Legislative Committee on Health Care's Subcommittee to Study Medical and Societal Costs and Impacts of Obesity

January 2005

Legislative Counsel Bureau

Bulletin No. 05-10

LEGISLATIVE COMMITTEE ON HEALTH CARE
SUBCOMMITTEE TO STUDY MEDICAL AND SOCIETAL COSTS AND IMPACTS OF OBESITY

BULLETIN NO. 05-10

JANUARY 2005

TABLE OF CONTENTS

SUMMARY OF RECOMMENDATIONS

This summary presents the recommendations approved by the Legislative Committee on Health Care's Subcommittee to Study Medical and Societal Costs and Impacts of Obesity (Senate Concurrent Resolution No. 13, File No. 89*, Statutes of Nevada 2003)* at its March 22, 2004, meeting. The Subcommittee submits the following proposals to the 73rd Session of the Nevada Legislature:

Statewide Plan and Resource List Concerning Obesity

1. **Recognizing both that obesity is a major public health issue and that the Health Division in the state's Department of Human Resources serves as the state's leader in public health, the Division was asked to continue the work of the Subcommittee. The Subcommittee approved two primary requests for the Division: (a) convene a planning group or steering committee to develop a Statewide Strategic Plan concerning the prevention of obesity; and (b) maintain and update the "Obesity Resource List" that the Subcommittee developed during the course of its study.**

Letters

Additionally, the members authorized the Subcommittee chairwoman to send the following letters on behalf of the Subcommittee:

2. **A letter to Nevada's Congressional representatives urging them to enact legislation, such as the Improved Nutrition and Physical Activity (IMPACT) Act, which was referred to the House Committee on Energy and Commerce on January 20, 2004. This legislation will provide more funding to states to help them pursue initiatives to reduce the prevalence of obesity.**

3. **A letter to the United States Food and Drug Administration and the U.S. Department of Agriculture urging these agencies to simplify the nation's food labeling system and to undertake a more comprehensive promotional effort to educate consumers about the use of the Nutrition Facts Panel and its application to their daily diet and the Food Pyramid.**

4. **A letter to billboard companies in Nevada urging them to allow obesity prevention advertising without charging a fee whenever a billboard is not in use.**

5. **A letter to Nevada's Department of Transportation urging the department to find grant funding to develop safe biking and walking routes to schools.**

6. **A letter to representatives of the nation's packaged foods industry urging them to package snack foods in single serve packages and to include labeling that reflects the packaging.**

7. **A letter to the superintendent of the State Department of Education asking him to request information from the state's school districts about their use of vending machines, snack boxes, and candy stores in each of their respective schools. The request should ask for the amount of funding that is raised from vending machines in each school, an identification of the contract requirements for each school, and information identifying how the money is used by each school.**

8. **A letter to the chancellor of the University and Community College System of Nevada (UCCSN) urging the UCCSN to include obesity training in the health curriculums of the medical school and for teachers who instruct in nutrition and health at elementary, middle, and high schools.**

REPORT BY THE LEGISLATIVE COMMITTEE ON HEALTH CARE SUBCOMMITTEE TO STUDY MEDICAL AND SOCIETAL COSTS AND IMPACTS OF OBESITY BY THE TO THE 73rd SESSION OF THE NEVADA LEGISLATURE

I. INTRODUCTION

The Legislative Committee on Health Care's Subcommittee to Study Medical and Societal Costs and Impacts of Obesity was established by Senate Concurrent Resolution No. 13, File No. 89, *Statutes of Nevada 2003*.

The Subcommittee met three times. All public hearings were conducted through simultaneous videoconferences between Carson City and Las Vegas, Nevada.

The Subcommittee considered a number of significant issues related to obesity prevention. The Subcommittee did not adopt any recommendations for legislation, but it did adopt one recommendation that was forwarded to the Health Division in Nevada's Department of Human Resources (DHR) for its consideration. In addition, the Subcommittee authorized the chairwoman to send seven letters to various parties about the activities of the Subcommittee and the desire of members to see certain changes related to obesity prevention.

Although no formal recommendations for legislation were adopted by the Subcommittee, this bulletin provides background information concerning the activities of the Subcommittee.

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Senator Valerie Wiener served as the Chair of the Subcommittee. Other legislative members of the Subcommittee during the 2003-2004 interim included:

Senator Barbara Cegavske
Assemblyman Kelvin Atkinson
Assemblyman Garn Mabey, M.D.

Additionally, the following representative of the Health Division, DHR, and the Department of Education served as voting members of the Subcommittee:

Keith Rheault, Ed.D., Superintendent, Nevada Department of Education
Richard Whitley, Chief, Bureau of Community Health, Health Division, DHR

Legislative Counsel Bureau staff services were provided by:

Marsheilah D. Lyons, Senior Research Analyst
Marla McDade Williams, Former Senior Research Analyst
Leslie K. Hamner, Principal Deputy Legislative Counsel
Kennedy, Senior Research Secretary

II. REVIEW OF SENATE CONCURRENT RESOLUTION 13
(File No. 89, *Statutes of Nevada 2003)*

Senate Concurrent Resolution No. 13 directs the Legislative Committee on Health Care to conduct an interim study of the medical and societal costs and impacts of obesity in Nevada. The measure requires that a subcommittee be formed to conduct the study, consisting of four legislators, one representative from the Health Division of the DHR, and one representative from the Department of Education. Further, the bill sets forth the topics for evaluation during the study.

The study must include:

1. An analysis of the fiscal impact of obesity on health care costs and productivity in Nevada and a determination of possible savings in health care costs resulting from the prevention and proper treatment of obesity;

2. The identification of programs and practices that have been established in Nevada and other states which are cost-effective and could be implemented throughout Nevada;

3. Recommendations for programs to increase public awareness regarding the causes, prevention, risks, and treatment of obesity;

4. An examination of the particular effects of the 24-hour lifestyle and transient nature of some of the population of this state on obesity;

5. Recommendations for programs and practices that encourage healthy and balanced fitness and nutritional choices; and

6. Any other proposals for legislation relating to health care for obesity that the Subcommittee may receive or develop.

III. BACKGROUND

In 2001, the United States Surgeon General David Satcher released a report outlining the problem of obesity in America. The report, *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*, outlined strategies that communities can use in helping to address the problems. Those options included requiring physical education at all school grades, providing more healthy food options on school campuses, and providing safe and accessible recreational facilities for residents of all ages.

According to information provided in the Surgeon General's Report, approximately 300,000 U.S. deaths a year currently are associated with obesity and overweight (compared to more than 400,000 deaths a year associated with cigarette smoking). The total direct and indirect costs attributed to overweight and obesity amounted to $117 billion in the year 2000.

Additionally the report indicated, in 1999, an estimated 61 percent of U.S. adults were overweight, along with 13 percent of children and adolescents. Obesity among adults has doubled since 1980, while overweight among adolescents has tripled. Only 3 percent of all Americans meet at least four of the five federal Food Guide Pyramid recommendations for the intake of grains, fruits, vegetables, dairy products, and meats. And less than one-third of Americans meet the federal recommendations to engage in at least 30 minutes of moderate physical activity at least five days a week, while 40 percent of adults engage in no leisure-time physical activity at all.

While the prevalence of overweight and obesity has increased for both genders and across all races, ethnic and age groups, disparities exist. According to information gathered by Dr. Satcher, in women, overweight and obesity are higher among members of racial and ethnic minority populations than in non-Hispanic white women. In men, Mexican-Americans have a higher prevalence of overweight and obesity than non-Hispanic men, while non-Hispanic white men have a greater prevalence than non-Hispanic black men. Members of lower-income families generally experience a greater prevalence than those from higher-income families.

These trends are associated with dramatic increases in several health conditions, such as asthma and Type 2 diabetes among children. Dr. Satcher indicates that failure to address overweight and obesity "could wipe out some of the gains we [have] made in areas such as heart disease, several forms of cancer, and other chronic health problems."

Following the release of Surgeon Generals' Report, many states began to address the issue of obesity prevention. The 72nd Session of Nevada's Legislature was presented with many of the findings from this report and the efforts of other states seeking to develop comprehensive plans to study the impact of obesity on the health and well being of Nevadans. Following deliberations on this issue, the Nevada Legislature directed the Legislative Committee on Health Care to establish an interim subcommittee to study the medical and societal costs and impacts of obesity.

IV. SUBCOMMITTEE ACTIVITIES

The Legislative Committee on Health Care's Subcommittee to Study Medical and Societal Costs and Impacts of Obesity held three meetings, including a work session. During the course of the interim study, the Subcommittee reviewed a variety of issues related to obesity. The Subcommittee received testimony from diverse sources, including representatives of state agencies, local government agencies, health care organizations, private citizens, advocacy and support groups, food manufacturers, health care professionals, and National organizations. Following are summaries of the Subcommittee's deliberations and activities at each of the three meetings:

1. November 3, 2004, Meeting in Las Vegas

The Subcommittee heard presentations concerning the incidence of obesity, the health effects of the condition, and the costs to certain sectors of the health care delivery system of obesity-related diseases. The Subcommittee also heard a presentation summarizing a study in the Washoe County School District, which analyzed the foods and beverages available to students.

2. January 14, 2004, Meeting in Las Vegas

The Subcommittee heard a number of presentations concerning ways to combat obesity in Nevada. Representatives from the Center for Science in the Public Interest, the National Conference of State Legislatures (NCSL), and the Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, discussed legislative and policy efforts that have been considered and implemented in other states. Other speakers addressed proactive efforts by companies that sell snack food products to bring awareness to the need for nutrition awareness and physical fitness to consumers. Representatives of the Nevada Alliance for Chronic Disease Prevention outlined ways that cooperative efforts can be undertaken in Nevada to increase awareness of issues related to the prevention of obesity and the promotion of healthy lifestyles.

3. March 22, 2004, Meeting in Las Vegas

The Subcommittee heard presentations concerning the ability of private fitness clubs to assist in the prevention of obesity, activities undertaken in California related to obesity prevention in schools, and activities of the Clark County School District concerning obesity prevention and recess periods in schools, as well as the District's intention to improve its nutrition policies and standards for school meals and snacks.

The Subcommittee also heard a recommendation to require physicians to take continuing medical education units related to obesity screening and to establish a committee on obesity prevention and treatment.

Members concluded the meeting by considering recommendations for legislation. Although the Subcommittee did not officially adopt any recommendations for legislation, it agreed to send seven letters from the Subcommittee to various interests.

V. DISCUSSION OF RECOMMENDATIONS

At its work session in Las Vegas, the Subcommittee considered several recommendations relating to the impact and prevention of obesity. The Subcommittee authorized the drafting of seven letters on its behalf to be sent to various interests, including the Health Division, DHR, the state's Congressional representatives, the U.S. Food and Drug Administration (FDA) and

the U.S. Department of Agriculture, the state's billboard companies, the state's Department of Transportation, the packaged foods industry, the state's Department of Education, and the UCCSN. This section provides brief background regarding the Subcommittee's request for drafting these letters. Testimony indicated that weight gain is a direct function an imbalance between the amount of calories consumed (nutrition) and the amount of calories expended by an individual (physical activity). The letters are divided based on the subject area they most closely address toward meeting the goal of preventing obesity.

A. DEVELOPMENT OF HEALTHY EATING HABITS (NUTRITION)

Food Labels

In mid-March of 2004, the U. S. Department of Health and Human Services released a new FDA report, entitled *Calories Count: Report of the Working Group on Obesity*, which outlines an additional component in HHS' strategy for combating the growing obesity epidemic. The FDA report included recommendations on revamping food labels, educating consumers about maintaining a healthy diet and weight, and encouraging restaurants to voluntarily provide calorie and nutrition information. The report also recommended increasing FDA enforcement of food labels to more accurately inform consumers about serving sizes.

With regard to food labels the report recommends that FDA take the following actions:

1. Publish an advance notice of proposed rulemaking (ANPRM) to seek comment on how to give more prominence to calories on the food label (e.g., increasing the font size for calories, including a percent Daily Value column for total calories, and eliminating the listing for calories from fat).

2. Publish an ANPRM to seek comment on authorizing health claims on certain foods that meet FDA's definition of "reduced" or "low" calorie. An example of a health claim for a "reduced" or "low" calorie food might be: "Diets low in calories may reduce the risk of obesity, which is associated with Type 2 diabetes, heart disease, and certain cancers."

3. Publish an ANPRM to seek comment on whether to require additional columns on the NFP to list quantitative amounts and percent Daily Value of an entire package on those products/package sizes that can reasonably be consumed at one eating occasion (or declare the whole package as single serving).

4. Publish an ANPRM to seek comment on which, if any, reference amounts customarily consumed of food categories appear to have changed the most over the past decade and require updating.

5. File petitions the FDA has received that ask the agency to define terms such as "low," "reduced," and "free" carbohydrate; and provide guidance for the use of the term "net" in relation to carbohydrate content of food.

6. Encourage manufacturers to use dietary guidance statements, an example of which would be, "To manage your weight, balance the calories you eat with your physical activity."

7. Encourage manufacturers to take advantage of the flexibility in current regulations on serving sizes to label as a single-serving those food packages where the entire contents of the package can reasonably be consumed as a single serving.

8. Encourage manufacturers to use appropriate comparative labeling statements that make it easier for consumers to make healthy substitutions.

The Subcommittee specifically addressed the issue of food labels during discussions regarding the Kraft Foods Obesity Initiative. After considering testimony on this issue the Subcommittee authorized the drafting of:

> **A letter to the U.S. FDA and the U.S. Department of Agriculture urging these agencies to simplify the nation's food labeling system and to undertake a more comprehensive promotional effort to educate consumers about the use of the Nutrition Facts Panel and its application to their daily diet and the Food Pyramid.**

Additionally, the Subcommittee asked for the drafting of:

> **A letter to representatives of the nation's packaged foods industry urging them to package snack foods in single serve packages and to include labeling that reflects the packaging.**

Nutrition at School

A recent study conducted by the Food and Beverage Study Committee for the Washoe County School District (WCSD) indicted the following key findings from the study that involved 75 of the 86 schools open during School Year (SY) 2001-2002:

- Competitive foods (foods offered at school, other than meals served through USDA's school meal programs—school lunch, school breakfast, and after-school snack programs) are widely available in WCSD.

  1. Ninety-one percent of schools reportedly sell competitive foods.

1. Competitive foods are available to students at school before school (32 percent), during school hours when school meals are not being served (43 percent), during lunch (65 percent), and after school (64 percent).

- Net revenue from competitive foods in SY 2001-2002 was estimated at $1,147,491.

    1. Sixty-three percent of net revenue was generated from a la carte sales and was paid to Nutrition Services to support the operating and personnel costs associated with the School Breakfast and School Lunch Programs.

    2. The remaining revenues were generated from vending machines (18 percent), fundraising efforts (12 percent), and school stores (6 percent) to support a wide variety of student activities, programs, and school necessities.

    3. Fifty-six percent of net revenue was generated from sales at high schools, 34 percent from middle schools, and 10 percent from elementary schools.

    4. A high proportion of schools were unable to account *for both gross and net revenues* from vending machines (39 percent), school stores (20 percent), and fundraising efforts (36 percent) making profitability difficult to determine.

    5. Overhead costs of selling competitive foods were unaccounted for here. For example, energy costs related to the 128 chilled beverage machines are estimated at $45,000 per year.

- The nutritional quality of the foods and beverages most commonly available is poor.

    1. Sugary drinks (i.e., soft drinks, sports drinks, and juice drinks—not 100 percent juice) were available at 73 percent of the schools.

    2. Baked goods—not low fat (i.e., cookies, crackers, cakes, pastries) were available at 63 percent of the schools.

    3. Salty snacks—not low fat were available at 59 percent of the schools.

    4. Candy was available at 44 percent of the schools.

    5. Bottled waters and plain milk were also widely available, which suggests there is a market for more healthful choices.

- Student access to foods of low nutritional quality may be undermining the National School Breakfast and School Lunch Programs. Sugary drinks, candy, high-fat baked goods, and salty snacks are available at times when school meals are offered. Some students may

choose to purchase these items in place of, or in addition, to a school meal that meets federal nutrition standards.

- Many schools are out of compliance with existing WCSD policy regarding competitive foods. Policies adopted by the Washoe County Board of Trustees (1988) restrict student access to competitive foods at specific times of the school day. School practices reported here indicate that these policies are not consistently followed.

Testimony based on anecdotal evidence suggested that such challenges related to providing healthy foods at school are seen throughout the state and the nation. To encourage a review of this issue, the Subcommittee moved to request the drafting of:

> **A letter to the superintendent of the State Department of Education asking him to request information from the state's school districts about their use of vending machines, snack boxes, and candy stores in each of their respective schools. The request should ask for the amount of funding that is raised from vending machines in each school, an identification of the contract requirements for each school, and information identifying how the money is used by each school.**

Additionally, the Subcommittee requested the drafting of:

> **A letter to the chancellor of the University and Community College System of Nevada (UCCSN) urging the UCCSN to include obesity training in the health curriculums of the medical school and for teachers who instruct in nutrition and health at elementary, middle, and high schools.**

B. DEVELOPMENT OF HEALTHY ENVIRONMENTS AND PHYSICAL FITNESS

Testimony provided by a representative of the National Conference of State Legislators outlined a variety of ways that the Federal government and other states have addressed obesity.

Federal legislation, entitled Improved Nutrition and Physical Activity Act or the IMPACT Act amends the Public Health Service Act, to include in the training grant program for health profession students the treatment of persons (including children) who are overweight or obese and at risk for serious medical conditions, as well as persons who suffer from eating disorders. Additionally, the measure authorizes health professional training grant appropriations through Fiscal Year 2007. The measure authorizes the Secretary of Health and Human Services to make grants to train primary care physicians and other health professionals in obesity and eating disorder identification, treatment, and prevention.

This bill also amends the Public Health Service Act to direct the CDC to make grants (four-year maximum) to eligible entities to promote increased physical activity and improved nutrition through: (1) community-based activities; (2) school-based activities; and (3) health care delivery systems. The measure permits grant targeting to at-risk populations, including

youth, adolescent girls, and health disparity and underserved populations. It also authorizes grant priority for entities that provide matching contributions. The measure allows the National Center for Health Statistics to: (1) provide for collection and analysis of data to determine child and youth fitness and energy expenditure levels, including data collected as part of the National Health and Nutrition Examination Survey; (2) make grants to States, public entities, and nonprofits to further such data collection and analysis; and (3) provide grantees with technical assistance. The measure also establishes reporting requirements respecting: (1) health disparities; (2) obesity research; and (3) the national campaign to change children's health behaviors and reduce obesity. Finally the measure permits the use of preventive health and health services block grants for healthy eating and exercise education programs.

To demonstrate support for the concepts presented through this legislation the Subcommittee asked for the drafting of:

> **A letter to Nevada's Congressional representatives urging them to enact legislation such as the Improved Nutrition and Physical Activity (IMPACT) Act, which was referred to the House Committee on Energy and Commerce on January 20, 2004. This legislation will provide more funding to states to help them pursue initiatives to reduce the prevalence of obesity.**

Testimony by NCSL indicated that other states were encouraging communities to promote active living and address obesity through exercise. Certain states were looking at planning dynamics to determine how effectively they supported activities such as walking and biking. Additionally, states were looking at advertising campaigns to support active living and healthy nutritional choices.

Following testimony on these issue the Subcommittee moved to request the drafting of:

> **A letter to Nevada's Department of Transportation urging the department to find grant funding to develop safe biking and walking routes to schools.**
>
> **A letter to billboard companies in Nevada urging them to allow obesity prevention advertising without charging a fee whenever a billboard is not in use.**

C. STATEWIDE STRATEGIC PLAN FOR THE PREVENTION OF OBESITY

Testimony indicated that to adequately address the challenge of obesity in Nevada, the work of the Subcommittee needed to continue beyond the parameters established for the interim study. Additionally, testimony indicated that the primary funding source for obesity prevention efforts is the CDC. It was further indicated that the CDC prefers to make funding awards from strategic plans that have been developed by states, and Nevada does not currently have a strategic plan in place. Advocates testified to the need for a Planning Group and Statewide Strategic Plan to address obesity in Nevada.

The following recommendations, which related to the development and potential work of a Planning Group and the development of the strategic plan, were presented to the Subcommittee:

1. In determining membership of the planning group, be inclusive to ensure it represents the interests of Nevadans. As such, work with representatives of the State Department of Education, the UCCSN, including the School of Medicine, representatives of the state's Cooperative Extension offices, representatives of the Nevada Dietetic Association, and representatives of private industry.

