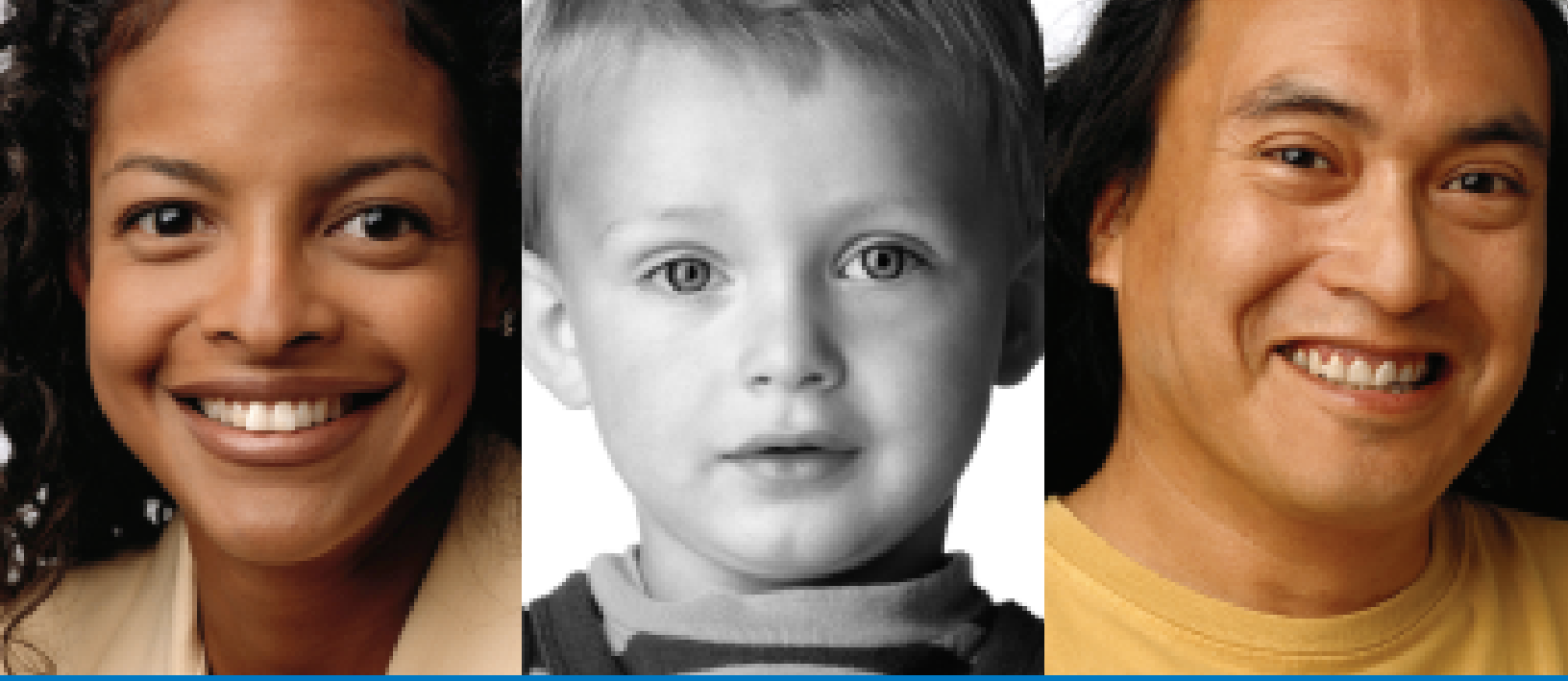


Arizona Nutrition & Physical Activity State Plan

Arizona Department of Health Services

A Comprehensive Plan to Reduce Chronic Disease & Obesity in Arizona

"I commend the Arizona Department of Health Services and its Obesity Prevention Program for gathering a broad coalition of experts and concerned citizens from around the state to create this comprehensive plan. It is a matter of great pride to see the multitude of organizations that work together for the benefit of all Arizonans."

January 1, 2005

To the Citizens of Arizona:

It is with great pleasure I present to you the first ever Arizona State Nutrition and Physical Activity Plan; a five-year action plan to reduce the burden of chronic disease and obesity in Arizona through nutrition education and physical activity. Implementation of this plan will reduce the problems of chronic diseases, such as heart disease, diabetes, osteoporosis, cancer and arthritis. The plan also represents an opportunity to develop policies and modify our environments in ways that will ultimately help our citizens lead healthier lives. I commend the Arizona Department of Health Services and its Obesity Prevention Program for gathering a broad coalition of experts and concerned citizens from around the state to create this comprehensive plan. It is a matter of great pride to see the multitude of organizations that work together for the benefit of all Arizonans.

The Arizona Department of Health Services is paving the way for a healthier future for Arizonans. The Nutrition and Physical Activity Plan provides our state with a wide range of public health opportunities including objectives and strategies for action. The development of this plan demonstrates that working together to address the burden of chronic disease and obesity are the first steps towards combating this problem in our state.

Our health is one of the most important investments we can make for our futures. I applaud the efforts made throughout the state to improve the health of Arizonans.

Sincerely,

Janet Napolitano

Governor

January 1, 2005

Dear Community Partners,

The development of the Arizona State Nutrition and Physical Activity Plan comes at a very critical time for our state. The U.S. Surgeon General recently stated that obesity was the single greatest threat to the United States. Obesity increases the risk of heart disease, diabetes, several forms of cancer and other chronic health problems. This dramatic increase in obesity in Arizona is negatively affecting our health and quality of life and is adding extraordinary costs to our health care system.

There is an increased awareness of the threat of obesity to the public's health. More individuals, schools and communities than ever before are acknowledging the gravity of this problem and that something must be done, but what? People are looking for a solution to this problem, but how can we have an impact on a disease that is currently affecting 60% of the state's population? The Arizona Nutrition and Physical Activity Plan was developed to provide guidelines for schools, health care, communities and worksites to address the obesity epidemic in our state. There is an urgent need for action and this Arizona Nutrition and Physical Activity Plan shows us where to begin.

This plan was developed with input from the citizens of our state, from a myriad of communities and settings, over a period of several months. They worked tirelessly to identify and describe programs and plans that will target chronic disease and obesity and improve the health of our state. While some recommendations encourage individuals and families to eat healthier and be more active, others are broader in scope and focus on priorities for environmental and policy change in schools, communities, worksites and healthcare. Other recommendations call on the media to promote and educate the public on the need to make healthier lifestyle choices.

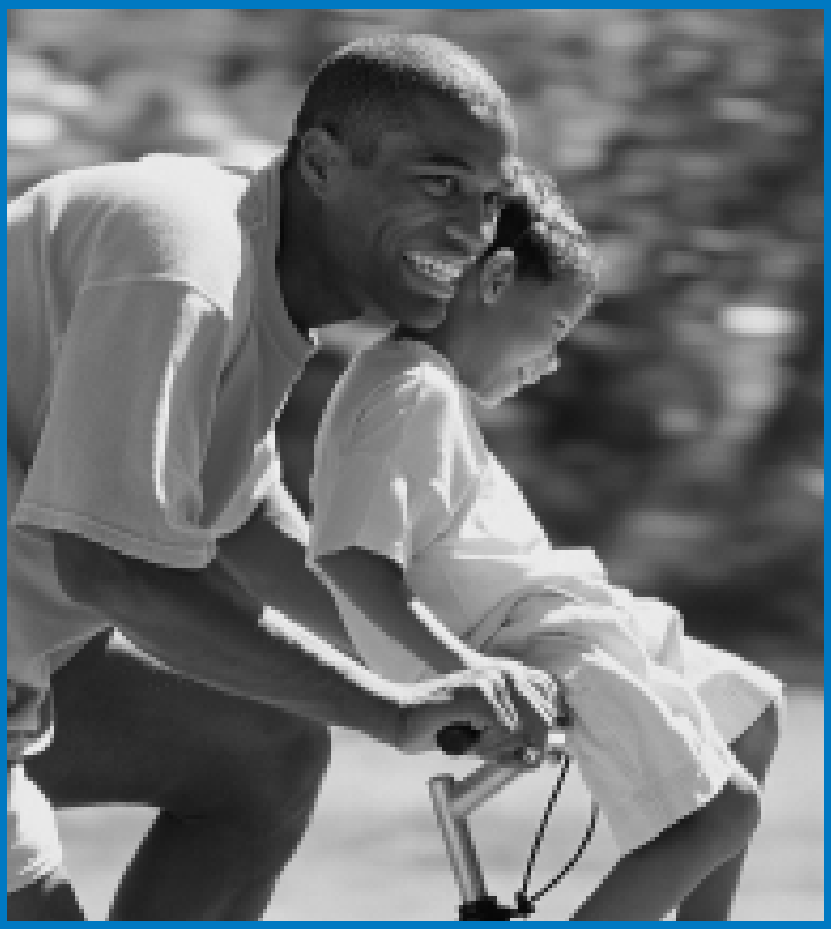
I am pleased that Arizona has begun to address these issues through the Obesity Prevention Program. I encourage all of us to become involved in working with the guidelines identified in this plan. Above all, let's remember that obesity is preventable, but it requires an approach that involves small steps and messages that are consistently delivered throughout our communities. We must use this approach, involving individuals and families, business and industry, government and non-governmental organizations, healthcare and policy makers at all levels. I challenge all of us to work together to achieve this important vision.

Sincerely,

Catherine Eden

Director

Arizona Department of Health Services



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The Arizona Nutrition and Physical Activity Plan is a result of numerous individuals who devoted their time and effort to the creation of this plan. This endeavor could not have happened without the hard work and commitment that was displayed from the partners of the Arizona Obesity Prevention Program, working as members of workgroups representing a variety of settings, and representing more than 90 organizations were involved in this process, together with more than 400 Arizonans who provided input through community forums, workgroup meetings and advisory team meetings.

Special Thanks

The Arizona Obesity Prevention Program Advisory Team is comprised of community members who are committed to and passionate about the problem of obesity in our state and who played a critical role in the development of the Arizona Nutrition and Physical Activity Plan. This document was completed through the dedication and contributions of the following advisory team members:

Lawrence Sands, D.O., M.P.H. – Maricopa County Health Department

Donna Baker-Miller – Kronos Optimal Health Company

Steve Barclay, J.D. – Community member

Kathryn Eagle, M.D. – Health Policy Consultant, Apache Diabetes Wellness Center

Jaime Figueroa – City of Phoenix Parks and Recreation

Matt Mixer – AZAHPERD, Horizon Community Learning Center

Sonja Nelson – Banner Health Bariatric Program

Annabel Rimmer – Asian Pacific Community in Action

Gurpreet Singh – Community member/graduate student

Melissa Steinle – Arizona Department of Education

Margaret Tate, M.S., R.D. – Arizona Department of Health Services

Stephen West, M.D. – Pediatrician

The Arizona Nutrition and Physical Activity Plan is the outcome of months of strategic planning by six workgroups. Participants included individuals from state and local agencies and representatives from advocacy organizations throughout the state. The participants have expertise in healthcare, education, transportation, planning, physical activity, nutrition, parks and recreation, health education and economic development. The workgroup members spent countless hours providing the foundation for this plan. Each workgroup showed tremendous strength and resolve in accomplishing their tasks and their patience, diligence and willingness to work cooperatively were integral to this process. Their efforts are recognized and greatly appreciated. A list of agencies represented in the workgroups is provided at the end of this section.

Additional acknowledgement and thanks are extended to the following individuals: Viral Joshi, M.P.H., from the Arizona Department of Health Services, who provided technical assistance and support for the planning process and data for the burden component of the plan; Jana Granillo, B.S., from the Arizona Department of Health Services for expertly facilitating the workgroup planning process; Mariaelena Jefferds, Ph.D., Centers for Disease Control and Prevention Project Officer, for her expertise and guidance with the planning efforts; Arizona Department of Health Services Obesity Prevention Program Manager Renae Cunnien, Ph.D.; Nutrition Coordinator Lisa DeMarie, M.A.; and Physical Activity Coordinator Emily Augustine, B.S., CHES (Certified Health Education Specialist), for coordinating the planning process and writing of the plan.

The Arizona Obesity Prevention Program and the Arizona Department of Health Services would like to thank the following organizations for their time and energy in preparing the Arizona Nutrition and Physical Activity Plan:

Organizations

5 A Day Coalition

Active Arizona for Life: Meeting the Goals of Healthy Arizona 2010

American Academy of Family Practice, Arizona Chapter

American Academy of Pediatrics, Arizona Chapter

American Cancer Society

American Heart Association

Apache Diabetes Wellness Center

Arizona Action for Healthy Kids

Arizona Association for Health, Physical Education, Recreation and Dance

Arizona Community Nutrition Network

Arizona Dairy Council

Arizona Department of Economic Security/ Aging and Adult Administration

Arizona Department of Education

Arizona Department of Health Services Comprehensive Cancer Control Program

Arizona Department of Health Services Preventive Health Services Block Grant Program

Arizona Department of Health Services Women, Infants and Children (WIC) Program

Arizona Department of Health Services Office of Children with Special Health Care Needs

Arizona Department of Health Services Office of Chronic Disease Prevention and Nutrition Services

Arizona Department of Health Services Office of Women and Children's Health

Arizona Department of Health Services Tobacco Education and Control Program (TEPP)

Arizona Department of Insurance

Arizona Department of Transportation
Arizona Dietetics Association
Arizona Fitness and Nutrition Coalition
Arizona Governor's Council for Health, Physical Fitness and Sports
Arizona Health Care Cost Containment System
Arizona House of Representatives
Arizona Physicians/IPA
Arizona Beverage Association
Arizona State University
Arizona Sports and Tourism Authority
The Arizona Cancer Center
Asian Pacific Community in Action
Banner Health Systems
Blue Cross/Blue Shield of Arizona
The Center for Kids FIRST in Sports, Health and Education
The Centers for Disease Control and Prevention
Central Arizona College
Children's Clinic for Rehabilitative Services
CIGNA Health Group
City of Phoenix Parks and Recreation
City of Scottsdale
City of Tempe/ Kids Zone
Coalition for Healthy and Active America
Cochise County Health Department
Coconino County Health Department
Cooperative Extension – Pinal County
Family Fit Lifestyle
Frito Lay
Goodwill
Horizon Community Learning Center
Health Choice Arizona
Insight
John C. Lincoln Health Network
Kalil Bottling Company
Kronos Optimal Health Company
Legacy Foundation
LifeScape Medical Association
Maricopa Agricultural Center
Maricopa County Health Department
Maricopa Environmental Services
McDonald's
Mesa School District
Mohave County Department of Public Health
National Governor's Association
Navajo County Health Department
Navajo Nation
Nogales Unified School District
Nutrition Education Worldwide
Paradise Valley Health Solutions
Pepsi Bottling Company
Pfizer Pharmaceuticals Group
Phoenix Children's Hospital
Pima County Health Department
Pinal County Division of Public Health
Pinal County Cooperative Extension Services
S & L Vending
San Carlos Diabetes Prevention Program
Santa Cruz County Health Department
Scottsdale Healthcare
SODEXHO
Southwest Health Alliance
Southwest Human Development
Tohono O'Odham Tribe
United Healthcare
University of Arizona Prevention Research Center
University Physicians
Valley Anesthesiology Consultants, LTD.
Weight Watchers of America
Western Grower's Association
Whiteriver Apache Community Health Center
Yavapai County Community Health Services
Yuma County Health Department

Executive Summary

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity recently established the "Obesity Epidemic" as the single greatest threat to the public's health. Currently, an estimated 65% of adults are overweight or obese (National Center for Health Statistics, 2004).

The Surgeon General's Call to Action established that for most Americans, this epidemic is, in part, believed to be a result of unhealthy eating and sedentary lifestyles. Overweight/obesity, physical inactivity and unhealthy eating are associated with increased risk for heart disease; Type 2 diabetes; endometrial, colon, postmenopausal breast, and other cancers; stroke; hypertension; sleep apnea; gallbladder disease; osteoarthritis; depression; and psychological difficulties due to social stigmatization (U.S. Department of Health and Human Services, 2001).

The Arizona Nutrition and Physical Activity State Plan is a five-year action plan to reduce the burden of chronic disease and obesity in Arizona through nutrition and physical activity efforts. The purpose of the plan is to provide guidelines for schools, healthcare providers, communities and worksites to address overweight and obesity in Arizona. Through the implementation of this plan, the burden of chronic diseases such as cancer, heart disease, diabetes, osteoporosis and arthritis will be reduced. This plan also presents an opportunity to develop policies and modify our environments in ways that will ultimately help Arizona residents lead healthier lives. The plan provides Arizona with a wide range of public health opportunities with objectives and strategies for action. The development of this plan demonstrates that working together to address the burden of chronic disease and obesity are the first steps towards combating this problem in Arizona.

Recommendations of this plan are focused on increasing healthy eating and physical activity and promoting healthy lifestyles for all Arizona residents. Arizona's communities and organizations can implement recommendations in this plan to help prevent and reduce overweight and obesity statewide.

The Arizona Nutrition and Physical Activity State Plan was developed under the direction of the Arizona Department of Health Services. The Obesity Prevention Program's Vision, Mission and Goals guided the planning process.

Vision

To be recognized as the leader in obesity prevention in Arizona, resulting in optimal health for our citizens.

Mission

To improve the health and quality of life of Arizona residents by reducing the incidence and severity of chronic disease and obesity through physical activity and nutrition interventions.

Goals

1. To promote and enable the citizens of Arizona to eat smart.
2. To promote and enable active lifestyles in Arizona residents.

The Arizona Obesity Prevention Program identified the following key objectives for the Arizona Nutrition and Physical Activity State Plan:

Physical Environment

- Educate residents about and promote healthy design of Arizona communities.
- Recommend that Arizona communities assess and plan for healthy community designs and/or re-designs in both urban and rural areas.

Families And Communities

- Promote and encourage all Arizona residents to make healthy lifestyle choices.
- Integrate a culture of physical activity throughout Arizona communities.

