next WIC visit. Through this process, WIC parents were encouraged to become role models for their children, by improving their own eating and activity behaviors.

Third, to encourage staff to model healthy behaviors for participants and demonstrate that fitness is a goal for everyone, a staff fitness component was included. WIC staff members were encouraged to use the stairs rather than the elevator, to engage in fitness "competitions" and to bring brown-bag healthy lunches from home.

Fourth, educational materials promoting the six key messages were distributed to collaborating community health and service agencies, at meetings organized by *Fit WIC* staff. With the

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[38] In "anticipatory guidance" based education, parents are taught to anticipate their children's readiness to engage in different types of physical activity and mealtime behaviors and to guide their children in the development of related skills, thereby promoting healthy weight. See Story, Hold, and Sofka, eds. Bright Futures in Practice: Nutrition. Arlington, VA: National Center for Education in Maternal and Child Health, 2000.

partner agencies using the educational materials and promoting the same six messages to their clients, WIC clients received consistent and reinforced health messages.

Finally, in order to effectively provide community linkages, a list of community resources was prepared. WIC nutritionists used the list during education sessions to refer participants to helpful community agencies.

Accomplishments

Following implementation of the Virginia *Fit WIC* project in a WIC clinic in northern Virginia, WIC parents reported positive changes in some health-related behaviors: They more often engaged their children in active play; increased the amount of water (vs. sweetened beverages) they offered to their children; and were more confident about their ability to prevent overweight in their children. They were also more likely to report observing WIC staff in healthy behaviors than were parents in a control site.

Implications

The six key messages used in the Virginia *Fit WIC* project are simple messages that can readily be used to promote healthy weight in children. The efficacy of WIC staff members can be increased through training on obesity prevention and by increasing staff awareness of and comfort in their role-model relationship with participants. Staff must be encouraged and supported in their efforts to make healthy lifestyle choices for themselves. Community wide promotion of health messages by WIC can support efforts made at the WIC site to prevent childhood overweight.

The *Fit WIC* Response—Summary of Findings

The successes of *Fit WIC* indicate that WIC is positioned to play a significant role in efforts to prevent obesity in preschool children. What follows is a list of findings of the five *Fit WIC* project teams.

- Training, specialized educational materials, and increased time with participants allowed staff to effectively address the complex issue of childhood overweight with WIC parents.

- Education sessions that focused on healthy behaviors were more effective than those which focused on weight issues, since parents often fail to identify overweight in their own children.

- Parents were eager to receive information on healthy lifestyle choices, and especially wanted activities that involved the entire family in their efforts.

- WIC staff felt that training, appropriate educational materials, and more time with participants allowed them to build the rapport essential for addressing the sensitive issue of childhood overweight with WIC parents.

- Physical activity promotion is an important adjunct to the promotion of healthy eating.

- When provided with wellness opportunities in the work place, staff felt they could be more effective health educators. They could more easily provide positive modeling of healthy behaviors for WIC participants and better understand the obstacles faced by overweight participants.

- Community stakeholders recognized the role of WIC as a leader and partner in obesity prevention efforts.

The *Fit WIC* Response—Recommendations

The WIC program was created by Congress to provide low-income pregnant women, infants and children with nutrition education, nutritious supplemental foods, and referrals to other health, welfare and social service agencies during critical times of growth and development. The original purpose of WIC's nutrition education was to teach pregnant and postpartum participants (whose diets were inadequate) about the value of good nutrition. With the increasing prevalence of childhood overweight in the nation, especially in low-income-families, the need to adapt the nutrition education and services offered by WIC agencies has become clear. To help address the complex problem of obesity and its related health problems, the scope of nutrition education and training in WIC must be expanded and new teaching methods must be introduced.[39]

The following recommendations for institutional change in WIC were made by the *Fit WIC* project teams with the goal of making WIC more responsive and effective in the fight against the epidemic of childhood obesity. The recommendations are based on the experiences of the *Fit WIC* project teams and on the results of their qualitative research. These findings are limited in the extent to which they can be generalized to other contexts. However, the clinical and research experiences of the project teams, both individually and collectively, in the field of childhood overweight prevention are extensive. The project teams propose that if these recommendations were to be followed, the WIC program could contribute significantly to the nation's efforts to prevent childhood overweight. At the same time, the *Fit WIC* project teams recognize that further research needs to be done to evaluate the impact of interventions in the WIC clinic on physical activity levels, eating patterns and prevalence of overweight in WIC participants.

What Can Be Done Within the Current WIC Program Structure

1. ***Develop and encourage the use of participant-centered assessment and education procedures.***
   The purpose of participant assessment should be not only to determine risk and eligibility, but also to gather information for subsequent participant-centered nutrition education strategies. When WIC staff use participant-centered assessment techniques, they can tailor their nutrition education sessions to the needs and circumstances of participants. As a result, staff will be able to develop more effective counseling relationships with participants.

2. ***Adopt physical activity as an essential element of nutrition assessment and education.***
   Integrating the topic of physical activity into assessment procedures and education will enable local WIC programs to foster the spectrum of health behaviors necessary to prevent childhood overweight in their participants.

[39] United Sates General Accounting Office. Report to Congressional Committees, GAO-02-142. "Food Assistance: WIC Faces Challenges in Providing Nutrition Services", pages 10-12. December 2001. Available for downloading on http://www.gao.gov/.

