Health Improvement Planning Report for Madison County

October 2009

Madison County Mobilizing for Action Through Planning and Partnerships (MAPP) Committee
“Public Health is what we as a society do collectively to assure the conditions in which people can be healthy.”

Institute of Medicine, 1988
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Section 1

Introduction

Organizing for Success

In January 2008, individuals representing various local agencies and organizations convened at the Madison County Department of Health’s conference room to embark upon a comprehensive health improvement process for Madison County. This group of individuals agreed upon and followed a community health improvement planning model adapted from the National Association of County and City Health Officials and the Centers for Disease Control and Prevention, called Mobilizing for Action through Planning and Partnerships (MAPP). The subsequently named MAPP Committee was established to guide and direct the MAPP process leading to the development of a health improvement plan to address identified concerns.

The MAPP process (Figure 1) provides a framework for; convening the variety of organizations, groups, and individuals that comprise the local public health system; actively seeking input from community members; assessing the conditions in which people can be healthy; and identifying, prioritizing, and addressing the health concerns of most importance to our community. MAPP is based on the premise that public health is “what we as a society do collectively to assure the conditions in which people can be healthy.”

\[1\]

The Madison County MAPP Committee concurred that no single entity provides public health services in Madison County, and all entities make important contributions to the County’s local health system. With this as an underlying premise the Committee established further guiding principles to ensure their success in developing and implementing a well-coordinated plan that uses resources efficiently and effectively. These principals included:

- A community-driven and community-focused process, which actively involves affected populations, e.g., students/youth, elderly.

- Building on existing activities and collaborative efforts, and dovetail needs and resources to optimize performance through shared resources and responsibilities.

- Focus on systems thinking that promotes and appreciates the dynamic interrelationships of all components of the local public health system.

- Incorporates Evidence-Based and Best Practices i.e., using the best available evidence to make informed public health practice decisions.
Section 2

Vision for a Healthy Madison County

*A place of natural beauty where families and individuals thrive*

In June 2008 the MAPP Committee adopted the Vision for a Healthy Madison County:

*Madison County’s vision - a blueprint for the future - will be achieved by an engaged community of all ages, cultures and talents and its dedicated leaders.*

This vision characterizes our community by:

- Welcoming neighborhoods and a sense of individual belonging
- Values that protect its agricultural traditions, rich history and natural scenic beauty
- Maintenance of its clean environment through planning and preservation
- Safe, affordable housing for all ages
- Access to affordable health care, education and recreation, promoting health and wellness for all
- Opportunities for ample employment and business prospects for all
- A dynamic partnership of citizens, government agencies, employers, faith based, educational, community, and service organizations

This vision for a healthy community emerged through the MAPP process as a result of direct community input through in-person questionnaires and a community forum.

*Healthy People, Healthy Places, and Health in all Policies*

On May 14, 2008, Dr. Cathleen M. Walsh, Goals Team Leader for the Office of Strategy and Innovation, Centers for Disease Control and Prevention presented on CDC’s new Health Protection Goals to a forum of local community leaders and agencies at Colgate University. The health protection goals provide a framework for future public health initiatives that may be used to address health impacts throughout all stages and aspects of life, including places and policies. A panel discussion of local leaders followed Dr. Walsh’s presentation to address:

- How healthy activities are currently incorporated in community sectors like businesses, agriculture, faith-based, and community-based organizations, and
- How independent health activities may be integrated using local partnerships, expertise and networks to engage communities and map out what society can do to ensure the conditions for a healthy Madison County.

Issues arising from the discussions were considered in the development of the Vision statement.
The Art Project

The Vision was further realized through engaging local artists as collaborators in helping promote awareness of the Vision through their respective art media.

In 2008, the Madison County Department of Health received funding from the De-Centralization Program, a Re-Grant program of the New York State Council on the Arts, administered by the Stanley Center for the Arts a local initiative to engage local artists in depicting our Vision.

Through a juried process, a winner was selected that best illustrated the selected concept from the vision that characterizes Madison County as a community that maintains “values that protect its agricultural traditions, rich history, and natural scenic beauty.”

On August 19, 2009, the artwork of Ms. Catherine Bennett, resident of Canastota, was unveiled that best represented this vision statement. Local artist, Joseph M. Murphy initiated and coordinated the art project. Mr. Murphy’s graphic illustrating talents were instrumental in promoting the art project and subsequent winning entry.
Section 3

The Four Assessments

*Insights into opportunities and challenges*

During the MAPP assessment phase, four subcommittees were formed to guide and implement each assessment activity in order to identify key issues and the challenges and opportunities they present in Madison County.