Healthcare

- Deliver a health marketing campaign about measures that can be taken to prevent obesity providing culturally sensitive and intergenerational media messages promoting preventive screening, healthy weight and physical activity options.
- Create multiple mechanisms for community healthcare agencies to exchange information to solidify a universal message/program.
- Facilitate systematic, longitudinal education for healthcare professionals and healthcare consumers.
- Promote access to and encourage economic support from the insurance industry for convenient healthcare and prevention services from all health professionals.

Worksite

- Encourage, recommend and support work cultures that promote and are conducive to physical activity and healthy eating.
- Develop/create a wellness market within employer and employee groups.
- Encourage worksites to implement worksite breast-feeding policies.

Schools

- Establish a comprehensive healthy school environment with support of staff, students, parents and community members in all Arizona school districts.
- Streamline obesity prevention efforts taking place in Arizona to integrate services and messages.

While some recommendations simply encourage citizens or residents to lead healthier lives, others are broader in scope and focus on agency, organizational, policy and environmental change. Using this plan as a guide, residents, communities, schools, worksites, the healthcare system and agencies will make progress toward healthier environments and preventing and reversing the trend toward overweight and obesity and the chronic diseases that accompany them. This require active participation, commitment, and cooperation among stakeholders throughout the state.

By working collaboratively through partnerships, investment of resources and sharing the results of our efforts, the key outcomes of this plan can be achieved and an impact can be made on the health of all Arizonans.

Introduction

Governor's Call To Action And Proclamation

Arizona participated in a National Governor's Association Policy Academy on Chronic Disease Prevention and Management that was held in August 2003. The purpose of the Policy Academy was to bring state teams together to work with national experts to design action plans for preventing and managing chronic diseases.

Arizona's delegation included a representative from the Governor's office, State Legislators, community representatives and staff from the Department of Health Services and the Arizona Health Care Cost Containment System (AHCCCS). The first strategy was to convene a forum on childhood obesity.

To increase the awareness of Arizona's residents and potential stakeholders about the burden of obesity, the Arizona Department of Health Services partnered with the Office of the Governor of Arizona, the Honorable Janet Napolitano, to create an event that was the catalyst for the development of the state plan. Because Governor Napolitano felt strongly about the need to reduce childhood obesity in Arizona, she eagerly supported this effort. Major sponsors of the event included Blue Cross Blue Shield of Arizona, Arizona Physicians/IPA, Kronos Optimal Health, the Western Growers Association, the Arizona Dietetic Association and the National Governor's Association.

The "Governor's Call to Action: Healthy Weight for Children and Their Families" event was held on January 30, 2004. Approximately 350 individuals, appropriately representative of the diversity of the state, attended. Noted speakers included Governor Janet Napolitano, Arizona Department of Health Services Director Catherine Eden, Ph. D., James S. Marks, M.D., M.P.H., Director of the National Center for Chronic Disease Prevention and Health Promotion at the Centers for Disease Control and Prevention and Eduardo J. Sanchez, M.D., M.P.H., Commissioner of the Texas Department of State Health Services.

Attendees participated in 11 facilitated sessions to discuss tactics to combat the obesity epidemic in Arizona. From these sessions, individuals were invited to continue their involvement and participate in the state plan development process by joining one

of eight workgroups.

Arizona state Senator Robert Cannell, M.D. and Governor Napolitano's Health Policy Advisor Susan Gerard concluded the event with a Call to Action. Governor Napolitano issued a Proclamation declaring obesity a serious issue and urging residents of Arizona to eat healthy and be physically active. Governor Napolitano encouraged all citizens of Arizona to take the following steps:

- Eat at least 5 servings or more fruits and vegetables a day.
- Spend less time in sedentary activities (i.e., watching television, playing video games and working on computers).
- Eat reasonable portions.
- Make time to be physically active, such as walking as a family, walking to school or work, or dancing to music.
- Work together to create changes in schools, worksites, medical settings and communities so healthier alternatives are available in all areas of our lives.

This proclamation can be found on the following page.

Office Of The Governor

PROCLAMATION

Establishing Healthy Weight for Children and Their Families

Whereas, in 2002, more that half of the deaths in Arizona were from heart disease, cancer and stroke, and;

Whereas, physical inactivity and unhealthy eating take the lives of 300,000 Americans a year.

Whereas, currently 56% of Arizonans are overweight or obese; this increase their risk for high blood pressure, diabetes, cardiovascular disease, stroke, cancer and early death, and

Whereas, nationally 15.3% of children ages 6 to 11 were diagnosed as overweight, and 15.5% of adolescents ages 12-19 were diagnosed as overweight, and the rates of overweight and obese children have tripled in the past twenty years, therefore, there is an increased instance of chronic diseases, traditionally seen only in adults, emerging in children.

NOW, THEREFORE, I, Janet Napolitano, Governor of the State of Arizona, do hereby establish A Call to Action to promote healthy weight for children and their families. Because nothing is more important than the health of children and families, I urge all Arizonans to make healthy choices for yourselves and your families by:

- Eating at least 5 servings of fewer fruits and vegetables a day.
- Spending less time in sedentary activities, i.e., watching television, playing video games and working on computers.
- Eating reasonable portions.
- Making time to be physically active, such as walking as a family, walking to school or work, or dancing to music.
- Working together to create changes in schools, worksites, medical settings and communities so that healthier alternatives are available in all areas of our lives.

In witness whereof, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona – Janet Napolitano – Governor, Done at the Governor's Call To Action: Healthy Weight For Children and Their Families Meeting, on this thirtieth day of January in the year Two Thousand Four.

By doing so I affirm that small changes can make a big difference for a healthier tomorrow for Arizona children and their families.

Obesity Prevention Program Vision, Mission And Goals

The Arizona Nutrition and Physical Activity State Plan was developed under the direction of the Obesity Prevention Program at the Arizona Department of Health Services through a grant from the Centers for Disease Control and Prevention. The Program's Vision, Mission and Goals guided the planning process.

Obesity Prevention Program

Vision

To be recognized as the leader in obesity prevention in Arizona, resulting in optimal health for our citizens.

Mission

To improve the health and quality of life of Arizona residents by reducing the incidence and severity of chronic disease and obesity through physical activity and nutrition interventions.

Goals

1. To promote and enable the citizens of Arizona to eat smart.
2. To promote and enable active lifestyles in Arizona residents.

Theory And Model For Action

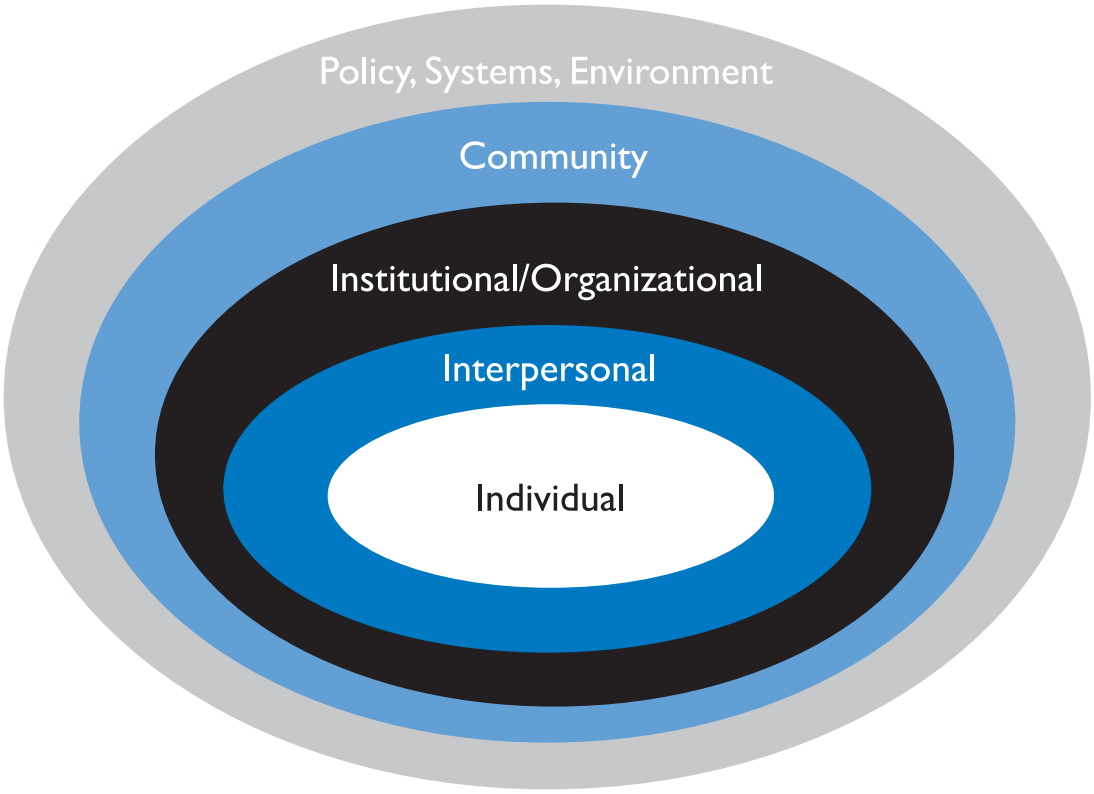
The Arizona Nutrition and Physical Activity State Plan provides a statewide focus for obesity prevention and treatment activities utilizing nutrition and physical activity interventions. Secondary to tobacco use, overweight and obesity are now the most preventable causes of death in both Arizona and the nation. The Arizona Department of Health Service's Obesity Prevention Program will assist existing organizations to achieve the objectives, strategies and action steps outlined in the plan. The strategies identified to reduce chronic disease and obesity in Arizona will be targeted to reach all Arizona citizens, inclusive of all ages, races and socio-economic classes.

The Social-Ecological Model (opposite page) provides a framework in which all plan objectives and strategies have been developed. Utilizing the Social-Ecological Model, individual behavior can be impacted at multiple spheres of influence including individual, interpersonal, organizational, community and public policy. The model addresses the need to influence personal behavior within social and environmental contexts. Emerging evidence demonstrates that multilevel approaches based on ecologic models may be essential to bring about positive lifestyle changes that lead to improvements in the public's health. The strategies in the plan recognize that personal behavior change for a healthier lifestyle is difficult but can be positively influenced through enabling forces such as schools, worksites and community settings that promote and support healthy choices.

Social-Ecological Model

Conceptual Framework

The Social-Ecological Model, Inter-Sectorial Approaches And The Role Of Public Health



We live our lives within several broad spheres of influence. Each in turn affects the other. Health promotion approaches that are based on the social-ecological model focus on the behavior choices of each individual as well as situations within each sphere that can influence health behaviors. The following factors influence behaviors at each level:

Individual: awareness, knowledge, attitudes, beliefs, values, preferences

Interpersonal: family, friends, peers that provide social identify and support

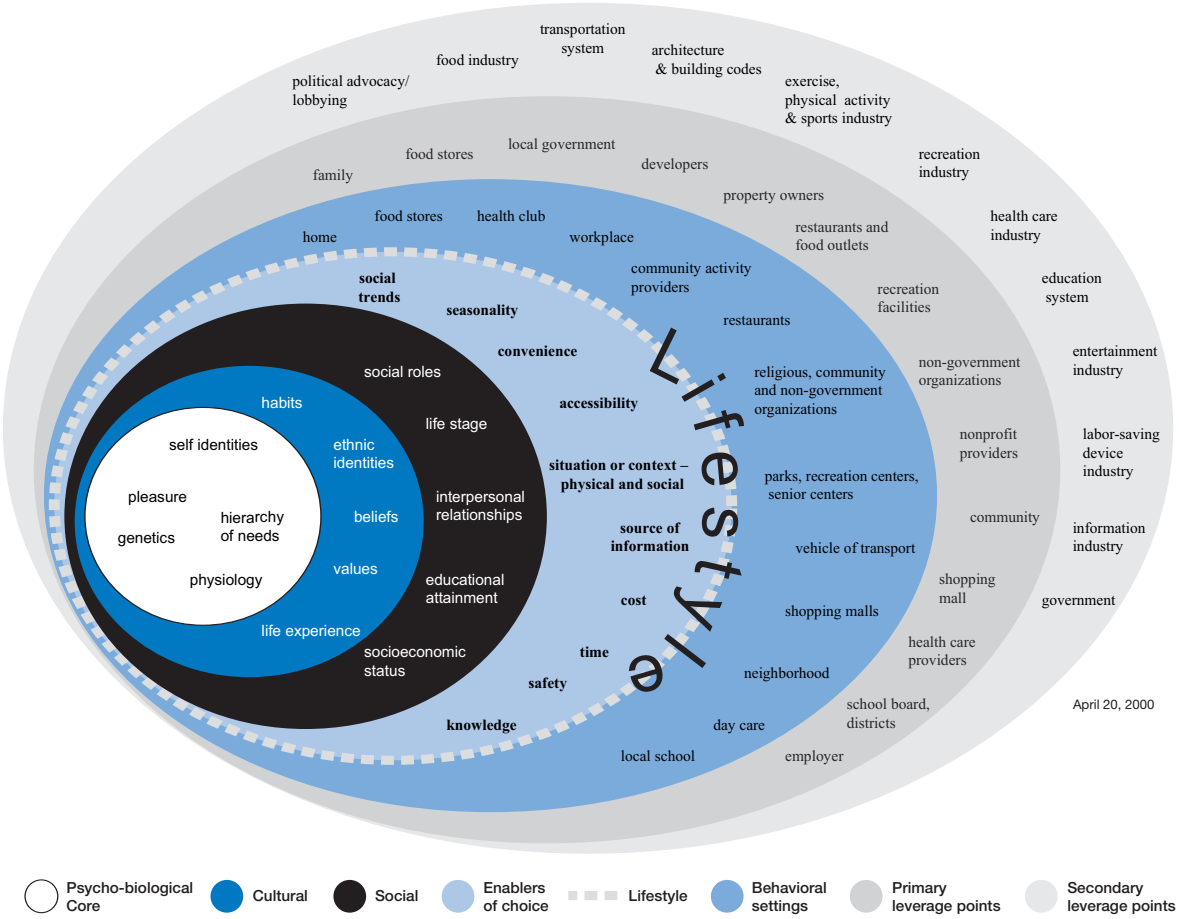
Institutional/organizational: rules, policies, procedures, environment, informal structures

Community: social networks, norms standards and practices

Public Policy: local, state, and federal governmental policies, regulations, and laws

Framework For Determinants Of Physical Activity And Eating Behavior

The diagram below, Framework for Determinants of Physical Activity and Eating Behavior, illustrates the spheres of influence that shape an individual's nutrition and physical activity choices. The diagram demonstrates the significant influence of the environment in determining an individual's behavior and how different approaches can be used effectively to affect behavior change. In short, multiple factors affect individual choices, so the broader the scope of environmental and policy change, the greater the impact on the individual, community and society.



April 20, 2000

A multitude of factors contribute to inactivity in our population including lack of time and facilities, cost, convenience, work, childcare, family and interpersonal relationships. It is easier to be inactive in today's society than to be active. Only through the development and implementation of policies and strategies that enable us to lead healthier lives will we have a chance to become healthier.

For example, as work environments become more sedentary, it is incumbent upon worksites to encourage on-site daily activity that can be incorporated into an employee's day. An intervention such as a daily walking club is inexpensive to the employer and requires no additional employee time away from work if done on breaks or at lunch. Plus, walking can be done alone or with co-workers. Company policies and promotions can be implemented including the use of stairways instead of elevators, providing extended lunch hours or flex time schedules to allow time for physical activity. Additionally, employers can offer healthier alternatives in the employee cafeteria and encourage alternative modes of transportation like walking or biking to and from the workplace.

Using the framework of the Social-Ecological Model and the Framework for Determinants of Physical Activity and Eating Behavior, the employee's commitment to healthy behavior is supported by organizational and policy change and sustained through a cultural shift toward a more active work environment.

The Role Of The Environment

Obesity is the consequence of a complex blend of behavioral, social, environmental, cultural, economic, physiological and genetic factors. Since the emergence of the obesity epidemic, our social and physical environment has been dramatically altered, while many other factors have remained relatively constant. The physical and social environment in which we live has a considerable influence on personal behavior and while it may in some cases promote healthy choices, it frequently detracts from them. For example, in restaurants and markets, individuals are encouraged to purchase larger portions of food or additional food items to increase the value of the meal, when in fact they encourage the consumption of food that is high is sugar, fat and calories and low in nutritional value. Convenience stores and fast-food restaurants frequently advertise high-calorie foods in point of purchase displays. At the same time, opportunities to burn the excess calories are hindered by technology (T.V. remote controls, electric doors and elevators) and infrastructure that encourages sedentary behavior.

Transtheoretical Model Of Behavior Change

While it might be easy to recognize numerous barriers, it is critical to also identify an individual's role in the behavior change process. The Transtheoretical Model of Behavior Change, introduced by James Prochaska in the 1970's, identifies the five stages of change: Pre-contemplation, Contemplation, Preparation, Action and Maintenance. The premise of the model suggests

that changing behavior is a process and occurs as an individual progresses through the stages. Individuals move through the stages at varying rates, converting intention to take personal action into behavioral steps, dependent upon their readiness to change.

Strategies presented in the Arizona Nutrition and Physical Activity State Plan are intended to assist Arizonans to develop healthier lifestyles. Keeping in mind the Transtheoretical Model of Behavior Change in conjunction with the Social-Ecological Model can serve to guide individuals, communities and organizations as interventions are developed and implemented that will influence behaviors in larger target populations. When strategies are addressed at all spheres of influence at the same time that an individual's stage of change is identified, there is a greater likelihood of influencing positive lifestyle change. Changes in the physical and environmental settings in which we live and work must occur to support and sustain the adoption of healthier lifestyle choices.

