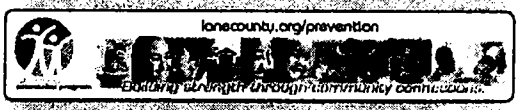
T-6.a.

Prevention Best Practices



Lane County Health & Human Services

How Do We Define 'Prevention'?

- The active process of creating conditions and/or attributes that promote the well being of people • Excludes Preconception Care
- Prevent problem behaviors from occurring or progressing

**We do this by *reducing* risk factors that contribute toward problem behavior while working to *increase* protective factors

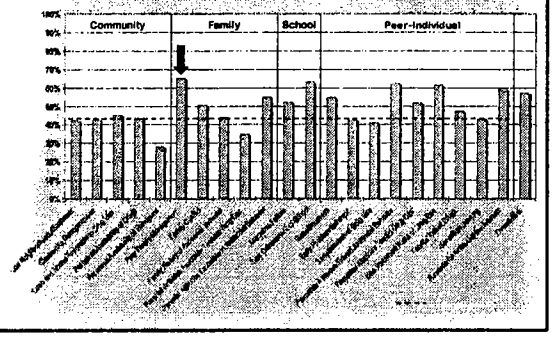
Premise of Prevention Science:

To prevent a problem before it happens, the factors that predict the problem must be changed

- Longitudinal studies have identified predictors of adolescent health risking behaviors – Risk & Protective Factors
- Predictive of 6 health risk behaviors
  - Substance Abuse
  - Delinquency
  - Teen Pregnancy
  - School Drop-out
  - Violence
  - Depression & Anxiety

Risk Factors for Adolescent Problem Behavior	Substance Abuse	Delinquency	Teen Pregnancy	School Drop-Out	Violence	Depression & Anxiety
Availability of Drugs	☑				☑	
Availability of Firearms		☑			☑	
Community Laws and Norms Favorable toward Drug Use, Firearms & Crime	☑	☑			☑	
Media Portrayals of Violence					☑	
Transitions and Mobility	☑	☑		☑		☑
Low Neighborhood Attachment and Community Disorganization	☑	☑			☑	
Extreme Economic and Social Deprivation	☑	☑	☑	☑	☑	
Family history of High Risk Behavior	☑	☑	☑	☑	☑	☑
Family Management problems	☑	☑	☑	☑	☑	☑
Family Conflict	☑	☑	☑	☑	☑	☑
Favorable Parental Attitudes and Involvement in the Behavior	☑	☑			☑	
Academic Failure in Elementary School	☑	☑	☑	☑	☑	☑
Lack of Commitment to School	☑	☑	☑	☑	☑	
Early and Persistent Anti-Social Behavior	☑	☑	☑	☑	☑	☑
Friends who Engage in Problem Behavior	☑	☑	☑	☑	☑	
Gang Involvement	☑	☑			☑	
Alienation and Rebelliousness	☑	☑		☑		
Favorable Attitudes toward the Problem Behavior	☑	☑	☑	☑		
Early Initiation of the Problem Behavior	☑	☑	☑	☑	☑	
Constitutional Factors	☑	☑			☑	☑

Example: The Community of Baskerville



Priority Drives Evidence-based Program Selection

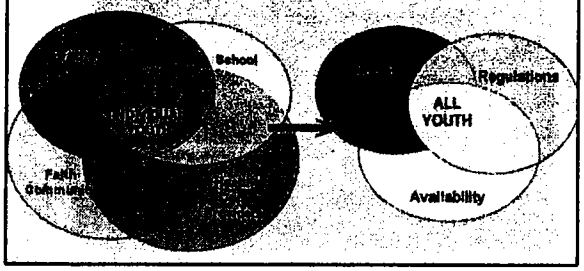
Factor Addressed	Program Strategy	Developmental Period
Family Management Problems	Parental/Infancy Programs	prenatal-3
	Early Childhood Education	3-6
	Parent Training	prenatal-14
	Family Therapy	6-14

Strategies Targeting INDIVIDUALIZED Environments

Socialize, Instruct, Guide, Counsel

Strategies Targeting the SHARED Environment

Support, Thwart

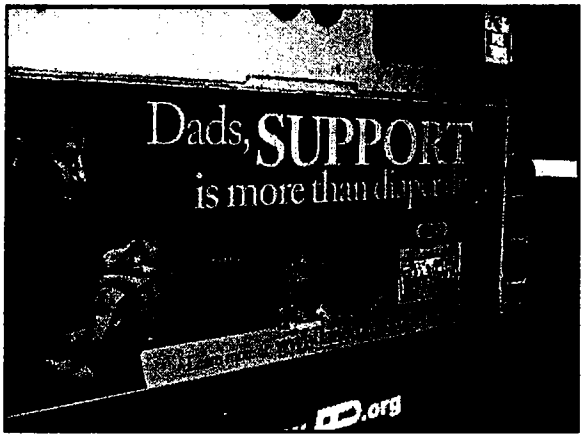


HHS Prevention Efforts: Individualized Environments

- Identification & referral
  - Problem gambling
  - Suicide
- School-based prevention
  - Reconnecting Youth
  - RESPONSE
  - Problem gambling integration with curricula
- Family support
  - Evidence-based parenting classes
  - WIC services

HHS Prevention Efforts: Shared Environments

- Community-based prevention coalitions
  - Communities that Care
- Norms, Policies & Law
  - Social Host Ordinance
  - Tobacco, nutrition promotion, & gambling
- Media



Program Information

Parenting programs

- Urban
  - Bethel: Strengthening Families, 10-14, English & Spanish
  - Springfield: Make Parenting a Pleasure, English & Spanish, Strengthening Families, 10-14, Spanish
  - 4J School District: 'Parents Who Care' project for Latino parents
- Rural
  - McKenzie: Strengthening Families, 10-14
  - Oakridge: Strengthening Families, 10-14
  - Cottage Grove: Make Parenting a Pleasure, English & Spanish and class for Teen Parents

Program Information con't

Parenting programs

- Over 300 parents & youth served 2008-2009
- 68-100% of parent participants reported increase in parenting skills, knowledge and improved relationship with children

Program Information con't

Reconnecting Youth

- 5 Schools 2008-09 school year
- 79 students participated
- 77% increased or stayed same in math grade
- 78% increased or stayed same in Language Arts
- 44% decrease in AOD use on weekends
- 28% increase to use self praise to build esteem in making decisions and personal commitments
- 22% in ability to use refusal skills

Program Information con't

Problem Gambling Prevention

- Over 300 middle, high school & college participants served in 2008-09 school year
  - 96% of presentation participants reported an increase in their knowledge of problem gambling as a result of the presentation
- lanecounty.org/prevention/gambling received a total of 29,701 visits during the 2009 fiscal year (averaging 2,475 distinct visits per month)