2. In working with private industry representatives, consider including each chamber of commerce in Nevada, each Better Business Bureau in the state, the Retail Association of Nevada, the Nevada Restaurant Association, and any other identified employer group to encourage their employer-members to develop: (a) targeted intervention programs that are based on identified health risks and interests; (b) focused education programs that support individuals throughout the process of lifestyle change; (c) smoking cessation, weight management, nutrition and cholesterol management, and fitness activities; (d) integrated one-stop workshops that include multi-session classes, individual counseling, and self-directed modules; and (e) maintenance strategies that include ongoing awareness, interactive campaigns, and group support with on-site services. Additionally, a resource that may be used in this regard is the Nevada Cooperative Extension, which has developed a worksite wellness program.

3. In cooperation with health districts in Nevada, seek ways to establish state initiatives that support: promoting weight maintenance as well as weight loss; preventing weight gain as well as weight regain; preventing obesity and/or exacerbation of the obese state; decreasing or delaying morbidity and mortality; improving health profiles and reducing risk; developing long-term strategies; enacting smaller, simpler interventions; establishing incremental, additive steps; and providing appropriate reimbursement for interventions and documented outcomes.

4. Develop methods to encourage restaurants in Nevada to identify menu items served that are high-fat, high carbohydrate, and high-calorie foods.

5. Leverage money received from federal sources for programs that promote physical activity in Nevada.

6. Develop nutrition standards and guidelines to control the sale of competitive foods in schools and determine which organizations should be responsible for developing and enforcing the standards and rules.

7. Implement methods to provide nutritional training for families enrolled in the state's Temporary Assistance for Needy Families program, the state's Food Stamps program,

and any other public assistance food programs, including the Women, Infant, and Children's program.

8. Encourage education in reading nutrition labels on packaged foods.

9. Develop methods to establish a fitness and wellness program for state employees, which might include cooperating with the Department of Personnel and the Public Employees' Benefits Program.

10. Use existing tools, such as the training kit from the Center for Weight and Health, University of California, Berkeley, to help local communities prevent obesity in children.

11. Develop ways to encourage school districts in Nevada to work with health coordinators who will develop curricula to promote physical activity and healthy nutrition in schools in the district; ensure the availability of tobacco education programs; and engage parents in providing healthy environments for kids at home.

12. Develop methods to ensure that after-school programs promote physical education in their activities.

13. Consider adopting strategies to ensure that schools provide to children, aged five years and older, the recommended amount of activities for cardiovascular fitness.

Additionally, to assist in coordinating services the Subcommittee created the "Obesity Resource List." This list was available to the public during the course of the study.

Recognizing both that obesity is a major public health issue and that the Health Division serves as the state's leader in public health, the Division was asked to continue the work of the Subcommittee. The Subcommittee approved two primary requests.

Convene a planning group or steering committee to develop a Statewide Strategic Plan concerning the prevention of obesity; and

Maintain and update the "Obesity Resource List" that the Subcommittee developed during the course of its study.

VI. CONCLUDING REMARKS

This report presents a summary of the recommendations requested by the Subcommittee for discussion before the 2005 Nevada Legislature. Persons wishing to have more specific information concerning these documents may find it useful to review the meeting minutes and exhibits for each of the meetings of the Subcommittee.

VI. APPENDICES

Page

APPENDIX A

Senate Concurrent Resolution No. 13 (File No. 89, *Statutes of Nevada 2003*)

Senate Concurrent Resolution No. 13
File No. 89
Statutes of Nevada 2003

SENATE CONCURRENT RESOLUTION—Directing the Legislative Committee on Health Care to conduct an interim study concerning the medical and societal costs and impacts of obesity in Nevada.

WHEREAS, Obesity manifests itself as one of our nation's most significant public health concerns as proven by recent statistics from the Centers for Disease Control and Prevention which reveal that in the United States, approximately 38.8 million adults, 19.8 percent of adults in the United States, are classified as obese, and an estimated 9 million children and adolescents between the ages of 6 and 19 years, 15 percent of that age group, are categorized as overweight; and

WHEREAS, These statistics represent such an extremely rapid rise of obesity in our society over the last decade that members of the medical profession attach the word "epidemic" to the problem, a word usually reserved for massive outbreaks of infectious disease; and

WHEREAS, Obesity is a chronic disease, and studies show that about one half of children who are overweight by the time they are 6 or 7 years of age remain overweight as adults and 75 percent of adolescents who are overweight will remain overweight as adults; and

WHEREAS, Research has established that there is a direct causal relationship between obesity and heart disease, hypertension, stroke, elevated cholesterol, type 2 diabetes, gallbladder disease, arthritis, breathing problems, gout, and forms of cancer such as uterine, cervical, ovarian, breast, gallbladder, colorectal and prostate; and

WHEREAS, Statistics for the year 2000 from the Centers for Disease Control and Prevention disclose that 4,089 deaths in Nevada were the result of heart disease and that 3,763 deaths were caused by cancer, and obesity almost assuredly played a role in many of these deaths; and

WHEREAS, Not only does obesity affect physical health, but obese persons may also experience low self-esteem, social stigmatism, discrimination, poor body image and increased risk of emotional problems, and disorders such as chronic depression, anxiety and obsessive compulsive disorder have commonly been linked to obesity; and

WHEREAS, According to *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity,* issued in 2001, an estimated 300,000 people die each year from illnesses directly

WHEREAS, In 2000, the total costs of this epidemic in the United States rose to an estimated $117 billion per year, consisting of $61 billion in direct costs for preventive, diagnostic and treatment services for medical care and $56 billion in losses relating to productivity in the workforce and the value of future earnings lost by premature death; and

WHEREAS, There is a compelling need for an aggressive program of prevention and treatment because the direct and indirect costs resulting from obesity are expected to

increase rapidly as the problem worsens and because the prevention and amelioration of obesity could have a significantly positive impact on health care costs in this state; and

WHEREAS, Conquering the problem of obesity must begin with the process of accumulating sound scientific data as a foundation for fostering awareness of the role that genetics, behavior and environment play in obesity and finding solutions to improve the quality of life; now, therefore, be it

RESOLVED BY THE SENATE OF THE STATE OF NEVADA, THE ASSEMBLY CONCURRING, That the Legislative Committee on Health Care is hereby directed to conduct a study of the medical and societal costs and impacts of obesity on the State of Nevada; and be it further

RESOLVED, That a subcommittee must be appointed for the study consisting of one Legislator appointed by the Majority Leader of the Senate, one Legislator appointed by the Minority Leader of the Senate, one Legislator appointed by the Speaker of the Assembly and one Legislator appointed by the Minority Leader of the Assembly, all of whom must have served on the Senate Standing Committee on Human Resources and Facilities or the Assembly Standing Committee on Health and Human Services during the 2003 Legislative Session; and be it further

RESOLVED, That one person assigned by the Health Division of the Department of Human Resources and one person assigned by the Department of Education shall also serve as voting members of the subcommittee; and be it further

RESOLVED, That the Legislative Commission shall appoint a chairman of the subcommittee from among the members of the subcommittee; and be it further

RESOLVED, That the study must include, without limitation:

1. An analysis of the fiscal impact of obesity on health care costs and productivity in Nevada and a determination of possible savings in health care costs resulting from the prevention and proper treatment of obesity;

2. The identification of programs and practices that have been established in Nevada and other states which are cost-effective and could be implemented throughout Nevada;

3. Recommendations for programs to increase public awareness regarding the causes, prevention, risks and treatment of obesity;

4. An examination of the particular effects of the 24-hour lifestyle and transient nature of some of the population of this state on obesity;

5. Recommendations for programs and practices that encourage healthy and balanced fitness and nutritional choices; and

6. Any other proposals for legislation relating to health care for obesity that the committee may receive or develop; and be it further

RESOLVED, That any recommended legislation proposed by the subcommittee must be approved by a majority of the members of the Senate and a majority of the members of the Assembly appointed to the subcommittee; and be it further

RESOLVED, That the Legislative Committee on Health Care shall submit a report of the results of the study and any recommendations for legislation to the 73rd Session of the Nevada Legislature.

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APPENDIX B

Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity
United States Department of Health and Human Services

The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity 2001

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of the Surgeon General
Rockville, MD

National Library of Medicine Cataloging in Publication

The Surgeon General's call to action to prevent and decrease overweight and obesity / Office of Disease Prevention and Health Promotion; Centers for Disease Control and Prevention, National Institutes of Health. - - Rockville, MD: U.S. Dept. of Health and Human Services, Public Health Service, Office of the Surgeon General; Washington, D.C. : For sale by the Supt. of Docs., U.S. G.P.O., 2001.

Includes bibliographical references.
Also available on the internet.

1. Obesity--prevention & control. 2. Weight Gain. I. United States. Public Health Service. Office of the Surgeon General. II. United States. Office of Disease Prevention and Health Promotion. III. Centers for Disease Control and Prevention (U.S.) IV. National Institutes of Health (U.S.)

02NLM: WD 210 S9593 2001
D.C., 20402-0001

Office of Disease Prevention and Health Promotion

Centers for Disease Control and Prevention

National Institutes of Health

This publication is available on the World Wide Web at
http://www.surgeongeneral.gov/library

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In Memory of

PAUL AMBROSE, M.D., M.P.H.

(December 26, 1968–September 11, 2001)

Office of Disease Prevention and Health Promotion,
U.S. Department of Health and Human Services

As senior editor of this *Call To Action*, Dr. Ambrose's commitment to promoting public health and preventing disease was a critical force in the development of this document.

A Call To Action To Prevent and Decrease Overweight and Obesity

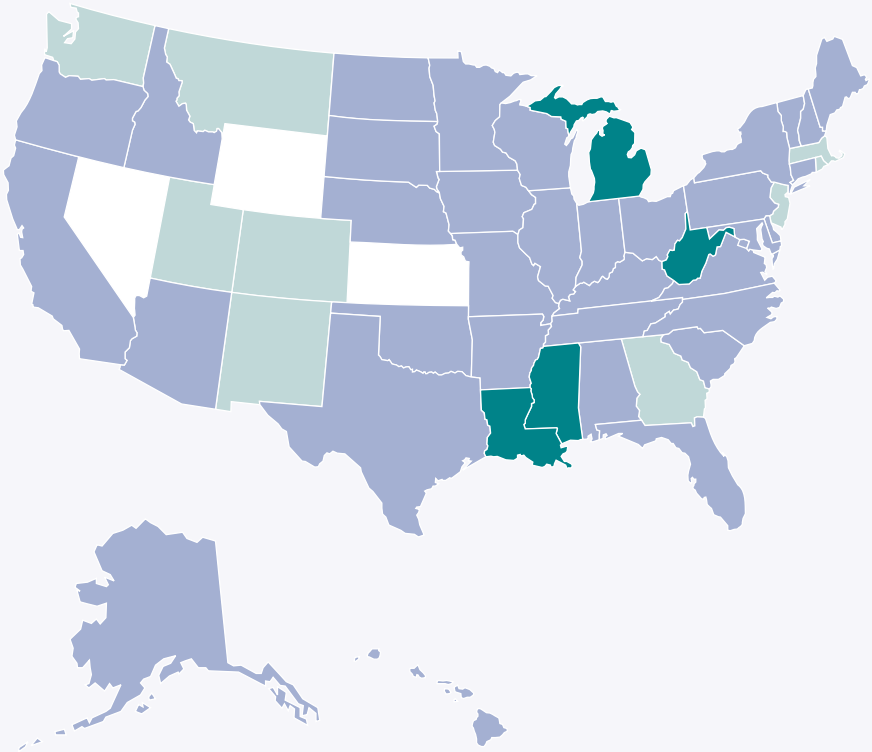
PRINCIPLES:

Overweight and obesity have reached nationwide epidemic proportions. Both the prevention and treatment of overweight and obesity and their associated health problems are important public health goals. To achieve these goals, *The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity* is committed to five overarching principles:

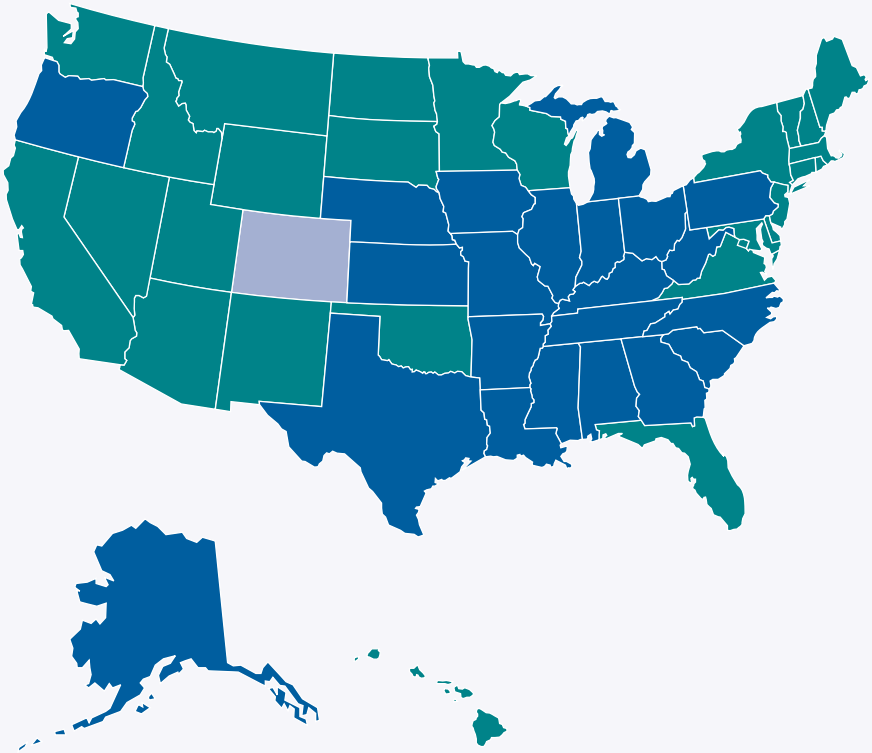
- Promote the recognition of overweight and obesity as major public health problems.
- Assist Americans in balancing healthful eating with regular physical activity to achieve and maintain a healthy or healthier body weight.
- Identify effective and culturally appropriate interventions to prevent and treat overweight and obesity.
- Encourage environmental changes that help prevent overweight and obesity.
- Develop and enhance public-private partnerships to help implement this vision.

THE SURFACING OF AN EPIDEMIC: PREVALENCE OF OBESITY* AMONG U.S. ADULTS

1991



2000



No Data | <10% | 10%-14% | 15%-19% | ≥20%

These two figures demonstrate the increasing prevalence of obesity among U.S. adults*

**Approximately 30 pounds overweight*

Source: Behavioral Risk Factor Surveillance System (BRFSS)

Note: BFRSS uses self-reported height and weight to calculate obesity; self-reported data may underestimate obesity prevalence.

Table of Contents

Message From the Secretary
U.S. Department of Health and Human Services

The 20th century saw remarkable and unprecedented improvements in the lives of the people of our country. We saw the infant mortality rate plummet and life expectancy increase by 30 years. Deaths from infectious diseases dropped tremendously, and improvements in medical care allowed many individuals with chronic disease to lead longer, fuller lives. Yet despite these and other successes, complex new health challenges continue to confront us.

Overweight and obesity are among the most important of these new health challenges. Our modern environment has allowed these conditions to increase at alarming rates and become highly pressing health problems for our Nation. At the same time, by confronting these conditions, we have tremendous opportunities to prevent the unnecessary disease and disability that they portend for our future.

As we move to acknowledge and understand these conditions, it is important to remember that they are as sensitive for each of us as they are challenging and important for our country's health. This is truly the time for a *Call To Action*, because each one of us as an individual must understand that we are called upon to act, just as our institutions are called upon to consider how they can help confront this new epidemic.

This Surgeon General's *Call To Action* represents an opportunity for individuals to make healthy lifestyle choices for themselves and their families. It encourages health care providers to help individuals prevent and treat these conditions. At a broader level, it prompts all communities to make changes that promote healthful eating and adequate physical activity. It calls for scientists to pursue new research. Above all, it calls upon individuals, families, communities, schools, worksites, organizations, and the media to work together to build solutions that will bring better health to everyone in this country.

I wholeheartedly support *The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity*, and I urge all of us to work together to achieve its ambitious and essential vision.

Like many across the Nation, the Department of Health and Human Services was reminded how small the world is when, on September 11, we lost one of our own, Paul Ambrose, M.D., M.P.H. He had just finished the final edits on the *Call To Action* and was on his way to a conference in California on childhood obesity when tragedy struck. Paul was a man of great compassion and heart, committed to helping people in rural America obtain better health care and improving prevention measures for all Americans. He cared deeply for the issues he worked on but even more for the people affected. While we will miss Paul's energy and dedication, we will miss his humanity even more.

Tommy G. Thompson

Foreword From the Surgeon General
U.S. Department of Health and Human Services

Overweight and obesity may not be infectious diseases, but they have reached epidemic proportions in the United States. Overweight and obesity are increasing in both genders and among all population groups. In 1999, an estimated 61 percent of U.S. adults were overweight or obese, and 13 percent of children and adolescents were overweight. Today there are nearly twice as many overweight children and almost three times as many overweight adolescents as there were in 1980. We already are seeing tragic results from these trends. Approximately 300,000 deaths a year in this country are currently associated with overweight and obesity. Left unabated, overweight and obesity may soon cause as much preventable disease and death as cigarette smoking.

Overweight and obesity have been grouped as one of the Leading Health Indicators in *Healthy People 2010*, the Nation's health objectives for the first decade of the 21st century. The Leading Health Indicators reflect the major public health concerns and opportunities in the United States. While we have made dramatic progress over the last few decades in achieving so many of our health goals, the statistics on overweight and obesity have steadily headed in the wrong direction. If this situation is not reversed, it could wipe out the gains we have made in areas such as heart disease, diabetes, several forms of cancer, and other chronic health problems. Unfortunately, excessive weight for height is a risk factor for all of these conditions.

Many people believe that dealing with overweight and obesity is a personal responsibility. To some degree they are right, but it is also a community responsibility. When there are no safe, accessible places for children to play or adults to walk, jog, or ride a bike, that is a community responsibility. When school lunchrooms or office cafeterias do not provide healthy and appealing food choices, that is a community responsibility. When new or expectant mothers are not educated

about the benefits of breastfeeding, that is a community responsibility. When we do not require daily physical education in our schools, that is also a community responsibility. There is much that we can and should do together.

Taking action to address overweight and obesity will have profound effects on increasing the quality and years of healthy life and on eliminating health disparities in the United States. With this outcome in mind, I asked the Office of Disease Prevention and Health Promotion, along with other agencies in the Department of Health and Human Services, to assist me in developing this *Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity.* Our ultimate goal is to set priorities and establish strategies and actions to reduce overweight and obesity. This process begins with our attitudes about overweight and obesity. Recognition of the epidemic of overweight and obesity is relatively recent, and there remain enormous challenges and opportunities in finding solutions to this public health crisis. Overweight and obesity must be approached as preventable and treatable problems with realistic and exciting opportunities to improve health and save lives. The challenge is to create a multifaceted public health approach capable of delivering long-term reductions in the prevalence of overweight and obesity. This approach should focus on health rather than appearance and empower both individuals and communities to address barriers, reduce stigmatization, and move forward in addressing overweight and obesity in a positive and proactive fashion.

Several events have drawn attention to overweight and obesity as public health problems. In 1998, the National Heart, Lung, and Blood Institute in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health released the *Clinical Guidelines on the Identification, Evaluation, and Treatment of Obesity in Adults: Evidence Report.* This report was the result of a thorough scientific review of the evidence related to the risks and treatment of overweight and obesity, and it provided evidence-based treatment guidelines for health care providers. In early 2000, the release of *Healthy People 2010* identified overweight and obesity as major public health problems and set national objectives for reduction in their prevalence. The National Nutrition Summit in May 2000 illuminated the impact of dietary and physical activity habits on

achieving a healthy body weight and began a national dialogue on strategies for the prevention of overweight and obesity. Finally, a Surgeon General's Listening Session, held in late 2000, and a related public comment period, generated many useful ideas for prevention and treatment strategies and helped forge and reinforce an important coalition of stakeholders. Participants in these events considered many prevention and treatment strategies, including such national priorities as ensuring daily physical education in schools, increasing research on the behavioral and environmental causes of obesity, and promoting breastfeeding.