Developing And Using The Plan

The purpose of the Arizona Nutrition and Physical Activity State Plan is to provide a framework in which local, state and institutional policy makers can work collaboratively to create and support environments that make it easier for Arizona residents to choose healthy foods and to be physically active in order to:

- Reduce rates of chronic diseases associated with inactivity, poor eating habits and overweight and obesity.
- Reverse the trend toward obesity in youth and adults.
- Improve quality of life for youth and adults.

Background

On July 1, 2003, the Arizona Department of Health Services received a five-year grant from the Centers for Disease Control and Prevention (CDC) to support a state nutrition and physical activity program to prevent and reduce chronic disease and obesity in Arizona. One of the planning activities funded by this grant was the formation of workgroups to help develop a strategic plan to address the problem of obesity in Arizona. The Arizona Nutrition and Physical Activity State Plan was developed as a result of workgroups representing a variety of settings.

Development The Plan

Over 75 organizations participated in the workgroup process including a diverse group of individuals and organizations from around the state. Workgroups met for six months to develop draft objectives, strategies and action steps. The goal for workgroups was to assist with the writing of Arizona's comprehensive state plan, including developing strategies and action steps, to reduce chronic disease and obesity through physical activity and nutrition interventions.

The workgroups developed these strategies after considering existing programs and interventions currently in place that address nutrition, physical activity and obesity prevention and treatment. The workgroups focused on providing education and tools to enable positive behavior change across the

lifespan, utilizing the Social- Ecological Model as a framework. The focus was on an intergenerational, cross-cultural means through which interventions could have a positive impact on the diet and physical activity of youth and adult populations across the State. The workgroups' efforts focused on prevention rather than treatment across all spheres of influence to prevent and reduce overweight and obesity in Arizona.

During the development process, the workgroups gathered input and gained support from partners at the community and state levels to help ensure the integrity of the final plan and the feasibility and acceptability of its implementation.

To obtain input from community partners around the state who were unable to participate in the workgroup process, five community forums were conducted; each in Tucson, Yuma, Sierra Vista, Prescott and Fort Defiance. At each, representatives of tribal, rural, suburban and urban areas attended. Over 100 individuals participated in the community forums, providing their unique perspective to the strategies drafted by the workgroups. Comments were gathered, reviewed by program staff, and incorporated into the final plan.

This plan is being released at the statewide "2005 Healthy Weight for Children and Their Families" conference on February 24, 2005 in Phoenix. The plan is a set of recommended guidelines that can be utilized in a variety of settings to begin reversing the obesity epidemic in Arizona. At the conference, national and local speakers will present obesity research and approaches that support strategies in the plan. Breakout sessions will enhance the understanding and possible uses for the plan in various settings.

Using The Plan

The Arizona Nutrition and Physical Activity State Plan is intended as a guideline and a call to action. The plan presents ideas that can be used by all Arizonans to help make healthier choices and sustainable lifestyle changes.

The plan includes four sections with thirteen objectives, addressing nutrition, physical activity and obesity. There are 35 strategies identified to meet these objectives. For each objective and strategy, suggested action steps or activities are provided. These action steps are not intended to be prescriptive, rather to provide ideas about activities that might be applicable in selected populations.

The Arizona Department of Health Services will work with internal and external partners to promote use of the plan to stimulate new ideas and generate new activities, partnerships and coalitions throughout the state. To that end, the Arizona Department of Health Services will encourage state and community-level organizations to take responsibility for implementation for strategies in the plan. The plan will be presented to policymakers around the state to increase awareness of further actions that can make an impact on Arizona's obesity rates. Arizona Department of Health Services will facilitate the development of partnerships, provide technical assistance where needed and monitor the implementation of the strategies identified in this plan.

Description Of The Problem

National Burden, Trends And Issues

The words "Obesity Epidemic" are becoming a common as the population of the United States continues an upward climb in its prevalence of overweight and obesity. An estimated 65% of adults are overweight or obese (National Center for Health Statistics, 2002).

If the trend continues, the next generation may be the first in American history to live sicker and shorter lives than their parents. Since 1980, rates of childhood obesity have doubled and rates of obesity among adolescents have tripled (U.S. Department of Health and Human Resources, 2004). This epidemic is, in part, believed to be a result of unhealthy eating and sedentary lifestyles. Furthermore, obesity is the second cause of death in the U.S. (U.S. Department of Health and Human Services, 2004). This statistic has proven to be very costly with the United States spending more money per capita on health care than any other country in the world.

The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity states that the overweight and obesity crisis presents a significant public health problem in America. It also suggested that for most Americans, overweight and obesity are due to excess calorie intake and/or inadequate physical activity. In fact, obesity is the first chronic disease that spread patterns that of an infectious disease. Overweight/obesity, physical inactivity and unhealthy eating are associated with increased risk for heart disease; Type 2 diabetes; endometrial, colon, postmenopausal breast, and other cancers; stroke; hypertension; sleep apnea; gallbladder disease; osteoarthritis; depression; and psychological difficulties due to social stigmatization (U.S. Department of Health and Human Services & Office of the Surgeon General, 2001).

Healthy eating can start to prevent and/or reverse this trend. Unfortunately, this is a tough task considering Americans are constantly bombarded with messages that encourage overeating and poor nutritional intake. Each year the average child watches 10,000 food commercials, 95% of which

are for candy, fast-food, soft drinks, and sugared cereals. (French, S.A., et al, 2001). These mass-marketed, low-nutrient products are typically offered at promotional prices making them inexpensive and easily accessible.

Another trend contributing to the problem is America's convenience-oriented society; fast-food has become a frequent choice. The majority of the fast-food is laden with empty calories from sugar and saturated fats. The typical fast-food portion size provides much more than one meal's worth of calories and can sometimes provide more than the daily-recommended calorie intake. Americans have the perception that "more is better", resulting in expanding waistlines and negatively affecting health.

Physical inactivity adds to America's weight problems. Despite the proven advantages of an active lifestyle, more than 60% of American adults do not get enough physical activity to provide health benefits and 26% are not active at all. In addition, more than half of Americans do not meet the recommended guidelines for moderate physical activity and only 26% meet the recommended guidelines for vigorous physical activity. More than a third of adolescents in grades 9-12 do not regularly engage in vigorous physical activity (Behavior Risk Factor Surveillance System, 2003).

Overall, the population is working longer hours and is involved in more organized programs; therefore having reduced time to be active. Most cities are no longer designed for pedestrian traffics but for automobiles making it difficult for residents to use active modes of transportation by biking or walking. Additionally, because of the way neighborhoods are now designed, most of the population doesn't consider active transportation as an option (because it is so far out of the mindset). In many cities, fear for safety limits activities outside the home for both adults and children. Schools are eliminating or reducing time spent in physical education classes and recess; therefore, children do not have as many opportunities for activity during the school day.

Being more physically active can be as simple as using the stairs, walking to the store or parking farther away from the store entrance. Increased physical activity for overweight individuals reduces many of the illnesses associated with obesity, helps maintain weight loss, and helps prevent further weight gain. Decreasing time spent watching television, playing video games and using computers also appears to be effective for treating and preventing obesity.

Currently, the burden of overweight and obesity is the most critical public health crisis that the United States is facing. By improving eating habits and increasing physical activity and creating an energy balance (where calories consumed equal or are lower than calories expended), we can reduce obesity and other chronic diseases in adults and children. The scientific body of research now suggests that behaviors that are adopted in childhood have lasting effects into adulthood; therefore, much of the effort to change behavior should be on children and their families.

Arizona's Burden, Trends And Issues

Geographically, Arizona is the nation's sixth largest state with a continuously expanding population. According to the 2000 U.S. Census, Arizona's diverse population was more than 5 million people, and was composed of 63.8% White, non-Hispanics, 25.3% Hispanics, 5.0% American Indians, 3.1% African Americans, and 2% Asian. Eighty-three percent of the population resides in urban areas (Maricopa, Pima, Pinal and Yuma counties) with the remaining 17% of the population located in small towns, rural settings and on Indian reservations. Thirteen percent of the population is over 65 years of age. Among Arizona families with children under the age of 5 years, 19.3% live in poverty and for families headed by a single female this number increases to 43.7% (U.S. Census Bureau, 2000 & Arizona Department of Health Services, 2002).

The Epidemic:

- 57.1% of Arizona adults are overweight or obese (BRFSS, 2003).
- 28.5% of Arizona's African Americans are obese, followed by 22.3% of Hispanics, 16.9% Whites and 15.6% of other races/ethnicities, which includes American Indians. (BRFSS, 2003)
- The obesity rate among Arizona adults increased by 80% from 1990 to 2002 (BRFSS, 1990, 2002).
- 24% of low-income children between ages 2 and 5 years in Arizona are overweight or at risk of becoming overweight (Pediatric Nutrition Surveillence System, 2002).
- 24% of Arizona high school students are overweight or at risk of becoming overweight (Youth Risk Behavioral Surveillience System, 2003).

In 2002, more than half of the deaths in Arizona (54.8%) were from diseases for which overweight and obesity are known to increase the risk, including diseases of the heart (25.9%), malignant neoplasms (22.4%) and cerebrovascular disease (6.5%) (Arizona Department of Health Services, 2002). The Behavioral Risk Factor Surveillance System (BRFSS) data for 2002 shows about 6.4% of Arizonans reported that they have diabetes. This translates to at least 350,256 Arizonans. Native Americans, African Americans, and Hispanics are more likely to develop Type 2 diabetes than the population as a whole. Experts believe Native Americans are about four times as likely as the general population to develop Type 2diabetes. Arizona's 2001 BRFSS report shows that Hispanics are twice as likely as non-Hispanic whites to be diagnosed with Type 2 diabetes. In 2002, there were a total of 7,959 deaths related to coronary heart disease in Arizona and the overall mortality rate was 229.6 per 100,000 people (Arizona Department of Health Services, 2002).

Studies show the prevalence of overweight and obesity is greater in Native American children than in other children in the United States. A study of Navajo youth including children ages 5-17 years indicates the prevalence of overweight or obesity for males is 12.5%, and 11.2% for females (Freedman et al., 1997). A recent report of *Pathways*, a randomized intervention trial for the prevention of obesity in Native American children, confirms the

high prevalence of excess body fat in school-age American Indian children. Four of the six tribes participating in the *Pathways* study are in Arizona – White Mountain Apache, Pima, Tohono O'Odham and Navajo (Lohman et al., 2000).

> "The typical fast-food portion size provides much more than one meal's worth of calories and can sometimes provide more than the daily-recommended calorie intake."

According to the 2003 BRFSS for Arizona, 20.1% of respondents either met or exceeded the Body Mass Index (BMI) standard for obesity; defined as a BMI ≥ 30.0 and 37% of respondents were overweight (BMI = 25.0 - 29.9). Similar to national trends, the number of overweight (BMI >25 kg/m2) and obese (BMI >30 kg/m2) Arizona adults has increased in recent years from 44.7% in 1994 to 56.0% in 2001 (BRFSS, 2001). A 5-year summary of BRFSS data (1994-2000, n = 14,021) of weight ranges by race and ethnicity indicates that the highest levels of overweight and obesity are seen among Hispanic (55.4%) and American Indian (64.2%) individuals. Counties with the highest prevalence of overweight adults include La Paz (61.0%) and Apache (62.4%). The highest prevalence of overweight by age was among respondents 55-64 years of age (54.7%) (BRFSS, 2001).

The BRFSS 2003 prevalence data indicates that 21.2% of Arizonans did not engage in any physical activity. 50.1% of the population does not meet recommended guidelines for moderate physical activity and 70.9% of Arizonans do not meet recommended guidelines for vigorous physical activity. The 5-year summary of Arizona BRFSS data shows that the highest numbers of people reporting no leisure time activity include Hispanics (52.4%) and American Indians (37.4%). This data also show that only 18.6% of the respondents report greater than or equal to 30 minutes of physical activity at least 5 days per week (recommended amount).

In Arizona, weight data is available for low-income preschool children enrolled in the 3 Special Supplemental Nutrition Programs for Women, Infants, and Children (WIC) in the state. The Arizona WIC program reported the total percent of children under age 5 years who at anytime between 2001 and 2004 were flagged as overweight as

30.7%. In addition, Arizona ranks 35th nationally among contributors for overweight children under 5 years. The percentage of overweight children increased from 26.5% in 2001 to 29.6% in 2003 among the WIC participants. Within participating children ages 2 years and older, 11.9% were considered overweight, also demonstrating a consistently increasing trend over the last 6 years from 8.8% in 1995. In the 2 tribal WIC programs, Intertribal Council of Arizona (7,220 clients in 2001) and Navajo Nation 2001, the prevalence of overweight children under 5 years of age was 20.5% (ranking 47th among national contributors) and 12.3% respectively. Among children two years and older identified as obese represents rates of 21.4% for Intertribal Council of Arizona and 13.3% (ranking 34th among national contributors) for Navajo (U.S. Department of Health and Human Services, 2002b).

Consuming a diet high in fruits and vegetables is associated with lower risks for numerous chronic diseases, including cancer and cardiovascular disease. Even so, according to the BRFSS, 2003, only 22.9% of Arizonans consume 5 or more servings of fruits and vegetables a day, even though the current recommendation is for Americans to consume between 5-9 servings daily.

Recommendations in this plan are focused on increasing healthy eating and physical activity and decreasing physical inactivity. Arizona's communities and organizations can implement recommendations in this plan to help prevent and reduce overweight and obesity in the state of Arizona.

Existing Efforts

Arizona has had one of the most comprehensive public health nutrition services in the country for the past 30 years. The state developed a model for delivery of community-based nutrition services that included assessment, intervention, food delivery and referral that was used in the development of the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) on a national scale. Arizona was the first to implement a statewide WIC program in 1974.

The state of Arizona has provided funding to rural counties for nutrition services since the late 1970s through the Community Nutrition Program. The program evolved over the years from providing nutrition services including cholesterol screening, weight control and other topics to providing community-based nutrition interventions focusing on selected Healthy People objectives. The objectives and intervention activities were selected by community coalitions. Since 1998, 11 of 12 rural counties have been contracted to provide a series of classes for approximately 6,000 third grade students. Interventions are provided in schools with greater than 50% of the students receiving free or reduced cost lunch. The program includes three classroom sessions that promote the *5 a Day* message and one tour of the produce section at a local grocery store. Data from each of the past four years indicates significant changes in knowledge and behavior for students participating in the classes.

In the early 1980', ADHS' Preventive Health and Health Services Block Grant (PHHSBG) funds,

from the Centers of Disease Control and Prevention, to address the risk factors for cardiovascular disease. The PHHSBG and nutrition programs worked jointly to implement community-based programs through county health departments that addressed tobacco use, physical activity and nutrition. When funding for the Arizona Tobacco Education and Prevention Program (TEPP) became available, PHHSBG funds were redirected for the support of local physical activity programs based in county health departments. Close collaboration between the ADHS's physical activity and nutrition programs has continued by both the state and local levels, with staff co-funded between programs in some local agencies.

Robert Pangrazi, Ph.D., and Katrine Tudor-Locke, Ph.D., professors at Arizona State University and internationally recognized experts in physical activity have provided technical assistance in program development, implementation and evaluation to the Arizona physical activity program. Dr. Robert Pangrazi also provides training to county health department staff, conducts research in community settings, and is a consultant to the President's Council on Physical Fitness and Sports.

Included in the ADHS physical activity program is the Promoting Lifetime Activity for Youth (PLAY) Program, a 12-week, teacher-directed, behavior change program. PLAY is targeted to children in grades 4 through 8 and was designed to intervene at the age when children begin decreasing their physical activity.

Jointly, ADHS and 12 county health departments, through the PHHSBG funding from the Centers for Disease Control and Prevention, conduct physical activity programs for adults. Some of the programs implemented are: Walk Everyday and Live Longer (WELL) Arizona for older adults and the Arizona Take Charge Challenge, a modified version of the CDC's program. Additionally, one county implements an *Aerobic Winter Challenge* with more than 100 worksites and another implements the *Just a Bit to Get Fit* program, a 12-week fitness challenge for county employees. Recent collaborations that have taken place in Arizona have allowed a county health department and the Navajo Indian Reservation to design and implement *Eat and Play the Navajo Way*, a culturally specific physical activity and nutrition program.

Arizona was one of the first states to implement *5 a Day for Better Health* activities. For more than a decade, the Arizona Department of Health Services has incorporated *5 A Day* into other public health and education programs.

All Arizona WIC clients receive a *5 A Day* message on the protective holder for their identification folder, many child care centers and Head Start Programs offer *5 a Day* activities from the *5 a Day for Better Health Fruit and Vegetable Activity Book for Child Care Programs*, and the *5 a Day* message is featured in materials provided in Food Stamp offices throughout the state. Since 1998, the Community Nutrition Program in Arizona has provided three classroom sessions that promote the *5 a Day* message and one tour of the produces

ection at a local grocery store to more than 7,500 low-income third grade students each school year.

In 2004, the Arizona *5 a Day* program received a national Award of Excellence from the Produce for Better Health Foundation. The ADHS is collaborating with the Arizona Department of Education to include *5 a Day* activities in the USDA Fruit and Vegetable Snack Program being included in eight schools on the Gila River and Tohono O'odham reservations. Common *5 a Day* strategies and messages are being implemented into chronic disease prevention programs.

The mission of the Arizona Nutrition Network is to shape food consumption in a positive way, promote health and reduce disease among all people living in Arizona. Nearly all the Network funding has been from the United States Department of Agriculture Food Stamp Nutrition Education (FSNE) with activities limited to the food stamp eligible population. These services are provided through an interagency agreement between ADHS and the Arizona Department of Economic Security, Family Assistance Administration, and require dollar for dollar expenditure of state or local funds to qualify for federal FSNE funds. The local share funds come from 34 Matching Partners including schools, county health departments, tribal governments, cities, and nonprofit agencies.

The Network links comprehensive health marketing and community education efforts to change dietary behaviors among low-income individuals in Arizona. An example is the *Building Better Bones* curriculum targeted to fifth and sixth graders to encourage them to eat at least three servings of 1% or less fat dairy products each day. The Network conducts three health marketing campaigns each year with messages including:

- Eat five or more servings of fruits and vegetables each day.
- Drink 1% or less fat milk.
- Be physically active, at least 60 minutes for children and 30 minutes or more for adults on most days of the week.

