

FIGHTING OBESITY

IN SULLIVAN COUNTY, NEW YORK

HUDSON VALLEY
PATTERN
for
PROGRESS



A REPORT BY

HUDSON VALLEY PATTERN FOR PROGRESS

CLASS OF 2014 FELLOWSHIP PROGRAM

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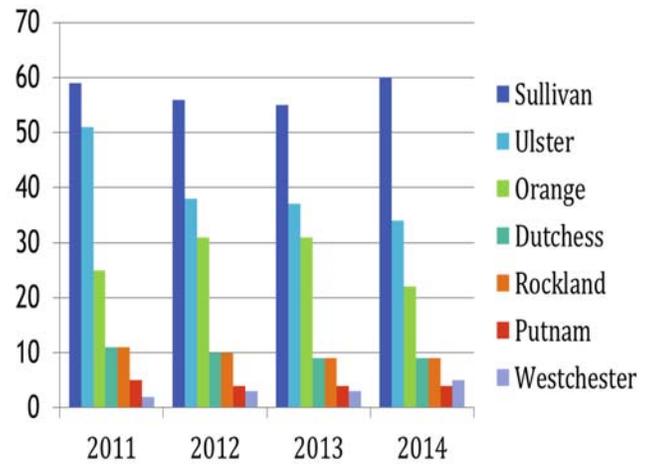
Executive Summary

Prompted by the continued lagging score of Sullivan County in the nationwide County Health Rankings, this report by the Hudson Valley Pattern for Progress Regional Fellows Program, examines what the numbers tell us, explores lessons for regional and wider trends, and offers recommendations to support local efforts at addressing the problem. Many questions and factors are at play in understanding why Sullivan is at the bottom of the list of New York State counties and is an outlier within its region. Sullivan is the least populous, least dense and has the lowest per capita income among the seven counties in New York State's Mid-Hudson Region (Rockland, Orange, Ulster, Sullivan, Dutchess, Putnam and Westchester). These factors are known to contribute to public health challenges in rural communities throughout the US. However, Sullivan County compares negatively to similarly rural counties to its west both in New York and Pennsylvania.

The increasing rate of obesity and overweight in Sullivan County, the region and the nation is one important factor influencing overall poor health outcomes and leading to premature death within the population. This is a complex problem with a myriad of interrelated causes. Sullivan County is not unique, but merely representative of some of the most intractable challenges in contemporary US society, which are playing out in increased obesity/overweight and overall deterioration in our public health. Hence, this report focuses on obesity, which the Center for Disease Control now defines as a disease, including the complex barriers to changing behaviors and outcomes. It analyzes strategies being tested nationally and locally for reversing this trend and offers a brief set of recommendations aimed at coordinating actions within Sullivan County.

The Numbers

For the fifth straight year, Sullivan County has ranked poorly on the County Health Rankings & Roadmaps program. The program is an innovative collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The County Health Rankings measure the health of nearly all counties in the nation and rank them within states. The Rankings are compiled using county-level measures from a variety of national and state data sources. These measures are standardized and combined using scientifically-informed weights. The health outcomes category represents how healthy a county is by measuring two types of health outcomes based upon the length (mortality) and quality of life (morbidity). The health factors category represents what influences the health of a county and is based upon a combination of four major factors that influence health outcomes, including behaviors (Diet & Exercise, Tobacco, Alcohol, Drug use, and the quality and accessibility of clinical care), social/economic factors and the physical environment.

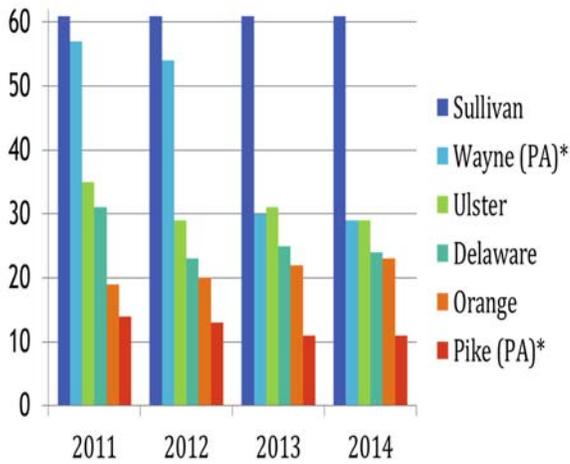


For 2014, Sullivan County was again ranked 60th out of 62 New York counties in the health factors category (above).

The RWJ Report determines Health Factors as follows:

- Health Behaviors (30%), which takes population tobacco use, diet and exercise, alcohol and drug use, and sexual activity into consideration
- Clinical Care (30%) determines the population's access to health care and the quality of the care
- Social and Economic Factors (40%) considers education, employment, income, family and social support, and community safety
- Physical Environment (10%) considers the community's air and water quality and its housing & transit.