Each MAPP subcommittee examined different aspects of the community. The four assessments conducted were: Community Themes and Strengths, Local Public Health System, Community Health Status, and Forces of Change.

**Community Themes and Strengths:** The CTS assessment provides a deep understanding of the issues residents feel are important by answering the questions “what is important to our community?” and “how is quality of life perceived in our community?” Zogby International, a professional polling agency, surveyed 400 residents to determine priority health issues, quality of life, and access to care issues. Cancer, Heart Disease, and Obesity represent top 3 health concerns.

<table>
<thead>
<tr>
<th>Community Themes – Madison County</th>
<th>Top 3 Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Question</strong></td>
<td></td>
</tr>
<tr>
<td>Three most serious health problems</td>
<td>1. Cancer</td>
</tr>
<tr>
<td></td>
<td>2. Heart Disease</td>
</tr>
<tr>
<td></td>
<td>3. Obesity</td>
</tr>
<tr>
<td>Three potential risks to a persons’ health</td>
<td>1. Alcohol abuse</td>
</tr>
<tr>
<td></td>
<td>2. Tobacco abuse</td>
</tr>
<tr>
<td></td>
<td>3. Being overweight</td>
</tr>
<tr>
<td>Three things that positively impact health</td>
<td>1. Healthy behavior and lifestyles</td>
</tr>
<tr>
<td></td>
<td>2. Clean environment</td>
</tr>
<tr>
<td></td>
<td>3. Access to health care and other services</td>
</tr>
<tr>
<td>Most used medical information resources</td>
<td>1. Medical care provider</td>
</tr>
<tr>
<td></td>
<td>2. Family and friends</td>
</tr>
<tr>
<td></td>
<td>3. Internet/blogs</td>
</tr>
<tr>
<td>Place most likely to receive treatment</td>
<td>1. Urgent care facility</td>
</tr>
<tr>
<td></td>
<td>2. Hospital emergency room</td>
</tr>
<tr>
<td></td>
<td>3. Community health center</td>
</tr>
<tr>
<td>Transportation to medical appointments</td>
<td>1. Own vehicle</td>
</tr>
<tr>
<td></td>
<td>2. Family/friend</td>
</tr>
<tr>
<td></td>
<td>3. Taxi</td>
</tr>
<tr>
<td>Reasons why people seek medical services outside Madison County</td>
<td>1. Recommended by a provider</td>
</tr>
<tr>
<td></td>
<td>2. Recommended by family/friend</td>
</tr>
<tr>
<td></td>
<td>3. Accept my insurance</td>
</tr>
</tbody>
</table>

Source: Madison County Department of Health, 2008
Local Public Health System: The LPHSA is a comprehensive assessment of all of the entities that contribute to the public’s health. The LPHSA answers the questions “What are the activities, competencies, and capacities of our local public health system?” and “How are the Essential Services being provided to our community?” Over the course of two meetings in October and November 2008, over seventy individuals, representing various agencies that comprise our local health system, assessed the performance of our local public health system, identifying the following priority areas for further improvement:

### Local Public Health System Priority Areas

- Monitor health status to identify community health problems
- Diagnose and investigate health problems and health hazards
- Inform, educate and empower people about health issues
- Mobilize community partnerships to identify and solve health problems
- Develop policies and plans that support individual and community health efforts
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable

Community Health Status: The CHS identifies priority issues related to community health and quality of life. Questions answered during the phase include “How healthy are our residents?” and “What does the health status of our community look like?” In partnership with Colgate University’s Upstate Institute, SUNY Albany School of Public Health, and Morrisville State College Baccalaureate Nursing Program, data was collected and tabulated. Resulting tables, statistics, and graphs were organized by life stage.

A lack of child obesity data lead to the creation of the Child Obesity Prevalence Study or “BMI Project”, a collaborative research project between, Morrisville State College, Madison-Oneida BOCES, and MCDOH. Approximately 4000 school-age children were weighed and measured, providing vital primary data on childhood obesity in Madison County. This study represents the first of its kind in New York State.
### Selected Indicators – Madison County