Each of the three campaigns include 30-second television ads in English and Spanish, wallboards in Food Stamp Offices, billboards, a website, and education materials.

In *Healthy Arizona 2010: Collaborating for a Healthy Future*, nutrition and physical activity were selected as 2 of 12 focus areas in the plan (ADHS, 2001). Twelve objectives in *Healthy Arizona 2010* address critical nutrition and physical activity concerns in Arizona. These objectives include: healthy weight, fruit and vegetable intake, calcium, folate, breastfeeding, iron deficiency anemia, food security, food safety, and physical activity for children, adolescents, and adults. During the past 2 years, these objectives have been used to redirect ADHS nutrition and physical activity programs.

In 2000, Active Arizona (a statewide working group of *Healthy Arizona 2010*) was formed and includes more than 30 different individuals and organizations. The first initiative of the group was to conduct statewide focus groups to better understand the issues inhibiting Arizona residents from getting the recommended amount of physical activity.

The information gained from the focus groups was used to develop a media campaign the second year, *"Feeling Great: It Happens When You Move!"* In 2003, the group began collaborating with the Arizona Action for Healthy Kids Initiative to accomplish common goals.

In 2004, after hiring of staff, Active Arizona reconvened and changed its name to *Active Arizona for Life: Meeting the Goals of Healthy Arizona 2010.* Active Arizona is committed to getting Arizonans more active through this coalition.

Arizona promotes breastfeeding through a variety of coalitions and organizations. Lactation Support in Arizona To Collaborate for Health (LATCH-AZ) promotes continuing education and training to lactation professionals, other health professionals, and WIC paraprofessionals, and has developed a health marketing campaign to encourage breastfeeding mothers who return to work. Campaign materials include model worksite policies, a web site, and information packets for employers and breastfeeding women. ADHS initiated its own breastfeeding policy allowing mothers who breastfeed to bring babies to work until 4 months of age with extensions available, and providing lactation rooms for breastfeeding mothers.

In 2001, the American Hiking Society awarded Arizona the *Trails for Tomorrow* award for being the first state to show a strong partnership between the parks and recreation, open space, public health, and health organizations. Because of this collaboration, Arizona was able to implement 50 National Trails Day events statewide reaching approximately 5,000 people with its message about getting physically active on an Arizona trail.

In 2002, Arizona was selected as one of the ten magnet center sites for the Hearts-N-Parks program, a National Heart, Lung and Blood Institute and National Recreation and Park Association program designed to help park and recreation agencies encourage heart-healthy lifestyles in their communities. The nutrition and physical activity programs

> "The mission of the Arizona Nutrition Network is to shape food consumption in a positive way, promote health and reduce disease among all people living in Arizona."

provided technical assistance to parks and recreation programs. Scholarships were provided to low-income individuals and families to participate in the Hearts-N-Parks events.

"Muevete Guadalupe for Diabetes" (Move it Guadalupe) is a project to get the community of Guadalupe to be physically active. Together with the National Park Service in Tucson and the Alianza Guadalupana de Salud applied for a grant to create a walking trail for Guadalupe. Ten-thousand dollars was received from Arizona Tree Council to develop a walking trail, build a kiosk that will serve as the trail head with health messages, benches will be built by Youth Build, and 100 trees were donated by Mountain State Nursery to create shade along the trail.

Arizona applied and was accepted to participate in a National Governor's Association Policy Academy on Chronic Disease Prevention and Management that was held in August 2003. The purpose of the Policy Academy was to bring state teams together to work with national experts to design action plans for preventing and managing chronic diseases. Arizona's delegation included a representative from the Governor's Office, state legislators, community representatives and staff from the Department of Health Services and Arizona Health Care Cost Containment System (AHCCCS).

The Arizona delegation developed the following vision:

We envision Arizona to be a state where healthy living is a cultural norm, where individuals, families, schools, government, the healthcare community and where business collaboratively work to provide knowledge and opportunities for healthy life choices. Measurable health status indicators will reflect a reduction of incidence and associated risks of chronic disease and health disparities.

The Arizona focus area was obesity prevention, targeting childhood obesity, by promoting physical activity and good dietary intake. Three strategies were identified for the state.

The first strategy was to convene a forum on childhood obesity. On January 30, 2004, the *Governor's Call to Action: Healthy Weight for Children and Their Families* was held to begin the process of developing a statewide nutrition, physical activity and obesity plan. This one-day meeting included presentations in the morning followed by 11 breakout sessions in the afternoon to begin developing Arizona strategies to prevent obesity. The response was overwhelming with over 350 participant representatives from federal and local philanthropy organizations to federal, state, and local health; human service and education officials; cabinet members, legislators, community action leaders; commercial food service, food corporations and vending corporate executives.

The second strategy was to explore the feasibility of developing a wellness component to the state self-insurance program for state employees that began October 2004. In the interim, the Arizona Department of Health Services established an employee wellness council, providing health education to employees.

The third strategy was the development of a chronic care model for adult Arizona long-term care participants. This strategy has moved in a different direction, as the Arizona Health Care Cost Containment System (AHCCCS) became instrumental in the development of a Clinical Care Model

for childhood obesity. A workgroup established to address childhood obesity included representatives from AHCCCS, contractors, state agencies, providers and community organizations. A clinical care model has been developed, including practice guidelines, and will be implemented in Pima County. Other proposed activities are:

- Collaborate with the Arizona Academy of Pediatrics and the ADHS to develop self-management tools and provider toolkits;
- Develop capabilities for tracking and reporting Body Mass Index (BMI);
- Develop capabilities for the provision of nutrition education and counseling; and,
- Develop a community resource list

Additionally, the following list includes some of the activities taking place throughout Arizona. It is not a complete list, rather it is an acknowledgment that there may be activities not represented on this list.

- ADHS Employee Wellness Council – Promotes physical activity and healthy lifestyle behaviors to employees by providing on-site fitness classes and lunchtime health lectures.
- ADHS, Comprehensive Cancer Control Program – funded by the Centers for Disease Control, the program is developing a state plan to serve as a guide to action in cancer control throughout the state.
- ADHS, Arthritis Program – Funded by the Centers for Disease Control, the program encourages physical activity and proper nutrition for anyone suffering from arthritis. Recently partnering with The Greater Southwest Chapter of the Arthritis Foundation, a self-help course was developed for arthritis sufferers to learn about pain management, exercise, nutrition and stress-relief.
- ADHS, Diabetes Prevention and Control Program – Funded by the Centers for Disease Control, this program reduces the burden of diabetes in Arizona through community interventions, health communications, and health systems development.

- ADHS, STEPS to a Healthier US Program – Funded by the Centers for Disease Control, the program currently works with 3 border counties and the Tohono O'odham Nation to implement community-driven intervention strategies that focus on primary, secondary and tertiary prevention activities targeting asthma, diabetes and obesity.
- ADHS, The Women, Infants and Children Program (WIC) – Federally funded by The United States Department of Agriculture (USDA), WIC provides Arizona residents with nourishing supplemental foods, nutrition education, and referrals. The program also delivers the USDA funded, Commodity Supplemental Food Program to eligible women, children over 5 and seniors.
- ADHS, Farmers Market Nutrition Program – Funded by the Arizona State Legislature and the Nina Mason Pulliam Charitable Trust. Through AZ FMNP clients are able to purchase $30 of fresh, locally grown fruits and vegetables at Approved Farmers' Markets each year. These direct purchases of locally grown fruits and vegetables increase the growers' share of the food dollar, keep more of the consumer dollar in local communities, and help to strengthen farmers' markets.
- ADHS, Office of Oral Health – Promotes healthy eating behaviors and educates the public about the contribution of poor dietary habits to oral diseases, specifically tooth decay, periodontal disease and oral cancer.
- ADHS, Office of Women and Children's Health – Provides community health grants to various entities to enable them to build infrastructure and provide community-based services to improve the health status of women and children targeting infant mortality and those at risk of health disparities.
- The *Healthy Aging 2010* program focuses on the creation of common messages to educate and heighten public awareness of the activities that improve or maintain health as we age.
- The Bureau of Public Health Statistics collects analyzes and reports on a number of the data sources for ADHS including vital records, Hospital Discharge data, the Behavioral Risk Factor Survey, cancer registry and the birth defects registry.

Some of the other existing efforts within the state of Arizona include:

- Lighten Up Arizona – Fulton Homes Grand Canyon State Games presented by Arizona Public Service celebrates the first of many initiatives to help Arizonans, young and old, obtain and maintain a healthy quality of life. Since the introduction as "The Lifestyle Component of the Grand Canyon State Games," The Lighten Up Arizona Program has created a community, providing team members the resources, knowledge, and support necessary to achieve their goals.
- Genesis Diabetes Prevention Program – This program is funded by the U.S. Department of Health and Human Services (DHHS) and the Indian Health Services Special Diabetes Program for Indians. It is for the Native Americans and offers diabetes prevention services to infants and children under the age of 5 and offers families an opportunity to actively participate in the promotion of healthy lifestyles, and improves the well-being of their children.
- Quest Diabetes Prevention Program – This program is funded by the U.S. Department of Health and Human Services (DHHS) and the Indian Health Services to provide classroom education about diabetes prevention, the value of a daily mile walk with the teacher, and modification of school breakfast and school lunch. The goal is to teach children in grades kindergarten through grade 3 that diabetes is preventable with healthy lifestyle choices.

- Arizona Action for Healthy Kids – This movement in Arizona came from a national effort known as the Action For Healthy Kids (AFHK) From this national group, the Arizona Department of Education (ADE), ADHS, The Dairy Council of Arizona, and other community agencies, schools, and industry stakeholders have worked together to develop The Arizona Healthy School Environment Model Policy.
- ADE Team Nutrition Mini-Grants – Eight pilot schools are implementing portions of the Arizona Healthy School Environment Model Policy. With the funding of a 2003 Team Nutrition Training Grant, the ADE, Health and Nutrition Programs are helping Arizona educators and students create a healthy school environment one school at a time. In 2005, five additional schools will be able to implement the pilot.

- Arizona Association for Health, Physical Education, Recreation and Dance (AzAHPERD) – promotes healthful lifestyles through quality education for all populations and provides leadership to schools, community and state- wide programs in the areas of health, physical education, recreation, dance and other movement-related programs.
- Arizona State University (ASU) – Conducts research regarding weight control and physical activity and provides community lectures and classes on weight control, proper nutrition and physical activity.
- InterTribal Council of Arizona (ITCA) – Promoting Fit WIC, this project focuses specifically on addressing the problems of obesity in the WIC population by educating participants about the importance of healthy food choices and daily physical activity.
- Wellness Council of Arizona (WELCOAZ) – Collaborates with healthcare providers, community leaders, businesses and institutions to improve the health of employees and their families. WELCOAZ strives to be the recognized leader and resource for worksite health promotion in Arizona.
- Women Together for Health – Funded by ADHS, Office of Women and Children's Health – is a program designed to target minority women age 18-44 years old, and encourage increased physical activity, healthy food choices and reducing risks of chronic disease.
- People Together for Health – Funded by ADHS, Office of Women and Children's Health – is a program designed to target minority families, anyone over age 13, and encourage increased physical activity, healthy food choices and reducing the risks of chronic disease.
- *Healthy Arizona 2010 and Arizona Healthy Aging 2010* have provided mini-grants to organizations to develop and implement health promotion programs focusing on healthy eating and physical activity.

Global Social Marketing Approaches

As the Arizona Nutrition and Physical Activity State Plan workgroups developed objectives, strategies and action steps, a common theme through all groups was the need for a comprehensive integrated health marketing and media campaign to raise public and professional awareness of the overweight and obesity epidemic as a health issue.

Another consistent theme was the need to deliver consistent, intergenerational and culturally sensitive health messages targeted to all population segments and reaching all spheres of influence based on the Social-Ecological Model. Because every workgroup wanted to address these issues in the plan, this section of the plan is devoted to health marketing and media.

Despite the expansion of social marketing programs in public health, social marketing remains poorly understood by many. This misunderstanding poses a threat to the future of social marketing because, as stated by social marketing practitioner William Smith (1993), "the problem with social marketing is that there is often little or no marketing in social marketing." If non-marketing based health education and health behavior interventions continue to be developed under the banner of social marketing, social marketing may fail to live up to its promise to have an impact on social change.

Social Marketing

While many definitions exist, social marketing is the application of commercial marketing concepts to the planning and implementation of programs intended to influence the voluntary behavior change of a target audience (Andreasen, 1995). The primary objective of social marketing is to influence the voluntary behavior of a target audience. This influence can be directed toward efforts to either change behavior or maintain current behavior. A critical attribute of the social marketing approach is to offer target members an appealing package that offers attractive benefits and reduces critical barriers to choices currently available and to create and deliver new, alternative choices in order to influence them to choose healthier options.

Social marketing is a consumer-oriented process that focuses on the power of choice in making decisions about health behavior. Social marketers must concentrate their activities on understanding and responding to the target audience's perspectives. Research, segmentation, and targeted programs are three important aspects of social marketing.

> "Social marketing is a consumer-oriented process that focuses on the power of choice in making decisions about health behavior."

Social marketing *research*, both formative and environmental, generates a better understanding provided by the target audience relative to the desired behavior change and enables the marketer to design an intervention most suited for the perceived needs, benefits sought and barriers of concern related to the specific behavior targeted. It also helps marketers understand the environment in which consumers make their decisions. Two types of research are the most commonly used in social marketing development. Qualitative research, which utilizes focus group testing, designed to provide insights without preconceived notions. This type of research provides more than "yes or no" answers and is a better use for developing of messages. *Quantitative research* is generally a survey or poll. Where qualitative research will reveal true attitudes and perceptions, the *quantitative research* can help determine if they are of true significance.

Audience/Market Segmentation of a larger, more heterogeneous target market into smaller segments based on demographical, geographical, psychological and behavioral variables, allows the marketer to identify subgroups of individuals who may respond to an intervention in a similar way. Audience segmentation increases the success of a social marketing campaign because marketing efforts are concentrated on certain markets. By using research and segmentation, social marketers are able to develop targeted programs based on the unique needs and circumstances of each segment.

Media Campaigns

Media is powerful and it can play an influential role in promoting or discouraging healthy behaviors. In producing a media message, the social and

organizational factors that may influence behavior must be considered. Additionally, the media effect, or the consequences of media exposure on individuals, groups, institutions and communities, must be addressed. Appreciating media effects is useful in understanding and evaluating health promotion and disease prevention efforts and can provide the structure for the development of community interventions. While mass media campaigns have the potential to play a significant role in promoting healthy eating and physical activity, more studies are needed to prove that potential.

There is often a misunderstanding about the difference between a mass media campaign and a marketing campaign. Whereas a marketing campaign may include mass media, they are two different types of market infiltration. It is necessary to be aware that media campaigns are not a "one size fits all" model. Not all markets are designed for mass media campaigns; dissemination of messages via media outlets in the rural areas of the state is challenging due to the limited media resources available for distributing a message. However, focus group testing would determine the effectiveness of a media campaign in certain areas to specific target audiences.

The application of social marketing and behavior change models to health behavior in the media studies framework that can influence health outcomes, usually in the context of a planned campaign intervention (Finnegan & Viswanath, 2002). Further, in intervention planning models, evidence-based media strategies are useful in formative-analysis, and strategy-development stages, and in evaluating outcomes. Mass media, especially television, can be used to amplify local prevention efforts and create a positive impact in public health, but it is imperative that public health advocates build relationships with the media for such change to occur.

Social Ecological Model

In the introduction of the Arizona Nutrition and Physical Activity State Plan, the social-ecological model was introduced. The model suggests that behavior change requires not only educational activities, but also advocacy, organizational change efforts, policy development, economic support and environmental change and that these "spheres of influence" can have an impact on individual health behavior. Through this we know public health issues must be approached at multiple levels, stressing interaction and integration of factors within and across levels.

Until recently, the impact of ecological models on health behavior research and health education practice had not been substantiated. Now the emerging consensus suggests that multilevel interventions are promising approaches for disease prevention and health promotion efforts (Smedley and Syme, 2000). As stated by Sallis and Owen (2002), "Multilevel interventions may be our best hope for reducing the toll of lifestyle-related diseases that continue to be epidemic in developed nations and that are rising in developing nations, but interventions should be based on research that identifies the critical interpersonal, socio-cultural and environmental policy correlates of health behavior."

Health Marketing Approaches In The Arizona Plan

Health marketing can be used to address health issues at all levels of the socio-ecological model, addressing variables that help or hinder the desired behavior. Public health is using health marketing theory to build programs with community input. This approach is used a great deal by government agencies, community-based organizations and social/health coalitions to affect social change.

The Arizona Nutrition and Physical Activity State Plan will identify interventions that can be directed toward groups in schools, worksites or other segments of the community. Multi-level marketing strategies will be critical to the state plan to promote higher levels of physical activity and healthier eating choices in an effort to reduce chronic disease and obesity throughout the state. Although the research is limited regarding population approaches to modifying behavior such as physical activity, other areas of public health programming may be helpful to study (e.g., interventions aimed at the reduction of tobacco use). Approaches using social marketing and ecological models to intervene on individual behavior can have an impact in population-based programs such as those that will emerge from the state plan.

The use for social marketing is best defined by Sallis and Owen (2002) and is as follows:

"There is great potential for changing physical activity of entire populations through community-based and mass media programs. Currently, we have limited information on what types of large-scale initiatives are likely to be successful. Programs in schools and worksites that show particular promise alter policies and environments to facilitate physical activity. Social marketing models can be applied more effectively to use mass media approaches to target those who are in the earlier stages of change. Ecological models have barely been applied to nutrition and physical activity promotion. Research on population interventions for healthy eating and activity is especially important because it can be used directly by decision makers in governments and in the private sector to enhance health-promoting behaviors and hence improve the health of entire populations".

