# Minnesota OBESITY plan

# Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases 2008-2013

Promoting Healthy Eating, Physical Activity and Healthy Weight

Development of the Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases was facilitated by the Chronic Disease Risk Reduction (CDRR) Unit at the Minnesota Department of Health (MDH).

# MINNESOTA PLAN TO REDUCE OBESITY AND OBESITY-RELATED CHRONIC DISEASES

*Promoting Healthy Eating, Physical Activity and Healthy Weight*

July 2008

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*Protecting, maintaining and improving the health of all Minnesotans*

July 1, 2008

Dear Obesity Prevention Stakeholders of Minnesota,

Obesity is one of the most serious public health concerns facing our state today. Not only does being overweight and obese contribute to numerous health conditions that limit the quality and duration of life for Minnesotans, but they place an unsustainable burden on our healthcare system, disable our workforce and reduce the productivity of our state's economy. Throughout the state all population groups are experiencing increases in weight and weight-related chronic conditions. Simply said, we have an epidemic of obesity that is negatively affecting our health, our quality of life and our future. The clock is ticking; we need to act now.

The development of the *Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases: Promoting Healthy Eating, Physical Activity and Healthy Weight* comes at a very important turning point for our state. The Plan positions and encourages both the public and the private sectors to take action. Creating nutrition and physical activity environments throughout our state that support healthy eating and active living are critical components for combating this epidemic and ensuring progress.

*The Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases* was developed to bring partners together to work collaboratively toward shared goals, to maximize opportunities and to reduce duplication. The Plan encourages policy and environmental changes that support healthy eating, physical activity and achieving or maintaining a healthy weight. The plan represents a collaborative effort of statewide partners, including individuals representing state and local public health, state and local education agencies, transportation, parks and recreation, community and non-profit organizations, healthcare providers and insurers, academia, advocacy organizations, industry and chronic disease prevention partners – all working to improve the health of people in Minnesota.

*The Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases* is a call to action. We invite you to join us in making the reduction of obesity a priority, and helping to make Minnesota truly the healthiest state in the nation.

Sincerely,

Sanne Magnan, M.D., Ph.D.
Commissioner of Health

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# EXECUTIVE *Summary*

## MINNESOTA PLAN *to Reduce Obesity and Obesity-Related Chronic Diseases*

***Promoting Healthy Eating, Physical Activity and Healthy Weight***

Obesity poses a serious threat to both Minnesota and the nation. As our aging population combines with an increasingly overweight and obese population, the cost of healthcare in Minnesota and nationally will become unsustainable. In addition, obesity threatens to undermine our economic security and our communities by creating an increasing chronically ill and disabled workforce and citizenry. It is time to carefully assess the causes of weight gain and obesity in our environment and to take significant steps to ensure those conditions change.

**Obesity and obesity-related chronic diseases are on the rise**

Nationally, the proportion of children, youth and adults classified as overweight or obese is growing at an alarming rate. Prevalence of obesity among children and adolescents in the United States quadrupled among 6-11 year-olds and more than tripled among 12-19 year-olds between 1971-74 and 1999-2002 according to the National Health and Nutrition Examination Survey.[1] Meanwhile the prevalence of obesity for adults has increased from 15% to 33% in the last 25 years.[2]

The rising rates of overweight and obesity are alarming because they both parallel and are directly related to the sharp increases in obesity-related chronic diseases. Carrying excess weight places individuals at much greater risk for future development and early onset of a wide variety of chronic diseases and health conditions. Overweight and obesity are generally caused by lack of physical activity, unhealthy eating patterns, or a combination of the two, with genetics, lifestyle and the environment all playing important roles in determining a person's weight.

Minnesota mirrors national trends. According to the 2007 Behavioral Risk Factor Surveillance System (BRFSS) survey, many Minnesota adults are overweight or obese, have developed health problems and chronic diseases and continue to not practice healthy behaviors:

- 51 percent do not achieve weekly recommended physical activity recommendations;
- 81 percent consume fewer than five servings of fruits and vegetables per day;
- 1 in 4 are obese and 1 in 3 are overweight;
- 33 percent have high cholesterol;
- 22 percent have high blood pressure;
- 6 percent have diabetes and 26 percent have prediabetes.[3, 4]

The prevalence of risk behaviors among youth in Minnesota is setting up the next generation of adults for earlier onset and more widespread chronic disease. According to the 2007 Minnesota Student Survey:

- 67 percent of 12th grade girls report not participating in moderate physical activity five or more days per week;
- 34 percent of 12th grade boys and 48 percent of 12th grade girls report not participating in vigorous physical activity at least three day per week;
- 49 percent of 12th grade boys and 37 percent of 12th grade girls report watching six hours or more of television or videos per week;
- 32 percent of 12th grade boys report playing computer or video games for six hours or more per week;
- Fewer than 20 percent of elementary, middle and high school students surveyed report eating the recommended five servings of fruits and vegetables a day; and
- 47 percent of 12th grade girls and 65 percent of 12th grade boys report drinking at least one soda a day.[7]

The environments in which people live have a tremendous influence on the choices that they make about eating healthy and being physically active. Dramatic changes in the world, especially over the past 30 years, have altered our daily lifestyles. Advances in technology have engineered physical activity out of our daily lives, while media advertising and easy access to large quantities of energy-dense food and beverages increase our overconsumption. The physiology of our bodies has become out of balance as our daily school, work and community environments increasingly promote unhealthy behaviors that lead to weight gain, chronic disease, earlier disability and death.

**Excess weight is a burden to our health, productivity and healthcare system**

Escalating expenses associated with weight and weight-related conditions may involve direct (primary, secondary and tertiary care) and indirect costs (decreased productivity, restricted activity, absenteeism and premature death).[2] For example, obesity and morbid obesity are associated with increased rates of work absenteeism, costing the U.S. an estimated $4.3 billion per year.[32] Nationally, productivity gains of $254 billion could be realized by reductions in obesity alone.[33]

The overall financial burden of obesity in Minnesota, based on national estimates, was $1.3 billion in 2004.[34] The financial burden of childhood obesity in Minnesota is difficult to estimate. However ties have been made between childhood obesity and future adult weight-related disease and healthcare costs.[35] Trends show diagnosis of weight-related disease occurring at younger and younger ages, which will likely lead to increased healthcare and other costs over larger portions of the lifecycle.

**Obesity and obesity-related chronic diseases are preventable**

*The Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases* was developed in response to Minnesota's rising overweight and obesity rates as well as poor eating and physical activity behaviors of a majority of people in the state. The Plan is the first step in developing a coordinated effort to reduce obesity and obesity-related chronic diseases within the state. The Plan is intended for all stakeholders and sectors in Minnesota that have a stake in the following: (1) improving healthy eating and physical activity environments and people's health behaviors statewide from infancy and continuing throughout the lifecycle; (2) reducing obesity; (3) reducing obesity-related chronic diseases; and (4) eliminating obesity-related health disparities.

The Plan focuses on three priority issues: healthy eating, physical activity and healthy weight. The intention of the Plan is to provide high-level strategies that focus on changing behaviors that often lead to overweight or obesity. While individuals make their own behavior choices, the policies, systems and environments in which we live guide those choices. It is estimated that an additional 40 percent of annual premature deaths could be prevented by altering environmental conditions, social inequities and behavioral choices.[32]

The objectives and strategies highlighted in the Plan are intended to outline key examples of best and promising strategies for reducing overweight and obesity in Minnesota, while encouraging collaboration, coordination and the maximization of resources.

**The Plan's vision, goals and three priority objectives**

**Vision:** People in Minnesota eat healthy, are physically active and maintain a healthy weight because they live in an environment designed to support healthy lifestyles across the lifespan.

**Goals:** To reduce obesity and obesity-related chronic diseases among all people in Minnesota.

| Objectives |
|---|
| **Long-Term Objective 1:** Increase Healthy Eating among People in Minnesota |
| **Intermediate Objective 1.1:** Increase the number of environmental and policy supports to healthy eating |
| **Intermediate Objective 1.2:** Increase the availability of healthy food options |
| **Intermediate Objective 1.3:** Increase the number of people who recognize the importance of a balanced diet and its contribution to overall health. |
| **Intermediate Objective 1.4:** Increase fruit and vegetable consumption |
| **Intermediate Objective 1.5:** Increase the number of pregnant women who recognize the role of human milk in healthy infant development |
| **Intermediate Objective 1.6:** Reduce disparities in nutrition-related health behaviors by gender, age, race, socioeconomic class, education, ability and geographical region |
| **Long-Term Objective 2:** Increase Physical Activity among People in Minnesota |
| **Intermediate Objective 2.1:** Increase the number of physical activity environmental and policy supports |
| **Intermediate Objective 2.2:** Increase the number of people who recognize the importance of physical activity for health and other benefits |
| **Intermediate Objective 2.3:** Increase the number of physical activity behavioral and social supports |
| **Intermediate Objective 2.4:** Decrease the amount of excessive sedentary time |
| **Intermediate Objective 2.5:** Reduce physical activity disparities by gender, age, race, socioeconomic class, education, ability and geographical region |
| **Long-Term Objective 3:** Increase Healthy Weight among People in Minnesota |
| **Intermediate Objective 3.1:** Increase the number of people who recognize the value of a healthy weight |
| **Intermediate Objective 3.2:** Increase the number of people who have their BMI measured and reported on a routine basis and who understand the meaning of their results |
| **Intermediate Objective 3.3:** Increase initiation, exclusivity and duration of breastfeeding |
| **Intermediate Objective 3.4:** Promote healthy weight loss among people who are overweight or obese |
| **Intermediate Objective 3.5:** Reduce disparities in overweight and obesity by gender, age, race, socioeconomic class, education, ability and geographical region |

In order to accomplish the Plan's goals and objectives, the resources, dedication and commitment of many sectors – government, education, healthcare, media, industry, worksites, community organizations and others – will be required to help ensure the health of our state. Many of the solutions require collaboration; financial support; dedication to research and evaluation; and the commitment to communicate lessons learned to avoid duplication and make the best use of available resources.

Individuals must be active and engaged in improving their own health and weight maintenance. However, to be successful, the healthy choice should become the easy, affordable, safe and attractive choice for all Minnesota residents. We must work together to ensure all corners of our state find the path to good health. Minnesota this is your call to action. Together we can create a state where people live long healthy lives and share a bright future.

# MINNESOTA'S *Call to Action*

An individual can hardly open up a newspaper or magazine today without reading about America's expanding waistline and the latest fad diet that can help us shed pounds. Like citizens in many other states, Minnesotans may know the health hazards of carrying excess weight, but keep inching up on the scale. The amount which one weighs can be a very personal topic of conversation, but with two-thirds of Minnesota's population defined as overweight or obese, we have reached the crisis point.

As our aging population combines with an increasingly overweight and obese population, the cost of health care in Minnesota and nationally will become unsustainable. In addition, obesity threatens to undermine our economic security and our communities by creating an increasing chronically ill and disabled workforce and citizenry. This progressively more unhealthy and shrinking work force will be expected to support the much larger population of aging and retiring baby boomers. It is time to carefully assess the causes of weight gain and obesity in our environment and to take decisive steps to ensure that those conditions are changed and our citizens are able to return to good health.

The environment in which people live guides the choices that they make about eating healthy and being physically active. Dramatic changes in the world, especially over the past 30 years, have altered our daily lifestyle. Advances in technology have engineered physical activity out of our daily lives, while media advertising and easy access to large quantities of energy-dense food and beverages increase our overconsumption. The physiology of our bodies has become out of balance as our school, work and community environments increasingly promote unhealthy behaviors that lead to weight gain, chronic disease, early disability and death.

The goals outlined in the *Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases* aim to reduce obesity and obesity-related chronic diseases through focusing on improving healthy eating, increasing physical activity and supporting healthy weight promoting behaviors. The Plan is not meant to be comprehensive, but rather it is created to inspire much-needed change. The objectives and strategies outlined in the Plan are purposely written at a high-level to allow for a broad range of creative solutions, yet ensure that efforts across the state are collaborative in nature and parallel in design.

Many of the strategies outlined in this Plan will require much more than verbal commitment; they will require significant financial support and statewide action if success is to be achieved. Interested stakeholders will need to prioritize and invest in the strategies that best align with their individual goals. The U.S. *Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity* states it best,

> "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."

It is our hope that a wide range of stakeholders and sectors will find their own important role within this Plan. Each of us must identify strategies on which to work, reach out to partners to maximize our resources, and begin to halt the obesity epidemic that looms before us. We all know that addressing overweight and obesity is much more than improving how individuals look – it is about improving

the quality of people's lives through decreasing their chance of developing obesity-related chronic diseases such as high blood pressure, high cholesterol, heart disease, diabetes, breast cancer, colon cancer, arthritis and depression; it is about ensuring that our children and youth outlive their parents; it is about access to healthcare and controlling our nation's escalating healthcare costs; it is about making our communities healthy places to live and making healthy choices easy choices for our citizens; and it is about preventing health and social problems before they begin.

Individuals must be active and engaged in improving their own health and weight maintenance. However, to be successful, a culture that supports health and wellness must be integrated across all sectors in Minnesota – in our government, worksites, communities, schools, industry, media, healthcare and family homes. We must work together to ensure all corners of our state find the path to good health. Minnesota this is your call to action. Together we can create a state where people live long healthy lives and share a bright future.

# HOW TO *Use This Plan*

## WHY HAVE *a Plan?*

- To provide a vision for obesity prevention and treatment
- To stay focused and to prioritize
- To encourage collaboration in order to maximize opportunities and impact
- To recommend actions for all sectors within the state
- To evaluate what has been accomplished and what work is left to be done

## WHO IS *the Plan for?*

The Plan is intended for all obesity prevention stakeholders committed to:

- improving healthy eating and physical activity environments and people's health behaviors
- preventing and reducing overweight and obesity
- preventing and reducing obesity-related chronic diseases
- eliminating health disparities related to overweight and obesity

**To accomplish the goals within the Plan, a variety of partners will need to be involved including, but not limited to:**

- Business owners and employers
- Food producers and vendors
- Sports and fitness organizations
- Parks and recreation organizations
- Community-based organizations
- Non-profit organizations
- Government agencies
- Non-governmental organizations
- Local public health departments
- Payers, insurers and health plans
- Healthcare systems
- Physicians & healthcare providers
- Restaurant owners and chefs
- Consumers
- Professional organizations
- State and local coalitions
- Universities and researchers
- Schools and educators
- Media
- Entertainment industry
- Transportation planners
- Land-use planners
- Faith-based organizations
- Minority and underserved populations
- Policymakers

## HOW IS *the Plan organized?*

*The Minnesota Plan to Reduce Obesity and Obesity-Related Diseases,* hereafter referred to as the Plan, begins in Chapter 1 with an overview of the burden of overweight, obesity and obesity-related chronic diseases in the state of Minnesota. Chapter 2 describes how the Plan was developed and outlines the vision, goals, and long-term objectives of the Plan. Chapter 2 also describes the Plan's logic model. Chapter 3 focuses on three priority long-term objectives: healthy eating, physical activity, and healthy weight and goes into detail describing intermediate objectives and strategies to achieve the long-term objectives. The final portion describes how the Plan will be evaluated. Together these sections define the problem, summarize data and trends, recommend areas for action and outline evaluation methods.

## HOW CAN *the Plan be accessed?*

The Plan can be viewed and downloaded by visiting: http://www.health.state.mn.us/obesity.

## HOW WILL *the Plan be updated?*

The Plan will continue to evolve as more scientific evidence and research on the prevention and reduction of overweight, obesity and obesity-related diseases becomes available. The Minnesota Department of Health will work with state partners to regularly review the Plan's vision, goals and strategies.

# CHAPTER 1: *Where We Are Now*

## INTRODUCTION

### Obesity and obesity-related chronic diseases are on the rise.

The proportion of children, youth and adults classified as overweight or obese is growing at an alarming rate. Prevalence of obesity among children and adolescents in the United States quadrupled among 6-11 year-olds and more than tripled among 12-19 year-olds between 1971-74 and 1999-2002 according to the National Health and Nutrition Examination Survey (NHANES).[1] Meanwhile the prealence of overweight and obesity for adults has increased significantly in the last 25 years.[2] Overweight and obesity are generally caused by lack of physical activity, unhealthy eating patterns, or a combination of the two, with genetics, lifestyle and the environment all playing important roles in determining a person's weight.

Minnesota's adult population mirrors these national trends. According to the 2007 Behavioral Risk Factor Surveillance System (BRFSS) survey many Minnesota adults are overweight or obese and are not practicing healthy behaviors:

- 51 percent do not achieve the recommended amount of physical activity per week;
- 81 percent consume less than five servings of fruits and vegetables per day;
- 1 in 4 are classified as obese based on Body Mass Index (BMI);
- 1 in 3 are classified as overweight based on BMI;
- 33 percent have been told by their health professional that they have high cholesterol;
- 22 percent have been told by their health professional that they have high blood pressure;
- 6 percent have been told by their health professional that they have diabetes; and
- 26 percent have been told by their health professional that they have prediabetes.[3,4]

In addition, the American Academy of Pediatrics recommends that all infants be exclusively breastfed for the first six months of life and breastfed with complimentary foods to a year or more. According to the Centers for Disease Control and Prevention (CDC) National Immunization Survey over 80% of Minnesota infants are ever breastfed, yet only 16% are exclusively breastfed at 6 months of age.[5]

Minnesota does not have a statewide data monitoring system to track overall population trends in child and youth obesity. However, Minnesota-specific data from the Pediatric Nutrition Surveillance System shows that the prevalence of obesity in children aged 2 to 5 years enrolled in the Supplemental Nutrition Program for Women, Infants, and Children (WIC) increased 41 percent between 1995 and 2004, from 9.8 percent to 13.8 percent, respectively.[6]

*Obesity has been recognized as a major health problem by the Surgeon General of the United States, the World Health Organization, the National Institutes of Health and the Centers for Disease Control and Prevention (CDC).*

Despite the lack of a statewide system to monitor overweight and obesity trends in Minnesota's children and youth, there is data available that indicate the state's younger generations are engaging in unhealthy lifestyles as well. The prevalence of risk behaviors among youth in Minnesota is setting up the next generation of adults for earlier and more widespread chronic disease. According to the 2007 Minnesota Student Survey:

- 67 percent of 12th grade girls report not participating in moderate physical activity five or more days per week;
- 34 percent of 12th grade boys and 48 percent of 12th grade girls report not participating in vigorous physical activity at least three days per week;
- 49 percent of 12th grade boys and 37 percent of 12th grade girls report watching six hours or more of

television or videos per week;
- 32 percent of 12th grade boys report playing computer or video games for six hours or more per week;
- Fewer than 20 percent of elementary, middle and high school students surveyed report eating the recommended five servings of fruits and vegetables a day; and
- 47 percent of 12th grade girls and 65 percent of 12th grade boys report drinking at least one soda a day.[7]

The rising rates of overweight and obesity are alarming because they both parallel and are directly related to the sharp increases in obesity-related chronic diseases. Carrying excess weight places individuals at much greater risk for future development and early onset of a wide variety of chronic diseases and health conditions including:
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Cancers (endometrial, breast, and colon)
- Gallbladder disease
- Osteoarthritis
- Hypertension (high blood pressure)
- Dyslipidemia (high blood cholesterol, high triglycerides)
- Depression
- Sleep apnea and respiratory problems.[2]

According to the CDC chronic diseases – such as cardiovascular disease (primarily heart disease and stroke), cancer and diabetes – are among the most prevalent, costly, and preventable of all health problems. Seven out of every ten Americans who die each year, or more than 1.7 million people, die of a chronic disease.[2]

Chronic diseases are responsible for the majority of deaths, years of potential life lost, disability and healthcare costs in Minnesota. In 2004, of the over 37,000 Minnesotans who died, 56 percent died from the following chronic diseases:
- Nearly 25 percent died from cancer;
- Over 21 percent died from heart disease;
- Almost 7 percent died from stroke; and
- 3 percent died from diabetes.[9]

*On a typical day, an estimated 70 Minnesotans die from a chronic disease. Many of these deaths are premature and preventable, and are exacerbated by the policies, systems and environments in which we live, learn, work and access healthcare.[8]*

Poor nutrition and sedentary lifestyles are among the top causes for chronic diseases that disrupt lives prematurely. The prevalence of these behaviors among Minnesotans is largely predicted by the communities in which they live, environments in which they work and learn and the nature, access and use of their healthcare services.

## Obesity and obesity-related chronic diseases are preventable.

Obesity is a preventable and treatable disease. The best way to prevent obesity is balancing the number of calories consumed with the time spent being physically active on a daily basis. Leading a lifestyle that is active and includes a balanced diet not only helps individuals maintain a healthy weight, but reduces their risks of developing a long list of weight-related conditions. For example, healthy eating, beginning with preconception and in infancy with breastfeeding, is vital to good health and disease prevention and is essential for healthy growth and development of children and adolescents. Consumption of healthier foods can decrease the risk of:
- Chronic diseases, such as type 2 diabetes, hypertension, and certain cancers;

- Overweight and obesity; and
- Nutritional deficiencies.[2]

Regular physical activity reduces the risk for many diseases, as well as helps control weight and strengthens muscles, bones and joints. For older adults, it can also reduce the risk for falls. For children and adolescents, regular physical activity can also help with reducing anxiety and stress and increasing muscular strength and self-esteem.[2]

People of all ages and abilities who are generally inactive can improve their health by becoming active on a regular basis. Physical activity does not need to be strenuous to be beneficial; people of all ages and abilities benefit from participating in regular, moderate-intensity physical activity, such as 30 minutes of brisk walking five or more days per week. The CDC reports that engaging in regular physical activity is associated with taking less medication and having fewer hospitalizations and physician visits.[2]

## One Approach to Success… the *Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases: Promoting Healthy Eating, Physical Activity and Healthy Weight*

A long-term, sustainable solution that focuses on environment, policy and systems change will be necessary to reduce the risk of obesity and obesity-related chronic diseases. The Plan helps fulfill this need by (1) providing a vision for obesity prevention and treatment; (2) helping stakeholders to stay focused and to prioritize; (3) encouraging collaboration in order to maximize opportunities and impact; (4) suggesting actions for all sectors within the state; and (5) evaluating what has been accomplished and what work is left to be done.

The Plan focuses on the following overarching goals (1) reduce obesity and (2) reduce obesity-related chronic diseases. Objectives and strategies to achieve these goals are outlined within the Plan.

The solutions to reversing the obesity epidemic are not simple. The increase in obesity results from a complex interplay of environmental, social, economic, genetic and behavioral factors. Because of the multifactorial nature of obesity, many entities will be required to help formulate a variety of approaches to prevent obesity in Minnesota. Many of these approaches will require collaboration; financial support; dedication to research and evaluation; the commitment to communicate lessons learned; to avoid duplication; and make the best use of available resources.

In addition to the commitment from a variety of partners, the dedication to increase social awareness as well as public and political support will be required to produce the necessary cultural change to reverse the rising trend of obesity. Minnesota's environment must be transformed so that it supports healthy choices and promotes the skills needed to foster healthy lifestyles throughout the lifespan.