<u>Sullivan County vs. Hudson Valley</u>	Sullivan	Rockland	Orange	Ulster	Dutchess	Putnam	Westchester
Health Outcomes	61	3	23	29	11	4	7
Premature Death Years of potential life lost before age 75 per 100,000 population (age-adjusted)	7,799	4,329	5,774	6,159	5,266	4,491	4,441
Health Factors	60	6	21	29	9	4	5
Adult obesity % of Adults with BMI above 30	29%	24%	24%	27%	26%	31%	17%
Food Environment Index Index of factors that contribute to a healthy food environment	8.1	8.8	8.8	8.5	8.7	9.5	9.1
Food Insecurity Percent of people who do not have adequate access to food during the past year	12%	9%	10%	10%	9%	6%	10%
Limited Access to Healthy Food Percent of population who are low-income and do not live close to a grocery store	6%	5%	4%	6%	6%	5%	1%
Access to Exercise Opportunities Percent of the population with adequate access to locations for physical activity	61%	89%	74%	75%	85%	73%	98%
Physical Inactivity Percent of adults aged 20 and over reporting no leisure-time physical activity	26%	24%	25%	21%	22%	22%	20%



Obesity & Chronic Disease

In 2014, RWJF again ranked Sullivan County highest in New York State for mortality (death), which includes a startlingly high rate of premature death (death prior to age 65) at 33%. The number one cause of death in Sullivan County is chronic disease, particularly heart disease followed closely by cancer. According to the CDC, more than half of people in the nation live with a chronic disease. Nationally, 7 out of 10 deaths are related to chronic disease. Of these, 20% of cancer cases in women and 15% of cases in men are linked to obesity (Calle, EE, Rodriquez C, Walker-Thurmond K, Thun MJ. Overweight, Obesity, and Mortality from Cancer in a Prospectively Studied Cohort of U.S. Adults. *New England Journal of Medicine*, 348(17):1625-38, 2003)

The prevalence of chronic disease has been linked to many environmental and lifestyle factors, particularly when associated with obesity. Obesity is a significant risk factor for many chronic health conditions including type-2 diabetes, asthma, high blood pressure, high cholesterol, stroke, heart disease, certain types of cancer, and osteoarthritis. These diseases in large part contribute to the morbidity, mortality and premature death rates in Sullivan County. Poor nutrition, including limited access to fresh food, and limited physical activity are two major drivers in the increasing rates of obesity.

In 2014, Sullivan County was ranked 61st out of 62 New York counties in the health outcomes category. The above table highlights the significant variances in health outcomes comparing Sullivan to the seven counties of the Mid-Hudson Region and the four counties (Orange, Ulster, Delaware in NY and Wayne and Pike in PA) surrounding Sullivan County. The RWJ Report determines Health Outcomes as follows:

- Average length of life including factors such as premature death
- Quality of Life factors including average sick / mental health days, birth weight, and how respondents perceive their overall health.

Obesity as an Epidemic

In public health metrics, overweight is defined as having a body-mass index (BMI) over 25, and obesity is defined by a BMI over 30. While, in reality, health levels and BMI vary by the individual, we know that the incidence of obesity has increased to the level of a national epidemic. According to the Centers for Disease Control and Prevention, obesity is common, serious and costly. In recent estimates, more than one-third (34.9%) of United States (U.S.) adults are obese. Current trajectories suggest that the rate of obesity in New York State could reach 50.9% of the population by 2030. In addition the American Medical Association has recognized obesity as a disease, addressing this more formally as a major problem (USA Today, 6/19/13).

According to the Jaimie Oliver Foundation, in America alone, 32% of children, aged 2-19 years, are overweight and 17% are obese. This amounts to 23 million overweight children and 12.5 million obese children. Over 80% of obese children are likely to be obese as adults. Today's generation of children are predicted to be the first to die at a younger age than their parents due to obesity-related illnesses.

The Economic Impact

The economic impact of obesity and premature death is staggering. Three-quarters of every dollar spent in the US on healthcare is used to treat chronic disease (F as in Fat, 2013). According to the CDC, in 2008 the estimated national cost of medical care related to obesity has doubled to \$147 billion over the last decade. The estimated annual cost of treating obesity related illnesses in New York State is upwards of \$6.7 billion annually. (healthy-america.org, May 2014). Obesity and being overweight are currently the second leading cause of preventable death in the United States and may soon overtake tobacco as the leading preventable cause of death. Without a change in the current upward climb of obesity in the population we are poised to have a 14.8% increase in that cost in New York (F as in Fat, 2013).

The Impact on Sullivan County

RWJF County Health Rankings 2014 reports the obesity rate in Sullivan County is 29%, compared to New York State's rate of 24% and a national rate of 35.7% as reported by the CDC. The New York State Department of Health reports that within our region (i.e. the seven counties of the Hudson Valley) Sullivan County ranks the highest in chronic disease prevalence, specifically diabetes, coronary heart disease, congestive heart failure and cardiovascular disease, leading to stroke (State and County Indicators for Tracking Public Health Priority Areas 2008-2010). A survey conducted as part of the Sullivan County Public Health Services' 2013 Community Health Assessment (CHA) identified "primary health issues" as nutrition, physical inactivity and chronic diseases such as diabetes, heart disease and cancer. Each of these health issues has a connection to obesity.