Nutrition And Physical Activity In The Physical Environment

Experts have determined that obesity is not only a result of poor personal choices in diet and lifestyle, but is also rooted in surroundings.

Americans have purposefully engineered physical activity out of their lives through dependence on vehicles, materialistic values, laborsaving devices, sedentary lifestyles, fast-food and zoning and development that discourages activity (Gerard, 2003). Because of this, Arizonans need to make a conscious effort to bring physical activity back into their daily lives. That can, in part, be done through developing active community environments.

"Active Community Environments" is a term used to describe communities where people of all ages and abilities can easily enjoy walking, bicycling, and other forms of recreation. These communities support and promote physical activity with adequate sidewalks, bicycle facilities, paths, trails, parks and recreational facilities. These communities also have implemented mixed-use industrial and residential areas using a linked network of streets that allow for easy walking between homes, work, schools and stores (U.S. Department of Health and Human Services, 2003).

Active transportation is a term used to describe purposefully getting from point A to point B by walking, bicycling or using any other sort of active mode of transportation. The capability for physical activity is partly determined by how communities are designed and built. With the increase in and expansion of suburbs, residents are using active modes of transportation less and less and using their motorized modes of transportation more. Specifically, since 1977, trips made by walking have declined 40%. Currently, 90% of all adult trips and 70% of all children's trips are made in vehicles. Furthermore, 25% of all trips are within a mile or less and 75% of these short trips are made by car (Schmidt, 2003).

Unfortunately, existing policies, which include current zoning practices and disconnected development patterns, have created environments that make active transportation extremely challenging. This is understandable considering the way designs cause fear of traffic and safety considerations, walking is one of the most hazardous methods of transportation in the United States. These challenges can be reduced by creating communities that have safe,

connected and integrated bicycle and pedestrian systems and improving crosswalks, street and sidewalk lighting and traffic signals. Traffic calming should be considered through residential areas to make routes safer for residents to use as active transportation or for recreation.

To make these changes, it is crucial that policymakers understand the public health impact of creating healthy community designs that support active transportation and recreation activities. Communities can promote healthful eating and physical activity by creating an environment that is supportive of accessible and affordable healthy foods and economically and socially supportive of active transportation and recreation. If healthy behaviors are not easy to start and maintain, it is less likely that people will participate in them. In order to support the efforts to reduce overweight and obesity, the physical environment of communities, worksites and other public facilities must address eating healthy and physical activity issues to make healthy lifestyles easier and more culturally acceptable.

In developing strategies for the state plan, several components were addressed that must be present *throughout* the plan and are implied in *each* of the physical environment objectives and strategies. These are:

- There needs to be strong communication between transportation officials, planners, developers, local and state policymakers, citizens, health departments and other decision makers.
- These recommendations should be adaptable for both urban and rural areas.
- All objectives and strategies should consider and address the needs of all individuals, including those with special health care needs.
- Healthy community design, transportation, and public facilities (buildings, sidewalks, playgrounds, etc.) should encompass and address the unique needs of individuals with disabilities and other special health care needs.

Objectives And Strategies

Objective #1

Educate and promote healthy design of Arizona communities.

Strategy A: Define healthy community design.

Action Steps:

- Survey existing research around the country to define healthy community design
- Identify tools that grade/rank communities on physical environment

Strategy B: Educate planners, developers, policymakers and other decision makers about best practices and the importance of healthy designed communities.

Action Steps:

- Determine messages that will influence this population to implement a healthy design
- Work with architect and engineer education programs to include healthy environment in curriculum
- Investigate the use of incentives for encouraging communities to make changes to designs

Strategy C: Educate citizens on the importance of healthy community design and encourage them

to become advocates in their community regarding the issue.

Action Steps:

- Use existing research on healthy community design, including new developments and existing structures, to educate public
- Identify and promote model cities (local and nationwide) to raise expectations of home buyers and community members
- Organize and plan groups to advocate
- Identify leaders within citizen groups to lead the advocacy charge

Objective #2

Recommend that Arizona communities assess and plan for healthy community designs and/or re-designs in both urban and rural areas.

Strategy A: Develop criteria/recommendations for new and existing developments on how to achieve or enhance a community to reflect a healthy community design.

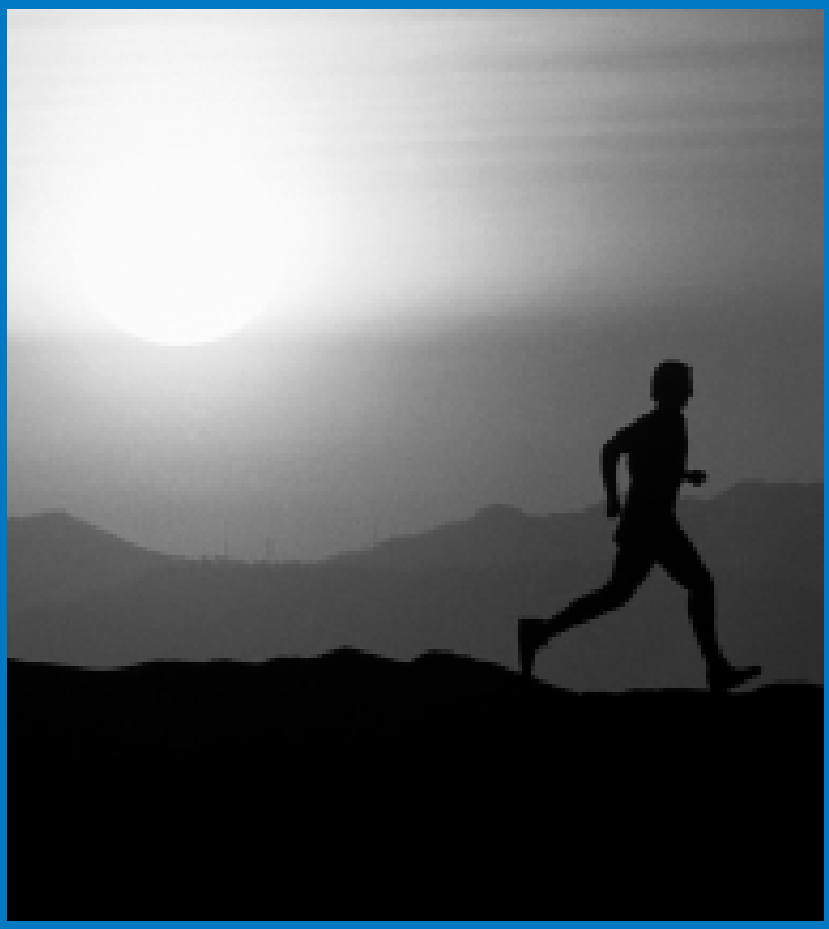
Action Steps:

- Identify various resources and/or programs for communities to access
- Investigate evidence-based practices and current research in public health/physical environment
- Convene a taskforce to assist in developing criteria/recommendations
- Explore current or new legislation or building codes to include requirements for cities and counties to use these recommendations
- Develop criteria for new communities
- Create related criteria for existing communities
- Encourage communities to develop or identify an existing community project to develop their goals and objectives

Strategy B: Create/identify a community assessment tool/report card that includes public health components of physical activity and nutrition to be implemented at the local level.

Action Steps:

- Identify resources/procedures that are already available for developing the public health component questions for the assessment tool
- Determine how to implement
- Investigate using incentives for communities that use the tool
- Encourage communities to use the tool to assess their healthy community design status



Nutrition And Physical Activity In The Community

Introduction

Communities reflect the needs and priorities of their residents. Community members represent individuals, organizations, industry, government and faith communities. When communities come together for a common concern, a powerful forward movement can be generated.

The scope and strength of community support for engaging in physical activity and promoting healthy eating varies widely in Arizona. Significant numbers of Arizona residents live in rural or tribal communities wherein comprehensive services and access to them are not readily available. While the metropolitan areas of the state benefit from a more comprehensive array of services, most residents are not recipients of such programming.

In the Arizona Nutrition and Physical Activity State Plan workgroup planning process, three distinct community-related workgroups were identified to address the healthy eating and physical activity components of the plan: Family, Community and Healthcare. As workgroups identified issues critical to the range of settings, it became evident that there was overlap in the general goals and objectives on which they were working. So, the Family and Community workgroups were combined. The Healthcare workgroup, while an integral part of the larger community, remained a separate entity because of unique issues being considered by that group.

As the state plan is presented, the Family/Community and Healthcare objectives, strategies and action steps are presented under the larger framework of Nutrition and Physical Activity in the Community.

Families/Community

While we traditionally think of community as meaning the people in a given geographical location, community can mean any group of people with something in common. In many instances, cities are made up of many overlapping communities; for example, the faith community, the arts community, the medical community, the elderly community, the business community, ethnic community groups, and families. Individuals can be a part of one or

several of these community groups. Because of this broad definition, communities can have a large positive impact on promoting healthful eating and physical activity among its community members.

The most important food-related lifestyle change of the past two decades is probably the increase in consumption of food prepared away from home, whether eaten in a restaurant or as take-out or home-delivered meals. But when Americans order their restaurant or take-out meals, fruits and vegetables seldom make the list. United States Department of Agriculture (USDA) data indicate that while food prepared away from home makes up about a third of the average American's daily caloric intake, it accounts for less than half a serving of fruit and 1-1/4 servings of vegetables (Guthrie, 2004). This style of living combined with the decrease in physical activity that has occurred can have a huge negative impact on families where children are present. Children often model the eating and activity behaviors of their parents and, in general, overweight parents tend to have overweight children.

Individuals can eat, sleep, work, go to school, shop and socialize in diverse locations, leading to a sense of disconnection from any one particular community environment. The escalated pace of our lives has contributed to a sense of isolation that can make people depressed and more prone to unhealthy lifestyle behaviors such as eating meals on the run or in front of a television. Because of this, community interventions need to meet the needs and interests of diverse audiences.

Community members are encouraged to partner with each other to provide an economically and socially supportive environment where healthy eating and physical activity behaviors are the norm. Building a community that supports healthy eating and the opportunity for regular physical activity opportunities requires a commitment from community members to advocate for and sustain health-promoting policies and practices.

This section of the Arizona Nutrition and Physical Activity State Plan provides ideas on what families and communities can do to assist in this effort.

In developing strategies for the state plan, several components were addressed which the group agreed must be present throughout the plan and are implied in each of the community goals. These are:

1. It is important to link to existing websites as resources for providers with community specific information about state, community, and federal programs and provide online access to this information.
2. Coordinate leadership and programs such as Governor's Council on Sports and Physical Fitness, Healthy Arizona 2010, and Action for Healthy Kids, etc., to promote shared goals throughout the plan that address/plan for/incorporate sustainability should be overarching goals. To include:
   - Recruitment of health advocate role models in highly visible leadership positions who can influence business and industry
3. All media messages should be consistent and recognizable and sensitive to the intergenerational and cross-cultural needs of Arizonans, including those with special health care needs.

Objectives And Strategies

Objective #1

Promote and encourage all Arizona residents to make healthy lifestyle choices.

Strategy A:

Deliver a social marketing campaign to the public about preventive measures that can be taken to prevent obesity and other chronic diseases and saturate communities with culturally sensitive and intergenerational media messages promoting active living and healthy lifestyles.

Action Steps:

- Develop a campaign that has a statewide focus for the common messages, (e.g., promote 5 servings of fruits and vegetables a day, 2 or less hours of screen time, 30 minutes physical activity per day, portion control) focusing on simple message identifying what is healthy
- Work with local media to promote healthy living. (billboards, radio, print, school media, business newsletters, etc.)
- Market existing programs in communities about active living and healthy lifestyles using a unified health marketing message (slogans)
- Promote use of mass transit and physical activity and other public messages at transportation stops including messages on the vehicle itself
- Ask the television businesses for incentives, free airtime promoting physical activity and healthy lifestyles
- Use public service announcements for reducing inactive screen time
- Partner with faith communities to provide weekly promotion of messages
- Designate and empower influential leaders in the community to become experts and advocates for nutrition and obesity prevention
- Encourage local businesses to promote walking programs and provide financial assistance for incentives

> "Community members are encouraged to partner with each other to provide an economically and socially supportive environment where healthy eating and physical activity behaviors are the norm."

Strategy B:

Increase social awareness of the benefits of breast-feeding to make it more socially acceptable and remove constraints that prevent exclusive use of breast milk.

Action Steps:

- Develop a cross-cultural media campaign to educate moms regarding health/economic benefits and acceptability of breast feeding
- Provide peer counseling in communities throughout the state
- Support and market 24-hour hot line for breast-feeding consultation
- Increase availability of breast pumps through corporate sponsorships or agency sponsored reduced prices
- Promote breastfeeding policies at work sites and public places
- Include in school health curriculum at age appropriate level.
- Educate health care providers and include breast-feeding education/videos in all prenatal education and childbirth classes
- Increase hospital contacts to promote hospital breast-feeding options
- Increase the number of International Board Certified Lactation Consultants (IBCLC) or Certified Breastfeeding Counselors (CBC) and provide financial support for training
- Encourage hospitals to create a policy about breast-feeding to new mothers
- Encourage La Leche League support groups
- Increase training for nurses and health care workers on advantages of breast-feeding

Strategy C:

Actively educate and promote healthy eating behaviors that will enhance healthy weight through community campaigns.

Action Steps:

- Increase access to and consumption of fruits and vegetables through the promotion of community gardens, food banks, WIC, Arizona Farmer's Market Nutrition Program, and Food Stamps Gleaning Program
- Educate consumers on healthy choices utilizing schools, fast-food, restaurants, supermarkets about using portion size plates as a tool in reducing portions
- Encourage family meals by teaching WIC clients cooking skills, supermarket demonstrations, encouraging activity and conscious eating
- Promote healthy eating at senior centers
- Partner with supermarkets and restaurants to provide educational materials for patrons
- Provide budget and finance training/assistance to families showing how to re-direct money for more nutritious foods
- Develop marketing strategy to promote 5 a day to men

Strategy D:

Partner with community groups to advocate for physical activity and nutrition awareness for children with special needs.

Action Steps:

- Educate groups on obesity issues and provide supporting information
- Develop messages specific to this audience
- Provide information to this audience through targeted publications and advocacy

Objective #2

Integrate a culture of physical activity throughout Arizona communities.

Strategy A:

Use motivational strategies to encourage people to make time for conscious daily activity and to build physical activity into their daily routine.

Action Steps:

- Create a statewide, community-based activity program with an emphasis on promoting lifetime activity
- Educate about why daily physical activity is important
- Create indoor space in the Capitol Mall area for physical activity for state employees; work with legislators, Arizona Department Of Administration (ADOA), and Risk Management to make this happen; have Governor lead off an Arizona Workout Day
- Schedule and promote fun runs or walk events
- Increase use of schools and community centers for public physical activity classes
- Partner with law enforcement to increase levels of safety in communities and/or initiate neighborhood safety programs
- Incorporate family physical activity opportunities and facilitate transportation for community physical activities and community events.
- Promote community gardening as a family physical activity
- Publicize existing resources and current free or low cost physical activity programs
- Utilize technology to promote physical activity programs

Strategy B:

Use existing community education resources to communicate the healthy weight and physical activity message.

Action Steps:

- Market/advertise existing resources and current free/low cost physical activity programs
- Incorporate teaching healthy behaviors into mandated and voluntary community parenting classes
- Partner with faith community to provide weekly promotional messages
- Identify an expert to do health education interviews and presentations
- Utilize tobacco prevention education programs for children to expand opportunities for healthy weight and physical activity information dissemination
- Use neighborhood associations, block watch and parks and recreation programs to reach families with messages
- Partner with gyms and fitness centers to decrease membership fees to be more affordable to everyone

Healthcare

The healthcare delivery system is an essential setting in the community for interventions targeted at reducing chronic disease and conditions related to overweight and obesity. The majority of Americans interact with the health care system at least once a year (U.S. Department of Health and Human Services, 2001). As people look to their healthcare providers for guidance, all healthcare professionals, including healthcare workers, nurse, allopathic physicians and alternative medicine practitioners, are in a position to influence the physical activity and eating choices made by patients and families. Furthermore, health professionals can effectively reach other spheres of influence within the community such as policymakers, healthcare advocates and special interest groups and serve as catalysts for intervention efforts. It is well documented that physicians play an important role in influencing personal health behavior when they take the opportunity of the "teachable moment" to ask and advise

patients about behaviors that are critical to their health and well-being.

For children and adolescents, in addition to the clinical setting, the opportunity exists to develop school-based interventions and counsel children and their families about physical activity. For adults, the healthcare system presents a logical setting to develop and implement comprehensive weight management programs.

Organizations such as Kaiser-Permanente are providing a variety of programs and implementing policies to help combat obesity. With a focus on healthy lifestyle choices and attaining a healthy weight, as opposed to "dieting" or reaching an "ideal" weight. Its' innovative program is achieving success utilizing prevention, screening and management of patients with a secondary chronic disease and managing those with obesity. Kaiser-Permanente's National Weight Management Initiative fosters innovative programs, disseminates best practices to providers across regions, develops evidence-based treatment protocols for members of all ages across the weight spectrum, and partners with community groups, schools, and state agencies (National Governor's Association, 2002).

One concern among healthcare professionals is that there is not enough time during patient visits to ask, educate, advise, and provide adequate follow-up and evaluation of overweight and obesity, physical activity and nutrition interventions. Even if time were not a factor, many healthcare providers feel they do not have the adequate tools needed to discuss the topic properly. In fact, most physicians receive only a few hours of education during their medical school training on topics related to physical activity, nutrition, and how to effectively influence or change patient behavior.

In the Arizona healthcare community, key issues include recognition from healthcare providers of the long-term risk of childhood obesity as a chronic condition, the implementation of early assessment and intervention strategies, development of a health marketing campaign about preventive measures that can be taken to prevent obesity, advocacy for more longitudinal, comprehensive training programs for health professionals, and influencing the insurance industry to support reimbursement for medical services related to overweight and obesity.