Program Information con't

Community

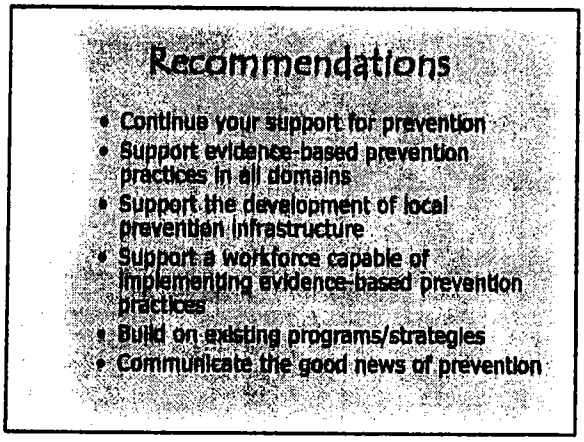
- Mobilization, training, data collection, & support for prevention best practices
  - McKenzie Community Coalition
  - Oakridge/Westfir Together
  - South Lane Coalition
  - Siuslaw Area Partnership
  - Healthy Babies/Healthy Communities
  - Lane County Problem Gambling Advisory Committee

Funding

- Alcohol & Drug Prevention
  - $165,000/year (state funds)
  - $41,600/year (local liquor tax)
- Problem Gambling Prevention
  - $98,000/year (state funds)
- Suicide Prevention
  - $76,500 FY 09-10, (grant)
  - $14,500/year, 09-12 (grant)
- Reconnecting Youth
  - $100,000 09-10, (state)
- Healthy Babies/Healthy Communities
  - $2,500 (grant)

HHS Prevention Program

- C.A. Baskerville, Program Supervisor & County Prevention Coordinator
- Karen Gaffney, Assistant Director
- Lisa Halvorsen, Program Extra Help
- Julie Hynes, Prevention Specialist
- Monica Langley, Program Assistant
- Sandy Moses, Prevention Specialist
- Rob Rockstroh, Director
- Mo Young, Prevention Specialist


Recommendations
• Continue your support for prevention
• Support evidence-based prevention practices in all domains
• Support the development of local prevention infrastructure
• Support a workforce capable of implementing evidence-based prevention practices
• Build on existing programs/strategies
• Communicate the good news of prevention

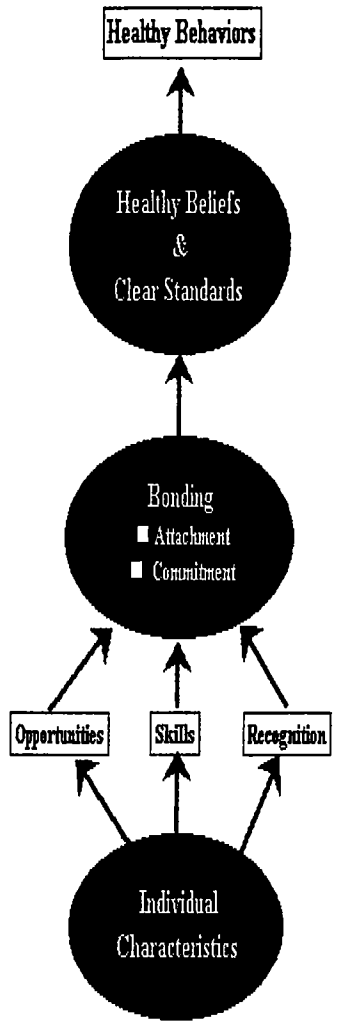
Adolescent Problem Behavior Risk Factors

Domains	Risk Factors	Adolescent Problem Behaviors					
	Risk factors are characteristics of individuals, their families, schools, and community environments that are associated with increases in alcohol and other drug use, delinquency, teen pregnancy, school dropout, and violence. The following factors increase the likelihood that children and young people may develop such problem behaviors.	Substance Abuse	Depression and Anxiety	Delinquency	Teen Pregnancy	School Dropout	Violence
Community	Availability of alcohol/other drugs	✔					✔
	Availability of firearms			✔			✔
	Community laws and norms favorable to drug use, firearms, and crime	✔		✔			✔
	Transitions and mobility	✔	✔	✔		✔	
	Low neighborhood attachment and community disorganization	✔		✔			✔
	Media portrayals of violence						✔
	Extreme economic deprivation	✔		✔	✔	✔	✔
Family	Family history of the problem behavior	✔	✔	✔	✔	✔	✔
	Family management problems	✔	✔	✔	✔	✔	✔
	Family conflict	✔	✔	✔	✔	✔	✔
	Favorable parental attitudes and involvement in problem behaviors	✔		✔			✔
School	Academic failure beginning in late elementary school	✔		✔	✔	✔	✔
	Lack of commitment to school	✔		✔	✔	✔	✔
Individual / Peer	Early and persistent antisocial behavior	✔	✔	✔	✔	✔	✔
	Rebelliousness	✔		✔		✔	
	Friends who engage in the problem behavior	✔		✔	✔	✔	✔
	Favorable attitudes toward the problem behavior (including low perceived-risk of harm)	✔		✔	✔	✔	
	Early initiation of the problem behavior	✔		✔	✔	✔	✔
	Gang involvement	✔		✔			✔
	Constitutional factors	✔	✔	✔			✔

