Overweight & Obesity in Madison County

Strategies to Build a Healthier Community

Issue Profile Update

2016

Madison County DEPARTMENT of HEALTH

Madison County Rural Health Council

November 1, 2016

Dear Madison County,

The Rural Health Council of Madison County is pleased to present the updated report on overweight and obesity in Madison County. The first report entitled *Overweight and Obesity in Madison County* was completed in 2009 by the Madison County Department of Health in an effort to create awareness and provide information to address this important health issue. The updated report serves as a current "*call to action*" to inspire agencies, employers, institutions and neighborhoods to recognize the importance of key preventive factors, especially nutrition and physical activity, by adopting one or more of the strategies outlined.

The 2017-18 Madison County Community Health Assessment Steering Committee and Community Stakeholders have identified obesity as a Madison County Health Priority and as an action area over the next two years due to higher overweight and obesity rates in our County. This report provides population-based interventions for individuals, families, organizations, businesses and communities to encourage and suggest ways to respond to how and what we eat and ways in which we can be more physically active throughout life.

The Rural Health Council of Madison County and the Madison County Department of Health would like to thank the many committed individuals who are dedicated to helping our residents lead a more nutritious and physically fit future. The Rural Health Council of Madison County is available to convene partners in communities who would like to address this issue, as you work toward a healthier community or organization. We welcome your comments and participation as we work together, as individuals and partners to realize our goals in becoming a healthier Madison County.

Respectfully,

Eric Faisst, Director

Madison County Department of Health

Bonnie J Slocum

Bonnie Slocum, Executive Director

Rural Health Council of Madison County

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Overweight and Obesity: Overview

Obesity represents a growing global public health threat. The World Health Organization (January 2015) latest projections indicated that globally in 2014, approximately 1.9 billion adults (age 18+) were overweight and at least 600 million adults were obese. Global childhood overweight and obesity more than doubled in the last ten years with at least 42 million children under the age of 5 years now overweight or obese in 2014. With approximately 32.6% of U.S. citizens obese in 2014, it is estimated that by 2030 at least 50% of the U.S. population will reach obesity levels based on current trends (Levi et al., 2012; Finkelstein et al., 2012). Once considered a problem only in high-income countries, overweight and obesity are now dramatically on the rise in low and middle-income countries, particularly in urban settings (World Health Organization 2006; 2015).

Statistics from the United States National Center for Health Statistics (2014) show that over the past thirty years, the prevalence of overweight and obesity in our local communities and across the nation increased dramatically. The overweight and obesity epidemic represents one of the most serious health issues challenging our society today. The repercussions of the obesity trend are significant and are associated with a reduced quality of life, adverse medical and psychological consequences, increased medical care and other economic costs, and premature death. (CDC: Adult Obesity Causes and Consequences, 2015).

In its simplest form, obesity and overweight are the result of an imbalance between energy consumed and energy expended. (What Causes Overweight and Obesity, 2015). However, the factors that contribute to this imbalance are many, as are the means to address them. Factors including diet, physical inactivity, genetics, environment, social and health conditions all contribute to overweight and obesity in children and adults. (CDC: Adult Obesity Causes and Consequences, 2015). The public health response will require a multi-faceted approach and involve a wide array of public/private partners working in concert to successfully address this issue. The potential health benefits from reduction in the prevalence of overweight and obesity are of significant public health importance.

Background

In 2008, the Madison County Department of Health completed a report on the issue of overweight and obesity in Madison County. The 2016 update to the report serves as a guide to develop future prevention programs and intervention strategies. The content of the report is derived from data obtained through national and state sources, and current community assessment activities that includes data collection and independent research. The recommendations included in this report are based on the goals and objectives established in Healthy People 2020, Federal guidance documents, the New York State Prevention Agenda 2013-2018, evidence-based public health practice, regional reports and local initiatives.

Purpose

This report presents an overview of the obesity issue, provides a description of the condition of overweight and obesity in Madison County, and identifies strategies to reduce or prevent adult and child obesity. The *Overweight & Obesity In Madison County: Strategies to Build a Healthier Community 2016* report is also intended to serve as a "call to action" to inspire agencies, institutions, businesses, and neighborhoods to recognize the importance of key preventive factors, specifically nutrition and physical activity, by adopting one or more of these strategies.

With the overarching goal of improving the health and well-being of individuals and families in Madison County, the objectives of the *Overweight and Obesity in Madison County: Strategies to Build a Healthier Community 2016* report includes the following:

- Building awareness about the problem of obesity
- Serving as a guide for all those in Madison County who are interested in addressing obesity including individuals, organizations, and communities
- Planting a seed and building momentum for action without being prescriptive
- Catalyzing partnerships for those already working on this issue with new organizations and new sectors
- Ensuring that strategies emphasize policy and environmental changes and not just individual and family efforts.

Overweight and Obesity in the United States

The prevalence of obesity in the U.S. among children and adults alike increased dramatically over the past thirty years (Figure 1). Findings from the National Health and Nutrition Examination Surveys, showed substantial increases in overweight among adults, with approximately 47% of adults ages 20-74 classified as overweight or obese in 1976-1980 compared to 70.7% in 2013-2014. (U.S. National Center for Health Statistics, 2014). Although the prevalence of obesity has remained relatively stable in adults between 2000 and 2010, the trends in weight distribution, as measured by body mass index (BMI) have shifted upwards, with the greatest shift observed in the severe or morbidly obese category (BMI > 40), signifying that the entire adult population is heavier, and the heaviest have become much heavier (Sturm & Hattori, 2013).

Likewise, the percentage of children (6–11 years of age) and adolescents (12–19 years of age) who are overweight has also risen since 1976–1980. In 2013–2014, 17.7%– 20.5% of children and adolescents were obese, triple the percentage observed in 1980 (5%-6.5%). The percentage of preschool-age children (2–5 years of age) who are obese almost doubled from 1988–1994 (7%) to 2003–2004 (14%), but has since decreased to 8.9% in 2011-2012 (U.S. National Center for Health Statistics 2014). Unlike the adult groups however, there appears to be no signs of slowing or lessening of this trend among our school-aged youth, and is cause for concern. For children, the probability of childhood obesity persisting into adulthood is estimated to be 20% at the age four and 80% likelihood by adolescence (Guo & Chumlea, 1999).

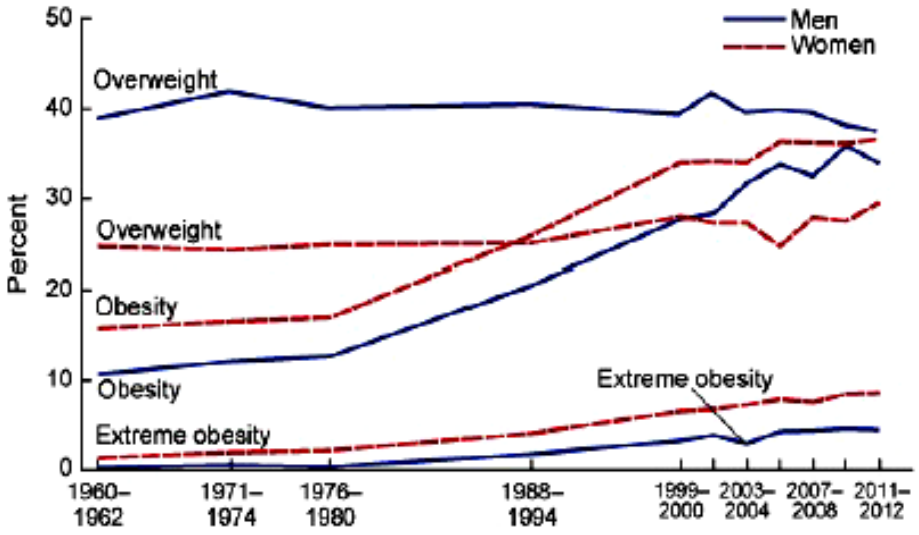


Figure 1: Overweight, Obesity, and Extreme Obesity among age 20-74—United States. CDC's National Center for Health Statistics, Health E-Stats 2011-2012.

United States 2014

Demographic Characteristics

The overweight and obesity epidemic knows no boundaries as it affects all levels of our society. Overweight and obesity is observed in all age groups, both genders, all education and socio-economic levels, and spans all racial/ ethnic groups across our society (Centers for Disease Control and Prevention (CDC). National Health Interview Survey (NHIS), 2014; National Health and Nutrition Examination Survey (NHANES), 2015). The following are demographic characteristics of obesity in the U.S. for 2014:

Education

Education level does appear to be associated with increased prevalence of obesity. As educational levels increase, prevalence of overweight and obesity tend to be lower.

Income

Prevalence of overweight and obesity appear to be higher among individuals whose income ranges between $35,000 and $100,000.

Ethnicity

Hispanic and Latino individuals show the highest levels of overweight and obesity at 78.4 percent.

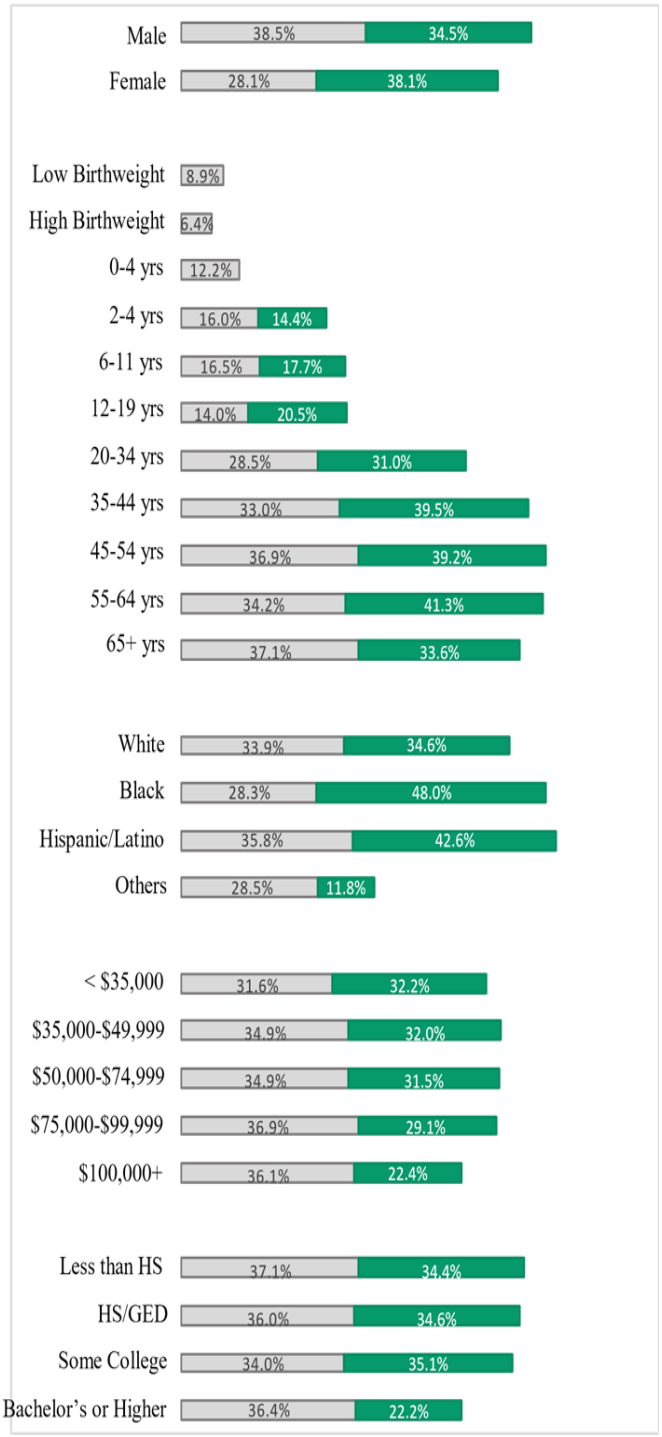
Age

Individuals between the ages of 45 to 64 years of age demonstrate the highest rates of overweight and obesity with 75.8 percent.

Childhood obesity starts alarmingly early with nearly one third (30.4%) of children aged 2-4 being overweight or obese. By age 6-11 the ratio of overweight to obese tips toward higher levels of obesity and remains this way through nearly every other age group, demonstrating the trend toward a heavier population.

Gender

Adult men demonstrate higher rates of overweight and obesity (73%) compared to adult women (66.2%), although the rate of obesity is actually higher among women (38.1%) compared to men (34.5%).



Survey, Source: Center for Disease Control and Prevention U.S. Health Data 2015;CDC's National Health Interview Survey, National Health and Nutrition Examination SHS BMI Data 2014; to men (34.5%). Pediatric Nutrition Surveillance Report 2011; Ogden et al. 2014.

Health Outcomes

With the rise in obesity we observe a parallel increased risk in developing various diseases and poor health conditions. A review by the American Obesity Association, listed obesity as an independent risk factor or an aggravating agent for 30 co-morbidities or health conditions including: birth defects, breast cancer, cardiovascular disease, colon cancer, end stage renal disease, gallbladder disease, impaired immune response, liver disease, diabetes mellitus, renal cancer, rheumatoid arthritis, stroke, and surgical complications. (American Obesity Association www.obesity.org 2015). Injuries (Pollack KM et al., 2007), sleep apnea and respiratory problems, increased hypertension, and complications with reproductive functioning (American Obesity Association www.obesity.org 2015) are also negative health outcomes associated with obesity. In fact, obesity's association with chronic health conditions is analogous to 20 years of aging (Sturm R, 2002).

Physical inactivity and dietary patterns, the major contributors to obesity, are estimated to cause 1/3 of premature deaths in the U.S. (NANA 2010). In a 1993 study, 14% of all deaths in the United States were attributed to low patterns of activity and poor diet (McGinnis JM & Foege WH, 1993). Overall, higher body weights are associated with increases in all cause mortality (CDC: "Healthy Weight", 2015).

Cost to Society

A substantial increase in related health care costs, coincides with the rise in obesity ("The Facts About", 2015). In 2009, the total direct and indirect costs attributable to obesity were estimated to be $147 billion (U.S. Department of Health and Human Services 2009). Medical care is approximately 42% more expensive for obese individuals versus those who are normal weight (U.S. Department of Health and Human Services 2009). The economic consequences of the obesity epidemic on healthcare costs are substantial, not only for individuals, but also for employers and government health programs, such as Medicare and Medicaid. In 2012, 60% of the national statewide estimates of annual medical expenses attributed to obesity were financed by Medicare and Medicaid (Finkelstein et al., 2012).

With advances in the medical field improving the safety and effectiveness of bariatric surgery, there are now four common procedures available: gastric by-pass, gastric banding, gastric sleeve, and duodenal switch ("Cost of Bariatric Surgery", 2015). The cost of these surgeries range from $20,000 to $32,000 in New York State ("Cost of Bariatric Surgery", 2015). These bariatric surgeries have been shown to result in greater weight loss than nonsurgical procedures, and they reduce the dependence and cost of medication for chronic dis-eases tied to obesity up to 20 years following surgery (Courcoulas et al., 2014).

The costs of treatments for obesity such as weight loss programs and products were estimated to be more than $30 billion in 1989 alone (National Institute of Health, 1993). With over 100 million Americans now involved in weight loss or dieting programs, the market has doubled in the last 20 years, reaching revenues of $61.6 billion in 2012 (LaRosa, 2012).

National Resources at a National Level

A tremendous number of resources exist about the issue of overweight and obesity at the national level. Appendix A provides listing of various agencies, publications, research centers and information related to the issue of obesity.

Overweight and Obesity in New York

The prevalence rate of overweight and obesity in New York State and Upstate New York mirrors national trends. The percentage of New Yorkers classified as overweight or obese rose from 50% in 1997 to 61.3% in 2013 (NYSDOH: BRFSS Brief No. 1502, Overweight and Obesity, NYS Adults 2013).

The prevalence for overweight and obesity within the Central NY Region was approximately 66% in 2013 (Table 1). Similar to national trends, the prevalence of overweight has not significantly increased between 1997 and 2006, however, the prevalence of obese individuals increased from 16% in 1997 to 22.5% in 2007, with the total now reaching 31.5% as of 2013 (NYSDOH: BRFSS Brief No. 1502, Overweight and Obesity, NYS Adults 2013).

As stated in the Trust for America's Health report (Key Health Data About New York, 2015), New York ranked 39th for adult obesity rates with 27%, and 25th for obese youth between the ages 10–17 at 14.5% in the nation (1 = highest percentage; 57 = lowest).

Table 1: Overweight & Obesity in Central New York 2013-2014

County	Adult Obesity (% age 18 and over)	Adult Overweight (% age 18 and over)	Healthy Weight Adults (% age 18 and over)
Cayuga	**33.0**	**30.2**	**36.8**
Cortland	**30.8**	**34.6**	**34.6**
Herkimer	**38.2**	**36.3**	**25.5**
Madison	**32.9**	**31.4**	**35.7**
Oneida	**36.6**	**32.5**	**30.9**
Onondaga	**27.9**	**35.2**	**36.9**
Oswego	**33.8**	**40.9**	**25.3**
Tompkins	**21.1**	**27.0**	**51.9**
8 County Rate	**31.5**	**34.5**	**34.0**
NYS	**24.6**	**35.9**	**39.5**

Source: Center for Disease Control and Prevention Expanded BRFSS (eBRFSS), County Data 2013-2014.

New York State 2013

Demographic Characteristics

Education in NYS, education level does appear to be associated with increased prevalence of obesity. In 2013 we observed that as educational levels increase, prevalence of obesity decreases.