# THE BURDEN OF *Obesity and Obesity-Related Chronic Diseases in Minnesota*

## DEFINING *Overweight and Obesity*

***Adults:***

| Centers for Disease Control and Prevention Definitions: Weight Status Categories in Adults | |
|---|---|
| Underweight: | BMI below 18.5 |
| Normal Weight: | BMI 18.5 – 24.9 |
| Overweight: | BMI 25.0 – 29.9 |
| Obese: | BMI 30.0 and Above |

The Centers for Disease Control and Prevention (CDC) defines obesity using weight and height to calculate the body mass index (BMI).[10] BMI is a measure of a person's weight in relation to height and correlates with their amount of body fat. Adults with BMIs between 25 and 29.9 are considered overweight and those with BMIs of 30 or higher are considered obese.

***Children and Teens:***

| Centers for Disease Control and Prevention Definitions: Weight Status Categories in Youth | |
|---|---|
| The percentile indicates the relative position of the child's body mass index (BMI) number among children of the same sex and age. BMI is a measure of weight in relation to height that is used to determine weight status. | |
| Underweight: | less than the 5th percentile |
| Normal: | 5th percentile to Less than the 85th percentile |
| At Risk for Overweight*: | 85th percentile to less than the 95th percentile |
| Overweight**: | Equal to or greater than the 95th percentile |
| * "At risk for overweight" is classified as "overweight" in the Plan<br>** "Overweight" is classified as "obese" in the Plan | |

For children and teens, BMI ranges above a normal weight have historically had different labels ("at risk for overweight" and "overweight"). Additionally, BMI ranges for children and teens are defined so that they take into account normal differences in body fat between boys and girls and differences in body fat at various ages.[10] Children and teens with BMIs between the 85th and 95th percentile are classified as "at-risk for overweight" and those that measure above the 95th percentile on the CDC growth charts are classified as "overweight."

Nationally there is growing consensus that weight category terms used for children (at-risk for overweight and overweight) should be modified to match terms used to classify adults (overweight and obese). The goal is to raise public awareness about the seriousness of the obesity epidemic in children and youth and to encourage urgent action be taken nationally to address the epidemic. The American Medical Association (AMA) recommended this change in terminology in 2007.[11]

*The Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases* has adopted the AMA terminology within this document for classifying children's weight. *"At risk for overweight" has been changed to "**overweight**" in the Plan* (child's BMI is equal to or greater than the 85th percentile, but less than the 95th percentile). *"Overweight" has been changed to "**obese**" in the Plan* (child's BMI is equal to or greater than the 95th percentile).

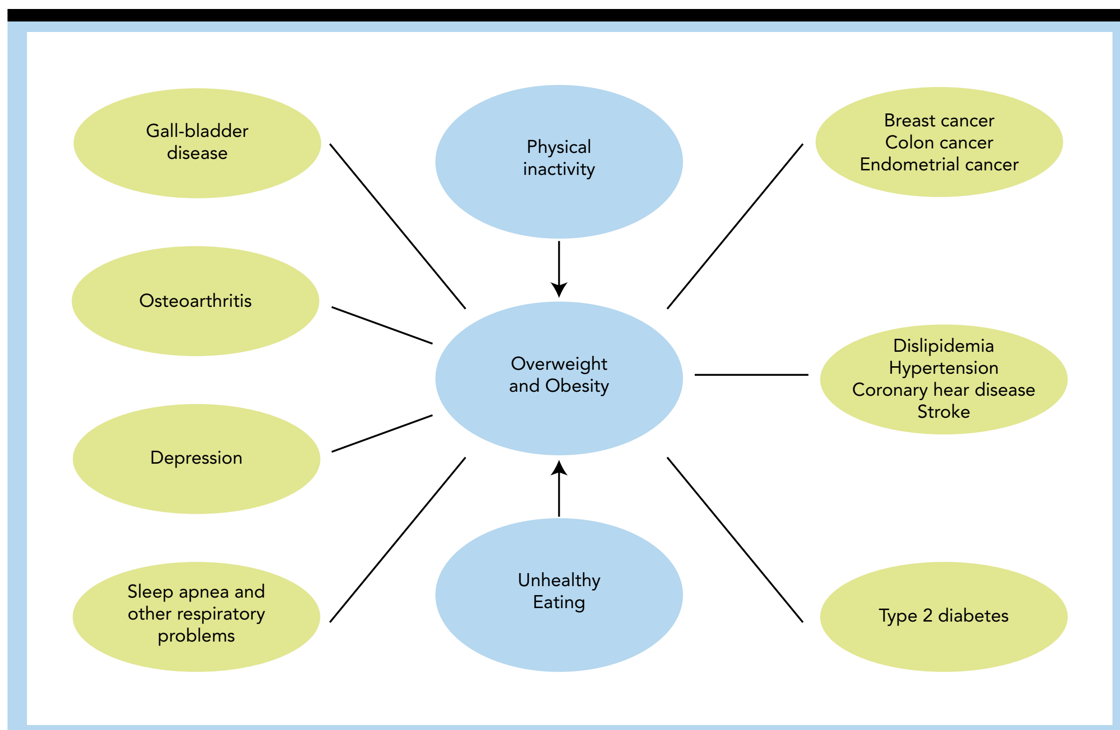
## CONSEQUENCES OF *Overweight and Obesity*

As described in Figure 1, overweight and obesity are associated with many diseases and conditions including hypertension, dislipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and respiratory problems, depression and some cancers (endometrial, breast, and colon).[2,10] Just four of these obesity-related conditions, heart disease, stroke, cancer, and diabetes accounted for nearly 60 percent of deaths in Minnesota during 2004.[9] Obesity doubles the risk of developing coronary heart disease and increases the risk of having a stroke by 1.5 to 2 times.[12]

The prevalence of these obesity-related conditions is alarming and is already starting to become a major strain on the healthcare system as obesity rates continue to rise and the Minnesota population continues to change demographically to a society with an increasing number of elderly.

- Nearly six percent of the Minnesota population currently has diabetes, 3.4 percent have experienced a heart attack, 3.7 percent have coronary heart disease or angina, and 1.9 percent have suffered a stroke.[13,14]
- In 2006, over 3,000 new cases of breast cancer were diagnosed and 2,400 new cases of colorectal cancer were diagnosed.[15]
- In 2005, 1 in 4 Minnesota adults reported being diagnosed with arthritis by a physician.[3]
- In 2005, 1 in 5 Minnesota adults reported being told by their healthcare provider that they had hypertension and 1 in 3 Minnesota adults who have had their blood cholesterol checked have been told it was high.[3]
- Over 26 percent of Minnesota adults have prediabetes (elevated blood glucose levels) and over 41,000 youth 12-19 years of age have prediabetes. Glucose levels are strongly modified by improved physical activity, healthy eating and weight loss.[4]

**Figure 1. Causes and Consequences of Overweight and Obesity**

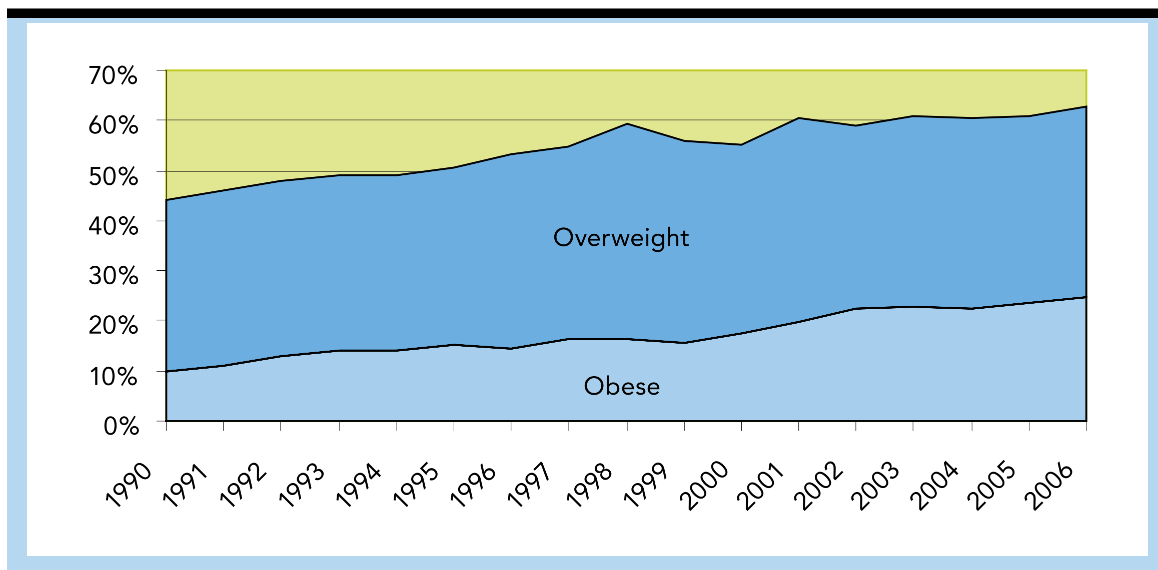



Source: Minnesota Department of Health, 2007

## OVERWEIGHT *and Obesity in Adults*

Nearly 25 percent of adults in Minnesota reported heights and weights that classified them as obese (BMI>30) in 2006, a 2.5-fold increase since 1990 (a 250 percent increase in 16 years).[3] In addition, 38 percent of Minnesota adults reported being overweight (BMI = 25 – 29.9) in 2006. Therefore, 63 percent of adults in Minnesota are either overweight or obese. Minnesota's trend of overweight and obesity is demonstrated in Figure 2. Because these rates are based on self-reported height and weight, they likely underestimate the true obesity problem. Obesity estimates from measured height and weight data are as much as 50 percent higher than those described from self-reported height and weight data.[16]

**Figure 2: Proportion of Minnesota Adults Overweight and Obese (BRFSS)**




Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

## OVERWEIGHT *and Obesity in Children and Youth*

Obese children and youth are more likely to become obese adults. Nationwide, an estimated 19 percent of children (ages 6-11) and 17 percent of adolescents (ages 12-19) were measured and categorized as obese in the 2003-2004 NHANES study.[1] State-level data representative of all Minnesota children and youth is not available for Minnesota. A few sources provide data that describes the magnitude of the childhood obesity problem in certain populations in Minnesota. The Youth Risk Behavior Survey (YRBS), for which national data are available on high school students, shows that 13.1 percent of high school students are obese nationwide.[17] This survey is currently not conducted in Minnesota on a statewide basis. However, the federally-funded Steps to a Healthier US program has been implemented in four Minnesota cities and each of these cities has conducted the YRBS. The Minnesota Steps YRBS found that 13.6 percent of high school students in Minneapolis public high schools, 14.9 percent in St. Paul public high schools, 7.8 percent in Rochester public high schools, and 9.9 percent of student responding to the survey in Willmar public high schools were obese in the spring of 2007.[18] The 2007 Minnesota Student Survey (MSS), a survey administered to public school students in grades 6, 9, and 12, respectively, reported heights and weights that classified them as being overweight or obese.[7] Among 12$^{th}$ grade students, 26 percent of males and 17 percent of females were classified as overweight or obese.[7]

The National Study of Children's Health collected children's height and weight data from parents of 10-17 year olds to provide statewide estimates of obesity. Their study found that over 10 percent of 10-17 year-olds in Minnesota were obese in 2003-2004.[19]

Data describing weight status of younger children in Minnesota is available only for children participating in the Supplemental Nutrition Program for Women, Infants, and Children (WIC). In 2004 (the most recent data available), 13.8 percent of this low-income preschool population (ages 2-5) was overweight and 16.9 percent were obese.[6] Approximately half of all babies born in Minnesota are enrolled in WIC.

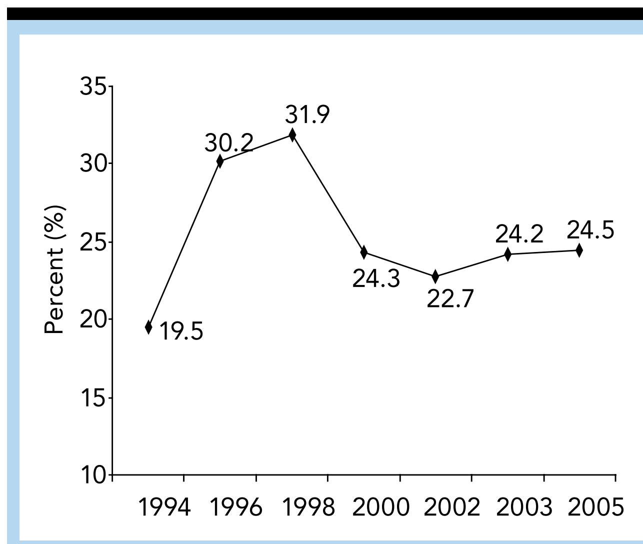
## RISK FOR *Overweight and Obesity*

There are many factors contributing to the statewide and national epidemic of obesity. Lifestyle factors contributing to obesity and overweight include low consumption of fruits and vegetables and other unhealthy food choices, sedentary lifestyles, and low rates of breastfeeding. Unfortunately, many of these unhealthy habits are driven by the policies, systems and environments in which Minnesotans live, work and learn. The world we live in has become conducive to unhealthy choices.

## HEALTHY *Eating*

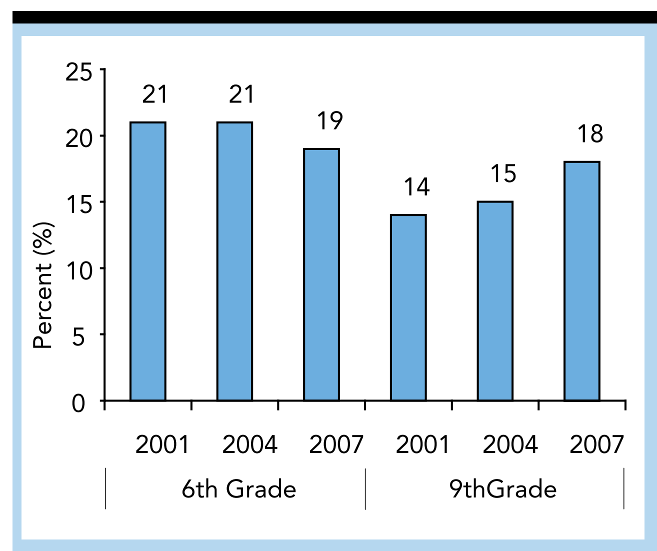
The United States Department of Agriculture recommends that adults consume between four and nine cups of fruits and vegetables daily depending upon their age, gender, and stature.[20] In 2005, only 25 percent of Minnesota adults consumed five or more servings of fruits and vegetables per day as described in Figure 3. This compares to 23.2 percent for the nation as a whole.[3] According to the Minnesota Student Survey, few Minnesota students eat five or more servings of fruits and vegetables daily.[7] Figure 4 shows that around 18 percent of Minnesota's 6th and 9th graders report that they consumed five or more fruits and vegetables per day in 2007.

**Figure 3. Percent of Minnesota Adults Consuming Five or More Servings of Fruits and Vegetables Per Day (BRFSS)**




Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

**Figure 4. Percent of Minnesota Students Consuming Five or More Fruits and Vegetables Daily (MSS)**




Source: Minnesota Department of Education, Minnesota Student Survey

Nutritional risk factors contributing to obesity include the consumption of soft drinks and the frequency of meals eaten outside the home, where nutritional content and portion size may lead to poor nutrition and consumption of too many calories. According to the Minnesota Student Survey, between 60 percent and 77 percent of Minnesota students consume at least one soft drink per day.[7] Moreover, in 2002 nearly 43 percent of Hennepin County adults ate two or more restaurant meals that included foods such as breakfast sausages, hamburgers, French fries, fried chicken, pizza, or other similar foods in the week preceding the survey.[21]

## PHYSICAL *Activity*

For general health, the CDC recommends that adults participate in 30 minutes of moderate physical activity at least five times per week or 20 minutes of vigorous activity at least three times per week.[22] The 2005 Behavioral Risk Factor Surveillance Survey (BRFSS) showed that 49 percent of the Minnesota adult population is at-risk for health problems related to an insufficient level of physical activity (not meeting the recommendations) and 16 percent of the Minnesota adult population reported no leisure-time physical activity at all.[3]

It is recommended that children and adolescents participate in at least 60 minutes of moderate intensity physical activity most days of the week, preferably daily.[22] According to 2007 YRBS data from the four Steps to a HealthierMN communities, 38.3 percent of Minneapolis high school students, 40.6 percent of Willmar high school students, 45 percent of Rochester high school students, and 45 percent of St. Paul high school students meet federal recommendations for physical activity per week. However, in all four communities, far fewer high school girls meet the requirements than high school boys.[18]

Additionally, youth are spending significant amounts of time in sedentary activities. Obesity rates are highest among children watching greater than four hours of television per day and lowest among children watching less than one hour per day.[23] According to 2007 YRBS data from the four Steps to a HealthierMN communities, 30.7 percent of Minneapolis high school students, 33.4 percent of St. Paul high school students, 25.3 percent of Willmar high school students, and 18 percent of Rochester high school students spend three or more hours per day in front of a television.[19] Similarly, approximately one-fifth of high school students in all four communities spend three or more hours a week in front of the computer on something that is not schoolwork.[18]

## BREASTFEEDING

Breastfeeding and breastfeeding for longer durations result in a lower risk of being overweight during older childhood and adolescence.[24] According to CDC's National Immunization Survey, nearly 80 percent of infants are initially breastfed in Minnesota, 47 percent of mothers are breastfeeding when their infant reaches six months of age and 24 percent at 12 months of age.[5] These statistics support the need to increase exclusivity and duration of breastfeeding statewide.

While breastfeeding initiation rates in Minnesota exceed the Healthy People 2010 goals, rates tend to be lower among low-income groups. This is reflected in data from the Minnesota WIC Program in 2002, in which 69 percent of WIC mothers reported ever breastfeeding and 26 percent reported still breastfeeding at six months.[25]

Photo credit: Hennepin County Public Affairs

## DISPARITIES *in Overweight and Obesity*

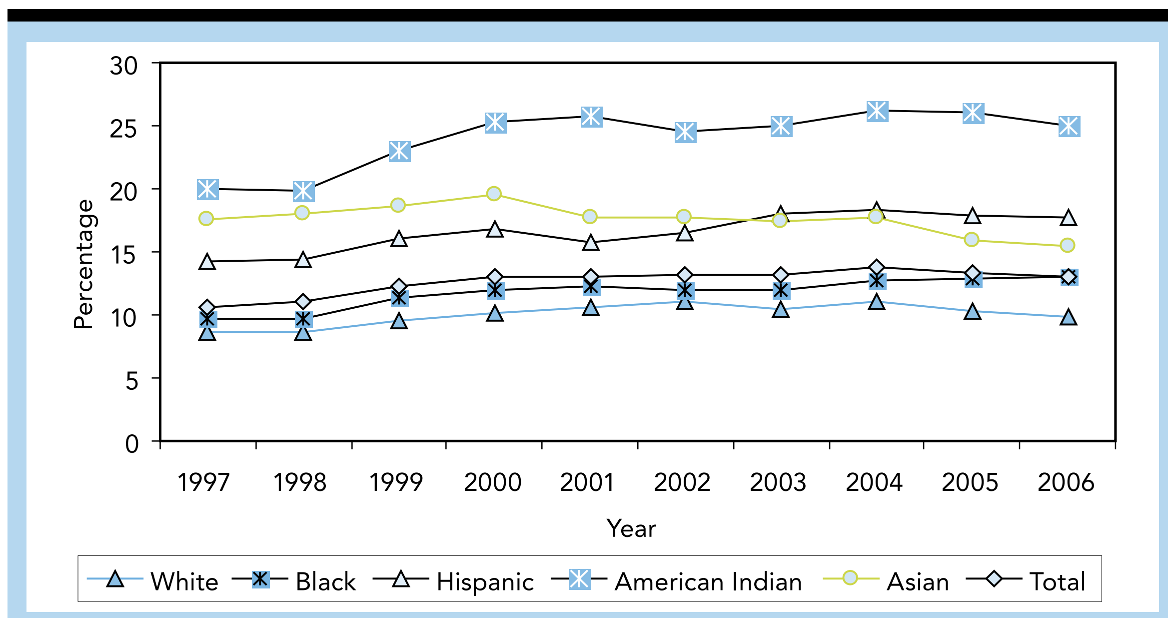
Health disparities refer to gaps in the quality of health, healthcare and access to healthcare by gender, age, race, socioeconomic class, education, ability, geographical region and other life circumstances and/or conditions. Nationally, disparities in overweight and obesity exist in adults. The greatest prevalence in obesity occurs in the non-Hispanic black population according to 2005 BRFSS data.[26]

Unfortunately, the Minnesota BRFSS data does not sample enough of many racial and ethnic population groups, such as American Indians, to provide accurate obesity estimates. While data on obesity prevalence among American Indians is sparse, several studies demonstrate that obesity is a far greater problem in this population group than any other racial/ethnic group.[27] A U.S.-based study from 2003 found that obesity rates for American Indian men were 40.1 percent compared to 26.5 percent, 26.6 percent, and 2.7 percent for black, Hispanics, and Asian men respectively.[27] Similar rates were found for women. Overall, obesity rates for American Indian women were 37.7 percent compared to 37.6 percent, 28.4 percent, and 3.1 percent for black, Hispanics and Asian women respectively.[27] Several studies find regional/tribal variations in obesity and overweight among American Indians and some suggest that the Northern Plains Indians may have a less significant problem as compared to tribes or regions in other parts of the United States.[27]

Again, while BMI data is unavailable for all Minnesota children, there is BMI data for lower-income children 2 to 5 years of age who participate in WIC. Figure 5 below illustrates the differences in weight status between racial and ethnic groups. The prevalence of obesity has been consistently higher among American Indian children, with 25 percent obese in 2006.[28]

As expected, racial and ethnic disparities in health behaviors that contribute to overweight and obesity follow a similar pattern. The white population of Hennepin County, the largest metropolitan area in the state, was significantly more likely to report consuming five or more servings of fruits and vegetables (38.2 percent) than U.S. born blacks (25.2 percent) or African born blacks (27.4 percent).[21] Similarly, there are differences in breastfeeding rates across racial and ethnic groups. This

**Figure 5: Trends in prevalence of obesity from 1997 to 2006 among Minnesota children aged 2 to 5 years enrolled in WIC by race and ethnicity**




Source: Minnesota Department of Health, Pediatric Nutrition Surveillance System Report

is evident in data from WIC. Breastfeeding is less common among American Indian and Asian American women than in other races.[6]

Not surprisingly, these disparities in risk factors (obesity, physical inactivity, and poor nutrition) lead to disparities in chronic disease and death. African Americans, Asians, Hispanics and American Indians continue to experience poor health and disproportionately higher rates of illness and death.[29] These drastic disparities exist in Minnesota even though it is consistently ranked as one of the healthiest states in the country.