#### Socio-Demographic

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>662 square miles</td>
</tr>
<tr>
<td>Person/mile&lt;sup&gt;2&lt;/sup&gt;</td>
<td>107 persons per square mile</td>
</tr>
<tr>
<td>Population 2008</td>
<td>69,766</td>
</tr>
<tr>
<td>65 yrs of age and older</td>
<td>13%</td>
</tr>
<tr>
<td>Median HH Income 2005-2007</td>
<td>$46,481</td>
</tr>
<tr>
<td>High School Graduates (%) 2000</td>
<td>83</td>
</tr>
<tr>
<td>College or higher education (%) 2000</td>
<td>22</td>
</tr>
<tr>
<td>Low Literacy – Adults (%) 2009</td>
<td>10</td>
</tr>
<tr>
<td>Poverty (%) 2007</td>
<td>11</td>
</tr>
<tr>
<td>% Children in poverty - 2005</td>
<td>13.8</td>
</tr>
<tr>
<td>Health Insurance Among Adults (%) 2008</td>
<td>86</td>
</tr>
<tr>
<td>Unemployment (%) Dec. 2008</td>
<td>7.6</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes of Death (per 100,000)</td>
<td></td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>184.7</td>
</tr>
<tr>
<td>Malignant Neoplasm</td>
<td>206.2</td>
</tr>
<tr>
<td>Cerebro-vascular Disease</td>
<td>57.3</td>
</tr>
<tr>
<td>CLRD &amp; COPD</td>
<td>67.3</td>
</tr>
<tr>
<td>Total Accidents</td>
<td>35.8</td>
</tr>
<tr>
<td>Teen (15-19) Births (per 1,000 births) 2005-2007</td>
<td>27.1</td>
</tr>
<tr>
<td>Low Birth Weight (per 1,000 births) 2005-2007</td>
<td>7.4</td>
</tr>
<tr>
<td>Infant Mortality (per 1,000 births) 2005-2007</td>
<td>4.0</td>
</tr>
</tbody>
</table>

#### Behavioral Health - 2008

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Smoking (%) 2008</td>
<td>25.8</td>
</tr>
<tr>
<td>Adult Overweight &amp; Obesity (%) 2008</td>
<td>56.6</td>
</tr>
<tr>
<td>Child Overweight &amp; Obesity (%) 2008</td>
<td></td>
</tr>
<tr>
<td>2-5 years of age</td>
<td>45</td>
</tr>
<tr>
<td>6-11 years of age</td>
<td>40.3</td>
</tr>
<tr>
<td>12-19 years of age</td>
<td>37.3</td>
</tr>
<tr>
<td>Adult Heavy Drinkers (%) 2008</td>
<td>7.8</td>
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</tbody>
</table>

#### Environmental Health

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Water Systems (% of population served) 2004</td>
<td>38</td>
</tr>
<tr>
<td>Houses built before 1950 (%) 2000</td>
<td>41.9</td>
</tr>
<tr>
<td>Public Trails (miles)</td>
<td>500</td>
</tr>
</tbody>
</table>

Source: Madison County Department of Health, 2009
Forces of Change: The FOC focuses on the identification of forces such as legislation, technology, and other issues that affect the context in which the community and its public health system operate. This answers the questions ‘What is occurring or might occur that affects the health of our community or the local public health system?’ and ‘What specific threats or opportunities are generated by these occurrences?’ In September 2008, the Forces of Change Regional Brainstorming Session was held. Over 140 diverse professionals from Herkimer, Madison, and Oneida Counties attended the event. Nineteen ‘forces’ or themes were identified that positively or negatively effect health and health care in our communities.

<table>
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<tr>
<th>Forces of Change – Madison County</th>
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<tbody>
<tr>
<td>Social Climate</td>
</tr>
<tr>
<td>Political Issues</td>
</tr>
<tr>
<td>Attitude/Morale About Region</td>
</tr>
<tr>
<td>Regulations</td>
</tr>
<tr>
<td>Aging Population</td>
</tr>
<tr>
<td>Environmental Issues</td>
</tr>
<tr>
<td>Youth Out-Migration</td>
</tr>
<tr>
<td>Aging Infrastructure</td>
</tr>
<tr>
<td>Diversity</td>
</tr>
<tr>
<td>Increase in Obesity</td>
</tr>
<tr>
<td>Economic Conditions</td>
</tr>
<tr>
<td>Prevention/Health Education Resources</td>
</tr>
<tr>
<td>Access to Health Care</td>
</tr>
<tr>
<td>Education Issues</td>
</tr>
<tr>
<td>Workforce Shortages</td>
</tr>
<tr>
<td>Technology</td>
</tr>
<tr>
<td>Geography</td>
</tr>
<tr>
<td>Emergency Response &amp; Preparedness Planning</td>
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<tr>
<td>Lack of Coordination of Services</td>
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</tbody>
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Detailed reports for each of the assessment areas were developed and are available via the Madison County Department of Health web site [www.healthmadisoncounty.org](http://www.healthmadisoncounty.org).
Section 4

Strategic Areas
The Tale of the Sauce – A Yonai Yarn

Between January and April of 2009 the MAPP Committee members reviewed the findings from the four assessments, and through a series of discussions and exercises identified eighty-five strategic issues. Through further discussion the Committee felt that it was imperative that our primary focus for subsequent strategy development should be on the family/individual, i.e., how can we help families/individuals thrive and be healthy? This focus should also tailor subsequent strategy implementation to the individual/family dependent on their respective stage in life, i.e., infant, child, adolescent, adult, and older adult. A subcommittee was established to review, refine and consolidate the strategic issues within this construct.