These activities are just a beginning, however. Effective action requires the close cooperation and collaboration of a variety of organizations and individuals. This *Call To Action* serves to recruit your talent and inspiration in developing national actions to promote healthy eating habits and adequate physical activity, beginning in childhood and continuing across the lifespan. I applaud your interest in this important public health challenge.

David Satcher, M.D., Ph.D.

SECTION 1:

Overweight and Obesity as Public Health Problems in America

This *Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity* seeks to engage leaders from diverse groups in addressing a public health issue that is among the most burdensome faced by the Nation: the health consequences of overweight and obesity. This burden manifests itself in premature death and disability, in health care costs, in lost productivity, and in social stigmatization. The burden is not trivial. Studies show that the risk of death rises with increasing weight. Even moderate weight excess (10 to 20 pounds for a person of average height) increases the risk of death, particularly among adults aged 30 to 64 years.[1]

Overweight and obesity are caused by many factors. For each individual, body weight is determined by a combination of genetic, metabolic, behavioral, environmental, cultural, and socioeconomic influences. Behavioral and environmental factors are large contributors to overweight and obesity and provide the greatest opportunity for actions and interventions designed for prevention and treatment.

For the vast majority of individuals, overweight and obesity result from excess calorie consumption and/or inadequate physical activity. Unhealthy dietary habits and sedentary behavior together account for approximately 300,000 deaths every year.[2,3] Thus, a healthy diet and regular physical activity, consistent with the *Dietary Guidelines for Americans*, should be promoted as the cornerstone of any prevention or treatment effort.[4,5] According to the U.S. Department of Agriculture's 1994–1996 Continuing Survey of Food Intakes by Individuals, very few Americans meet the majority of the Food Guide Pyramid recommendations. Only 3 percent of all individuals meet four of the five recommendations for the intake of grains, fruits, vegetables, dairy products, and meats.[6] Much work needs to be done to ensure the nutrient adequacy of our diets while at the same time avoiding excess calories. Dietary adequacy and moderation in energy consumption are both important for maintaining or achieving a healthy weight and for overall health.

Many adult Americans have not been meeting Federal physical activity recommendations to accumulate at least 30 minutes of moderate physical activity most days of the week.[4,7] In 1997, less than one-third of adults engaged in the recommended amount of physical activity, and 40 percent of adults engaged in no leisure-time physical activity.[7] Although nearly 65 percent of adolescents reported participating in vigorous activity for 20 minutes or more on 3 or more out of 7 days, national data are not available to assess whether children and adolescents meet the Federal recommendations to accumulate at least 60 minutes of moderate physical activity most days of the week.[4,8] Many experts also believe that physical *inactivity* is an important part of the energy imbalance responsible for the increasing prevalence of overweight and obesity. Our society has become very sedentary; for example, in 1999, 43 percent of students in grades 9 through 12 viewed television more than 2 hours per day.[8]

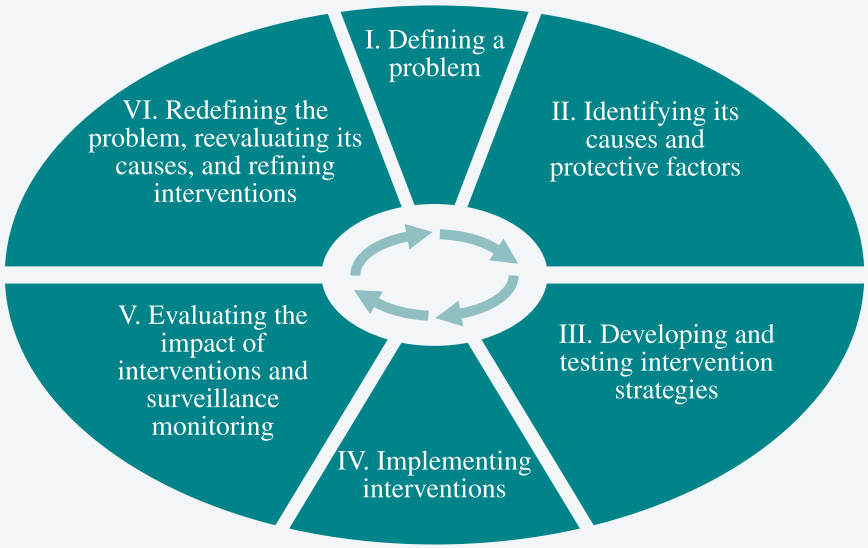
Both dietary intake and physical activity are difficult to measure on either an individual or a population level. More research is clearly necessary to fully understand the specific etiology of this crisis. However, these statistics and the increasing prevalence of overweight and obesity highlight the need to engage all Americans as we move forward to ensure the quality and accessibility of prevention and treatment programs.

Public Health and the Surgeon General

Through cooperative action, public health programs have successfully prevented the spread of infectious disease, protected against environmental hazards, reduced accidents and injuries, responded to disasters, worked toward ensuring the quality and accessibility of health services, and promoted healthy behaviors.[9] Over the past 100 years, thanks largely to public health efforts, the life expectancy of Americans has increased by approximately 50 percent.[10]

Public health success has traditionally come from the reduction in the incidence of infectious diseases through improved sanitation and nutrition, cleaner air and water, and national vaccination programs. As the threats to America's health have shifted, so too have public health efforts. In recent years, public health efforts have successfully navigated new frontiers such as violence prevention, tobacco cessation, and mental health. Public health officials remain poised to address new health challenges through the collaborative processes of scientific research, policy development, and community mobilization.

The public health approach involves a circle of activities:



Measuring Overweight and Obesity

The first challenge in addressing overweight and obesity lies in adopting a common public health measure of these conditions. An expert panel, convened by the National Institutes of Health (NIH) in 1998, has utilized Body Mass Index (BMI) for defining overweight and obesity.[11] BMI is a practical measure that requires only two things: accurate measures of an individual's weight and height (figure 1). BMI is a measure of weight in relation to height. BMI is calculated as weight in pounds divided by the square of the height in inches, multiplied by 703. Alternatively, BMI can be calculated as weight in kilograms divided by the square of the height in meters.

Studies have shown that BMI is significantly correlated with total body fat content for the majority of individuals.[11] BMI has some limitations, in that it can overestimate body fat in persons who are very muscular, and it can underestimate body fat in persons who have lost muscle mass, such as many elderly. Many organizations, including over 50 scientific and medical organizations that have endorsed the NIH *Clinical Guidelines*, support the use of a BMI of 30 kg/m^2 or greater to identify obesity in adults and a BMI between 25 kg/m^2 and 29.9 kg/m^2 to identify overweight in adults.[12,13] These definitions are based on evidence that suggests health risks are greater at or above a BMI of 25 kg/m^2 compared to those at a BMI below that level.[12] The risk of death, although modest until a BMI of 30 kg/m^2 is reached, increases with an increasing Body Mass Index.[1]

Figure 1: Adult Body Mass Index

$$BMI = \left\{ \frac{\text{WEIGHT (pounds)}}{\text{HEIGHT (inches)}^2} \right\} \times 703$$

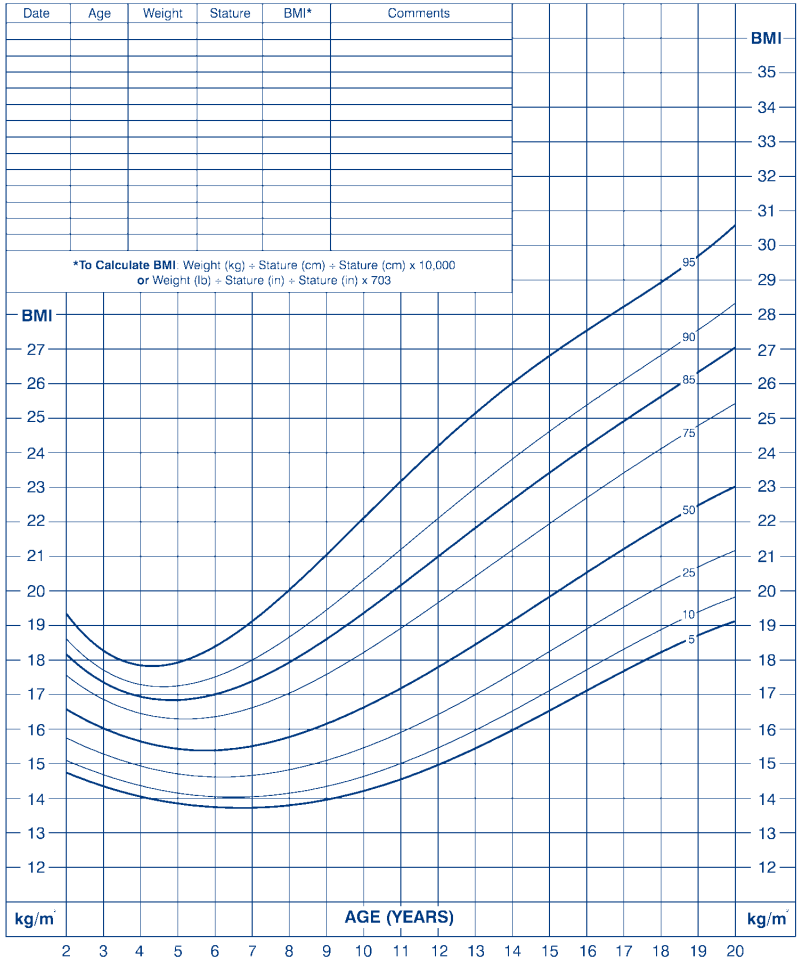
Weight in Pounds

Height in Feet and Inches	120	130	140	150	160	170	180	190	200	210	220	230	240	250
4'6	29	31	34	36	39	41	43	46	48	51	53	56	58	60
4'8	27	29	31	34	36	38	40	43	45	47	49	52	54	56
4'10	25	27	29	31	34	36	38	40	42	44	46	48	50	52
5'0	23	25	27	29	31	33	35	37	39	41	43	45	47	49
5'2	22	24	26	27	29	31	33	35	37	38	40	42	44	46
5'4	21	22	24	26	28	29	31	33	34	36	38	40	41	43
5'6	19	21	23	24	26	27	29	31	32	34	36	37	39	40
5'8	18	20	21	23	24	26	27	29	30	32	34	35	37	38
5'10	17	19	20	22	23	24	26	27	29	30	32	33	35	36
6'0	16	18	19	20	22	23	24	26	27	28	30	31	33	34
6'2	15	17	18	19	21	22	23	24	26	27	28	30	31	32
6'4	15	16	17	18	20	21	22	23	24	26	27	28	29	30
6'6	14	15	16	17	19	20	21	22	23	24	25	27	28	29
6'8	13	14	15	17	18	19	20	21	22	23	24	25	26	28

Healthy Weight Overweight Obese

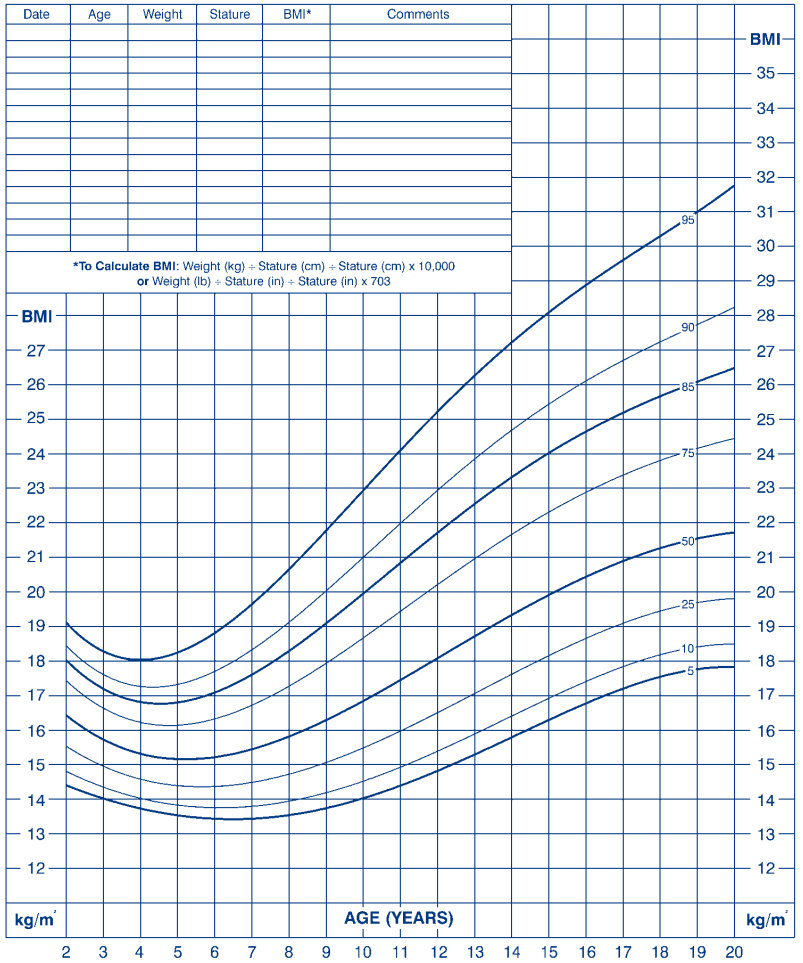
In children and adolescents, overweight has been defined as a sex- and age-specific BMI at or above the 95th percentile, based on revised Centers for Disease Control and Prevention (CDC) growth charts (figures 2 and 3).[14] Neither a separate definition for obesity nor a definition for overweight based on health outcomes or risk factors is defined for children and adolescents.[15]

FIGURE 2: BODY MASS INDEX-FOR-AGE PERCENTILES: BOYS AGED 2 TO 20 YEARS



Source: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000)

FIGURE 3: BODY MASS INDEX-FOR-AGE PERCENTILES: GIRLS AGED 2 TO 20 YEARS



Source: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000)

Health Risks

Epidemiological studies show an increase in mortality associated with overweight and obesity. Individuals who are obese (BMI ≥ 30) have a 50 to 100 percent increased risk of premature death from all causes compared to individuals with a BMI in the range of 20 to 25.[16] An estimated 300,000 deaths a year may be attributable to obesity.[3]

Morbidity from obesity may be as great as from poverty, smoking, or problem drinking.[17] Overweight and obesity are associated with an increased risk for coronary heart disease; type 2 diabetes; endometrial, colon, postmenopausal breast, and other cancers; and certain musculoskeletal disorders, such as knee osteoarthritis (table 1).[18] Both modest and large weight gains are associated with significantly increased risk of disease. For example, a weight gain of 11 to 18 pounds increases a person's risk of developing type 2 diabetes to twice that of individuals who have not gained weight, while those who gain 44 pounds or more have four times the risk of type 2 diabetes.[19]

A gain of approximately 10 to 20 pounds results in an increased risk of coronary heart disease (nonfatal myocardial infarction and death) of 1.25 times in women[20] and 1.6 times in men.[21] Higher levels of body weight gain of 22 pounds in men and 44 pounds in women result in an increased coronary heart disease risk of 1.75 and 2.65, respectively.[20,21] In women with a BMI of 34 or greater, the risk of developing endometrial cancer is increased by more than six times.[22] Overweight and obesity are also known to exacerbate many chronic conditions such as hypertension and elevated cholesterol.[23] Overweight and obese individuals also may suffer from social stigmatization, discrimination, and poor body image.[24]

Although obesity-associated morbidities occur most frequently in adults, important consequences of excess weight as well as antecedents of adult disease occur in overweight children and adolescents. Overweight children and adolescents are more likely to become overweight or obese adults; this concern is greatest among adolescents. Type 2 diabetes, high blood lipids, and hypertension as well as early maturation and orthopedic problems also occur with increased frequency in overweight youth. A common consequence of childhood overweight is psychosocial—specifically discrimination.[25]

These data on the morbidity and mortality associated with overweight and obesity demonstrate the importance of the prevention of weight gain, as well as the role of obesity treatment, in maintaining and improving health and quality of life.

Table 1: Health risks associated with obesity

Obesity is Associated with an Increased Risk of:	
• premature death • type 2 diabetes • heart disease • stroke • hypertension • gallbladder disease • osteoarthritis (degeneration of cartilage and bone in joints) • sleep apnea • asthma • breathing problems • cancer (endometrial, colon, kidney, gallbladder, and postmenopausal breast cancer)	• high blood cholesterol • complications of pregnancy • menstrual irregularities • hirsutism (presence of excess body and facial hair) • stress incontinence (urine leakage caused by weak pelvic-floor muscles) • increased surgical risk • psychological disorders such as depression • psychological difficulties due to social stigmatization

Adapted from www.niddk.nih.gov/health/nutrit/pubs/statobes.htm[26]

Economic Consequences

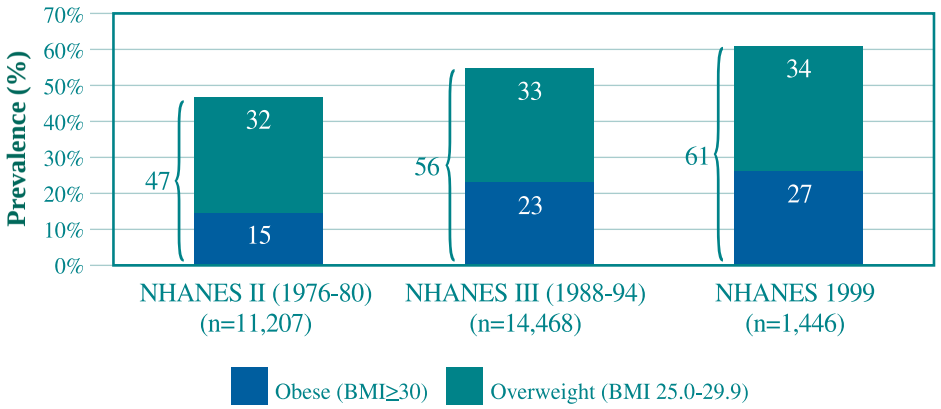
Overweight and obesity and their associated health problems have substantial economic consequences for the U.S. health care system. The increasing prevalence of overweight and obesity is associated with both direct and indirect costs. Direct health care costs refer to preventive, diagnostic, and treatment services related to overweight and obesity (for example, physician visits and hospital and nursing home care). Indirect costs refer to the value of wages lost by people unable to work because of illness or disability, as well as the value of future earnings lost by premature death.[27]

In 1995, the total (direct and indirect) costs attributable to obesity amounted to an estimated $99 billion.[27] In 2000, the total cost of obesity was estimated to be $117 billion ($61 billion direct and $56 billion indirect).[28] Most of the cost associated with obesity is due to type 2 diabetes, coronary heart disease, and hypertension.[29]

EPIDEMIOLOGY

The United States is experiencing substantial increases in overweight and obesity (as defined by a BMI ≥ 25 for adults) that cut across all ages, racial and ethnic groups, and both genders.[30] According to self-reported measures of height and weight, obesity (BMI ≥ 30) has been increasing in every State in the Nation.[31] Based on clinical height and weight measurements in the 1999 National Health and Nutrition Examination Survey (NHANES), 34 percent of U.S. adults aged 20 to 74 years are overweight (BMI 25 to 29.9), and an additional 27 percent are obese (BMI ≥ 30).[32] This contrasts with the late 1970s, when an estimated 32 percent of adults aged 20 to 74 years were overweight, and 15 percent were obese (figure 4).[30]

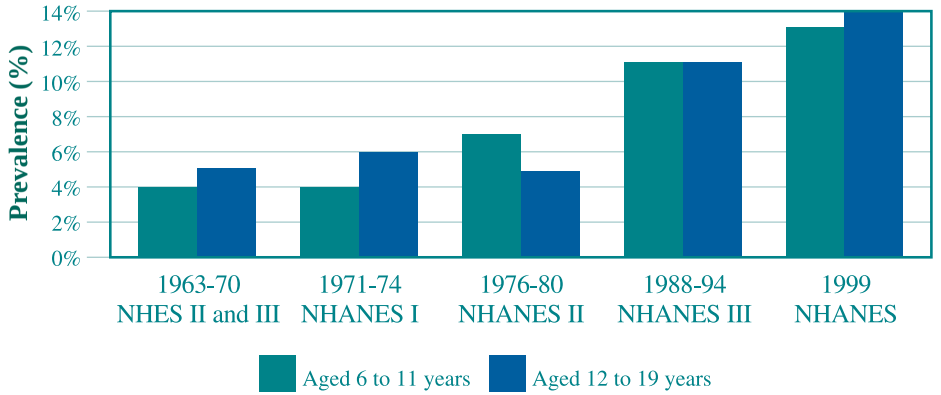
FIGURE 4: AGE-ADJUSTED PREVALENCE OF OVERWEIGHT AND OBESITY AMONG U.S. ADULTS AGED 20 TO 74 YEARS



Source: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

The most recent data (1999) estimate that 13 percent of children aged 6 to 11 years and 14 percent of adolescents aged 12 to 19 years are overweight.[33] During the past two decades, the percentage of children who are overweight has nearly doubled (from 7 to 13 percent), and the percentage of adolescents who are overweight has almost tripled (from 5 to 14 percent) (figure 5).[33]

FIGURE 5: PREVALENCE OF OVERWEIGHT* AMONG U.S. CHILDREN AND ADOLESCENTS



**Gender- and age-specific BMI ≥ the 95th percentile*
Source: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS) National Health Examination Survey (NHES), National Health and Nutrition Examination Survey (NHANES)

DISPARITIES IN PREVALENCE

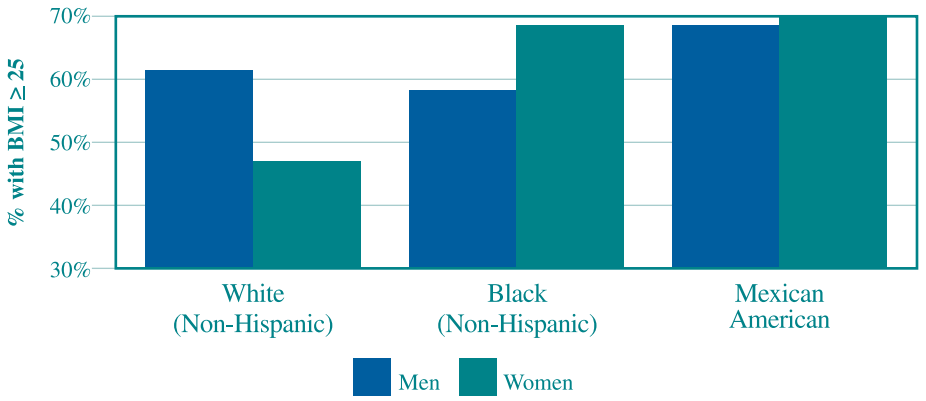
Between the second and third National Health and Nutrition Examination Surveys (NHANES II and III), the prevalence of overweight and obesity (BMI ≥ 25 for adults and ≥ 95th percentile for age and gender in children) increased in both genders, across all races and ethnicities, and across all age groups.[15,30] Disparities in overweight and obesity prevalence exist in many segments of the population based on race and ethnicity, gender, age, and socioeconomic status. For example, overweight and obesity are particularly common among minority groups and those with a lower family income.