Income

Prevalence of obesity is highest among incomes less than $25,000, while incomes ranging from $35,000 to $75,000 show a higher prevalence of overweight.

Ethnicity

Non-Hispanic black individuals continue to show the highest levels of overweight and obesity between 1997 and 2013. Since 2007, black individuals have demonstrated the greatest increase in overweight and obesity, followed by white individuals.

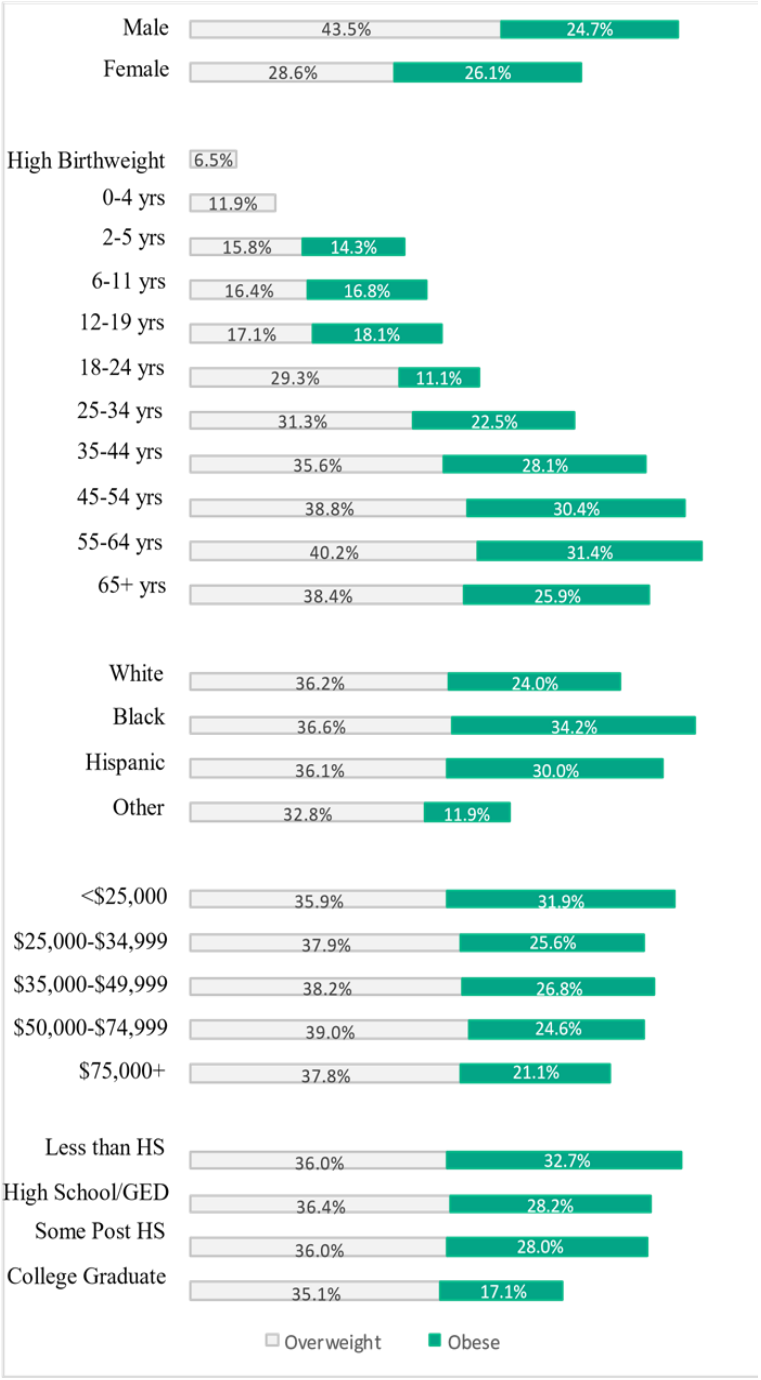
Age

Individuals between the ages of 45 to 64 years of age continue to demonstrate the highest rates of overweight and obesity.

In 2013-2014, one third (33.4%) of children 2-19 were overweight or obese with 2.4% classified under obese class III (BMI greater than 40).

Gender

Although overweight and obesity percentages among adult New York men (68.2%) and women (54.7%) are lower than the national averages for males and females; the prevalence rate of overweight and obesity in NYS mirrors the national trends.

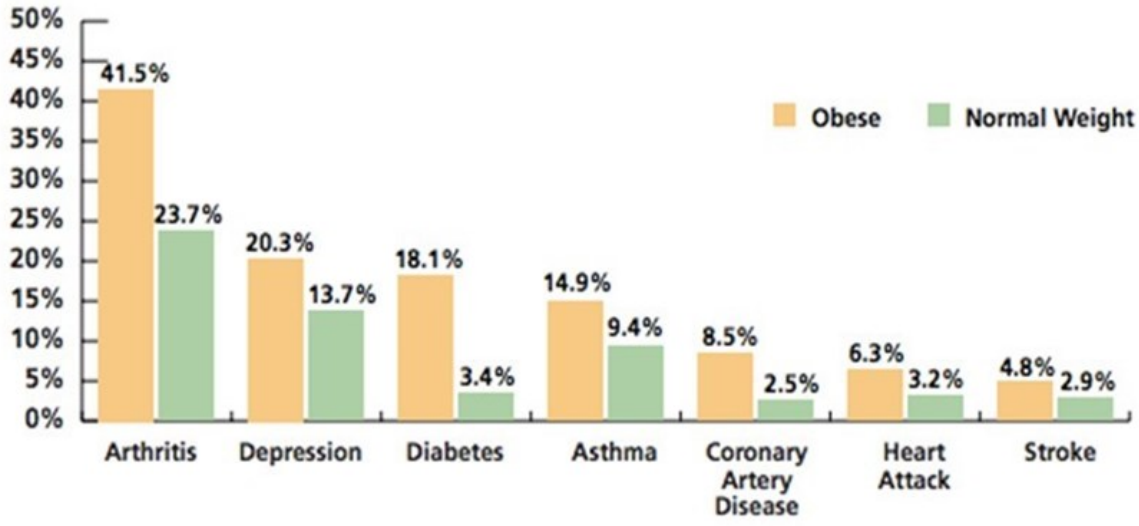


Source: Center for Disease Control and Prevention Behavioral Risk Factor Surveillance System Survey Data 2013-2014; CDC's Pediatric Nutrition Surveillance Report 2011.

Health Outcomes - NYS

The increased risk of obesity-related disease can be considerable. The Excellus Blue Cross/ Blue Shield Fall 2015 report entitled Overweight, Obesity, and Related Health Risks and Costs, Upstate New York, 2013-2014 highlighted the increased risk of certain diseases relative to a individuals weight. (Table 2)

In an Excellus Blue Cross Blue Shield (BCBS) report (The Facts About, Fall 2015), 18.1% of individuals in Upstate New York who were overweight or obese were diabetic compared to 3.4% of the population who were a healthy weight. Similar health disparities exist for other adverse health conditions such as heart disease, arthritis, and stroke (Table 2).



Source: Excellus Blue Cross Blue Shield The Facts About: Overweight and Obesity Rates Among Upstate New York Adults, Fall 2015.

Table 3: Estimated Medical Costs Attributable to Obesity (2012 Dollars In Millions)						
States (rank)	**Total Costs related to obesity (millions)**	**Medicare obesity-related costs (millions)**	**Medicaid obesity-related costs (millions)**	**% Medicare obesity-related costs**	**% Medicaid obesity-related costs**	**% Medicaid/ Medicare obesity-related costs**
California (1)	15,223	3,429	2,884	22.5%	19%	41.5%
New York (2)	**11,114**	**2,738**	**4,013**	**25%**	**36%**	**61%**
Texas (3)	10,262	2,346	821	23%	8%	31%
State Ave.*	2,897	684	495	24%	17%	41%

*Source: Adapted from Finkelstein EA, Khavjou OA, Thompson H, Trogdon JG, Pan L, Sherry B, Dietz W. Obesity and severe obesity forecasts through 2030. American Journal of Preventive Medicine 42.6 (2012):563-70. *State average includes the District of Columbia*

Health Care Costs in New York

When comparing New York State (NYS) to national averages, New York State ranked second highest in the United States in medical expenditures for adult-related obesity health issues, with spending estimated at approximately $11.1 billion in 2012 (Finkelstein et al., 2012). More staggering is that in New York State, approximately 61% of the estimated medical costs attributed to obesity are covered by Medicaid and Medicare. Of the three states with the highest total costs, NYS's percentage of Medicaid/Medicare obesity related costs is almost double that of California and Texas combined (Finkelstein et al., 2012).

The estimated aggregate health care costs in the Utica/Rome/North Country Region, which includes Madison County, attributed to obesity and overweight prevalence totaled $424 million in 2013-2014 (Excellus BCBS, Fall 2015).

According to the Trust for America's Health 2016 report, the state health budget, per capita (2014-2015) is $94.90 for New Yorkers compared to $33.50 for the U.S., ranking NY number 6 for the highest medical costs per capita associated health factors, including obesity.

Prevention Agenda 2013-2018

In 2013 the New York State Department of Health released its strategic plan to address health issues in New York State. The plan entitled *Prevention Agenda 2013-2018: New York State's Health Improvement Plan* outlines goals and focus areas within five specified action plans targeted toward improving the health of New Yorkers and reducing health disparities within the population (State of New York Department of Health, 2013).

Under the Prevent Chronic Diseases Action Plan, the first focus area deals with reducing obesity in children and adults. The four goals within this focus area were defined as 1) Create community environments that promote and support healthy food and beverage choices and physical activity, 2) Prevent childhood obesity through early childcare and schools, 3) Expand the role of health care and health service providers and insurers in obesity prevention, and 4) Expand the role of public and private employers in obesity prevention. A series of intervention strategies were developed, including, but not limited to:

- Adopt hospital policies to support use of healthy, locally grown foods in cafeteria and patient meals
- Site businesses with access to transit, walking and bicycling facilities, and develop workplace facilities and incentives that encourage active commuting

- Use public service announcements to promote healthy eating, physical activity, and breastfeeding
- Identify emerging best practices
- Create linkages with local health care systems to connect patients to community preventative resources
- Assist in the development of nutrition education standards
- Promote opportunities for availability of healthy foods
- Increase local and State parks infrastructure repairs and improved park operations
- Advocate for restriction of marketing of unhealthful products to kids.

These are just a few of the interventions proposed to address the focus on reducing child and adult obesity in New York State. A full list of the interventions and activities can be found at *www.health.ny.gov/prevention/prevention_agenda/2013-2017*. In addition, the following programs were highlighted by the New York State Department of Health to further address obesity prevention in community, child care, school, and health care settings *(http://www.health.ny.gov/prevention/obesity/prevention_activities/):*

Just Say Yes to Fruits and Vegetables

The JSY program is a comprehensive nutrition education and obesity prevention program. Using nutrition education workshops, food demonstrations and environmental strategies to improve access to healthier foods and physical activity, JSY helps to ensure low-income families in New York eat nutritious foods, make the most of their food budgets and prepare foods safely. Workshops provide practical nutrition information using USDA approved lesson plans, recipes and cooking demonstrations focusing on fruits and vegetables and low-fat ingredients.

Eat Well Play Hard

The goal of Eat Well Play Hard (EWPH) is to prevent childhood overweight and reduce long term risks for chronic disease by encouraging healthy eating and increased physical activity. EWPH strategies and messages are incorporated target low-income families and their children ages 2 years and older.

Designing a Strong and Healthy New York (DASH-NY)

DASH-NY is a statewide coalition and works with partners from such sectors as transportation, agriculture, economic development, planning, education, academia, and health care, to develop sustainable policy, systems and environmental changes and strategies for reducing the burden of obesity and chronic disease. DASH-NY provides policy analysis, training, technical assistance, and support for sustainable changes that increase access to healthy food and safe places to be physically active for communities, schools, child care and health care across New York State.

Woman Infant Children (WIC): Supplemental Nutrition Program

The WIC Program provides supplemental food, participant-centered nutrition education and counseling, breastfeeding support, and linkages with health and social services for eligible low-income women and children to improve pregnancy outcomes, promote optimal growth and development for infants and children, and influence lifetime nutrition and health behaviors. NYS has developed many initiatives that assist WIC participants in achieving healthier lifestyles and contribute to decreasing overweight and obesity.

Steps to a Healthier NY

Steps to a Healthier NY is part of a national program developed by the Department of Health and Human Services and administered by the Centers for Disease Control and Prevention (CDC), highlighting the influence of healthy lifestyles and behaviors on reaching and maintaining good health. In New York, two counties are the focus of Steps activities: Broome and Rockland. The Steps Program applies community-driven initiatives to reduce the problems related to 3 chronic diseases; obesity, diabetes and asthma.

The NYSDOH provides educational and informational materials for parents and childcare professionals including:

- Preventing Childhood Obesity: Tips for Child Care Professionals
- Preventing Childhood Obesity: Tips for Parents
- BMI Screening Tools
- Choose Low-fat or Fat-free Milk

In the January 7, 2009 State of the State address, the Governor unveiled a five-point plan to fight obesity. His proposal included:

- The Healthy Food/Healthy Communities Initiative, which offers a new revolving loan fund that will increase the number of healthy food markets in underserved communities.
- Banning trans fats in restaurants;
- Requiring calorie posting in chain restaurants;
- Banning junk food sales in schools;
- Placing a tax on sugared beverages like soda.
    - ◊ The $404 million this tax would raise would go toward public health programs, including obesity prevention programs, across New York State.

Although some of the programs like Healthy Food and Healthy Communities continue to run, others like the trans fat and junk food ban in schools were not followed through on for the county. Since 2009, there has been national or state legislation passed concerning calorie posting and a sugared beverage tax, which has set a standard for Madison County to follow.

The Governor rolled out the Healthy Steps to Albany Initiative in five cities in February 2009 to encourage children to eat right and exercise. Healthy Steps to Albany was a contest that challenged New York State middle school students to increase their physical activity by competing with each other to walk approximately four million steps in six weeks. A total of 270 classes from Albany, Buffalo, Yonkers, Syracuse, and Rochester participated in the six week program. Combining all the cities, the participating students walked over 1.4 billion steps during the Healthy Steps program.

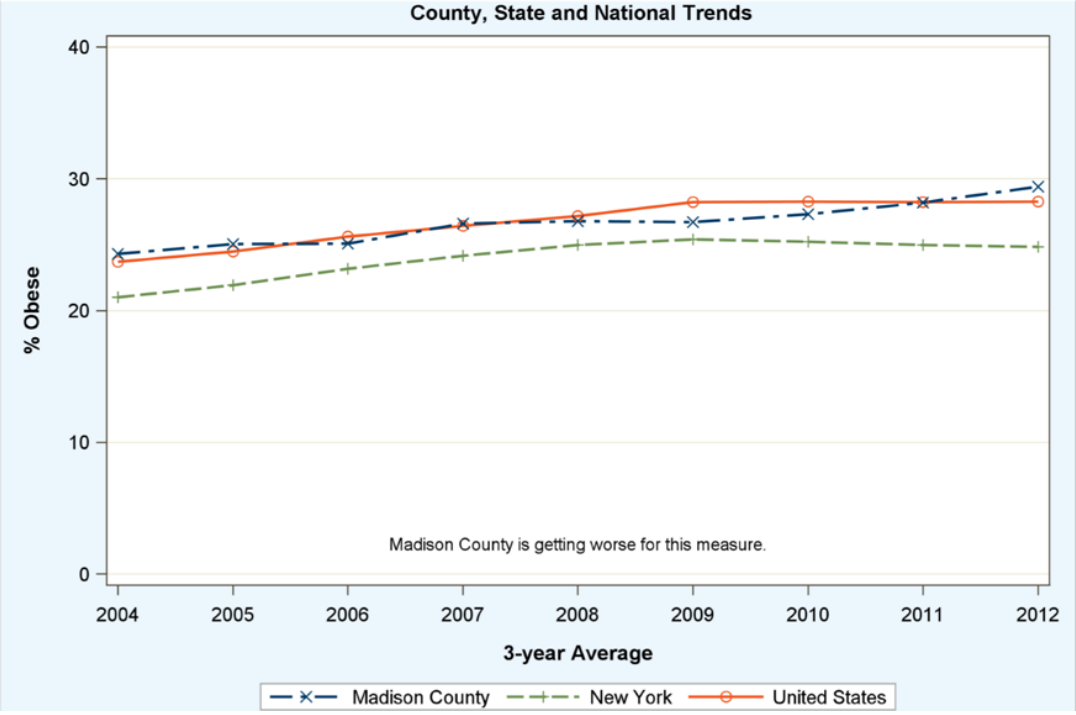
Overweight and Obesity in Madison County

Overweight and obesity is on the rise in Madison County, demonstrating rates similar to those observed in New York State and the Nation (New York State Department of Health, Madison County: Health Risks and Behavior Indicators, 2011-2013). Adult overweight and obesity data for Madison County is derived from a state-wide Behavioral Risk Factor Surveillance System survey whereby participants self-report their height, weight, leisure time, and other relevant information. Obesity represents an ongoing identified health issue for Madison County.

The 2005 Madison County Community Health Needs Assessment report first identified obesity in adults and children as a local public health concern in Madison County, and introduced objectives targeted at unhealthy behaviors related to diet and exercise

Building off this, the 2009 Improvement Planning Report for Madison County identified healthy weight as one of the top three concerns needing to be addressed.

This report presents the most recent information on overweight and obesity for Madison County and is derived from existing state sources and from both formal and informal local, data collection efforts.