Strategic Issue
Conceptual Model

Nine strategic areas or “elements” were identified through the sub-committee work. A strategic issue conceptual model (Figure 2) was developed based on an underlying socio-ecological model and adapted to reflect Madison County specific data and input, and vision for a healthy community.

Figure 2. Strategic Issue Conceptual Model
The two large concentric circles of the model, which have a common center, represent a strategic relationship between the community and the individual/family. The model advances two general strategic issue statements that capture this community and individual/family relationship, and were used to frame and refine strategies.

The nine elements represent the strategic areas of interaction between the “community” (including its various “systems”) and the family or individual, that the data and community indicate are important to address for us to achieve our Vision for a Healthy Madison County. As one member of the committee commented, “If we consider this [model] similar to a sauce, these [elements] are the distinctive ingredients that make it our [Madison County’s] unique sauce.” Strategy development was targeted within these nine element areas.

A second sub-committee meeting was held to define the nine strategic areas, develop goals statements, and describe the strategic components of each issue. The definitions and goal statements were presented to the larger Committee for approval and adoption. (See Appendix A)
Section 5

Priority Public Health Areas

*Refocusing Upstream*

Our health depends on the interaction of many factors; thus, the health of our community is a shared responsibility of many entities, organizations, and interests in the community. A system focus can help to bring diverse interests together to collaboratively determine the most effective way to improve the public’s health.

The MAPP Committee determined that to affect greater change and have a more significant impact on the health of our community, our efforts should be directed at underlying systemic issues; issues that occur further “upstream” from the disease and health outcome focal points of past efforts, to those that better address the underlying social determinants that affect health outcomes and create health disparities within our communities.

Graphic courtesy of New England Research Institute, Boston; adapted by Paul Blackburn, Division of Public Health, University of Liverpool.
The strategic issues identified through the Madison County MAPP process activities best reflect where overall system improvements need to occur, regardless of the specific health issue.

On July 15, 2009 seventy-five individuals convened at a Health Summit in Morrisville to prioritize the strategic issues and initiate strategy development activities. Following a series of discussions and breakout workgroup sessions, the participants selected four priority areas for initial strategy development. These four strategic areas were: Access to Health Systems, Health Literacy, Community Economic Development, and Public Policy.

In August 2009, the MAPP Committee reviewed and finalized the strategies developed at the Health Summit to ensure that the resulting strategies best reflected the assessment findings and the community’s input and vision. The following section includes a definition for each priority health area, a goal statement, a description of the issue and its public health importance, and the suggested strategies for each priority health area.
Access to Health Systems

**Definition:** The ability and means to obtain, and sustain access to preventive services and health education, primary care, chronic disease care, mental health care, oral health care, and vision and hearing services. It includes the concept of universal health coverage that ensures access to health care regardless of income, age, employment or health status in a manner that will increase positive health outcomes and improve the health status and health equity of all persons. This definition includes both the use and effectiveness of health services. The concept of access also encompasses physical accessibility of facilities.

**Goal:** Improve access to comprehensive, high quality health care services

**Overview**

Sustained access to health care systems, the services and the health information they provide is essential for the ongoing protection of our resident’s health and wellbeing. The inability to access quality health care services can result in health disparities in vulnerable populations, diminish the overall quality of life for persons in our community and have significant costs to society.

Access to health care can encompass the full scope of primary (preventive), secondary (preventive screenings), and tertiary (treatment) services provided in the areas of medical, dental and mental health care. It also includes emergency services, home care and long term care services, and access to health data and information systems.

Many of the disparities in access to quality health care relate to affordability, availability, and accessibility, and the financial, structural, and personal barriers that can prevent individuals from obtaining essential and needed health services.