Risk and Protective Factor Framework

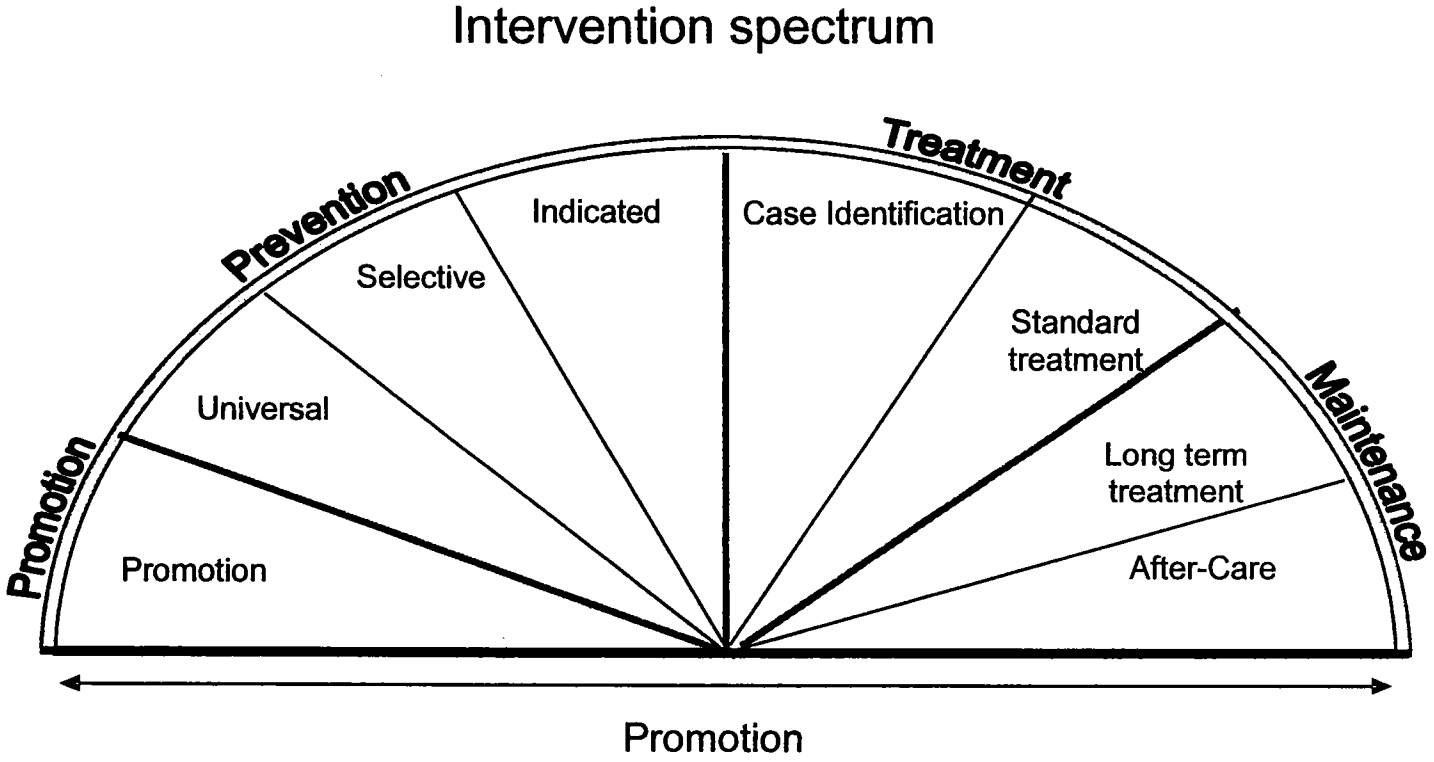
The following graph supports a public health model using a theoretical framework of risk reduction and protection enhancement. Developments in prevention and intervention science have shown that there are characteristics of individuals and their families and their environment (i.e., community neighborhood, school) that affect the likelihood of negative outcomes including substance abuse, delinquency, violence, and school dropout. Other characteristics serve to protect or provide a buffer to moderate the influence of the negative characteristics. These characteristics are identified as risk factors and protective factors. (Arthur, Hawkins, et al., 1994, Hawkins, Catalano, Miller, 1992).

Domains	**Risk Factors**	**Adolescent Problem Behaviors**						**Protective Factors**	**Social Development Model (SDM)**
	Risk factors are characteristics of individuals, their family, school, and community environments that are associated with increases in alcohol and other drug use, delinquency, teen pregnancy, school dropout, and violence. The following factors have been identified that increase the likelihood that children and youth may develop such problem behaviors.	Substance Abuse	Depression & Anxiety	Delinquency	Teen Pregnancy	School Drop-Out	Violence	*Factors associated with reduced potential for drug use are called protective factors. Protective factors encompass family, social, psychological, and behavioral characteristics that can provide a buffer for the children and youth. These factors mitigate the effects of risk factors that are present in the child or youth's environment.*	*SDM is a synthesis of three existing theories of criminology (control, social learning, and differential association). It incorporates the results of research on risk and protective factors for problem behaviors and a developmental perspective of age, specific problem, and prosocial behavior. It is based on the assumption that children learn behaviors.*
Community	Availability of alcohol/other drugs	✔					✔	Opportunities for prosocial involvement in community Recognition for prosocial involvement	
	Availability of Firearms			✔			✔		
	Community laws and norms favorable to drug use, firearms, and crime	✔		✔			✔		
	Transitions and mobility	✔	✔	✔		✔			
	Low neighborhood attachment and community disorganization	✔		✔			✔		
	Media Portrayals of Violence						✔		
	Extreme economic deprivation	✔		✔	✔	✔	✔		
Family	Family history of the problem behavior	✔	✔	✔	✔	✔	✔	Bonding to family with healthy beliefs and clear standards. Attachment to family with healthy beliefs & clear standards Opportunities for prosocial involvement Recognition for prosocial involvement	
	Family management problems	✔	✔	✔	✔	✔	✔		
	Family conflict	✔	✔	✔	✔	✔	✔		
	Favorable parental attitudes and involvement in problem behaviors	✔		✔			✔		
School	Academic failure beginning in late elementary school	✔	✔	✔	✔	✔	✔	Bonding and Attachment to School Opportunities for prosocial involvement Recognition for prosocial involvement	
	Lack of commitment to school	✔		✔	✔	✔	✔		
Individual / Peer	Early and persistent antisocial behavior	✔	✔	✔	✔	✔	✔	Bonding to peers with healthy beliefs and clear standards. Attachment to peers with healthy beliefs & clear standards Opportunities for prosocial involvement Increase in Social skills	
	Rebelliousness	✔		✔		✔			
	Friends who engage in the problem behavior	✔		✔	✔	✔	✔		
	Favorable attitudes toward the problem behavior (including low perceived risk of harm)	✔		✔	✔	✔			
	Early initiation of the problem behavior	✔		✔	✔	✔	✔		
	Gang Involvement	✔		✔			✔		
	Constitutional factors	✔	✔	✔			✔		



Institute of Medicine Model

The Institute of Medicine's Preventing Mental, Emotional and Behavioral Disorders Among Young People describes prevention services in four categories.



Source: Preventing Mental, Emotional, and Behavioral Disorders Among Young People, 2009

Promotion and universal prevention services target the general public and are intended to enhance the public's ability to achieve developmentally appropriate tasks and a sense of positive well being. Selective interventions are targeted at a population subgroup whose risk of developing problems with substance abuse and mental disorders is significantly higher than the average population. Indicated interventions target high-risk individuals who have minimal but detectable signs or symptoms that foreshadow mental, emotional and substance abuser problems.

REPORT BRIEF • SEPTEMBER 2009

Local Government Actions to Prevent Childhood Obesity

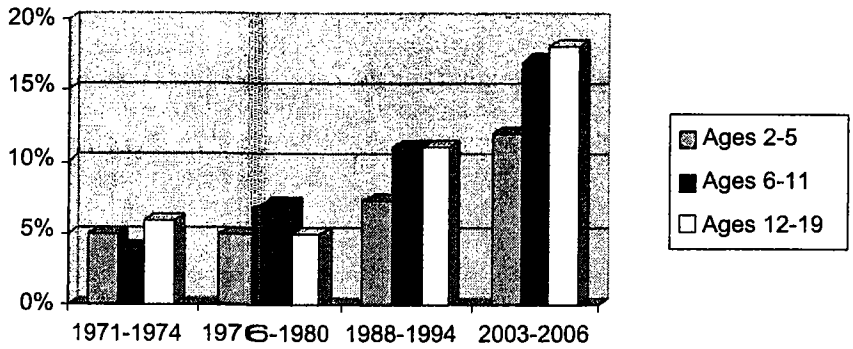
In the United States, 16.3 percent of children and adolescents between the ages of two and 19 are obese. This epidemic has exploded over just three decades. Among children two to five years old, obesity prevalence increased from 5 percent to 12.4 percent; among children six to 11, it increased from 6.5 percent to 17 percent; and among adolescents 12 to 19 years old, it increased from 5 percent to 17.6 percent (see Figure 1).