Race and Ethnicity, Gender, and Age

In general, the prevalence of overweight and obesity is higher in women who are members of racial and ethnic minority populations than in non-Hispanic white women. Among men, Mexican Americans have a higher prevalence of overweight and obesity than non-Hispanic whites or non-Hispanic blacks. For non-Hispanic men, the prevalence of overweight and obesity among whites is slightly greater than among blacks.[30]

Within racial groups, gender disparities exist, although not always in the same direction. Based on NHANES III (1988–1994),[30] the proportion of non-Hispanic black women who were overweight or obese (BMI ≥ 25; 69 percent) was higher than the proportion of non-Hispanic black men (58 percent) (figure 6). For non-Hispanic whites, on the other hand, the proportion of men who were overweight or obese (BMI ≥ 25; 62 percent) exceeded the proportion of women (47 percent). However, when looking at obesity alone (BMI ≥ 30), the prevalence was slightly higher in non-Hispanic white women compared to non-Hispanic white men (23 percent and 21 percent, respectively).[30] The prevalence of overweight or obesity (BMI ≥ 25) was about the same in Mexican American men and women (69 percent and 70 percent, respectively).[30] Although smaller surveys indicate a higher prevalence of overweight and obesity in American Indians, Alaska Natives, and Pacific Islander Americans and a lower prevalence in Asian Americans compared to the general population, the number surveyed in NHANES III was too small to reliably report prevalence comparisons of overweight and obesity for these populations.[34]

Figure 6: Age-adjusted prevalence of overweight or obesity in selected groups (NHANES III, 1988–1994)



Source: Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), National Health and Nutrition Examination Survey (NHANES)

Racial and ethnic disparities in overweight may also occur in children and adolescents. Data for youth from NHANES III showed a similar pattern to that seen among adults. Mexican American boys tended to have a higher prevalence of overweight than non-Hispanic black and non-Hispanic white boys. Non-Hispanic black girls tended to have a higher prevalence of overweight compared to non-Hispanic white and Mexican American girls.[15] The National Heart, Lung, and Blood Institute Growth and Health Study on overweight in children found a higher mean BMI for black girls aged 9 and 10 years, compared to white girls of the same ages.[35] This racial difference in BMI widened and was even greater at age 19.[36]

In addition to racial and ethnic and gender disparities, the prevalence of overweight and obesity also varies by age. Among both men and women, the prevalence of overweight and obesity increases with advancing age until the sixth decade, after which it starts to decline.[30]

Socioeconomic Status

Disparities in the prevalence of overweight and obesity also exist based on socioeconomic status. For all racial and ethnic groups combined, women of lower socioeconomic status (income ≤ 130 percent of poverty threshold) are approxi-

mately 50 percent more likely to be obese than those with higher socioeconomic status (income > 130 percent of poverty threshold). Men are about equally likely to be obese whether they are in a low or high socioeconomic group.[37]

Among children, the relationship between socioeconomic status and overweight in girls is weaker than it is in women; that is, girls from lower income families have not consistently been found to be overweight compared to girls from higher income families. Among Mexican American and non-Hispanic black children and adolescents, family income does not reliably predict overweight prevalence. However, non-Hispanic white adolescents from lower income families experience a greater prevalence of overweight than those from higher income families.[15]

HEALTH BENEFITS OF WEIGHT LOSS

The recommendations to treat overweight and obesity are based on two rationales. First, overweight and obesity are associated with an increased risk of disease and death, as previously discussed.[3,16,18] Second, randomized controlled trials have shown that weight loss (as modest as 5 to 15 percent of excess total body weight) reduces the risk factors for at least some diseases, particularly cardiovascular disease, in the short term. Weight loss results in lower blood pressure, lower blood sugar, and improved lipid levels.[38] While few published studies have examined the link between weight loss and reduced disease or death in the long-term,[39] current data as well as scientific plausibility suggest this link.

Studies have shown that reducing risk factors for heart disease, such as blood pressure and blood cholesterol levels, lowers death rates from heart disease and stroke. Therefore, it is highly probable that weight loss that reduces these risk factors will reduce the number of deaths from heart disease and stroke. Trials examining the direct effects of weight loss on disease and death are currently under way.[40,41] For example, one trial shows that weight loss, a healthful diet, and exercise prevent the development of type 2 diabetes among persons who are overweight or obese.[42] The recently completed Diabetes Prevention Program from NIH also confirmed significant reductions in the risk for developing type 2 diabetes among obese subjects with impaired glucose tolerance through similar lifestyle interventions.[43]

SECTION 2: Posing Questions and Developing Strategies

Current knowledge is clear on many issues: the prevalence of overweight and obesity is high, and that of obesity is increasing rapidly; adolescents who are overweight are at high risk of becoming overweight or obese adults; overweight and obesity increase the risk for serious diseases such as type 2 diabetes, hypertension, and high blood cholesterol; and overweight and obesity are associated with premature death and disability. It is also known that a healthy diet and adequate physical activity aid in maintaining a healthy weight and, among overweight or obese persons, can promote weight loss.

Knowledge is less clear, however, on some very important questions. How can overweight and obesity be prevented? What are the most effective prevention and treatment strategies? How can the environment be modified to promote healthier eating and increased physical activity? Determining the answers to these questions demands a national public health response. Assembling the components of this response has begun.

DEVELOPING A PUBLIC HEALTH RESPONSE

In December 2000, the Surgeon General hosted a public Listening Session on overweight and obesity. The meeting—Toward a National Action Plan on Overweight and Obesity: The Surgeon General's Initiative—began a developmental process that led to this *Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity.* A menu of important activities has been assembled from comments received during the Surgeon General's Listening Session, a public comment period, and the National Nutrition Summit. The menu, which is presented in the following section, highlights areas that received significant attention during one or more of these events. Although not meant to be prescriptive, the menu should establish useful starting points as individuals and groups focus their own skills, creativity, and inspiration on the national epidemic of overweight and obesity.

The discussions at the Surgeon General's Listening Session centered on activities and interventions in five key settings: families and communities, schools, health care, media and communications, and worksites. The key actions discussed are presented for each of these settings. Many of these actions overlap the different settings and can be applied in several or all environments.

CARE To Address Overweight and Obesity

The key actions are organized by setting in a framework called CARE: Communication, Action, and Research and Evaluation.

Communication: Provision of information and tools to motivate and empower decision makers at the governmental, organizational, community, family, and individual levels who will create change toward the prevention and decrease of overweight and obesity.

Action: Interventions and activities that assist decision makers in preventing and decreasing overweight and obesity, individually or collectively.

Research and Evaluation: Investigations to better understand the causes of overweight and obesity, to assess the effectiveness of interventions, and to develop new communication and action strategies.

Within the CARE framework, effective actions must occur at multiple levels. Obviously, individual behavioral change lies at the core of all strategies to reduce overweight and obesity. Successful efforts, however, must focus not only on individual behavioral change, but also on group influences, institutional and community influences, and public policy. Actions to reduce overweight and obesity will fail without this multidimensional approach. Individual behavioral change can occur only in a supportive environment with accessible and affordable healthy food choices and opportunities for regular physical activity. Furthermore, actions aimed exclusively at individual behavioral change, while not considering social, cultural, economic, and environmental influences, are likely to reinforce attitudes of stigmatization against the overweight and obese.

Setting 1: Families and Communities

Families and communities lie at the foundation of the solution to the problems of overweight and obesity. Family members can share their own knowledge and

habits regarding a healthy diet and physical activity with their children, friends, and other community members. Emphasis should be placed on family and community opportunities for communication, education, and peer support surrounding the maintenance of healthy dietary choices and physical activity patterns.

Communication

- Raise consumer awareness about the effect of being overweight on overall health.
- Inform community leaders about the importance of developing healthy communities.
- Highlight programs that support healthful food and physical activity choices to community decision makers.
- Raise policy makers' awareness of the need to develop social and environmental policy that would help communities and families be more physically active and consume a healthier diet.
- Educate individuals, families, and communities about healthy dietary patterns and regular physical activity, based on the *Dietary Guidelines for Americans*.
- Educate parents about the need to serve as good role models by practicing healthy eating habits and engaging in regular physical activity in order to instill lifelong healthy habits in their children.
- Raise consumer awareness about reasonable food and beverage portion sizes.
- Educate expectant parents and other community members about the potentially protective effect of breastfeeding against the development of obesity.

Action

- Form community coalitions to support the development of increased opportunities to engage in leisure time physical activity and to encourage food outlets to increase availability of low-calorie, nutritious food items.
- Encourage the food industry to provide reasonable food and beverage portion sizes.
- Increase availability of nutrition information for foods eaten and prepared away from home.

- Create more community-based obesity prevention and treatment programs for children and adults.
- Empower families to manage weight and health through skill building in parenting, meal planning, and behavioral management.
- Expand efforts to encourage healthy eating patterns, consistent with the *Dietary Guidelines for Americans*, by nutrition assistance recipients.
- Provide demonstration grants to address the lack of access to and availability of healthy affordable foods in inner cities.
- Promote healthful dietary patterns, including consumption of at least five servings of fruits and vegetables a day.
- Create community environments that promote and support breastfeeding.
- Decrease time spent watching television and in similar sedentary behaviors by children and their families.
- Provide demonstration grants to address the lack of public access to safe and supervised physical activity.
- Create and implement public policy related to the provision of safe and accessible sidewalks, walking and bicycle paths, and stairs.

Research and Evaluation

- Conduct research on obesity prevention and reduction to confirm their effects on improving health outcomes.
- Determine the root causes, behaviors, and social and ecological factors leading to obesity and how such forces vary by race and ethnicity, gender, and socioeconomic status.
- Assess the factors contributing to the disproportionate burden of overweight and obesity in low-income and minority racial and ethnic populations.
- Develop and evaluate preventive interventions that target infants and children, especially those who are at high risk of becoming obese.
- Coordinate research activities to refine risk assessment, to enhance obesity prevention, and to support appropriate consumer messages and education.
- Study the cost-effectiveness of community-directed strategies designed to prevent the onset of overweight and obesity.

- Conduct behavioral research to identify how to motivate people to increase and maintain physical activity and make healthier food choices.
- Evaluate the feasibility of incentives that support healthful dietary and physical activity patterns.
- Identify techniques that can foster community motivation to reduce overweight and obesity.
- Examine the marketing practices of the fast food industry and the factors determining construction of new food outlets.

Setting 2: Schools

Schools are identified as a key setting for public health strategies to prevent and decrease the prevalence of overweight and obesity. Most children spend a large portion of time in school. Schools provide many opportunities to engage children in healthy eating and physical activity and to reinforce healthy diet and physical activity messages. Public health approaches in schools should extend beyond health and physical education to include school policy, the school physical and social environment, and links between schools and families and communities. Schools and communities that are interested in reducing overweight among the young people they serve can consider options listed below. Decisions about which options to select should be made at the local level.

Communication

- Build awareness among teachers, food service staff, coaches, nurses, and other school staff about the contribution of proper nutrition and physical activity to the maintenance of lifelong healthy weight.
- Educate teachers, staff, and parents about the importance of school physical activity and nutrition programs and policies.
- Educate parents, teachers, coaches, staff, and other adults in the community about the importance they hold as role models for children, and teach them how to be models for healthy eating and regular physical activity.
- Educate students, teachers, staff, and parents about the importance of body size acceptance and the dangers of unhealthy weight control practices.

- Develop sensitivity of staff to the problems encountered by the overweight child.

Action

- Provide age-appropriate and culturally sensitive instruction in health education that helps students develop the knowledge, attitudes, skills, and behaviors to adopt, maintain, and enjoy healthy eating habits and a physically active lifestyle.
- Ensure that meals offered through the school breakfast and lunch programs meet nutrition standards.
- Adopt policies ensuring that all foods and beverages available on school campuses and at school events contribute toward eating patterns that are consistent with the *Dietary Guidelines for Americans.*
- Provide food options that are low in fat, calories, and added sugars, such as fruits, vegetables, whole grains, and low-fat or nonfat dairy foods.
- Ensure that healthy snacks and foods are provided in vending machines, school stores, and other venues within the school's control.
- Prohibit student access to vending machines, school stores, and other venues that compete with healthy school meals in elementary schools and restrict access in middle, junior, and high schools.
- Provide an adequate amount of time for students to eat school meals, and schedule lunch periods at reasonable hours around midday.
- Provide all children, from prekindergarten through grade 12, with quality daily physical education that helps develop the knowledge, attitudes, skills, behaviors, and confidence needed to be physically active for life.
- Provide daily recess periods for elementary school students, featuring time for unstructured but supervised play.
- Provide extracurricular physical activity programs, especially inclusive intramural programs and physical activity clubs.
- Encourage the use of school facilities for physical activity programs offered by the school and/or community-based organizations outside of school hours.

Research and Evaluation

- Conduct research on the relationship of healthy eating and physical activity to student health, learning, attendance, classroom behavior, violence, and other social outcomes.
- Evaluate school-based behavioral health interventions for the prevention of overweight in children.
- Develop an ongoing, systematic process to assess the school physical activity and nutrition environment, and plan, implement, and monitor improvements.
- Conduct research to study the effect of school policies such as food services and physical activity curricula on overweight in children and adolescents.
- Evaluate the financial and health impact of school contracts with vendors of high-calorie foods and beverages with minimal nutritional value.

Setting 3: Health Care

The health care system provides a powerful setting for interventions aimed at reducing the prevalence of overweight and obesity and their consequences. A majority of Americans interact with the health care system at least once during any given year. Recommendations by pediatric and adult health care providers can be influential in patient dietary choices and physical activity patterns. In collaboration with schools and worksites, health care providers and institutions can reinforce the adoption and maintenance of healthy lifestyle behaviors. Health care providers also can serve as effective public policy advocates and further catalyze intervention efforts in the family and community and in the media and communications settings.

Communication

- Inform health care providers and administrators of the tremendous burden of overweight and obesity on the health care system in terms of mortality, morbidity, and cost.

- Inform and educate the health care community about the importance of healthy eating, consistent with the *Dietary Guidelines for Americans*, and physical activity and fitness for the promotion of health.
- Educate health care providers and administrators to identify and reduce the barriers involving patients' lack of access to effective nutrition and physical activity interventions.
- Inform and educate the health care community about assessment of weight status and the risk of inappropriate weight change.
- Educate health care providers on effective ways to promote and support breastfeeding.

Action

- Train health care providers and health profession students in effective prevention and treatment techniques for overweight and obesity.
- Encourage partnerships between health care providers, schools, faith-based groups, and other community organizations in prevention efforts targeted at social and environmental causes of overweight and obesity.
- Establish a dialogue to consider classifying obesity as a disease category for reimbursement coding.
- Explore mechanisms that will partially or fully cover reimbursement or include as a member benefit health care services associated with weight management, including nutrition education and physical activity programs.

Research and Evaluation

- Develop effective preventive and therapeutic programs for obesity.
- Study the effect of weight reduction programs on health outcomes.
- Analyze the cost-effectiveness data on clinical obesity prevention and treatment efforts and conduct further research where the data are inconclusive.
- Promote research on the maintenance of weight loss.
- Promote research on breastfeeding and the prevention of obesity.
- Review and evaluate the reimbursement policies of public and private health insurance providers regarding overweight and obesity prevention and treatment efforts.

Setting 4: Media and Communications

The media can provide essential functions in overweight and obesity prevention efforts. From a public education and social marketing standpoint, the media can disseminate health messages and display healthy behaviors aimed at changing dietary habits and exercise patterns. In addition, the media can provide a powerful forum for community members who are addressing the social and environmental influences on dietary and physical activity patterns.

Communication

- Emphasize to media professionals that the primary concern of overweight and obesity is one of health rather than appearance.
- Emphasize to media professionals the disproportionate burden of overweight and obesity in low-income and racial and ethnic minority populations and the need for culturally sensitive health messages.
- Communicate the importance of prevention of overweight through balancing food intake with physical activity at all ages.
- Promote the recognition of inappropriate weight change.
- Build awareness of the importance of social and environmental influences on making appropriate diet and physical activity choices.
- Provide professional education for media professionals on policy areas related to diet and physical activity.
- Emphasize to media professionals the need to develop uniform health messages about physical activity and nutrition that are consistent with the *Dietary Guidelines for Americans.*

Action

- Conduct a national campaign to foster public awareness of the health benefits of regular physical activity, healthful dietary choices, and maintaining a healthy weight, based on the *Dietary Guidelines for Americans.*
- Encourage truthful and reasonable consumer goals for weight loss programs and weight management products.

- Incorporate messages about proper nutrition, including eating at least five servings of fruits and vegetables a day, and regular physical activity in youth-oriented TV programming.
- Train nutrition and exercise scientists and specialists in media advocacy skills that will empower them to disseminate their knowledge to a broad audience.
- Encourage community-based advertising campaigns to balance messages that may encourage consumption of excess calories and inactivity generated by fast food industries and by industries that promote sedentary behaviors.
- Encourage media professionals to utilize actors' influences as role models to demonstrate eating and physical activity lifestyles for health rather than for appearance.
- Encourage media professionals to employ actors of diverse sizes.

Research and Evaluation

- Evaluate the impact of community media advocacy campaigns designed to achieve public policy and health-related goals.
- Conduct consumer research to ensure that media messages are positive, realistic, relevant, consistent, and achievable.
- Increase research on the effects of popular media images of ideal body types and their potential health impact, particularly on young women.

Setting 5: Worksites

More than 100 million Americans spend the majority of their day at a worksite. While at work, employees are often aggregated within systems for communication, education, and peer support. Thus, worksites provide many opportunities to reinforce the adoption and maintenance of healthy lifestyle behaviors. Public health approaches in worksites should extend beyond health education and awareness to include worksite policies, the physical and social environments of worksites, and their links with the family and community setting.