**Financial Barriers**

Financial barriers exist when individuals have insufficient resources to pay for health care, inadequate insurance, or providers receive inadequate reimbursement for services. Fourteen percent (7,506) of Madison County adults, age 18 and older, are without health care coverage, while seven percent (1,169) of children under the age of 19 years of age are uninsured. In 2009, eleven percent (5,898) of Madison County
adults aged 18 and older reported that cost prevented a visit to a doctor within the last year. ²

Although having insurance increases access to the health care system, it is not sufficient to ensure appropriate use of services or care that is of high quality. While reimbursement for common screening tests, such as mammograms and Pap tests is provided by most health insurance plans, reimbursement for effective counseling interventions, such as smoking cessation, is less common. ³

In Madison County, about three and a half percent of adults 65 and older surveyed reported that cost prevented a visit to a doctor within the past year. Although a portion of these individuals are Medicare beneficiaries, they may not be able to afford supplemental insurance to pay for needed services not covered by Medicare Part A, including high cost prescription drugs.

Even though public insurance programs like Medicaid provide medical and some dental care coverage for adults and children with low socioeconomic status, a significant number of providers do not accept Medicaid due to low reimbursement rates. In the 2008 CHFWCNY Survey of CNY Providers, the underinsured and uninsured and overall low reimbursement levels were identified as two of the top five priorities that create barriers to care. Relationship with insurers was also a major concern as some primary care providers noted that Medicare reimbursement has not changed in 7 years. ⁴

The total monthly average number of Medicaid eligible individuals in Madison County increased from 9,141 in 2004 to 9,911 as of April 2009, representing an eight percent increase over this time period. In the Central New York Region the proportion of women using Medicaid to pay for their births was 45.1 percent in 2007. ⁵

**Structural Barriers**

Shortage of primary care and other health care providers, lack of accessible service sites, lack of resources or attention devoted to prevention, lack of systems to track the quality of care, lack of time providers spend with patients, and/or transportation present structural barriers that affect one’s ability to access care. ³

---

² NYDOH BRFSS 2009
⁴ Community Health Foundation of Western and Central New York. *Provider Assessment of Community Health Needs Project.* 2008
⁵ NYSDOH web site: [http://www.health.state.ny.us/nysdoh/medstat/medicaid.htm](http://www.health.state.ny.us/nysdoh/medstat/medicaid.htm) accessed 9/4/09
In rural areas such as Madison County, having “breadth” and “depth” of providers creates potential access issues. First, the breadth of specialists available to serve our residents (e.g., neurologists) is limited; and second, for those specialists that are available we lack “depth” or a redundancy of these types of providers. One specialty provider leaving the area could seriously affect our local health care system.

Several areas, predominantly in the southern tier of the Madison County, are designated as Health Professional Shortage Areas. Shortage Areas exist for both Primary Medical Care and Mental Health Providers. Although Madison County is not designated a health professional shortage area for dental health, there are parts of the County that lay outside the normal dental coverage area specifically in the south-central and southeastern sections of the County.

The medically disenfranchised are people with no or inadequate access to a primary care physician due to the local shortage of physicians. According to the report *Access Denied: A Look at America’s Medically Disenfranchised*, the 2005 Estimated Percent of Medically Disenfranchised People for Madison County is approximately ten percent; this translates to as many as 7000 individuals in the County may be disenfranchised.

Over fifteen percent of adults in Madison County (8,150) do not have a regular health care provider. In 2008, sixty-seventy percent of adults surveyed in Madison County reported having visited the doctor for a routine check up in the last year. Similar results were observed for dental visits within the last year for adults in Madison County (64.6%).

In the 2008 Zogby survey, fifty-seven percent of the respondents said they seek medical services outside of Madison County. According to the NYSDOH Inpatient Data for 2006, approximately 54 percent of the residents who required hospitalization were hospitalized out of the county.
In addition to the lack of primary and specialized health care professionals, the county is further burdened by an overall healthcare worker shortage. In the 2008 CHFWCNY Survey of Providers in CNY health care providers stated that one of the most significant barriers to addressing unmet health care needs was workforce recruitment and retention. Nursing, nursing assistant, and physician shortages were chief concerns especially in the areas of primary care providers and psychiatrists.4

Madison County is primarily a suburban and rural community. The relationship between where people live and the location of the health care facilities can be characterized in many instances by long travel distances, particularly as it pertains to accessing specialized medical services. This is particularly true of travel on country roads during the winter months.

The Madison County Department of Social Services provides transportation to and from medical appointments for Medicaid recipients in hardship situations. The year 2008 marked an increase in requests that exceeded the vendor capacity to provide them, the discontinuance of the lone taxi provider for medical transport services, an increase in out-of-state transports for major medical issues, an increase in demand routine medical transports for such services as dialysis, and an increase in mileage reimbursement rates for those Medicaid clients that drove themselves, which was further exacerbated by rising gas prices.6

The rural topography, dispersed population of the county, and a predominantly volunteer-based staffing pool, pose significant challenges to our local EMS organizations to deliver quality services. The travel distance required transporting victims to medical facilities places considerable burdens on volunteers and affects overall response capabilities. Most of the County’s ambulatory squads and first response units are operated with volunteers and it has become increasingly difficult for communities to keep these emergency medical services fully staffed and trained in advanced medical techniques.