Years of potential life lost (YPLL) is a statistical measure of the relative impact of various diseases and other lethal forces on a population. Therefore YPLL is often used to provide an indication of death at early ages. African Americans (YPLL=6163 in 2001-2005) and American Indians (YPLL=9437 in 2001-2005) have YPLL more than twice that of the white population (YPLL=2662 in 2001-2005) in Minnesota. [29] Deaths occurring before age 65 contribute to YPLL. YPLL is decreasing since the early 1990s for all races except American Indians, where they are increasing.[29] Many of these lost years of life are due to obesity-related chronic diseases and conditions. In 2001-2005, compared to whites, the heart disease mortality rate was 33 percent higher among American Indian women and 66 percent higher among American Indian men in Minnesota.[30] Mortality data demonstrate that African Americans and American Indians have age-adjusted mortality rates due to diabetes that are more than twice the rate for whites, and American Indian males have the highest incidence of colorectal cancer.[29]

## HOW POLICIES, *Systems and Environments Support Unhealthy Behaviors*

While individuals make their own behavior choices, the policies, systems and environments in which we live influence our choices. These variables have inadvertently changed over time to encourage unhealthy lifestyles. It is estimated that an additional 40 percent of annual premature deaths could be prevented by altering environmental conditions, social inequities and behavioral choices.[31]

Over the past several decades, Minnesota's communities, schools, worksites, and healthcare system have changed in ways that impact our health:

*Community*: Walking and biking are not feasible transportation options in many neighborhoods because of safety concerns, poor lighting and unreasonable distances from residences to destinations. Neighborhoods where residents do not have access to high-quality, affordable, fresh produce and instead provide easy access to junk food and tobacco and alcohol products disproportionately impact those at the highest risk for chronic diseases. Increased portion sizes at restaurants and inexpensive, processed foods are ever-present in communities throughout the United States.

*Schools:* Students have fewer opportunities for physical activity and healthy eating. More than 90 percent of Minnesota schools did not meet the number of minutes per week for physical education classes recommended by CDC and the National Association for Sport and Physical Education. Current Minnesota legislation requires that all students ages 7-16 must receive instruction in physical education; however the amount of instruction time is determined at the school district level. Due to budget constraints and emphasis on testing in language arts, mathematics, science and social studies; school districts have been faced with making decisions that have reduced the amount of physical education time. Time constraints may have also forced some schools to reduce the amount of recess time. Concurrently, the number of children walking or biking to school has decreased dramatically from the last generation and budget constraints have caused some schools to offer fewer after school activity programs. Budget constraints in the past 20 years, have led schools to contract with soft drink industries to provide financial resources through pop sales. School cafeterias and snack bars have added a wide variety of candy, chips and other non-nutritive items which yield higher profits. All these factors have a direct impact on children's opportunities for healthy behaviors.

*Worksites*: Technology has created more desk jobs and fewer active jobs. Larger proportions of our population are in the workforce, leaving less time at home to be

active and prepare nutritious meals. Convenience food has become a staple in the workplace and at home due to overscheduled families. Stairs in our worksites are often more difficult to access than elevators or escalators. Office traffic signage often directs people to the elevator. Our sprawling communities, increased road development, lack of mass transit opportunities and complicated lives make it difficult for employees to walk or bike to work which leads to an increase in time spent commuting or essentially being inactive.

*Healthcare*: Changes in healthcare and the healthcare setting have created challenges to making healthcare a place for supporting wellness and not just treating illness. For example, marketing medications directly to consumers may lead some consumers to believe that rather than changing their lifestyles there is an easy pharmaceutical answer to many conditions. Providers frequently have little time to spend with patients and are often not equipped to offer resources that could help their patients lead more active lives and eat more healthfully.

These circumstances have affected Minnesota's environment and often have disproportionately affected Minnesota's most vulnerable populations. Intervening within these settings is the most effective way to reduce the burden of obesity and obesity-related chronic diseases. The healthy choice should become the easy, affordable and attractive choice for all Minnesota residents.

## FINANCIAL BURDEN *of Obesity and Overweight*

### *. . . Excess weight is a burden to our health, productivity and healthcare system*

Escalating expenses associated with weight and weight-related conditions may involve direct (primary, secondary and tertiary care) and indirect costs (decreased productivity, restricted activity, absenteeism, and premature death).[2] For example, obesity and morbid obesity are associated with increased rates of work absenteeism, costing the U.S. an estimated $4.3 billion per year.[32] Nationally, productivity gains of $254 billion could be realized by reductions in obesity alone.[33]

The overall financial burden of obesity in Minnesota, based on national estimates, was $1.3 billion in 2004.[34] The financial burden of childhood obesity in Minnesota is difficult to estimate. However ties have been made between childhood obesity and future adult weight-related disease and healthcare costs.[35] Trends show diagnosis of weight-related disease occurring at younger and younger ages, which will likely lead to increased healthcare and other costs over larger portions of the lifecycle.

A 2007 report by the Minnesota Department of Health suggests that reducing the prevalence of obesity to 15%, reducing the prevalence of overweight to 35% and increasing the percentage of people with a healthy weight in Minnesota to 50% by the year 2020 has a potential cost savings of approximately $14.6 billion dollars throughout the period of 2008-2020.[36] For the year 2020 alone, this would translate into a 3.5 percent reduction in state healthcare spending.

### *. . . Chronic diseases are expensive*

While lost lives and the stress and disability of living with chronic diseases may be the greatest concern to Minnesotans individually, the cost of chronic diseases is substantial. In 2003, U.S. spending on healthcare rose to $1.67 trillion or $5,670 per person.[33] Experts estimate that chronic diseases are responsible for 83 percent of this spending. Healthcare spending for individuals with one

chronic disease is two and one half times the spending for an individual without a chronic disease.

Chronic disease costs can be separated into two distinct components: direct costs related to the cost of medical treatments and indirect costs attributable to chronic diseases.

*Direct Costs:* In 2000, the direct cost of physical inactivity in the U.S., a risk factor for chronic diseases, was almost $77 billion; in Minnesota, the cost was $500 million.[37, 38] Also in 2003, the estimated direct cost of arthritis was more than $81 billion nationally and over $1.5 billion in Minnesota.[39] In 2005, over 12 percent of all hospitalizations in Minnesota were principally for cardiovascular disease events, accounting for total charges of over $2.1 billion.[30]

*Indirect Costs*: In addition to direct costs, there are many indirect costs attributable to chronic diseases. These include lost productivity due to increased sick days from work and lost productivity due to early death. In 2001, the cost of lost productivity in the U.S. due to cardiovascular disease alone was $129 billion.[37]

Several national studies have estimated the total economic cost (direct and indirect costs) for many chronic diseases and their risk factors. In the U.S., the total annual cost attributable to:

- Diabetes is nearly $132 billion;
- Arthritis is $128 billion;
- Obesity is $117 billion;
- Cardiovascular disease is $300 billion; and
- Smoking is $75 billion.[37]

## *. . . Overweight and obesity are preventable*

One way to reduce the prevalence of obesity and overweight as well as increase the percentage of people with a healthy weight is to focus on prevention. In the U.S. only 5% of health spending is spent on prevention despite evidence that prevention could significantly reduce the financial burden of chronic disease.[40] Educating and encouraging individuals to lead lifestyles that are centered on healthy eating and active living and to maintain or strive for a healthy weight are essential in helping to reduce the financial burden that is upon us. The Plan identifies strategies that will help to create the mass cultural change that is needed in order to create an environment that supports these healthy behaviors.

# MINNESOTA PARTNERSHIPS *and Collaboration*

Successfully reversing the rising trends of overweight and obesity in Minnesota will require a variety of sectors, including government, education, media, industry, community organizations, worksites, healthcare and other partners across the state (*refer to Appendix B for the Roles of Minnesota Partners in Reducing Obesity*). No one sector will be able to solve the obesity epidemic. Because of the multifactorial nature of obesity, many entities are required to formulate approaches to prevent obesity in Minnesota. A statewide effort will require collaboration; financial support; dedication to research and evaluation; and the commitment to communicate lessons learned to avoid duplication and make the best use of available resources.

**Individual, Community and Societal: Levels of Impact**

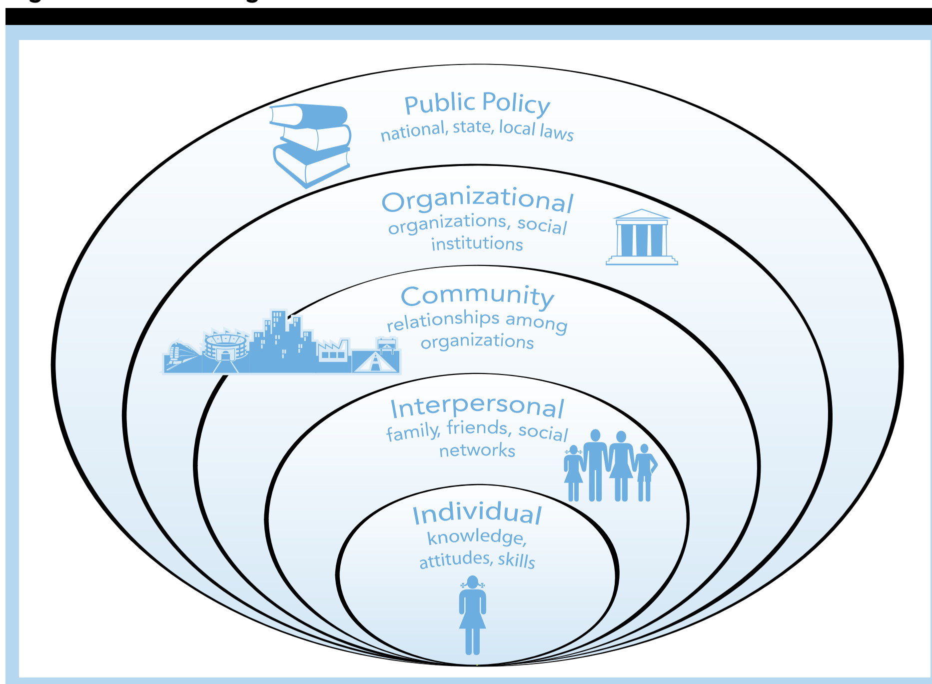
Research has shown that people's health is related to both the physical and social environment in which they live. Environments, social norms, policies, regulations and laws impact behaviors of individuals. These social and physical environmental elements can promote, support and reinforce healthy behaviors and contribute to the reduction of obesity in the state of Minnesota.

The wide range of objectives and strategies listed within the Plan address multiple levels: individual, interpersonal, community, organizational and public policy. This is known as the Socio-Ecological Model (Figure 6). Individuals make key lifestyle choices that impact their health. However, the systems that surround individuals greatly influence and determine their behavior choices.[41]

To better understand the socio-ecological model, it is helpful to examine each level. **Interpersonal** family, friends and social networks influence **individuals**, as do **social organizations and institutions** such as educational systems, financial resources, access to healthcare and cultural norms. **Community** norms and environments also impact the behavior of individuals. **Policies** and laws that govern behaviors in communities at the local, regional, state and national level support and promote healthy choices and lifestyles.

To achieve positive outcomes, strategies at the individual, interpersonal, community, organizational and societal level are needed with all population groups in Minnesota. To ensure cultural sensitivity the application and manner of how strategies are implemented is key to success. For example, strategies that are effective in metropolitan communities may be inappropriate or even impossible to implement in rural Minnesota while strategies that target a specific cultural group may not be appropriate for all cultures.

Figure 6: Socio-Ecological Model




**Building on Unique Opportunities to Reduce Obesity in Minnesota**

Not only are multiple partners needed to reduce overweight, obesity and obesity-related chronic diseases, but comprehensive programs

and policy and environmental changes are needed as well. Fortunately, a number of unique opportunities exist in Minnesota that has potential to make significant improvements. The existence of strong public-private partnerships along with a solid public health infrastructure and educational system all forging ahead will help our state successfully work toward change.

With an abundance of outdoor recreational opportunities and locally grown produce the ability to promote active lifestyles and healthy eating are available. Another unique opportunity is that many of the nation's largest food manufacturers are headquartered in Minnesota.

Our educational system, particularly our state universities, are paving the way by conducting cutting-edge research around childhood obesity and what can be done to stop the steady rise in weight among our children and youth. Health plans and systems throughout the state are also committed to halting the obesity epidemic and have designed programs, often tied to insurance options, for individuals to take advantage of. The Minnesota Council of Health Plans, the Institute for Clinical Systems Improvement, and the Minnesota Medical Association have been working to develop recommendations for Minnesota around obesity and the effect that added weight has to the health of future generations.

Partners throughout the state are ready to take action; the time is ripe. As a state, moving forward, we must work together to identify solutions for increasing physical activity and healthy eating among all people in Minnesota. *Appendix D* provides examples of unique programs and partnerships to reduce obesity in Minnesota. Each example makes the case for how efforts that span sectors, support public-private partnerships and foster collaboration often yield the greatest impact.

# CHAPTER 2: *Where We Need to Go*

## DEVELOPMENT *of the State Plan*

### THE GROUNDWORK

The framework for the Plan was developed with the participation of a diverse group of stakeholders throughout Minnesota who are passionate about the prevention of chronic disease and obesity and dedicated to improving important health behaviors, specifically healthy eating and active living, in Minnesota's population as a whole.

Chronic disease and health promotion staff from the Minnesota Department of Health (MDH) identified and compiled science-based best practices for physical activity, healthy eating and overweight and obesity prevention. A variety of state advisory groups reviewed the best practices and identified recommendations and effective strategies for reducing obesity and chronic disease in Minnesota across multiple sectors. MDH staff also reviewed current Minnesota chronic disease state plans focused on diabetes, heart disease and stroke and cancer. The key risk reduction objectives and strategies from these chronic disease plans were incorporated throughout the Plan.

In order to develop recommendations and strategies for weight loss and weight maintenance, MDH staff conducted a key informant survey of Minnesota physicians and clinical researchers who are experts in the field of obesity treatment. The survey asked physicians and clinical researchers to describe promising new treatments or weight management methods, key barriers to treatment, how the current medical system measures the quality of obesity treatment and the use of medical treatment algorithms or guidelines. From the survey summary, MDH staff developed specific recommendations and strategies for weight loss and weight maintenance for the Plan.

A draft of the Plan was then reviewed extensively by internal MDH staff from the Diabetes, Cancer, Heart Disease and Stroke, Arthritis, Steps to a HealthierMN and Minnesota WIC programs. Following this revision, the Plan was again reviewed and revised by key partners from a wide range of Minnesota organizations, including health plans; state agencies; health professional organizations; local public health agencies; non-profit chronic disease organizations, transportation and agricultural advocacy organizations; University of Minnesota researchers and academics; business leaders; transportation and land use planners and officials; education professionals; media experts; and other community organizations.

### Key Advisory Groups, Steering Committees and Statewide Alliances

A number of state advisory groups, steering committees and statewide alliances participated in reviewing best practices and identifying recommendations and effective strategies for reducing obesity and chronic disease to be included in the Plan. More details about the role each played in the development of the Plan is described below.

### The Minnesota Task Force on Childhood Obesity

In response to the growing concern about childhood obesity, in June 2006 the Commissioner of Health, along with the Commissioner of Human Services and the Commissioner of Education, convened the Minnesota Task Force on Childhood Obesity to study and make recommendations for reducing the rate of obesity among children in Minnesota. The task force was comprised of representatives of key organizations and stakeholder groups throughout Minnesota who were notably engaged in addressing the health of children and youth.

Members of the Task Force on Childhood Obesity self-selected into one of five workgroups: government; education; industry and media; community organizations and worksites; and healthcare. Strategies for encouraging parents and families to adopt healthier lifestyles were also addressed. Members were asked to develop evidence-based recommendations for their topic areas as well as to create corresponding objectives and list strategies stating how those objectives could be achieved. *Refer to Appendix I for a list of the Task Force on Childhood Obesity recommendations.*

In the process of developing recommendations, Task Force members identified four areas common to all five workgroups:

1. Encourage Healthy Eating Habits
2. Increase Physical Activity
3. Create Healthy Environments
4. Increase Monitoring and Measurement

The intention of identifying focus areas was to begin to recognize core areas for action to reduce childhood obesity that multiple stakeholders, regardless of sector, could collaborate on. The Task Force on Childhood Obesity recommendations and focus areas were incorporated into this larger Plan.

## The *Healthy Kids, Healthy Minnesota* Childhood Obesity Prevention Steering Committee

The work of the Minnesota Task Force on Childhood Obesity blossomed into a statewide effort to address obesity prevention in Minnesota children and youth. With the support from Minnesota's Governor and a grant from the National Governors Association. A Statewide Childhood Obesity Prevention Steering Committee was convened for one year in 2007. The task of this group was to build upon the recommendations developed by the Minnesota Task Force on Childhood Obesity by identifying key priorities and creating an action plan to address childhood obesity for the State of Minnesota. The priorities and action plan developed by the Childhood Obesity Prevention Steering Committee were incorporated into the goals and objectives of the *Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases*. Steering Committee members also endorsed the Plan and provided important input and feedback during its creation.

## Environmental Scan of Obesity Prevention Efforts in Minnesota

As part of the *Healthy Kids, Healthy Minnesota* statewide initiative to prevent and reduce childhood obesity, a statewide scan of current policies and activities was conducted. The purpose of this scan was to create a preliminary inventory of available obesity prevention resources throughout the state. Programs, environmental supports, and legislation/policies addressing obesity were the three focus areas in this scan. (*Refer to Appendix C for a summary of the environmental scan.*)

## Minnesota State Plans to Manage and Prevent Chronic Diseases

It is impossible to discuss the obesity epidemic without addressing obesity-related chronic diseases. There are a number of partners and programs within Minnesota which are dedicated to preventing and reducing weight-related chronic diseases and conditions. Because of this common mission, it was important to involve these partners invested in the prevention of diabetes, heart disease, stroke, arthritis and cancer.

Minnesota currently has a state plan that addresses each of these chronic diseases: diabetes, heart disease and stroke, arthritis and cancer. These state plans were each developed using similar models which included input from key stakeholders statewide with oversight by state steering committees and a rigorous review process. In 2007, each of the existing state chronic disease plans was reviewed and relevant objectives and recommendations were adapted for inclusion within the *Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases*.

## Key Informant Survey of Minnesota Physicians and Clinical Researchers on Obesity Treatment

In order to develop recommendations and strategies for weight loss treatment and weight maintenance, MDH staff conducted a key informant survey of Minnesota physicians and clinical researchers who are experts in the field of obesity treatment. Those interviewed included medical professionals from the Institute for Clinical Systems Improvement (ICSI) Guidelines Review Group for the ICSI guidelines *Prevention and Management of Obesity (Mature Adolescents and Adults)*, the Minnesota Medical Association, the University of Minnesota Obesity Prevention Center, HealthPartners, Willmar Bariatric Medical Center, Indian Health Service, Children's Hospital Fairview, Minnesota Academy of Family Physicians, Hennepin County Medical Center, and Blue Cross Blue Shield of Minnesota.

The survey asked key informant physicians and clinical researchers to describe: (1) current trends and promising new treatments or weight management methods, (2) key barriers to treatment, including access to care and medical

care reimbursement issues, (3) how the current medical system measures the quality of obesity treatment and what national research shows about quality, (4) what common barriers they encounter when trying to help patients lose weight and how they motivate people to lose weight, (5) the use of medical treatment algorithms and barriers to implementing medical guidelines and what screening measures they use, (6) what actions are needed to improve Minnesota's ability to measure obesity rates and trends and (7) what can be done to encourage the population as a whole to maintain a healthy weight. From the survey summary, MDH staff developed specific recommendations and strategies for clinical weight loss and weight maintenance for the Plan. *Refer to Appendix E for a list of survey questions and a summary of the interviews.*

## In the Next Five Years… Moving forward

The Plan will continue to evolve as more scientific evidence and research on the reduction of obesity and obesity-related chronic diseases become available. The Minnesota Department of Health will work with state partners to regularly review the Plan's vision, goals, objectives and strategies and coordinate efforts identified in the various chronic disease plans going forward.

This Plan marks the beginning of more intensified and expanded statewide collaboration to reduce Minnesota's epidemic of overweight and obesity. ***Please refer to the evaluation and surveillance section to learn more about how the Plan will be evaluated and the timeline for measuring progress.***

# MINNESOTA GOALS *and Objectives*

The Plan is a call to action to reverse the rise of obesity and obesity-related chronic diseases by changing behaviors and creating environments that support people in Minnesota to eat healthfully and to be physically active.

***Vision:***

*People in Minnesota eat healthfully, are physically active and maintain a healthy weight because they live in an environment designed to support healthy lifestyles across the lifespan.*

***Goals:***

*To reduce obesity and obesity-related chronic diseases among all people in Minnesota.*

## Long-Term Objective 1: Increase Healthy Eating among People in Minnesota

**Rationale:** This objective focuses on improving healthy eating environments throughout Minnesota. Eating a balanced diet is one of the most important things one can do to maintain and improve overall health. Nutritional factors are associated with four of the ten leading causes of death – heart disease, stroke, cancer and diabetes. Other serious health problems associated with poor nutrition which can lead to disability or early death include obesity, hypertension, osteoporosis and dental diseases.

What we choose to eat has a direct effect on our health, growth, and feeling of well-being. This is true for everyone in spite of his or her age or current health status. Poor eating habits that result in too many calories and insufficient nutrients increase the risk for disease and disability. These diseases and disabilities affect the quality of life over a long period of time. They are costly to manage and cause early death. It is important that people understand the role of a proper diet in preventing or delaying the onset of all of these illnesses.

Focusing on increasing healthy eating within the Plan is necessary in order to successfully decrease obesity and obesity-related chronic diseases.

**Diet Quality:** Diet quality is measured by how well an individual's diet complies with the Food Guide Pyramid and the Dietary Guidelines for Americans and the key to a healthy diet is balance. It is important to understand the role of portion size, nutrient density, individual caloric needs, and the influence of industrial processing and cooking methods in a healthy diet. Decreasing sugar-sweetened drinks, hydrogenated fats and added sodium may require particular attention and effort to achieve a balanced diet. There is compelling scientific evidence that demonstrates a diet rich in fruits and vegetables can lower the risk of heart disease, stroke and high blood pressure. Since no single food provides all the nutrients needed to stay healthy it is important to consume a variety of foods everyday.

## Long-Term Objective 2: Increase Physical Activity among People in Minnesota

**Rationale:** This objective focuses on increasing physical activity levels. Physical activity is associated with numerous health benefits. These include prevention and/or treatment of overweight, obesity and many chronic diseases and conditions. The leading chronic diseases and conditions partially attributable to lack of physical activity are heart disease and stroke, hypertension, Type 2 diabetes, colon and breast cancer, osteoporosis, depression, anxiety and falls among the elderly.