Source: County Health Rankings and Roadmaps, Hamilton, NY (2016)
Web site www.countyhealthrankings.org/app/new-york/2016/rankings/madison/county. Accessed 5/25/16.

Madison County 2013

Demographic Characteristics

A recent national report indicates that the prevalence of obesity in Madison County continues to rise with 32.9% of Madison County adults obese in 2013, up from 23.5% in 2003. (Expanded BRFSS 2013-2014).

Age

In 2013, 64.3% of adults age eighteen and older were overweight or obese ranking Madison County as 33rd out of 57 for the prevalence of overweight and obesity among New York State counties, excluding New York City (a rank of 1 has the lowest prevalence of overweight and obesity).

Approximately 35.3% of children between the ages of 2 to 4 in Madison County are overweight or obese placing the County in the bottom 25% of the counties in New York State.

Amongst our youngest children 0 to 5 years of age we tend to have children who are heavier than their peers from other counties.

Birth Weight

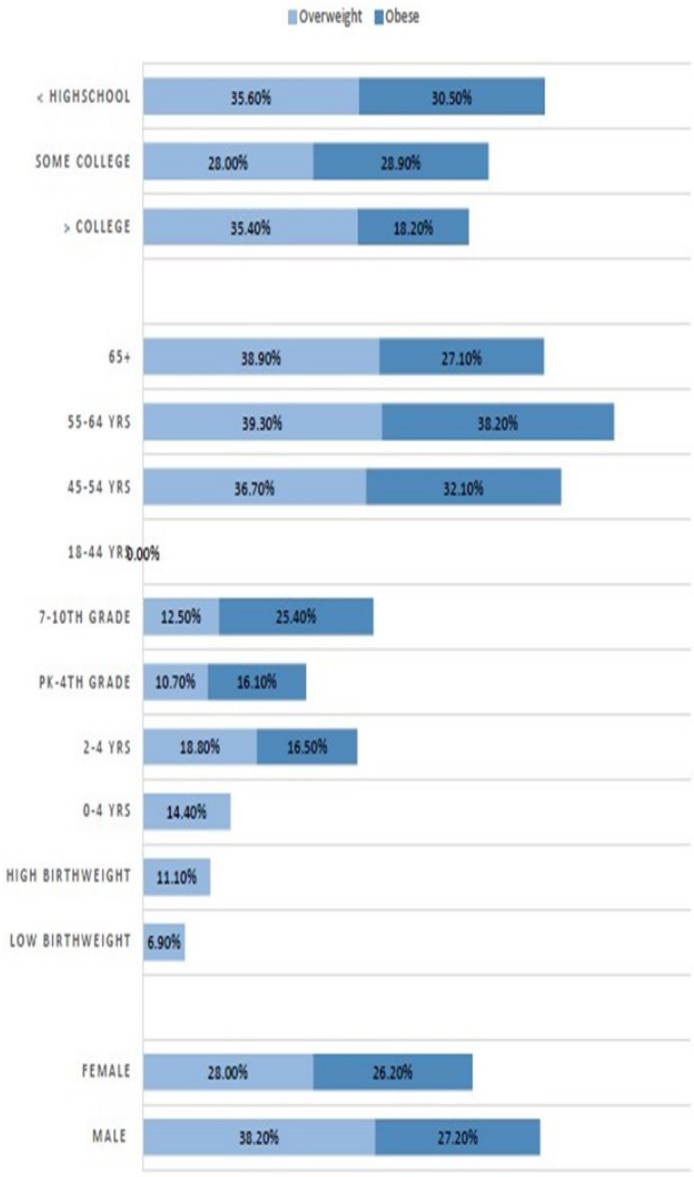
Between 2009 and 2011, 11.1% of the babies born in Madison County demonstrated high birth weights, ranking Madison County 59th out of 63 counties on this issue.

Gender

Almost 65.4% of adult men in Madison County are overweight or obese, compared to 54.2% of adult women.

Education

Individuals who have completed at least some college education demonstrate a lower prevalence of overweight and obesity.



Source: CDC: Expanded Behavioral Risk Factor Surveillance System from NYSDOH, 2008-09 and 2013-14, Center for Disease Control and Prevention 20092011 Pediatric Nutrition Surveillance, New York, and Student WSC Reporting Survey Results (county level) 2008-10.

Table 4: Selected Health Risks and Behaviors Indicators Madison County - 2013-2014				
Indicator	**3 Year Total**	**County Rate**	**NYS Rate**	**NYS Rate excluding NYC**
% Pregnant Women in WIC Who Were Pre-pregnancy Overweight (BMI 25 - 29), Low SES (2010-12)	**315**	**23.0**	**26.6**	**26.3**
% Pregnant Women in WIC Who Were Pre-pregnancy Very Overweight (BMI Over 29), Low SES (2010-12)	**432**	**31.5**	**24.2**	**28.0**
Expanded BRFSS Madison County (2013)	**County Rate**	**CI***	**NYS Rate**	**County Rank**** 1 = best, 57 = worst
% adults that participated in leisure time physical activity in last 30 days	**66.4**	**9.4**	**72.9**	**51st**
% adults eating 5 or more servings of fruit or vegetables daily	**22.6**	**8.6**	**27.1**	**50th**
% adults reporting physician diagnosed diabetes	**9.5**	**3.4**	**8.9**	**25th**
% adults reporting physician diagnosed heart attack, angina or stroke	**9.1**	**4.6**	**7.6**	**45th*** **

** = 95% confidence interval for Madison County data*

*** = Percentage compared to scores for other localities (single or multi-county percentages).*

**** = Four way tie for 45th (with Chautauqua, Seneca, and Saratoga)*

Source: CDC: Expanded BRFSS 2013-2014 Health Indicators – Madison County – accessed NYSDOH web site on 5/25/16 www.health.ny.gov/statistics/brfss/expanded/2013/county/docs/madison.pdf

WIC NYS Pregnancy Nutrition Surveillance System 2010-2012—Madison County—accessed NYSDOH website on 5/26.16 www.health.ny.gov/statistics/chac/indicators/mih.htm

Over half (54.5%) of pregnant women certified for WIC are overweight or obese, i.e., with a BMI≥ 25 (WIC PNSS Report, 2012).

In 2013, adults in Madison County are less likely to eat the recommended number of servings of fruits and vegetables when compared to the NYS and National averages. (Table 4)

The percentage of physician diagnosed diabetes among adults in Madison County (9.5%) is now higher than the State level of 8.9%.

For heart attack, angina or stroke, the percent of adults (9.1%) diagnosed with these conditions in Madison County is higher than the State percentage of 7.6%. The Madison County locality ranked in the bottom 50% as 45th out of 57 localities. (Table 4)

Madison County was in the top 10% for health outcomes in 2016, ranking 6th out of 62 counties. However, for health behaviors, including overweight and obesity, the rank dropped to 33 out of 62 (County Health Rankings and Roadmaps—Madison County, 2016).

In 2014, Madison County students in grades 7 through 12 identified a variety of activities and the length of time spent on these activities that they might engage in during non-school hours. According to the survey, just under two-thirds (63%) of the students spend two or more hours watching television, playing video or computer games; and over half of them (53%) spend two or more hours online. Both areas show a slight decrease in time spent doing these activities from the 2003 and 2007 surveys (Madison County, Teen Assessment Project, 2014).

The Madison County Living Well Partnership (LWP) was a public/private member group that promoted healthy living by encouraging families to eat well and be physically active. The LWP worked in partnership with state agencies on grant-funded projects including "Eat Well Play Hard" (EWPH). The goal of the EWPH project was to prevent childhood overweight by partnering with community organizations to implement programs, policies and environmental changes targeting children age two to ten and their families in Madison and Herkimer Counties. Oneida Healthcare is now sponsoring the event during August of each year since the dissolution of the LWP several years ago.

The Madison County Rural Health Council has recently convened a "Live Well" committee, which reunited many of the Living Well Partnership members, to focus on introducing more activity opportunities, such as the Monday Mile in areas of the county identified with the highest childhood obesity rates.

Child Obesity Prevalence Project

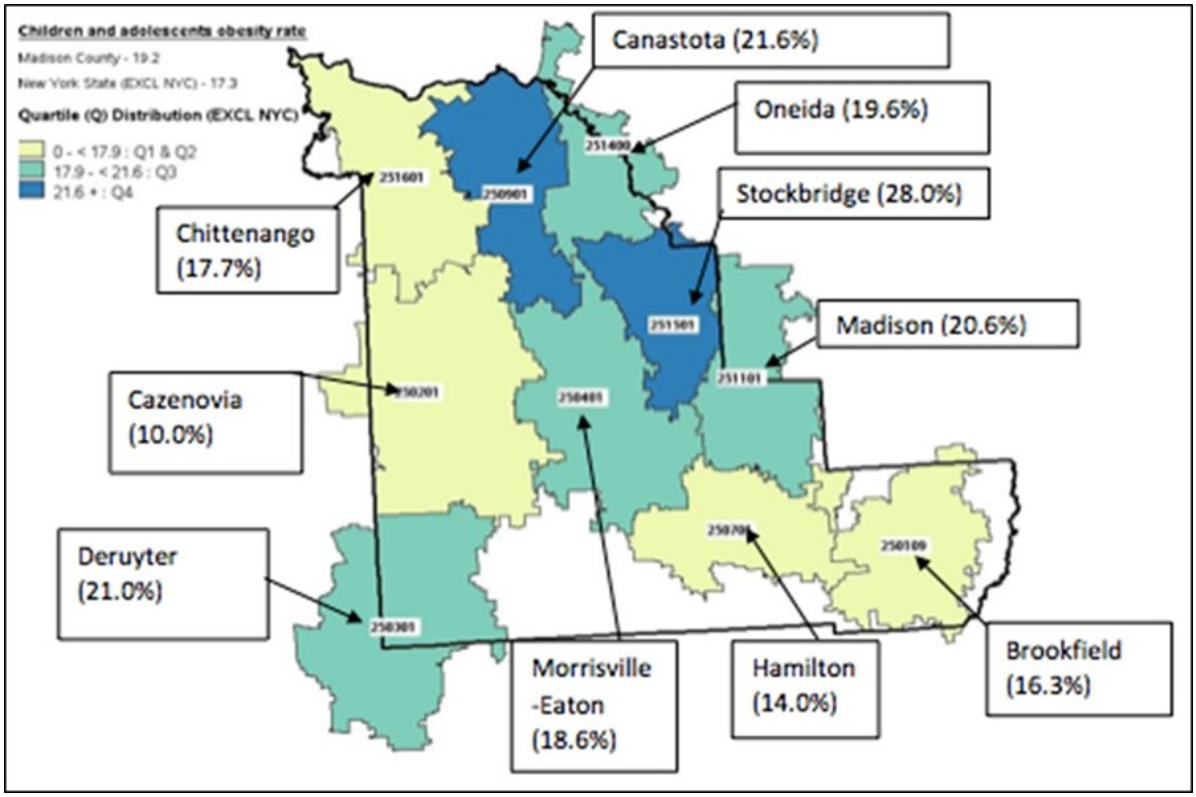
Locally, as well as at the state and national levels, virtually no data existed on the prevalence of overweight and obesity for children and adolescents between the ages of 5 and 18 years until 2010.

Beginning in the 2008-2009 school year, New York State requires schools to report student's body mass index (BMI) as part of the student's health record. (State of New York. Senate-Assembly Bill S.2108-C.A. 4308-C, R.R., 24 January 31, 2007). Data from the Student Weight Status Reporting Survey is collected and reported on the NYSDOH's Health Data NY site every two years. These measurements provide each county with a baseline to monitor childhood overweight and obesity prevalence rates.

Through a collaborative partnership between the Madison-Oneida BOCES, the Morrisville State College's Baccalaureate Nursing Program, and the Madison County Department of Health, a comprehensive prevalence study on childhood obesity was performed within the local school districts in 2009.

Height and weight measurements for children between Pre-K and twelfth grade were measured and BMI values calculated among students from participating public schools. A report from the first phase of testing, released in 2010, indicated that 37% to 45% of Madison County youth age 2-19 were overweight or obese. This number is above the 2010 national average indicating an area of concern for the community.

Percent of Madison County Students who are Obese, by School District (2012-2014)



Student Weight Status Category Reporting Survey 2010-2012."Community Health: Percentage obese—all students." New York State

Cost to Madison County

Determining an accurate picture of the medical health care costs attributable to obesity for Madison County is difficult and complex, requiring additional research and analytical efforts that are beyond the scope of this report. However, it is possible to generate a rudimentary understanding of the potential medical care costs attributed to obesity in Madison County by looking at the County's Medicaid expenditures.

In the previous issue of this report (2008) we estimated that the medical care costs attributed to obesity would constitute roughly ten percent (10%) of the State's total Medicaid expenditures. In 2015, Madison County's total Medicaid expenditures were $108 million (NYSDOH Medicaid Statistics Reports for 2015). For Madison County, ten percent of the total Medicaid expenditures would result in medical care cost attributable to obesity of approximately $10.8 million.

Madison County contributes a local share of approximately 9.8% towards the total costs to cover the Medicaid expenditures allocated to the County (L. Silkowsky, telephone correspondence on June 15, 2016). Therefore, in 2015, the estimated local share of the medical costs for obesity to the County would be approximately $1,058,400.

Likewise, Medicare costs related to obesity were estimated to be approximately 25% of the total medical costs for New York State (Table 3). Applying the same percent to Madison County expenditures results in Medicare costs related to obesity of approximately $15.1 million.

Defining Overweight & Obesity

Obesity is defined as an excessively high amount of body fat or adipose tissue in relation to lean body mass, (Stunkard AJ & Wadden TA, 1993). Overweight refers to increased body weight in relation to height, which is then compared to a standard of acceptable weight (Stunkard & Wadden, 1993). The National Institute of Health developed a standard measurement of obesity called the Body Mass Index or BMI. The BMI is a measure of weight in relation to height, which correlates with the total body fat content for the majority of individuals. BMI is a useful tool in identifying and screening for greater health risks among individuals. Higher BMI's are generally associated with greater health risks ("Healthy Weight", 2015).

BMI is just one indicator of potential health risks associated with being overweight or obese. The National Heart, Lung, and Blood Institute Overweight and Obese guidelines (2012) recommend looking at two other predictors:

- The individual's waist circumference (because abdominal fat is a predictor of risk for obesity-related diseases).
- Other risk factors the individual has for diseases and conditions associated with obesity (for example, high blood pressure or physical inactivity).

The use of BMI as a primary measure of obesity has its limits. For instance, BMI does not distinguish between fat and muscle, and traits of different people, i.e., men versus women, and therefore, should not be used as a stand alone indicator of body fatness or an individuals health ("Healthy Weight", 2015).

Although these issues exist, BMI still represents one of the best methods for population assessment of overweight and obesity. Because a BMI calculation requires only height and weight, and for children - age, it is inexpensive and easy to use for clinicians and for the general public. Furthermore, the use of BMI allows people to compare their own weight status to that of the general population.

For adults 20 years old and older, BMI is interpreted using standard weight status categories that are the same for all ages and for both men and women. Table 5 depicts the standard weight status categories associated with BMI ranges for adults.

Table 5. Adult Weight Status Categories

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0—34.9	Obese Class I
35.0—39.9	Obese Class II
≥ 40.0	Obese Class III

Source: "Adult Overweight and Obesity" CDC, 2016; www.cdc.gov/obesity/adult/defining.html.

For children and teens, 2 to 19 years of age, the BMI number is calculated the same way as it is for adults, however the criteria used to interpret the meaning of the BMI number for children and teens are different from those used for adults. For children and teens, BMI age- and sex-specific percentiles are used.

There are two reasons for this different approach:

- The amount of body fat changes with age.
- The amount of body fat differs between girls and boys.

As a result, the interpretation of BMI is both age- and sex-specific for children and teens. The CDC BMI-for-age growth charts take into account these differences and allow translation of a BMI number into a percentile for a child's sex and age. Weight status for the child is determined based on the where their percentile falls within a categorized percentile range (Table 6). For example, if the BMI of an child/teen is between the 85th and 95th percentile for age and sex, the person is considered overweight. An individual at or above the 95th percentile can be considered obese.

BMI-for-age weight status categories and the corresponding percentiles for individuals 2 to 19 years of age, are shown in Table 6.

Table 6. Weight Status Categories Ages 2 -19

Weight Status Category	Percentile Range
Underweight	Less than the 5th percentile
Healthy weight	5th percentile to less than the 85th percentile
Overweight	85th to less than the 95th percentile
Obese	Equal to or greater than the 95th percentile

Source: CDC, 2008; http://www.cdc.gov/nccdphp/dnpa/healthyweight/index.htm.

Aspects of Overweight & Obesity

In general, a variety of factors play a role in overweight and obesity. This makes it a complex health issue to address. This section will look at several of the more prominent factors that may have an effect in causing people to be overweight and obese.

These factors include:

- What and where we eat
- Lack of physical activity
- Social and demographic determinants
- Genetic predisposition
- Our communities and built environment
- Public awareness
- Legislation and policy
- Health insurance
- Social Determinants of Health

What and Where We Eat

A change to our food consumption and nutritional practices over the years has coincided with the rise in obesity. The cost of food in the U.S. has reached an all time low, while the abundance and variety of food choices has grown significantly. This change in the affordability and availability of food, healthy or not, drives increased consumption, aiding in current obesity levels (Strum & An, 2014).