Communication

- Inform employers of the direct and indirect costs of obesity.
- Communicate to employers the return-on-investment (ROI) data for worksite obesity prevention and treatment strategies.

Action

- Change workflow patterns, including flexible work hours, to create opportunities for regular physical activity during the workday.
- Provide protected time for lunch, and ensure that healthy food options are available.
- Establish worksite exercise facilities or create incentives for employees to join local fitness centers.
- Create incentives for workers to achieve and maintain a healthy body weight.
- Encourage employers to require weight management and physical activity counseling as a member benefit in health insurance contracts.
- Create work environments that promote and support breastfeeding.
- Explore ways to create Federal worksite programs promoting healthy eating and physical activity that will set an example to the private sector.

Research and Evaluation

- Evaluate best practices in worksite overweight and obesity prevention and treatment efforts, and disseminate results of studies widely.
- Evaluate economic data examining worksite obesity prevention and treatment efforts.
- Conduct controlled worksite studies of the impact of overweight and obesity management programs on worker productivity and absenteeism.

Section 3:
The Power of People and Ideas

Public health efforts are carried by the force of ideas and by the power of commitment. *Healthy People 2010* identifies goals to improve the country's health status, including reducing the prevalence of overweight and obesity. This *Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity* addresses the *Healthy People 2010* objectives to reduce the prevalence of overweight and obesity and presents many ideas by which this can be done. Translating these ideas into meaningful action will require a great commitment. We must collectively build on existing successful programs in both the public and private sectors, identify current gaps in action, and develop and initiate actions to fill those gaps. Public-private working groups should be formed around key themes or around the major settings in which obesity prevention and treatment efforts need to take place. While the magnitude of the problem is great, the range of potential solutions is even greater. The design of successful interventions and actions for prevention and management of overweight and obesity will require the careful attention of many individuals and organizations working together through multiple spheres of influence.

Individuals

Individuals lie at the foundation of the solution to the problems of overweight and obesity. Individuals can share their own knowledge and habits regarding a healthy diet and physical activity with their children, other family members, friends, and co-workers. Through frank dialogue regarding the methods, challenges, and benefits of adopting a healthy lifestyle, individuals can make the effort to combat the obesity epidemic both personal and relevant.

Organizations

Organizations represent individuals who have common goals and purposes. Organizations can initiate discussions on obesity and overweight within their membership and can establish weight and lifestyle goals. Organizations can develop programs that educate members on food choices and appropriate levels of physical

activity and engage members in these healthy habits. Using their links to and influence within the broader community, organizations can share their experiences in weight management and thus serve as an important public resource.

Industry

Industry has a vital role in the prevention of overweight and obesity. Through the production and distribution of food and other consumer products, industry exerts a tremendous impact on the nutritional quality of the food we eat and the extent of physical activity in which we engage. Industry can use that leverage to create and sustain an environment that encourages individuals to achieve and maintain a healthy or healthier body weight.

Communities

Communities consist of multiple components, including individuals, faith-based and other community organizations, worksites, and governments. A forum should be provided in which all community members can discuss the scope of the problem of overweight and obesity within the community. Also, the nature and adequacy of available resources for public education and treatment, as well as current and future policies and programs to reduce the burden of overweight and obesity within the community, must be addressed. Clearly, the discussions and the strategies adopted will vary depending on the prevalence of obesity and overweight within each community.

Government

Local governments can work together with organizations and communities to facilitate goals for reducing overweight and obesity. Local governments can assist with providing services to increase physical activity and improve nutritional intake. State, Tribal, and local governments can collaborate more with Federal nutrition assistance programs that provide services promoting healthy eating and physical activity. States can form task forces, steering committees, or advisory committees and can also develop State strategic plans. State and national governments can provide funding for research on the effects of interventions on overweight and obesity prevalence, prevention, and treatment, and on trends in diet and exercise

among at-risk populations. Governments can also provide support for public education, public awareness campaigns, and treatment services. Finally, governments can create and promote policies that promote an environment in which healthy dietary and physical activity options are readily accessible.

Creating National Action

Interventions and actions in the fundamental areas of the CARE approach should catalyze a process of national, State, and local action to address overweight and obesity. While strategies and action steps will vary, all who take action should acknowledge and embrace the following principles:

- Actions by diversified and cooperative groups are desirable. Working groups may form around settings or around crosscutting themes, as appropriate, to best leverage their talents and resources against overweight and obesity. Partnerships among all levels of government; public and private national, State, Tribal, and local organizations; and faith-based and other community groups will increase the likelihood that true gaps in action will be addressed. Partnerships also may foster learning, sharing of resources, division of labor, and consistency in the message to the public. Additionally, they may enhance media prominence and the social credibility of actions to address overweight and obesity.
- Actions require vigorous, dedicated commitment. The social, environmental, and behavioral factors responsible for the epidemic of overweight and obesity are firmly entrenched in our society. Identifying and dislodging these factors will require deliberate, persistent action and a degree of patience.
- Actions should strive to help all Americans maintain a healthy or healthier weight through balancing caloric intake and energy expenditure. Actions should focus at multiple levels, targeting the environment, behavior change, and policy.
- Actions should be carefully planned. The choice of actions should be based on the relative feasibility, effectiveness, and suitability of all potential actions, and all partners should have a clearly defined role in the action.

- Actions should be sensitive to the needs of minority populations and to the social stigmatization that can surround overweight and obesity.
- Actions and their outcomes should be evaluated. While implementing a system to monitor outcomes should not stand as a barrier to action, groups that are able should monitor and document the short-term and long-term effects of the actions they take. This type of tracking provides important information for the next round of actions and increases the likelihood of success. Developing a concrete evaluation plan early may help focus the goals for action.

Sustaining National Action

Effectiveness of the public health response to overweight and obesity requires strong leadership, regular monitoring, and committed support of all—government; industry; public, private, and professional organizations; communities; schools; families; and individuals. These features will ensure sustained action, productive collaboration, and ongoing progress toward the vision of this *Call To Action.*

Leadership

A network of leadership across the country needs to be established to ensure that actions are employed in the appropriate settings nationwide. This network should be structured at the organizational, industrial, State, and community levels. The creation of a public-private partnership in the form of a national steering committee could provide an overarching perspective and a more centralized leadership to such efforts. A dialogue among all these spheres of leadership is essential. Several key functions of this leadership structure are described in the following section.

Monitoring

The effectiveness of a CARE approach to overweight and obesity must be assessed at regular intervals. Monitoring should include gathering new information on overweight and obesity as well as reporting on the status of current interventions.

Information Gathering

- Update on the biological, epidemiological, and psychological aspects of obesity and overweight.
- Review of surveillance data systems to track overweight and obesity.
- Update on the latest behavioral and pharmacological interventions for overweight and obesity.
- Discussion of new ideas and goals for continued national activity.

Reporting

- Reporting on progress based on measurable objectives, such as those outlined in *Healthy People 2010.*
- Discussion of the progress achieved through actions undertaken within the various settings.
- Reporting on the status of current policies, programs, and interventions.
- Creation and dissemination of a library of best practices based on evidence-based programs.
- Recognition of exemplary intervention programs, for example, through an awards program.

Monitoring will ensure that all members of the various settings can communicate their ideas and strategies. Monitoring will allow planners to see which objectives are reached or exceeded as well as those that fall short of expectations.

Promotion

In addition to strong leadership and regular evaluation, a successful public health effort requires active promotion. Continuous public education on the magnitude of the problem of overweight and obesity will reinforce the goals of the national effort and will encourage public participation. Therefore, the national action to combat overweight and obesity should:

- Foster a consistent message to the public regarding the risks of overweight and obesity as well as the mechanisms by which a person can adopt a healthy lifestyle.
- Target high-risk groups for education on overweight and obesity.

- Promote interventions that address disparities in the prevalence of overweight and obesity.
- Seek to improve the general sensitivity to the social stigma of overweight and obesity.

Committed Government Support

Local, State, Tribal, and national governments have previously declared their support of efforts to maintain and improve America's health. Such governmental backing may be enhanced through the following:

- Creation of laws and policies that support a healthy physical and nutritional environment for the public.
- Allocation of resources to both government and private organizations to carry out national action to prevent and decrease overweight and obesity.
- Provision of authority to specific Federal and State agencies to enforce policies aimed at reducing overweight and obesity.

Ongoing Dialogue

At a minimum, a national steering committee should convene an annual meeting modeled after the Surgeon General's Listening Session. This event would provide leaders with a useful forum for information exchange and enhance their abilities to carry out the functions listed above.

Section 4:
Vision for the Future

This *Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity* underscores the tremendous health impact that overweight and obesity have on the United States. Through widespread action on the part of all Americans, this *Call To Action* aims to catalyze a process that will reduce the prevalence of overweight and obesity on a nationwide scale. Without support and investment from a broad array of public and private partners, these efforts will not succeed. With such support, however, there exist few limitations on the potential of this effort to improve the health of individuals, families, communities, and, ultimately, the Nation as a whole.

Surgeon General's Priorities for Action

The previously discussed CARE framework presents a menu of important activities for the prevention and treatment of overweight and obesity. Building from this menu, the Surgeon General identifies the following 15 activities as national priorities for immediate action. Individuals, families, communities, schools, worksites, health care, media, industry, organizations, and government must determine their role and take action to prevent and decrease overweight and obesity.

Communication

The Nation must take an informed, sensitive approach to communicate with and educate the American people about health issues related to overweight and obesity. Everyone must work together to:

- Change the perception of overweight and obesity at all ages. The primary concern should be one of health and not appearance.
- Educate all expectant parents about the many benefits of breastfeeding.
  - Breastfed infants may be less likely to become overweight as they grow older.
  - Mothers who breastfeed may return to pre-pregnancy weight more quickly.
- Educate health care providers and health profession students in the prevention and treatment of overweight and obesity across the lifespan.

- Provide culturally appropriate education in schools and communities about healthy eating habits and regular physical activity, based on the *Dietary Guidelines for Americans,* for people of all ages. Emphasize the consumer's role in making wise food and physical activity choices.

ACTION

The Nation must take action to assist Americans in balancing healthful eating with regular physical activity. Individuals and groups across all settings must work in concert to:

- Ensure daily, quality physical education in all school grades. Such education can develop the knowledge, attitudes, skills, behaviors, and confidence needed to be physically active for life.
- Reduce time spent watching television and in other similar sedentary behaviors.
- Build physical activity into regular routines and playtime for children and their families. Ensure that adults get at least 30 minutes of moderate physical activity on most days of the week. Children should aim for at least 60 minutes.
- Create more opportunities for physical activity at worksites. Encourage all employers to make facilities and opportunities available for physical activity for all employees.
- Make community facilities available and accessible for physical activity for all people, including the elderly.
- Promote healthier food choices, including at least five servings of fruits and vegetables each day, and reasonable portion sizes at home, in schools, at worksites, and in communities.
- Ensure that schools provide healthful foods and beverages on school campuses and at school events by:
  - Enforcing existing U.S. Department of Agriculture regulations that prohibit serving foods of minimal nutritional value during mealtimes in school food service areas, including in vending machines.

  - Adopting policies specifying that all foods and beverages available at school contribute toward eating patterns that are consistent with the *Dietary Guidelines for Americans.*
  - Providing more food options that are low in fat, calories, and added sugars such as fruits, vegetables, whole grains, and low-fat or nonfat dairy foods.
  - Reducing access to foods high in fat, calories, and added sugars and to excessive portion sizes.
- Create mechanisms for appropriate reimbursement for the prevention and treatment of overweight and obesity.

RESEARCH AND EVALUATION

The Nation must invest in research that improves our understanding of the causes, prevention, and treatment of overweight and obesity. A concerted effort should be made to:

- Increase research on behavioral and environmental causes of overweight and obesity.
- Increase research and evaluation on prevention and treatment interventions for overweight and obesity, and develop and disseminate best practice guidelines.
- Increase research on disparities in the prevalence of overweight and obesity among racial and ethnic, gender, socioeconomic, and age groups, and use this research to identify effective and culturally appropriate interventions.

CONCLUSION

This *Call To Action* is for all who can have an impact on overweight and obesity in the United States to take action to create a future where:

- It is widely recognized that overweight and obesity can reduce the length and quality of life.
- The etiology of this complex problem of overweight and obesity is better understood.

- Effective and practical prevention and treatment are widely available and integrated in health care systems.
- Environments have been modified to promote healthy eating and increased physical activity.
- Disparities in overweight and obesity prevalence based on race and ethnicity, socioeconomic status, gender, and age are eliminated.
- The health consequences of overweight and obesity are reduced.
- The social stigmatism associated with overweight and obesity is eradicated.

This vision should be approached vigorously and optimistically but with patience. There is no simple or quick answer to this multifaceted challenge. This *Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity* calls upon individuals, families, communities, schools, worksites, organizations, government, and the media to work together to build solutions that will bring better health to everyone in this country. Working together, we can make this vision become a reality.

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Steering Committee Roster

Agency for Healthcare Research and Quality	David Atkins
Administration for Children and Families	
Head Start Bureau	Robin Brocato
Administration on Aging	Yvonne Jackson
Centers for Disease Control and Prevention	
Division of Nutrition and Physical Activity	William Dietz
	Charlene Sanders
Division of Adolescent and School Health	Lloyd Kolbe
	Charlene Burgeson
	Casey Hannan
	Howell Wechsler
Centers for Medicare and Medicaid Services	John Whyte
	CAPT David Arday
Food and Drug Administration	Bruce Schneider
	Elizabeth Yetley
Health Resources and Services Administration	CAPT Laura McNally
Indian Health Service	Jean Charles-Azure
National Institutes of Health	
Office of the Director	Martina Vogel-Taylor
Division of Nutrition Research Coordination	CAPT Van Hubbard
	Pamela Starke-Reed
National Cancer Institute	CDR Richard Troiano
National Heart, Lung, and Blood Institute	Karen Donato

National Institute of Diabetes and Digestive and Kidney Diseases	Susan Yanovski
National Institute of Child Health and Human Development	Lynne Haverkos
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Office of Disease Prevention and Health Promotion	Randolph Wykoff
	Paul Ambrose
	Kathryn McMurry
	Linda Meyers
Office of the Surgeon General	Ann Elderkin
Office of Minority Health	Violet Woo
Office on Women's Health	Wanda Jones
	Kathy McCarty
	Jonelle Rowe
President's Council on Physical Fitness and Sports	Christine Spain

Appendix A:
Examples of Federal Programs and Initiatives

Programs on overweight and obesity span multiple departments, offices, and agencies in the Federal Government and promote valuable research and action in various settings. These programs are amplified by State, Tribal, local, and private-sector activities. Some examples of Federal initiatives on overweight and obesity, and the programs that support them, are listed below. For more information on a number of these programs, please see appendix B.

Setting 1: Families and Communities

- The Centers for Disease Control and Prevention (CDC) has a community planning tool called the *Planned Approach to Community Health (PATCH)*. This tool can be valuable in the process of developing and sustaining action.
- The Federal Highway Administration, the Environmental Protection Agency, and the Georgia Department of Transportation have developed *Strategies for Metropolitan Atlanta's Regional Transportation and Air Quality,* a document that provides a framework for assessing which factors of land use and transportation investment policies have the greatest potential to reduce the level of automobile dependence, which may consequently increase walking and bicycling activities while promoting the economic and environmental health of the Atlanta metropolitan region.
- The Head Start Bureau of the Administration for Children and Families, in conjunction with members of the community and various Federal agencies, will convene a focus group in fall 2002 to identify issues, effective practices, and recommendations addressing overweight in children of the Head Start Program.
- The Head Start Bureau has published a *Training Guide for the Head Start Learning Community: Enhancing Health in the Head Start Workplace.* The guide addresses the importance of health in the workplace and presents health

promotion principles and activities that can be applied to a variety of workplace health issues, including achieving and maintaining a healthy weight.

- The Health Resources and Services Administration (HRSA) has sponsored Statewide Partnerships in Women's Health that have begun a new prevention initiative entitled WISEWOMAN. Three Statewide Partnerships in Women's Health grantees (Alaska, North Carolina, and Vermont) have WISEWOMAN programs in their States. These grantees are encouraged to collaborate with the WISEWOMAN programs in their States and with other community-based partners to support cardiovascular screenings for women aged 40 to 64 years who then receive nutrition counseling and physical activity support.
- Under the Healthy People 2010 initiative, the Department of Health and Human Services (HHS) has produced the document *Healthy People in Healthy Communities: A Community Planning Guide Using Healthy People 2010*. This document is a guide to developing an action plan through building community coalitions, creating a vision, measuring results, and creating partnerships. It outlines strategies to help start community activities.
- HHS sponsored the development of a *Healthy People 2010 Toolkit* to provide guidance, technical tools, and resources to groups as they develop and sustain a successful plan of action. The *Toolkit* is organized around common elements of health planning and improvement and provides useful tips for getting started.
- HHS has recently released a *Blueprint for Action on Breastfeeding*. The *Blueprint for Action*, which was developed by health and scientific experts from 14 Federal agencies and 23 health care professional organizations, offers action steps for the health care system, families, the community, researchers, and the workplace to better focus attention on the importance of breastfeeding.
- HHS, the U.S. Department of Agriculture (USDA) and other organizations have collaborated to form the United States Breastfeeding Committee. They have developed *Breastfeeding in the United States: A National Agenda*, which is a strategic plan to protect, promote, and support breastfeeding.

- The Indian Health Service and Head Start Bureau have partnered in the development of an initiative, Healthy Children, Healthy Families, and Healthy Communities: A Focus on Diabetes and Obesity Prevention, which has focused on obesity and diabetes prevention activities for Head Start children, families, staff, and communities.
- The National Institutes of Health (NIH) Pathways research fosters culturally appropriate healthy eating practices and increased physical activity among American Indian children, their families, food service staff, and physical education and classroom teachers.
- NIH and the National Recreation and Park Association have developed the Hearts N' Parks program, which will create national dissemination magnet sites for implementing activities encouraging healthy eating and physical activity.
- NIH has developed a health awareness campaign called Sisters Together: Move More, Eat Better to encourage African American women in Boston to maintain or achieve a healthier weight by increasing their physical activity and eating healthy foods. NIH is currently expanding this program to other sites.
- The Office for American Indian, Alaska Native, and Native Hawaiian Programs has developed the Wisdom Steps Health Promotion Program for Elders, a partnership between the Tribes and Minnesota's State Unit on Aging. The program promotes health awareness, with major emphasis on assisting elders in weight loss, participation in exercise programs, improvement of diet, and smoking cessation.
- The Office on Women's Health has developed the Girls and Obesity Initiative, serving to identify existing government obesity programs and to adapt these programs toward gender-specific guidance for girls.
- USDA's Cooperative State Research, Education, and Extension Service (CSREES) has developed a nationwide project, Reversing Childhood Obesity Trends: Helping Children Achieve Healthy Weights. This project will achieve its goals through the integration of research, education, and innovative approaches to help children achieve healthy weights. The project will test a number of program interventions designed to reduce the prevalence of

childhood overweight and obesity in various populations. Both quantitative and qualitative methodologies will be employed in determining the most appropriate and effective program intervention for a specific population.

- CSREES also funds WIN the Rockies (Wellness IN the Rockies), which seeks to improve attitudes and behaviors about food, physical activity, and body image among rural residents of Idaho, Montana, and Wyoming in order to reverse the rising tide of obesity. Interventions will be community based and will target youth, limited-resource audiences, and overweight or obese adults.
- The Women, Infants, and Children (WIC) Farmer's Market Nutrition Program was established by Congress to provide fresh and nutritious foods from farmers' markets to low-income families participating in the WIC program.

SETTING 2: SCHOOLS

- The Assistant Secretary for Health, the Assistant Secretary of Elementary and Secondary Education, and USDA's Under Secretary for Food, Nutrition, and Consumer Services co-chair a Federal Interagency Committee on School Health that serves to integrate efforts across three Cabinet departments to improve the health and education of young people, including efforts to prevent and decrease obesity.
- CDC currently supports 20 State education agencies for coordinated school health programs to reduce the following chronic disease risk factors: tobacco use, poor eating habits, physical activity, and obesity. CDC also has developed guidelines for school health programs based on a review of published research and input from academic experts.
- *School Health Index for Physical Activity and Healthy Eating: A Self Assessment & Planning Guide,* is a guide developed by CDC that enables schools to identify strengths and weaknesses of their physical activity and nutrition policies and programs; develop an action plan for improving student health; and involve teachers, parents, students, and the community in improving school services.