A recent growing trend in Madison County is that local EMS services are being asked to provide non-emergency transportation for mental health patients to out-of-county providers. Transport in the past was traditionally provided by local law enforcement. This has created coverage concerns during times of such transports.

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4 Madison County Department of Social Services. Annual Report. 2008
**Personal Barriers**

Personal barriers may also affect one's ability to successfully access healthcare. Such barriers may be the result of; a lack of knowledge about the healthcare system, skepticism about the effectiveness of prevention, environmental challenges for people with disabilities, and cultural, linguistic, health literacy, and educational factors.

People with disabilities are four times more likely than those without to have special needs that are not covered by their health insurance. People with disabilities are also more likely to put off or postpone medical care because they cannot afford it. For Madison County, the disability status of the civilian non-institutionalized population 5 years and over is 17.3 percent, higher than the NYS average of 14.1 percent.²

Each year Madison County has approximately 300 migrant farm workers working on farms throughout our community. For most, English is a second language and therefore efforts to convey information about access to healthcare services and healthcare education must be presented in English and Spanish. Second, as they are a mobile group, sustaining continuity in care is extremely difficult.

Over the recent years there has been an increase in population of our Amish and Mennonite communities. Their religious and cultural beliefs and practices limit their interaction with the local health care system. This challenge is further heightened due to a limited or lack of cultural competency training for health care workers and providers in serving these population groups.

Soldiers returning from Iraq and Afghanistan, and/or their families, face barriers to health and mental health care because the veteran’s system is strained causing delayed access to critical services; and local providers often lack an understanding of veteran’s issues (e.g., trauma-related disorders) and have a lack of expertise and/or capacity to serve them.

Population projections show an increase in the number and percent of aging adults for Madison County. Estimates suggest that by 2025 the elderly will comprise approximately 16% of the population, an increase from 13% in 2006. With an increasing aging population a parallel increased need and cost for health care services should be observed, as older adults consume a greater share of these resources. Based on these demographic trends, the nursing home capacity in the county will need to expand as a
means of accommodating the growth in the aging population. Currently the nursing homes in Madison County are at or very near capacity of beds being utilized.7

**Suggested Strategies**

**Dental Services/health**

- Increase oral Health workforce by subsidizing dental providers who serve those living in poverty to reduce necessary fees
- Explore state loan repayment program to attract dentists to the County
- Educate dentists and dental staff about: improvements in the Medicaid system, the impact of the culture of poverty, how to organize/schedule to compensate for the no-show rate, the rationale for seeing children ages 0-5, the need for comprehensive exams for those at risk, how to assess, treat and refer infants, toddlers, MRDD and other special needs populations
- Establish case management positions to coordinate oral health & access issues for Medicaid, special needs population, and the un-insured
- Conduct assessment to identify need for additional dental clinics and mobile dental vans

**Mental Health**

- Identify and adopt a model of service delivery that clearly identifies the continuum of care that is appropriate for the County.
- Increase collaboration and coordination between service providers in the planning, service delivery and assessment of service adequacy for the County
- Enhance relationships and partnerships with regional medical schools to encourage providers to practice within the County
- Provide mobile services/van/response team

**Medical Care**

- Develop and maintain a current directory of organizations that comprise the Local Public Health System and include:
  - Managed care organizations
  - Local businesses and employees
  - Neighborhood organizations
  - Faith institutions
  - Local officials who impact policy and fiscal decisions
- Conduct awareness campaign on the importance of a medical home,
- Establish access to primary care office technology with interconnectivity capabilities, technical support to ensure that the medical home is the starting

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point connecting via EMR’s, effective use of that technology, and formalize referral relationships between primary care physicians and specialists and using telemedicine to link patients with doctors.

- Establish primary care and preventive services in community settings such as schools and senior centers to include training aimed at enhancing the roles of primary care and mid-level practitioners that have a shortage of such individuals to strengthen the primary care safety net and implement programs to reduce emergency room usage.

- Develop technological capabilities and payer acceptance for tele-health for specialty care, behavioral health, home care, and care for incarcerated individuals, and emergency medicine.

- Increase number of providers through development of incentives that focus on recruitment & retention. Advance tele-specialty services, including but not limited to psychiatry, dermatology, radiology and emergency medicine.

- Increase number of NP by utilizing local educational programs and encourage local targeted retention.