The prevalence of obesity is so high that it may reduce the life expectancy of today's generation of children and diminish the overall quality of their lives. Obese children and adolescents are more likely than their lower-weight counterparts to develop hypertension, high cholesterol, and type 2 diabetes when they are young, and they are more likely to be obese as adults.

In 2008, the Institute of Medicine (IOM) Committee on Childhood Obesity Prevention Actions for Local Governments was convened to identify promising ways to address this problem on what may well be the epidemic's frontlines. The good news is that there are numerous actions that show potential for use by local governments. Of course, parents and other adult caregivers play a fundamental role in teaching children about healthy behaviors, in modeling those behaviors, and in making decisions for children when needed. But those positive efforts can be undermined by local environments that are poorly suited to supporting healthy behaviors—and may even promote unhealthy behaviors. For example, many communities lack ready sources of healthy food choices, such as supermarkets and grocery stores. Or they may not provide safe places for children to walk or play. In such communities, even the most motivated child or adolescent may find it difficult to act in healthy ways.

. . . local governments are ideally positioned to promote behaviors that will help children and adolescents reach and maintain healthy weights.

FIGURE 1: PREVALENCE OF OBESITY AMONG CHILDREN, 1971-2006



SOURCE: Centers for Disease Control and Prevention, National Health and Nutrition Examination Survey

INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

For more information visit www.iom.edu/obesitylocalgov.

Advising the Nation. Improving Health.

ACTING LOCALLY

Local governments are experienced in promoting children's health, as they historically have implemented policies intended to ensure, among other things, that children are immunized or they wear helmets when riding a bike. In the same way, local governments—with jurisdiction over many aspects of land use, food marketing, community planning, transportation, health and nutrition programs, and other community issues—are ideally positioned to promote behaviors that will help children and adolescents reach and maintain healthy weights. Promoting children's healthy eating and activity will require the involvement of an array of government officials, including mayors and commissioners or other leaders of counties, cities, or townships. Many departments, including those responsible for public health, public works, transportation, parks and recreation, public safety, planning, economic development, and housing will also need to be involved.

In addition, community involvement and evaluation are vital to childhood obesity prevention efforts. It is critical for local government officials and staff to involve constituents in determining local needs and identifying top priorities. Engaging community members in the process will help identify local assets, focus resources, and improve implementation plans. And, as obesity prevention actions are implemented, they need to be evaluated in order to provide important information on what does and does not work.

CREATING EQUAL OPPORTUNITIES FOR HEALTHY WEIGHT

In adopting policies and practices tailored to raising healthy children, local communities have an added opportunity to achieve health equity—put simply, the fair distribution of health resources among all population groups, regardless of their social standing. Poverty, poor housing, racial segregation, lack of access to quality education, and limited access to health care contribute to the uneven well-being of some groups of people, especially those living in historically disadvantaged communities. If local officials observe, for example, that many children in certain neighborhoods do not engage in sufficient physical activity or consume too few fruits and vegetables, they should examine the equity of access to recreation opportunities and grocery stores in those areas. These officials may then find themselves uniquely positioned to catalyze, support, or lead collaborations in the community and engage diverse constituent groups in efforts to improve the places where children live and play.

RECOMMENDING PROMISING ACTIONS

Evidence on the best childhood obesity prevention practices is still accumulating and is limited in many important topic areas. However, local government officials want to act now on the best available information. The IOM committee reviewed published literature, examined reports from organizations that work with local governments, heard presentations from experts on the role of local government in obesity prevention, and explored a variety of tool kits that have been developed for communities and their leaders.

In arriving at its recommendations, the committee looked for actions that are within the jurisdiction of local governments; likely to directly affect children; based on the experience of local governments or sources that work with local governments; take place outside of the school day; and have the potential to promote healthy eating and adequate physical activity. Healthy eating is characterized as consuming the types and amounts of foods, nutrients, and calories recommended by the Dietary Guidelines for Americans, and adequate physical activity for children constitutes a total of 60 minutes per day.

The committee recommends nine healthy eating strategies and six physical activity strategies for local government officials to consider in planning, implementing, and refining childhood obesity prevention efforts. The committee also recommends a number of specific action steps for each strategy and highlights 12 steps overall judged to have the most promise.

ACTIONS FOR HEALTHY EATING

GOAL 1: IMPROVE ACCESS TO AND CONSUMPTION OF HEALTHY, SAFE, AND AFFORDABLE FOODS

Strategy 1: Retail Outlets

Increase community access to healthy foods through supermarkets, grocery stores, and convenience/corner stores.

Action Steps

- Create incentive programs to attract supermarkets and grocery stores to underserved neighborhoods (e.g., tax credits, grant and loan programs, small business/economic development programs, and other economic incentives).
- Realign bus routes or provide other transportation, such as mobile community vans or shuttles to ensure that residents can access supermarkets or grocery stores easily and affordably through public transportation.
- Create incentive programs to enable current small food store owners in underserved areas to carry healthier, affordable food items (e.g., grants or loans to purchase refrigeration equipment to store fruits, vegetables, and fat-free/low-fat dairy; free publicity; a city awards program; or linkages to wholesale distributors).
- Use zoning regulations to enable healthy food providers to locate in underserved neighborhoods (e.g., "as of right" and "conditional use permits").
- Enhance accessibility to grocery stores through public safety efforts, such as better outdoor lighting and police patrolling.

Strategy 2: Restaurants

Improve the availability and identification of healthful foods in restaurants.

Action Steps

- Require menu labeling in chain restaurants to provide consumers with calorie information on in-store menus and menu boards.
- Encourage non-chain restaurants to provide consumers with calorie information on in-store menus and menu boards.
- Offer incentives (e.g., recognition or endorsement) for restaurants that promote healthier options (for example, by increasing the offerings of healthier foods, serving age-appropriate portion sizes, or making the default standard options healthy – i.e., apples or carrots instead of French fries, and non-fat milk instead of soda in "kids' meals").

Strategy 3: Community Food Access

Promote efforts to provide fruits and vegetables in a variety of settings, such as farmers' markets, farm stands, mobile markets, community gardens, and youth-focused gardens.

Action Steps

- Encourage farmers markets to accept Special Supplemental Nutrition Program for Women, Infants and Children (WIC) food package vouchers and WIC Farmers Market Nutrition Program coupons; and encourage and make it possible for farmers markets to accept Supplemental Nutrition Assistance Program (or SNAP, formerly the Food Stamp Program) and WIC Program Electronic Benefit Transfer (EBT) cards by allocating funding for equipment that uses electronic methods of payment.
- Improve funding for outreach, education, and transportation to encourage use of farmers markets and farm stands by residents of lower-income neighborhoods, and by WIC and SNAP recipients.