Physical activity may occur in four domains of daily life: activities of daily living, transportation, occupation and recreation. Activities of daily living include personal hygiene and food preparation, attending school, managing a house and yard and taking care of children and other family members. Transportation includes walking, biking and other types of people-powered activities to get from one place to another. Occupational activity includes any physical exertion expended during the workday. Recreation includes activities engaged in during leisure time such as hiking, swimming or playing sports. Unfortunately, sedentary behavior is becoming the norm in all domains of our daily lives. Our culture enjoys many labor-saving conveniences, an abundance of automobile usage, and ever-increasing time spent engaged with electronic screens such as computers and televisions for work and play. Consequently, insufficient physical activity has become an epidemic and the negative health effects have placed a tremendous burden on our healthcare system.

Focusing on increasing physical activity within the Plan is necessary to successfully decrease obesity, obesity-related chronic diseases and obesity-related health disparities.

## Long-Term Objective 3: Increase Healthy Weight among People in Minnesota

**Rationale:** Overweight and obesity are generally caused by lack of physical activity, unhealthy eating patterns, or a combination of the two, with genetics, lifestyle and environment all playing important roles in determining a person's weight. Achieving a healthy weight requires balancing calories consumed from food and beverages with the calories used to keep one's body going and being physically active. Most often this balance requires incorporating a healthy diet and physical activity into one's lifestyle which is outlined in the first two objectives. This objective focuses on the importance of maintaining a healthy weight throughout one's lifetime.

Maintaining a healthy weight is an extremely important part of overall health. Carrying excess weight places individuals at much greater risk for future development and early onset of a wide variety of chronic diseases and health conditions including (1) high blood pressure; (2) high cholesterol; (3) Type 2 diabetes; (4) coronary heart disease; (5) stroke; (6) gallbladder disease; (7) depression; (8) osteoarthritis; (9) sleep apnea and respiratory problems; and (10) certain cancers such as endometrial, breast and colon.

Focusing on the importance of a healthy weight at an early age and throughout the age continuum is essential in instilling and supporting lifelong healthy habits. Including healthy weight within the Plan is necessary in order to reach the roughly 60 percent of Minnesotans who currently struggle with overweight or obesity.

# LOGIC MODEL *for the Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases*

The Plan's logic model is presented here to give a visual map of what the Plan expects to achieve and how it expects to get the work done. The logic model depicts the broad view of the Plan, connecting the Plan's various components to the overall goals. The logic model is outlined below, organized by inputs, short-term objectives, intermediate objectives, long-term objectives and goals.

**Inputs – Resources for the Plan**

The inputs list the resources that are required for implementing the Plan and include currently available resources and potential resources that hopefully will be available in the future.

**Short-term Objectives – Building and strengthening the foundation for the Plan**

In the first two years, MDH staff will be working with Plan partners to build the foundation of the Plan. This includes:

- Relationship building – both existing and new partners
- Surveillance and evaluation system building
- Partners and MDH staff choosing strategies that are Plan-related and committing to implementing them. This includes:
  - Choosing to strengthen existing strategies/initiatives and committing to implementing them
  - Choosing new strategies/initiatives, and starting the initial steps to implement them

**Intermediate Objectives – Implementing the Plan**

The intermediate objectives, and the work done in the second through fifth year, represent the main focus of the Plan. In years two through five, the coordination and implementation of the strategies put into action by Plan partners and MDH staff will be in full-swing. By the end of the fifth year, progress of the Plan and progress towards achieving the Plan's long-term goals will be measured through the objectives listed in the logic model. *See the Evaluation and Surveillance Section for more information*.

**Long-term Objectives**

The long-term objectives, and the goals, are what the Plan is ultimately trying to achieve. If momentum of the Plan is sustained, it is expected that the long-term objectives can be achieved in 10 years.

**Goals:**

With sustained commitment over 25 years, the goals of reducing obesity and reducing obesity-related chronic disease can be achieved.

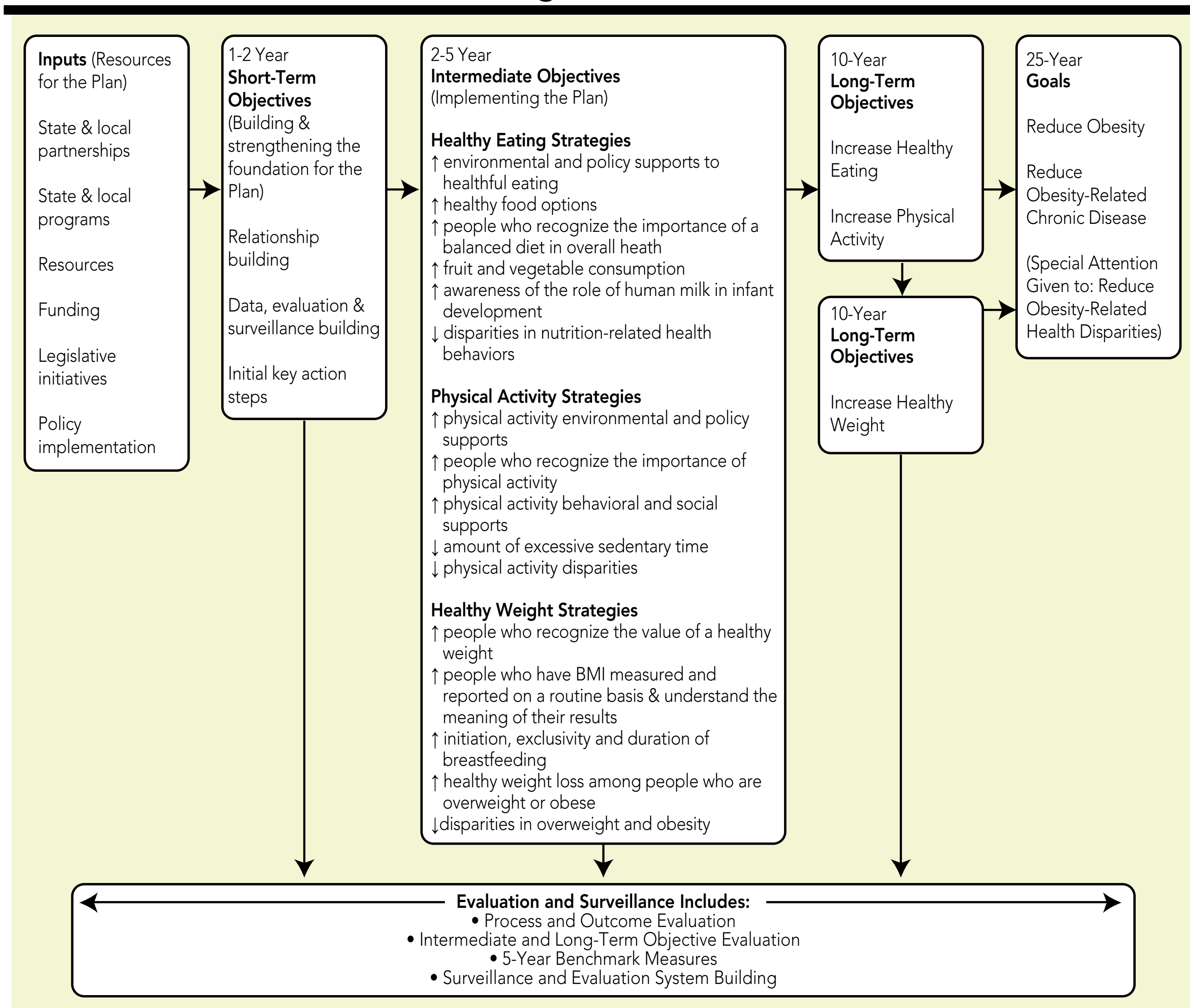
**Evaluation and Surveillance**

Evaluation and surveillance need to take place at each level throughout the Plan as depicted in the logic model. Evaluation allows for the ability to measure progress and adjust strategies as needed, while surveillance provides the state with overall trends needed to gauge areas of need, track outcomes and measure prevalence. *See the Evaluation and Surveillance section for a description of how the Plan will be evaluated*.

***Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases: Promoting Healthy Eating, Physical Activity and Healthy Weight***

**Vision:**
***People in Minnesota eat healthfully, are physically active and maintain a healthy weight because they live in an environment designed to support healthy lifestyles across the lifespan.***

## Logic Model



# CHAPTER 3: *How We Will Get There*

## MINNESOTA'S OBESITY PREVENTION *Objectives and Strategies for 2008-2013*

***Best and promising strategies:***
This section offers suggested strategies based on best and promising practices. Each long-term objective is organized by corresponding intermediate objectives. These intermediate objectives then contain applicable strategies that promote healthy weight and reduce overweight, obesity and obesity-related chronic diseases. The strategies outlined in this chapter are not meant to be exhaustive.

The intermediate objectives and their corresponding strategies focus on changes within the physical and social environment; enhancing education, awareness and access; as well as the need to address disparities.

***Physical and Social Environment:*** The environment in which people live guides the choices they make about eating healthy and being active. Dramatic changes in the world over the last several decades have altered our daily lifestyle, such as:

- Technology that reduces physical activity (e.g., cars, computers, TV);
- Increased marketing and consumption of unhealthy food items (e.g., high fat, sugar and calorie content);
- Increased food portions/serving size;
- Lack of environmental supports (e.g., no sidewalks, unsafe neighborhoods, limited access to fruits and vegetables); and
- Missing social and policy support (e.g., school and child care nutrition and physical education standards, worksite food vending and catering policies)

These circumstances affect the physical and social environments in Minnesota and leave many populations vulnerable to poor eating habits and sedentary lives. Interventions targeting the environment are the most effective way to reduce the burden of obesity and obesity-related chronic diseases. The healthy choice should become the easy, affordable and attractive choice for all people in Minnesota.

***Education, awareness, and access:*** High calorie, low nutrient food is abundant in ever-increasing portion sizes. In addition, the effects of advanced technology are leading to increasingly sedentary lifestyles. Misinformation and poor media communication about health research and health behaviors contribute to public confusion about the definition of healthy eating and the amount of physical activity needed. Awareness of and access to healthy food and safe places to be active are essential in improving diet quality and levels of physical activity.

***Disparities:*** The incidence of obesity and chronic diseases are more pronounced in certain populations. It is important that quality nutrition and physical activity messages, outreach, and programs are visually, culturally, and socially appropriate for the individual audiences most at-risk.

### *Guiding Principles Considered in Addressing Disparities*

The Plan recognizes that differences in race, ethnicity, age, gender, sexual orientation, language, physical ability, socioeconomic class, religious belief, and level of education can affect desired health outcomes. Significant disparities persist in Minnesota, and additional work will be required to address the needs of those who are most

vulnerable to chronic disease. Since it is not possible to address every contingency, the Plan will embrace the following three principles in regard to reducing disparities:

***Comprehensive:*** The Plan will support meaningful collaboration across broad sectors in order to make best use of the multidisciplinary resources needed to implement the strategies essential for public health systems and organizations to close the disparity gap.

***Sustainability:*** The Plan will support the integration of strategies that build on new and existing efforts that, over time, improve the ability of diverse audiences to become engaged participants in their own health outcomes.

***Shared Accountability:*** The Plan will communicate the expectation that all partners will make every effort to reduce barriers that place vulnerable audiences in jeopardy of missing out on opportunities to improve health-related behaviors, skills, or knowledge.

***Moving Toward Change***

Many of the strategies will require significant financial support and statewide action from a variety of sectors if they are to be achieved. Success in overcoming the obesity epidemic will require mass cultural change in how we live our daily lives and will require long-term commitment to creating a state where healthy eating and active living are the cultural norm. Altering the environment in which we live is not an easy task, but it is one for which we need to aim.

To effectively implement changes for health, Minnesota stakeholders interested in reducing obesity must work together to:

- Build strong partnerships;
- Provide clear and consistent messages about the importance of healthy eating and active living;
- Coordinate intervention activities and policy development; and
- Maximize resources through collaboration.

The following objectives and strategies will help us create supportive policies and environments, increase awareness and change behavior in order to achieve the three long-term objectives – healthy eating, physical activity and healthy weight for all people in Minnesota. The three long-term objectives are similar in nature and are dependent on each other for good health; therefore, many of the components in the long-term objectives overlap. The highlighted strategies were chosen based on current and potential future state activities and a review of promising and best practices and are not intended to be an exhaustive list of possibilities.

# LONG-TERM OBJECTIVE 1:

## *Increase Healthy Eating among People in Minnesota*

### INTERMEDIATE OBJECTIVE 1.1:
INCREASE THE NUMBER OF ENVIRONMENTAL AND POLICY SUPPORTS TO HEALTHFUL EATING

**IMPLEMENTATION STRATEGIES**

**PUBLIC SECTOR**

1.1.1 Build on existing strategies that assist schools in implementing and evaluating their local wellness policies

1.1.2 Increase opportunities and policy supports for enrollment in family nutrition education classes for youths and adults

1.1.3 Identify policies and practices that support a statewide nutrition surveillance system

**PRIVATE SECTOR**

1.1.4 Identify how changes in food packaging might increase fruit and vegetable consumption

1.1.5 Work with providers to assess the scientific evidence and feasibility of providing for effective nutrition counseling that is reimbursable.

1.1.6 Identify and address barriers to reducing the number of sweetened beverages offered by increasing the number of venues that include low-fat milk as a beverage choice

1.1.7 Increase the number of employers that offer health screenings for cholesterol, blood pressure, and blood sugar

1.1.8 Increase the number of employers that have a catering policy and promote healthy food choices within the workplace

**INNOVATIONS AND RESEARCH**

1.1.9 Explore additional innovations to increase the number of environmental, social, and policy supports to healthful eating

1.1.10 Support additional research to increase the number of environmental and policy supports to healthful eating

### INTERMEDIATE OBJECTIVE 1.2:
INCREASE THE AVAILABILITY OF HEALTHY FOOD OPTIONS

**IMPLEMENTATION STRATEGIES**

**SCHOOLS**

1.2.1 Decrease access to foods of minimal nutritional value

1.2.2 Promote the implementation of policies that support farm-to-school and school garden programs

1.2.3 Increase the numbers of food items accessible outside the lunch program that meet accepted guidelines for fat, saturated fat, calories, sodium, and added sugar including fundraisers, vending, concessions, classroom celebrations, and a la carte

1.2.4 Reduce the fat and saturated fat content in school lunch for schools participating in the School Lunch Program

1.2.5 Improve access to healthy food options outside the School Lunch Program

| | |
|---|---|
| 1.2.5 | Develop and implement pricing strategies that create incentives for purchasing fruits, vegetables, whole grains, low- and fat-free dairy, and other healthy options in a la carte, vending and school stores |
| 1.2.6 | Increase the number of schools that serve a universal breakfast program |
| 1.2.7 | Ensure that school wellness policies support healthy eating environments |
| **RESTAURANTS** | |
| 1.2.8 | Develop policies or guidelines that increase healthy food and beverage options in fast food outlets |
| 1.2.9 | Develop policies or guidelines that increase or improve nutrition labeling for food in restaurant settings |
| 1.2.10 | Develop policies or guidelines to increase availability of healthy choices in catered foods |
| **COMMUNITY** | |
| 1.2.11 | Implement policies that increase healthier food and beverage options sold in vending machines and at concessions |
| 1.2.12 | Create incentives for retailers to offer better food choices |
| 1.2.13 | Develop pricing strategies that create disincentives for foods of minimal nutritional value |
| 1.2.14 | Increase geographic access to supermarkets |
| **INNOVATIONS AND RESEARCH** | |
| 1.2.15 | Explore additional innovations to increase the availability of healthy food options |
| 1.2.16 | Support additional research to increase the availability of healthy food options |

## INTERMEDIATE OBJECTIVE 1.3: INCREASE THE NUMBER OF PEOPLE WHO RECOGNIZE THE IMPORTANCE OF A BALANCED DIET AND ITS CONTRIBUTION TO OVERALL HEALTH

### IMPLEMENTATION STRATEGIES

| | |
|---|---|
| **MARKETING AND PROMOTION** | |
| 1.3.1 | Apply consumer research to identify effective ways to encourage the use of the nutrition label and other food-guidance systems with populations at high-risk for obesity and its complications |
| 1.3.2 | Develop and coordinate healthy nutrition messages for targeted audiences in schools, healthcare, and workplace settings (messages should include the importance of eating breakfast as it relates to weight loss, the health benefits of breastfeeding, portion size, the importance of eating together as a family, or the role of whole grains in a balanced diet) |
| 1.3.3 | Reduce the number of advertisements targeting children that encourage the consumption of foods and beverages with minimal nutritional value |
| 1.3.4 | Develop marketing materials that encourage eating breakfast and whole grains |
| **EDUCATION** | |
| 1.3.5 | Increase K-12 teacher exposure to available evidence-based nutrition education curricula through workshops, training modules, websites, and printed resources |
| 1.3.6 | Support, develop or enhance training programs to help school personnel and child care providers improve core competency skills nutrition education classes |
| 1.3.7 | Encourage the growth and expansion of community-based train-the-trainer networks |

| | |
|---|---|
| 1.3.8 | Identify or develop meal planning resources for childcare, early childhood programs, and elder care facilities |
| 1.3.9 | Promote quality K-12 nutrition education in Minnesota schools |
| **TECHNICAL ASSISTANCE** | |
| 1.3.10 | Provide technical assistance to local public health departments to develop, support, or expand local nutrition education programs |
| 1.3.11 | Develop resources that will assist employers to build awareness and educate employees to make healthier food choices |
| 1.3.12 | Provide technical assistance to schools to implement and evaluate local school wellness policies |
| 1.3.13 | Develop models for schools to use nutritional analysis data for education |
| **INNOVATIONS AND RESEARCH** | |
| 1.3.14 | Explore additional innovations to increase the number of people who recognize the importance of a balanced diet and its contribution to overall health |
| 1.3.15 | Support additional research to increase the number of people who recognize the importance of a balanced diet and its contribution to overall health |

## INTERMEDIATE OBJECTIVE 1.4: INCREASE FRUIT AND VEGETABLE CONSUMPTION

### IMPLEMENTATION STRATEGIES

| | |
|---|---|
| 1.4.1 | Disseminate evidence-based nutrition information on fruit and vegetable consumption through workshops, trainings, and web-based formats |
| 1.4.2 | Increase marketing messages that encourage fruit and vegetable consumption |
| 1.4.3 | Collaborate with organizations to develop action strategies that increase fruit and vegetable consumption |
| 1.4.4 | Explore additional innovations to increase fruit and vegetable consumption |
| 1.4.5 | Support additional research to increase fruit and vegetable consumption |

## INTERMEDIATE OBJECTIVE 1.5: INCREASE THE NUMBER OF PREGNANT WOMEN WHO RECOGNIZE THE ROLE OF HUMAN MILK IN HEALTHY INFANT DEVELOPMENT

### IMPLEMENTATION STRATEGIES

| | |
|---|---|
| 1.5.1 | Increase awareness of the nutritional and protective qualities of human milk |
| 1.5.2 | Increase awareness of the financial benefits of breastfeeding |
| 1.5.3 | Develop policies that limit the advertisement of infant formula in hospital settings |
| 1.5.4 | Develop and distribute breastfeeding information/resource packets during prenatal check-ups |
| 1.5.5 | Explore additional innovations to increase the number of pregnant women who recognize the role of human milk in healthy infant development |
| 1.5.6 | Support additional research to increase the number of pregnant women who recognize the role of human milk in healthy infant development |

## INTERMEDIATE OBJECTIVE 1.6: REDUCE DISPARITIES IN NUTRITION-RELATED HEALTH BEHAVIORS BY GENDER, AGE, RACE, SOCIOECONOMIC CLASS, EDUCATION, ABILITY AND GEOGRAPHICAL REGION

### IMPLEMENTATION STRATEGIES

#### MARKETING AND PROMOTION

| | |
|---|---|
| 1.6.1 | Identify and promote use of nutrition messages for targeted at-risk audiences |
| 1.6.2 | Provide resources that promote the understanding of the causes and distribution of nutritional disparities in populations |

#### PROGRAMS

| | |
|---|---|
| 1.6.3 | Develop community-based participatory programs to reducing social and physical environmental barriers to healthy eating |
| 1.6.4 | Increase participation in the Summer Food Program (school lunch programs which continue during summer break) by facilitating improved access |
| 1.6.5 | Identify strategies to broaden access to nutrition education programs for people with limited resources |
| 1.6.6 | Implement effective community interventions to increase nutrition-related screening and modify risk behaviors |
| 1.6.7 | Improve access to and affordability of fruits and vegetables for low-income populations, through supermarkets, farmers' markets, and community gardens |
| 1.6.8 | Continue funding for programs that specifically target eliminating disparities |
| 1.6.9 | Conduct formative research to gather perceptions and barriers to healthy eating among disparate populations |

#### INNOVATIONS AND RESEARCH

| | |
|---|---|
| 1.6.10 | Explore additional innovations to reduce disparities in nutrition-related health behaviors |
| 1.6.11 | Support additional research to reduce disparities in nutrition-related health behaviors |

***Refer to the Evaluation Section and Appendix F for Long-Term Objective 1 evaluation methods and measurement indicators, baselines and targets.***

## POTENTIAL LEADERS AND KEY ORGANIZATIONS *to Increase Healthy Eating in Minnesota:*

Academic institutions

American Cancer Society

American Heart Association, Greater Midwest Affiliate

Area Agency on Aging

Businesses and workplaces

Cater to Health

Childcare centers and providers

City, county, township, and tribal governments

Community coalitions

Community and non-profit organizations

Early Childhood Family Education Program

Head Start and Early Head Start

Health plans

Hospitals and clinics

Local public health agencies

Media industry

Minnesota Beef Council

Minnesota Dairy Council

Minnesota Department of Agriculture

Minnesota Department of Education

Minnesota Department of Employee Relations

Minnesota Department of Health

Minnesota Department of Human Services

Minnesota Food Nutrition Network

Minnesota Fruit and Vegetable Coalition

Minnesota Growers Association

Minnesota Grown

Minnesota School Food Service Association

Minnesota state, county and local government leaders

Nutrition education specialists

Office of Economic Opportunity

Prevention Minnesota, Blue Cross Blue Shield of Minnesota

Produce for Better Health

Public Housing Agencies

School districts

School food authorities

Second Harvest Food Banks

Steps to a HealthierMN

Steps to a Healthier Minneapolis

Steps to a Healthier Rochester

Steps to a Healthier St. Paul

Steps to a Healthier Willmar

Special Supplemental Nutrition Program for Women, Infants and Children

University of Minnesota Extension

University of Minnesota School of Public Health

Youth Services Bureau

# LONG-TERM OBJECTIVE 2: *Increase Physical Activity among People in Minnesota*

## INTERMEDIATE OBJECTIVE 2.1: INCREASE THE NUMBER OF PHYSICAL ACTIVITY ENVIRONMENTAL AND POLICY SUPPORTS

### IMPLEMENTATION STRATEGIES

#### NON-MOTORIZED TRANSPORTATION (WALKING, BIKING, ETC.)

| | |
|---|---|
| 2.1.1 | Continue implementation of the Safe Routes To School infrastructure grants programs for planning, design and construction of facilities improvements such as sidewalks, crosswalks, bicycle facilities, traffic diversions and traffic calming |
| 2.1.2 | Implement pedestrian and bicycle improvements based on community assessments and community engagement |
| 2.1.3 | Implement policies, ordinances and zoning requirements that support pedestrian-and bicycle-oriented development and that complements transit-oriented development |
| 2.1.4 | Create incentives for using non-motorized transportation such as walking, biking, and transit (transit typically includes some walking or biking on either end of the trip) |
| 2.1.5 | Implement Complete Streets policies along with the context sensitive design and solutions that support a comprehensive, integrated transportation network ensuring the public right-of-way is designed and operated to provide access for all users including pedestrians, bicycles, transit, and motorists |