3. ***Foster the potential of WIC staff members to be role models for healthy behaviors.*** Providing staff with a supportive work environment conducive to healthy eating and physical activity can empower staff members to make changes in their personal health habits. Staff who practice the healthy habits that they teach can become more confident and effective health educators. Within the current WIC structure and at no additional expense, a site can encourage group walks at lunch, activity breaks for WIC staff, and healthy snacks at group gatherings.

4. ***Change the focus of participant education from weight to healthy lifestyle.*** WIC parents and staff often differ in their perceptions of overweight and its causes, and parents often fail to recognize that their child is overweight. Therefore, discussions that focus specifically on weight are not likely to be productive. When the discussion centers on improving health behaviors within the entire family, rather than on the child's weight, nutrition education is likely to be more effective, and the entire family will benefit. This would also allow all children, regardless of current weight status, to be included in nutrition education protocols aimed at promoting healthy lifestyles. Educators should weave practical, how-to information and skill building activities into every aspect of WIC education.

WIC Program Enhancements Likely to Require Additional Funding Beyond the Current WIC Appropriation

1. ***Expand and update training for WIC staff.*** Training should include these specific areas and topics:
   - The causes, prevention and treatment of childhood overweight
   - Successful methods to open a discussion with parents about overweight
   - Successful intervention strategies, including dealing with resistant parents, helping families to identify barriers, and motivating participants
   - The barriers that WIC participants face in their everyday lives to achieving a healthy lifestyle for themselves and their families
   - Cultural issues related to the topic of childhood overweight
   - The differences in perception about overweight that exist between WIC staff and participants

2. ***Provide wellness opportunities at work for WIC staff***. This could take many forms, from exercise classes on site, to activity breaks, to the use of incentives for documented improvements in health-related behaviors. All staff, even the "front-line" support staff, should be included in wellness activities,[40] to maximize the benefit of these programs.

3. ***Establish partnerships with community agencies to develop comprehensive community-wide interventions.***

[40] For activities that involve a program cost, WIC Policy Memorandum #95-5 and OMB circulars A-87 and A-122 currently provide guidelines regarding allowable costs.

The scope of the problem of childhood obesity requires a community-wide effort. By working with community groups, WIC can garner support for sustainable community changes that will impact the health habits of residents. WIC staff will need additional time and training to develop the leadership skills necessary for forming community task forces or work groups. This effort will support the effectiveness of WIC's educational messages and programs in the broader community.

4. ***Increase staffing levels in WIC so that more staff time can be devoted to individual counseling and group education***.
   Current staffing levels do not allow adequate time for WIC staff to address the complex issue of childhood obesity. Although all clients are offered nutrition education, extended contact time is usually reserved for clients who meet high-risk criteria not related to obesity.

What Next? The Future of WIC's Role in Childhood Obesity Prevention

1. ***Fund additional research to evaluate the impact of obesity prevention initiatives in the WIC setting.***
   While the *Fit WIC* projects suggested a number of promising program opportunities, they were not designed to evaluate the effects of programmatic change on children's dietary habits, physical activity levels or weight status. Future efforts of WIC in the area of childhood obesity prevention should build on the success of *Fit WIC* and rigorously evaluate activities and materials developed through *Fit WIC* as well as the recommendations contained in this report.

2. ***Fund research to study ways to change the WIC food package.***
   The WIC food package should reflect current federal guidelines for a healthful diet using the Dietary Guidelines for Americans, the Food Guide Pyramid and the Food Guide Pyramid for Children. In September 2003, FNS contracted with the Institute of Medicine (IOM) to complete a thorough, independent review of the WIC food package; results and recommendations were released by the IOM in April, 2005 and FNS is currently reviewing the report recommendations.

By adopting these recommendations and continuing to pursue strategies to prevent overweight in the WIC setting, the WIC program can contribute significantly to the national effort to prevent childhood obesity.

Appendix A. References on Childhood Overweight

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Appendix B. Contributors to the *Fit WIC* Projects

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Appendix C. Useful Tools Produced by the Five *Fit WIC* Project Teams

1. **<u>*Fit WIC*: Programs to Prevent Childhood Overweight In Your Community. The Implementation Manual for the *Fit WIC* Childhood Overweight Prevention Project.</u> P.C. Crawford, M.C. Schaeffer and E. Herzog, Editors. United States Dept. of Agriculture, Food and Nutrition Service, May 2003.**

   The Implementation Manual was prepared by the *Fit WIC* project teams for use by WIC administrators, clinicians, and educators as a step-by-step guide for the implementation of the five *Fit WIC* programs. Background information, some of the results of the qualitative and quantitative research done as part of the project, steps to implement the programs, lessons learned, recommendations and useful resources are included. The Implementation Manual was distributed to all 50 WIC State agencies, along with the tools needed for implementation of the programs. The Manual and all forms and tools needed are available through the *Fit WIC* link on the *WIC Works* website: http://www.nal.usda.gov/wicworks/.

   Also, an overview of the 5-State *Fit WIC* Overweight Prevention Project can be found on The Center for Weight and Health's website, http://www.cnr.berkeley.edu/cwh/activities/fitwic.shtml.

2. Papers Published by the Five *Fit WIC* Project Teams

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3. Abstracts Published by the Five *Fit WIC* Project Teams

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