= Most Promising Steps

- Introduce or modify land use policies/zoning regulations to promote, expand, and protect potential sites for community gardens and farmers' markets, such as vacant city-owned land or unused parking lots.
- Develop community-based group activities (e.g., community kitchens) that link procurement of affordable, healthy food with improving skills in purchasing and preparing food.

Strategy 4: Public Programs and Worksites

Ensure that publicly-run entities such as after-school programs, child-care facilities, recreation centers, and local government worksites implement policies and practices to promote healthy foods and beverages and reduce or eliminate the availability of calorie-dense, nutrient-poor foods.

Action Steps

- Mandate and implement strong nutrition standards for foods and beverages available in government-run or regulated after-school programs, recreation centers, parks, and child care facilities (which includes limiting access to calorie-dense, nutrient-poor foods).
- Ensure that local government agencies that operate cafeterias and vending options have strong nutrition standards in place wherever foods and beverages are sold or available.
- Provide incentives or subsidies to government run or regulated programs and localities that provide healthy foods at competitive prices and limit calorie-dense, nutrient poor foods (e.g., after-school programs that provide fruits or vegetables every day, and eliminate calorie-dense, nutrient poor foods in vending machines or as part of the program).

Strategy 5: Government Nutrition Programs

Increase participation in federal, state, and local government nutrition assistance programs (e.g., WIC, school breakfast and lunch, the Child and Adult Care Food Program [CACFP], the Afterschool Snacks Program, the Summer Food Service Program, SNAP).

Action Steps

- Put policies in place that require government-run and -regulated agencies responsible for administering nutrition assistance programs to collaborate across agencies and programs to increase enrollment and participation in these programs (i.e., WIC agencies should ensure that those who are eligible are also participating in SNAP, etc.)
- Ensure that child care and after-school program licensing agencies encourage utilization of the nutrition assistance programs and increase nutrition program enrollment (CACFP, Afterschool Snack Program, and the Summer Food Service Program).

Strategy 6: Breastfeeding

Encourage breastfeeding and promote breastfeeding-friendly communities.

Action Steps

- Adopt practices in city and county hospitals that are consistent with the Baby-Friendly Hospital Initiative USA (United Nations Children's Fund/World Health Organization). This initiative promotes, protects, and supports breastfeeding through ten steps to successful breastfeeding for hospitals.
- Permit breastfeeding in public places and rescind any laws or regulations that discourage or do not allow breastfeeding in public places and encourage the creation of lactation rooms in public places.
- Develop incentive programs to encourage government agencies to ensure breastfeeding-friendly worksites, including providing lactation rooms.
- Allocate funding to WIC clinics to acquire breast pumps to loan to participants.

Strategy 7: Drinking Water Access

Increase access to free, safe drinking water in public places to encourage water consumption instead of sugar-sweetened beverages.

Action Steps

- Require that plain water be available in local government-operated and administered outdoor areas and other public places and facilities.
- Adopt building codes to require access to and maintenance of fresh drinking water fountains (e.g., public restroom codes).

GOAL 2: REDUCE ACCESS TO AND CONSUMPTION OF CALORIE-DENSE, NUTRIENT-POOR FOODS

Strategy 8: Policies and Ordinances

Implement fiscal policies and local ordinances to discourage the consumption of calorie-dense, nutrient-poor foods and beverages (e.g., taxes, incentives, land use and zoning regulations).

Action Steps

- Implement a tax strategy to discourage consumption of foods and beverages that have minimal nutritional value, such as sugar-sweetened beverages.
- Adopt land use and zoning policies that restrict fast food establishments near school grounds and public playgrounds.
- Implement local ordinances to restrict mobile vending of calorie-dense, nutrient-poor foods near schools and public playgrounds.
- Implement zoning designed to limit the density of fast food establishments in residential communities.
- Eliminate advertising and marketing of calorie-dense, nutrient-poor foods and beverages near school grounds and public places frequently visited by youths.
- Create incentive and recognition programs to encourage grocery stores and convenience stores to reduce point-of-sale marketing of calorie-dense, nutrient-poor foods (i.e., promote "candy-free" check out aisles and spaces).

GOAL 3: RAISE AWARENESS ABOUT THE IMPORTANCE OF HEALTHY EATING TO PREVENT CHILDHOOD OBESITY

Strategy 9: Media and Social Marketing

Promote media and social marketing campaigns on healthy eating and childhood obesity prevention.

Action Steps

- Develop media campaigns, utilizing multiple channels (print, radio, internet, television, social networking, and other promotional materials) to promote healthy eating (and active living) using consistent messages.
- Design a media campaign that establishes community access to healthy foods as a health equity issue and reframes obesity as a consequence of environmental inequities and not just the result of poor personal choices.
- Develop counter-advertising media approaches against unhealthy products to reach youth as has been used in the tobacco and alcohol prevention fields.

ACTIONS FOR INCREASING PHYSICAL ACTIVITY

GOAL 1: ENCOURAGE PHYSICAL ACTIVITY

Strategy 1: Built Environment

Encourage walking and bicycling for transportation and recreation through improvements in the built environment.

Action Steps

- Adopt a pedestrian and bicycle master plan to develop a long-term vision for walking and bicycling in the community and guide implementation.
- Plan, build, and maintain a network of sidewalks and street crossings that creates a safe and comfortable walking environment and that connects to schools, parks, and other destinations.
- Plan, build, and retrofit streets so as to reduce vehicle speeds, accommodate bicyclists, and improve the walking environment.
- Plan, build, and maintain a well-connected network of off-street trails and paths for pedestrians and bicyclists.
- Increase destinations within walking and bicycling distance.
- Collaborate with school districts and developers to build new schools in locations central to residential areas and away from heavily trafficked roads.

Strategy 2: Programs for Walking and Biking

Promote programs that support walking and bicycling for transportation and recreation.

Action Steps

- Adopt community policing strategies that improve safety and security of streets, especially in higher crime neighborhoods. *
- Collaborate with schools to develop and implement a Safe Routes to School program to increase the number of children safely walking and bicycling to schools.
- Improve access to bicycles, helmets, and related equipment for lower-income families, for example, through subsidies or repair programs.
- Promote increased transit use through reduced fares for children, families, and students, and improved service to schools, parks, recreation centers, and other family destinations.
- Implement a traffic enforcement program to improve safety for pedestrians and bicyclists.

Strategy 3: Recreational Physical Activity

Promote other forms of recreational physical activity.

Action Steps

- Build and maintain parks and playgrounds that are safe and attractive for playing and in close proximity to residential areas.
- Adopt community policing strategies that improve safety and security for park use, especially in higher crime neighborhoods.*
- Improve access to public and private recreational facilities in communities with limited recreational options through reduced costs, increased operating hours, and development of culturally appropriate activities.