Because the healthcare community includes many settings, strategies must be identified that will utilize a consistent message in all areas, including hospitals, multi-specialty clinics, community health centers, offices of healthcare professionals and public health departments. Collaboration with medical schools and other health professional programs to include assessment of Body Mass Index (BMI) and treatment approaches for overweight and obesity is essential. Cooperation will be needed from parents, schools, communities and managed care providers to promote positive change. Working together to achieve an integrated and comprehensive system of care is critical. Approaches used must incorporate intergenerational media messages promoting

preventive screening, healthy weight and physical activity options for the prevention and treatment of obesity.

In developing strategies for the state plan, several components were addressed which the group agreed must be present *throughout* the plan and are implied in *each* of the healthcare goals. These include:

- Incorporate a behavioral and mental health component at every sphere of influence and involve behavioral health professionals in planning efforts, with consideration for behaviors that lead to obesity, stages of change and the obesity and depression link
- Foster Healthy Community 2010 partnerships throughout the plan
- All objectives and strategies should consider the needs of all individuals, including those with special health care needs

Objectives And Strategies

Objective #1

Deliver a health marketing campaign about measures that can be taken to prevent obesity providing culturally sensitive and intergenerational media messages promoting preventive screening, healthy weight and physical activity options.

Strategy A:

Develop a universal health message for consistency in consumer education, incorporating concepts such as 5 a Day, portion control, and family meals.

Action Steps:

- Identify the biological, psychological, social and cultural dimensions of the educational message
- Establish priorities for anticipatory guidance in primary care settings to promote such behaviors as eating 5 fruits and vegetables per day
- Conduct focus groups to assist in design of messages and programs
- In all messages, address the causes, prevention, and health risks of obesity
- Develop promotional messages about breast-feeding

> "The healthcare delivery system is an essential setting in the community for interventions targeted at reducing chronic disease and conditions related to overweight and obesity."

- Create and distribute posters with the messages for exam rooms, medical and dental waiting rooms, community centers, churches, schools, pharmacies, hospitals, and health clubs

Strategy B:

Develop cross-cultural educational campaigns that for the parents early childhood through school-aged populations.

Action Steps:

- Partner with local media, including faith-based and tribal media outlets to disseminate nutrition and physical activity messages,
- Prepare in public service announcements for distribution to the media
- Organize parents as advocates at the grassroots level and include parents and families in all media messages and incorporates this component to existing messages
- Partner with school nurses, parent teacher associations and school lunch programs to provide information to children
- Provide nutrition and physical activity messages to pre-school aged children
- Provide new parents with information on healthy weight for children and families while still hospitalized, i.e., during breast-feeding education
- Develop links from the ADHS website to direct residents to high-quality nutrition and physical activity education sites

Objective #2

Create multiple mechanisms for community healthcare agencies to exchange information and to solidify a universal message.

Strategy A:

Develop community organization collaboration to identify consistent messages.

Action Steps:

- Partner with existing programs and coalitions to distribute literature, share public awareness campaigns, and to collaborate on special events and environmental change
- Identify and archive resources for organizations to access
- Disseminate messages through professional organizations and continuing education opportunities
- Develop a message map to identify messages appropriate at various age groups and which agencies or organizations will and should deliver these messages

Objective #3

Facilitate systematic, longitudinal education for healthcare professionals and healthcare consumers.

Strategy A:

Develop an evidence-based medical curriculum to educate health professionals on issues related to healthy weight screening, prevention, assessment, referral and management, and obesity treatment options.

Action Steps:

- Identify appropriate groups of health professionals to develop curriculum, and include use of biological, psychological, social, and cultural and developmentally appropriate patient education materials
- Identify delivery methods for the curriculum
- Integrate messaging into existing training, residency, or fellowship programs and target post-graduate health professionals for training on more obesity-specific education, current pediatric screening recommendations and anthropomorphic measurement protocols

- Develop culturally, developmentally, socially appropriate, and consistent messages, including the benefits of breast-feeding, for patient education
- Strongly recommend that clinicians, schools and all healthcare providers measure and track Body Mass Index (BMI) as well as educate individuals on their BMI status

Objective #4

Promote access to and encourage economic support from the insurance industry for convenient healthcare and prevention services from all health professionals.

Strategy A:

Identify evidence-based programs that incorporate prevention and treatment as it relates to obesity.

Action Steps:

- Conduct an assessment of existing programs
- Based on analysis of data, work with top healthcare leadership to promote implementation of, or develop best practice interventions designed to address the needs of targeted populations
- Establish and promote standards of practice, quality assurance for managed care, and other healthcare delivery systems

Strategy B:

Support partnerships to implement medical insurance incentives for healthy behaviors and to discount insurance rates for companies with wellness programs.

Action Steps:

- Engage top leadership from public and private health plans, businesses, and policy staff in all elements of partnership and incentive development
- Create funding incentives for families and patients; employers; providers; nutritionists; educators and wellness programs that promote interventions that encourage regular physical activity and healthy eating
- Research evidence-based programs and identify programs that currently reimburse, including criteria for reimbursement
- Compile and make available evidence of economic benefit to those services
- Support efforts to secure funding through grants and other funding sources for initiatives that promote prevention and treatment services
- Migrate best practices into existing programs

Strategy C:

Advocate for preventive reimbursement and for healthy weight management and obesity-related interventions including behavioral health and group visit coverage.

Action Steps:

- Engage top leadership from public and private health plans, businesses, and policy staff in all elements of planning
- Compile and make available evidence of economic benefit to those services
- Migrate best practices into existing programs
- Provide and promote reimbursement for services of health professionals such as registered dietitians, psychologists and clinical social workers for proven interventions or treatment services provided to individuals who are overweight or obese

Nutrition And Physical Activity In The Worksite

American workers spend an average of 47 hours per week at work. That is close to, if not more than, the time spent at home awake each week.

Today, American's work 164 more hours than only 20 years ago (Bureau of Labor Statistics, 2004). Furthermore, almost 63% of Arizona workers sit or stand at work (U.S. Department of Health and Human Services, 2003). Because of the amount of time spent at work and because employees are a captive audience, worksites are a vital place to influence lifestyle behaviors such as physical activity and healthy eating. Worksites can influence their employees not only through personal behavior change but also through interpersonal, institutional or organizational change, support systems, and policies.

The requirements of jobs and careers contribute to the obesity epidemic. Fast-paced lifestyles, longer hours, and higher job pressures are pushing Americans to eat foods that may be convenient and fast but are less nutritious. Americans eat fast-food during work hours and during their free time. As a matter of fact, Americans now spend more than $110 billion on fast-food each year (Brownell, 2004).

Worksites can provide assistance and encouragement for healthy lifestyles. The environment of the worksite is very important to create motivation and support for making healthy choices. Many employers are interested in implementing a worksite wellness program because by launching a health promotion program, employers can take important steps toward preventing unnecessary sickness and death.

If worksites provide an environment and programs in which employees are able to include physical activity and healthful eating into their day, it benefits both employees and the business' bottom line. Research suggests that 80% of obese adults have diabetes, high blood pressure, heart disease, gallbladder disease, high cholesterol and/or osteoarthritis. This costs employers more than 39 million days of work time each year. However, sustained weight loss of just 10% gives economic and health benefits to the employer and employees (Partnership for a Healthy Workforce, 2001). Research continues see higher productivity when a worksite wellness program is in place. Healthy workers have higher levels of productivity, lower

costs of healthcare, lower absentee levels and higher morale.

This section of the Arizona Nutrition and Physical Activity State Plan provides ideas on what worksites can do to assist in this effort.

In developing strategies for the state plan, several components were addressed which the group agreed must be present *throughout* the plan and are implied in *each* of the worksite goals. These are:

- Address all sizes and types of businesses
- Explore factors that will influence employers to fund and implement a wellness program for employees
- All objectives and strategies should consider and address the need of all individuals, including those with special health care needs

Objectives And Strategies

Objective #1

Encourage and support work cultures that promote and are conducive to physical activity and healthy eating.

Strategy A:

Develop/identify and implement a stage of readiness tool for employers to assess the creation for or improving the existing workplace wellness programs.

Action Steps:

- Determine experts to develop or identify an assessment plan or tool
- Use a systematic approach for assessment and referral to resources

Strategy B:

Create a web-based health promotion best practices resource and toolbox for employers to assist with developing their wellness programs.

Action Steps:

- Provide technical support for the website
- Convene a creative team in conjunction with technical support
- Develop website content
- Conduct a focus group of employers and wellness coordinators to help determine content
- Promote website and online toolbox

Objective #2

Create a wellness market within employer and employee groups.

Strategy A:

Develop a media campaign for the general media about the benefits for employees of wellness at the workplace.

Action Steps:

- Conduct focus groups on messages
- Determine media outlets
- Secure production resources

Strategy B:

Educate employers on the benefits of wellness programs at work.

Action Steps:

- Identify existing data/ that supports cost benefits of workplace wellness
- Conduct focus groups of employers to determine what will influence them to start a wellness program in their worksite
- Create a peer-to-peer advocacy group for employers

- Create a group to advocate employers to start a wellness program
- Explore ideas for incentives to offer employers if they adopt a wellness program
- Develop cost benefit educational packet (matching the demographics of employers)

Strategy C:

Create a recognition program for worksite wellness programs.

Action Steps:

- Develop criteria for award levels
- Determine media timeline and messages
- Have a proclamation event in support of program
- Link media and application to resource websites (so that worksites can take the steps necessary to qualify)
- Create a website to recognize and profile award winners

Objective #3

Encourage worksites to implement breast-feeding policies.

Strategy A:

Promote worksite breast-feeding policies and their benefits to employers

Action Steps:

- Create a letter, fact sheets and brochures summarizing the benefits of breast-feeding
- Create a letter, fact sheets, and brochures on breast-feeding benefits at work for employers and employees to encourage the implementation of breast-feeding program/policy
- Work with lactation nurses and breast-feeding counselors to educate hospital patients to breast-feed at work and to be an advocate for a breast-feeding policy at their worksites
- Encourage worksites to provide a comfortable environment when breast-pumping is the alternative

Nutrition And Physical Activity In The Schools

In the past 20 years, the prevalence of overweight has more than doubled among American children and tripled among adolescents. Some of the causes for this significant increase are a combination of physical inactivity and poor eating habits. This unhealthy combination has also contributed to this rise of serious health problems (U.S. Department of Health and Human Service & U.S. Department of Agriculture, 2004).

Children's health and well-being play a very important role in determining their ability to come to school ready and able to learn (National Governors Association, 2000). With at least 95% of children age 5-17 years enrolled in school, schools have a wonderful opportunity to educate children and adolescents on the lifelong benefits of adopting healthy behaviors.

According to the National Association for Sport and Physical Education (NASPE), schools can help combat the increase in obesity by providing quality physical education (PE) programs, which requires a minimum of 150 minutes a week (30 minutes a day), a certified teacher, and a class size of approximately 25 students, in addition to daily recess time which promotes discretionary physical activity. According to the Arizona Department of Education's Comprehensive Health and Prevention Program Surveillance report for 2002, 75.6% of surveyed schools require PE for their students. However, number of minutes per week, class size, and days per week were not addressed in this survey. According to a survey done by the ADHS physical activity program, the most frequently reported PE class time was 30 minutes, 3 days a week, and approximately 124 days a year or about 5600 minutes short of the recommendation of NASPE (http://www.aahperd.org/naspe/template.cfm).

While schools must follow federal standards when serving lunch and breakfast, increasing financial pressures and limited resources often make nutrition a low priority (U.S. Department of Agriculture, 2001). Almost all schools rely on revenue from what is known as "competitive food" sales. These are foods that are largely marketed to children and are often very high in calories, fat and sugar increasing the likelihood for over-consumption and unhealthy weight gain.

A school environment which reinforces healthful eating and physical activity, will produce healthy students who will achieve their full educational potential and then have a positive impact on the health of their communities.

This section of the Arizona Nutrition and Physical Activity State Plan provides ideas on what schools can do to assist in this effort.

In developing strategies for the state plan, several components were addressed which the group agreed must be present *throughout* the plan and are implied in *each* of the school goals. These are:

- There was strong consensus that action needed to be taken to re-think curriculum changes. Agreement was made to look at what is already developed in the way of free resources for schools to use at the local level.
- There was also strong consensus that the entire school environment needs to be considered when suggesting changes. Changes in schools seem to work best when implemented at the local level with the direct involvement of school administrators and staff, parents, students, and the community.
- All objectives and strategies should consider and address the unique needs of all students including students with special health care needs.

Objectives And Strategies

Objective #1

Establish a comprehensive healthy school environment with support of staff, students, parents and community members in all Arizona school districts.

Strategy A:

Establish standards for nutrition and physical education, which includes healthy lifestyle concepts for all Arizona school districts.

Action Steps:

- Use a coordinated school health "Kit" from Centers for Disease Control and Prevention (CDC) with creative strategies for approaching schools at the local level. Review already developed approaches
- Approach educators and administrators directly invoke buy-in to changes
- Identify existing standards and develop new standards
- Develop or find existing curriculum (Dairy Council material, 5-A-Day, Build Better Bones), which includes healthy lifestyle choices content (healthy eating, peer pressure, physical activity for life activities, portion control, etc)
- Develop a program that uses peer reinforcement of messages
- Build on existing partnerships to assist with changes
- Develop and distribute a curriculum resource list

Strategy B:

Establish a baseline using student's Body Mass Index (BMI) measurements, create an action plan and implement the plan.

Action Steps:

- Assess current funding to do assessments
- Secure funding for identifying areas of need
- Review statistics and trends of last decade regarding the obesity problem
- Get assessment information out to interested people and organizations
- Utilize available resources such as the School Health Index, School Health Education Profile, Youth Risk Behavior Survey
- Increase number of schools who participate in the School Health Education Profile
- Coordinate with school health councils
- Implement action plans that are based on the assessments results

Strategy C:

Develop and implement a coordinated culturally appropriate health marketing campaign for schools, families, and communities.

Action Steps:

- Provide education to teachers and administrators about the established link between food, health and nutrition and higher academic performance. Promote the fact that children who are physically active behave better in school and children who have a nutritionally sound breakfast do better on tests and have less illness, which increases attendance
- Use focus groups with children to identify appealing messages
- Promote daily life activities such as washing cars, doing yard work, playing
- Encourage healthy food choices through food services to students
- Enforce the message that links healthy lifestyles to attractiveness
- Connect messages about healthy lifestyles to something they already like (i.e.: NASCAR, X-games, BMX, Tony Hawke (skater), AZ/local team sports)
- Develop a campaign to reduce time spent on computers and television time as well as removing TVs from children's bedrooms
- Review existing campaigns such as the "Truth Program" (see www.legacy.org)
- Establish a funding partnership
- Use school television and other media like public service announcements to get out messages
- Coordinate with social marketing team within ADHS, use university student in marketing /business or use volunteers

Strategy D:

Encourage and support parent-led "walking school buses" to increase physical activity before and after school.

Action Steps:

- Fund local coordinator
- Explore option to work through existing programs for physical activity in local health departments
- Market program in the media campaign
- Provide incentives (such as t-shirts)
- Provide walking kits (Safety vest, sign-up sheets; whistles, stop signs)
- Perform program evaluation
- Establish and/or identify safe walking paths

Strategy E:

Establish school policy to increase nutritional value of food distributed in the cafeteria, school store, vending, fundraising and classroom parties, or for rewards, etc.

Action Steps:

- Form local school task forces and empower them to create local policy
- Fund trainer at state level to work with schools, assess environment and give them tool kit
- Survey school lunch programs for nutrition quality
- Analyze nutrition quality of food service
- Develop improvement plan and implement plan
- Encourage private sector participation with school health and nutrition programs using model guidelines for advertising, vending and revenue sharing

Strategy F:

Work with schools to develop policies to hold recess before lunch and daily physical education and wellness for all students.

Action Steps:

- Do a baseline study of current schedules and activity levels
- Educate legislators on the important issues relative to physical activity in schools.
- Secure funding for more certified teachers, equipment, physical education etc.
- Research how and what other school/states are doing
- Mandate changes with legislative backing and funding

Strategy G:

Increase physical activity, emphasizing intramural, wellness and other broad-based activities, and nutrition education opportunities on school property before, during and after school.

Action Steps:

- Increase opportunities for all children to participate in physical activity before, during, and after-school
- Promote alternate and additional credit incentive for physical activity to be credited toward graduation
- Recruit volunteers to facilitate programs within the schools and secure non-traditional funding, such as corporate sponsorship, for program coordinators
- Revisit state tax credit policy to allow extra-curricula physical activity

Strategy H:

Educate and recommend schools and after-school programs have physical education and activities that meet the needs of special health care children.

Action Steps:

- Establish a baseline of information on current services and practices in schools and communities
- Educate school and after-school program staff on the importance of physical activity and nutrition and the needs of special needs children in those arenas
- Encourage staff and parents to use 504s and Individual Education Plans (IEP) for recreation plans
- Create best practices and training protocols for people who work with special needs population
- Work with local government, parks and recreation, community services, etc. to increase adaptive facilities and opportunities
- Recruit qualified personnel and encourage state requirements and certifications for adapted physical education teachers
- Encourage universities and higher education systems to create a program and certification for adapted physical education teachers

Strategy I:

Educate and apply knowledge learned in classroom curriculum to making healthy cafeteria choices.

Action Steps:

- Create criteria for the quick identification of healthy food items
- Promote alternate or additional credit incentive for physical activity to be credited toward graduation
- Use existing resources (such as 5 a day the color way – 3-A-Day Dairy, Red-light/Green-light, winners circle, etc.) to educate students on nutrition choices
- Revisit state tax credit policy to allow extra-curricula physical activity

Objective #2

Streamline obesity prevention efforts taking place in Arizona to integrate services and messages.

Strategy A:

Create a network organization for obesity prevention, healthy living and lifestyles to coordinate efforts and disseminate information about programs and grants in Arizona.