While below national norms, the obesity rate in Sullivan County is concerning and increasing year to year. Given the established connection to many of the chronic diseases and conditions that contribute to the county's high incidence of premature death, obesity/overweight appears to be a logical target for health policy aimed at improving outcomes, reducing costs and enhancing overall quality of life. The County's Community Health Improvement Plan (CHIP) arrives at the same conclusion, citing prevention of chronic disease as Priority Area #1 and reducing obesity in children and adults as one of two primary focus areas, while acknowledging barriers exist such as access lower incomes and limited transportation, both of which hinder access to healthy foods and physical activity in rural areas.

Identifying and Understanding the Challenges in Sullivan County

In order to properly address this challenge, there are many areas of influence that must be identified and explored. In 2005, the Centers for Disease Control and Prevention created a "Social-Ecological Model" to serve as a framework to help identify areas of influence that contribute to the obesity epidemic in the United States. As described by the CDC, "The model is based on the premise that changes in individual behavior will come about through a combination of societal, community, organizational, interpersonal, and individual efforts" (Centers for Disease Control and Prevention [CDC], 2005).

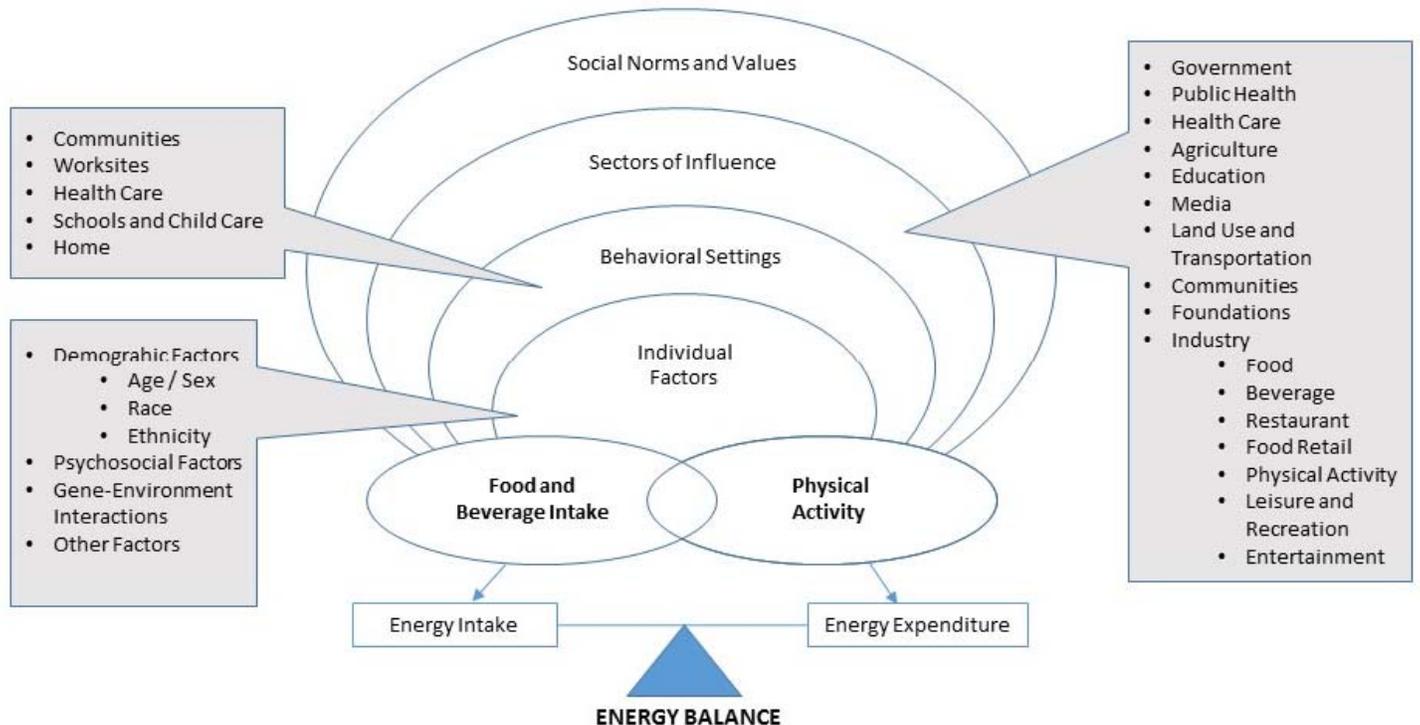
When applying the Social-Ecological Model and comparing statewide and national statistics with Sullivan County, there are many areas of influence that are a challenge to Sullivan in the fight against obesity. The next section will apply the Social-Ecological Model to Sullivan County and identify which facets of influence may be contributing to the obesity rate in the county.

Applying the CDC's Social Ecological Model to Sullivan County

The Social-Ecological Model, illustrated in the diagram below, provides a framework to determine the interrelated spheres of influence that can impact an individual's habits leading to obesity. The model helps to explore the environment of the individual to identify how influences like community, local and federal governmental policies, access to food, demographics, and industry may contribute to the overall balance of energy intake and expenditure.