#### WORKSITES

| | |
|---|---|
| 2.1.6 | Install facilities and implement policies within the workplace and surrounding community that support physical activity such as showers, lockers, safe and accessible stairways, fitness equipment, bike racks or lockers, sidewalks and trail connections |
| 2.1.7 | Work with health providers and employers to assess scientific evidence and feasibility of potentially effective physical activity incentives for employees such as paid time for non-work related physical activity, onsite fitness facilities at work and subsidies for health clubs |

#### SCHOOLS

| | |
|---|---|
| 2.1.8 | Advocate for quality K-12 mandated state physical education standards based on national physical education standards |
| 2.1.9 | Support adequate funding to implement K-12 physical education in schools |

#### ACTIVE COMMUNITIES

| | |
|---|---|
| 2.1.10 | Incorporate active living principles into community comprehensive plans (active living integrates physical activity into daily routines such as walking and biking for transportation or recreation, playing in the park, working in the yard, taking the stairs or using recreation facilities) |
| 2.1.11 | Implement municipal resolutions supporting active living (active living integrates physical activity into daily routines such as walking and biking for transportation or recreation, playing in the park, working in the yard, taking the stairs or using recreation facilities) |
| 2.1.12 | Provide year-round access to and promote physical activity facilities such as parks, trails, recreation areas, recreation centers, and other facilities |

2.1.13 Raise awareness of existing policies that inadvertently deter active living opportunities such as zoning requirements and building site guidelines (active living integrates physical activity into daily routines such as walking and biking for transportation or recreation, playing in the park, working in the yard, taking the stairs or using recreation facilities)

2.1.14 Promote policies and recommendations on age-appropriate play equipment, space and activities for youth to families, community organizations and child care centers

### OUTDOOR RECREATION

2.1.15 Acquire, protect and restore Minnesota's natural resource base, on which outdoor recreation depends

2.1.16 Develop and maintain a sustainable and resilient outdoor recreation infrastructure

2.1.17 Promote increased outdoor recreation participation through targeted programming and outreach

2.1.18 Evaluate and understand the outdoor recreation needs of people in Minnesota and the ability of Minnesota's natural resources to support those needs

### INNOVATIONS AND RESEARCH

2.1.19 Explore additional innovations to increase the number of physical activity environmental and policy supports

2.1.20 Support additional research to increase the number of physical activity environmental and policy supports

## INTERMEDIATE OBJECTIVE 2.2: INCREASE THE NUMBER OF PEOPLE WHO RECOGNIZE THE IMPORTANCE OF PHYSICAL ACTIVITY FOR HEALTH AND OTHER BENEFITS

### IMPLEMENTATION STRATEGIES

### CAMPAIGNS AND MESSAGES

2.2.1 Continue implementation of the do Campaign, a statewide physical activity public awareness campaign utilizing paid advertisements in mass media including broadcast (TV), billboards, and other media

2.2.2 Develop and disseminate the statewide physical activity branded message of the Step Up To Health/Be Active Minnesota initiative through parks and recreation, public health and many other public and private organizations' publications, events, and programs

2.2.3 Implement Walk To School, Walk To Work, and Walk To Play events and campaigns through schools, workplaces and communities

2.2.4 Continue implementation of the Share the Road campaign, a statewide bicycle safety campaign utilizing public service announcements, bicycle safety education and courses, bicycle helmet information and promotion, and bicycle safety events

2.2.5 Develop and implement a Safe Routes to School statewide education and outreach marketing plan

2.2.6 Implement a statewide campaign to promote Minnesota's crosswalk law

2.2.7 Develop and implement a statewide campaign to promote connections between physical activity and learning

| PATIENT COUNSELING | |
|---|---|
| 2.2.8 | Explore providing reimbursement for physical activity counseling by healthcare providers in primary and specialty care settings |
| **POINT-OF-DECISION PROMPTS** | |
| 2.2.9 | Implement point-of-decision prompts (i.e., stairwell campaign, steps or miles signage, walking routes maps) in communities and workplaces |
| **INNOVATIONS AND RESEARCH** | |
| 2.2.10 | Explore additional innovations to increase the number of people who recognize the importance of physical activity for health and other benefits |
| 2.2.11 | Support additional research to increase the number of people who recognize the importance of physical activity for health and other benefits |

## INTERMEDIATE OBJECTIVE 2.3: INCREASE THE NUMBER OF PHYSICAL ACTIVITY BEHAVIORAL AND SOCIAL SUPPORTS

### IMPLEMENTATION STRATEGIES

| YOUTH | |
|---|---|
| 2.3.1 | Promote key components of quality health education classes in schools including teacher, curriculum and assessment quality |
| 2.3.2 | Increase availability of quality physical education opportunities in schools |
| 2.3.3 | Integrate physical activity opportunities throughout the school day such as recess and active classrooms |
| 2.3.4 | Promote physical activity opportunities in out-of-school time programs including before school, after school, and school and summer breaks |
| 2.3.5 | Promote physical activity opportunities in communities for youth such as recreation and sports programs and Walk To Play programs |
| 2.3.6 | Continue implementation of the Safe Routes To School non-infrastructure grants programs for education, enforcement, encouragement and evaluation projects |
| **ADULTS** | |
| 2.3.7 | Engage adults in individually-adapted health behavior change programs offered through healthcare providers, employers and community organizations |
| 2.3.8 | Engage adults in non-family social support programs offered through healthcare providers, employers and community organizations |
| 2.3.9 | Promote physical activity opportunities in communities for adults such as health and fitness classes, recreation and sports programs, and Walk To Work and Walk To Play programs |
| **INNOVATIONS AND RESEARCH** | |
| 2.3.10 | Explore additional innovations to increase the number of physical activity behavioral and social supports |
| 2.3.11 | Support additional research to increase the number of physical activity behavioral and social supports |

## INTERMEDIATE OBJECTIVE 2.4: DECREASE THE AMOUNT OF EXCESSIVE SEDENTARY TIME

### IMPLEMENTATION STRATEGIES

2.4.1 Increase awareness of the health consequences of excessive screen time

2.4.2 Reduce the amount of sedentary commuting time through strategies such as increasing use of non-motorized transportation (walking, biking, etc.), promoting telecommuting, and encouraging residential development in close proximity to schools, work centers and transportation choices

2.4.3 Integrate physical activity opportunities throughout the school day such as recess and active classrooms

2.4.4 Increase the number of active workplaces through policies and practices that limit extended sedentary time such as length of meetings and breaks from screen and desk time

2.4.5 Increase the number of active senior living facilities through policies and practices that limit extended sedentary time for residents

2.4.6 Increase the promotion of community programs and activities that get children and adults to be more active

2.4.7 Explore additional innovations to decrease the amount of excessive sedentary time

2.4.8 Support additional research to decrease the amount of excessive sedentary time

## INTERMEDIATE OBJECTIVE 2.5: REDUCE PHYSICAL ACTIVITY DISPARITIES BY GENDER, AGE, RACE, SOCIOECONOMIC CLASS, EDUCATION, ABILITY AND GEOGRAPHICAL REGION

### IMPLEMENTATION STRATEGIES

2.5.1 Implement social marketing campaigns and messages targeting girls and women, older adults, people of color and American Indians, people with low income or lower education, and people with disabilities

2.5.2 Implement behavior change programs for girls and women, older adults, people of color and American Indians, people with low income or lower education, and people with disabilities such as Work Out Low Fat (WOLF), Wisdom Steps, Community Fitness Today, Step To It Northside/Southside, and Walking for Health

2.5.3 Promote access to free or low-cost alternative modes of transportation (walking, biking, etc.)

2.5.4 Promote year-round access to free or low-cost recreation opportunities

2.5.5 Increase access to public facilities for physical activity, like public school gymnasiums or grounds, malls, parks, recreational trails and community recreation centers

2.5.6 Develop additional opportunities for physical activity in underserved areas

2.5.7 Work toward complete implementation of the Americans with Disabilities Act, particularly Title II addressing access to public accommodations and commercial facilities operated by private entities

2.5.8 Continue funding for programs that specifically target eliminating disparities in physical activity

2.5.9 Conduct formative research to gather perceptions and barriers to increasing physical activity among disparate populations

| INNOVATIONS AND RESEARCH | |
|---|---|
| 2.5.10 | Explore additional innovations to reduce physical activity disparities |
| 2.5.11 | Support additional research to reduce physical activity disparities |

***Refer to the Evaluation Section and Appendix F for Long-Term Objective 3 evaluation methods and measurement indicators, baselines and targets.***

## POTENTIAL LEADERS AND KEY ORGANIZATIONS *to Increase Physical Activity in Minnesota:*

Academic institutions

American Cancer Society

American Heart Association, Greater Midwest Affiliate

Builders and developers

Businesses and workplaces

Childcare centers and providers

City, county, township, and tribal governments

Community coalitions

Community and non-profit organizations

Courage Center

Fitness facilities

Health clubs

Health plans

Hospitals and clinics

Local parks and recreation agencies

Local public health agencies

Media industry

Metropolitan planning organizations

Minnesota Association of Health, Physical Education, Recreation and Dance

Minnesota Department of Education

Minnesota Department of Health

Minnesota Department of Natural Resources

Minnesota Department of Transportation

Minnesota Recreation and Park Association

Minnesota Safety Council

Minnesota state, county and local government leaders

National Institute on Media and the Family

Parks & Trails Council of Minnesota

Physical education specialists

Prevention Minnesota, Blue Cross Blue Shield of Minnesota

School districts

Sporting goods manufacturers and retailers

State Bicycle Advisory Committee

Steps to a HealthierMN

Steps to a Healthier Minneapolis

Steps to a Healthier Rochester

Steps to a Healthier St. Paul

Steps to a Healthier Willmar

Transit for Livable Communities

Transit providers

Transportation and land use planners

YMCAs

# LONG-TERM OBJECTIVE 3: *Increase Healthy Weight among People in Minnesota*

## INTERMEDIATE OBJECTIVE 3.1: INCREASE THE NUMBER OF PEOPLE WHO RECOGNIZE THE VALUE OF A HEALTHY WEIGHT

### IMPLEMENTATION STRATEGIES

#### POLICY

3.1.1 Increase policymakers' and decision-makers' understanding of the cause and effects, severity and economic impact of overweight and obesity

3.1.2 Identify and promote the development of policies that support collaborations among healthcare providers, educational systems, worksites and families that openly address the concerns and consequences of overweight and obesity and provide resources, programs and support to address weight in children, youth, adults and seniors

#### WORKSITES

3.1.3 Work with state agencies and community partners to assist employers in implementing programs to prevent and reduce overweight and obesity

#### PATIENT COUNSELING

3.1.4 Provide information and counseling to expectant mothers on healthy eating and physical activity during pregnancy by working with healthcare providers and community partners

3.1.5 Work with the healthcare industry to increase the proportion of healthcare providers who counsel patients and families on the prevention of and risks associated with overweight and obesity in a sensitive and culturally-appropriate manner

3.1.6 Work with the healthcare industry to increase the proportion of healthcare providers who address physical activity and nutrition during well-child exams

#### SOCIAL MARKETING MESSAGES

3.1.7 Develop a coordinated statewide media campaign targeting high-risk populations on the cause and effects, severity and economic impact of overweight and obesity

3.1.8 Increase the number of individuals who recognize the impact of a healthy diet and an active lifestyle on weight (refer to Long-Term Objectives 1 and 2 for additional information)

#### INNOVATIONS AND RESEARCH

3.1.9 Explore additional innovations to increase the number of people who recognize the value of a healthy weight

3.1.10 Support additional research to increase the number of people who recognize the value of a healthy weight

## INTERMEDIATE OBJECTIVE 3.2: INCREASE THE NUMBER OF PEOPLE WHO HAVE THEIR BMI MEASURED AND REPORTED ON A ROUTINE BASIS AND WHO UNDERSTAND THE MEANING OF THEIR RESULTS

### IMPLEMENTATION STRATEGIES

#### SURVEILLANCE AND MEASUREMENT

3.2.1 Review and learn from other state models to determine successful strategies for developing a system to collect students' heights and weights for statewide monitoring and program purposes.

3.2.2 Explore with state agencies, community partners and local school districts how to develop a suitable and appropriate system to collect students' heights and weights for statewide monitoring and program purposes

3.2.3 Recognize Body Mass Index (BMI) as a vital sign in all healthcare systems

3.2.4 Add BMI to the standard medical form used in all healthcare clinics so that it can easily be recorded and reviewed

3.2.5 Develop a system for all health plans, using Electronic Medical Records, to report aggregate health data (BMI and obesity-related co-morbidities)

#### TRAINING/EDUCATION

3.2.6 Provide healthcare reimbursement for counseling on lifestyle behaviors (nutrition and physical activity) that can reduce overweight and obesity

3.2.7 Implement professional training programs for healthcare providers on utilizing science-based guidelines in their personal practice in order to promote a consistent diagnosis and treatment algorithm

3.2.8 Work with the healthcare industry to increase the proportion of healthcare providers who, at a minimum, perform yearly assessments of weight and height on all patients

3.2.9 Identify, promote and implement a curriculum for healthcare professionals that focuses on counseling patients and families in a concise, effective, and non-threatening way about overweight and obesity

3.2.10 Increase the number of healthcare providers who routinely monitor, review and inform patients and families of weight and height

3.2.11 Collaborate with state agencies, local school districts and healthcare providers to educate parents and families about the weight and height of their children

#### SOCIAL MARKETING MESSAGES

3.2.12 Increase the understanding of Body Mass Index (BMI) by the general population

3.2.13 Develop a statewide campaign to educate healthcare providers on science-based guidelines in order to promote a consistent diagnosis algorithm for weight classification

#### INNOVATIONS AND RESEARCH

3.2.14 Explore additional innovations to increase the number of people who have their BMI measured and reported on a routine basis and who understand the meaning of their results

3.2.15 Support additional research to increase the number of people who have their BMI measured and reported on a routine basis and who understand the meaning of their results

## INTERMEDIATE OBJECTIVE 3.3: INCREASE INITIATION, EXCLUSIVITY AND DURATION OF BREASTFEEDING

### IMPLEMENTATION STRATEGIES

| | |
|---|---|
| **CULTURAL, REGIONAL AND INCOME SENSITIVITIES** | |
| 3.3.1 | Implement culturally specific and sensitive approaches to promoting breastfeeding |
| 3.3.2 | Increase the promotion of breastfeeding among low-income populations |
| **HEALTHCARE** | |
| 3.3.3 | Provide lactation support and services in hospital and outpatient clinics |
| 3.3.4 | Develop and implement a birth plan that promotes mom-baby connections |
| 3.3.5 | Provide supportive environments for breastfeeding in Neonatal Intensive Care Units |
| 3.3.6 | Limit the number of incentive-based relationships between hospitals and birthing centers and formula companies |
| 3.3.7 | Ensure all health plans cover breastfeeding equipment to encourage breastfeeding |
| **WORKSITES** | |
| 3.3.8 | Collaborate with employers to create work environments that are supportive of breastfeeding, such as providing private rooms for breast milk pumping and refrigerated storage |
| **TRAINING/EDUCATION** | |
| 3.3.9 | Offer written materials in healthcare clinics that convey the benefits of and barriers to breastfeeding |
| 3.3.10 | Improve and increase continuing education about breastfeeding for physicians, midwives, nurses, dietitians and childcare providers |
| 3.3.11 | Ensure consistent messaging in all environments on the importance of breastfeeding |
| 3.3.12 | Ensure employers are aware of and post the Minnesota Law that supports women who breastfeed |
| **INNOVATIONS AND RESEARCH** | |
| 3.3.13 | Explore additional innovations to increase initiation, exclusivity and duration of breastfeeding |
| 3.3.14 | Support additional research to increase initiation, exclusivity and duration of breastfeeding |

## INTERMEDIATE OBJECTIVE 3.4: PROMOTE HEALTHY WEIGHT LOSS AMONG PEOPLE WHO ARE OVERWEIGHT OR OBESE

### IMPLEMENTATION STRATEGIES

#### PROTOCOLS

3.4.1 Work with the healthcare industry to promote the use of science-based guidelines when addressing healthy weight loss

3.4.2 Explore establishing a treatment algorithm for overweight children and youth

#### REIMBURSEMENT/COVERAGE

3.4.3 Provide reimbursement for referrals to physical activity and nutrition professionals for weight loss guidance

3.4.4 Provide reimbursement to healthcare providers to support a team approach for obesity treatment, using the Chronic Care Model as a framework

3.4.5 Increase the number of third party payers that cover obesity as a disease which includes coverage for medical nutrition therapy, behavior modification, office visits, laboratory testing and pharmacotherapy

#### PARTNERSHIPS

3.4.6 Work with health plans, employers and unions to develop insurance-based incentive programs that encourage individuals to maintain a healthy weight

3.4.7 Work with key partners (healthcare providers, educational systems, community recreation centers, etc.) to create and implement science-based programs to promote weight loss, for example stressing the importance of social support in maintaining a healthy weight

3.4.8 Advocate for increased access to fruits and vegetables and safe places to be physically active within the community and the school environment (refer to Long-Term Objectives 1 and 2 for additional information)

3.4.9 Create a community-healthcare interface where providers can refer patients to community-based resources

#### TRAINING/EDUCATION

3.4.10 Develop professional trainings for healthcare providers on how to identify, set and counsel patients to achieve realistic weight loss goals and utilize a weight loss treatment algorithm that includes physical activity prescriptions and nutrition recommendations

3.4.11 Work with the healthcare industry to promote the use of motivational interviewing and other effective strategies among healthcare providers

#### SOCIAL MARKETING MESSAGES

3.4.12 Develop a statewide media campaign that increases the awareness of what constitutes healthy weight loss

3.4.13 Educate Minnesotans on the behaviors that lead to weight gain and encourage frequent self-measuring of one's weight

3.4.14 Develop statewide media messages that emphasize how environments and social norms impact healthy eating, physical activity and weight gain and that avoid blaming or creating prejudice towards those who are overweight or obese

| | |
|---|---|
| 3.4.15 | Develop statewide media messages that stress the importance of social support when trying to achieve realistic, sustainable weight loss |
| 3.4.16 | Create an educational campaign that informs individuals what weight loss resources are available to them within their community |

### INNOVATIONS AND RESEARCH

| | |
|---|---|
| 3.4.17 | Explore additional innovations to promote healthy weight loss among people who are overweight or obese |
| 3.4.18 | Support additional research to promote healthy weight loss among people who are overweight or obese |

## INTERMEDIATE OBJECTIVE 3.5: REDUCE DISPARITIES IN OVERWEIGHT AND OBESITY BY GENDER, AGE, RACE, SOCIOECONOMIC CLASS, EDUCATION, ABILITY AND GEOGRAPHICAL REGION

### IMPLEMENTATION STRATEGIES

| | |
|---|---|
| 3.5.1 | Conduct formative research to gather perceptions and barriers to healthy weight among disparate populations |
| 3.5.2 | Fund community-based, population-level physical activity and dietary behavior research, including ethnic and cultural influences on behavioral change, to maximize impact in communities and populations at high-risk for obesity and its complications |
| 3.5.3 | Continue funding for programs that specifically target eliminating disparities |
| 3.5.4 | Work with the healthcare industry to increase the proportion of healthcare providers who counsel patients and families on the prevention of and risks associated with overweight and obesity in a sensitive and culturally-appropriate manner |
| 3.5.5 | Work with community partners, health plans and employers to adapt weight loss programs that meet the needs of diverse populations |
| 3.5.6 | Offer culturally sensitive programs that focus on reducing obesity prevalence, improving dietary behaviors, increasing physical activity levels, and reducing sedentary behaviors in populations at high-risk for obesity (refer to Long-Term Objectives 1 and 2 for additional information) |
| 3.5.7 | In at-risk communities, provide parent education and skillful parenting models to promote healthful eating behaviors and physically active lifestyles to promote healthy weight (refer to Long-Term Objectives 1 and 2 for additional information) |
| 3.5.8 | Promote reinforcing health promotion messages through diverse community and cultural media outlets and coordinate these messages with health promotion community events and programs |
| 3.5.9 | Ensure healthcare access for all populations |

### INNOVATIONS AND RESEARCH

| | |
|---|---|
| 3.5.10 | Explore additional innovations to decrease overweight and obesity-related disparities |
| 3.5.11 | Support additional research to decrease overweight and obesity-related disparities |

***Refer to the Evaluation Section and Appendix F for Long-Term Objective 3 evaluation methods and measurement indicators, baselines and targets.***

## POTENTIAL LEADERS AND KEY ORGANIZATIONS *to Increase Healthy Weight in Minnesota:*

*(See Long-Term Objectives 1 & 2 for potential healthy eating and physical activity leaders and key organizations)*

Academic institutions

American Cancer Society

American Heart Association, Greater Midwest Affiliate

Beltrami B-Well Coalition

BLEND Coalition

Businesses and workplaces

Child and Teen Checkups

Childcare centers and providers

City, county, township, and tribal governments

Community coalitions

Community and non-profit organizations

Headstart and Early Headstart

Health plans

Hospitals, clinics and birthing centers

Indian Health Service

Individuals and families

Institute for Clinical Systems Improvement

Local public health agencies

Mayo Clinic, Action on Obesity

Media industry

Minnesota Council of Health Plans

Minnesota Department of Education

Minnesota Department of Health

Minnesota Department of Human Services

Minnesota Medical Association

Minnesota state, county and local government leaders

Northeast Minnesota Obesity Prevention Project

Obesity Prevention Center, University of Minnesota

Parent education programs

Parks and recreation

Policymakers

Prevention Minnesota, Blue Cross Blue Shield of Minnesota

Recreation centers

School districts

Special Supplemental Nutrition Program for Women,

Infants and Children

Steps to a HealthierMN

Steps to a Healthier Minneapolis

Steps to a Healthier Rochester

Steps to a Healthier St. Paul

Steps to a Healthier Willmar

Tribes and reservations

YMCAs

# SUMMARY: *We Must Act Now*

The obesity epidemic cuts across gender, all ages, and all population groups. National data demonstrates that certain groups, including Hispanics, non-Hispanic Blacks, Native Americans and individuals in low socioeconomic groups, are particularly affected by obesity. Disparities appear to be growing over time. Although one of the national health objectives for the year 2010 is to reduce the prevalence of obesity, current data indicate that the situation is worsening rather than improving.