* These two action steps on community policing were combined for the most promising 12 action steps list.

- Create after-school activity programs, e.g., dance classes, city-sponsored sports, supervised play, and other publicly or privately supported active recreation.
- Collaborate with school districts and other organizations to establish joint use of facilities agreements allowing playing fields, playgrounds, and recreation centers to be used by community residents when schools are closed; if necessary, adopt regulatory and legislative policies to address liability issues that might block implementation.
- Create and promote youth athletic leagues and increase access to fields, with special emphasis on income and gender equity.
- Build and provide incentives to build recreation centers in neighborhoods.

Strategy 4: Routine Physical Activity

Promote policies that build physical activity into daily routines.

Action Steps

- Institute regulatory policies mandating minimum play space, physical equipment, and duration of play in preschool, after-school, and child-care programs.
- Develop worksite policies and practices that build physical activity into routines (for example, exercise breaks at a certain time of day and in meetings, or walking meetings). Target worksites with high percentages of youth employees and government-run and -regulated worksites.
- Create incentives for remote parking and drop-off zones and/or disincentives for nearby parking and drop-off zones at schools, public facilities, shopping malls, and other destinations.
- Improve stairway access and appeal, especially in places frequented by children.

GOAL 2: DECREASE SEDENTARY BEHAVIOR

Strategy 5: Screen Time

Promote policies that reduce sedentary screen time.

Action Steps

- Adopt regulatory policies limiting screen time in preschool and after-school programs.

GOAL 3: RAISE AWARENESS OF THE IMPORTANCE OF INCREASING PHYSICAL ACTIVITY

Strategy 6: Media and Social Marketing

Develop a social marketing program that emphasizes the multiple benefits for children and families of sustained physical activity.

Action Steps

- Develop media campaigns, utilizing multiple channels (print, radio, internet, television, other promotional materials) to promote physical activity using consistent messages.
- Design a media campaign that establishes physical activity as a health equity issue and reframes obesity as a consequence of environmental inequities and not just the result of poor personal choices.
- Develop counter-advertising media approaches against sedentary activity to reach youth as has been done in the tobacco and alcohol prevention fields.

FOR MORE INFORMATION . . .

Copies of *Local Government Actions to Prevent Childhood Obesity* are available from the National Academies Press, 500 Fifth Street, N.W., Lockbox 285, Washington, DC 20055; (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area); Internet, www.nap.edu. The full text of this report is available at www.nap.edu.

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STUDY STAFF

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Executive Summary

Tobacco* use is the single most preventable cause of death and disease in the United States. People begin using tobacco in early adolescence; almost all first use occurs before age 18. An estimated 45 million American adults currently smoke cigarettes. Annually, cigarette smoking causes approximately 438,000 deaths. For every person who dies from tobacco use, another 20 suffer with at least one serious tobacco-related illness. Half of all long-term smokers die prematurely from smoking-related causes. In 2004, this addiction costs the nation more than $96 billion per year in direct medical expenses as well as more than $97 billion annually in lost productivity. Furthermore, exposure to secondhand smoke causes premature death and disease in nonsmokers. In 2005, the Society of Actuaries estimated that the effects of exposure to secondhand smoke cost the United States $10 billion per year.

Nearly 50 years have elapsed since the first Surgeon General's Advisory Committee concluded: "Cigarette smoking is a health hazard of sufficient importance in the United States to warrant appropriate remedial action." There now is a robust evidence base about effective interventions. Yet, despite this progress, the United States has not yet achieved the goal of making tobacco use a rare behavior. A 2007 Institute of Medicine (IOM) report presented a blueprint for action to "reduce smoking so substantially that it is no longer a public health problem for our nation." The two-pronged strategy for achieving this goal includes not only strengthening and fully implementing currently proven tobacco control measures, but also changing the regulatory landscape to permit policy innovations. Foremost among the IOM recommendations is that each state should fund a comprehensive tobacco control program at the level recommended by the Centers for Disease Control and Prevention (CDC).

We know how to end the epidemic. Evidence-based, statewide tobacco control programs that are comprehensive, sustained, and accountable have been shown to reduce smoking rates, tobacco-related deaths, and diseases caused by smoking. Recommendations that define a comprehensive statewide tobacco control intervention have been provided in the Surgeon General's reports *Reducing Tobacco Use* (2000) and *The Health Consequences of Involuntary Exposure to Tobacco Smoke* (2006), the Task Force for Community Preventive Services' *Guide to Community Preventive Services* (2005), IOM's *Ending the Tobacco Problem: A Blueprint for the Nation* (2007), the Public Health Service's Clinical Practice Guideline *Treating Tobacco Use and Dependence* (2000), and the National Institutes of Health's State-of-the-Science Conference Statement *Tobacco Use: Prevention, Cessation, and Control* (2006) and President's Cancer Panel Annual Report *Promoting Health Lifestyles: Policy, Program and Personal Recommendations for Reducing Cancer Risk* (2007).

A comprehensive statewide tobacco control program is a coordinated effort to establish smoke-free policies and social norms, to promote and assist tobacco users to quit, and to prevent initiation of tobacco use. This comprehensive approach combines educational, clinical, regulatory, economic, and social strategies. Research has documented the effectiveness of laws and policies in a comprehensive tobacco control effort to protect the public from secondhand smoke exposure, promote cessation, and prevent initiation, including increasing the unit price of tobacco products and implementing smoking bans through policies, regulations, and laws; providing insurance coverage of tobacco use treatment; and limiting minors' access to tobacco products. Additionally, research has shown greater effectiveness with multi-component intervention efforts that integrate the implementation of programmatic and policy interventions to influence social norms, systems, and networks.

* In this document, the term "tobacco" refers to the use of manufactured, commercial tobacco products including, but not limited to, cigarettes, smokeless tobacco, and cigars.

Executive Summary

This document updates *Best Practices for Comprehensive Tobacco Control Programs—August 1999.* This updated edition describes an integrated programmatic structure for implementing interventions proven to be effective and provides the recommended level of state investment to reach these goals and reduce tobacco use in each state. It is important to recognize that these individual components must work together to produce the synergistic effects of a comprehensive tobacco control program. Based on the evidence of effectiveness documented in scientific literature, the most effective population-based approaches have been defined within the following overarching components:

I. State and Community Interventions
State and community interventions include supporting and implementing programs and policies to influence societal organizations, systems, and networks that encourage and support individuals to make behavior choices consistent with tobacco-free norms. The social norm change model presumes that durable change occurs through shifts in the social environment, initially or ultimately, at the grassroots level across local communities. State and community interventions unite a range of integrated programmatic activities, including local and statewide policies and programs, chronic disease and tobacco-related disparity elimination initiatives, and interventions specifically aimed at influencing youth.