At the base of the model are Food and Beverage Intake (Energy Intake) and Physical Activity (Energy Expenditure) as the primary factors that determine obesity. When an individual's diet and activity level are in balance, the risk of obesity falls dramatically. As the balance is skewed towards a greater caloric intake than expenditure, the risk of obesity rises. Where this model is instructive is in examining the other factors individual, environmental and community levels that help tip that balance.

As Nancy McGraw, LCSW, MBA, Public Health Director, Sullivan County references in the 2013-2017 Community Health Assessment Report, "The trends in rising rates of overweight and obesity are complex and somewhat perplexing in a largely agricultural and rural county that has vast opportunities for available exercise and healthy food." However, by applying the Social-Ecological Model, we can identify influences at work Sullivan County that likely contribute to the growing obesity rate and the high incidence of chronic diseases related to obesity and overweight that lead to premature death. Key among these are: Demographic Factors (primarily income); Health Care (specifically limited access to care and the services available); Land Use and Transportation patterns typical of rural, low-population areas; and Industry, in the quality and quantity of foods readily available within the community.



Individual Factors: Income

According to the Food Research and Action Center, research suggests a link between lower income rates and the prevalence of obesity. Though trends have shown obesity becoming more prevalent across the board in all income levels, research still shows greater risks of obesity in low-income brackets, especially for Caucasian women and children.

Lower income rates may present a challenge for Sullivan County in the fight against the prevalence of obesity. The median income in Sullivan County is \$46,287 according to the US Census Bureau (2012). This income is at least \$9,000 less than the NY state average. The percentage of people living below the poverty level is 17.2% compared to New York State's figure of 14.9% (US Census Bureau, accessed 5/4/14). The highest level of poverty is among single female head of household families with children at an astounding 48.4%. The unemployment rate is currently 8.4% (NYS Department of Labor, March 2014) in comparison to New York State at 6.7% (NYS Department of Labor) and the United States national average of 6.3% (Bureau of Labor Statistics), and is the highest in the Mid-Hudson Region.

Behavioral Settings [and Sectors of Influence]: Health Care

Access to health care providers for preventive and chronic health care services is a challenge for many in Sullivan County due to limited access to transportation and the limited number of providers. Sullivan has a very high provider-to-patient ratio at one provider for every 2,136 patients seen, as compared to the statewide average of one provider for every 1,216 patients seen (RWJF, 2014). Set against the high incidence of chronic diseases, this situation suggests that the limited access to health care may result in residents failing to have preventive care and limiting management of disease.

Moreover, with limited access to health care providers, Sullivan County residents have less access to health counseling. Health counseling as part of disease prevention programs has the ability to reduce obesity and thus chronic disease. In 2012 Medicare began covering intensive obesity counseling for patients with BMI >30 through their primary care providers. Three major components of the 2010 Affordable Care Act address obesity, including requiring insurers to cover obesity screening and counseling without any copayment or deductible. Patients found to be at risk can access services that may include telephone counseling, sessions with a health coach or group sessions for advice.

Sectors of Influence: Land Use and Transportation

Given the rural location of Sullivan County, the primary mode of transportation is by car. Public transit has limited access or is costly. In many communities, limited infrastructure exists in the form of sidewalks or trails that would support routine physical activity such as walking or jogging. Dedicated recreational facilities, whether in the form of private gyms, public indoor facilities or community parks, are infrequent and widely dispersed throughout the community due to its low population density.

Robert Wood Johnson Foundation's County Health Ranking finds that only 61% of Sullivan County residents have access to locations for physical activity, in comparison to the statewide average of 89%. This is also coupled with the findings that 26% of Sullivan residents age 20 and over have reported that they do not participate in leisure-time physical activity, slightly higher than the State average of 24%. While many factors could influence this behavior, the limited availability of facilities for exercise may have an effect.