The United States Healthful Food Council reported that the average American buys food or beverages from restaurants 5.8 times a week, spending half of their food dollars eating out (2016). These away from home meals tend to be larger in their portion size and on average higher in overall calories (Cohen & Story, 2014). In today's society, unlike in the past, we are able to obtain substantial amounts of energy dense foods with little physical exertion or effort (Friedman JM, 2003; Hill JO, Wyatt HR, Reed GW & Peters JC, 2003). During the 2011-2012 survey period, each day over 30% of American children consumed some type of fast food (NCHS Brief: Caloric Intake from Fast Food, 2015).

Our consumption patterns in the U.S. of fruits & vegetables, i.e., 5 or more servings per day remained relatively unchanged over the last decade. Approximately 76% of Americans eat too little fruit, 87% eat too few vegetables (Perrine et al., 2015). Minor improvements have been made over the last few years, but there is still a large amount of room for improvement. In New York State the percent of adults who consumed five or more fruits and vegetables a day rose from 25.8% in 2003 to 27.1% in 2013-2014 (CDC, BRFSS 2013-2014).

The standards for what constitutes a healthy diet have become unclear for many as the message has changed over time. In 1997 only 1% of all U.S. children regularly ate diets that resembled those portrayed in the USDA Food Pyramid guidelines (Munoz et al., 1997). However, since then this version of the food pyramid, which highlighted cereal grains and reduced fat intake, by the 2010 Dietary Guidelines committee findings indicated protein and balanced fats should be the focus of the diet (Layman, 2014).

Among US students in grades 9th–12th. 20 percent ate the recommended number of serving of fruits, a number which has decreased since 1999, and only 14.8% consumed the recommended amount of vegetables per day (Youth Risk Behavior Surveillance (YRBS), US 2015). Despite a decrease in fruits and vegetables, snacking is a growing trend among youth; with a 20% rise since the late 1970s in the amount of youth having at least one snack a day (NHANES: What We Eat in America, 2011).

The growing consumption of sugar sweetened beverages, particularly soda, has fueled poor nutritional habits. Soda, with its high caloric content and low nutritional value, has replaced juice and milk as the drink for children. Soda consumption is associated with increased calories and sugar; 50% of an adults daily recommended intake of sugar coming from soft drinks (NHANES: What We Eat in America, 2011). Within the school setting for instance, soda company "pouring rights" contracts and cafeteria fast food offerings limit healthy food choices; thereby further exacerbating poor eating behaviors. "Pouring rights" contracts involve large payments to school districts and additional compensation over a five to ten year period for the exclusive sale of their beverages in vending machines and at school events (Obesity in Onondaga County: A Community's Call to Action, 2004). Currently it is estimated over half of the nation's public elementary and middle schools, along with 80% of public high schools, are involved in these contracts (Philpott, 2012).

Lack of Physical Activity

Sedentary lifestyles are on the rise and are associated with up to a 50% increase in the risk of all-cause mortality (Wilmot, 2012). Diabetes showed the greatest predictive association with high inactivity, increasing an individuals risk by 112% compared to people with very active lifestyles (Wilmot, 2012).

People of all ages benefit from regular physical activity as significant health benefits are obtained through a moderate daily amount of physical activity (USDHHS: Physical Activity Guidelines, 2008). Examples of a moderate level of physical activity are 30 minutes of walking, or raking leaves, or vacuuming.

Approximately 75% of New York State adults engaged in moderate physical activity for 30 or more minutes five or more days a week, while Madison county adults had a slightly lower participation of about 66.4% (CDC: BRFSS 2013-2014). As may be expected, activity decreases with age, and sufficient activity is less common in women and among those with lower incomes and education levels (Office of the Surgeon General—Step it Up!, 2015).

In 2008, the U.S. Department of Health and Human Services (HHS) issued the 2008 Physical Activity information and guidance on the types and amounts of physical activity that provide substantial health benefits with a focus on reducing the risk of chronic disease and promoting health-related fitness. The Guidelines take a lifespan approach and provide recommendations for three age groups: Children and Adolescents, Adults, and Older Adults. The amount of physical activity an adult gets every week was separated into four categories: inactive, low, medium, and high (Table 7).

The new guidelines modified previous CDC/ACSM guidelines for the amount of moderate physical activity a person should engage in from the "30 minutes on 5 days a week" to "150 minutes a week in various ways." The midcourse report on Strategies for Youth (2012) built on the current guidelines through recommending specific practices to increase physical activity among teens and children.

In 2015, 48.6% of U.S. students in grades 9–12, were physically active for a total of 60 minutes or more per day on five or more of the past seven days. New York state demonstrated a slightly lower level of activity with only 41.8% of high schoolers participating in at least 60 minutes of exercise on 5 days (YRBS, U.S. 2015).

Table 7. Classification of Total Weekly Amounts of Aerobic Physical Activity into Four Categories

Levels of Physical Activity	Range of Moderate-Intensity Minutes a Week	Summary of Overall Health Benefits	Comment
Inactive	No activity beyond baseline	None	Being inactive is unhealthy.
Low	Activity beyond baseline but fewer than 150 minutes a week	Some	Low levels of activity are clearly preferable to an inactive lifestyle.
Medium	150 minutes to 300 minutes a week	Substantial	Activity at the high end of this range has additional and more extensive health benefits than activity at the low end.
High	More than 300 minutes a week	Additional	Current science does not allow researchers to identify an upper limit of activity above which there are no additional health benefits.

Source: USDHHS 2008 Physical Activity Guidelines for Americans.

Lack of Physical Activity

Nationwide, 29.8% of students went to physical education (PE) classes 5 days in an average week when they were in school (YRBS-US, 2015). Only one out of 5 New York high schoolers attended PE classes daily (YRBS-US, 2015).

The percentage of US students who attended PE classes daily decreased during 1991– 1995 (41.6%–25.4%) and then did not change significantly during 1995–2015 (25.4%–29.8%) (YRBS-US 2015).

Nationwide, 51.6% of students in grades 9th

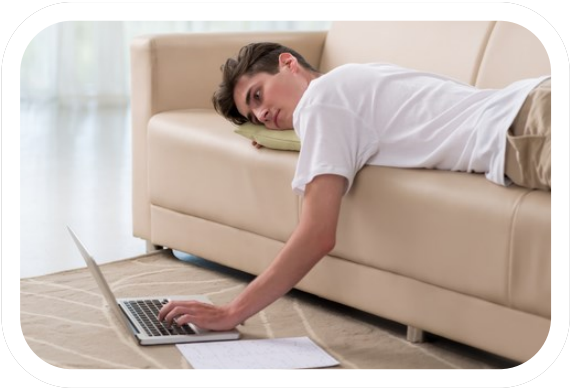
-12th grades, went to PE classes on one or more days in an average week when they were in school (i.e., attended PE classes) (YRBS-US, 2015). Despite new programs and the focus on childhood obesity there has been no change in daily PE participation since 1991 (YRBS-US, 2015).

Nationwide, 41.7% of students played video or computer games or used a computer for something that was not school work for 3 or more hours per day on an average school day (i.e., used computers 3 or more hours per day) (YRBS-US, 2015).

Nationwide, 24.7% of students watched television 3 or more hours per day on an average school day (YRBS-US, 2015).

Although the percentage of high schoolers watching 3 or more hours of television a day has significantly decreased from 42.8% in 1999 to 24.7% in 2015, the amount of teens using a computer for 3 or more hours has almost doubled in the past 12 years from 22.1% in 2003 to 41.7% in 2015 (YRBS-US, 2015).

In a study by LeBlanc et al. (2015) it was found that while girls tend to lead more sedentary lifestyles, boys typically have higher levels of screen time. Unhealthy eating habits have been linked to increased screen time, however, higher sedentary lifestyles were not associated with poor diet (LeBlanc et al., 2015). Changes to the environment (i.e. removing computers or televisions from bedrooms) and behavior (i.e. focusing on outdoor recreation time) are necessary to reducing the risk of chronic diseases, including obesity. (LeBlanc et al., 2015).



Social & Demographic Determinants

Although obesity effects all aspects of society, it does not effect all groups equally, creating health disparities in certain populations. Obesity is present in almost 48% of black adults, compared to 42.6% in Hispanic adults, and 34.6% in white adults (CDC: BRFSS—U.S. 2013-2014).

Wealthier, more educated individuals usually lead healthier lives and maintain better diets. Among households below 130% of the poverty level, 20% of children are obese, compared with 12% from households at or above 350% of the poverty level (NCHS Brief: Obesity and Socioeconomic Status in Children and Adolescents, 2010).

Low income adults, regardless of whether they were in the Supplemental Nutrition Assistance Program (SNAP), met almost none of the healthy food and nutrient guidelines as their diets revolved around excess processed meat, sweets, bakery desserts, and sugary beverages (Leung et al., 2012).

Maternal obesity poses a significant risk to the health and safety of both the mother and child (Oteng-Ntim et al., 2012). Obesity in the post partum period puts infants at risk of developing obesity and other chronic conditions in early childhood. Breastfeeding for a full year is important for reducing the risk of childhood obesity, as well as in conferring added health benefits to the mother and child, yet only half of all infants receive any breast milk by the six month mark (Perrine et al., 2015).

In addition to proper nutrition and adequate exercise, the social and psychological environment contribute to the risk of obesity.

Physical, emotional, sexual, and general abuse in childhood were all associated with increased risk of adult obesity, especially when the abuse was considered severe (Hemmingsson et al., 2014).

Communities with lower pedestrian danger index scores, had higher levels of walk ability, demonstrating the importance a community's environment has on active transportation (Slater et al., 2016).

As pointed out by the Obesity Society, "the social consequences of being obese and overweight are serious and pervasive". The stigma and bias generally associated with being overweight or obese, i.e., ridicule and stereotyping, or physical barriers, such as the size of airplane or amusement ride seating, may extend into forms of discrimination within schools and the workplace, as well as have a direct negative impact on the quality and utilization of health care services (Facts About Obesity, www.obesity.org/information/weight_bias.asp).

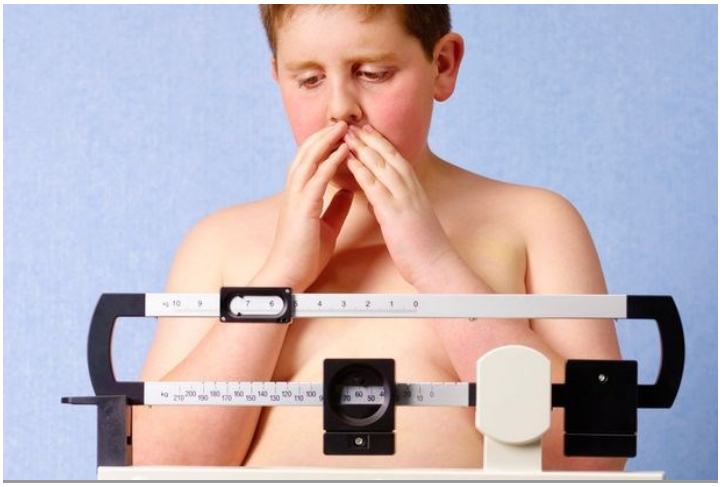
As a result of such biases, providers tend to spend less time, respect and communicate less, over-attribute health conditions to obesity, and/or perform fewer interventions when seeing overweight patients (Phelan et al., 2015).

Individuals that are overweight and obese are therefore less likely to seek medical care, delay medical appointments that may cause them excess stress, or disregard the advice and instruction given by the provider (Phelan et al., 2015). About one in three patients who saw a physician in the last year were asked to do or continue doing physical activity.

Obese patients were twice as likely to receive exercise recommendations than healthy weight patients (NCHS Brief: Trends in Adults Receiving a Recommendation for Exercise or Other Physical Activity, 2012).

Social & Demographic Determinants

Nearly one third of youth have misperceptions about their weight, with weight status misperception higher among boys. Roughly 81% of overweight boys and 71% of overweight girls, along with 48% of obese boys and 36% of obese girls, perceive themselves at about a healthy weight (NCHS Brief: Perception of Weight Status in U.S. Children and Adolescents, 2014).



Genetic Predisposition

Understanding the genetic influence and contribution to the obesity epidemic is challenging on account of the complex interactions of genes, environment and lifestyle. Although we tend to hear more about the influence of the environment and lifestyle choices on obesity, it appears a person's underlying genetic composition may affect their ability to maintain a healthy weight. Studies conducted on identical twins demonstrate a high correlation on body mass index, especially among boys as girls were subject to higher levels of environmental influences during adolescence (Dubois et al., 2012). Walley et al. (2006) found obesity is a highly transmissible trait with heritability estimates around 0.70 compared to other disorders like hypertension (0.29 heritability) and depression (0.5 heritability). Children of obese parents have a higher risk of weight issues, some of which may stem from a genetic predisposition.

Unfortunately, there does not appear to be a "smoking gun" or single gene that can be used to explain this hereditary relationship. A meta analysis performed by Locke et al. (2016) identified 97 genome wide loci associated with body mass index (BMI) that account for 2.7% of the variation in an individuals BMI. The study also concludes common variation across the entire genome may account for up to 21% of the variation in BMI. Variations in these genes along with variations in environmental and behavioral influences, and their interactions further add to the complexity of understanding the role of genetics in the issue of obesity.

Our Communities & Built Environment

Where we live and how we design the communities in which we live may impact the prevalence of obesity among our residents. Our increasing dependence on the automobile together with planning and zoning policies and practices has turned our communities into environments that discourage physical activity and limit dietary choices.

Zoning and other conventional land development codes control the physical form of communities. They classify land uses (residential, commercial, industrial, and agricultural) and regulate building activities.

In the hunt for privacy and space, many communities have become sprawled to a point which requires individual motorized transportation. Compact areas, which are those areas with higher population and employment density, are associated with increased active transportation (walking and cycling) and lower BMIs found in a study done by Ewing et al.(2014).

Community design practices often present barriers to physical activity, contributing to increased risk for obesity, and certain chronic diseases. Barriers include, but are not limited to, the absence of sidewalks/bike lanes, heavy traffic, lack of parks or recreation facilities, long distances, and high levels of crime (Sallis et al., 2012).

The “neighborhood food environment” refers to the availability of healthy foods within a community and how easily residents can access those foods. There is a growing understanding that barriers to accessing healthy foods play a role in poor dietary decisions. However, only increasing access to healthy food has not been shown to significantly impact an individual’s diet or BMI (Cummins, et al., 2014), but when done in concert with other initiatives such as communities designed for active living, then it contributes to positive impacts.

Nationwide, one out of seven households are food insecure at some point during the year (Franklin et al., 2012). "Food insecurity is limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways." (Definitions are from the Life Sciences Research Office, S.A. Anderson, ed., "Core Indicators of Nutritional State for Difficult to Sample Populations," The Journal of Nutrition 120:15575-1600S, 1990.). Previously food insecurity had been related to higher levels of obesity, but new information suggests there are other confounding factors, and only low to moderate levels of food insecurity are associated with higher BMIs (Franklin et al., 2014).

A recent study demonstrated that residents living in neighborhoods with better walking environments and availability of healthy foods were associated with lower body mass index (Mahasin S et al., 2008).

Rural America, once seen as being synonymous with robust health now leads the way in the obesity epidemic. Research conducted since 2000 has consistently concluded that adults and children living in rural areas demonstrate a higher levels of obesity compared to their urban counterparts (Befort et al., 2012). The studies also show that in addition to being at increased risk for obesity and overweight, rural Americans are also at increased risk of poverty, are less likely to have health care, are less likely to have

Our Communities & Built Environment

healthy diets, and have lower levels of physical activity (Burton et al., 2013). Overall, children living in rural areas are about up to 50 percent more likely to be overweight or obese than children living in metropolitan areas (Burton et al., 2013).

According to a report by the National Advisory Committee on Rural Health and Human Services (2015), "Children living in rural communities are more likely than their non-rural peers to experience health problems....". The report identifies additional factors that contribute to this disparity including; limited coverage by Medicaid for preventive services, a lack of SNAP eligibility; geographic isolation; a lack of transportation; availability of nutritious foods ("food deserts"), limited opportunities for physical activity, and lifestyle changes.

Furthermore, rural communities still face those factors similar to those confronted by more urban communities, which include: the struggle against the effects of marketing of unhealthy foods to children; the overabundance of and easy access to calorie dense foods; and the overall trend of less active lifestyles.

Much of the research and evaluation on obesity prevention efforts has focused on solutions that work best in urban and suburban communities and may be difficult to implement, or are not as effective in rural areas. Many rural communities are spread out over large distances, making sidewalk implementation, mixed-use development, and public transportation prohibitively expensive on a community-wide basis. The distance and time it takes residents to travel from their homes to schools and other facilities may also challenge the success of after-hours community programs.

In recent years there has been a growing movement away from traditional zoning ordinances and land development codes, rules and policies, which have encouraged sprawling, automobile-reliant development patterns, towards the concept of smart growth and healthy communities (DASH–NY, 2010). Health considerations, including; whether farmers' markets and community gardens are permitted uses; where fast food establishments locate; reduced automobile use; and the construction of places that are more attractive to pedestrians and cyclists, are embedded within the smart growth concept and present opportunities to enhance the built environment and improve overall health.

Built Environment

Defined broadly to include land use patterns, the transportation system, and design features that together provide opportunities for travel and physical activity. Land use patterns refer to the spatial distribution of human activities. The transportation system refers to the physical infrastructure and services that provide the spatial links or connectivity among activities. Design refers to the aesthetic, physical, and functional qualities of the built environment, such as the design of buildings and streetscapes, and relates to both land use patterns and the transportation system.

Source: Saelens, B.E. and Handy, S.L. "Built Environment correlates of walking: A review." Medicine and Science in Sports and Exercise 40.7 supplemental (2008): S550.