II. Health Communication Interventions
An effective state health communication intervention should deliver strategic, culturally appropriate, and high-impact messages in sustained and adequately funded campaigns integrated into the overall state tobacco program effort. Traditional health communication interventions and counter-marketing strategies employ a wide range of efforts, including paid television, radio, billboard, print, and web-based advertising at the state and local levels; media advocacy through public relations efforts, such as press releases, local events, media literacy, and health promotion activities; and efforts to reduce or replace tobacco industry sponsorship and promotions. Innovations in health communication interventions include more focused targeting of specific audiences as well as fostering message development and distribution by the target audience through appropriate channels.

III. Cessation Interventions
Interventions to increase cessation encompass a broad array of policy, system, and population-based measures. System-based initiatives should ensure that all patients seen in the health care system are screened for tobacco use, receive brief interventions to help them quit, and are offered more intensive counseling services and FDA-approved cessation medications. Cessation quitlines are effective and have the potential to reach large numbers of tobacco users. Quitlines also serve as a resource for busy health care providers, who provide the brief intervention and discuss medication options and then link tobacco users to quitline cessation services for more intensive counseling. Optimally, quitline counseling should be made available to all tobacco users willing to access the service.

IV. Surveillance and Evaluation
State surveillance is the process of monitoring tobacco-related attitudes, behaviors, and health outcomes at regular intervals. Statewide surveillance should monitor the achievement of overall program goals. Program evaluation is used to assess the implementation and outcomes of a program, increase efficiency and impact over time, and demonstrate accountability. A comprehensive state tobacco control plan—with well-defined goals; objectives; and short-term, intermediate, and long-term indicators—requires appropriate surveillance and evaluation data systems. Collecting baseline data related to each objective and performance indicator is critical to ensuring that program-related effects can be clearly measured. For this reason, surveillance and evaluation systems must have first priority in the planning process.

V. Administration and Management
Effective tobacco prevention and control programs require substantial funding to implement, thus making critical the need for sound fiscal management. Internal capacity within a state health department is essential for program sustainability, efficacy, and efficiency. Sufficient capacity enables programs to plan their strategic efforts, provide strong leadership, and foster collaboration between the state and local tobacco control communities. An adequate number of skilled staff is also necessary to provide or facilitate program oversight, technical assistance, and training.

The primary objective of the recommended statewide comprehensive tobacco control program is to reduce the personal and societal burden of tobacco-related deaths and illnesses. Research shows that the more states spend on comprehensive tobacco control programs, the greater the reductions in smoking—and the longer states invest in such programs, the greater and faster the impact. States that invest more fully in comprehensive tobacco control programs have seen cigarette sales drop more than twice as much as in the United States as a whole, and smoking prevalence among adults and youth has declined faster as spending for tobacco control programs has increased.

In California, home of the longest-running comprehensive tobacco control program, adult smoking rates declined from 22.7% in 1988 to 13.3% in 2006. As a result, compared with the rest of the country, heart disease deaths and lung cancer incidence in California have declined at accelerated rates. Due to the program-related reductions in smoking, lung cancer incidence has been declining four times faster in that state than in the rest of the nation. Among women in California, the rate of lung cancer deaths decreased while it increased in other parts of the country. Because of this accelerated decline, California has the potential to be the first state in which lung cancer is no longer the leading cancer cause of death.

Implementing a comprehensive tobacco control program structure at the CDC-recommended levels of investment would have a substantial impact. For example, if each state sustained its recommended level of funding for 5 years, an estimated 5 million fewer people in this country would smoke. As a result, hundreds of thousands of premature tobacco-related deaths would be prevented. Longer-term investments would have even greater effects.

The tobacco use epidemic can be stopped. We know what works, and if we were to fully implement the proven strategies, we could prevent the staggering toll that tobacco takes on our families and in our communities. We could accelerate the declines in cardiovascular mortality, reduce chronic obstructive pulmonary disease, and once again make lung cancer a rare disease. If we as a nation fully protected our children from secondhand smoke, more than one million asthma attacks and lung and ear infections in children could be prevented. With sustained implementation of state tobacco control programs and policies (e.g., increases in the unit price of tobacco products), IOM's best-case scenario of reducing adult tobacco prevalence to 10% by 2025 would be attainable.

WIC Outcomes

WIC saves lives and improves the health of nutritionally at-risk women, infants and children. The results of studies conducted by FNS and other non-government entities prove that WIC is one of the nation's most successful and cost-effective nutrition intervention programs. Since its beginning in 1974, the WIC Program has earned the reputation of being one of the most successful Federally-funded nutrition programs in the United States. Collective findings of studies, reviews and reports demonstrate that the WIC Program is cost effective in protecting or improving the health/nutritional status of low-income women, infants and children. The following highlights some of the findings (pertinent references are provided).

- ***Improved Birth Outcomes and Savings in Health Care Costs***
- ***Improved Diet and Diet-Related Outcomes***
- ***Improved Infant Feeding Practices***
- ***Immunization Rates and Regular Source of Medical Care***
- ***Improved Cognitive Development***
- ***Improved Preconceptional Nutritional Status***
- ***Other Improved Outcomes***
- ***Summary***
- ***References***

Improved Birth Outcomes and Savings in Health Care Costs

Research has shown that the WIC Program has been playing an important role in improving birth outcomes and containing health care costs.[7,20] A series of reports published by USDA based on linked 1988 WIC and Medicaid data on over 100,000 births found that every dollar spent on prenatal WIC participation for low-income Medicaid women in 5 States resulted in:

- longer pregnancies;
- fewer premature births;
- lower incidence of moderately low and very low birth weight infants;
- fewer infant deaths;
- a greater likelihood of receiving prenatal care; and
- savings in health care costs from $1.77 to $3.13 within the first 60 days after birth.[3,4,5]

Improved Diet and Diet-Related Outcomes

Studies have found WIC to have a positive effect on children's diet and diet-related outcomes such as:

- higher mean intakes of iron, vitamin C, thiamin, niacin and vitamin B6, without an increase in food energy intake, indicating an increase in the nutrient density of the diet;[19]
- positive effects on the intakes of ten nutrients without an adverse effect on fat or cholesterol;[14]
- more effective than other cash income or SNAP benefits at improving preschoolers' intake of key nutrients;[14] and
- decline in the rate of iron deficiency anemia from 7.8 percent in 1975 to 2.9 percent in 1985 which the Centers for Disease Control and Prevention attributed to both a general improvement in iron nutrition and participation in WIC and other public nutrition programs.[20]

Improved Infant Feeding Practices
WIC promotes breastfeeding as the optimal method of infant feeding. Studies show:

- WIC participants who reported having received advice to breastfeed their babies from the WIC clinic were more likely to breastfeed than other WIC participants or eligible nonparticipants;[18]
- WIC breastfeeding policy and program activities were strengthened in the early 1990's;
- Between 1996 and 2001, the percentage of WIC mothers breastfeeding in the hospital increased by almost 25 percent, from 46.6 to 58.2 percent;
- The percentage of WIC infants breastfeeding at six months of age increased by 61.2 percent, from 12.9 to 20.8 percent; and,
- For those infants who are fed infant formula, 90 percent received iron-fortified formula, which is recommended for nearly all non-breastfed infants for the first year of life.[1]