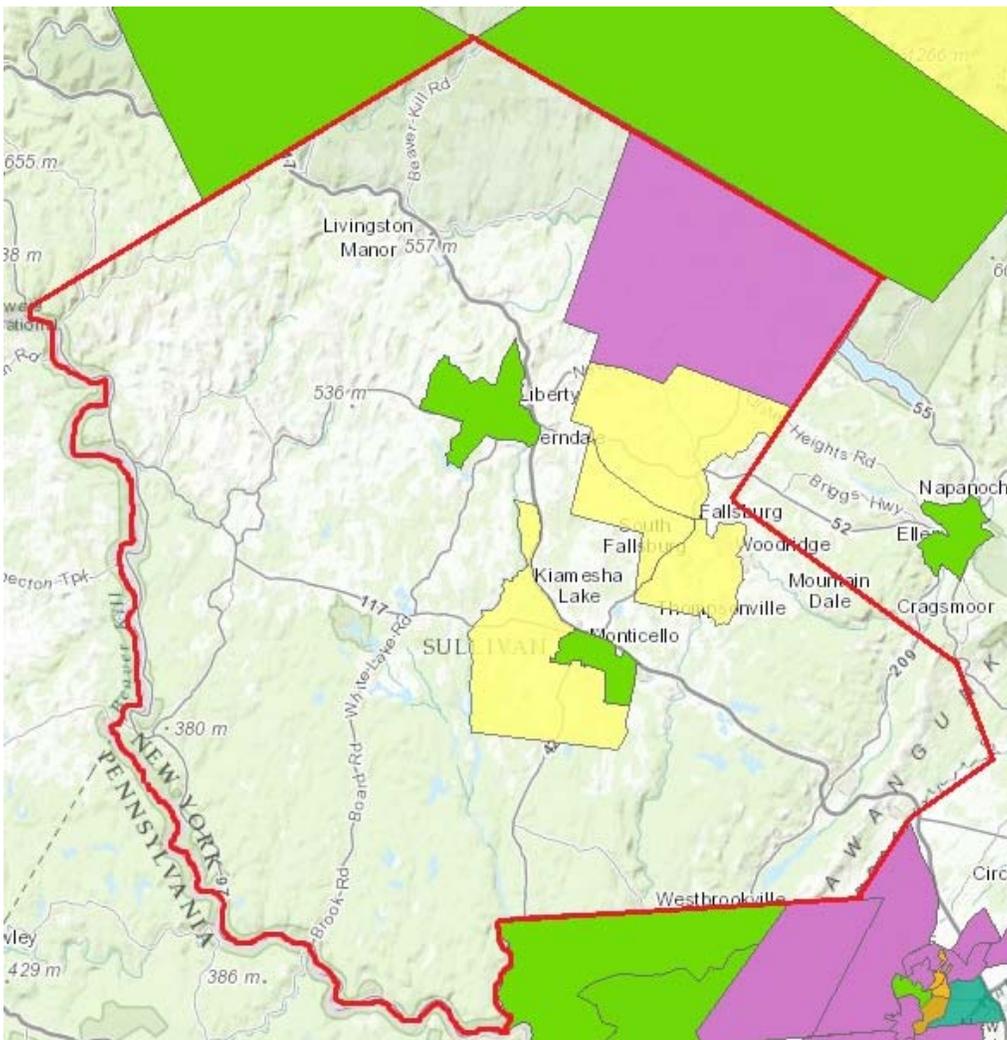
Sectors of Influence: Industry—Food and Beverage

Sullivan County recognizes the need to address the health of its community through focusing efforts on healthy eating, both for adults and children. Among the complex reasons for the rising rates of obesity in both segments of the population are believed the access to and knowledge about what constitutes healthy eating. In Sullivan County phone surveys, residents believed that access to healthy foods, defined as fruits and vegetables and fresh food, as opposed to fast or highly processed (with a long shelf-life) foods were less readily accessible.

Monticello, the largest village in Sullivan County, has been designated a food desert. This designation granted by the USDA if a census tract meets certain low-income and low access thresholds (CRREO report, pg. 6). As a food desert, Monticello is challenged by more than 33% of its residents living more than one 1 mile from a supermarket or large grocery store (10 miles, in the case of non-metropolitan census tracts).

This lack of easy access to foods, particularly, fresh foods including fruits and vegetables, is related to another issue identified by the USDA known as food insecurity. The USDA defines food insecurity as "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways" (CRREO report, pg. 5).

Despite the presence of Farmers' Markets, and supportive programs such as Women, Infants and Children (WIC), and Catskill Health, factors such as transportation, economics, the lack of accessibility of grocery stores and a limited supply of health educators and dietitians, remain barriers to healthy eating.



FOOD DESERT

In Sullivan County, as evidenced by the health rankings and other survey findings, the community overall finds access to healthy foods, such as fruits and vegetables, one of the reasons that geographic sections such as Monticello, are referred to as "Food Deserts".

The map of Sullivan County to the left shows the areas in the county that have been deemed Food Deserts by the US Department of Agriculture.

- The green areas of the map, particularly around the towns of Monticello and Liberty, represent areas of low income along with low accessibility to supermarkets or grocery stores.
- The purple areas of the map represent areas of Sullivan County where at least 33% of residents live 1 mile (city areas) or 10 miles (rural areas) from the closest supermarket or grocery store.
- The tan areas of the map represent areas of Sullivan where there are low income tracts along with limited access to food sources by vehicle.

Striking a Balance

As the Social-Ecological Model illustrates, the causes of increasing overweight/obesity in Sullivan County and elsewhere are widespread and interrelated. The County's Public Health Services recognizes the need to address obesity through efforts aimed at healthy eating and increasing physical activity for adults and children while acknowledging that access to healthy foods is an issue. Access to and knowledge about what constitutes healthy eating and exercise are exacerbated by poverty, the lack of public transportation, limited availability of fresh foods, food insecurity and a marketplace that pushes unhealthy options. Strategies for reversing obesity must take an equally interrelated and comprehensive view of the problem. Fortunately, many national initiatives local efforts and others within the region are models for addressing obesity/overweight, leading to improving overall health.

What is Working?

Many of the initiatives receiving support around the nation involve campaigns for healthy eating. These programs increase knowledge about healthy eating, encourage consumption of fruits and vegetables and foster access to or availability of healthy foods. Strategies include media campaigns and engaging community partners and private businesses such as supermarkets, restaurant menu labeling, worksite nutrition programs, school lunch reforms, and engaging healthcare providers and managed care companies. These efforts recognize that interventions across all levels of the Social-Ecological Model are needed. Many focus on youth because of the lasting public health and economic benefits of preventing or reversing childhood obesity.