- Develop and implement medical education models that address the core problem of physician supply for Madison County.

- Support efforts for both regulatory and reimbursement reform that better incentivizes our communities’ investments in fairly distributed comprehensive primary care.

- Increase the use of incentives to recruit and retain providers such as Exploring state loan repayment programs to attract providers to the County and Subsidize providers who serve those living in poverty to reduce necessary fees.

- Establish patient-centered care focused on the integration of primary and specialty care with behavioral health, dental care, and other services.

- Establish an association of local Health Care Providers to develop a comprehensive Employee Advocate program accessible to participating providers, with the goal of improving retention rates and improving the overall image of entry level positions in the health care field. Develop multi-community and provider networks to expand access to high quality, specialty mental health services.

- Develop regional hub networks with a focus on prevention and health that have broader programs that are shared by multiple organizations rather than a burden on each organization. Foster pooling of resources.

- Explore the feasibility of the creation of a Madison County Rural Health Network.

- Establish a collaborative Health Care Team charged with developing coordinated strategies to expand services with an emphasis on establishing primary care “medical home” for residents and comprehensive disease management to address chronic illness.
Health Literacy

Definition: Health Literacy is the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions.

Goal: Improve the degree to which people can obtain and process basic health information and services they need to make appropriate health decisions.

Overview

Low literacy affects millions of people across the United States. It shapes all aspects of our lives and creates unnecessary disparities, especially in regards to our health and access to health care. According to the National Assessment of Adult Literacy estimates, in 2003 approximately 10% of the adult population (5,520 individuals) in Madison County functions below the basic literacy skill level, an increase from the 1992 estimate of 8%.8

General literacy skills and health-related literacy skills are related. Individuals with more general literacy skills will also be more likely to have stronger health literacy skills. However, health literacy is not only about education. A person who has finished high school and knows how to read may still not be able to navigate the health system.

With regard to health literacy, more than a third (36%) of individuals (ages 16 and older) has difficulty understanding and acting upon health information.9 In Madison County this would equate to approximately 25,000 individuals who are faced with this difficulty.

Individuals with low literacy levels lack the skills needed to accomplish health-related tasks such as following directions on medicine labels, reading nutrition labels, describing symptoms, interacting with health care providers, completing forms, choosing between health plans, comparing prescription drug coverage, or using a map

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to locate health facilities. As a result, these same individuals demonstrate the following10:

- Higher rates of hospitalization and use of emergency services.
- Less frequent use of preventive services.
- Enter the healthcare system when they are sicker.
- More likely to report their health as poor.
- Associated with higher health care cost.
- Negative psychological effects (e.g., sense of shame).
- Lack knowledge or have misinformation about the body as well as the nature and causes of disease, and therefore do not understand the relationship between lifestyle factors (e.g., diet) and various health outcomes.
- More likely to have chronic conditions and less able to manage them effectively.
- More likely to be uninsured
- Less ability to negotiate the health care system

Compounding this issue, individuals with low health literacy skills are faced with additional barriers that include:11

- Use of specialized medical language (“medicalese”) or technical jargon by health care providers.
- Increased complexity of health care and health care system.
- Increasing prevalence of chronic conditions (e.g., diabetes, congestive heart failure) require patients to know how to manage their own health care outside the clinic and hospital.
- Lack of training of health care providers in dealing with low literacy patients.
- Lack of time spent with patients during a visit.

Suggested Strategies

- Enhance access to health information including materials, media, oral and other non-written forms of communication, collaboration among all professional groups and establish standards and process for readability and understanding of materials that is used by all providers.
- Improve the usability of health information and health services by including:
  - Involve intended user group/target population in design and testing of health messages and services information.
  - Improve the usability of information on the internet.
  - Make written materials easier to read.

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10 America’s Health Literacy: Why we Need Accessible Health Information. An Issue Brief From the U.S. Department of Health and Human Services. 2008