- CDC and USDA are developing a mentoring curriculum to promote nutrition and physical activity in 11- to 18-year-old African American males in an effort to address racial disparities in nutrition and physical activity.
- CDC, the President's Council on Physical Fitness and Sports (PCPFS), and the Department of Education have developed a report, *Promoting Better Health for Young People Through Physical Activity and Sports,* in which they describe strategies to increase the number of youth engaging in physical activity.
- PCPFS has developed the President's Challenge Physical Activity and Fitness Awards Program, incorporating the Presidential, National, Participant, and Health Fitness Awards, and for the first time this year, the Presidential Active Lifestyle Award; the State Champion Award; the National School Demonstration Program; and the Presidential Sports Award Program as means of encouraging individual children and schools to adopt and maintain an active, fit, and healthy lifestyle.
- USDA has launched efforts to foster healthy school environments that support proper nutrition and the development of healthful eating habits, including re-emphasizing regulations that prohibit serving foods of minimal nutritional value in the food service area during meal periods.
- USDA's Team Nutrition includes a multitude of nutrition education materials for children ranging from prekindergarten through high school that support concepts to maintain a healthy weight. Team Nutrition provides grants to States promoting the Federal *Dietary Guidelines for Americans,* healthy food choices, and physical activity.
- USDA's Team Nutrition resources include a Food and Nutrition Service's "action kit," *Changing the Scene: Improving the School Nutrition Environment,* which can be used at the State and local levels to educate decision makers about the role school environments play in helping students meet the goals of the *Dietary Guidelines for Americans.*

Setting 3: Health Care

- The Agency for Healthcare Research and Quality is supporting the U.S. Preventive Services Task Force's update to the 1996 *Guide to Clinical Preventive Services* chapter on screening for obesity. The report will be expanded to address screening and counseling for overweight and obesity and will assess the effectiveness of primary care-based interventions to prevent or treat obesity.
- CDC has been active in leading discussions about reimbursement, or inclusion as a member benefit, for services relating to the prevention and treatment of overweight and obesity.
- CDC is focusing on the prevention of pediatric overweight in the primary care setting.
- The Department of Defense has developed the LEAN Program, a healthy lifestyle model for the treatment of obesity administered in the Tripler Army Medical Center.
- HRSA and other partners including PCPFS, NIH, and CDC have developed *Bright Futures in Practice: Physical Activity.* These guidelines and tools emphasize health promotion, disease prevention, and early recognition of physical activity issues and concerns of infants, children, and adolescents.
- HRSA, in collaboration with other partners, has developed *Bright Futures in Practice: Nutrition.* These nutrition guidelines provide a thorough overview of nutrition supervision during infancy, childhood, and adolescence. The guidelines also highlight how partnerships among health professionals, families, and communities can improve the nutritional status of infants, children, and adolescents.
- HRSA sponsors a Diabetes and Hypertension Collaborative that includes nutrition and weight management education for patients in community health centers.
- NIH has developed the *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: Evidence Report,* which has been formatted into various products suitable for use by physicians and other health professionals.

- NIH has collaborated with other Federal agencies to conduct and promote research on obesity and associated diseases. These studies focus on biologic and environmental determinants of human overweight and obesity, prevention strategies, and treatment modalities.
- NIH has developed a Weight-control Information Network to provide health professionals and consumers with science-based materials on obesity, weight control, and nutrition.
- HHS has charged members of NIH's National Task Force on Prevention and Treatment of Obesity to publish evidence reviews of overweight and obesity in leading medical journals to provide clinicians with the latest and most accurate information.

Setting 4: Media and Communications

- CDC is using existing surveillance systems to develop biennial reports on national, State, and local trends in the prevalence of cardiovascular disease, cancer, and diabetes; the risk factors related to these diseases; and the school-based programs that may reduce these risk factors.
- CDC, in conjunction with PCPFS and other private and public agencies, is *Promoting Better Health for Young People Through Physical Activity and Sports,* a document that reports on the strategies being used to involve families, school programs, recreation programs, community structural environment, and media campaigns on physical activity.
- The *PCPFS Research Digest,* a quarterly publication, synthesizes scientific information on specific topics in physical fitness, exercise science, and sports medicine for dissemination to fitness professionals and citizens.

Setting 5: Worksites

- CDC has developed the Personal Energy Plan (PEP), a self-help program that promotes healthy eating and physical activity in the workplace. Worksites are encouraged to supplement the PEP self-help kits with added activities and modifications to the nutritional and physical environment.

- CDC has a Web site, *Ready, Set, It's Everywhere You Go: CDC's Guide to Promoting Moderate Physical Activity,* which provides resources and information on how adults can incorporate physical activity into their routines at the workplace.
- CDC has provided funding to State departments of health in Maine, Montana, New York, and North Carolina for the establishment of health promotion programs at multiple worksites. The programs are intended to formulate and implement policy and environmental changes that support increased physical activity and healthy eating.

Appendix B:
Federal Program Resource List

Blueprint for Action on Breastfeeding
Office on Women's Health
U.S. Department of Health and Human Services
200 Independence Avenue, SW., Room 730B
Washington, DC 20201
Phone: (202) 690-7650
Fax: (202) 205-2631
http://www.4woman.gov/Breastfeeding/index.htm

Bright Futures in Practice
Bright Futures Project
HRSA/Maternal and Child Health Bureau
5600 Fishers Lane, Room 18A55
Rockville, MD 20857
Phone: (301) 443-2340
Fax: (301) 443-4842
Email: cdegraw@hrsa.gov
http://www.brightfutures.org

CDC Reports and Guidelines for Overweight and Obesity
http://www.cdc.gov/health/obesity.htm
Phone: (800) 311-3435

Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report

NHLBI Health Information Network
P.O. Box 30105
Bethesda, MD 20824-0105
Phone: (301) 592-8573
Fax: (301) 592-8563
http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm

Dietary Guidelines for Americans

Phone: (888) 878-3256
http://www.health.gov/dietaryguidelines

Exercise: A Guide from the National Institute on Aging

http://www.nia.nih.gov/health/pubs/nasa-exercise/index.htm

Exercise: A Video from the National Institute on Aging

http://www.nia.nih.gov/exercisevideo/

5 A Day for Better Health

National Cancer Institute
6130 Executive Boulevard, EPN 232
Bethesda, MD 20892-7332
Phone: (301) 496-8520
http://dccps.nci.nih.gov/5aday/

Girls and Obesity Initiative

Office on Women's Health
U.S. Department of Health and Human Services
200 Independence Avenue, SW., Room 730B
Washington, DC 20201
Phone: (202) 690-7650
Fax: (202) 205-2631
http://www.4woman.gov/owh/education.htm

Guidance on How To Understand and Use the Nutrition Facts Panel on Food Labels

U.S. Food and Drug Administration
Center for Food Safety and Applied Nutrition
Phone: (888) SAFEFOOD
http://www.cfsan.fda.gov/~dms/foodlab.html

Guide to Clinical Preventive Services, 2nd edition, 1996

U.S. Preventive Services Task Force
Phone: (800) 358-9295
http://www.ahrq.gov/clinic/uspstfix.htm

Head Start Bureau—Administration for Children and Families

Phone: (202) 205-8572
http://www2.acf.dhhs.gov/programs/hsb/

healthfinder® Gateway to Reliable Consumer Health Information on the Internet

National Health Information Center
U.S. Department of Health and Human Services
P.O. Box 1133
Washington, DC 20013-1133
Phone: (800) 336-4797
http://www.healthfinder.gov

Healthy Children, Healthy Families, and Healthy Communities

American Indian/Alaska Natives Programs Branch
Administration on Children, Youth and Families
Administration for Children and Families
330 C Street, SW., Room 2030
Washington, DC 20447
Phone: (877) 876-2662
Fax: (202) 205-8436

Healthy People 2010 Initiative

Office of Disease Prevention and Health Promotion
U.S. Department of Health and Human Services
200 Independence Avenue, SW., Room 738G
Washington, DC 20201
Phone: (202) 401-6295
Fax: (202) 205-9478
http://www.health.gov/healthypeople

Healthy People in Healthy Communities: A Community Planning Guide Using Healthy People 2010

http://www.health.gov/healthypeople/publications/HealthyCommunities2001.

Healthy People 2010 Toolkit

Phone: (877) 252-1200
http://www.health.gov/healthypeople/state/toolkit

Hearts N' Parks

National Heart, Lung, and Blood Institute
P.O. Box 30105
Bethesda, MD 20824
Phone: (301) 592-8573
Fax: (301) 592-8563
Email: NHLBIinfo@rover.nhlbi.nih.gov
http://www.nhlbi.nih.gov/health/prof/heart/obesity/hrt_n_pk/index.htm

LEAN Program

Tripler Army Medical Center
Phone: (808) 433-6060
http://das.cs.amedd.army.mil/journal/J9725.HTM

National Breastfeeding Promotion Campaign

USDA Food and Nutrition Service
Phone: (800) 277-4975
http://www.fns.usda.gov/wic/content/bf/brpromo.htm

NHLBI Obesity Education Initiative

NHLBI Health Information Network
P.O. Box 30105
Bethesda, MD 20824-0105
Phone: (301) 592-8563
Fax: (301) 592-8563
http://www.nhlbi.nih.gov and
http://rover.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/

Nutrition.Gov

http://www.nutrition.gov

Partnership for Healthy Weight Management

Phone: (202) 326-3319

http://www.consumer.gov/weightloss/

PATCH

CDC's Planned Approach to Community Health

(770) 488-5426

http://www.cdc.gov/nccdphp/patch/index.htm

Physical Activity and Health: A Report of the Surgeon General

Phone: (202) 512-1800

http://www.cdc.gov/nccdphp/sgr/sgr.htm

President's Council on Physical Fitness and Sports

200 Independence Avenue, SW., Room 738H

Washington, DC 20201

Phone: (202) 690-9000

Fax: (202) 690-5211

http://www.fitness.gov

Promoting Better Health for Young People Through Physical Activity and Sports

Phone: (888) 231-6405

http://www.cdc.gov/nccdphp/dash/presphysactrpt/index.htm

Sisters Together: Move More, Eat Better

1 WIN WAY

Bethesda, MD 20892-3665

Phone: (202) 828-1025 or 1 (877) 946-4627

Fax: (202) 828-1028

Email: win@info.niddk.nih.gov

http://www.niddk.nih.gov/health/nutrit/sisters/sisters.htm

Team Nutrition

USDA Food and Nutrition Service

Child Nutrition Division

3101 Park Center Drive, Room 640

Alexandria, VA 22302

Phone: (703) 305-2590

Fax: (703) 305-2879

Email: cndinternet@fns.usda.gov

http://www.fns.usda.gov/cnd

USDA Food and Nutrition Service

Phone: (703) 305-2286

http://www.fns.usda.gov

USDA's National Agricultural Library

Phone: (301) 504-5755

http://www.nal.usda.gov

Weight-control Information Network (WIN)

1 WIN WAY

Bethesda, MD 20892-3665

Phone: (202) 828-1025 or 1 (877) 946-4627

Fax: (202) 828-1028

Email: win@info.niddk.nih.gov

http://www.niddk.nih.gov/health/nutrit/win.htm

WIN the Rockies (Wellness IN the Rockies)

http://www.uwyo.edu/wintherockies

Wisdom Steps Health Promotion Program for Elders

Office for American Indian, Alaskan Native, and Native Hawaiian
Phone: (202) 619-2713
Fax: (202) 260-1012
http://www.aoa.dhhs.gov/factsheets/natams.html

APPENDIX C

Food and Beverage Study Results
Submitted to the Board of Trustees
Washoe County School District
October 2003

School Food and Beverage Study Results

Submitted to
The Board of Trustees
Washoe County School District

On Behalf of the Food and Beverage Study Committee:

Eddie Bonine, Director, WCSD Student Services (Co-Chair)
Patricia Marble, Associate Director, WCSD Nutrition Services (Co-Chair)
Jamie Benedict, Associate Professor, University of Nevada, Reno
Rick Borba, Principal, Galena High School
John Carlson, Principal, McQueen High School
Pat Cook, Nutrition Consultant, Nevada Department of Education
Lisa Hill, Nutrition Consultant
Mike Supple, Co-Director, WCSD Nutrition Services

October, 2003

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Debra Brus, Public Health Epidemiologist, Washoe County District Health Dept.
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Barbara Scott, Associate Professor, University of Nevada School of Medicine
Gwenn Snow, Health Program Specialist, University of Nevada, Reno
Krista Steele, Nutrition Student, University of Nevada, Reno

Table of Contents

Executive Summary

A study of the financial and nutritional impact of foods and beverages sold *outside* of the National School Lunch and Breakfast Programs (hereafter referred to as "competitive foods") was conducted. **The following are key findings from the study that involved 75 of the 86 schools open during the 2001-02 school year:**

1. **Competitive foods are widely available in WCSD.**
   - 91% of schools reportedly sell competitive foods.
   - Competitive foods are available to students at school before school (32%), during school hours when school meals are not being served (43%), during lunch (65%), and after school (64%).
2. **Net revenue from competitive foods in 2001-02 is estimated at $1,147,491.**
   - 63% of net revenue was generated from a la carte sales and is paid to Nutrition Services to support the operating and personnel costs associated with the School Breakfast and School Lunch Programs.
   - The remaining revenues were generated from vending machines (18%), fundraising efforts (12%) and school stores (6%) to support a wide variety of student activities, programs, and school necessities.
   - 56% of net revenue was generated from sales at high schools, 34% from middle schools and 10% from elementary schools.
   - A high proportion of schools were unable to account *for both gross and net revenues* from vending machines (39%), school stores (20%) and fundraising efforts (36%) making profitability difficult to determine.
   - Overhead costs of selling competitive foods are unaccounted for here. For example, energy costs related to the 128 chilled beverage machines are estimated at $45,000/yr.
3. **The nutritional quality of the foods and beverages most commonly available is poor.**
   - Sugary drinks (i.e., soft drinks, sports drinks, and juice drinks—not 100% juice) were available at 73% of the schools.
   - Baked goods—not low fat (i.e., cookies, crackers, cakes, pastries) were available at 63% of the schools.
   - Salty snacks—not low fat were available at 59% of the schools.
   - Candy was available at 44% of the schools.
   - Bottled waters and plain milk were also widely available and suggests there is a market for more healthful choices.
4. **Student access to foods of low nutritional quality may be undermining the National School Breakfast and School Lunch Programs.**
   - Sugary drinks, candy, and high-fat baked goods and salty snacks are available at times when school meals are offered. Some students may choose to purchase these items in place of, or in addition to a school meal that meets federal nutrition standards.
5. **Many schools are out of compliance with existing WCSD policy regarding competitive foods.**
   - Policies adopted by the Washoe County Board of Trustees (1988) restrict student access to competitive foods at specific times of the school day. School practices reported here indicate that these policies are not consistently followed.

Introduction

Upon the recommendation of Superintendent Jim Hager, a study of the nutritional and financial impact of foods and beverages sold outside of the National School Breakfast and School Lunch Programs (hereafter referred to as "competitive foods") was conducted. The study committee, co-chaired by Eddie Bonine (Director, WCSD Student Services) and Patricia Marble (Associate Director, WCSD Nutrition Services) was therefore created to determine the:

(1) Types of foods and beverages offered for purchase at the school sites,
(2) Annual gross and net revenues, and
(3) Use of these revenues.

Committee members agreed that a District-wide survey (K-12) was needed in order to obtain the desired information. Members also agreed to limit the scope of the study to student access during the school day to vending machines, student stores, fundraising and a la carte offerings. The following is a description of the survey methods employed, results, and conclusions.

Methods

The survey instrument was developed by committee members and included both open- and close-ended questions related to vending machines, student stores, fundraising and a la carte sales during the 2001-02 school year. Using the Centers for Disease Control and Prevention's School Health Policies and Programs Study (SHPPS 2000) questionnaire as a template, the survey included questions about access during the school day, types of foods and beverages sold, and gross and net revenues from each venue listed above. In addition, questions about selling foods and beverages from specific restaurant chains and contracts with food and beverage companies were included due to concerns about commercialism in schools and its effect on students' eating habits. Questions about existing school policies related to foods and beverages were included to evaluate potential models to build upon. Pre-test results with six principals provided evidence that the survey format and questions were suitable.

The survey was sent electronically to every school principal in the District during March 2003 (Appendix A). A cover letter from Superintendent Hager was enclosed that explained the purpose of the survey, and requested that each school participate (Appendix B). Survey reminders were sent to principals approximately two weeks later.

Results

Surveys were received from 75 schools in the District including 53 elementary schools, 11 middle schools and 11 high schools. This represented 87% of schools open during the 2001-02 school year. To maximize the reliability and validity of the study, principals were asked to clarify responses or provide missing information. However, it should be noted that in many cases, the information was unavailable. Survey responses were then entered into a database and tabulated.

Vending Machines

Forty-one percent (31/75) of the responding schools reported that students could purchase competitive foods from vending machines at school. This included 21% of elementary schools, 91% of middle schools, and 91% of high schools (Table 1). The total number of machines reported was 140; 128 for beverages and 12 for foods. (It should be noted that several schools also reported the presence of vending machines strictly for teacher use but the content and revenue from these machines is not included here.) Among schools that did have vending machines, students could purchase competitive foods before school (45%), during school hours when school meals were not being served (42%), during lunch (48%), and after school (90%). Access to vending machines at specific times of the school day among elementary, middle and high schools is shown in Table 2.

The types of competitive foods sold from vending machines are listed in Table 3. The items most commonly available were soft drinks (71%), fruit drinks—not 100% juice (68%), bottled water (68%), sports drinks (61%), and salty snacks—not low fat (26%).

Among schools that did provide gross and/or net revenues from vending machines, the totals were $316,903 and $211,269 respectively (Table 4). However, because 39% of schools could not provide a complete accounting of these revenues (i.e., either the gross or net revenues for food and/or beverages were unknown), the profitability of this venue cannot be determined. In addition, these revenues do not reflect the **electric costs** associated with chilled beverage machines estimated at $45,000/yr for the 128 machines (see Appendix C). The reported revenues did vary greatly by school level with high schools reporting the largest net revenue from vending machines ($162,413 or 77% of total net), followed by middle schools ($41,335 or 20%), and elementary schools ($7,520 or 3%).

School Stores

Twenty-percent (15/76) of the responding schools reported that students could purchase competitive foods from a school store. This included 13% of elementary schools, 36% of middle schools, and 36% of high schools (Table 1). Among these schools, students could purchase competitive foods before school (27%), during school hours when school meals were not being served (27%), during lunch period (40%), and after school (40%). Access to school stores at specific times of the school day among elementary, middle and high schools is shown in Table 2.

Types of competitive foods sold from school stores are listed in Table 3. The items most commonly available were non-chocolate candy (67%), bottled water (53%), salty snacks—not low fat (47%), chocolate candy (47%), soft drinks (40%) and cookies, crackers, cakes, pastries and other baked goods—not low fat (40%) (Table 3).

Reporting of gross and net revenues resulting from school stores was better, compared to vending machines with only 20% of schools unable to provide both figures. As shown in Table 4, gross and net revenues were $199,111 and $73,667 respectively. However, because of missing information (i.e., some schools could not provide gross and net for both food and beverage sales), profitability of school stores cannot be determined.

Net revenues from middle and high schools were similar, $30,444 (41% of total net) and $35,180 (48%) respectively, while the sales from elementary schools were relatively small ($8,043 or 11%).

Fundraisers

Sixty-one percent (46/75) of the responding schools reported that students could purchase competitive foods through various fundraising efforts. This included 60% of elementary schools and 64% of both middle and high schools (Table 1). Among these schools, students could purchase competitive foods before school (24%), during school hours when school meals were not being served (52%) during lunch (22%), and after school (67%). Access to fundraising offerings at specific times of the school day among elementary, middle and high schools is shown in Table 2.

Types of foods and beverages available from fundraisers are listed in Table 3. The items most commonly available were non-chocolate candy (63%), cookies, crackers, cakes, pastries and other baked goods—not low fat (54%), chocolate candy (50%), soft drinks (30%), and ice cream and frozen yogurt (30%).

Similar to the other venues, incomplete reporting of fundraising revenues makes it difficult to assess the profitability of this venue; 36% of schools were unable to provide both gross and net revenues for food and beverages sales. Among schools that could provide *either or both* figures, the gross and net revenues were $155,770 and $138,832 respectively (Table 4). High school sales were the highest ($95,600 or 69% of total net revenues) followed by elementary ($28,339 or 20%) and middle schools ($14,893 or 11%).