Specific examples include healthier food options in school lunches in Ohio, efforts to improve public parks in Rochester, New York, and helping local grocers' and convenience stores increase access to fruits and vegetables in North Carolina. In Baldwin Park, CA, "Comprehensive Corner Store Marketing Audits" are helping community leaders and store owners increase the presence of healthy foods by revamping floor plans and product placement. In Boise, Idaho, legislation is being crafted to require child-care centers to have minimum standards around healthy food options and time for physical activity.

Within the Mid-Hudson, several communities including the cities of Poughkeepsie and Kingston are addressing food insecurity through mobile farmers' markets, community gardens and plans to create a transportation system known as the Food Loop. This new bus transportation will allow riders to carry more than the current four grocery bag limit, thus helping residents without cars to make better use of chain supermarkets (Source, CRREO report, pg. 20, Food Security Coordinator in Orange County, Ulster County Food Policy Council). Sullivan County's "Eat Healthy Move More" (EHMM) campaign, sponsored by the Sullivan County Wellness Committee, links public health education with intervention activities that influence healthy eating and physical activity, both in schools and the general population.

These examples have policy implications for ways to see greater improvements in Sullivan County and throughout the region:

- **Promote existing efforts** – With more resources, EHMM and similar campaigns could expand to cover employers, churches and community-based organizations, promoting Sullivan County's and the region's resources for being healthy, such as access to outdoor recreation and locally grown foods. Sullivan County's Community Health Improvement Plan 2013-2017 identifies the need for more funding to expand on EHMM to add more health educator positions (the County currently has only one).
- **Identify areas for further improvement** – Sullivan County may benefit from an in-depth review of barriers to healthy eating, as outlined in a CRREO report for the City Poughkeepsie. Understanding where specific challenges exist within the community, even going town by town, would help direct more "hyper-local" efforts and marshal community groups in those areas.
- **Cross-sector collaboration is essential** – As the causes of and solutions to the obesity epidemic extend far beyond the individual or any one sector, policy makers at the County, State and municipal levels, businesses, institutions and community development organizations need to support a public health agenda that acknowledges obesity as a problem and commits to addressing it through coordination and collaboration (Collaboration to Build Healthier Communities, A Report for the Robert Wood Johnson Foundation Commission to Build a Healthier America, June 2013).

Healthy Communities

(www.healthycommunities.org)

The Healthy Communities movement has made inroads across the US since it began in the 1980s. More than 1,000 communities now embrace the principles of Healthy Cities / Healthy Communities, which include broadening the definition of health and developing local assets and resources, and receive support from the Center for Disease Control's Healthy Communities Program (Public Health Reports, March/April & May/June 2000, Volume 115 pg 122, Authors Tyler Norris and Mary Pitman). The Healthy Communities movement has prompted the US Department of Health and Human Services through the Office of Disease Prevention and Health Promotion (ODPHP) to reshape its goals and create the Healthy People 2000, 2010 and 2020 programs.

The Healthy Communities approach acknowledges the myriad variables, including "social norms and values" (the outermost ring on the Social-Ecological model), that inform the causes of the obesity epidemic and its solutions: "Effective obesity prevention initiatives should address multiple levels of the environment and engage multiple sectors of society in order to affect social change and achieve health impact. For these reasons, CDC supports population based approaches to prevent and control obesity, such as policy, systems, and environmental change, in various settings and at all levels of government" (Healthy Communities, CDC, 2005).

Healthy Kids, Healthy Communities

www.healthykidshealthycommunities.org

Healthy Kids, Healthy Communities is a related program of the Robert Wood Johnson Foundation (RWJF) helping dozens of communities across the country to reshape their environment to support healthy living and prevent childhood obesity.

Community Food Assessment

Among the policy recommendations to be considered is the commissioning of a community food assessment, such as has been done in Poughkeepsie to direct grant funding for community-wide education (ex: Fresh Connects) and the training of health education specialists, health coaches, health mentors to spread the word about healthy eating habits.

Food Hubs

"Skyrocketing consumer demand for local and regional food is an economic opportunity for America's farmers and ranchers. Food hubs facilitate access to these markets by offering critical aggregation, marketing, distribution and other services to farmers and ranchers. By serving as a link between the farm or ranch and regional buyers, food hubs keep more of the retail food dollar circulating in the local economy. In effect, the success of regional food hubs comes from entrepreneurship, sound business sense and a desire for social impact." - *USDA Secretary Tom Vilsack, May 2013*

Grant Opportunities

The following grant opportunities are available through organizations committed to foster sound nutrition and good physical activity in children, youth and schools.

Action for Healthy Kids

Awards 40 schools with \$1000 each to impact nutrition and or physical Activity.
www.actionforhealthykids.org

Fuel Up To Play 60 Funding

If your school has a least one adult designated as a program advisor and is enrolled in the National School Lunch Program, school eligible to apply for up to \$4000 per school year- can help a school meet it's long term wellness goal.
www.fueluptoplay60.com

Farm To School Grant Program

On February 19, 2014, Agriculture Secretary Tom Vilsack announced the availability of Federal funds for the Fiscal Year. The purpose is the assist eligible entities in implementing farm to school programs that improve access to local foods in eligible schools. Annually the USDA awards up to \$5 million in competitive grants for training, planning, purchasing equipment, developing gardens and developing partnerships.