Overweight and obesity are generally caused by lack of physical activity, unhealthy eating patterns, or a combination of the two, with genetics and lifestyle both playing important roles in determining weight. The importance of these two lifestyle factors, physical activity and healthy eating, led to the vision of the Plan – that all people in Minnesota eat healthfully, are physically active and maintain a healthy weight because they live in an environment designed to support healthy lifestyles across the lifespan. Furthermore, while we recognize that these lifestyle behaviors directly impact obesity rates, they also impact obesity-related chronic diseases and health disparities throughout the state. These realizations helped to frame the goals of the Plan – to decrease obesity and obesity-related chronic diseases.

The expectation of the Plan is to create a document that is useful to all sectors throughout Minnesota. While the Plan is not meant to be an exhaustive list of objectives, it lays the foundation for collaboration and movement in the state to address a growing area of concern – the rise in overweight and obesity.

Many of the strategies outlined in this Plan will require significant financial support and dedicated action if success is to be achieved. Organizations and stakeholders throughout the state will need to commit themselves to promoting and implementing the recommendations outlined in this Plan.

In May 2008 the Minnesota State Legislature passed new health care reform legislation supporting community-based health promotion and chronic disease prevention efforts statewide in order to reduce health care costs. The new initiative, called the Statewide Health Improvement Program (SHIP), will provide competitive grants to community health boards and tribal governments to convene, coordinate, and implement eveidence-based strategies targeted at reducing the percentage of Minnesotans who are obese or overweight and reducing the use of tobacco. Grantees activities shall: (1) be based on scientific evidence; (2) be based on community input; (3) address behavior change at the individual, community, and systems levels; (4) occur in community, school, worksite, and healthcare settings; and (5) be focused on policy, systems, and environmental changes that support healthy behaviors.

The goals outlined in SHIP closely align with those of the Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases and rely heavily on strong partnerships and collaboration. The commitment and funding from the Minnesota State Legislature as well as the support of many partners throughout the state significantly enhances the ability to achieve these goals.

In addition to commitment from a variety of partners, organizations and stakeholders will need to build increased social awareness as well as public and political support over time for the massive cultural changes needed to reverse the increasing trend of obesity.

Rising healthcare costs and the health burden associated with the rise in overweight and obesity are unsustainable. We are facing losses in productivity, absenteeism, reduced quality of life and premature death. This Plan offers the first step toward increasing awareness, changing behaviors and creating the cultural shifts that are needed to promote lifelong behaviors that support active living and healthy eating. We are the agents of change. Doing nothing is not an option; we must act now.

# IIEVALUATION AND SURVEILLANCE:
## *How We Will Measure Our Progress*

### OVERVIEW
Evaluation of the *Minnesota Plan to Reduce Obesity and Obesity-Related Chronic Diseases* will be facilitated and coordinated by the Minnesota Department of Health (MDH) with input, guidance, and information from other stakeholders and partners, from different sectors of the state, engaged in implementing the Plan.

MDH will begin monitoring state progress by tracking process measures related to the marketing and dissemination of the Plan and its goals and objectives statewide, and monitoring expansion of state partnerships, infrastructure and capacity to implement the Plan. Minnesota's long-term progress in improving healthy eating, increasing physical activity and improving healthy weight will be measured over time with both existing data sets and new data to be collected in the future. Existing and future datasets will be used to monitor goals and objectives defined in the Plan. The additional datasets and surveillance systems will be added as new resources and opportunities emerge.

### COMPONENTS OF THE *Evaluation Plan*
In order to evaluate the progress of the Plan, separate activities and initiatives will need to be evaluated.

To evaluate the different Plan-related activities and initiatives, both process and outcome evaluation will be performed.

- ***Process evaluation*** – documents how the activity or initiative was implemented. It focuses on questions such as: "Was the initiative implemented as planned?" "What activities were conducted?"
- ***Outcome evaluation*** – documents if the initiative achieved the outcomes that were intended. It focuses on questions such as "What changed because of the initiative?"

### INITIAL EVALUATION *Building and Focus*
MDH staff will work with Plan partners to put an evaluation system in place. Since much of the work of the Plan will be implemented by stakeholders other than MDH, a large part of the evaluation system will depend on working with partners to develop data sharing agreements in order to share both process and outcome data on initiatives which the partners are implementing. MDH will also work to expand its epidemiological and evaluation staff resources over time.

In both process and outcome evaluation, the information provided will be a mixture of qualitative (e.g. stories, written documents) and quantitative (e.g. the proportion of people who changed their behavior).

Initial evaluation efforts will focus on:
- Putting an evaluation system in place
- Marketing and dissemination of the Plan and its goals and objectives

- Expanding state partnerships, infrastructure and capacity to implement the Plan goals and objectives as resources allow

Constraints on evaluation activities such as availability of process and outcome data sources and feasibility of creating or accessing these data sources will be addressed as resources and opportunities emerge.

**Evaluation of the Short-Term Objectives:** This will include collecting process (and if feasible, outcome) data to document the progress of each of the objectives. Examples of process indicators for the short-term objectives include:

- Documentation of meetings between new partners to discuss their involvement in the Plan
- List of partners involved in implementing an intervention related to the Plan and the partners' role in the intervention
- Written reports of intervention strategies implemented

The process data will be collected each year, from MDH staff who implemented strategies/interventions and from Plan partners sharing data about the strategies they implemented. Outcome data will be collected each year, if available, but it is understood that outcome data may take time to achieve, and may not be seen in the first 1-2 years.

**Evaluation of the Intermediate Objectives and Five-Year Benchmark Measures**: By the end of the fifth year, progress towards achieving the Plan's long-term goals will be measured by examining the indicators of the intermediate objectives *(refer to Appendix F for list of measurable indicators for each Intermediate Objective)* as well as the 5-year benchmark measures. Each intermediate objective will be measured as resources and data systems are available.

**Evaluation of the Long-Term Objectives:** This is beyond the current 5-year plan, but the data systems are in-place to measure the progress of the long-term objectives.

## SURVEILLANCE *Building*

The Plan relies on existing and new data sets in order to monitor the progress of the Plan. Appendix F lists the measurable indicators for each Intermediate Objective. Appendix H lists the data measurement gaps. The indicators and objectives with no existing data measures are included in the plan to highlight the need to find ways to collect data on several important aspects of healthy eating, physical activity, and healthy weight for which data do not currently exist.

With additional resources, the Plan partners could establish new surveillance systems or look at expanding existing data systems to establish baselines for objectives and indicators that have no direct measure. Each of the different areas – healthy eating, physical activity and healthy weight have different data needs. Each group will need to determine how to address their gaps.

Selected examples of ways to address data gaps include:

- Collaborate with state agencies, community partners, local school districts, health plans and others to determine how to develop a system to address the gaps using new and existing datasets.
- Partner with existing entities addressing health disparities and work with them to determine appropriate ways to address the data gaps using new

and existing datasets.
- Advocate for additional resources to enhance existing monitoring and data surveillance systems to:
    - Add questions which will cover data gaps
    - Expand analyses of the existing data sets
    - Increase sample size to get reliable estimates for populations and geographic regions that have disparities in the areas of healthy eating, physical activity and healthy weight.
- Develop innovative approaches to address data gaps
- Develop consensus on standard data elements which need to be collected

Constraints on surveillance activities such as the feasibility of enhancing existing data sources or creating new data sources, and adequate data collection partners will be addressed as resources and opportunities emerge.

**Common Community Measures for Obesity**

The CDC, Division of Nutrition, Physical Activity, and Obesity, has initiated a Common Community Measures for Obesity Project. The project is identifying a set of core data elements that can be used by communities for evaluation. For each measure, a data collection protocol and potential data sources will be identified. When the Common Community Measures for Obesity Project is finished, and the data collection protocol and potential data sources are made available, the information will be incorporated into the Plan's evaluation process.

## MID-COURSE *Review*

MDH will facilitate a mid-course review three years into the Plan's implementation process to review the progress of the Plan and to make adjustments as needed. The review will use process evaluations and, where possible, outcome evaluations. The data will be collected from Plan Partners. The mid-course review will evaluate the expansion and development of programs (relationships, data and evaluation and surveillance systems) and progress towards implementing the Plan's vision, goals and objectives.

## FIVE-YEAR *Benchmarks*

At the end of the five-year plan, the five-year benchmarks will be examined to determine the progress made towards achieving long-term objectives. The five-year benchmarks, in most instances, are a half-way point to the ten-year long-term objectives. Where possible, the benchmarks also take into account the need to build infrastructure before changes in the benchmark indicators can be seen.

## OBJECTIVES, *Indicators and Data Measurement Sources*

The long-term objectives, intermediate objectives, and five-year benchmarks, along with the indicators and data measurement sources which will be used to measure each, can be found in *Appendix F*.

## ANALYSIS, *Interpretation, and Report Dissemination*

Techniques used for data analysis will vary based on the data collection method and the data source. MDH will work with state partners to determine appropriate statistical methods and reporting methods to be used depending on the audience and types of initiatives being evaluated and data being produced.

Evaluation data will be judged against program standards to assure that conclusions are drawn in the appropriate context, are sound, reasonable and objective. Partners and key stakeholders will be involved in the interpretation of the evaluation data as they hold valuable insight and explanations regarding the evaluation findings.

Evaluation results will be reported on a schedule appropriate to the audiences, including the needs of state partners, community audiences and policymakers. Results will be shared broadly via the web and other methods to be

determined. MDH will conduct a mid-course review of the Plan in collaboration with state partners and stakeholders.

## OVERVIEW OF *Existing Datasets*

*Refer to Appendix G.*

## CURRENT GAPS *in Surveillance and Data Collection Systems*

*Refer to Appendix H.*

# DISPARITIES

Long-term and five-year benchmark baseline and targets for populations and regions that have disparities in healthy eating, physical activity, and healthy weight will be determined by working with the Plan partners and experts in the populations with disparities. Collecting data on the baseline and progress towards the targets may require enhancing existing datasets or creating new data sources.

Intermediate objectives listed in the Plan dedicated to decreasing health disparities include all possible disparities not just those that can be currently measured by existing surveillance systems. Thus, the Plan seeks to reduce disparities in health by gender, age, race, socioeconomic class, education, ability and geographical region.

To measure change in disparities at the intermediate objective level, we will rely on outcome indicators from interventions conducted by Plan partners. The data collection methods and measures will be dependent on the intervention, as well as the cooperation of any partners who are implementing the intervention to collect and share the data. Thus, data collection methods and measures have not yet been determined.

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# APPENDIX B: *Roles of Minnesota Partners in Reducing Obesity*

## THE ROLES *of Partners*

The vital role each of these sectors play in helping to reduce obesity in Minnesota is briefly described below.

| Partner(s) | Role(s) |
|---|---|
| Government | Federal, state and local governments each have important leadership roles to play in the prevention of overweight and obesity, increasing access to healthcare and reducing health disparities. Through the administration of targeted funding, development of science-based public health objectives, policies, standards and regulations and implementation of programs, the governmental sector can help to assure that individuals achieve and maintain a healthy weight. Government also has an important role to play in measuring and reviewing obesity population trends over time in order to evaluate programs and monitor state progress in achieving public health goals and objectives. Coordinated, collaborative governmental efforts will assist greatly to prevent the rise in obesity. |
| Educational Systems | Because over 95 percent of young people are enrolled in schools and spend much of their day in schools or childcare settings, the obesity epidemic is unlikely to be solved without strong childcare and school-based policies and programs. The promotion of physical activity and healthy eating in schools has long been a part of education, and research has shown that well-designed, well-implemented programs can effectively promote these behaviors. |
| Media | Effective media partnerships can raise public awareness and ignite discussions around the health and economic concerns related to obesity. Media can educate and is in a position to help raise awareness of the obesity epidemic and its consequences and costs. The generation of multiple, consistent media messages portraying healthful eating habits and promoting daily physical activity can assist with altering social norms. In addition, media outlets can help garner support for policy changes around nutrition and physical activity and can help educate individuals, organizations and interested stakeholders on the importance of creating social and physical environments that support a healthy diet and daily physical activity. |
| Industry | Industry can play an important role in promoting health by selling products that support physical activity (such as footwear and equipment) and healthy food products and by limiting advertising and promotion of high-calorie, energy-dense products. The food and beverage industry can also promote consumer health by selling healthy food products in appropriate portion sizes and providing consumers with clear and consistent messages to help them make healthy nutritional choices. Consumption of food away from home has also risen in the last three decades. Cafeterias and restaurants can help support healthy nutritional choices by offering age-appropriate portion sizes and healthy meal options. Also, by making nutrition information available at point of purchase on each meal, consumers can make informed decisions about which foods to consume. |

| | |
|---|---|
| **Communities** | Communities reflect the priorities of their residents. Communities and their members can come together to raise issues of concern and take action. Communities can also create physical and social environments that support people to be healthy. Communities working with local governments and city and county planners can affect the health and well-being of individuals in many ways, ranging from how streets and sidewalks are designed to the perceived safety of the neighborhood to whether a community has access to affordable fruits, vegetables and other nutritious foods. Moving communities toward better health will require changes in both the social and built environment as well as collaboration among many partners to address the existence of health disparities. |
| **Employers (Worksites)** | Employers have a role to play in helping to keep individuals healthy. With increasing evidence demonstrating the benefits of health promotion programs in the workplace, many employers are turning to worksite wellness programs and policies in an effort to lower healthcare costs, reduce absenteeism, increase productivity, reduce injuries and improve employee morale and retention. For example, employers can work with their insurer to design health insurance benefits that create incentives for employees to become more physically active, quit smoking and eat more healthfully. Employers can also provide chronic disease risk factor screening at the worksite and follow-up health education and coaching resources for employees identified as high risk for chronic disease. Worksite wellness programs and policies can also be designed to reach the families of employees. Because families are often also covered under the employee's insurance, it is in the best interest of all parties to invest in the family unit as a whole. |
| **Healthcare** | The healthcare system is a special setting where people discuss their health with medical providers. In this setting, healthcare professionals have the opportunity to educate and influence the dietary and physical activity patterns of their patients and families. They can also serve as advocates for change in their communities and enhance government, media and industry efforts. Creative, multi-disciplinary, and culturally sensitive approaches to the prevention of obesity are essential. It is critical to encourage Minnesota healthcare systems to make the prevention and treatment of obesity a top priority in order to improve the health of Minnesota's population and reduce healthcare costs.<br><br>Healthcare providers can promote the development and maintenance of healthy lifestyle behaviors by encouraging individuals to maintain healthy eating habits and participate in physical activity on a regular basis. In addition, working to create an environment in which weight can be addressed in a non-threatening way; helping to educate parents about what defines "overweight;" and educating expectant parents, before weight even becomes a problem, are helpful methods for raising awareness and preventing obesity. |
| **Parents, Families, and Individuals** | Parents, families and individuals are essential in efforts to prevent and manage overweight and obesity. Structuring a home environment that is supportive of healthy eating and physical activity helps to develop and maintain lifelong healthy behaviors. Individuals can also serve as advocates for environmental and policy changes that support active and healthy lifestyles outside the home and within their own community. |

# APPENDIX C: *Environmental Scan of Obesity Prevention Efforts in Minnesota*

## EXECUTIVE *Summary*

As part of the *Healthy Kids, Healthy Minnesota* statewide initiative to prevent and reduce childhood obesity, a statewide scan was conducted of current policies and activities that address childhood obesity prevention in Minnesota. The purpose of this scan was to create a preliminary, non-comprehensive inventory of existing programs, legislation/policies, and environmental supports for obesity prevention, improved nutrition, and physical activity. Several sectors were examined at the state, regional, and local levels. These sectors included: government, community, worksites, educational systems, industry, media, and healthcare.

Information gathered from the scan demonstrates an interest at all levels, across a variety of settings, towards improving the health of Minnesota residents. Some of the primary gaps and challenges found through this scan include: insufficient promotion of healthy eating and active living to Minnesota youth, a need to strengthen health and physical education standards statewide, a significant lack of resources for community-based local public health agencies to effectively respond to the obesity epidemic at the community level, the need for resources and strategies that target high-risk groups, and a need for better obesity treatment interventions in Minnesota's healthcare system.

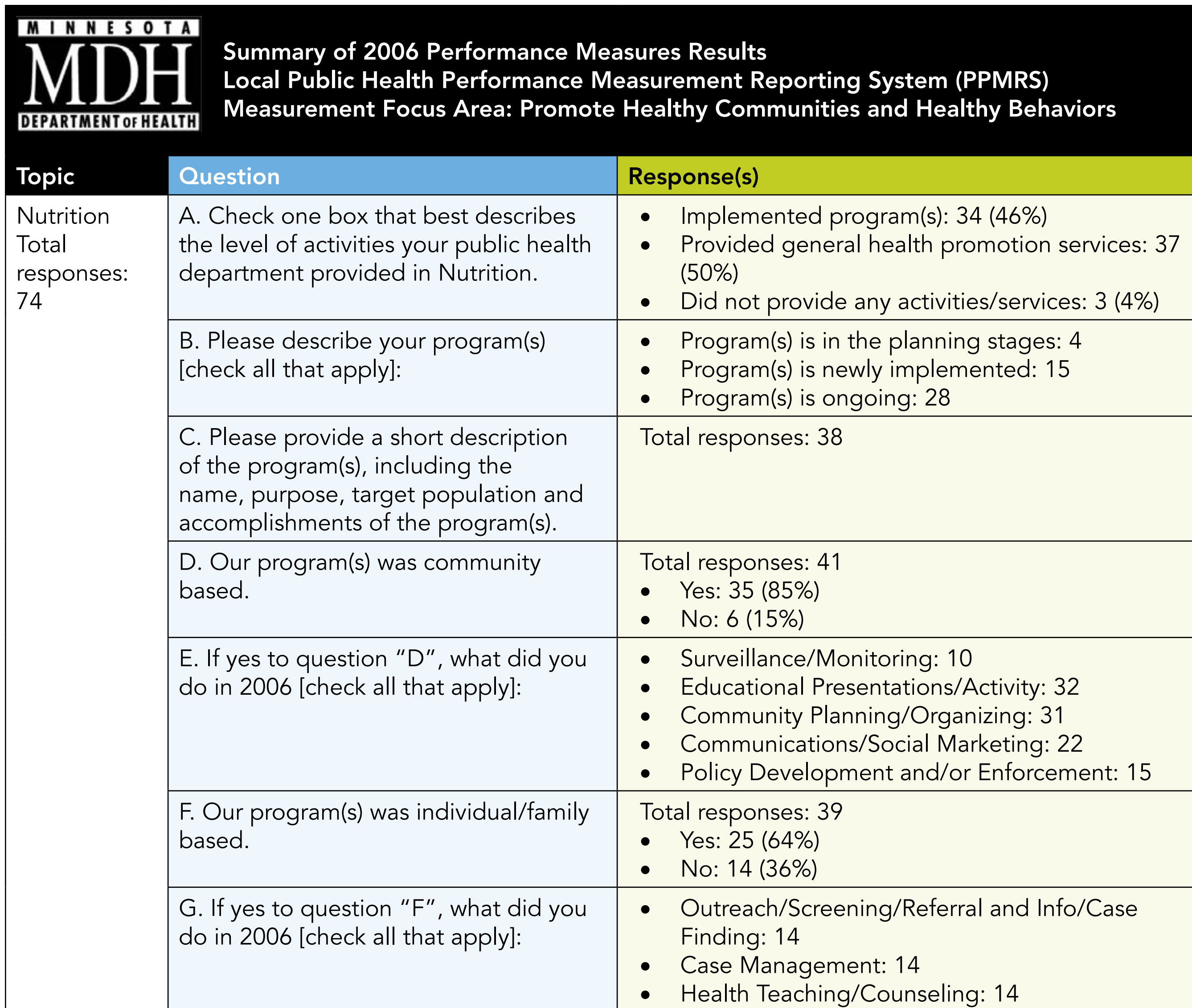
However, Minnesota has a number of opportunities and unique organizations which can help facilitate the prevention and reduction of obesity such as: enhancing research partnerships with the Obesity Prevention Center at the University of Minnesota; improvement of the state's built environment and food environment in coordination with the Blue Cross Blue Shield of Minnesota Center for Prevention's statewide active living and healthy eating initiatives; increased policymaker interest in the creation of a public health surveillance system to measure and track childhood obesity and the development of state policies addressing health and physical education standards; and additional opportunities for government to work with and support childcare providers and schools to expand implementation of wellness policies and programs that improve nutrition and increase physical activity among infants, children and youth.

To successfully prevent and reduce obesity, there needs to be further development in areas of collaboration, policy implementation, financial support, research and evaluation. In order to create programs and environments which promote healthy living, it is important to emphasize the need for strong partnerships between public and private sectors. Through collective efforts, changes can be made to ensure all Minnesota residents, young and old, lead healthy lifestyles.