A La Carte Foods and Beverages

WCSD Nutrition Services sells competitive foods a la carte, in addition to school meals. A la carte here includes *any* food and beverages sales to students that are not considered part of a reimbursable USDA school meal. Sixty-four percent (48/75) of responding schools reported that students may purchase competitive foods through this venue, including 50% of elementary schools, and 100% of middle and high schools. However, based on the data provided by Nutrition Services, 100% of participating schools generated revenue from competitive food sales. The disparity may be due to the different interpretations of "a la carte." In all likelihood, principals were not aware, or did not consider the sales of beverages to students who bring lunch from home. Among the schools that did report a la carte sales, students could purchase a la carte competitive foods before school (29%) and during lunch period (96%). Access to a la carte offerings among elementary, middle and high school students at these times is shown in Table 2.

Types of competitive foods available a la carte are listed in Table 3. The items most commonly available were unflavored milk (83%), sweetened/flavored milk (77%), cookies, crackers, cakes, pastries and other baked goods—not low fat (77%), sports drinks (73%) and fruit snacks (71%).

As shown in Table 4, the total gross and net revenues from a la carte food and beverage sales from all responding schools were $2,564,237 and $723,721 respectively. Only a very small proportion of the net revenues were from elementary schools ($68,211 or 9%), with the higher revenues generated from sales at high schools ($349,890 or 48%) and middle schools ($305,619 or 42%).

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In summary, 91% (68/75) of responding schools report the sale of competitive foods. While net revenues from these sales is conservatively estimated at $1,147,491, the incomplete accounting from schools makes it difficult to provide a full economic analysis for the District. Of total net revenues from all competitive food sales, approximately 63% were from a la carte offerings, 18% from vending machines, 12% from fundraising efforts, and 6% from school stores (see Table 5). Sales were highest among high schools generating approximately 56% of total net revenue, followed by middle schools (34%) and elementary schools (10%).

Students have access to competitive foods before school (32%), during lunch (65%), during school hours when school meals are not being served (43%) and after school (64%). And, as shown in Table 6, foods and beverages of poor nutritional value (i.e., sugary drinks, candy, and high-fat baked goods and salty snacks) are widely available, including at times when school meals are offered. Consequently, many schools are now out of compliance with existing District policy regarding competitive foods (see Appendix D).

Sale and Promotion of Specific Brands of Foods and Beverages

"Branded" competitive foods from restaurants were sold by 45% (34/77) of responding schools. Twenty-seven percent (20/75) of schools also reported that they had contracted with a specific food and/or beverage company that gave the company the rights to sell their product at school. The total number of contracts was 30 and the number of contracts at each school ranged from 1 to four. *Of schools who had such a contract(s)*; 55% (11/20) received a flat fee or incentive for agreeing to these contracts, and 50% (10/20) received a specified percentage of the sales receipts. No schools reported receiving incentives when sales reached a specific level. Thirty-percent of these schools (6/20) allowed the companies to advertise their product(s) on school grounds including inside school buildings (3 schools), and outside of school buildings, such as playing fields (3 schools).

Use of Revenues from Food and Beverage Sales

Respondents were asked to describe qualitatively how monies from competitive foods were used. Please see individual responses to this question as well as general comments from respondents in Appendices E and F. Competitive food revenues support a variety of student activities and programs (fieldtrips, scholarships, banquets, student awards, etc), and are also used for basic school necessities (books, paper, pencils, art supplies, custodial services, etc).

Policies Related to Food and Beverage Sales

Thirty-five percent of schools reportedly had policies regarding the types of foods and beverages that students could purchase during the school day (e.g., limited access to soft drinks, "sugary items, etc). An examination of these policies, among those that included this information, suggested that approximately half of these school policies were more closely related to *when* students have access to competitive foods as opposed to limiting any specific competitive food per se. In addition, 51% of schools had policies in place that prohibits the consumption of foods and beverages during instructional time.

Limitations

1. The findings do not represent 100% of WCSD schools.
2. Many schools were unable to provide the information requested.
3. Sales volume for any particular food or beverage was not measured.
4. Data are limited to the 2001-02 school year.

Key Findings

Key Finding 1. Competitive foods are widely available in WCSD. Ninety-one percent of schools who returned a survey report student access to vending machines, school stores, fundraisers and/or a la carte sales. These venues are available to students before classes start in the morning (32%), during school hours when school meals are not being served (43%), during lunch (65%), and after classes end in the afternoon (64%).

Key Finding 2. The net revenue generated from these sales is modestly estimated to be $1,147,491. The largest proportion derived from a la carte food and beverages sales (63%) that is paid to Nutrition Services and directly supports the operating and personnel costs associated with the School Breakfast and School Lunch Programs. The remaining revenues are generated from vending machines (18%), fundraising efforts (12%) and school stores (6%) and support a variety of student activities and programs, as well as school necessities. Fifty-six percent of revenues were generated from sales at high schools, 34% from middle schools and 10% from elementary schools.

A high proportion of schools were *unable to* account for gross and net revenues from vending machines (39%), school stores (20%), and fundraising efforts (36%). Because of this missing information, evaluating the profitability of these venues is difficult. In addition, overhead costs of selling competitive foods unaccounted for here. For example, the energy costs associated with the 128 chilled beverage machines are estimated at $45,000/yr.

Key Finding 3. The nutritional quality of the foods and beverages most commonly available is poor. Sugary drinks (i.e., soft drinks, sports drinks, and juice drinks—not 100% juice) were available at 73% of the responding schools; cookies, crackers, cakes, pastries and other baked goods—not low fat were available at 63% of the schools; salty snacks—not low fat were available at 59% of the schools; and candy was available at 44% of the schools. Water and plain milk were also widely available suggesting there is a market for more healthful choices.

Key Finding 4. Student access to foods of low nutritional quality may be undermining the National School Breakfast and School Lunch Programs. Sugary drinks, candy, and high-fat baked goods and salty snacks are available at times when school meals are offered. Some students may choose to purchase these items in place of or in addition to, a school meal that meets federal nutrition standards

Key Finding 5. Many schools are out of compliance with existing WCSD policy regarding competitive foods. The Washoe County School District Policy on Competitive Foods (adopted in 1988 by the Board of Trustees) limits the times when competitive foods may be sold to students. The practices reported here indicate that these policies are not consistently followed.

Implications

The wide availability of unhealthy foods in WCSD schools contributes to a nationwide trend in unhealthy eating patterns among children and subsequent health risks. Competitive food sales undermine the nutrition integrity and viability of the National School Lunch Program and National School Breakfast Program, which is a source of important nutrition intake for many children. Allowing access to unhealthy foods in schools overlooks a well known fact: consuming a healthy diet improves school success. As a result, school districts and states nationwide are enacting policy and statute governing all foods available to students at school. This trend is expected to continue due to overwhelming concern about the chronic disease epidemic and rising health care costs. A full summary of the background and rationale for such action can be found in the recent report to Congress "Foods Sold in Competition with USDA School Meal Programs" found at www.fns.usda.gov and the 2003 Surgeon General's report "The Power of Prevention" available at www.healthierus.gov/steps. The following are a few highlights from these reports.

Trends in Children's Eating Behaviors

- **Overweight and diabetes have skyrocketed in children.** During the past two decades, the percentage of children who are overweight has nearly doubled and the percentage of adolescents who are overweight has nearly tripled. Type II Diabetes ("adult onset"), once rare in children, has become more common. Type II Diabetes can lead to high blood pressure, heart disease, kidney failure, and blindness.

- **Children are not getting the nutrition they need.** Only two percent of school aged children meet the Food Pyramid serving recommendations for all five food groups. Girls, ages 14 to 18, have especially low intakes of fruits and dairy products. Children's diets are high in added sugar.

- **Soda has replaced water, natural juices, and milk.** Children are heavy consumers of regular or diet soda. Twenty percent of one and two year-olds drink soda. Almost half of all children between the ages of 6 and 11 drink soda and consume, on average, 15 ounces per day. Overall, 56 to 85 percent of children consume soda on any given day. As children drink more soda, they drink less milk and less fruit juices.

They have lower intakes of important nutrients like vitamin A and calcium (from milk) and folate and vitamin C (from fruit juices). A typical 20-ounce soft drink available in school vending machines provides about 250 calories and 66 grams of sugar (16 teaspoons) and can contain up to 80 milligrams of caffeine.

Trends in the Schoolhouse

- **Students' preferences.** Social trends in eating along with marketing campaigns targeted at children for foods high in fat, sugar, and salt content have contributed to an increased demand for unhealthy foods. School inadvertently contribute to targeted marketing of unhealthy foods by allowing these products in schools, through promotion of logos, sponsorship of education programs and activities, exclusive contracts, and fundraising campaigns. Research shows that the deciding factor for students given a choice between healthy or unhealthy drinks and snacks is price.

- **Increased financial demands and limited resources.** Financially strapped school districts sell unhealthy foods and beverages to generate income. Recently, however, schools who change to a healthier fare have maintained profitability.

These trends are especially troubling given that the United States is in the midst of a chronic disease epidemic of unparalleled proportions. In 2003, the Surgeon General reported:

- More than 1.7 million Americans die of a chronic disease each year, accounting for 70% of all U.S. deaths.

- Two-thirds of all deaths are related to lifestyle choices such as tobacco use, poor diet, and lack of exercise.

- Each year, over $33 billion in medical costs and $9 billion in lost productivity due to heart disease, cancer, stroke, and diabetes are attributed to **poor nutrition.**

The Center for Health and Health Care in Schools reported, in August 2003, that parents—regardless of income, race, or political affiliation—strongly support efforts to improve student health, including eating healthy. Over 85% of the 1,101 parents polled nationwide support programs in schools to help improve the nation's obesity epidemic. The full report can be accessed at www.healthinschools.org.

These trends indicate that timing is opportune to evaluate and update practices related to the nutrition quality of all foods and beverages available to Washoe County School District students.

Table 1. Percentage (and Number) of Responding Schools Where Students Can Purchase Competitive Foods from Each Venue

	Elementary (n=53)	Middle School (n=11)	High School (n=11)	All Schools (n=75)
Vending Machines	21 (11)	91 (10)	91 (10)	41 (31)
School Store	13 (7)	36 (4)	36 (4)	20 (15)
Fundraisers	60 (32)	64 (7)	64 (7)	61 (46)
A la Carte	49 (26)[1]	100 (11)	100 (11)	64 (48)
Any of the above	87 (46)	100 (11)	100 (11)	91 (68)

[1] This represents the number of elementary schools who reported the sale of a la carte foods and beverages at their school. Actual revenues provided by Nutrition Services indicate competitive foods are sold at 100% of elementary schools (see Table 4). The disparity may be due to the interpretation of "a la carte" by respondents.

Table 2. Students' Access to Competitive Foods During the School Day (By Venue and School Level)

	Before School	During School When Meals Are Not Being Served	During Lunch	After School
Venue/School Level	**Percentage (and Number) of Schools Reporting Access**			
Vending Machines				
Elementary Schools (n=11)	9 (1)	18 (2)	27 (3)	73 (8)
Middle Schools (n=10)	30 (3)	40 (4)	20 (2)	100 (10)
High Schools (n=10)	100 (10)	70 (7)	100 (10)	100 (10)
All Schools (n=31)	45 (14)	42 (13)	48 (15)	90 (28)
School Stores				
Elementary Schools (n=7)	0	57 (4)	0	43 (3)
Middle Schools (n=4)	25 (1)	0	50 (2)	25 (1)
High Schools (n=4)	75 (3)	0	100 (4)	50 (2)
All Schools (n=15)	27 (4)	27 (4)	40 (6)	40 (6)
Fundraisers				
Elementary Schools (n=32)	6 (2)	53 (17)	6 (2)	56 (18)
Middle Schools (n=7)	29 (2)	29 (2)	29 (2)	100 (7)
High Schools (n=7)	100 (7)	71 (5)	86 (6)	86 (6)
All Schools (n=46)	24 (11)	52 (24)	22 (10)	67 (31)
A La Carte[1]				
Elementary Schools (n=26)[2]	12 (3)	--	96 (25)	--
Middle Schools (n=11)	46 (5)	--	91 (10)	--
High Schools (n=11)	55 (6)	--	100 (11)	--
All Schools (n=48)	29 (14)	--	96 (46)	--
Any of the Above Venues (n=75)	**32 (24)**	**43 (32)**	**65 (49)**	**64 (48)**

[1] A La Carte foods and beverages are only sold when school meals are offered (i.e., during School Breakfast and School Lunch).

[2] This represents the number of elementary schools who reported the sale of a la carte foods and beverages at their school. Actual revenues provided by Nutrition Services indicate competitive foods are sold at 100% of elementary schools (see Table 4). The disparity may be due to interpretation of "a la carte" by respondents.

Table 3. Types of Competitive Foods Sold from Vending Machines, Schools Stores, Fundraisers and A La Carte Offerings

	Vending Machines	School Stores	Fund-raisers	A La Carte Sales
	Number of Schools That Report Venue Access			
	n=31	n=15	n=46	n=48
Types of Competitive Foods Sold	Percent (and Number) of Schools That Sell the Specific Type of Food or Beverage Within Each Venue			
Plain bottled water	**68 (21)**	**53 (8)**	17 (8)	69 (33)
Sport drinks	**61 (19)**	27 (4)	4 (2)	**73 (35)**
Soft drinks	**71 (22)**	**40 (6)**	**30 (14)**	19 (9)
Unflavored milk	3 (1)	13 (2)	2 (1)	**83 (40)**
Sweetened or flavored milk	3 (1)	7 (1)	2 (1)	**77 (37)**
Coffee drinks	3 (1)	13 (2)	4 (2)	4 (2)
Fruit drinks—not 100% juice	**68 (21)**	33 (5)	6 (3)	52 (25)
100% fruit or vegetable juice	19 (6)	13 (2)	9 (4)	27 (13)
Designer drinks	3 (1)	13 (2)	2 (1)	2 (1)
Chocolate candy	19 (6)	**47 (7)**	**50 (23)**	17 (8)
Non-chocolate candy	19 (6)	**67 (10)**	**63 (29)**	19 (9)
Chewing gum	3 (1)	20 (3)	4 (2)	0
Regular cookies, crackers, cakes, pastries or other baked goods	16 (5)	**40 (6)**	**54 (25)**	**77 (37)**
Low-fat cookies, crackers, cakes, pastries or other baked goods	6 (2)	33 (5)	13 (6)	10 (5)
Fresh whole fruits or vegetables	0	0	2 (1)	44 (21)
Regular salty snacks (e.g., chips)	**26 (8)**	**47 (7)**	24 (11)	69 (33)
Low-fat salty snacks (e.g., pretzels)	13 (4)	27 (4)	20 (9)	42 (20)
Meat sticks or jerky	0	27 (4)	15 (7)	10 (5)
Regular ice cream and frozen yogurt	0	20 (3)	**30 (14)**	2 (1)
Low-fat or fat-free ice cream, frozen yogurt or sherbet	0	7 (1)	9 (4)	2 (1)
Unfrozen low-fat or non-fat yogurt	0	0	2 (1)	21 (10)
Chicken sandwich	-	-	-	27 (13)
Hamburgers/cheeseburgers	-	-	-	33 (16)
Burrito	-	-	-	33 (16)
Pizza by the slice	-	-	-	48 (23)
Deli sandwich	-	-	-	38 (18)
Chef salad	-	-	-	33 (16)
Nachos with cheese	-	-	-	42 (20)
Cheese sauce	-	-	-	35 (17)
Fruit Snack	-	-	-	**71 (34)**
Bagels and cream cheese	-	-	-	40 (19)
Fries	-	-	-	42 (20)

Note: The foods and beverages most commonly offered for sale within each venue are shown in boldface.

Table 4. Part A: Reported Revenues from Competitive Food Sales by Venue and School Level for the 2001-02 School Year

	Elementary Schools	Middle Schools	High Schools	All Schools[3]
Vending Machines	(n=11)	(n=10)	(n=10)	(n=31)
Gross Revenues from Food Sales	8,865 (n = 1)	7,540 (n = 1)	55,945 (n = 5)	72,350 (n = 7)
Net Revenues from Food Sales	1,586 (n = 1)	4,508 (n = 2)	19,168 (n = 4)	25,263 (n = 7)
Gross Revenues from Beverage Sales	11,204 (n = 4)	56,950 (n = 6)	176,397 (n = 9)	244,552 (n = 19)
Net Revenues from Beverage Sales	4,572 (n = 7)	36,827 (n = 9)	143,244 (n = 10)	184,645 (n = 26)
Combined Gross Revenues from Food and Beverage Sales[1]	_____	_____	_____	_____
Combined Net Revenues from Food and Beverage Sales[1]	1,361 (n = 2)	_____	_____	1,361 (n = 2)
Total Gross Revenues from Vending[2]	20,070 (n = 5)	64,490 (n = 6)	232,342 (n = 9)	316,903 (n = 20)
Total Net Revenues from Vending[2]	7,520 (n = 10)	41,335 (n = 10)	162,413 (n = 10)	211,269 (n = 30)
School Stores	(n=7)	(n=4)	(n=4)	(n=15)
Gross Revenues from Food Sales	12,670 (n = 6)	42,231 (n = 4)	89,950 (n = 3)	144,851 (n = 13)
Net Revenues from Food Sales	7,843 (n = 6)	20,499 (n = 3)	12,930 (n = 3)	41,272 (n = 12)
Gross Revenues from Beverage Sales	300 (n = 1)	19,410 (n = 2)	34,550 (n = 2)	54,260 (n = 5)
Net Revenues from Beverage Sales	200 (n = 1)	9,945 (n = 2)	17,250 (n = 2)	27,395 (n = 5)
Combined Gross Revenues from Food and Beverage Sales[1]	_____	_____	_____	_____
Combined Net Revenues from Food and Beverage Sales[1]	_____	_____	5,000 (n = 1)	5,000 (n = 1)
Total Gross Revenues from Stores[2]	12,970 (n = 6)	61,641 (n = 4)	124,500 (n = 3)	199,111 (n = 13)
Total Net Revenues from Stores[2]	8,043 (n = 6)	30,444 (n = 3)	35,180 (n = 4)	73,667 (n = 13)

[1] Some schools were unable to separate food and beverage sale revenues and elected to report a combined revenue.

[2] It is important to note that due to missing revenue information, the gross and net revenues may not correspond to the same schools. Therefore, profitability cannot be determined.

[3] Minor discrepancies are due to rounding.

Table 4. Part B: Reported Revenues from Competitive Food Sales by Venue and School Level for the 2001-02 School Year

	Elementary Schools	Middle Schools	High Schools	All Schools[4]
Fundraising	(n=32)	(n=7)	(n=7)	(n=46)
Gross Revenues from Food Sales	43,605 (n = 23)	3,200 (n = 2)	93,528 (n = 4)	140,333 (n = 29)
Net Revenues from Food Sales	27,126 (n = 29)	6,667 (n = 3)	75,600 (n = 5)	109,393 (n = 37)
Gross Revenues from Beverage Sales	1,166 (n = 5)	1,100 (n = 2)		2,266 (n = 7)
Net Revenues from Beverage Sales	1,213 (n = 9)	850 (n = 3)	10,000 (n = 1)	12,063 (n = 13)
Combined Gross Revenues from Food and Beverage Sales[1]	_____	13,171 (n = 1)	_____	13,171 (n = 1)
Combined Net Revenues from Food and Beverage Sales[1]	_____	7,375 (n = 1)	10,000 (n = 1)	17,375 (n = 2)
Total Gross Revenues from Fundraising[2]	44,771 (n = 23)	17,471 (n = 3)	93,528 (n = 4)	155,770 (n = 30)
Total Net Revenues from Fundraising[2]	28,339 (n = 30)	14,893 (n = 4)	95,600 (n = 6)	138,832 (n = 40)
A La Carte Food and Beverage Sales[3]	(n=53)	(n=11)	(n=11)	(n=75)
Total Gross Revenues from Food and Beverage Sales	136,423 (n = 53)	1,131,923 (n = 11)	1,295,890 (n = 11)	2,564,237 (n = 75)
Total Net Revenues from Food and Beverage Sales	68,211 (n = 53)	305,619 (n = 11)	349,890 (n = 11)	723,721 (n = 75)
Total Gross Revenues from Food and Beverage Sales Among all Venues[2,4]	**214,235 (n = 53)**	**1,275,526 (n = 11)**	**1,746,260 (n = 11)**	**3,236,022 (n = 75)**
Total Net Revenues from Food and Beverage Sales Among all Venues[2,4]	**112,114 (n = 53)**	**392,292 (n = 11)**	**643,084 (n = 11)**	**1,147,491 (n = 75)**

[1] Some schools were unable to separate food and beverage sale revenues and elected to report a combined revenue.
[2] It is important to note that due to missing revenue information, the gross and net revenues may not correspond to the same schools. Therefore, profitability cannot be determined.
[3] The revenues for a la carte sales were provided by Nutrition Services and include *any* food or beverage sold outside of the reimbursable School Breakfast and School Lunch Programs (e.g., milk sales to children who bring lunch from home).
[4] Minor discrepancies are due to rounding.