Public Awareness

Most Americans are unaware of all the chronic disease linked to obesity and their severity. In a survey, only 7% identified obesity as a risk factor of cancer, 15% linked obesity to arthritis, and only 5% correctly associated excess weight to respiratory issues (Neergaard & Agiesta, 2013).

Parents surveyed also underestimated childhood obesity with only 12% identifying their child as overweight even though current data places the number over 30% (Neergaard & Agiesta, 2013). Though the issue balances between private and public, a holistic community approach is often the suggested model. The 2015-2020 Dietary Guidelines for Americans states everyone should have a role in creating a healthier home, work, school, and community environment.

The wealth of advertising campaigns marketing unhealthy food items increases the preference and intake of foods high in fat and carbohydrates, especially among already overweight children (Boyland & Halford, 2012).

To address the influence advertising has on our behavior and the subsequent choices we make, the Institute of Medicine issued a 2006 report advocating that the food and beverage industries and restaurants should encourage healthier diets for children and youth through advertising, and should work with the government, interest groups, and schools to improve marketing practices. A review of this report in 2013 showed only limited to moderate success in reducing the presence and power of unhealthy advertisements. The lack of support and ever-expanding media platforms to reach youth are two of the main struggles the campaign faces (Institute of Medicine, 2013).

Legislation & Policy

Obesity, along with nutrition and physical activity, represents a central issue for public health law (Chronic Disease State Policy Tracking System, nccd.cdc.gov/CDPHPPolicySearch/Default.aspx). The climbing costs and dramatic increases in obesity among children have caught the attention of state lawmakers leading to the introduction of numerous legislative initiatives over the last decade. Since 2001, state lawmakers across the United States have proposed 4,443 legislative or regulatory policies concerning obesity in both children and adults, with over a quarter of these still enacted (1,612). Nation-wide, only 12 policies were proposed in 2015, with New York State contributing 4 of the 12. The new state policies cover a variety of topics such as menu labeling, sweetened beverage taxes, BMI reporting in schools, breastfeeding rights, and trans fat reduction (Chronic Disease State Policy Tracking System, nccd.cdc.gov/CDPHPPolicySearch/Default.aspx).

Strong regulatory action is in part absent in the United States due to powerful lobbying from food and beverage companies, the ideology that obesity is a private, individual problem, and the wide range of environments these policies would have to police (Kersh and Elbel, 2015).

Federal Farm Policy

Over the years government supported subsidies, marketing assistance programs, special taxation, farm credit system, market regulations, commodity programs, and trade policies have lead to lower prices and the overproduction of certain food commodities such as wheat and corn. As a result, farm policy has been criticized for subsidizing the overproduction of ingredients used to build processed, energy dense food, containing increased levels of sugar, fat, and high fructose corn syrup, which can be sold at low prices than healthier options (Franck et al., 2013).

Federal Programming

Federal food programs and federal farm policy influence the consumption patterns of the American public. The United States Department of Agriculture, Food and Nutrition Services provides children and low-income people access to food, a healthful diet, and nutritional education through several Nutrition Assistant Programs (USDA-FNS www.fns.usda.gov/fns/services.htm, 7/11/2016). FNS Programs include:

- Supplemental Nutrition Assistance Program: As of Oct. 1, 2008, Supplemental Nutrition Assistance Program (SNAP) is the new name for the federal Food Stamp Program. SNAP provides low-income households with electronic benefits they can use like cash at most grocery stores. SNAP provides crucial support to needy households and to those making the transition from welfare to work. State agencies administer the program at State and local levels, including determination of eligibility and allotments, and distribution of benefits. SNAP helps low-income people and families buy the food they need for good health. SNAP can be used to buy healthy foods, but these foods cost more and are less available, hence, there is no incentive in the program for the purchase of healthier foods.

Legislation & Policy

- The Women, Infants and Children (WIC) Program: WIC supplies supplemental food, health care referrals, and nutrition education to low-income pregnant, postparum and breastfeeding women, and infants and children up to age 5 who are at nutrition risk. WIC is a federally funded pro-gram, administered through state grants to pay for WIC foods, nutrition education, and administrative costs.
- The WIC Farmers' Market Nutrition Program (FMNP): FMNP is associated with the Women, Infants and Children program. The FMNP was established by Congress in 1992, to provide fresh, unprepared, locally grown fruits and vegetables to WIC participants, and to expand the awareness, use of and sales at farmers' markets. Women, infants (over 4 months old) and children that have been certified to receive WIC program benefits or who are on a waiting list for WIC certification are eligible to participate in the FMNP. A variety of fresh, nutritious, unprepared locally grown fruits, vegetables and herbs may be purchased with FMNP coupons. State agencies can limit sales to specific foods in order to encourage FMNP recipients to support the farmers in their own States. In New York State, the Division of Agriculture and Markets administers this program.
- School-based Nutrition Programs: The National School Lunch Program is a federally assisted meal program operating in public and non-profit private schools and residential child care institutions. It provides low-cost or free lunches to children each school day. In 1998, Congress expanded the National School Lunch Program to include reimbursement for snacks served to children in after school educational and enrichment programs to include children through 18 years of age. Most of the support USDA provides to schools in the National School Lunch Program comes in the form of a cash reimbursement for each meal served. In addition to cash reimbursements, schools are entitled by law to receive commodity foods, called "entitlement" foods, at a value of 23.25 cents for each meal served in Fiscal Year 2012-2013. Schools can also get "bonus" commodities as they are available from surplus agricultural stocks. At the state level, the National School Lunch Program is usually administered by state education agencies, which operate the program through agreements with school food authorities.
- The School Breakfast Program: The School Breakfast Program operates in the same manner as the National School Lunch Program. Generally, public or nonprofit private schools of high school grade or under and public or nonprofit private residential child care institutions may participate in the School Breakfast Program. School districts and independent schools that choose to take part in the breakfast program receive cash subsidies from the U.S. Department of Agriculture (USDA) for each meal they serve. In return, they must serve breakfasts that meet Federal requirements, and they must offer free or reduced price breakfasts to eligible children.
- The Summer Food Service Program (SFSP): The SFSP provides free, nutritious meals and snacks to help children in low-income areas get the nutrition they need to learn, play, and grow, throughout the summer months when they are out of school. Children 18 years and younger may receive free meals and snacks through SFSP. Meals and snacks are also available to persons with disabilities, over age 18, who participate in school programs for people who are mentally or physically disabled.

Legislation & Policy

- The Emergency Food Assistance Program (TEFAP): Under TEFAP, commodity foods are made available by the U.S. Department of Agriculture to States. States provide the food to the local agencies they have selected, usually food banks, which in turn, distribute the food to soup kitchens and food pantries that directly serve the public. Each State sets criteria for determining what households are eligible to receive food for home consumption. Income standards may, at the State's discretion, be met through participation in other existing Federal, State, or local food, health, or welfare programs for which eligibility is based on income.
- Child and Adult Care Food Program: Child and Adult Care Food Program (CACFP) is authorized to provide meals and snacks to adults who receive care in nonresidential adult day care centers, meals to children residing in emergency shelters, and snacks and suppers to youths participating in eligible after school care programs. CACFP is administered nationally by the USDA Food and Nutrition Service, and by the Department of Health at the state level. The NYS Department of Health contracts with various community based agencies to sponsor CACFP programs in their service area, and these sponsors contract with family day care homes and day care centers interested in providing meals through CACFP. CACFP providers receive reimbursement for breakfasts, lunches, suppers and snacks that that meet federal nutrition requirements.
- The Senior Farmers' Market Nutrition Program (SFMNP): SFMNP is a program in which grants are awarded to States, to pro-vide low-income seniors with coupons that can be exchanged for eligible foods at farmers' markets, roadside stands, and community supported agriculture programs.
- Commodity Supplemental Food Programs (CSFP) CSFP which works to improve the health of low-income elderly people at least 60 years of age by supplementing their diets with nutritious USDA commodity foods. It provides food and administrative funds to States to supplement the diets of this group. As of February 6, 2014 women, infants, and children are no longer eligible for this program, however, those that were receiving benefits will continue to be supported until their eligibility expires. Local agencies determine the eligibility of applicants, distribute the foods, and provide nutrition education. Local agencies also provide referrals to other welfare, nutrition, and health care programs such as SNAP, Medicaid, and Medicare.

New York State Legislation

Though New York has introduced a high percentage of policies surrounding obesity, nutrition, and physical activity, only 13 have been enacted since 2010 (Chronic Disease State Policy Tracking System, nccd.cdc.gov/CDPHPPolicySearch/Default.aspx). One of the highlighted priorities of the laws passed in the last 5 years has been local food procurement to increase access to healthy foods for both children and adults. In 2013, a community gardens task force was initiated to manage and increase the number of gardens across the state, especially in low-income areas with high obesity rates (SB 2372). Collaborative implementation of the Childhood Obesity Prevention Program between the Department of Education and the Department of Health was another 2013 enacted policy which centered around the development of farm to school products (SB 2438).

Since 2006 New York State law prohibits the sale in public schools of: soda, water ices, gum, hard candy, jellies and gummies, marshmallow candies, fondants, licorice, spun candy and candy-coated popcorn from the beginning of the school day until the end of the last scheduled meal period in all parts of the building. A public school cannot sell or serve soda or candy of any type in the student store or

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from a machine located anywhere in the building, including the faculty lounge, before the last lunch period ends. However, in a comparison of state policy standards and USDA nutrition recommendations, New York falls short in almost every policy application (Snack Foods and Beverages in New York Schools, 2015). In an attempt to remedy some of these nutrition gaps, legislation introduced in 2015 aimed to establish nutrition standards for youth in restaurant venues and to place a $0.01 per fluid ounce tax on sugar sweetened beverages sold anywhere in the state (Chronic Disease State Policy Tracking System, nccd.cdc.gov/CDPHPPolicySearch/Default.aspx).

WIC Program nutritionists specify quantities and types of nutritious foods to eligible participants as part of what is called a "food package." WIC checks are then issued to purchase the prescribed items. Participants redeem the checks at approved WIC supermarkets and grocery stores.

A comprehensive revision to the prescribed food packages was made during March of 2014 to reflect updated information on nutrition science and new Institute of Medicine recommendations. Child vouchers were increased in monetary value and whole grains, vegetables, and fruits were promoted in the new food packages (USDA-FNS www.fns.usda.gov/fns/services.htm).

Along with the WIC programs targeted toward helping mothers, a 2013 regulation required all New York State employers to provide the opportunity and space for child performer breastfeeding. This is in addition to the existing Breastfeeding in the Workplace Accommodation Law of 2007 which guaranteed women the right to pump milk at work for up to three years after childbirth (Chronic Disease State Policy Tracking System, nccd.cdc.gov/CDPHP PolicySearch/Default.aspx).

A considerable number of proposed bills are currently in the New York State legislature that address obesity and related issues. Appendix B contains a summary table of the proposed bills.

Health Insurance

Obesity's impact on health-related economic cost to U.S. business is significant, representing about 10 percent of total medical care costs (Kleinman et al., 2014). Employees and employers are paying considerably more in healthcare costs than in previous years with roughly $8.7 billion spent annually in excess healthcare costs for overweight and obesity in New York State (The Facts About, 2015). The rise in overweight and obesity across the nation, and in particular among our nation's workforce contributes to these growing costs now and into the future. As body mass index (BMI) increased in the adult workforce, productivity significantly decreased while the number of sick days and healthcare costs increased (Kleinman et al., 2014).

With the hunt for a solution to the growing obesity epidemic underway, bariatric procedures were recently shown to be more effective in reducing weight and other related conditions than non-surgical treatments; however, these surgical procedures come at a much higher cost (Gloy et al., 2013). Treatments and combination of treatments that include drugs, surgery, and behavior therapy will drive significant healthcare cost increases. These additional costs only compound the growing healthcare expenditures faced by employers, cutting further into their profits and forcing business leaders to look adversely on continued employee healthcare spending.

The cost savings realized through prevention is understood by health insurance providers to the extent that they are capitalizing on this opportunity by providing incentives for physicians to counsel patients on the negative impacts of being overweight in order to prevent unhealthy behaviors from progressing into significant health threats. Under the Affordable Care Act, obese adults are protected against premium surcharges for being overweight and high costs for some preventive services like screening and counseling for children and adults (Cauchi, 2016).

Most New York insurance policies offer some coverage of bariatric surgery, but many do not reimburse for nutritional counseling (Cauchi, 2016).

Health insurance can be grouped into two broad categories, public insurance and private insurance. Public insurance includes programs such as Medicare, Medicaid, and State Children's Health Insurance Programs (SCHIP).

Public Plans

Medicare reimburses for an annual check-up but does not currently reimburse for anti-obesity care. Should a secondary condition develop, e.g. diabetes, Medicare will cover individuals by reimbursing physicians and hospitals for supplies and services. Specifically Medicare covers a portion of self-testing equipment including glucose testing monitors, blood glucose test strips, and other blood sugar testing supplies. Medicare also covers some of the necessary diabetic prescription medications, including insulin (Medicare Preventive Services, www.cms.hhs.gov).

Medicaid covers therapeutic depth-inlay shoes, custom-molded shoes and shoe inserts for people with diabetes. Medicaid also covers diabetes services including: self-management training; nutrition therapy services for patients referred by a doctor; flu and pneumoccocal pneumonia vaccinations; glaucoma screening once every 12 months; and referrals for more information.

Medicaid and SCHIP, federal/state partnership programs administered by the states, vary in accordance with state-specific initiatives. Programs must meet both federal and state guidelines. In general, supplies and services provided are similar to those provided to Medicare beneficiaries (Medicare Preventive Services, www.cms.hhs.gov).

Health Insurance

Private Plans

Private insurance is often provided through employers who have contracted with local insurance companies to provide a package of services for their employees. In addition, some individuals may be able to purchase individuals may be able to purchase private insurance local insurance from local insurance companies. Insurance companies are beginning to include programs in their policies that will incentivize and reward subscribers for engaging in healthy activities. A subscriber must prove they have attended fitness classes at an approved fitness facility and will be reimbursed at a prescribed rate for completion of activities.

Plans allow for routine annual doctors visits, during which health concerns associated with being overweight or obese may be discussed. Once a patient has developed secondary health conditions associated with being overweight or obese, e.g. diabetes, treatment of those conditions is often covered by the plan.

The nature of a private health insurance plan allows members to choose a plan that caters to their needs within an appropriate price range. While these plans may vary vastly, a basic health insurance package may include an annual check-up, specific health screenings and potential referrals for nutrition

Strategies & Recommendations

Madison County offers a favorable environment for healthy living. Several initiatives are currently underway in the county to prevent or reduce obesity, but more work needs to be done. Taking further action to address overweight and obesity will have profound effects on increasing the quality of life and eliminating health disparities in Madison County.

To adequately address the issue of obesity, the public health response will require a multi-faceted approach and involve individuals and organizations, at all levels, working together in a concerted effort. Recognizing that a comprehensive approach to the problem is necessary, the report outlines key domain areas that have the most influence on developing conditions that support healthy choices and behavior change.

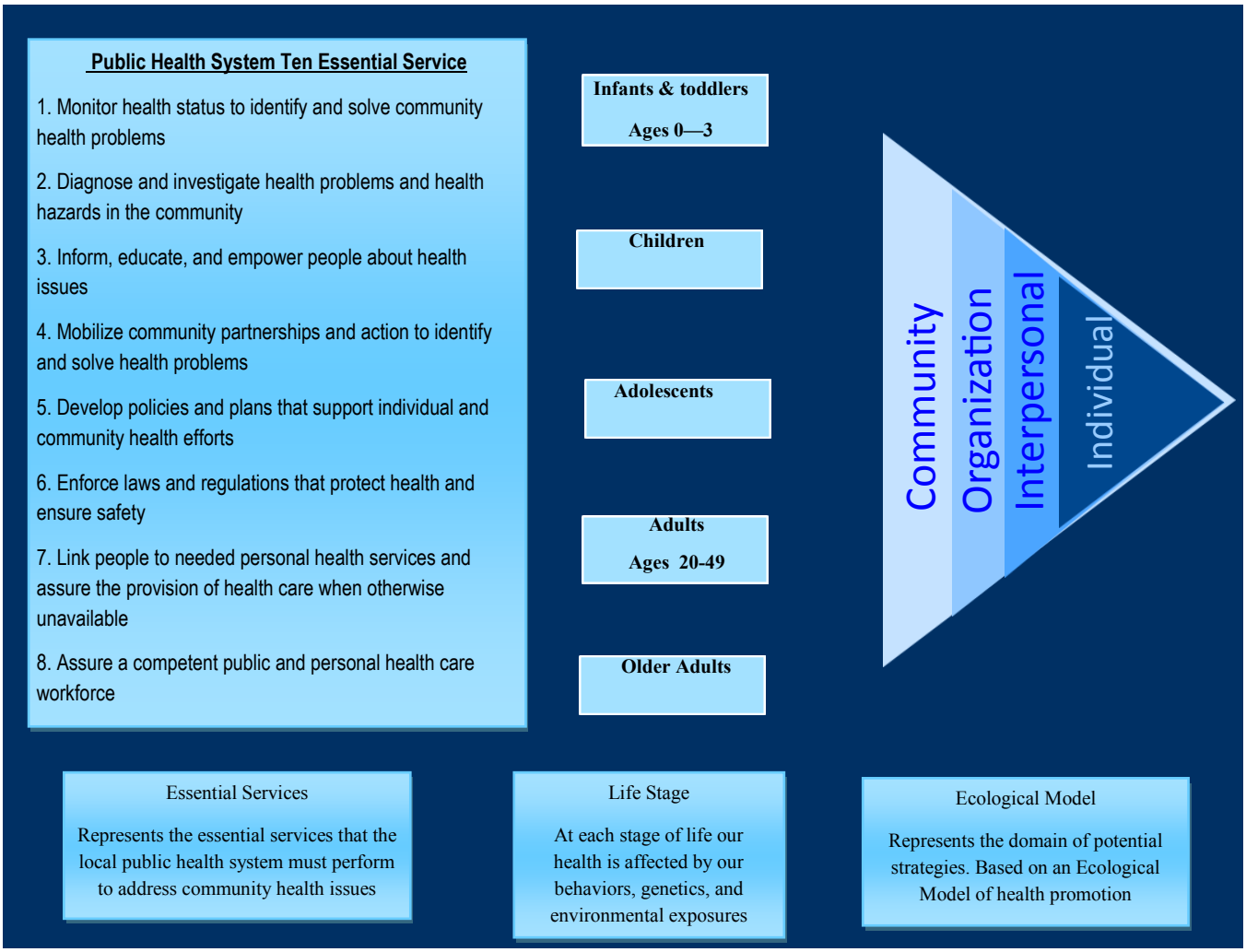
Overweight & Obesity Strategic Construct

The key domain areas and subsequent strategies developed for this report are based on a strategic construct (Figure 3) that incorporates three components in its design. The first part of the construct is based on the Essential Public Health Services. The Essential Public Health Services (Essential Services) provide the fundamental framework describing the public health activities that should be undertaken in all counties and communities (CDC & Office for State, Tribal, Local, and Terri-torial Support, 2014). In essence, the Essential Services represent those services that the local public health system needs to perform to ensure conditions in which people can be healthy. By applying the Essential Services to the issue of obesity, we are able to ask questions such as "how well is the local public health system performing these services in regards to obesity?" or more specifically, "Who is charged with monitoring the status of obesity in Madison County, and how is that done?"