Action Steps:

- Create resource directory of agencies and programs
- Create a communication network and website with links to agencies and programs

Strategy B:

Establish traditional and nontraditional funding sources to implement or support all strategies included in this plan.

Action Steps:

- Convene a Call for Action with Chief Executive Officer's (CEO) to encourage them to mobilize their efforts to assist with the success of strategies.
- Gather local input and local solutions
- Develop relationships with communities and stakeholders that lead to "buy-in": parents, teachers, school administration
- Review existing revenue streams to discover potential funding including non-traditional funding sources such as corporate sponsorships
- Educate policymakers
- Create change is policy tax code or other funding streams

Surveillance And Evaluation

The primary evaluation objectives for this plan are to ensure that programs implemented as a product of the Arizona Nutrition and Physical Activity State Plan are monitored; and that outcomes correlate to objectives and strategies outlined in the plan. The Obesity Prevention Program under the Arizona Department of Health Services (ADHS) will establish and oversee an evaluation system that will monitor both short- and long-term outcomes.

Process Evaluation

Evaluation methods and data collected will vary and be determined, in part, by the interventions selected for implementation. Process evaluation will be used to assess current systems and measure continual improvement on an ongoing basis. While not all Obesity Prevention Program activities may be amenable to evaluation, every attempt will be made to conduct an assessment when possible. Pilot interventions will be closely monitored in preparation for larger scale activities. The type of activity, staffing needs and funding requirements will be considered in relation to the goals of the program.

Process evaluation will provide a benefit to the programs through improved protocols and more effective implementation. Process evaluation activities will take into consideration planning versus actual implementation, changes that occur to improve collaborative relationships among partners and the degree to which target audiences are being reached. Program management will be evaluated by an internal monitoring system that will assess the extent of involvement in programs, audience reach and intervention settings.

Included in the process evaluation will be an assessment of collaboration, as measured by the amount of participation and level of effort. Collaboration between internal and external partners, local health promotion groups, local and county health departments and community agencies will also be monitored. Collaborators also include volunteers, advocates and additional representatives from the school, worksite and healthcare arenas.

Outcome Evaluation

Progress toward the objectives and strategies outlined in this plan will be measured by monitoring various data points related to the prevalence of chronic disease and obesity as measured by the following behavioral variables:

- Caloric intake and expenditure
- Body Mass Index (BMI)
- Increased consumption of fruits and vegetables
- Increased breast-feeding
- Increased physical activity
- Reduction of screen time (television., videos, computers)
- Portion sizes consumed

To assess progress of these variables, specific surveillance activities are already in place or are being developed within the Arizona Department of Health Services. Progress toward the goals and objectives outlined in the plan will be measured by monitoring various data points related to the prevalence of chronic disease, obesity, and the risk factors associated with these diseases. Detailed descriptions of these surveillance systems are outlined at the end of this section.

Long-Term Goals And Outcomes:

1. To Increase Physical Activity:

- This long-term outcome will be measured using the Behavioral Risk Factor Surveillance System (BRFSS) data for Arizona residents aged 18 years and older; and the Youth Risk Behavior Survey (YRBS) data for youth (grades 9-12).
- The School Health Education Policy (SHEP) data will be used to monitor the progress in increasing the percentage of schools requiring physical education classes.

2. To Improve Eating Habits For Healthy Nutrition:

- This long-term outcome will be measured using the BRFSS data for Arizona residents aged 18 years and above; and the YRBS data for youth (grades 9-12).

3. To Reduce The Prevalence Of Obesity:

- The proposed method of measuring this objective is to use the BRFSS, YRBS, Child Health Indicator Program (CHIP) data, and Pediatric Nutrition Surveillance System (PedNSS).

4. To Reduce The Prevalence Of Chronic Diseases Related To Obesity:

- Monitor, on an ongoing basis, the chronic disease estimates related to obesity.
- Establish a chronic disease surveillance system to identify common indicators across the disease areas, match them to outcomes and determine how to monitor them.
- Collaborate with other programs within ADHS and the state to develop new state-specific questions to monitor caloric intake and expenditure, and portion sizes consumed
- Collaborate with Steps to a Healthier Arizona Initiative (STEPS) by building capacity of regional healthcare professionals and systems to prevent and address overweight and obesity through BMI Toolkits, regional training, systems development and ongoing informational support.

Surveillance System Descriptions

Behavioral Risk Factor Surveillance System (BRFSS):

The Behavioral Risk Factor Survey System (BRFSS) is a random-sample telephone survey conducted annually in all 50 states by state health departments in collaboration with the Centers for Disease Control and Prevention (CDC). In 2003, about 3,235 adult Arizonans (18 years and older) were interviewed for the BRFSS. The BRFSS includes questions on health issues such as diabetes, tobacco and alcohol use, physical activity, diet, weight control, seat belt use, and use of preventive and other health care services. An annual telephone survey, conducted by CDC, will help monitor various chronic diseases, and the related risk factors.

Youth Risk Behavior Survey (YRBS):

The YRBS was successfully administered for the first time in 2003 for Arizona. The Arizona Department of Education (ADE) administers the Youth Risk Behavior Surveillance System (YRBSS) throughout the state. The Obesity Prevention Program at ADHS is working with the Arizona Department of Education and its contractor to collect the YRBS data for the year 2005. The YRBS will show behavioral trends related to tobacco-use, dietary habits and physical activity among youth.

Child Health Indicator Program (CHIP):

The Child Health Indicator Program (CHIP) captures aggregate data on the number of visits (encounters) that school nurses attend to each year

in the elementary, middle, and high schools. Age, race and sex of the students served are also captured. CHIP is based on the Arizona School Health Annual Report (ASHAR) which is data gathered on paper. About 800 schools in the state submit hard copies of ASHAR and approximately 200 schools submit electronic copies that belong to the Arizona School Nurse Consortium. The ADHS Public Health Division's Epidemiology Department is addressing collaboration with the Arizona School Nurses Association to facilitate access to, and use of, these data in the future. The CHIP data will show trends related to obesity and various chronic diseases.

Pediatric Nutrition Surveillance System (PedNSS):

The PedNSS is a child-based public health surveillance system that monitors the nutritional status of low-income children in federally funded maternal and child health programs such as Special Supplemental Nutrition Program for Women, Infants and Children (WIC). Data collected on birth weight, short stature, underweight, overweight, anemia, and breast-feeding are collected for children who visit public health clinics for routine care and nutrition services, including education and supplemental food. Data are available for children under the age of five years.

School Health Education Profile (SHEP):

The purpose of Arizona SHEP survey is to collect information regarding curricula, programs and policies and the framework required for health education courses, and professional preparation of health educators to assess the status of school health education at the middle/junior high and senior high school levels statewide. The data are valuable in assisting ADE, other state and local agencies, and organizations to identify needs, develop or revise programs and policies to improve the quality and delivery of school health education for students. The ADE administered the SHEP for the first time in Arizona in 2002. The survey is sent to school principals and lead health educators every other year.

Special Supplemental Nutrition Program for Women, Infants and Children (WIC):

The Special Supplemental Nutrition program for Women, Infants and Children (WIC) is a temporary assistance program for women who are pregnant, breast-feeding or who recently had a baby and for children under age 5 years. Arizona in Motion (AIM) is the Oracle database that Arizona uses to manage the WIC program. AIM contains over 5 terabytes of data and 400 tables; many tables have over 1 million records, and/or more than 100 fields. AIM contains information on: 100,000+ active clients, 100 WIC sites, 500 community nutrition workers, 6 million food vouchers, 500 WIC authorized stores and 50 bank branches. For each client, AIM has information on medical history, hemoglobin values, height and weight, nutrition and food security, demographics, income, WIC appointments and education.

Summary And Suggested Action Plan

At the Arizona Department of Health Service's (ADHS) "2005 Healthy Weight for Children and Their Families: Kick Off Conference for the Arizona Nutrition and Physical Activity State Plan" on February 24, 2005, this plan will be released.

At that time, community partners and stakeholders will receive a copy of the plan and will participate in facilitated breakout sessions designed to provide suggestions regarding ways in which portions of the plan can be implemented in various settings.

Environmental approaches in building healthier community environments make being more active easier through recreation and active transportation. School administrators and staff will model healthy lifestyle behaviors and promote a school environment that enables children to make healthy food choices and engage in regular physical activity.

Community members will understand the importance of advocating for the promotion of healthy lifestyles within their various organizations and within their families. The health care system can mobilize to influence the physical activity and healthy eating choices made by patients and families.

Finally, worksites can influence employees' behavior by launching and maintaining a worksite wellness program, supplying healthy foods, providing opportunities for physical activity and encouraging employees to make healthy lifestyle choices.

The plan has been developed as a working document. As interventions are identified, developed, piloted, and evaluated, much will be revealed about the efficacy of efforts designed to combat obesity in our state and revisions to the plan will be made.

With the state plan as a guide, individuals, families, communities, schools, worksites, the health care system and governmental agencies can make progress toward building healthier environments and reversing the trend toward overweight and obesity and the chronic diseases that accompany them. This will take commitment, active participation and cooperation among all entities.

By working collaboratively, learning together, and sharing the results of our efforts, ADHS feels confident that Arizona can make an impact on the health of all Arizonans.

Appendix A
Criteria For Selection Of Objectives And Strategies

As workgroups began meeting to brainstorm ideas that would be developed into formal state plan objectives and strategies, workgroup members were asked to keep in mind specific criteria as guiding principles to provide direction. With these principles in mind, Obesity Prevention Program staff evaluated the draft recommendations developed by the workgroups by identifying whether the strategies have the ability to be:

- Outcome driven including elements that have been shown to have an association with reducing chronic disease and obesity
- Supportive of Arizona's commitment to the elimination of disparities
- Population-based, affordable and sustainable
- Evidence-based and effective, representing best practices
- Replicable and relatively easy to implement
- Well-defined with the ability to identify measurable objectives and outcomes
- Of significance to, and valued by stakeholders and reflecting strategic coordination of leadership among a variety of partners to promote shared goals throughout the plan
- Comprehensive and inclusive of multiple spheres of influence, as described in the Social Ecological Model
- Inclusive of media messages that are consistent and recognizable and sensitive to the intergenerational, cross-cultural and special health care needs of Arizonans
- Addressing the following major focus areas:
- Caloric intake and expenditure
- Improved nutrition, including increased consumption of fruits and vegetables
- Increased breast-feeding
- Increased physical activity
- Reduction of screen time (television, videos, computers)
- Portion control

Additionally, the Division of Nutrition and Physical Activity (DNPA) at the Centers for Disease Control and Prevention, provided workgroups with Intervention Definition and Guidelines. Because the Obesity Prevention Program will ultimately implement interventions that employ an integrated approach to obesity control and prevention combining both improved nutrition and increased levels of physical activity to achieve a caloric balance, workgroups needed to have a thorough understanding of the general and operational definitions of an "intervention" in order to meet performance criteria.

For the purposes of meeting the Obesity Prevention Program's performance measurement standards and expectations, an intervention was defined as "a prescribed series of activities grounded within a Social-Ecological Model with the main purpose of changing and/or influencing existing obesity, nutrition and physical activity-related behaviors and or practices" (Centers for Disease Control, 2004). At a minimum, an intervention would include all the following components:

1. Grounded in theory and applied within the Social-Ecological Model
2. Defined purpose and clearly stated goals and objectives
3. Expected outcomes (to include BMI/BMI for age)
4. Defined intervention methodology (where, when and how)
5. Strategy for implementation (to include collaboration with partners)
6. Identified target population(s) as described in State plan
7. Defined evaluation methodology

This definition will be used as a framework within which pilot interventions will be identified and implemented commencing in 2005.

Additional reference documents to consider when developing the strategies were the "Guidelines for Comprehensive Programs to Promote Healthy Eating and Physical Activity" (http://www.astphnd.org/) and documents guiding coordinated school health programs (http://www.cdc.gov/nccdphp/dash/). Workgroup members were directed to these websites for supplementary planning ideas.

Appendix B
Healthy People 2010 Goals

Physical Activity

Improve health, fitness and quality of life through daily physical activity.

22-1 Reduce the proportion of adults who engage in no leisure time physical activity.

22-2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

22-3 Increase the proportion of adults who engage in vigorous physical activity that promotes the development and maintenance of cardio-respiratory fitness three or more days per week for 20 or more minutes per occasion.

22-4 Increase the proportion of adults who perform physical activities that enhance and maintain muscular strength and endurance.

22-5 Increase the proportion of adults who perform physical activities that enhance and maintain flexibility.

22-6 Increase the proportion of adolescents who engage in moderate physical activity for at least 30 minutes on five or more of the previous seven days.

22-7 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardio-respiratory fitness three or more days per week for 20 or more minutes per occasion.

22-8 Increase the proportion of the nation's public and private schools that require daily physical education for all students.

22-9 Increase the proportion of adolescents who participate in daily school physical education.

22-10 Increase the proportion of adolescents who spend at least 50 percent of school physical education class time being physically active.

22-11 Increase the proportion of adolescents who view television two or fewer hours on a school day.

22-12 Increase the proportion of the nation's public and private schools that provide access to their physical activity spaces and facilities for all persons outside of normal school hours.

22-13 Increase the proportion of worksites offering employer-sponsored physical activity and fitness programs.

22-14 Increase the number of trips made by walking.

22-15 Increase the number of trips made by bicycling.

Nutrition And Obesity

19-1 Increase the proportion of adults who are at a healthy weight.

19-2 Reduce the proportion of adults who are obese.

19-3 Reduce the proportion of children and adolescents who are overweight or obese.

19-4 Reduce growth retardation among low-income children under age five years.

19-5 Increase the proportion of persons aged two years and older who consume at least two daily servings of fruit.

19-6 Increase the proportion of persons aged two years and older who consume at least three daily servings of vegetable, with at least one-third being dark green or orange vegetables.

19-7 Increase the proportion of persons aged two years and older who consume at least six daily servings of grain products, with at least three being whole grains.

19-8 Increase the proportion of persons aged two years and older who consume less than ten percent of calories from saturated fat.

19-9 Increase the proportion of persons aged two years and older who consume no more than 30 percent of calories from total fat.

19-10 Increase the proportion of persons aged two years and older who consume 2,400 mg or less of sodium daily.

19-11 Increase the proportion of persons aged two years and older who meet dietary recommendations for calcium.

19-12 Reduce iron deficiency among young children and females of childbearing age.

19-13 Reduce anemia among low-income pregnant females in their third trimester.

19-14 Reduce iron deficiency among pregnant females.

19-15 Increase the proportion of children and adolescents aged six to 19 years whose intake of meals and snacks at school contributes to good overall dietary quality.

19-16 Increase the proportion of worksites that offer nutrition or weight management classes or counseling.

19-17 Increase the proportion of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that includes counseling or education related to diet and nutrition.

19-18 Increase food security among U.S. households and in so doing reduce hunger.

Appendix C
Healthy Arizona 2010 Objectives

Physical Activity

Objective 1:

Increase the proportion of children who participate in cumulative intermittent physical activity for 60 minutes per day.

Objective 2:

Increase the proportion of adolescents who engage in either moderate or vigorous physical activity.

Objective 3:

Increase the proportion of adults who engage regularly, preferably daily, in moderate or vigorous physical activity.

Objective 4:

Reduce the proportion of adults who engage in no physical activity.

Nutrition

Objective 1:

Reduce iron deficiency anemia among infants, young children and females of childbearing age.

Objective 2:

Increase the proportion of persons aged two years and older who consume at least to daily servings of fruit and at least three daily servings of vegetables with at least one-third being dark green or deep yellow vegetables.

Objective 3:

Increase food security (1) among U.S. households, and in so doing, reduce hunger.

Objective 4:

Increase the proportion of children, adolescents and adults who are a healthy weight. Gather data by age group.

Objective 5:

Increase the proportion of persons aged two years and older that meet dietary recommendation for calcium.

(1) Food Security: Access by all people at all times to enough food for an active, healthy life. It includes at a minimum (1) the ready availability of nutritionally adequate and safe foods, and (2) as assured ability to acquire acceptable foods in socially acceptable ways.