Table 5. Summary of Net Revenue Sources: Total Revenues and Percent of Total Net Revenue from Competitive Food Sales At Elementary, Middle and High Schools [1]

	Elementary Schools	Middle Schools	High Schools	All Schools
Vending Machines	$7,520 .6%	$41,335 3.6%	$162,413 14.1%	$211,269 18.4%
School Stores	$8,043 .7%	$30,444 2.6%	$35,180 3.1%	$73,667 6.4%
Fundraising	$28,339 2.5%	$14,893 1.3%	$95,600 8.3%	$138,832 12.1%
A La Carte	$68,211 5.9%	$305,619 26.6%	$349,890 30.5%	$723,721 63.1%
All Venues	$112,114 9.8%	$392,292 34.2%	$643,084 56.0%	$1,147,491 100%

[1] Discrepancies are due to rounding.

Table 6. Percentage (and Number) of Elementary, Middle and High Schools Who Sell Select Foods and Beverages During the School Day from Vending Machines, School Stores, Fundraisers, or A La Carte Offerings

	School Level	Before School	During School Hours When Meals Are Not Being Served	During Lunch	After School	During Any of the Reported Times
Sports Drinks, Soft Drinks, or Fruit Drinks—not 100% juice	Elementary Schools (n=53)	11 (6)	26 (14)	47 (25)	36 (19)	
	Middle Schools (n=11)	63 (7)	45 (5)	100 (11)	91 (10)	
	High Schools (n=11)	100 (11)	73 (8)	100 (11)	100 (11)	
	All Schools (n=75)	***32 (24)***	***36 (27)***	***63 (47)***	***53 (40)***	***73 (55)***
Candy (including chocolate candy)	Elementary Schools (n=53)	4 (2)	15 (8)	17 (9)	36 (13)	
	Middle Schools (n=11)	45 (5)	27 (3)	64 (7)	64 (7)	
	High Schools (n=11)	91 (10)	64 (7)	91 (10)	91 (10)	
	All Schools (n=75)	***23 (17)***	***24 (18)***	***35 (26)***	***40 (30)***	***44 (33)***
Cookies, crackers, cakes, pastries and other baked goods—not low fat	Elementary Schools (n=53)	6 (3)	30 (16)	36 (19)	21 (11)	
	Middle Schools (n=11)	64 (7)	45 (5)	100 (11)	91 (10)	
	High Schools (n=11)	91 (10)	73 (8)	91 (10)	91 (10)	
	All Schools (n=75)	***27 (20)***	***39 (29)***	***53 (40)***	***41 (31)***	***63 (47)***
Salty Snacks—not low-fat	Elementary Schools (n=53)	6 (3)	21 (11)	28 (15)	19 (10)	
	Middle Schools (n=11)	64 (7)	45 (5)	100 (11)	91 (10)	
	High Schools (n=11)	100 (11)	73 (8)	100 (11)	100 (11)	
	All Schools (n=75)	***28 (21)***	***32 (24)***	***49 (37)***	***41 (31)***	***59 (44)***

APPENDIX D

Obesity Resource List
Health Division, Nevada's Department of Human Resources

OBESITY RESOURCE LIST

Nevada's Legislative Committee on Health Care Subcommittee to Study Medical and Societal Costs and Impacts of Obesity

Chairwoman Valerie Wiener

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
AARP	Larry Spitler Associate State Director for Advocacy Bettye Thomas Lead Volunteer for Health Care Issues	5820 Eastern Ave., Ste. 190 Las Vegas, NV 89119 Telephone: (702) 938-3236	The AARP Internet Web site: www.aarp.org features health tips, the importance of checkups and prevention, eating well, managing stress, and staying active.
American Cancer Society (ACS)	Buffy Gail Martin Government Relations Director	Northern Nevada Office 6490 S. McCarran Blvd., Ste. 40 Reno, NV 89509 Telephone: (775) 825-0409	The ACS Web site (www.cancer.org) offers numerous resources on food and fitness. The ACS also has the following programs: Active for Life - A 10-week program to encourage employees to be more active on a regular basis by setting individual goals and forming teams for motivation and support. Meeting Well - A program that provides tools, including a guidebook that makes it easy to choose healthy food and activities for work events and meetings.
	Susan Robinson Regional Vice President	Telephone: (775) 329-0609	
	Victor Espinoza Program Manager	Southern Nevada Office 1325 E. Harmon Ave. Las Vegas, NV 89119 Telephone: (702) 798-6877	

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
ACS (continued)			Generation Fit - A program for students, ages 11 to 18, who take part in community service projects that promote more physical activity and healthier eating. The ACS will train coaches, counselors, and youth group leaders to run the program. More information is available by calling (800) ACS-2345.
American Heart Association (AHA) of Nevada	Robin Camacho Director of Advocacy and Communication	6370 W. Flamingo Rd., Ste. 1 Las Vegas, NV 89103 Telephone: (702) 367-1366 Fax: (702) 367-1975	The AHA's Web site provides information on its "Healthy Lifestyle" link at www.americanheart.org
Arthritis Foundation of Nevada	Sloane Arnold Executive Director	2450 Chandler Ave., Ste. 17 Las Vegas, NV 89120 Telephone: (702) 367-1626 Fax: (702) 367-6381	The Foundation offers exercise classes, support and education groups, self-help courses, physician referrals, informational brochures, and patient/physician education workshops. Also, the Foundation works in partnership with the Health Division, Department of Human Resources (DHR), and has established a state plan on arthritis to decrease the burden of arthritis in the state. More information about the disease is available at www.arthritis.org and http://health2k.state.nv.us/arthritis.

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
Center for Science in the Public Interest (CSPI)	Margo G. Wootan, D.Sc. Director Nutrition Policy	1875 Connecticut Ave., NW Washington, D.C. 20009 Telephone: (202) 332-9110	The CSPI is a nutrition advocacy organization. Many resources are available at www.cspinet.org.
Center for Nutrition and Metabolic Disorders (CNMD)	Sachiko T. St. Jeor, Ph.D., R.D. Director Professor and Chief Division of Medical Nutrition	Department of Internal Medicine University of Nevada School of Medicine (UNSOM) 153 Redfield Bldg., Rm. 249/MS 153 Reno, NV 89557 Telephone: (775) 784-4474, Ext. 15 Fax: (775) 784-4468	The CNMD offers "state of the art" evaluation and treatment options and conducts research related to obesity issues.
	Raymond Plodkowski, M.D. Co-Chief, Division of Medical Nutrition, and Chief of Endocrinology and Metabolism, Reno Veterans Affairs Medical Center Sub-specialty, Board Certified in Endocrinology, Diabetes, and Metabolism	Department of Internal Medicine UNSOM - Reno 1000 Locust St., MS 111 Reno, NV 89502 Telephone: (775) 328-1894 Fax: (775) 201-1581	Dr. Plodkowski performs obesity research and teaches medical residents and medical students.
	Other Physicians at the Center for Nutrition and Metabolic Disorders: Doina Kulick, M.D. (Board Certified in General Internal Medicine) Diane Chau, M.D. (Board Certified in Geriatrics) Registered Dietitians Involved in the Program: Barbara Scott, M.P.H., R.D. (Pediatrics and Family Medicine) Jessica Krenkel, M.S., R.D. (Certified in Nutrition Support, Geriatrics, General Medicine) Vicki Bovee, M.S., R.D. (Clinic Administrator, Certificate in Adult Weight Management)		

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
CNMD (continued)	Jolyn Wirshing, R.D. (Clinical dietitian and counselor) Holly Herzog, M.S., R.D. (General Medicine, Supplements) Miriam Een, M.S., R.D. (Family Medicine, Las Vegas) Behavioral Scientists: Tracy Veach, Ed.D., M.F.T. (Professor of Psychiatry & Behavioral Sciences, Internal Medicine, Stress Management) Sachiko T. St. Jeor, Ph.D., R.D. (Obesity, Weight Management); Fellow in the Society of Behavioral Medicine		
Clark County Health District (CCHD)	Jeanne Palmer Health Education Manager Rayleen Earney Chronic Disease Health Educator	P.O. Box 3902 Las Vegas, NV 89127 Telephone: (702) 759-1271 Fax: (702) 759-1416	The CCHD is Clark County's public health agency. More information about the District's programs is available at www.cchd.org.
Dairy Council of Utah/Nevada	Barbara Paulsen Program Director	Southern Nevada Office 5836 S. Pecos Rd. Las Vegas, NV 89120 Telephone: (702) 315-0520	The Dairy Council is a resource to obtain nutrition education materials and kits. The Council offers the following programs: Action for Healthy Kids - An integrated, national-state effort to address overweight, undernourished, and sedentary youth by focusing on change in the school environment. LIFESTEPS® - A behaviorally-based weight management program.

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Health Division, DHR	Bradford Lee, M.D., J.D., M.B.A. State Health Officer	505 E. King St., Rm. 201 Carson City, NV 89701 Telephone: (775) 684-4200 Fax: (775) 687-3859	The Health Division promotes and protects the health of Nevadans and visitors to the state through its leadership in public health and enforcement of laws and regulations pertaining to public health. More information about the Division's programs and initiatives is available at http://health2k.state.nv.us.
	Richard Whitley Chief Bureau of Community Health	505 E. King St., Rm. 103 Carson City, NV 89701 Telephone: (775) 684-5996 Fax: (775) 684-5998	The Bureau offers numerous programs designed to prevent, control, and eradicate communicable and chronic disease in Nevada. Relevant programs are: (1) Tobacco Control; (2) Breast and Cervical Cancer Prevention and Control; (3) Cancer Registry; (4) Diabetes Control; and (5) Arthritis Prevention and Control.
	Charlene Herst Manager Chronic Disease Prevention Programs Bureau of Community Health	Telephone: (775) 684-5914	The Nevada Alliance for Chronic Disease Prevention includes the following work groups: (1) data users; (2) policy; (3) behavioral risk factors; (4) environmental risk factors; and (5) psychosocial and genetic.

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Kaufman, Dr. Francine	Dr. Francine Kaufman Professor of Pediatrics Head Division of Endocrinology Department of Pediatrics	Children's Hospital University of Southern California 4650 Sunset Blvd., MS 61 Los Angeles, CA 90027 Telephone: (323) 669-4606 Fax: (310) 701-2780	Dr. Kaufman recently served on a White House Summit on Healthy Schools/Healthy Students, and, as the chair of a Task Force created by the Los Angeles County Board of Supervisors, was instrumental in banning soda vending machines on many public school campuses, including the second largest school district in the country - the Los Angeles Unified School District, which is currently in the process of phasing out soda vending machines. She has been the recipient of National Institutes of Health (NIH) funding since 1980, and more recently chaired the NIH study on the Prevention and Treatment of Type 2 Diabetes in Children and Youth.
Kraft Foods North America, Inc.	Kathleen Spear Vice President Deputy General Counsel	Three Lakes Drive Northfield, IL 60093 Telephone: (847) 646-2517 Fax: (847) 646-4431	The company launched its Obesity Initiative on July 1, 2003, with the formation of a Worldwide Health & Wellness Advisory Council. More information about the initiative is available at http://kraft.com.
Las Vegas Athletic Clubs (LVAC)	Bret Fitzgerald Vice President of Corporate Communication Editor and Publisher *LVAC Magazine*	2655 S. Maryland Pkwy. Las Vegas, NV 89109 Telephone: (702) 591-7441	More information about programs and services offered by LVAC is available at www.lvac.com.

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Lummis Elementary School PTA	Terri Janison Parent/Team Nutrition Leader	9000 Hillpoint Las Vegas, NV 89134 Telephone: (702) 373-3683	An elementary school program to increase the health and fitness of the students and staff of the school. The program includes: (1) recess before lunch; (2) Lummis Laser Fitness Team; (3) conversion of lunch room to "serve up" lunches; and (4) switching from snack bar to Fun Friday's. More information is available at www.lummispta.com
National Center for Chronic Disease Prevention and Health Promotion	Howell Wechsler, Ed.D., M.P.H., Chief Research Application Branch Division of Adolescent and School Health	Centers for Disease Control and Prevention 4770 Buford Highway Atlanta, GA 30341 Telephone: (770) 488-6197	Obesity and juvenile fitness and nutrition resources are available at www.cdc.gov.
Nevada Association for Health, Physical Education, Recreation, and Dance (NAHPERD)	Dr. R.R. Apache President-Elect	Department of Educational Leadership University of Nevada, Las Vegas 4505 Maryland Pkwy., Box 453002 Las Vegas, NV 89154 Telephone: (702) 895-4629 Fax: (702) 895-3492	According to information on the Association's Web site, the mission of the NAHPERD is: • To encourage quality elementary, secondary, and college physical education programs based upon needs, interests, and inherent capacities of the individual for his optimum development;

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
NAHPERD (continued)			• To contribute to the individual's understanding of his role as a democratic citizen in Nevada, the United States, and at large; • To provide the leadership essential to the continual development and improvement of programs in health, physical education, recreation, and dance; • To awaken and stimulate intelligent and comprehensive interest in health, physical education, recreation and dance; • To assist in research and experimentation and to disseminate accurate information in programs of health, physical education, recreation, and dance; and • To promote sound community relationships leading to adequate support for health, physical education, recreation, and dance. More information about the group is available at www.nahperd.0catch.com.

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Nevada Diabetes Association for Children and Adults (NDACA)	Mylan Hawkins Executive Director	Northern Nevada Office 1005 Terminal Way, Ste. 104 Reno, NV 89502 Telephone: (775) 856-3839 Fax: (775) 348-7591 Southern Nevada Office 6239 Island Palm Avenue Las Vegas, NV 89119 Telephone: (800) 379-3839	The NDACA is the only organization in Nevada that provides direct services to children and support for families dealing with diabetes. More information about the NDACA is available at http://diabetesnv.org.
Nevada Dietetic Association (NDA)	Michele Cowee President	13 Canyon Dr. Carson City, NV 89703	Dietetic professionals (dietitians and dietetic technicians) provide expertise in foods and nutrition to state agencies as they formulate programs. The NDA has access to 300 members in Nevada who are available for treating persons who are overweight or obese. Many of the organization's dietitians and dietetic technicians are involved in programs for weight management throughout the state.
	Barb Scott President-Elect	1840 Brenda Way Carson City, NV 89704	
	Debbie Klein Legislative Chair	4843 Elkcreek Trail Reno, NV 89509	
	Kay Oring Nevada Delegate to ADA	2390 Overlook Ct. Reno, NV 89509	
Nevada PTA	DJ Stutz President	6134 W. Charleston Blvd. Las Vegas, NV 89146 Telephone: (800) 782-7201 Telephone: (702) 258-7885 Fax: (702) 258-7836	The Committee on Health and Welfare of the Nevada PTA promotes school initiatives on nutrition and healthy choices. More information is available at www.nevadapta.org.

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Nevada State Association of School Nurses	Virginia Smith, R.N., M.S., M.S.N. Director		Information about the role of school nursing is available at www.nasn.org.
Sierra Health Services, Inc.	Jack Kim, Director Legislative Programs Government Affairs & Special Projects Jennifer Martinsen, M.S.E., C.H.E.S. Director Health Education and Wellness Colleen Corey, R.D., C.D.E. Health Educator Health Education and Wellness	2724 N. Tenaya Way Las Vegas, NV 89128 Telephone: (702) 240-8890 Fax: (702) 242-7931	Sierra Health Services, Inc. offers: • 15 programs to address a wide variety of medical conditions. • Two programs to address childhood obesity, nutrition, and fitness: Camp LEAN and KidFit. • Three programs to address adult obesity, nutrition, and fitness: (1) Lean On Me; (2) the Employee Wellness Program; and (3) the Fit-For-Life Club.
University of Nevada, Las Vegas	Susan L. Meacham, Ph.D., R.D. Chair Department of Nutrition Sciences Director Didactic Program in Dietetics School of Health and Human Sciences Department of Nutrition Sciences Division of Health Sciences	4505 S. Maryland Pkwy. Box 453026 Las Vegas, NV 89154 Telephone: (702) 895-1169 Fax: (702) 895-2616	Dr. Meacham provides community education and community assessment. She may also assist with obesity prevention programs.
	Monica Lounsbery, Ph.D. Associate Professor/Coordinator of the Sports Education and Leadership Program Department of Educational Leadership	4505 Maryland Pkwy., Box 453002 Las Vegas, NV 89154 Telephone: (702) 895-4629 Fax: (702) 895-3492	The Planned Approached To Healthier Schools (PATHS) program is a school-based health intervention program. Services include program development, implementation, and evaluation.

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University of Nevada, Reno (UNR)	Dr. Jamie Benedict Associate Professor Department of Nutrition	Mail Stop 142 Reno, NV 89523 Telephone: (775) 784-6445	Instructional programs at UNR concerning nutrition include: (1) an undergraduate degree in nutrition; (2) a dietetic internship; (3) nutrition courses that support other health-related majors; and (4) a graduate program in Nutritional Science. Dr. Benedict also conducted the Washoe County School District Food and Beverage Study, which assessed food and beverages sold in district schools.
UNR Cooperative Extension	Madeleine Sigman-Grant, Ph.D., R.D. Area Extension Specialist	2345 Red Rock St., Ste. 100 Las Vegas, NV 89146 Telephone: (702) 222-3130 Fax: (702) 932-1280	The Cooperative Extension provides programs for children, including: (1) Child Obesity Prevention in Nevada, or COPIN; (2) Tummy Talks; (3) child care provider training; (4) collaboration with Women, Infants and Children Special Supplemental Nutrition Program; (5) breastfeeding promotion and support; (6) the Expanded Food and Nutrition Education Program (EFNEP); (7) Chefs for Kids; and (8) team nutrition education.

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
UNR Cooperative Extension (continued)			The Cooperative Extension provides programs for adolescents, including: (1) Calcium - It's Not Just Milk; and (2) Nurturing Partners. The Cooperative Extension provides programs for adults, including: (1) An Ounce of Prevention (Diabetes); (2) Healthy Hearts; (3) EFNEP; and (4) Seniors Can.
UNR Southern Nevada Area Health Education Center (SNAHEC)	Rose M. Yuhos Executive Director	School of Medicine 1094 E. Sahara Ave. Las Vegas, NV 89104 Telephone: (702) 318-8452 Fax: (702) 318-8463	The SNAHEC has: • A Youth and Family Services Department that works with area schools and directly with parents of teenaged and pre-teen children; • Student development programs designed to interest students (elementary through high school) in health careers. These programs can be expanded to include units on nutrition and exercise; • Adolescent family life programs that promote "positive choices for positive futures" through an outreach program for families with teenaged and pre-teen

PROGRAM	CONTACT	CONTACT INFORMATION	COMMENTS
SNAHEC (continued)			children with a focus on improving communication and understanding; and • A continuing education program to assist professionals in the fields of education and medicine to achieve national, state, and professional standards.
Washoe County District Health Department	Barbara Hunt District Health Officer Debra Brus, D.V.M. Epidemiologist	P.O. Box 11130 Reno, NV 89520 Telephone: (775) 328-2416 Fax: (775) 328-2279	The Department is the county's public health agency. More information about its programs is available at www.co.washoe.nv.us/health.
Washoe County School District	Aaron M. Hardy, M.S. Wellness Coordinator Risk Management	School-Based Wellness Program 425 Ninth St. Reno, NV 89520 Telephone: (775) 333-5054 Fax: (775) 348-0280	The Wellness Program was created in 1994. The program's mission is to establish environments that increase health awareness, promote positive lifestyles, decrease the risk of disease, and enhance the quality of life for district personnel and retirees. More information about the program is available at www.washoe.k12.nv.us/wellness.

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