## SUMMARY OF *Environmental Scan Results*

| Summary of Obesity-Related Initiatives (45 programs reported) | |
|---|---|
| **Question** | **Response(s)** |
| What focus area(s) does the program target? (mark all that apply) [total responses: 45] | • Fruit and vegetable consumption: 36<br>• Sweetened beverage consumption: 22<br>• Portion size: 22<br>• Breastfeeding: 22<br>• Physical activity: 39<br>• Screentime: 14<br>• Other: 15 |
| Target audience age (mark all that apply) [total responses: 41] | • All ages: 14<br>• 0-2 years: 7<br>• 3-5 years: 10<br>• 6-12 years: 14<br>• 13-17 years: 11<br>• 18-24 years: 10<br>• 25-64 years: 11<br>• 65+ years: 11 |
| Program coverage [total responses: 43] | • National: 10<br>• Statewide: 10<br>• County: 2<br>• Region: 3<br>• City: 9<br>• Neighborhood: 1<br>• Other: 8 |

| Summary of Worksite Wellness Initiatives (46 programs reported) |
|---|
| The Healthy Minnesota Workplace Initiative captured 46 successful employer worksite wellness programs throughout the state. Each program focuses on helping employees to be healthier, more energetic and more productive. A summary of the programs can be found by visiting: www.health.state.mn.us/hmwi. |



MINNESOTA MDH DEPARTMENT OF HEALTH

**Summary of 2006 Performance Measures Results**
**Local Public Health Performance Measurement Reporting System (PPMRS)**
**Measurement Focus Area: Promote Healthy Communities and Healthy Behaviors**

| Topic | Question | Response(s) |
|---|---|---|
| Nutrition Total responses: 74 | A. Check one box that best describes the level of activities your public health department provided in Nutrition. | • Implemented program(s): 34 (46%)<br>• Provided general health promotion services: 37 (50%)<br>• Did not provide any activities/services: 3 (4%) |
| | B. Please describe your program(s) [check all that apply]: | • Program(s) is in the planning stages: 4<br>• Program(s) is newly implemented: 15<br>• Program(s) is ongoing: 28 |
| | C. Please provide a short description of the program(s), including the name, purpose, target population and accomplishments of the program(s). | Total responses: 38 |
| | D. Our program(s) was community based. | Total responses: 41<br>• Yes: 35 (85%)<br>• No: 6 (15%) |
| | E. If yes to question "D", what did you do in 2006 [check all that apply]: | • Surveillance/Monitoring: 10<br>• Educational Presentations/Activity: 32<br>• Community Planning/Organizing: 31<br>• Communications/Social Marketing: 22<br>• Policy Development and/or Enforcement: 15 |
| | F. Our program(s) was individual/family based. | Total responses: 39<br>• Yes: 25 (64%)<br>• No: 14 (36%) |
| | G. If yes to question "F", what did you do in 2006 [check all that apply]: | • Outreach/Screening/Referral and Info/Case Finding: 14<br>• Case Management: 14<br>• Health Teaching/Counseling: 14 |

| Topic | Question | Response(s) |
|---|---|---|
| Physical Activity Total Responses: 74 | A. Check one box that best describes the level of activities your public health department provided in Physical Activity. | • Implemented program(s): 41 (55%)<br>• Provided general health promotion services: 29 (39%)<br>• Did not provide any activities/services: 4 (5%) |
| | B. Please describe your program(s) [check all that apply]: | • Program(s) is in the planning stages: 9<br>• Program(s) is newly implemented: 14<br>• Program(s) is ongoing: 27 |
| | C. Please provide a short description of the program(s), including the name, purpose, target population and accomplishments of the program(s). | Total responses: 44 |
| | D. Our program(s) was community based. | Total responses: 43<br>• Yes: 41 (95%)<br>• No: 2 (5%) |
| | E. If yes to question "D", what did you do in 2006 [check all that apply]: | • Surveillance/Monitoring: 8<br>• Educational Presentations/Activity: 34<br>• Community Planning/Organizing: 34<br>• Communications/Social Marketing: 23<br>• Policy Development and/or Enforcement: 7 |
| | F. Our program(s) was individual/family based. | Total responses: 41<br>• Yes: 22 (54%)<br>• No: 19 (46%) |
| | G. If yes to question "F", what did you do in 2006 [check all that apply]: | • Outreach/Screening/Referral and Info/Case Finding: 11<br>• Case Management: 11<br>• Health Teaching/Counseling: 11 |

# APPENDIX D: *Unique Opportunities to Reduce Obesity in Minnesota*

Not only are multiple partners needed to reduce obesity and obesity-related chronic diseases, but comprehensive programs are needed as well. Fortunately, the existence of strong partnerships, public-private relationships, a solid public health infrastructure and educational systems within the state that are forging ahead with new research, will help our state successfully work toward change.

With an abundance of outdoor recreational opportunities and locally grown produce the ability to promote active lifestyles and healthy eating are available. Another positive is that many of the nation's largest food manufacturers are headquartered in Minnesota. Our state universities are paving the way by conducting cutting-edge research around childhood obesity and what can be done to stop the steady rise in weight among our children, youth and adult populations. Health plans and systems throughout the state are also committed to halting the obesity epidemic and have designed programs, often tied to insurance options, for individuals to take advantage of. The Institute for Clinical Systems Improvement, the Minnesota Council of Health Plans and the Minnesota Medical Association have been working to develop obesity treatment and chronic disease prevention care guidelines for Minnesota and the state's healthcare systems have begun to outline specific objectives to implement patient electronic medical record tracking systems statewide.

Partners throughout the state are ready to take action; the time is ripe. As a state, moving forward, we must work together to identify solutions for increasing physical activity and healthy eating among all residents. Some examples of unique opportunities within the state are highlighted below. Each example also makes the case for how efforts that span sectors often yield the greatest impact serving as a reminder that a coordinated approach is the best approach.

| Examples of Unique Opportunities in Minnesota | Description | Partners Involved |
|---|---|---|
| Bike/Walk Twin Cities | Bike/Walk Twin Cities (formerly known as the Non-Motorized Transportation Pilot Program or NTP) was established in 2005 as part of the six-year federal transportation bill known as SAFETEA-LU. The law provides $21.5 million to four pilot communities nationwide (Columbia, MO; Marin County, CA; Minneapolis and adjoining communities, MN; Sheboygan County, WI) to explore how investments in planning, infrastructure, and public education can increase rates of bicycling and walking and reduce driving by 2010. The four communities will also study the impact of these investments on traffic congestion, energy use, health, and the environment. | Government, media, industry, communities, worksites |

| Examples of Unique Opportunities in Minnesota | Description | Partners Involved |
|---|---|---|
| Community coalitions | There are a number of successful community coalitions operating across Minnesota with the goal of obesity prevention and treatment. The coalitions bring together a diverse group of local stakeholders to assess the needs of the community, identify priorities of the community, and implement strategies for obesity prevention and treatment. Coalition members work together to promote healthy eating, physical activity and healthy weight. Examples of successful coalitions include the North East Minnesota Obesity Prevention Project (NEMOPP), Beltrami Wellness Education for Long Life (B-WELL), and the Better Living: Exercise and Nutrition Daily (BLEND) coalition in central Minnesota. | Government, communities, worksites, healthcare |
| Healthy Minnesota Workplace Initiative | A statewide initiative to build employer support and capacity to implement successful worksite health promotion programs that increase healthy behavior, improve the overall health status of Minnesota workers and their families, and reduce healthcare costs across the state. | Government, communities, industry, worksites, media |
| Institute for Agriculture and Trade Policy | The Minnesota-based Institute for Agriculture and Trade Policy promotes resilient family farms, rural communities and ecosystems around the world through research and education, science and technology, and advocacy. | Industry, community, education |
| Institute for Clinical Systems Improvement (ICSI) | An independent, non-profit organization, ICSI facilitates collaboration on healthcare quality improvement by medical groups, hospitals and health plans that provide healthcare services to people who live and work in the state of Minnesota and in adjacent areas of surrounding states. Founded in 1993 by HealthPartners Medical Group, Mayo Clinic and Park Nicollet Health Services, today ICSI has 62 members and is funded by all six Minnesota nonprofit health plans. The combined medical groups and hospital systems represent more than 7,600 physicians. The ICSI program has four components: core commitment cycle, scientific groundwork for healthcare, support for improvement, and community outreach. | Healthcare, community |
| Local Public Health Association (LPHA) | The Local Public Health Association of Minnesota works statewide to improve and protect the health of the population of Minnesota by providing leadership and advocacy on behalf of public health issues. | Government, community |
| Mayo Clinic's Annual Action on Obesity | Representatives from Mayo Clinic and the Rochester, Minnesota community are collaborating with multidisciplinary state and national partners to prevent and combat obesity. Mayo Clinic has sponsored an annual Statewide Action on Obesity Summit since 2004 to bring partners together to identify solutions for the state. | Healthcare, government, education, industry, worksites |

| Examples of Unique Opportunities in Minnesota | Description | Partners Involved |
|---|---|---|
| Minnesota Cancer Plan | Cancer Plan Minnesota 2005-2015 is the state's first comprehensive cancer control plan created to reduce the cancer burden among all Minnesotans. A framework for action, this plan contains measureable objectives and will help guide the Minnesota Cancer Alliance in its fight against cancer in Minnesota. | Members of Cancer Alliance, representing a variety of sectors |
| Minnesota Council of Health Plans | A nonprofit trade association for Minnesota's health plans dedicated to strengthening Minnesota's position as one of the nation's healthiest states by promoting high standards of quality care; broad access to healthcare coverage and services; affordable healthcare; and a climate that facilitates improvement in quality, access, and affordability. | Healthcare, community |
| Minnesota Diabetes Plan | The Minnesota Diabetes Plan 2010 is a state call to action, urging Minnesota stakeholders to take a role in reducing the burden of diabetes. It consists of a broad set of goals with specific recommendations for action to address the diabetes epidemic in Minnesota. | Over 350 members of the Minnesota Diabetes community |
| Minnesota Heart Disease and Stroke Prevention Plan | The Minnesota Heart Disease and Stroke Prevention Plan 2004-2010 provides a blueprint and call to action for individuals, communities, and organizations to collaborate to reduce the incidence, complications and mortality rates of heart disease and stroke. | Over 150 people from a variety of sectors throughout Minnesota |
| Minnesota Food & Nutrition Network | This is a bioscience network focusing on educational outreach and health promotion. Their mission is to promote consistent, research-based nutrition messages through a coordinated network to help Minnesotans with limited resources enjoy healthful lifestyles. The membership includes more than 20 member organizations that represent state and local government and non-profit organizations. | Government, communities, education |
| Minnesota Fruit and Vegetable Coalition | This is a unique partnership consisting of public, private, and non-profit groups. The sole mission is to raise public awareness about the importance of increasing the consumption of fruits and vegetables for better health. | Government, community, worksites, industry, media |
| Minnesota Grown | A private, non-profit organization dedicated to the promotion of Minnesota Grown agricultural products that works closely with the Minnesota Department of Agriculture (MDA) to create awareness of the quality, diversity, and availability of Minnesota Grown specialty crops and livestock. | Government, community, worksites, industry |

| Examples of Unique Opportunities in Minnesota | Description | Partners Involved |
|---|---|---|
| Minnesota's Statewide Childhood Obesity Prevention Steering Committee | A committee comprised of approximately 15 organizations dedicated to preventing and reducing childhood obesity in Minnesota. This committee developed a five year Childhood Obesity Prevention Action Plan for Minnesota in 2007-2008. | Government, community, education, healthcare, industry |
| Prevention Minnesota, Blue Cross Blue Shield of Minnesota | Prevention Minnesota is an initiative of Blue Cross and Blue Shield of Minnesota formed from the 1998 Minnesota tobacco industry lawsuit settlement. It is focusing on the leading causes of death - heart disease and cancer - by reducing tobacco use, increasing physical activity and promoting healthy eating. The initiative is investing significant financial resources over an extended period of time: approximately $241 million to be utilized over the next several decades. Prevention Minnesota is supporting a number of efforts including community engagement, planning and programming; built environment improvements; mass media marketing; and measurement and evaluation. Two very unique opportunities supported by Prevention Minnesota are the statewide mass media campaigns for physical activity (do Campaign) and healthy eating (under development) and two statewide tri-annual surveys (the Minnesota Physical Activity Survey and the Minnesota Healthy Eating Survey). | Healthcare, media, employers, government, community |
| Step Up to Health/Be Active Minnesota | This multi-sector partnership was formed by the Step Up To Health initiative hosted by the Minnesota Recreation and Park Association and a merger with the non-profit organization Be Active Minnesota. The partnership is developing a statewide physical activity branded message that can be utilized all across Minnesota. The message will be disseminated through programs, publications, and events implemented by all sectors in the state. | All sectors |
| Steps to a HealthierMN | The Steps to a HealthierUS Initiative is an overall effort of the U.S. Department of Health and Human Services (HHS), designed to identify and promote programs that encourage small behavior changes to reduce the burden of chronic disease. These efforts focus on reducing the burden of obesity, diabetes and asthma, and on the related risk factors of physical inactivity, poor nutrition and tobacco use. Steps to a HealthierMN is being implemented in four Minnesota cities: Minneapolis, St. Paul, Rochester and Willmar. | Government, education, communities, worksites, media |

| Examples of Unique Opportunities in Minnesota | Description | Partners Involved |
|---|---|---|
| University of Minnesota, Minnesota Obesity Center | The Minnesota Obesity Center is an Obesity Nutrition Research Center funded by the National Institute of Diabetes, and Digestive and Kidney Diseases of the National Institutes of Health. | Education, community, media, government |
| University of Minnesota, Obesity Prevention Center | Established in 2004 as part of the Healthy Foods, Healthy Lives Presidential Initiative, the Obesity Prevention Center provides leadership and coordination at the local, national, and international levels for multidisciplinary research, policy, and education that focuses on understanding and responding to the pernicious epidemic of excessive weight gain and obesity. | |

# APPENDIX E: *Key Informant Interviews on Obesity Treatment: Overview and Survey Questions*

## OVERVIEW OF *the Key Informant Interviews on Obesity Treatment*

In order to develop recommendations and strategies for weight loss treatment and weight maintenance, MDH staff conducted a key informant survey of Minnesota physicians and clinical researchers who are experts in the field of obesity treatment. Those interviewed included medical professionals from the Institute for Clinical Systems Improvement (ICSI) Guidelines Review Group for the ICSI guidelines *Prevention and Management of Obesity (Mature Adolescents and Adults*), Minnesota Medical Association, the University of Minnesota Obesity Prevention Center, HealthPartners, Willmar Bariatric Medical Center, Indian Health Service, Children's Hospital Fairview, Minnesota Academy of Family Physicians, Hennepin County Medical Center, and Blue Cross Blue Shield of Minnesota.

The survey asked key informant physicians and clinical researchers to describe: (1) current trends and promising new treatments or weight management methods, (2) key barriers to treatment, including access to care and medical care reimbursement issues, (3) how the current medical system measures the quality of obesity treatment and what national research shows about quality, (4) what common barriers they encounter when trying to help patients lose weight and how they motivate people to lose weight, (5) the use of medical treatment algorithms and barriers to implementing medical guidelines, and what screening measures they use, (6) what actions are needed to improve Minnesota's ability to measure obesity rates and trends and (7) what can be done to encourage the population as a whole to maintain a healthy weight. From the survey summary, MDH staff developed specific recommendations and strategies for clinical weight loss and weight maintenance for the Plan.

**Key Informant Interview Questions to Capture Issues/ Needs Related to Obesity Treatment in Minnesota**

1. What do you feel are the current trends for obesity treatment and weight maintenance in Minnesota and nationally?
2. From your perspective, are there any promising new treatments or weight management methods currently being developed in Minnesota and nationally?
3. In your opinion, what are the most effective treatment strategies for obesity and weight maintenance? Are there barriers to putting these strategies into practice?
4. What do you feel are the greatest problems with successful obesity treatment and maintenance? What are some of the common barriers you have encountered while aiding individuals to either lose and/or maintain weight loss?
5. In your view, how does access to care impact obesity treatment in Minnesota?
6. From your perspective, what are the key medical care reimbursement issues for obesity treatment in Minnesota?
7. How does the current medical system in Minnesota measure the quality of the obesity treatment it provides? What does national scientific evidence show to be the best way to measure the quality of obesity treatment?
8. Public health surveillance to monitor obesity trends has been identified as a key need in the state. What screening measures do you currently have in place in your medical practice and what other actions are needed to improve Minnesota's capability to measure obesity rates and trends throughout the state?
9. How do you motivate someone to lose weight and maintain weight loss? Are there specific programs that you refer individuals to?
10. (*Clinician-only Question*) Do you follow a medical treatment algorithm for weight loss/management? (E.g. ICSI , AMA, NHLBI) If yes, please describe.

Have you encountered any barriers to implementing medical guidelines for obesity treatment? If so, what are they?

11. What types of weight loss and weight management treatment do you use most often with your patients and why? (E.g. diet/nutrition; exercise; pharmacotherapy; bariatric surgery).
12. What can be done to encourage Minnesota's population, as a whole, to attain and maintain a healthy weight?

**Summary of the Key Informant Interviews on Obesity Treatment**

While certain questions garnered a broad spectrum of responses, others provided apparent commonalities which helped determine strengths and gaps in obesity treatment in Minnesota.

From information gathered, surgery was the most common method of treatment, followed by pharmacotherapy. However, a multi-modal approach encompassing a combination of surgery, environmental changes, physical activity/nutrition/behavior changes, pharmacotherapy and education was identified as the most effective treatment. The ICSI guidelines were the common treatment algorithm for weight loss and maintenance used by clinicians. Current treatments used for patients to lose and maintain weight include: lifestyle changes, surgery, and comprehensive approaches. Lifestyle changes are often incorporated into a surgical treatment program; however, surgery is a last option, primarily for those who are morbidly obese and in instances where lifestyle changes and pharmacotherapy have been ineffective.

The main barriers to receiving treatment for obesity included access to care and reimbursement. Although access to care was viewed as a barrier, it should be noted that clinical treatment of obesity is not the sole solution to the problem. Prevention of weight gain was indicated as the key method for long-term healthy weight maintenance followed by treatment for excessive weight. Reimbursement was an issue for treatments other than surgery, such as phone coaches, nutrition therapy, counseling and pharmacotherapy. Measuring quality of obesity treatment is an area which is in development. Currently, there is no systematic approach to measure quality of obesity-related care in Minnesota. However, there is momentum toward consistently using measurable outcomes, such as body mass index, weight and waist circumference, as an indicator. The American Society of Bariatric Surgery has recently created the Centers of Excellence as a resource for ensuring best practices and quality among bariatric surgery centers across the nation.

At the individual level, barriers experienced when trying to lose or maintain weight included the physical, emotional, and social environment and motivation from both the individual as well as from others. Education is the most common method for motivating individuals to lose weight or maintain a healthy weight; with healthcare providers being key to helping motivate individuals. Weight Watchers is often recommended as a resource for individuals to lose weight.

Surveillance of obesity trends was identified as a strong need in Minnesota. Height and weight are currently measured by most clinicians and with the establishment of a reporting system, these can be reported to generate surveillance data for the state.

Overall, there was an emphasis for a multi-modal approach, including lifestyle modifications, counseling, pharmacotherapy, environmental and social support, and surgery for treating obesity and maintaining a healthy weight among Minnesota residents. Policy implementation, environmental supports, and social marketing campaigns are the most promising strategies for addressing the entire population and eliminating barriers to promote healthy weight loss and healthy weight maintenance.

# APPENDIX F: *Long-Term Objectives, Intermediate Objectives and 5-Year Benchmarks*

<table>
<tr><th>Objective</th><th>Indicator, Baseline, Target</th><th>Data Source*</th></tr>
<tr><td colspan="3">Healthy Eating</td></tr>
<tr><td rowspan="4">LONG-TERM OBJECTIVE 1:<br>Increase Healthy Eating among People in Minnesota</td><td>Increase the percentage of adults who consume fruits and vegetables five or more times per day from 24% in 2005 to 48% in 2018.</td><td>BRFSS</td></tr>
<tr><td>Increase the percentage of youth who say they consumed at least 5 fruits, fruit juices, or vegetables the previous day:<br><table><tr><th></th><th>2004 Baseline</th><th>2019 Target</th></tr><tr><td>6th Grade</td><td>21%</td><td>42%</td></tr><tr><td>9th Grade</td><td>15%</td><td>30%</td></tr><tr><td>12th Grade</td><td>13%</td><td>26%</td></tr></table></td><td>MSS</td></tr>
<tr><td>Add additional measures beyond fruits and vegetables. Indicators to be determined.</td><td>2008 MN HE Survey</td></tr>
<tr><td>Disparities among adult and youth population subgroups. To be determined.</td><td></td></tr>
<tr><td rowspan="4">5-YEAR BENCHMARKS 1:<br>Increase Healthy Eating among People in Minnesota</td><td>Increase the percentage of adults who consume fruits and vegetables five or more times per day from 24% in 2005 to 34% in 2013.</td><td>BRFSS</td></tr>
<tr><td>Increase the percentage of youth report consuming at least 5 fruits, fruit juices, or vegetables the previous day:<br><table><tr><th></th><th>2004 Baseline</th><th>2013 Target</th></tr><tr><td>6th Grade</td><td>21%</td><td>31%</td></tr><tr><td>9th Grade</td><td>15%</td><td>22%</td></tr><tr><td>12th Grade</td><td>13%</td><td>19%</td></tr></table></td><td>MSS</td></tr>
<tr><td>Add additional measures beyond fruits and vegetables. Indicators to be determined.</td><td>2008 MN HE Survey</td></tr>
<tr><td>Disparities among adult and youth population subgroups. To be determined.</td><td></td></tr>
</table>

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| **INTERMEDIATE OBJECTIVE 1.1:** Increase the number of environmental and policy supports to healthful eating | | There is currently no direct measure for this objective |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |
| **INTERMEDIATE OBJECTIVE 1.2:** Increase the availability of healthy food options | By 2013, increase the proportion of school districts who meet the USDA requirements for nutrient standards by 12% (2006 Baseline: 7%) | SMI |
| | | No direct measures currently available for restaurants and community |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| **INTERMEDIATE OBJECTIVE 1.3:** Increase the number of people who recognize the importance of a balanced diet and its contribution to overall health | Increase by 10% the proportion who answer the following behaviors in a healthy or positive way:<br>2004 Baseline / 2013 Target<br>Plan meals ahead of time (Most of the time/Always) 45% / 55%<br>Compare prices before buy food (Most of the time/Always) 55% / 65%<br>Run out of food before end of month (Do Not Do) 22% / 32%<br>Shop with a grocery list (Most of the time/Always) 41% / 51%<br>Food sits out for more than two hours (Do Not Do) 58% / 68%<br>Thaw frozen food at room temperature (Do Not Do) 29% / 39%<br>Choose healthy food choices (Most of the time/Always) 45% / 55%<br>Prepared food without adding salt (Most of the time/Always) 43% / 53%<br>Use "Nutrition Facts" on food label to make choices (Most time/Always) 39% / 49%<br>Children eat something within 2 hours of waking up (Most time/Always) 47% / 57% | EFNEP Survey |
| | Add questions to the 2008 MN HE Survey. Indicators to be determined. | 2008 MN HE Survey in development |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |
| **INTERMEDIATE OBJECTIVE 1.4:** Increase fruit and vegetable consumption | MN HE Survey. Indicators to be determined. | MN HE Survey |
| | Increase the percentage of adults who consume fruits and vegetables five or more times per day from 24% in 2005 to 34% in 2013. | BRFSS |
| | Increase the percentage of youth who report consuming at least 5 fruits, fruit juices, or vegetables the previous day:<br>(2004 Baseline / 2013 Target)<br>6th Grade 21% / 31%<br>9th Grade 15% / 22%<br>12th Grade 13% / 19% | MSS |

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| **INTERMEDIATE OBJECTIVE 1.5:** Increase the number of pregnant women who recognize the role of human milk in healthy infant development | By 2013, increase breastfeeding in the early postpartum period to 85%. (Baseline based on 2004 births: 80.9% ) | CDC Immunization Survey |
| | By 2013, increase the percentage of 2-5 year olds in the WIC population who are initially breastfed by 10% (2006 Baseline: 71%). | PedNSS |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |
| **INTERMEDIATE OBJECTIVE 1.6:** Reduce disparities in nutrition-related health behaviors by gender, age, race, socioeconomic class, education, ability and geographical region | Outcome indicators from interventions conducted by MDH or Plan partners. Indicators to be determined. | Data collection system to be determined |