Teachers, Schools and /or individuals fundraising can post their projects on the site and donations can be made and a percentage of the fundraiser goes to the school.
<http://www.fns.usda.gov/>

Alliance for a Healthier Generation

Developed in part by Robert Wood Johnson and the American Heart Association, it is focused on lower obesity rates in children nationwide. They offer different programs that provide schools & communities with the framework to develop better exercise & nutrition practices. The Healthy Schools Program provides a framework and ranking guideline to help schools implement better practices.
<https://schools.healthiergeneration.org/>

What's Happening Nationally

Economic Research Service states as students returned to school in 2013-2014 school cafeterias across America will be entering their second year of serving healthier USDA school lunches based on updated nutritional standards. Besides USDA meals most US Schools also sell other foods and beverages referred to as "competitive foods". These foods will be subject to new nutritional standards. Behavior experts suggest that "nudges" can encourage increased acceptance of healthier foods by children and teens. This includes positioning of food, verbal suggestions by staff towards fruits and vegetables as well as installation of salad bars.

The support USDA provides to schools in the National School Lunch and Breakfast Program comes in the form of cash reimbursement for each meal served. Workshops are offered for districts scheduled to participate in an administrative review during the 2013-2014 school year and for these school food authorities that are certified to be in compliance with the updated meal reimbursement will receive an additional six cents (\$.06) of federal cash reimbursement for each meal served. This bonus will be adjusted for inflation in subsequent years.

<http://www.fns.usda.gov/school-meals/rates-reimbursement>

In addition to cash reimbursements, schools are entitled by law to receive USDA "entitlement" foods, at a value of 23.25 cents for each meal served in Fiscal Year 2012-2013. Schools can also get "bonus" USDA foods as they are available from surplus agricultural stocks.

A very successful project between USDA and the Department of Defense (DoD) has helped provide schools with fresh produce purchased through DoD. USDA has worked with schools to help promote connections with local small farmers who may be able to provide fresh produce.

<http://www.fns.usda.gov/office-type/child-nutrition-programs>

The USDA is committed to Food Hubs because it believes that food hubs offer strong and sound infrastructure support to producers across the country which will also help build a stronger regional food system. There are several food hubs in our region presently Kingston, New Paltz, New Woodstock, and Poughkeepsie.

<http://www.ams.usda.gov/AMSV1.0/foodhubs>

What's Happening in the Region

Among the policy recommendations to be considered is the commissioning of a community food assessment, such as been done in Poughkeepsie to direct grants funding for community wide- education (ex: Fresh Connects) and the training of health education specialists, health coaches, health mentors to spread the word about healthy eating habits. Training of lunchroom staff and obtaining equipment for healthier food preparation is necessary to create this change.

What's Happening Locally

Sullivan County has formed The Sullivan County Wellness Committee under their "Eat Healthy, Move More Initiative" mentored by Nancy McGraw, Public Health Director. This committee works with schools, businesses, community groups to promote policy and environmental changes and improve physical activity and nutrition throughout Sullivan County. It is open to the general public and meets monthly. Current activities involve planning with local schools to improve nutrition, physical activity opportunities for students and staff and exploring partnering with farmers and schools to create a Farm to School process in Sullivan County to explore ways to assist schools in creating healthier school meals. Increasing access to fresh fruits and vegetables for county residents is a goal of the committee. They will also be exploring ways to increase participation of area minority and low income families in local farmer's markets.

In an effort to improve it's lunch program, "Monticello Central School appointed Chef Andrew Yeomans was appointed as the new School Lunch Manager on August 9th, 2013. The local chef (a graduate of Monticello High School 1989) and restaurant manager of more than 20 years experience designed the school system menu with not only better tasting food options but also developing a menu that provides a healthier intake for the student population in the hopes to entice adolescents to eat healthier while given a more eye catching and creative presentation" (www.monticelloschools.net/new/2012).

Rounding up a Rural Region Through Online Communities and Resources

Regional community social media pages can help reach a range of folks in otherwise isolated or rural regions. Though it is important to note that many still do not have internet access or computer skills, including senior and immigrant populations, social media is effective. There are a slew of social media pages dedicated to running, bicycling, hiking and fitness bring communities together, offer support to beginners, foster mentorship, offer resources for equipment, offers tips and information as well as race information as well. A list of regional social media pages dedicated to bringing the community together through different activities can be found on the following page.