The second component of the construct encompasses a life stage approach (Healthy People 2020—Nutrition, Physical Activity, and Obesity Across the Life Stages). Many of the health issues we face later in life result from the accumulated effects of our behavioral choices, our genetic predisposition, environmental and social conditions, and illnesses and injuries that occur, or that we are exposed to over the course of our lives. For example, affecting positive change in dietary practices among pregnant women will reduce the risk of obesity and other health issues that may arise later on in the life of the child (Oteng-Ntim et al., 2012). The life stage approach, when used in conjunction with the Essential Services allows us to further identify possible gaps in services, or opportunities for intervention. For instance, we can ask "How do we educate and inform children about proper nutrition and physical activity?"

The third component of the construct involves an ecological model for health (Health.gov—2015-2020 Dietary Guidelines for Americans). The ecological model focuses on the environmental changes, behaviors and policies that help individuals make healthy choices in their daily lives. The foundation of the ecological model is the concept that behavior does not change in a vacuum and that a supportive environment is necessary for individuals to make healthy choices. This model takes into account the physical and social environments and their relationship to people at individual, interpersonal, organizational and community levels.

The construct provides a framework for the strategies and recommendations that were derived from national guidelines and strategies (e.g., Healthy People 2020, 2008 Physical Fitness Guidelines) evidence-based public health practice, regional reports, local initiatives.



A Call to Action

This plan calls for every person in Madison County to join the fight against obesity. The recommended strategies are based on population-based interventions that promote healthy growth and development among children and adolescents and support healthy weights among adults. The following section presents the strategies within key domain areas along with examples of promising local programs that address obesity for each domain:

- Individual/Interpersonal
- Organizations & Institutions
  - Healthcare systems and providers
  - Schools
  - Adult care, childcare, preschools, and before and after-school providers
  - Businesses and Worksites
  - Community-based organizations, faith-based organizations and youth organizations
- Community
  - County, town, city, and village governments
  - Health Promotion & Marketing

The strategies suggested in this plan are not meant to be all-inclusive. Community partners are encouraged to develop additional strategies for the prevention of obesity based on their experience, abilities and communities.

Individual/Interpersonal

Addressing obesity begins by changing individual behaviors as they relate to eating and physical activity. Interpersonal groups, e.g., family, friends, and social clubs, are an important way to encourage more healthful behaviors, giving individuals knowledge and support they need to make good nutrition and physical activity choices.

- Implement a healthy eating plan that emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products, includes lean meats, poultry, fish, beans, eggs, and nuts, and is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.
- Set personal goals for physical activity – e.g., a brisk walk in the neighborhood with friends for 45 minutes 3 days a week and walking to lunch twice a week.
- Develop knowledge to attain goals. Know and understand the issue of obesity, proper nutrition and physical activity and related issues. Simple ways to enhance your knowledge include:
  - Read the Nutrition Facts label on foods
  - Check serving sizes and calorie levels
  - Skill building in parenting, meal planning, and behavioral management
  - Learn about the types and amount of physical activity needed to attain personal goals
  - Using a pedometer to track walking
  - Seek advice from your health care provider
  - Learn more about the behaviors associated with risky and healthy eating and exercise habits on the internet by visiting such sites as the Madison County Department of Health www.healthymadisoncounty.org), NY State Dept. of Health (www.health.state.ny.us) and the Centers for Disease Control & Prevention (www.cdc.gov).
- At the store, plan ahead by buying a variety of nutrient-rich foods for meals and snacks throughout the week.
- When grabbing lunch, have a sandwich on whole-grain bread and choose low-fat/fat-free milk, water, or other drinks without added sugars.
- In a restaurant, opt for steamed, grilled, or broiled dishes instead of those that are fried or sautéed.
- On a long commute or shopping trip, pack some fresh fruit, cut-up vegetables, string cheese sticks, or a handful of unsalted nuts—to help you avoid impulsive, less healthful snack choices.
- Limiting screen time (television, computer, etc.) for all family members to a maximum of two hours per day.
- When given the choice between walking or driving, choose walking, use the stairs instead of the elevator, parking further away from the store, or walk the kids home from school or activities.
- Adults – engage in physically active for at least 150 minutes of moderate-intensity aerobic physical activity (2 hours and 30 minutes) a week. Perform 10-15 minute sessions, several times a day —whether it's walking, playing with the kids, swimming, gardening, hiking, playing a sport, taking a fitness class, or another activity that you enjoy.
- Children and teenagers should engage in moderate to vigorous intensity physical activity for periods of time that adds up to 60 minutes (1 hour) or more each day.
- Parents - serve as good role models by practicing healthy eating habits and engaging in regular physical activity in order to instill lifelong healthy habits in their children. Provide children and adolescents with positive feedback.

Individual/Interpersonal

- Get a walking or exercise partner, or become part of walking groups, community dances, etc.
- For mothers with infants – breastfeed infant for up to one year, exclusively for the first 6 months if possible.
- Provide time for both structured and unstructured physical activity during school and outside of school.

Erin Garrison, 12, of Oneida runs through an obstacle course during the annual Eat Well Play Hard Family Fun Day held at Allen Park in the city of Oneida on Friday, Aug. 14, 2009. Photo from Oneida Dispatch.

Madison County
Eat Well Play Hard Family Fun Day

This coming August (2016), Oneida Healthcare will be sponsoring the fourteenth annual Eat Well Play Hard Family Fun Day. The purpose of the event is to teach parents and children the importance of healthy eating and an active lifestyle and to teach them the skills that will help them to be successful. Families can engage in outdoor activities that can be easily replicated at home, while also learning how to prepare delicious, healthy meals from local ingredients that everyone will enjoy.

The event has grown each year with participants filling Veteran's Field Park in the City of Oneida. Produce from local farms will be available for purchase. Other highlights include a Zumba class trial, healthy snacks, mini-golf, and other games. The Family Fun Day has come to be a well established and well attended event that has great community support.

Organizations & Institutions

Organizations and institutions include schools, places of employment, places of worship, and community-based agencies. Organizations can help members and clientele make better choices about healthful eating and physical activity through changes to organization policies and environments, services and programs, as well as by providing health information.

- Continue research on obesity prevention and weight reduction to confirm their effects on improving health outcomes.
- Include obesity prevention, screening and referrals in routine clinical practice and quality assessment measures.
- Use formative evaluation to assess the needs of high-risk populations in understanding "healthy weight". Routinely track body mass index (BMI) to assess overweight and obesity and define weight status.
  - The BMI should be used to classify overweight and obesity and to estimate relative risk for disease compared to normal weight.
  - The waist circumference should be used to assess abdominal fat content.
  - For adult patients with a BMI of 25 to 34.9 kg/m2, sex-specific waist circumference cutoffs should be used in conjunction with BMI to identify increased disease risks.
  - For children, aged 2-18 years, using gender-specific BMI-for-age-percentiles
  - For infants, aged 0-2 years using gender-specific weight-for-height percentiles
  - For pregnant women, using weight gain charts based on a woman's pre-pregnancy BMI
- Develop a family-centered, multidisciplinary curriculum based on best practices for teaching patients about obesity prevention and treatment.
- Promote breastfeeding, 30 to 60 minutes of daily physical activity, and consumption of a minimum of five fruits and vegetables a day in collaboration with organizations that target nutrition education outreach.
- Use evidence-based counseling and guidance to patients and parents about promoting a healthy weight and preventing overweight and obesity by healthy eating and physical activity.
- Develop effective preventive and therapeutic programs for obesity.
- Expand and implement culturally appropriate health education classes on exercise, nutrition, food shopping, meal planning, cooking and other areas that would increase patients' knowledge and skills to make healthy changes.
- Partner with businesses, government, associations of schools, faith communities and other organizations to finance healthcare provider activities including obesity screening and nutrition and physical education.
- Collaborate with the insurers, and other medical professional organizations, managed care programs and healthcare systems to provide incentives for maintaining healthy body weight.
- Collaborate with professional, medical and allied health organizations and community leaders to develop culturally-sensitive methods of discussing weight status and weight-related issues, especially with high-risk population groups.
- Collaborate with medical and other healthcare providers who use BMI to guide recommended weight gain during pregnancy using Institute of Medicine guidelines.
- Work with Medicaid and other healthcare providers to increase the use of counseling regarding nutrition, physical activity and appropriate weight gain during pregnancy.

Organizations & Institutions

and private payers for behavioral, nutritional, medical and surgical treatment of overweight and obesity.

- Work with medical and allied healthcare providers, educators and others to develop efficient ways to counsel individuals, families, and other caregivers about limiting television viewing and other recreational screen time (videos, computer or video games, internet, etc.) to no more than 1-2 hours per day (for persons two years and older) and discourage any viewing by children under two years (American Academy of Pediatrics Guideline).
- Encourage partnerships between health care providers, schools, faith-based groups, and other community organizations in prevention efforts targeted at social and environmental causes of overweight and obesity.
- Explore mechanisms that will partially or fully cover reimbursement or include as a member benefit health care services associated with weight management, including nutrition education and physical activity programs.
- Provide information to employees and patients about available programs in the community to help people learn how to manage their diets and increase physical activity, such as those coordinated by the Madison County Rural Health Council like the National Diabetes Prevention Program (NDPP) and Chronic Disease Self-Management Program (CDSMP).
- Review and evaluate the reimbursement policies of public and private health insurance providers regarding overweight and obesity prevention and treatment efforts.
- Include obesity prevention and screening in quality assessment measures for health insurers, health plans, and quality improvement and accrediting organizations.
- Analyze the cost-effectiveness data on clinical obesity prevention and treatment efforts and conduct further research where the data are inconclusive.
- Promote research on the maintenance of weight loss.
- Promote research on breastfeeding and the prevention of obesity.
    - Train health care providers and health profession students in effective prevention and treatment techniques for overweight and obesity.
- Consider the following training issues:
    - Use of BMI as a screening tool by medical providers to improve identification of children who are overweight and adults who are overweight or obese.
    - The importance of appropriate weight gain during pregnancy, based on Institute of Medicine guidelines
    - Skills related to nutrition, physical activity, and other life behaviors, consistent with accepted guidelines (e.g., Dietary Guidelines for Americans, 2008 Physical Fitness Guidelines)
    - Awareness of critical or high risk periods during the lifecycle for excessive weight gain and the development of overweight or obesity (i.e., pregnancy, infancy, early childhood, adolescence).
    - The burden of overweight and obesity on the health care system in terms of mortality, morbidity, and cost
    - Identification and reduction of barriers involving patients' lack of access to effective nutrition and physical activity interventions, and regarding the implementation of practice recommendations and policies to support obesity prevention and control
    - Effective ways to promote and support breastfeeding.
    - Patient counseling
- Foster and support conferences on obesity in the hospital setting.
- Identify, develop and provide resources to providers regarding best practices in identifying, monitoring,

Organizations & Institutions

and optimizing treatment of obesity-associated risk factors in provider settings, and to improve referral practices to local health departments, qualified nutrition professionals, rural health networks, and other community agencies for various complimentary services regarding nutrition, physical fitness and behavior counseling.

- Improve continuing education about breast-feeding to physicians, midwives, nurses, and dietitians.
- Increase training opportunities for certified lactation specialists.

Provide advocacy to:

- Classify obesity as a disease category for reimbursement coding.
- Assure that food assistance programs such as Women, Infants and Children (WIC) provide adequate vouchers for fruits and vegetables and other healthy foods that can be used at farmers' markets and other venues.
- Reform food labeling so that information can be easily understood by the public.
- Increase government resources to support healthcare and treatment of obesity.
- Increase availability of affordable, nutritious and safe foods to decrease hunger and reduce the tendency to fend off hunger with readily available, inexpensive, high-calorie foods that have little or no nutritional value.
- Create incentives for providers to allocate more time and resources towards obesity prevention and healthy weight maintenance.

Community Memorial Hospital
Spirit of Women Program

The Spirit of Women program, accessed through Community Memorial's website, celebrates women's health by providing a collection of information on female health topics for women of all ages. For each age, the program has compiled a list of specific check ups and tests women should be aware of. Additional information for specific diseases or health priorities, like cancer, neurology, and wellness are also provided. Under wellness, women can learn more about the importance of fitness, nutrition, sleep, and stress management, along with helpful tips on how to make these healthy lifestyle choices your own. The program also notes local community events that are beneficial to women and their health, such as free blood pressure screenings. To learn more about all that the Spirit of Women program offer visit: http:/www.communitymemorial.spirithealth.com.

Crouse Spirit of Women

Organizations & Institutions

Schools

- Adopt and implement a "Gold Standard" school wellness policy that includes the following provisions:
  - ○ Provide students with health education that addresses nutrition, physical activity and adoption of other obesity preventive lifestyle choices. Use sequential, skills-based and evidence-based curricula that include family involvement. Incorporate the parents in school-based wellness initiatives.
  - ○ Integrate obesity prevention content into the general education curriculum.
  - ○ Expand physical activity opportunities beyond state physical education requirements. Enhance health curricula to include reducing sedentary behaviors, specifically targeting television and other recreational screen use, and include a behavioral skills focus.
  - ○ Ban use of food as a reward/punishment.
  - ○ Adopt standards for cafeteria, other food outlets, vending machines and school stores that meet USDA Dietary Guidelines and state mandates.
  - ○ Develop guidelines for healthy fundraising.
  - ○ Eliminate on-campus advertising of high-sugar and high-fat foods and beverages.
  - ○ Encourage and support the creation of a staff development day.
  - ○ Assess nutrition, physical activity and other wellness policies and change following federal legislation requiring wellness policies (for schools participating in federal school meals program). (effective July 2006)
- Provide culturally and linguistically appropriate education on nutrition and physical activity to students, teachers, food service staff, coaches, nurses and parents at low or no cost to participants.
- Provide all students with physical education classes and other opportunities for physical activity during the school day to help children have at least 60 minutes per day of vigorous physical activity.
- Reduce or subsidize student fees related to school athletic activities, including the purchase of athletic uniforms and equipment.
- Establish school gardens and use the resulting produce in school meals.
- Improve access to and affordability of fresh fruits and vegetables in all schools.
- Partner with community agencies and healthcare providers to provide school-based counseling pro-grams that address the emotional needs of overweight children and their parents, eliminate related bullying at school, and direct children and families to resources where they can set and meet nutrition and fitness goals.
- Use school facilities outside of school hours for physical activity programs offered by schools and/or community-based organizations.
- Partner with businesses, government, faith communities and other organizations to finance school activities including wellness policies and nutrition and physical education.
- Continue to perform Student Weight Status Category Reporting Surveys (SWSC) on a regular basis to collect information on students' height, weight, and gender-specific BMI-for-age percentile; all data is to be reported to the DOH for monitoring and program planning purposes.
- Collaborate with schools of medicine, nursing, allied health and nutrition to improve nutrition education and health-promoting behavioral counseling skills taught to students and professionals.
- Work with local and state policymakers to develop and implement guidelines and policies to ensure that foods and beverages available in schools and/or childcare settings are consistent with nutritional guidelines, and support the goal of preventing excess energy intake among students, and helping students achieve energy balance at a healthy weight.