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| Physical Activity | | |
| **LONG-TERM OBJECTIVE 2:** Increase Physical Activity among People in Minnesota | By 2018, decrease by 50% the percentage of adults who are physically inactive (percent of adults 18+ who report no leisure time activity in the last 30 days) (2006 Baseline: 14%, 2018 Target 7%) | BRFSS |
| | Increase the percentage of adults who meet the CDC recommendations for physical activity (30 minutes a day of moderate activity five or more times a week or 20 minutes a day of vigorous activity 3 or more times a week) from 51% in 2005 to 75% in 2018. | BRFSS |
| | Increase by 20% the percentage of boys and increase by 25% the percentage of girls who say they have exercised or participated in sports or other activities that made them sweat or breathe hard for at least 20 minutes at least 3 of the past 7 days.<br>2004 Baseline / 2019 Target<br>6th Grade Boys 69% 89%<br>9th Grade Boys 72% 92%<br>12th Grade Boys 61% 81%<br>6th Grade Girls 67% 92%<br>9th Grade Girls 64% 89%<br>12th Grade Girls 46% 71% | MSS |
| | Increase by 10% the percentage of boys and by 15% the percentage of girls who say they have been physically active for a combined total of at least 30 minutes at least 5 of the past 7 days.<br>2004 Baseline / 2019 Target<br>6th Grade Boys 52% 62%<br>9th Grade Boys 60% 70%<br>12th Grade Boys 45% 55%<br>6th Grade Girls 40% 55%<br>9th Grade Girls 46% 61%<br>12th Grade Girls 28% 43% | MSS |
| | Disparities among adult and youth population subgroups. To be determined. | |

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| **5-YEAR BENCHMARKS 2:** Increase Physical Activity among People in Minnesota | By 2013, decrease by 25% the percentage of adults who are physically inactive (percent of adults 18+ who report no leisure time activity in the last 30 days) (2006 Baseline: 14%, 2013 Target 11%) | BRFSS |
| | Increase the percentage of adults who meet the CDC recommendations for physical activity (30 minutes a day of moderate activity five or more times a week or 20 minutes a day of vigorous activity 3 or more times a week) from 51% in 2005 to 63% in 2013. | BRFSS |
| | Adult population subgroup targets. To be determined. | |
| | Increase by 10% the percentage of boys and by 15% the percentage of girls who say they have exercised or participated in sports or other activities that made them sweat or breathe hard for at least 20 minutes at least 3 of the past 7 days.<br>2004 Baseline — 2013 Target<br>6th Grade Boys: 69% — 79%<br>9th Grade Boys: 72% — 82%<br>12th Grade Boys: 61% — 71%<br>6th Grade Girls: 67% — 82%<br>9th Grade Girls: 64% — 79%<br>12th Grade Girls: 46% — 61% | MSS |
| | Increase by 5% the percentage of boys and by 10% the percentage of girls who say they have been physically active for a combined total of at least 30 minutes at least 5 of the past 7 days.<br>2004 Baseline — 2013 Target<br>6th Grade Boys: 52% — 57%<br>9th Grade Boys: 60% — 65%<br>12th Grade Boys: 45% — 50%<br>6th Grade Girls: 40% — 50%<br>9th Grade Girls: 46% — 56%<br>12th Grade Girls: 28% — 38% | MSS |
| | Disparities among adult and youth population subgroups. To be determined. | |

| Objective | Indicator, Baseline, Target | Data Source* |
| --- | --- | --- |
| **INTERMEDIATE OBJECTIVE 2.1:** Increase the number of physical activity environmental and policy supports | By 2013, increase by 10% the percentage of people who agree or strongly agree to the following statements about their neighborhood (2007 Baseline: N/A until 2008)<br><br>Q: Many shops, stores, markets or other places to buy things are within walking distance of my home.<br>Q: There is a transit stop (such as a bus, train, trolley, tram) within a 10-15 minutes walk from my home.<br>Q: There are sidewalks on most of the streets in my neighborhood.<br>Q: There are bicycle facilities in or near my neighborhood, such as special lanes, separate paths or trails, shared use paths for cycles and pedestrians.<br>Q: My neighborhood has several free or low cost recreation facilities, such as parks, walking trails, bike paths, recreation centers, playgrounds, public swimming pools, etc.<br>Q: The crime rate in my neighborhood makes it unsafe to go on walks at night. (Disagree or strongly disagree)<br>Q: There is so much traffic on the streets that it makes it difficult or unpleasant to walk in my neighborhood. (Disagree or strongly disagree)<br>Q: I see many people being physically active in my neighborhood.<br>Q: There are many interesting things to look at while walking in my neighborhood.<br>Q: There are many four-way intersections in my neighborhood. | MN PA survey |
| | By 2013, increase by .5% the proportion of people who walk to work (2006 Baseline: 3.1%) | ACS |
| | By 2013, increase by .5% the proportion of people who bicycle to work (2006 Baseline: 0.6%) | ACS |

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| **INTERMEDIATE OBJECTIVE 2.2:** Increase the number of people who recognize the importance of physical activity for health and other benefits | By 2013, increase by 10% the proportion of Minnesotans who report that their healthcare provider asked about their level of physical activity (2007 Baseline: N/A until 2008) | MN PA Survey |
| | By 2013, increase by 10% the proportion of Minnesotans who report that their healthcare provider advised them to get more physical activity (2007 Baseline: N/A until 2008) | MN PA Survey |
| | By 2013, increase by 20% the proportion of Minnesotans who report that the following statement is "True": Being active a total of 30 minutes per day over several shorter periods, such as 10-minutes at a time, can be enough to maintain a person's health. (2007 Baseline: N/A until 2008) | MN PA Survey |
| | By 2013, increase by 10% the proportion of Minnesotans who said they increased their physical activity level for one month or longer because they were trying to become more active (2007 Baseline: N/A until 2008) | MN PA Survey |
| | By 2013, increase by 10% the proportion of Minnesotans who intend to be more active in the next 6 months (2007 Baseline: N/A until 2008) | MN PA Survey |
| **INTERMEDIATE OBJECTIVE 2.3:** Increase the number of physical activity behavioral and social supports | By 2013, there will be a 10% increase in the people who agree to a number of statements in the MN PA Survey what shows friend, family and employer, health insurance support for physical activity (2007 Baseline: N/A until 2008)<br><br>Q: Your friends encourage you to be physically active.<br>Q: Your coworkers encourage you to be physically active.<br>Q: Your family encourages you to be physically active.<br>Q: Your employer provides places to be physically active such as on-site fitness centers, walking paths and attractive stairwells.<br>Q: Your employer allows you to take paid time to get physical activity.<br>Q: Your employer encourages physical activity through communications from management.<br>Q: Your employer provides financial incentives to be physically active, such as discounts on fitness center memberships or discounts on health insurance premiums.<br>Q. In the last 12 months, how would you rate your health insurance company on how well it promotes physical activity? Would you say it is…Excellent, Very good, Good, Fair, or Poor? | MN PA Survey |

| Objective | Indicator, Baseline, Target | Data Source* |
|---|---|---|
| **INTERMEDIATE OBJECTIVE 2.4:** Decrease the amount of excessive sedentary time | By 2013 there wil be a 10% decrease in the proportion of 6th, 9th and 12th graders who spend 6+ hours per week watching TV or videos.<br><br>2007 Baseline / 2013 Target<br>6th grade males 41% 31%<br>6th grade females 34% 24%<br>9th grade males 53% 43%<br>9th grade females 43% 33%<br>12th grade males 49% 39%<br>12th grade females 37% 27% | MSS |
| | By 2013, there will be a 10% decrease in the proportion of 6th, 9th, and 12th graders who spend 6+ hours per week playing computer or video games<br>2007 Baseline / 2013 Target<br>6th grade males 35% 25%<br>6th grade females 19% 9%<br>9th grade males 41% 31%<br>9th grade females 20% 10%<br>12th grade males 32% 22%<br>12th grade females 9% 5%*<br>*this target different because a 10% decrease would be less than 0. | MSS |
| | By 2013, increase by 10% the proportion of Minnesotans who said they increased their physical activity level for one month or longer because they were trying to become more active. (2007 Baseline: N/A until 2008) | MN PA Survey |
| | By 2013, increase by 10% the proportion of Minnesotans who intend to be more active in the next 6 months. (2007 Baseline: N/A until 2008) | MN PA Survey |
| **INTERMEDIATE OBJECTIVE 2.5:** Reduce physical activity disparities by gender, age, race, socioeconomic class, education, ability and geographical region | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |

| Objective | Indicator, Baseline, Target | Data Source |
|---|---|---|
| Healthy Weight | | |
| **LONG TERM OBJECTIVE 3:** Increase Healthy Weight among People in Minnesota | By 2018, decrease the percentage of adults classified as obese to 17% (2006 baseline: 25%) | BRFSS |
| | By 2018, increase the percentage of adults classified as healthy weight to 47% (2006 BRFSS Baseline: 36.7%) | BRFSS |
| | By 2018, decrease the percentage of 9th and 12th graders who are classified as obese by 10% (Note: children and youth ≥ 95th percentile)<br>2007 Baseline / 2019 Target<br>9th grade males: 12% / 10.8%<br>9th grade females: 6% / 5.4%<br>12th grade males: 13% / 11.7%<br>12th grade females: 5% / 4.5% | MSS |
| | By 2018, increase the percentage of 9th and 12th graders who are classified as healthy weight by 10%<br>2007 Baseline / 2019 Target<br>9th grade males: 73% / 83%<br>9th grade females: 82% / 92%<br>12th grade males: 74% / 84%<br>12th grade females: 83% / 93% | MSS |
| | By 2018, decrease the percentage of 2-5 year olds in WIC population who are classified as obese by 10% (2006 Baseline: 13.1) Note: children and youth ≥ 95th percentile | PedNSS |
| | By 2018, decrease the percentage of elementary school children who are classified as obese by 10% (Baseline: N/A) Note: children and youth > 95th percentile | There is no current surveillance system to collect these indicators |
| | By 2018, increase the percentage of elementary school children who are classified as healthy weight in by 10% (Baseline: N/A) | |
| | Disparities among adult and youth population subgroups. To be determined. | |

| Objective | Indicator, Baseline, Target | Data Source |
|---|---|---|
| **5-YEAR BENCHMARKS 3:**<br>Increase Healthy Weight among People in Minnesota | By 2013, decrease the percentage of adults classified as obese to 22%. (2006 baseline: 25%) | BRFSS |
| | By 2013, increase the percentage of adults classified as healthy weight to 42%. (2006 BRFSS Baseline: 37%) | BRFSS |
| | Adult population subgroup targets to be determined. | |
| | By 2013, decrease the percentage of 9th and 12th graders who are classified as obese. Note: children and youth ≥ 95th percentile<br>2007 Baseline / 2013 Target<br>9th grade males: 12% / 11.4%<br>9th grade females: 6% / 5.7%<br>12th grade males: 13% / 12.3%<br>12th grade females: 5% / 4.75% | MSS |
| | By 2013, increase the percentage of 9th and 12th graders who are classified as healthy weight<br>2007 Baseline / 2013 Target<br>9th grade males: 73% / 78%<br>9th grade females: 82% / 87%<br>12th grade males: 74% / 79%<br>12th grade females: 83% / 88% | MSS |
| | By 2013, decrease the percentage of 2-5 year olds in WIC population who are classified as obese by 5% (2006 Baseline: 13.1) Note: children and youth ≥ 95th percentile | PedNSS |
| | By 2013, decrease the percentage of elementary school children who are classified as obese by 5% (Baseline: N/A) Note: children and youth ≥ 95th percentile<br><br>By 2013, increase the percentage of elementary school children who are classified as healthy weight by 5% (Baseline: N/A) | There is no current surveillance system to collect these indicators |
| | Disparities among adult and youth population subgroups. To be determined. | |
| **INTERMEDIATE OBJECTIVE 3.1:**<br>Increase the number of people who recognize the value of a healthy weight | | There is currently no direct measure for this objective |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |

| Objective | Indicator, Baseline, Target | Data Source |
|---|---|---|
| **INTERMEDIATE OBJECTIVE 3.2:** Increase the number of people who have their BMI measured and reported on a routine basis and who understand the meaning of their results | <br>Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | There is currently no direct measure for this objective<br>Data collection system to be determined |
| **INTERMEDIATE OBJECTIVE 3.3:** Increase initiation, exclusivity, and duration of breastfeeding | By 2013, increase breastfeeding in the early postpartum period to 85% (Baseline based on 2004 births: 80.9%)<br>By 2013, increase breastfeeding at age 6 months to 50% (Baseline based on 2004 births: 46.5%)<br>By 2013, increase breastfeeding at age 12 months to 25% (Baseline based on 2004 births: 23.8%)<br>By 2013, increase exclusive breastfeeding at age 3 months to 60% (Baseline based on 2004 births: 33.9%)<br>By 2013, increase exclusive breastfeeding at age 6 months to 25% (Baseline based on 2004 births: 16.1%) | CDC Immunization Survey |
| | By 2013, increase the percentage of 2-5 year olds in WIC population who are initially breastfed by 10% (2006 Baseline: 71%) | PedNSS |
| | By 2013, increase the percentage of 2-5 year olds in WIC population who are breastfeeding at 6 months by 10% (2006 Baseline: 33%) | PedNSS |
| | By 2013, increase the percentage of 2-5 year olds in WIC population who are breastfeeding at 12 months by 10% (2006 Baseline: 19%) | PedNSS |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |
| **INTERMEDIATE OBJECTIVE 3.4:** Promote healthy weight loss among people who are overweight or obese | Increase by 10% the proportion of 9th and 12th graders, who are overweight or obese ($\geq$ 85th percentile), who are using healthy habits to lose or control their weight:, including exercising, not fasting or skipping meals, and eating healthy (2007 Baseline: N/A, 2018 Target N/A) | MSS |
| | Increase by 10% the proportion of adults, who are overweight or obese, who use healthy habits to lose or control their weight. | No direct data source for adults |
| | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |

| Objective | Indicator, Baseline, Target | Data Source |
| --- | --- | --- |
| **INTERMEDIATE OBJECTIVE 3.5:** Reduce disparities in overweight and obesity by gender, age, race, socioeconomic class, education, ability and geographical region | Process and outcome data from interventions conducted by MDH and Plan partners will be able to provide indicators of progress toward this objective. | Data collection system to be determined |

*Data Sources:

ACS = American Community Survey, U.S. Census Bureau
BRFSS = Behavioral Risk Factor Surveillance System, Minnesota Department of Health
CDC Immunization Survey, Centers for Disease Control and Prevention
EFNEP = Expanded Food and Nutrition Education Program, United States Department of Agriculture
MSS = Minnesota Student Survey, Minnesota Department of Education
MN PA Survey = Minnesota Physical Activity Survey, Blue Cross Blue Shield of Minnesota
MN HE Survey = Minnesota Healthy Eating Survey, Blue Cross Blue Shield of Minnesota
PedNSS = Pediatric Nutrition Surveillance System, Minnesota Department of Health
SMI= School Meals Initiative, Minnesota Department of Education

# APPENDIX G: *Existing Data Measurement Systems to Monitor State Obesity Plan Objectives*

| EXISTING DATA MEASUREMENT SYSTEMS TO MONITOR PLAN OBJECTIVES | | | | |
|---|---|---|---|---|
| SOURCE | PLAN INDICATOR TOPICS | DATA COLLECTION YEARS | METHOD AND POPULATION | WHERE DATA RESIDES |
| Behavior Risk Factor Surveillance System (BRFSS) | Fruits & vegetables consumption, physical activity, obesity, and healthy weight | Every year for some indicators, every other year for other indicators | Random sample telephone survey, adults age 18+. | CDC, Minnesota Department of Health |
| Minnesota Student Survey (MSS) | Fruits & vegetables consumption, physical activity, obesity, and healthy weight | Every three years | Self-administered survey given to sixth, ninth and twelfth grade students attending public schools. In 2004, 88% of public operating school districts participated. | Minnesota Department of Education |
| American Community Survey (ACS) | Walking or bicycling to work | Every year | Household survey | U.S. Census Bureau |
| Expanded Food and Nutrition Education Program (EFNEP) | Variety of questions on knowledge, skills and behavior change for a nutritionally sound diet | Every year | Participants of the EFNEP program fill out a survey as they enter the program and as they leave the program. Low income audience. | National dataset with state data available |
| Minnesota Physical Activity Survey (MN PA Survey) | Variety of questions on physical activity | Every 3 years starting in 2009 until 2030 | Random sample telephone survey of Minnesota adults. | Blue Cross Blue Shield of Minnesota |
| Minnesota Healthy Eating Survey (MN HE Survey) | Variety of questions on healthy eating | Every 3 years starting in 2010 until 2030 | Random sample telephone survey of Minnesota adults. | Blue Cross Blue Shield of Minnesota |
| Pediatric Nutrition and Surveillance System (PedNSS) | Overweight children and breastfeeding indicators | Every year | Special Supplemental Nutrition Program for Women, Infants and Children Program clinic data aggregated at state level and given to CDC. | National dataset with state data available. |
| School Meal Initiative (SMI) | Increase the availability of healthy food options in school | Every year | USDA program where each state can measure nutrition content in school meals. Every year, one fifth of the school districts have the nutritional value of their meals measured. | Minnesota Department of Education |

# APPENDIX H: *Data Measurement Gaps*

| DATA MEASUREMENT GAPS | | | |
|---|---|---|---|
| **INDICATOR** | **POSSIBLE DATA SOURCE** | **ABOUT DATA SOURCE** | **NEED ADDITIONAL RESOURCES?** |
| Increase the number of healthy eating, physical activity and healthy weight environmental and policy supports | Repeat of the environmental scan<br><br>Repeat of worksite survey | A baseline environmental scan was performed by the Minnesota Department of Health<br><br>A worksite survey was performed by the Minnesota Department of Health | Yes |
| Additional measures of healthy eating beyond fruits and vegetables | Minnesota Healthy Eating Survey (MN HE Survey) | A new survey being developed by Blue Cross Blue Shield of Minnesota and Minnesota Department of Health. The survey will be put in the field in 2008, and will be repeated every three years. The survey topics and questions yet to be determined. | No |
| Healthy food options policy environment in school<br><br>Healthy food options policy environment at work | School Food and Physical Activity Environment Survey<br><br>Cater to Health | A new survey developed by the STEPS program at MDH in partnership with the MN Department of Education. A random sample of 110 public high school principals received the electronic survey through email in December 2007. The survey was developed using Survey Monkey.<br><br>The Cater to Health coalition has representatives from health-oriented organizations in Minnesota. They have a Cater Survey to determine if catering services offer healthy food. | Yes, with additional resources, the survey could be repeated periodically to collect data to measure intermediate objectives in physical activity and nutrition.<br><br>Yes, with additional resources this survey could be modified and implemented statewide. |
| Increase the number of stand alone nutrition education courses, or nutrition as part of health education course curriculum | School Food and Physical Activity Environment Survey | See above | See above |

| DATA MEASUREMENT GAPS | | | |
|---|---|---|---|
| INDICATOR | POSSIBLE DATA SOURCE | ABOUT DATA SOURCE | NEED ADDITIONAL RESOURCES? |
| Obesity and healthy weight data for elementary school children. | A system would need to be created to collect this data | | Yes |
| Increase the number of people in Minnesota who recognize the value of a healthy weight. | Adding questions to the MN HE Survey<br><br>Adding questions to the Minnesota Center for Survey Research Omnibus Survey | See above<br><br>Minnesota Center for Survay Research conducts two omnibus telephone surveys—one of 800 households in the metropolitan area, and one of 800 households throughout the state. | No<br><br>Yes, the organizations are charged for each question put on the survey. |
| Increase the number of people who have their BMI measured and reported on a routine basis and who understand the meaning of their results. | Adding questions to the MN HE Survey<br><br>Adding questions to the BRFSS. | See above<br><br>See above | No<br><br>Yes, in order to get the data needed, additional resources to BRFSS is needed. |
| Promote healthy weight loss among people in Minnesota who are overweight or obese. | Adding questions to the MN HE Survey<br><br>Adding questions to the BRFSS | See above<br><br>See above | No<br><br>Yes, in order to get the data needed, additional resources to BRFSS is needed |
| Population and regional disparities in healthy eating, physical activity, healthy weight | Need to determine how to meet data gaps including enhancing existing data sets and / or creating new surveillance systems | | Yes |

# APPENDIX I: *Minnesota Task Force on Childhood Obesity Recommendations*

In 2006, the Minnesota Department of Health's Task Force on Childhood Obesity developed recommendations to reduce childhood obesity in the state as well as identified the following four focus areas common to all five workgroups: (1) encourage healthy eating habits; (2) increase physical activity; (3) create healthy environments; and (4) increase monitoring and measurement. The intention of identifying focus areas was to begin to identify core areas for action that multiple stakeholders, regardless of sector, could collaborate on.

| Encourage Healthy Eating Habits |
|---|
| 2.2 Implement a coordinated school health approach to obesity prevention |
| 2.3 Assure that childcare environments support good nutrition and age-appropriate physical activities |
| 3.1 Implement age-appropriate marketing messages and practices that promote healthy food and activity patterns for children and youth |
| 3.2 Improve availability of healthy food choices in cafeterias and restaurants |
| 3.3 Promote physical activity and healthy eating throughout the media |
| 4.1 Implement proven programs and initiatives that promote physical activity and good nutrition in community settings |
| 5.4 Encourage healthcare providers to address healthy weight behaviors with patients |
| 5.5 Promote and provide support for breastfeeding |
| **Increase Physical Activity** |
| 2.2 Implement a coordinated school health approach to obesity prevention |
| 2.3 Assure that childcare environments support good nutrition and age-appropriate physical activities |
| 3.1 Implement age-appropriate marketing messages and practices that promote healthy food and activity patterns for children and youth |
| 3.3 Promote physical activity and healthy eating throughout the media |
| 4.1 Implement proven programs and initiatives that promote physical activity and good nutrition in community settings |
| 5.4 Encourage healthcare providers to address healthy weight behaviors with patients |
| **Create Healthy Environments** |
| 1.1 Advocate for and initiate legislation and policies that contribute to healthy lifestyles and reduce overweight and obesity |
| 1.2 Convene and connect stakeholders interested in obesity prevention |
| 1.4 Eliminate health disparities in obesity and its complications |
| 2.2 Implement a coordinated school health approach to obesity prevention |
| 2.3 Assure that childcare environments support good nutrition and age-appropriate physical activities |
| 3.1 Implement age-appropriate marketing messages and practices that promote healthy food and activity patterns for children and youth |

| |
|---|
| 4.1 Implement proven programs and initiatives that promote physical activity and good nutrition in community settings |
| 4.2 Implement effective worksite wellness programs with a family-centered focus |
| 5.1 Advocate for and incorporate prevention and treatment of obesity in the healthcare system |
| 5.4 Encourage healthcare providers to address healthy weight behaviors with patients |
| **Increase Monitoring and Measurement** |
| 1.3 Support public health surveillance systems, program evaluation and research to track obesity trends and develop best practices |
| 2.1 Support measurement systems to track and monitor student health progress |
| 5.1 Advocate for and incorporate prevention and treatment of obesity in the healthcare system |
| 5.2 Establish body mass index as a vital sign |
| 5.3 Support data collection systems in the clinical setting to monitor patients and track trends in obesity |

*For a complete list of the Minnesota Task Force on Childhood Obesity recommendations please visit: http://www.health.state.mn.us/divs/hpcd/chp/obesity/.*

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