Online Communities and Resources (Continued)

The **Marlboro Fit Club** is one such regional club in which various community members connect to discuss their workouts, schedule workouts with one another, post various fitness events, health-related information and compare notes on progress. There are over 1100 members. This group currently has a One Million Mile goal, with members posting the amount of miles they have rowed, hiked, walked, run, or swam. They organize events like community basketball games, kick-ball, 5K competitions and more. www.facebook.com/groups/marlborofitclub/

Some groups are organized purely online, some on and offline. The **Mid-Hudson Runners Group** is a larger hub where various runs are formally or informally organized, routes are suggested, support regarding techniques, equipment or encouragement is also offered or sourced. It draws thousands of runners communicating with one another, and is an excellent resource for new and seasoned runners. www.facebook.com/groups/111793477715/

Bike riding is an inexpensive way to get the whole family moving, together. **Mid-Hudson Bicycle Club (MHBC)** posts resources for used and new bikes and equipment, routes and mile times, races, organizes group rides and offers new and vetted bike riders an abundance of resources with live links. There are solo rides, singles rides, family rides and rides for beginners as well. <https://www.facebook.com/groups/63636370946/>

Fats In the Cats is the mountain-biking round-up club with organized weekly runs. They are an established group simply using social media to build their base. The club's organizers who run the Facebook page are also the ones who organize the weekly rides. They recently added beginner rides to acquaint new mountain biker with safety and useful techniques, since mountain biking is not without its perils. This group also organizes holiday food drives on its and works with preservation groups to clear and mark new trails. <https://www.facebook.com/fatsinthecats>

Web pages like **Trailkeeper.org** deliver folks to Sullivan county trails and systems. They offer easy-to-read maps and trail guides to make it more accessible to recreationalists for hiking, biking, kayaking or horseback riding. The website offers Hiking101, news and events as well as current trail conditions. <http://www.trailkeeper.org>

Conclusion and Recommendations

In review, there are many challenges to improving the health of residents in this rural county. To implement change, a comprehensive approach necessitates collaboration among local government, healthcare providers, schools, workplaces, institutions and community groups, individuals and families. The following seven policy strategies can be adapted to create community-based solutions to help residents, employers and governmental agencies create long term health improvement:

1. Given the exorbitant cost of obesity, local government leaders must develop and support policies that improve land use and zoning to encourage more physical activity by residents. This can help develop recreational facilities and position healthy food and farm markets for accessibility.
2. Municipalities can work with one another and County Public Health, Planning and Family Services agencies, as well as regional and state partners to achieve broader impact for the community by setting some short and long term goals for promoting health and wellness in the communities.
3. Public, private and government partners can seek grants to address environmental factors which contribute to obesity. Current policies include initiatives such as the Complete the Streets Initiative and the Surface Transportation Act, both of which provides grants to localities to build/rebuild sidewalks, bike lanes and establish school safe routes. By changing the existing environment, communities encourage healthful activities, such as walking, running and bike riding.
4. A lead community advisory group will oversee and coordinate funding and promote anti-obesity partnerships among public and private sectors, including local, state, and federal governments, private and non-profit firms, the general public, elected officials and community leaders. An example is the use of the SNAP benefits at farmers markets. Another is the collaboration of corporations such as General Foods partnering with the Let's Move Campaign to improve children's access to healthy foods and increase physical activity. The local Sullivan Renaissance model would be a framework to apply these efforts.
5. Local government could help regulate unhealthy foods by labeling menus and institute limitations of saturated and trans fats and sodium levels, major contributors to obesity, at restaurants and public institutions including schools and workplaces which serve the public
6. Incentivize access to healthy foods through subsidies for fresh produce and/or supermarkets in food deserts.
7. Healthcare providers should work together to provide improved access. The Affordable Care Act will assist with the financial aspect of access, but physical access will need to be improved given the shortfall of providers per patient. Sullivan's rate of chronic disease and mortality challenges more emphasis on routine and preventative care and the best definitive management of existing conditions. Some ideas for improved access and education are:
 - Promote early childcare counseling and education by providing families with specialized health care providers and trained community outreach personnel to conduct public health information campaigns directed at changing individual behaviors through information about nutrition, physical activity, and health.
 - Support technology-driven counseling to motivate children and their providers to track their health and supply a template for a health-driven lifestyle. Telemedicine technologies can also be utilized to improve access to primary health care providers.
 - Monitor health data (BMI and weight data) of the population to evaluate changes in health behaviors for policy evaluations to create sustainable community programs. Funding is available from the CDC to create community-based evaluation models.

Schools and businesses/workplaces will need to collaborate with their counterparts to share resources to meet new standards for healthy eating and to encourage more physical activity. Schools are a central hub in these smaller rural communities that could be utilized for bringing people together to enhance such healthy change of culture. Businesses/workplaces are vital to survival in Sullivan County on both financial and health fronts. Obesity and poor health contributes to absenteeism, low productivity and higher insurance costs. Initiatives in health coaching and lower insurance premiums or incentives have already been initiated with some employers. Walking and wellness programs have begun as well. In this rural location there are many small businesses who could make strides in offering workplace wellness programs if there was a network among other small or even larger employers.

Establishing a champion for this cause through a community partnership framework will be the first step to organizing the key players to initiate the short and long term goals. This culture of change will require a collaborative effort. Funding limitations exist but many grants are available for healthy community design, workplace programs and school improvements. A community campaign involving all mentioned parties can generate energy and enthusiasm. From this a bridge to county residents can be made and the journey begins.