Immunization Rates and Regular Source of Medical Care
A regular schedule of immunizations is recommended for children from birth to 2 years of age, which coincides with the period in which many low-income children participate in WIC. Studies have found significantly improved rates of childhood immunization and of having a regular source of medical care associated with WIC participation.[19]

Improved Cognitive Development
Cognitive development influences school achievement and behavior. Participation in the WIC Program has been shown to:

- improve vocabulary scores for children of mothers who participated in WIC prenatally;
- significantly improve memory for numbers for children enrolled in WIC after the first year of life.[19]

Improved Preconceptional Nutritional Status
Preconceptional nutritional status is an important determinant of birth outcome. A previous pregnancy can cause nutritional depletion of the postpartum woman, particularly those with high parity and short interpregnancy intervals. One study found:

- women enrolled in WIC both during pregnancy and postpartum periods delivered infants with higher mean birth weights in a subsequent pregnancy than women who received WIC prenatally only; and,
- the women who received postpartum benefits had higher hemoglobin levels and lower risk of maternal obesity at the onset of the subsequent pregnancy.[2]

Other Improved Outcomes
WIC participation has also been shown to:

- increase the likelihood of children having a regular provider of medical care;[19] and,
- improve growth rates.[6,8]

Summary:

- WIC reduces fetal deaths and infant mortality.
- WIC reduces low birthweight rates and increases the duration of pregnancy.
- WIC improves the growth of nutritionally at-risk infants and children.

- WIC decreases the incidence of iron deficiency anemia in children.
- WIC improves the dietary intake of pregnant and postpartum women and improves weight gain in pregnant women.
- Pregnant women participating in WIC receive prenatal care earlier.
- Children enrolled in WIC are more likely to have a regular source of medical care and have more up to date immunizations.
- WIC helps get children ready to start school: children who receive WIC benefits demonstrate improved intellectual development.
- WIC significantly improves children's diets.

References

1. Baydar, Nazli, Margaret McCam, Rick Williams and Eric Vesper. *The WIC Infant* Feeding Practices Study. Alexandria, Virginia: Department of Agriculture, November 1997.
2. Caan, B., et. al., "Benefits associated with WIC Supplemental Feeding During the Interpregnancy Interval," *Am. J. Clin. Nutr.* 1987.
3. Devaney, Barbara, Linda T. Bilheimer, and Jennifer Schore. *The Savings in Medicaid Costs for Newborns and Their Mothers* from Prenatal Participation in the WIC Program. Alexandria, Virginia: U.S. Department of Agriculture, October 1980.
4. Devaney, Barbara. *Very Low Birthweight Among Medicaid Newborns in Five States: The Effects of Prenatal WIC Participation.* Alexandria, Virginia: U.S. Department of Agriculture, September 1992.
5. Devaney, Barbara-, and Allen Schirm. *Infant Mortality Among Medicaid Newborns in Five States: The Effects of Prenatal WIC Participation.* Alexandria, Virginia: U.S. Department of Agriculture, May 1993.
6. Edozien, J., Switzer, B., and Bryan, R.: "Medical Evaluation of the Special Supplemental Food Program for Women, Infants and Children," *Am. J. Clin. Nutr.* 32:677-692, March 1979.
7. Gordon, Anne; and Lyle Nelson. *Characteristics and Outcomes of WIC Participants and Nonparticipants: Analysis of the 1988 National Maternal and Infant Health Survey.* Alexandria, Virginia: U.S. Department of Agriculture, March 1995.
8. Heimendinger, J., Larid, N., Austin, J., Timmer, P., and Gershoff, S.: "The Effects of the WIC Program on the Growth of Infants," Am. *J. Clin. Nutr.,* 40:1250-1257, December 1984.
9. Kennedy, E.T., Gershoff, S., Reed, R., and Austin, J.E.: "Evaluation of the Effect of WIC Supplemental Feeding on Birth Weight," JADA, 80:220-227, March 1982.
10. Kennedy, E.T. and Gershoff, S.: "Effect of WIC Supplemental Feeding on Hemoglobin and Hematocrit of Prenatal Patients," *JADA,* 80:227-230, March 1982.
11. Kennedy, E. T. and Kotelchuck, M.: "The Effect of WIC Supplemental Feeding on Birth Weight: A Case-Control Analysis," *Am. J. Clin. Nutr.,* 40:579-585, September 1984.
12. Kotelchuck, M., Schwartz, J., Anderka, M, and Finison, K.: "WIC Participation and Pregnancy Outcomes: Massachusetts Statewide Evaluation Project," *Am. J. Public Health* 74:1086-1092, October 1984.
13. Metcoff, J., Costiloe, P., Crosby, W., Dutta, S., Sanstead, H., Milne, D., BodwelL C., and Majors, S.: "Effect of Food Supplementation (WIC) During Pregnancy on Birth Weight," *Am. J. Clin. Nutr.* 41:933-947, May 1985.
14. Rose, D., Habicht, J-P., and Devaney, B.: "Household Participation in the Food Stamp and WIC Programs Increases the Nutrient Intakes of Preschool Children," *J. of Nutr.,* 128:548-555, March 1998.
15. Ryan, A. S.: "Breastfeeding continues to increase into the New Millenium," *Pediatrics* 110(6): 1103-1109, December 2002.
16. Schramm, W.: "Prenatal Participation and Its Relationship to Newborn Medicaid Costs in

Missouri: A Cost/Benefit Analysis," *Am. J. Public Health* 75:851-857, August 1985.
17. Schramm, W.: "Prenatal Participation in WIC Related to Medicaid Costs for Missouri Newborns: 1982 Update," *Public Health Reports* 101:607-615, November-December 1986.
18. Schwartz, J. Brad, David K. Guilkey, John S. Akin, and Barry M. Popkin. The WIC *Breastfeeding Report: The Relationship of WIC Program Participation to the Initiation and Duration of Breastfeeding.* Alexandria, Virginia: U.S. Department of Agriculture, September 1992.
19. U.S. Department of Agriculture Food and Nutrition Service. *The National WIC Evaluation: An Evaluation of the Special Supplemental Food Program for Women, Infants, and Children. Vol. 1: Summary.* Alexandria, Virginia: U.S. Department Agriculture, 1987.
20. U.S. General Accounting Office, "Early Intervention: Federal Investments Like WIC Can Produce Savings," Document HRD 92-18, Washington, D.C., April 1992.
21. YIP, R., Binkin, N.J., Fleshood, L., Trowbridge, F.L.: "Declining Prevalence of Anemia Among Low-Income Children in the United States," JAMA, 258:1619-1647, September 25, 1987.