Appendix D
Resources

Nutrition

- 5 A-Day: www.5Aday.org
- American Dietetic Association, 800-877-1600: www.eatright.org
- American Public Health Association: www.aphafoodandnutrition.org
- Arizona Nutrition Network: www.eatwellbewell.org
- Building Better Bones: www.buildingbetterbones.org
- CDC five-a-day: www.cdc.gov/nccdphp/dnpa/5aDay/index.htm
- Center for Science in the Public Interest, 202-332-9110: www.cspinet.org
- Dietary Guidelines for Americans and Food Guide Pyramid: www.nutrition.gov
- Dole, 1-800-766-7201: www.dole5aday.com
- Eat Smart, Play Hard: www.fns.usda.gov/eatsmartplayhard/
- Food and Nutrition Information Center: www.nal.usda.gov/fnic
- Food and Nutrition Services: www.fns.usda.gov/fns
- Food Stamp Nutrition Connection, 1-800-221-5689: www.nal.usda.gov/fnic/foodstamp
- National Cancer Institute, 5 A Day Program: www.5aday.gov.
- National Dairy Council: www.nationaldairycouncil.org
- Partnership for Food Safety Education: www.fightbac.org
- Produce for Better Health, 1-888-391-2100: www.5aday.gov; www.aboutproduce.com
- Team Nutrition: www.fns.usda.gov/TN/
- Tufts University Nutrition Navigator: www.navigator.tufts.edu
- United States Department of Agriculture (USDA): www.cnpp.usda.gov.
- USDA Center for Center for Nutrition Policy and Promotion: www.cnpp.usda.gov
- USDA Food and Nutrition Service: www.fns.usda.gov
- United States Food and Drug Administration, 888-463-6332: www.fda.gov
- WIC Resource System: www.nal.usda.gov/wicworks/

Obesity/Overweight (General)

- Action for Healthy Kids: www.actionforhealthykids.org
- American Obesity Association: www.obesity.org
- American Public Health Association: www.apha.org
- Arizona Action for Healthy Kids: www.ActionForHealthyKids.org

- Centers for Disease Control and Prevention, 404-639-3311: www.cdc.gov
- CDC Nutrition, Physical Activity and Obesity Program: www.cdc.gov/nccdphp/dnpa/
- Center for Weight and Health: www.cnr.berkeley,edu/cwh/index.html
- The Community Guide: www.thecommunityguide.org

- Community Tool Box: http://ctb.ku.ed
- Healthier US Initiative: www.whitehouse.gov/infocus/fitness
- Healthy People 2010: www.health.gov/healthypeople
- National Centers for Chronic Disease Prevention and Health Promotion: www.cdc.gov/nccdphp
- National Heart, Lung and Blood Institute: Aim for a Healthy Weight: www.nhlbinih.gov/health/public/heart/obesity/lose
- National Institutes of Health: www.nih.gov
- North American Association for the Study of Obesity: www.obesityresearch.org.
- North American Association for the Study of Obesity: www.naaso.org.
- Partnership for Prevention: www.prevent.org
- The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity: www.surgeongeneral.gov/topics/obesity
- United States Department of Health and Human Services, 877-696-6775: www.hihs.gov

Physical Activity

- Active Arizona for Life: Meeting the Goals of Healthy Arizona: www.azdhs.gov/phs/physialactivity/active_az_2010.htm
- America Bikes, 202-833-8080, www.americabikes.org
- America Walks, 503-222-1077, www.americawalks.org
- American Alliance for Health, Physical Education, Recreation and Dance: www.aahperd.org
- American Council on Exercise: www.acefitness.org
- American Association for Health, Physical Education, Recreation, and Dance, 800-213-7193, www.aahperd.org
- American Heart Association, 303-369-5433, www.americanheart.org, www.justmove.org
- American College of Sports Medicine, 317-637-9200, www.acsm.org
- Arizona's Governor's Council on Health, Physical Fitness and Sports: www.getactivestayactive.org
- Arizona Department of Health Services P.L.A.Y. Program: www.maricopa.gov/publichealth/play/about.asp
- Human Kinetics Publishers: www.humankinetics.com
- IDEA Health and Fitness, www.ideafit.com

- National Blueprint: Pedestrian and Bicycling information, www.walkinginfo.org, www.bicyclinginfo.org
- National Coalition for Promoting Physical Activity, www.ncppa.org
- National Recreation and Park Association (NRPA): www.nrpa.org
- President's Council on Physical Fitness and Sports: www.fitness.gov
- YMCA, www.ymca.net

Physical Environment Partners/Resources

- Active Living at Work: www.activelivingatwork.com
- Active Living Research: www.activelivingresearch.org
- American Association for Active Lifestyles and Fitness (AALP): www.aahpherd.org/aaalf/template.cfm
- American Planning Association: www.planning.org

Family Community Partners/Resources

- AMC Cancer Research: www.amc.org
- American Association for Retired Persons, 800-424-3410: www.aarp.org/health
- American Cancer Society, 800-227-2345: www.cancer.org.
- American Diabetes Association: www.diabetes.org
- American Heart Association: www.americanheart.org

Health Care Partners/Resources

- American Academy of Pediatrics: www.aap.org
- American Association for Public Health Physicians (AAPHP): www.aaphp.org
- American College of Preventive Medicine (ACPM): www.acpm.org

School Site Partners/Resources

- Action for Healthy Kids, Arizona State Team, Healthy School Environment Model Policy. http://www.ade.az.gov/health-safety/cnp/nslp/NutritionPolicy-StateBoardMeeting.pdf
- American Association for Health Education: www.aahperd.org/aahe/template
- American School Food Service Association, 703-739-3900, www.asfsa.org
- American School Health Association, 330-678-1601, www.ashaweb.org
- Changing the Scebe – Improving the School Nutrition Environment: www.fns.usda.gov/tn/resources/changing.html
- Council of Chief State School Officers, 202-0408-5505, www.ccsso.org
- International Walk Your Child to School Day, www.walktoschool.org
- National Association for Sport and Physical Education, 800-213-7193, www.aahperd.org/naspe/template.cfm
- National Association of State Boards of Education: www.nasbe.org/HealthySchools/SamplePolicies/healthyeating
- National School Boards Association, 703-838-6733, www.nsba.org
- School Health Index, www.cdc.govnccdphp.dash/shi/
- School Nutrition Environment, www.fns.usda.gov/
- VERB – It's What You Do, www.verbnow.com/

Appendix E
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Appendix F
Adult Body Mass Index (BMI) Table

BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height							**Weight (in pounds)**										
4'10" (58")	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
4'11" (59")	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5' (60")	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5'1" (61")	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
5'2" (62")	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
5'3" (63")	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
5'4" (64")	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
5'5" (65")	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
5'6" (66")	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216
5'7" (67")	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
5'8" (68")	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230
5'9" (69")	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
5'10" (70")	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
5'11" (71")	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250
6' (72")	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258
6'1" (73")	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265
6'2' (74")	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272
6'3' (75")	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279

Source: Evidence Report of Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults, 1998. NIH/National Heart, Lung, and Blood Institute (NHLBI).
A comprehensive listing of BMI Tables for Children can be found on the Centers for Disease Control (CDC) website at www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm

Appendix G
Glossary Of Terms

5 A Day Campaign: A nationwide campaign to encourage the consumption of five servings of fruits and vegetables each day to improve the nation's health.

Active Community Environments: Communities where people of all ages and abilities can easily enjoy walking, bicycling, and other forms of recreation. These communities support and promote physical activity with adequate sidewalks, bicycle facilities, paths, trails, parks as well as recreational facilities. These communities also have implemented mixed-use industrial and residential areas using a linked network of streets that allow for easy walking between homes, work, schools and stores.

Active Transportation: Activity gained while moving from one place to another, usually across a reasonable distance. It includes walking, biking or wheeling (for wheelchair users), or similar activities used to get to work, school, place of worship, stores, etc.

Behavioral Risk Factor Surveillance System (BRFSS): A surveillance system that uses a population-based telephone survey to assess behavioral health risk factors of American adults. The BRFSS provides national and state data for following trends in obesity, physical activity, and fruit and vegetable consumption. Arizona residents aged 18 or older and living in households with telephones are chosen to participate by random selection.

Body Mass Index (BMI): An anthropomorphic measurement of weight and height that is defined as body weight in kilograms divided by height in meters squared. BMI is the commonly accepted index for the classification of overweight and obesity in adults and is recommended to identify children and adolescents who are underweight, overweight or at-risk for overweight.

Campaign: A planned, organized and integrated set of activities with a clearly defined purpose that uses a variety of strategies and approaches. Campaigns are waged during a specified period of time with a defined task in mind. Multiple communication channels are utilized, including the media, grassroots programming, and community organization and legislative advocacy.

Centers for Disease Control and Prevention (CDC): The CDC is a branch of the United States Department of Health and Human Services and is recognized as the lead federal agency for protecting the health and safety of people – at home and abroad, providing credible information to enhance health decisions, and promoting health through strong partnerships.

CDC's Division of Nutrition and Physical Activity (DNPA): A division of CDC that addresses the role of nutrition and physical activity in improving the public's health and preventing and controlling chronic disease.

Child Health Indicator Program (CHIP): The Child Health Indicator Program captures aggregate data on the number of visits (encounters) that school nurses attend to each year in the elementary, middle, and high schools. Age, race and sex of the students served are also captured. CHIP is based on the Arizona School Health Annual Report (ASHAR). The CHIP data will show trends related to obesity and various chronic diseases.

Chronic Disease: Illnesses that are prolonged do not resolve spontaneously and are rarely cured completely.

Coalition: A union of people or organizations involved in a similar mission working together to achieve goals.

Collaboration: Working in partnership with other individuals, groups or organizations, or through coalitions with inter-organizational representation, toward a common goal.

Community: A social unit that can encompass where people live and interact socially (a city, county, neighborhood, subdivision or housing complex). It can be a social organization wherein people share common concerns or interests. Often, a community is a union of subgroups defined by a variety of factors including age, ethnicity, gender, occupation and socioeconomic status.

Dietary Guidelines: Dietary Recommendations for healthy Americans age 2 years and over about food choices that promote health specifically with respect to prevention or delay of chronic diseases.

Epidemic: Widely prevalent and rapidly spreading.

Exercise: Physical activity that is planned or structured. It involves repetitive bodily movement done to improve or maintain one or more of the components of physical fitness-cardio respiratory fitness, muscular strength, muscular endurance, flexibility, and body composition.

Healthy Community Design: Places that are designed and built to improve the quality of life for all people who live, work, worship, learn, and play within their borders – where every person is free to make choices amid a variety of healthy, available, accessible, and affordable options.

Healthy Eating: An eating pattern that is consistent with the USDA Dietary Guidelines for Americans. Individual and cultural preferences can be accommodated within an eating pattern that is considered healthy.

Inactivity: Not engaging in any regular pattern of physical activity beyond daily functioning

Intervention: An organized, planned activity that interrupts a normal course of action within a targeted group of individuals or the community at large so as to reduce an undesirable behavior or to increase or maintain a desirable one. In health promotion, interventions are linked to improving the health of a population or to diminishing the risks for illness, injury, disability or death.

Leisure-time Physical Activity: Activity that is performed during exercise, recreation, or any additional time other than that associated with one's regular job duties, occupation, or transportation.

Moderate-intensity Physical Activity: Physical activity that requires sustained rhythmic movements and refers to a level of effort a healthy individual might expend while walking briskly, mowing the lawn, dancing, swimming, bicycling on level terrain, etc. The person should feel some exertion but should be able to carry on a conversation comfortably during the activity.

Media Advocacy: The strategic use of media to engage the public in changes in public policy. The primary purpose of media advocacy is to increase community capacity to develop their voices in order to be heard and seen.

Media Literacy: An educational initiative aimed at increasing the understanding and enjoyment of how the media work and is organized.

Media Effects: The outcomes of media dissemination of images, ideas, themes and stories on knowledge, attitude, opinion and behavior among individuals, groups, institutions or communities.

National School Lunch Program: (NSLP) is a federally assisted meal program operating in public and non-profit private schools and residential child-care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day. The program was established under the Nation School Lunch Act, signed by President Harry Truman in 1946.

Obesity: An excessively high amount of body fat in relation to lean body mass in an individual. The amount of body fat includes concern for both the distribution of fat throughout the body and the size of the body fat tissue deposits. In Body Mass Index measurements, obesity is defined as a BMI equal to or greater than 30 in adults.

Occupational Physical Activity: Activity that is completed regularly as part of one's job including activities such as hauling, lifting, pushing, carpentry, shoveling, packing boxes, etc.

Overweight: An increased body weight in relation to height, when compared to some standard of acceptable or desirable weight. In Body Mass Index standards, obesity is defined between 25 and 25.9 or greater in adults. In children and youth, a gender- and age-specific BMI measure that places the individual at or above the 95th percentile for children and youth aged 2-20 years old.

Partnership: A group of individuals or groups that work together on a common mission or goal.

Pediatric Nutrition Surveillance System (PedNSS): A program-based surveillance system that monitors the nutritional status of low-income infants, children, and women in federally funded maternal and child health programs.

Physical Activity: Bodily movement produced by the skeletal muscles that results in an energy expenditure and is positively correlated with physical fitness. Can also include household duties such as sweeping floors, scrubbing, washing windows, raking the lawn, etc.

Physical Fitness: A measure of a person's ability to perform physical activities that require endurance, strength, or flexibility and are determined by a combination of regular activity and genetically inherited ability.

Portion Size: Sizes of foods and beverages that are appropriate and contribute to total diet quality and do not result in energy imbalance relative to the individual's age and activity level.

Recreation: Activity that refreshes; activity that renews your health and spirits by enjoyment and relaxation.

Regular Physical Activity: Activity that is performed most days of the week that includes 5 or more days of moderate-intensity activities OR 3 or more days of the week of vigorous activities.

School Health Education Profile (SHEP): A CDC survey administered every even year by the Department of Public Instruction (DPI) to health education teachers and middle and high school principals. The survey examines health education and physical activity policies and practices of school.

School Health Index (SHI): A tool developed by CDC for schools to assess their nutrition and physical activity environments, plan and implement improvements and monitor change over time.

Sedentary Lifestyle: A lifestyle characterized by little or no regular physical activity.

Settings: The context in which a program or intervention to reduce or prevent overweight and obesity can occur. (i.e., families, communities, worksites, healthcare, schools).

Social Marketing: The application of commercial advertising and marketing concepts to the planning and implementation of programs intended to influence the voluntary behavior change of a target audience in order to improve personal welfare and that of society.

Social-Ecological Model: The model suggests that behavior change requires not only educational activities, but also advocacy, organizational change efforts, policy development, economic support and environmental change and that these "spheres of influence" can have an impact on individual health behavior. Rather than focusing on personal behavior change interventions with groups or individuals, public health problems must be approached at multiple levels, stressing interaction and integration of factors within and across levels.

Stakeholder: An individual or organization that has an appreciation of the issues or problems involved in a health promotion program and has something to gain or lose as a result of their participation. This person or group has a stake in the outcome of the health promotion program.

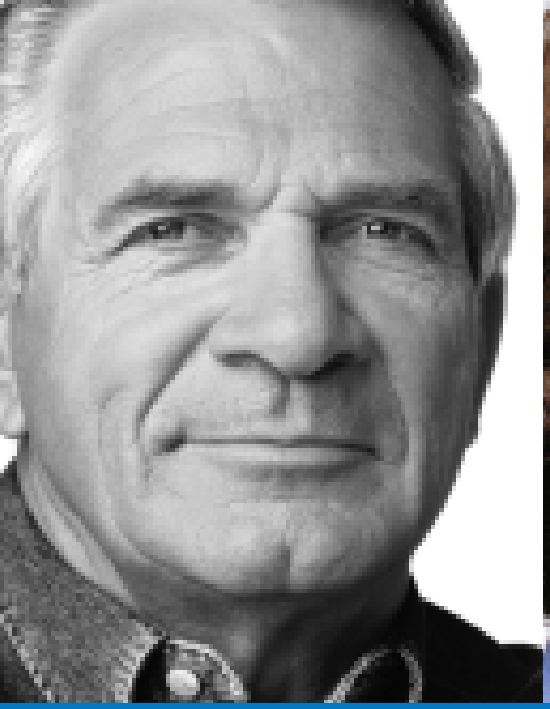
Surveillance System: A continuous, integrated and systematic collection of health-related data.

Target Audience: A group of individuals or an organization, sub-population or community that is the focus of a specific health promotion program or intervention.

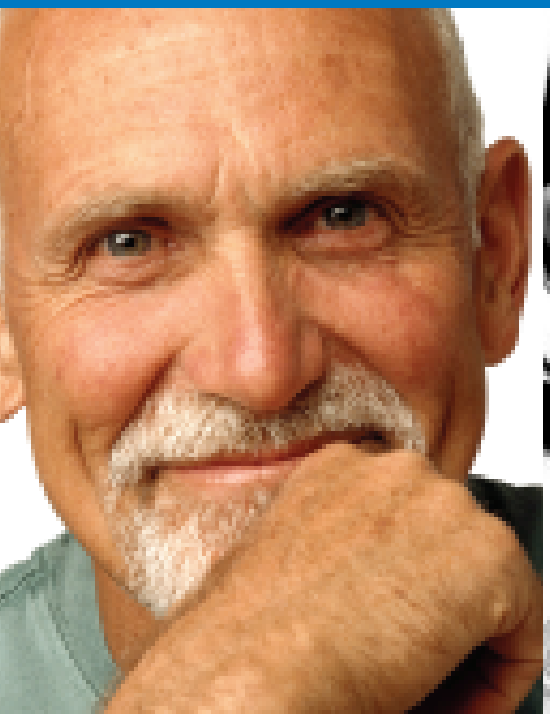
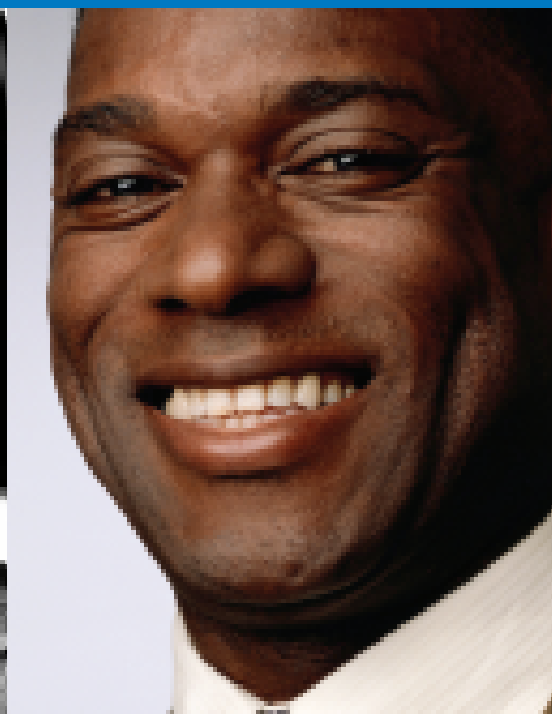
Vigorous-intensity Physical Activity: Activity that requires sustained, rhythmic movements that is intense enough to represent a substantial challenge to an individual and results in a significant increase in heart and breathing rate.

Youth Risk Behavior Surveillance System (YRBSS): A system developed by CDC to monitor priority health risk behaviors that contribute to the leading causes of morbidity, mortality and social problems among youth in the United States. The survey is administered in Arizona to middle and high school students every other year.

"With the state plan as a guide, individuals, families, communities, schools, worksites, the health care system and governmental agencies can make progress toward building healthier environments and reversing the trend toward overweight and obesity and the chronic diseases that accompany them."



Obesity Prevention

Eat Smart. Get Active. Be Healthy.

Arizona Department of Health Services
Division of Public Health
Office of Chronic Disease Prevention
and Nutrition Services