Organizations & Institutions

- Work with schools to increase the use of school-based media literacy programs.
- Develop and disseminate model nutrition and physical activity guidelines and policies for schools.
- Partner with organizations such as the Statewide Center for Healthy Schools, Childcare Coordinating Councils and the After-School Corporation to provide training and technical assistance in assessing and improving the nutrition environments in schools, childcare centers, and after-school programs.
- Educate parents, teachers, coaches, staff, and other adults in the community about the importance they hold as role models for children, and teach them how to be models for healthy eating and regular physical activity.
- Develop sensitivity of staff to the problems encountered by the overweight child.
- Provide food options that are low in fat, calories, and added sugars, such as fruits, vegetables, whole grains, and low-fat or nonfat dairy foods.
- Ensure that healthy snacks and foods are provided in vending machines, school stores, and other venues within the school's control.
- Prohibit student access to vending machines, school stores, and other venues that compete with healthy school meals in elementary schools and restrict access in middle, junior, and high schools.
- Provide an adequate amount of time for students to eat school meals, and schedule lunch periods at reasonable hours around midday.
- Provide daily recess periods for elementary school students, featuring time for unstructured but supervised play.
- Provide extracurricular physical activity programs, especially inclusive intramural programs and physical activity clubs.
- Conduct research on the relationship of healthy eating and physical activity to student health, learning, attendance, classroom behavior, violence, and other social outcomes.
- Evaluate school-based behavioral health interventions for the prevention of overweight in children.
- Develop an ongoing, systematic process to assess the school physical activity and nutrition environment, and plan, implement, and monitor improvements.
- Conduct research to study the effect of school policies such as food services and physical activity curricula on overweight in children and adolescents.
- Evaluate the financial and health impact of school contracts with vendors of high-calorie foods and beverages with minimal nutritional value.
- Conduct research on the relationship of healthy eating and physical activity to student health, learning, attendance, classroom behavior, violence, and other social outcomes.
- Evaluate school-based behavioral health interventions for the prevention of overweight in children.
- Develop an ongoing, systematic process to assess the school physical activity and nutrition environment, and plan, implement, and monitor improvements.
- Conduct research to study the effect of school policies such as food services and physical activity curricula on overweight in children and adolescents.
- Evaluate the financial and health impact of school contracts with vendors of high-calorie foods and beverages with minimal nutritional value.

Organizations & Institutions

Model Nutrition Policy for Schools

Broome County Steps Partners Collaborate to Increase Healthier Options on School Menus

Broome Tioga BOCES in partnership with the Broome County Steps program and in concert with many other community partners, brought together food service directors from 15 school districts in Broome and Tioga counties under one menu plan to provide healthier meal options to students in the school cafeteria.

This initiative includes a county-wide food bid system, which allows for higher quality, more nutritious produce at a lower cost. Health nutrition at its best, the program substitutes enriched breads with whole grain, as well as replaces fried foods with baked choices. Students have several healthier options such as salad bars, fresh fruits and vegetables.

Organizations & Institutions

Adult Care, Childcare, Pre-School (before/after school providers)

- Train adult care and childcare providers, preschool staff and before- and after-school staff to provide education and resources to parents and families on nutrition and physical activity.
- Assist adult care and childcare providers to utilize innovative methods and provide fun activities to promote healthy nutrition and physical activity.
- Educate parents/families on how to assess and select adult care and/or childcare sites, preschools and before- and after-school programs for their healthy nutrition and physical activity opportunities, as well as for their ability to involve families in physical activity and nutritional programming.
- Encourage teachers and childcare providers to model behaviors that demonstrate healthy eating and physically active lifestyles for parents and children.
- Eliminate advertising, selling and distribution of unhealthy foods and beverages to children and youth at before - and after-school programs.
- Encourage schools and before- and after-school providers using school space to collaborate to develop healthy policies and facilities for their mutual use.
- Institute healthy food and beverage standards that are consistent with USDA Dietary Guidelines and state mandates for all food items available at adult care, before-school and after-school programs, childcare sites and preschools.
- Partner with businesses, government, associations of schools, faith communities and other organizations to finance activities including nutrition and physical education.
- Work with community adult and youth organizations to develop ways to increase the number and variety of physical activity programs provided by these organizations.
- Collaborate with local produce growers and community organizations to increase the availability and affordability of fruits and vegetables in childcare, and after-school settings through promotion of farm-to-school and similar initiatives.
- Collaborate with the Child and Adult Care Food Program (CACFP), Child Care Health Promotion Specialists, Child Care Coordinating Councils and other resources to improve the food and nutrition environments of adult and child care centers.
- Ensure that adult daycare settings and amenities are designed to support physical and nutritional health. Structured programs should include physical activities, social engagement, health monitoring, and nutritional meals.
- Provide fresh, nutritious, unprepared, locally grown fruits, vegetables, and herbs from farmers' markets, roadside stands and community supported agriculture programs to low-income seniors.
- Ensure that adult meal programs provide hot nutritionally balanced meals to County residents. Each meal site should offer an environment that supports social, educational and recreational activities.
- Ensure that home delivered meals to a individual who is homebound or unable to prepare their own meals and lives in Madison County are nutritious and meet USDA Dietary Guidelines.
- Provide nutrition counseling and assistance to individuals with special diet problems.

Madison County Office for the Aging, Inc.

Congregate Meals

Noon day meal program provides hot nutritionally balanced meals to county residents who are age 60 and over. Each meal site offers a friendly atmosphere and the opportunity to join a variety of social, educational and recreational activities.

Organizations & Institutions

Business & Workplace

- Include healthier food and beverage choices consistent with USDA Dietary Guidelines at fast food and full-service restaurants.
- Participate in efforts to publicly acknowledge businesses that support and promote the prevention of obesity through window logos, certificates, media releases, etc.
- Partner with government, associations of schools, faith communities and other organizations to organize and financially support community physical activity clubs and healthy lifestyle projects.
- Incorporate a comprehensive approach to health management at the workplace.
- Utilize point-of-decision prompts in the workplace.
- Increase the proportion of restaurants that offer healthy menu options with appropriately-sized portions and caloric content and general nutritional information available at point-of-purchase.
- Collaborate with employers, the NYS Business Council, Chambers of Commerce, the Retail Council of NYS, the National Federation of Independent Businesses (NFIB) and other business groups to identify barriers and develop incentives to support maternity leave and to promote breastfeeding in the workplace.
    - Work with employers to expand the use of "NYS Best Practices for Breastfeeding Promotion in Workplace."
- Collaborate with medical, allied health, educational and community partners to raise awareness and improve dissemination of physical activity guidelines and recommendations.
- Work with the NYS Business Council, Chambers of Commerce, insurance payers, health care plans, Wellness Councils of America, the Retail Council of NYS, National Federation of Independent Businesses (NFIB), and other business organizations, partners and policymakers to develop ways to affect environmental and policy changes in work sites to increase opportunities for work site wellness.
- Develop best strategies, e.g., training partners such as occupational nurses, Chambers of Commerce, and others to provide technical assistance to employers to expand worksite exercise and wellness programs for all types of employers.
- Increase the work site supports for healthy eating, use of NYS Guidelines for Healthy Meetings, and support of farmers' markets and Community Supported Agriculture (CSA).
- Inform employers of the direct and indirect costs of obesity. Communicate to employers the return-on-investment (ROI) data for worksite obesity prevention and treatment strategies.
- Change workflow patterns, including flexible work hours, to create opportunities for regular physical activity during the workday.
- Provide protected time for lunch, and ensure that healthy food options are available.
- Establish worksite exercise facilities or create incentives for employees to join local fitness centers.
- Create incentives for workers to achieve and maintain a healthy body weight.
- Encourage employers to require weight management and physical activity.
- Encourage the food industry to provide reasonable food and beverage portion sizes.
- Increase availability of nutrition information for foods eaten and prepared away from home.
- Evaluate best practices in worksite overweight and obesity prevention and treatment efforts, and disseminate results of studies widely.
- Evaluate economic data examining worksite obesity prevention and treatment efforts.
- Conduct controlled worksite studies of the impact of overweight and obesity management programs on worker productivity and absenteeism.

Organizations & Institutions

- Implement a campaign to urge restaurants to voluntarily provide point-of-sale nutrition information and use healthy local food options in specials.

Madison County
Monday Mile Program

Live Well Committee

The Madison County Monday Mile Program, sponsored by the Live Well Committee, is set to unveil 5 mile-long walking trails in Madison County. Each of the mile trails will be opened in the fall of 2016, and are located in Canastota, Morrisville, Stockbridge, Oneida, and Brookfield. These areas represent locations with the highest levels of overweight and obesity. The goal of the Monday Mile Program is to encourage physical activity among all members of the community. Once the first 5 miles are established the committee will look to expand the program to other towns in Madison County.

Organizations & Institutions

Community-based Agencies & Organizations

- Enlist and empower faith congregations to reach their members to organize family physical activities and to increase awareness of healthy lifestyles.
- Enlist and empower community organizations to reach their members to organize physical activities and to increase awareness of healthy lifestyles.
- Eliminate advertising and selling of unhealthy foods and beverages at community, faith-based and youth organizations.
- Partner with businesses, government, and other organizations to finance healthy activities including nutrition education and physical fitness.
- Develop a common means of communication such as weekly e-messages or mailers so that involved organizations can stay informed about what each entity is doing about obesity.
- Create community environments that promote and support breastfeeding.
- Create faith-based initiatives that support healthy lifestyles.
- Create neighborhood based community programs that support healthy lifestyles.
- Encourage healthy food choice availability in underserved areas.
- Encourage alternate forms of transportation.
- Increase opportunities for women to be physically active during pregnancy, e.g. by encouraging community organizations and health clubs to offer physical activities for pregnant women.
- Increase access by local agency staff of the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and Medicaid Obstetrical and Maternity Services (MOMS) staff to breastfeeding education through innovative techniques such as distance learning, teleconferences, website development, and the expansion of peer counselor training programs.
- Identify barriers to breastfeeding among participants enrolled in the WIC, Supplemental Nutrition Assistance Program Education (SNAP-Ed) and related food and nutrition programs in the community.
- Conduct outreach and enrollment campaigns to increase the number and percentage of eligible households, children, adults and elderly that participate in federal and state food and nutrition pro-grams including WIC, food stamps and Farmers' Market Nutrition Programs.
- Collaborate with statewide non-profit organizations to identify and reduce barriers to federal and state food and nutrition program participation.
- Increase the amounts of fruits and vegetables procured by food banks for distribution to emergency food providers such as food pantries and soup kitchens.
- Work with local communities and neighborhoods, retail marketing associations, retailers economic development agencies and the NYS Department of Agriculture and Markets to improve access to: supermarkets, farmer's markets, community gardens, urban farm stands, and local markets that pro-vide affordable fresh fruits, vegetables and low-fat dairy products.
- Increase access to certified farmers' markets, food cooperatives, and community gardens to expand healthy and affordable food options, particularly in low-income and underserved neighborhoods.
- Support the expansion of wireless electronic benefits transfer (EBT) machines and other mechanisms that enable farmers' markets to serve SNAP participants with high-quality fruits and vegetables.
- Form community coalitions to support the development of increased opportunities to engage in lei-sure time physical activity and to encourage food outlets to increase availability of low-calorie, nutritious food items.

Organizations & Institutions

- Create more community-based obesity prevention and treatment programs for children and adults.
- Provide demonstration grants to address the lack of access to and availability of healthy affordable foods.
- Promote healthful dietary patterns, including consumption of at least five servings of fruits and vegetables a day.

Madison County
Oneida Farmers' Market

The Supplemental Nutrition Assistance Program (SNAP) helps low-income families gain access to nutritious foods. But until recently, families could not use their food stamps to buy fresh, healthy, local vegetables and fruit at the Farmers' Market. Across the state there are several markets that accept SNAP benefits through electronic benefits transfer (EBT) machines. This model has just begun to expand to Madison County where a couple vendors at the Farmer's Market at Cottage Lawn in Oneida will take SNAP benefits. With the increasing ease of technology, it is hopeful the future will see most vendors with personal EBT machines, allowing SNAP benefits to be used at farmers markets across the county.

Community

At the community level, changes to policy and the environment can give residents the best possible access to healthful foods and places to be physically active. Changes to zoning ordinances, improvements to parks and recreation facilities, creating ways to distribute free or inexpensive fruits and vegetables: These are only a few of the many ways community residents, groups, and organizations can work together to improve nutrition and physical activity.

- Modify current county, town, city and village general plans, zoning and subdivision ordinances, land use policies, and other planning practices so that walking and cycling paths are incorporated into existing communities to safely accommodate pedestrians, cyclists and others using non-motorized transportation. Priorities should be paths that lead to food outlets that serve healthy foods, as well as to parks and other venues that provide opportunities for physical activity.
- Design plans for new communities, capital improvement projects and large construction projects so that schools, parks, stores and other facilities are within easy walking and bicycling distance to residential areas and so that there are walking/cycling paths that encourage physical activity.
- Establish "safety corridors" and routes to school including "complete streets" design for children to encourage walking and bicycling. This includes wider sidewalks, barriers between the streets and walkways, increased security during hours that children are traveling to and from school, and strictly enforced speed zones.
- Increase quantity, quality and accessibility of parks and natural open spaces in order to encourage physical activity for individuals across the lifespan including those with disabilities. Support capital improvement projects that increase opportunities for physical activity in existing areas.
- Encourage smart growth—"Smart Growth is sensible, planned growth that integrates economic development and job creation with community quality-of-life by preserving the built and natural environments" (for more information visit the New York State Department of Environmental Conservation and the Madison County NY Planning Department).
- Promote and encourage an Active Living Community: An Active Living Community is designed with a pedestrian focus and provides opportunities for people of all ages and abilities to engage in routine daily physical activity.
- Provide local government managers, department heads, and staff with a basic understanding of the connections between active living and social equity removing the overarching barriers that limit access to economic opportunity, transportation, services, open space, education, and health and safety.
- Revise and disseminate maps of walking and bicycling routes throughout the county including information on mileage, sidewalk routes, bike paths, etc.
- Work with local and state government to change transportation policies and practices to promote safe non-motorized transportation.
- Develop social and environmental policy that would help communities and families be more physically active and consume a healthier diet.
- Work with development planners to facilitate placement of daycare centers at and near worksites.
- Sponsor and promote opportunities for children, youth and their families, and adults to engage in physical activities, with focus on the following:
    - A large and varied selection of activities (i.e., competitive and non-competitive; individual and team; separated genders and mixed) that attract persons of various cultures so that any individual is likely to regard one or more as "fun".
    - Activities that are likely to meet needs of people with various abilities and body types.

Community

  - Activities that lend themselves to life-long participation.
  - Activities that are located in low-income areas and areas with high rates of obesity-related conditions.
- Develop breastfeeding accommodations in public facilities, as breastfeeding helps prevent childhood obesity.
- Ensure that vending machines on all county- and municipal-owned and/or leased land, space and facilities have healthy choices and encourage community partners to do the same.
- Coordinate efforts to address and prevent obesity across government departments and jurisdictions.
- The Madison County Department of Health will coordinate with other County government agencies and municipalities to help advance and implement this Reports' strategies and recommendations, and work collaboratively with private and public sectors to increase resources that address obesity.
- Provide increased accessibility to purchase affordable nutritious food, such as increasing the number of grocery stores and farmers markets in lower-income areas.
- Support Initiatives that Increase Access to Healthy Foods – e.g., Madison County Food Bank, local farmers markets, Buy Madison County, etc.
- Invest in Affordable, Community-Supported Agriculture.
- Raise consumer awareness about the effect of being overweight on overall health.
- Highlight programs that support healthful food and physical activity choices to community decision makers.
- Provide demonstration grants to address the lack of public access to safe and supervised physical activity.
- Leverage additional resources for obesity prevention programs and research efforts through grants and other sources.
- Expand surveillance and program evaluation in overweight and obesity prevention to include the following:
  - Analyze, synthesize and disseminate existing data related to overweight, obesity, obesity-related diseases, nutrition, physical activity, television viewing, breastfeeding, food insecurity and related issues to monitor progress toward achieving program goals.
    - Assess the utility of existing data systems for population-based surveillance of obesity-related indicators, risk factors and outcomes including data sources from partners outside the Department of Health.
    - Routinely analyze reports of prevalence and trends from existing surveillance and other relevant data systems.
    - Report on the health and economic burden of obesity in Madison County.
  - Summarize and disseminate science-based best practices for the prevention of overweight and obesity on an ongoing basis.
    - Ensure timely access and dissemination of surveillance findings to meet the information needs of obesity prevention stakeholders.
    - Apply the results of research to improve program effectiveness.
  - Enhance, expand and strengthen surveillance to ensure that information is available across the population and within defined geographic areas.
    - Expand routine collection of data pertaining to breastfeeding, perinatal weight gain, and television viewing.
    - Identify gaps in surveillance information and develop strategies and resources to conduct surveillance across the population and within defined geographic areas.

Community

- ♦ Modify and integrate existing surveillance and other data systems to measure and report on obesity-related indicators.
- ♦ Utilize school-based monitoring system to assess the prevalence of childhood obesity.

○ Develop and implement data collection systems to evaluate the impact of the overweight and obesity prevention program.

- ♦ Utilize formative evaluation to assess design needs and program implementation needs. Develop and validate policy and environmental indicators of overweight and obesity prevention.
- ♦ Develop community evaluation tools to measure the availability of opportunities for physical activity and healthful eating.
- ♦ Develop a Community Check tool to be used at the local level to measure environmental and policy supports for physical activity and to guide local action.

○ Evaluate the design, implementation and effectiveness of interventions to reduce overweight and obesity and to improve health outcomes.

- Develop strategies for formative process, impact and outcome evaluation for the obesity prevention program.
- Collaborate with New York State academic institutions, health care providers, and community organizations to:
  - ○ Determine the root causes, behaviors, and social and ecological factors leading to obesity and how such forces vary by race and ethnicity, gender, and socioeconomic status.
  - ○ Assess the factors contributing to the disproportionate burden of overweight and obesity in low-income and minority racial and ethnic populations.
  - ○ Develop and evaluate preventive interventions that target infants and children, especially those who are at high risk of becoming obese.
  - ○ Coordinate research activities to refine risk assessment, to enhance obesity prevention, and to support appropriate consumer messages and education.
  - ○ Study the cost-effectiveness of community-directed strategies designed to prevent the onset of overweight and obesity.
- Conduct behavioral research to identify how to motivate people to increase and maintain physical activity and make healthier food choices.
  - ○ Evaluate the feasibility of incentives that support healthful dietary and physical activity patterns.
  - ○ Identify techniques that can foster community motivation to reduce overweight and obesity.
    - ♦ Examine the marketing practices of the fast food industry and the factors determining construction of new food outlets.
    - ♦ Evaluate and incorporate new research to support the obesity prevention program.
  - ○ Increase the number and diversity of obesity prevention programs across age, gender, educational levels, income levels and racial/ethnic groups that are being evaluated.
    - ♦ Identify high-risk populations and target specifically tailored interventions to those groups.
    - ♦ Provide technical assistance to obesity program partners and coalitions to conduct local level program evaluation.

Community

Link Trail/North Country National Scenic Trail

A hiking trail linking natural, cultural, and historic resources in Central New York, provides a connection between the Finger Lakes Trail and the Old Erie Canal Park in Canastota. Attractions include Muller Hill State Forest, The Tioughnioga Wildlife Management Area, the Nelson Swamp Unique Area, and the Stone Quarry Hill Art Park. The trail includes connections with the local Cazenovia Preservation Foundation Trail System and a major segment south of Canastota.

18 Hole Disc Golf Course - CNY Disc Golf Association

Community

Health Promotion & Marketing

- Encourage Media outlets and marketing industry to partner with other domains (i.e., government; healthcare; schools; childcare, preschools and before- and after-school providers; community-based, faith-based and youth organizations; and businesses) to create a culturally sensitive, media campaign that addresses healthy lifestyles including the health benefits of regular physical activity, healthy nutrition choices, and maintaining a healthy weight.
- Increase awareness of programs that provide low/no-cost physical activity opportunities for adults, families and youths.
- Encourage Media outlets and marketing industry to partner with schools to promote the appeal of healthy foods at primary and secondary schools in the same way fast foods are marketed.
- Encourage Media outlets and marketing industry to partner with businesses to limit advertising and promotion of unhealthy foods and beverages aimed directly at young children.
- Encourage Media outlets and marketing industry to partner with businesses, government, associations of schools, faith communities and other organizations to finance marketing activities that pro-mote nutrition education and physical activity.
- Develop and implement public education campaigns that encourage individuals to adopt and maintain lifestyle changes.
- Increase access to education on healthy lifestyles for low literacy individuals.
- Use social marketing to develop culturally-appropriate messages tailored to specific high-risk populations and low-income groups to increase knowledge, attitudes, beliefs and change perceptions.
- Use social marketing strategies to increase the knowledge and awareness of the benefits of healthy food choices that are culturally-appropriate and tailored to specific populations, particularly low-income groups, minorities and those at increased risk of obesity.
- Increase the awareness of availability of locally-grown fruits and vegetables through the Buy Madison County program, local farmers' markets, and the Department of Agriculture and Markets' Farm Fresh Guide.
- Work with partners to implement a sustained, targeted, community-wide information campaign for individuals and families to change knowledge, attitudes, and beliefs about the importance of balancing caloric intake with energy expenditure.
- Use social marketing strategies to increase awareness and knowledge of U.S. Dietary Guidelines.
- Educate the public, specifically targeting boards of education, teachers, parents and pediatricians, about the health benefits of reducing television viewing.
- Work with schools and preschools to implement TV and media reduction curricula such as Student Media and Awareness for the Reduction of Television-viewing (SMART) and 5-2-1-0 messaging to reduce use of television and other recreational screen time in schools, aftercare/ before care pro-grams and childcare settings.
- Work with schools and communities to increase participation in "National TV Turn-off Week" campaigns.
- Develop training programs for educators and healthcare providers to implement media literacy programs in other settings.
- Work to restrict commercials for high calorie, low-nutrient foods on school television programs.
- Enhance communication and collaboration among the overweight/obesity prevention program, community partners and statewide stakeholders.
- Emphasize to media that obesity is one of health rather than appearance.

Community

- Emphasize to media professionals the disproportionate burden of overweight and obesity in low-income and racial and ethnic minority populations and the need for culturally sensitive health messages.
- Communicate the importance of prevention of overweight through balancing food intake with physical activity at all ages.
- Promote the recognition of inappropriate weight change.
- Build awareness of the importance of social and environmental influences on making appropriate diet and physical activity choices.
- Provide professional education for media professionals on policy areas related to diet and physical activity.
- Emphasize to media professionals the need to develop uniform health messages about physical activity and nutrition that are consistent with the Dietary Guidelines for Americans.
- Encourage truthful and reasonable consumer goals for weight loss programs and weight management products.
- Train nutrition and exercise scientists and specialists in media advocacy skills that will empower them to disseminate their knowledge to a broad audience.
- Encourage community-based advertising campaigns to balance messages that may encourage consumption of excess calories and inactivity generated by fast food industries and by industries that promote sedentary behaviors.
- Encourage media professionals to utilize actors' influences as role models to demonstrate eating and physical activity lifestyles for health rather than for appearance.
- Encourage media professionals to employ actors of diverse sizes.
- Evaluate the impact of community media advocacy campaigns designed to achieve public policy and health-related goals.
- Conduct consumer research to ensure that media messages are positive, realistic, relevant, consistent, and achievable.
- Increase research on the effects of popular media images of ideal body types and their potential health impact, particularly on young women.
- Each media partner will have a sustainability clause built into their contracts to establish a policy systems or environmental change in their worksites, or how they communicate news or weather, for example the clear channels radio stations have instituted the walking weather forecast as their suitability contribution to the mission of the Steps program.
- Educate individuals, families, and communities about healthy dietary patterns and regular physical activity, based on the Dietary Guidelines for Americans.
- Educate parents to serve as good role models by practicing healthy eating habits and engaging in regular physical activity in order to instill lifelong healthy habits in their children
- Raise consumer awareness about reasonable food and beverage portion sizes.
- Educate expectant parents and other community members about the potentially protective effect of breastfeeding against the development of obesity.

Community

Southern Tier
Eat Smart New York

Through the funding of the SNAP-Ed program, Cornell Cooperative Extension works to improve the diet of low-income people across New York. Madison County falls into the Southern Tier region where SNAP eligible residents receive help through free workshops, food demonstrations, cooking classes, grocery store tours, and com-munity events. In addition, Eat Smart New York works to improve the community by supporting sustainable gardens, farmers markets, and school wellness committees.

Next Steps

Considerable effort is needed to assure the successful implementation of recommended strategies and the sustainability and ongoing support of this plan. Working together with a common purpose, we can make a difference in preventing obesity and improving the health and well-being of our Madison County residents.

Sustaining Our Efforts

A multi-faceted approach affecting systemic changes in the social and physical environments that contribute to unhealthy behaviors is needed. Over time, individuals and organizations representing the various domain areas must be involved and engaged to establish a strong foundation and assure the ongoing support of obesity prevention efforts. Specific recommendations include:

1. Raise awareness about the issue of overweight and obesity in Madison County through a defined marketing strategy.
2. Raise awareness of local programs and services available in our local communities pertaining to nutrition and physical activity through the development of a web-based resource guide, and other efforts and materials.
3. Raise awareness of the *Overweight & Obesity in Madison County* report through a defined communications strategy, public relations and other efforts.
4. Secure commitments from organizations representing all domain areas to implement recommended strategies including identifying "champions" in each domain area to lead the cause.
5. Create an ongoing county-wide infrastructure and oversight team to monitor, coordinate, and evaluate obesity prevention efforts by all domain areas.
    - Initial efforts of the oversight team may include the following:
        - Establishment of evaluation and tracking mechanisms to determine the effectiveness of implemented strategies.
        - Development of a website dedicated to obesity prevention.
        - Establishment of county-wide domain-specific meetings and an adult populations in Madison County over time, building on present services and opportunities.
        - Secure additional funding to assure ongoing efforts.
        - Formal recognition of the efforts of partnering organizations.
        - Develop mechanisms to track, over time, the eating and physical activity patterns of child and adult populations in Madison County, building on present opportunities.
        - Identify experts to evaluate the success of the engagement of the domain areas.
        - Advocate with all partnering organizations to ensure that a formal evaluation component is incorporated into the design of all projects that are not evidence-based.

6. Create and fund the position of a Coordinator for the Obesity Initiative, who will be responsible for providing leadership and coordination among stakeholders to facilitate the implementation of the strategies and recommendations established in the *Overweight & Obesity in Madison County: Strategies to Build a Healthier Community* report.

Implementing the Plan

The Madison County Department of Health is committed to the health and well being of our residents. To support this commitment departmental resources will be re-aligned to better address the preventable causes of obesity — lack of physical activity and poor nutrition. County activities will involve most sections of the County government and focus on the different levels of the ecological model.

Partnering organizations are encouraged to:

- Review the strategies and recommendations presented in this report across all domain areas.
- Conduct an internal review to:
    - Determine which recommended strategies you are currently implementing; and
    - Identify new strategies your organization can implement.
- Make a formal commitment to adopt new strategies by completing the "Commitment of Significance" form (see Appendix C) available online at www.healthymadisoncounty.org.
- Work with other organizations within and across domain areas to coordinate efforts.
- Work with oversight team to document, evaluate and report your efforts on an ongoing basis.

Appendix
A

Overweight & Obesity

Organizations

- The Academy for Eating Disorders
- The Academy of Nutrition and Dietetics
- American Academy of Pediatrics (AAP)
- American Council on Exercise
- American Diabetes Association
- American Heart Association
- American Obesity Treatment Association
- American Physiological Society
- American Society for Metabolic and Bariatric Surgery
- American Society for Nutrition
- Canadian Obesity Network
- Centers for Disease Control
- DASH-NY
- European Association for the Study of Obesity
- Federation of American Societies for Experimental Biology (FASEB)
- The Hormone Health Network
- International Association for the Study of Obesity
- Kidney & Urology Foundation of America
- National Board of Physician Nutrition Specialists (NBPNS)
- Nutrition.gov
- Obesity Action Coalition
- The Obesity Society
- Society for the Study of Ingestive Behavior
- STOP Obesity Alliance
- Trust for America's Health
- World Health Organization
- World Obesity Federation

Obesity Journals

- Obesity —the leading journal on obesity
- International Journal of Obesity

Research Centers

- Aberdeen Centre for Energy Regulation and Obesity (ACERO)
- Mayo Clinic & Foundation for Medical Education and Research
- Medical University of South Carolina Weight Management Center

- The Minnesota Obesity Center
- Monell Chemical Senses Center
- National Academy of Sciences—Institute of Medicine
- National Institutes of Health
- The New York Obesity Research Center
- Nutrition Obesity Research Center
- Obesity Research Center - Boston Medical Center
- Pennington Biomedical Research Foundation
- Stanford University School of Medicine
- University of Alabama at Birmingham Department of Nutrition Sciences (and Obesity Research Center)
- University of Colorado Center for Human Nutrition
- University of Pennsylvania Weight and Eating Disorder Program

Information on Obesity

- CDC: Overweight and Obesity
- Centers for Medicare and Medicaid
- Excellus Blue Cross Blue Shield
- Food and Nutrition Center (USDA)
- Food Surveys Research Group (USDA)
- Healthy People.gov
- National Center for Biotechnology Information
- National Heart, Lung, and Blood Institute of the National Institutes of Health
- The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- TOPS: Take Off Pounds Sensibly
- The Surgeon General

Appendix B

2007-2008 Legislative Proposals Related to Obesity		
Bill No.	**Summary**	**Status**
SB 1521	Allows school health services in public schools to use body mass index to screen for childhood obesity. Allows the committee on education to make recommendations on nutritional policies of school districts to promote proper nutrition and to reduce the incidence of childhood obesity.	**Introduced 1/13/2015**
SB 1942	Requires the commissioner of general services to provide and maintain secure bicycle parking facilities for state employees and visitors at state office buildings. Requires that commissioner make an inventory of all existing bicycle parking facilities at all state office buildings and office buildings in which state leases/occupies space (restrictions as to which buildings require inventory within bill). Requires that marketing and community outreach be done to engage state employees, visitors to state office buildings, and the general public.	**Introduced 1/15/2015**
SB 707	Creates the New York State Bicycle Tourism Promotion Act, which recognizes the role cycling plays in local tourism, and in turn, creates a working fleet of rental bikes at local points of interest. Appropriates monies for the purchase of bicycles, helmets, bike racks, and other equipment necessary for rental.	**Introduced 1/5/2015**
SB 3265	Establishes New York State Council on Food Policy with purpose of facilitating the growth of a state-based local farm and food economy that promotes healthy eating with access to healthy food for state residents. Initiates public awareness campaigns about the economic benefits of a local farm and food economy. Establishes council responsibilities.	**Introduced 2/4/2015**
SB 2523	"Requires all students enrolled in elementary and secondary school grades in cities with a population of one million or more shall, where feasible, include mandatory daily physical education for a minimum of one hundred fifty minutes during each school week. Provides for a two-year phase in schedule for daily physical education in elementary schools."	**Introduced 1/26/2015**
SB 779	"Requires the Commissioner of Health to establish nutrition standards for meals in retail venues that include “incentive items” for kids, which include toys and trading cards. The standards shall consider number of calories in the meal, sodium content, sugars and caloric sweeteners, and fruits and vegetables and grains."	**Introduced 1/7/2015**
AB 5945	"Requires distributors to collect a $0.01 per fluid ounce tax on sugar sweetened beverages. The tax establishes the Children's Health Promotion Fund to be allocated for the purposes of statewide childhood obesity prevention. The funds are allocated to improve access to and consumption of healthy, safe, and affordable foods and beverages; reduce access to and consumption of calorie-dense, nutrient poor foods; encourage physical activity; decrease sedentary behavior; and raise awareness about the importance of nutrition and physical activity to childhood obesity prevention; evidence-based prevention, early recognition, monitoring, and weight management intervention activities in the medical setting; and can include improving or building school recreational facilities that are used for recess and physical education; providing continuing education training for physical education teachers; hiring qualified physical education teachers; improving the quality and nutrition of school breakfasts, lunches, and snacks; ensuring free, clean drinking water access throughout the school day; and incorporating practical nutrition education into the curriculum. The Commissioner of Education is responsible for the allocation and distribution of these funds."	**Introduced 3/9/2015**
SB 3789	Creates the Task Force on Improving Urban and Rural Consumer Access to Locally Produced, Healthy Foods. The Task Force’s mission is to identify strategies and opportunities to expand access for underserved, nutritionally deficient urban and rural communities to healthy, locally produced food in New York state.	**Introduced 2/17/2015**

Source: Chronic Disease State Policy Tracking System, CDC. Accessed 7 July 2016.

Bill No.	Summary	Status
AB 6548	May require food service establishments to restrict the use of trans fats in food preparation. Allows the Commissioner of Public Health to establish a voluntary artificial trans fat reduction program which consists of public dissemination of information about health risks associated with consuming trans fats, and may also require food service facilities to disclose nutritional information on their menus. Such information may consist of total number of calories, number of milligrams of sodium, and number of grams of saturated fat. Adds child care facilities and places of employment to the Breastfeeding Mothers' Bill of Rights in the state, which allow for breastfeeding mothers the right to freely breastfeed their children in public venues. Allows body mass index to be used as a measurement by school health services for students. Allows school regent boards to require that all students in elementary and secondary schools participate in physical education, exercise, or activity for a minimum of one hundred twenty minutes during each school week. Requires that state government office buildings provide bicycle parking, and establishes the bicycle commuting task force to examine the development of sheltered bicycle parking in public spaces.	Introduced 3/26/2015
AB 10178	Requires the public schools to make available plain, potable water to all students during the day, at no cost to the students; offer for sale fresh fruit and non-fried vegetables at any location where food is sold, but not including non-refrigerated vending machines and vending machines dispensing only beverages; make nutrition information available for students for non-prepackaged competitive foods and beverages, with the exception of the sale or provision of fresh fruits or fresh vegetables, and foods or beverages sold during the school day at booster sales, concession stands and other school-sponsored or school-related fundraisers and events; and prohibit the use of fryers in the preparation of competitive foods. Schools must also ensure that snacks sold or provided in any public school shall meet the following standards: no more than thirty-five percent of its total calories shall be from fat; no more than ten percent of its total calories shall be from saturated fat except for packaged dairy food items or nuts; and not more than thirty-five percent of its total calories shall be from sugars. No beverages other than one hundred percent fruit and vegetable juice with no added sugar, milk, milk substitutes and water shall be sold or provided in any public school.	**Introduced 8/20/2014**
AB 8674	Provides loan guarantees, interest subsidies, and grants to businesses for expanding supermarkets, and food retail establishments into underserved areas and accepting payment from supplemental nutrition assistance programs	**Introduced 2/3/2014**
SB 5552	Establishes a joint effort between The Office of General Services and the Department of Economic Development to encourage and increase participation in the procurement of state grown food.	**Introduced 5/17/2013** **Enacted 9/23/2014**

Source: Chronic Disease State Policy Tracking System, CDC. Accessed 7 July 2016.

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Phone: 315-726-4869
Fax: 315-684-9290
http://www.mcruralhealthcouncil.org