Ensure the health information is relevant to the intended users’ social and cultural contexts
- Improve usability of health forms and instructions
- Improve accessibility of the physical environments
- Establish a patient navigator program
- Create mechanisms for sharing and distributing plain language materials among health professionals
- Change professional practice for health care providers and public health professionals, including health educators and pharmacists:
  - Encourage professional organizations and secure commitments to make health literacy issues a high priority on their policy, research and practice agendas and to develop position and issue policy statements and papers (e.g., CNY Academy of Medicine) [cross walk with Public Policy]
- Connect health literacy issues to ongoing efforts to improve the cultural competence of healthcare providers.
- Develop and implement educational curricula in professional and continuing education programs
- Ensure that health and health care providers are represented on the proposed literacy coalition to help coordinate decision making and implementation of the community literacy plan. Consider establishing a working sub-group to the coalition specific to health literacy
- Advocate for health literacy in our organizations
  - Include health literacy in staff training and orientation
  - Identify specific programs and projects affected by low health literacy
  - Target key opinion leaders with health literacy information
  - Incorporate health literacy into mission and planning
    - Convene a work group to develop a health literacy agenda for local organizations
    - Include health literacy in grants, contracts, and memorandums of understanding
  - Establish organizational accountability
    - Include health literacy improvement in program evaluation and quality improvement plans
    - Include health literacy improvement in budget requests
    - Implement health literacy metrics or measurable objectives in our organizations.
- Develop a county focus and agenda for health literacy
  - Convene an exploratory planning committee to assess opportunities for a county/regional conference such as Madison County Conference on Health Literacy to include a Health Literacy Plan (e.g., Onondaga County’s Conference on Obesity).
  - Convene a working group to collaborate on a county report on health literacy and report findings of this report.
- Raise awareness of health literacy through a defined marketing strategy
- Design a community calendar which includes different venues, different dates, communicating health to the general public on a topic per month
Community Economic Development

**Definition:** Action taken locally by a community to provide economic opportunities and improve social conditions in a sustainable way. CED is a community-centered process that blends social and economic development to foster the economic, social, ecological and cultural well-being of communities.

**Goal:** Improve economic opportunities and social conditions in a sustainable way.

**Overview**

*The Virtuous Cycle*

Investments in health is good business, good for business and good for the economy overall. It is not only cost effective in improving quality of life for individuals, but also profitable for an entire community because health is an engine that drives economic development. Evidence demonstrates that improved health increases economic growth through impacts on micro- and macro-economic factors.\(^{12}\) The microeconomic factors include the direct effects of increasing the number of working years and the productivity of each year of work, as well as indirect effects such as the impacts on children and education. Macroeconomic factors include increasing internal and external investment, improving social structures, and altering the long-term demographics of a population.\(^{13}\)

In turn, economic development can result in improved health status in populations.\(^{14}\) The links between health and wealth are clearly bidirectional and create a “virtuous cycle”\(^{15}\) in which improved health leads to improved economics and an improved economy leads to better health. Therefore, the role of health as economic engine does not replace, but rather adds to the conventional view of economic development as a precursor to improved health. Efforts, therefore, to advance economic development and health improvements must be interconnected.

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\(^{13}\) Mirvis DM, Chang CF. Health as an economic engine: how better health leads to economic development. *Business Perspectives.* Fall 2002.


Health and Wealth

Health and economic goals are interconnected in several complex ways. It is generally accepted that income levels impact health, that is, poverty is associated with poor health.\textsuperscript{16} The poor carry a greater burden of disease than do more affluent members of society for many reasons, including less access to safe housing, appropriate health care, adequate nutrition and sanitation, more exposure to environmental toxins, and more hazardous occupations.\textsuperscript{17} Poor persons are less willing than others to pay for health care services, especially those such as preventive services that have a long time-frame of action. They have other more immediate needs\textsuperscript{18} and are less likely to be alive to reap the long-term benefits of their health investments.\textsuperscript{19}

According to the 2005-2007 Census, 11% of all people in Madison County are below the poverty line, an increase from the county’s 9.8% level in 2000. The poverty level for persons 65 and older is 6.8% for Madison County. For children in Madison County, this level grows to 13.8%. The declining economic conditions have impacted and will continue to impact the health status of the residents of Madison County.

Lower socioeconomic conditions also lead to social disadvantages that can impact health status. These include psychological vulnerabilities, persistent stress, and lack of social participation, each of which is associated with lower health status.\textsuperscript{20} In addition, greater inequalities in incomes within a region may be associated with higher mortality rates.\textsuperscript{21}

In 2007, mortality rates in Madison County (814.8 per 100,000 population) were considerably higher than the New York State rate of 757.9 per 100,000. More specifically, from 2005 to 2007, the mortality rate in Madison County for chronic obstructive pulmonary disease (COPD) was 64.8 per 100,000 population, over double the rate for New York State (31.3 per 100,000 population). Likewise, cancer mortality


\textsuperscript{17} Marmot M. (2002). The influence of income on health: views of an epidemiologist. Health Affairs, 21, 31-45.


rates for colon and rectum (25.5), and lung and Bronchus (55.3) were significantly higher than the state rates (colon/rectum = 18.3; lung/bronchus = 46.2).  

**Healthy People is Healthy Business**

Poor health reduces economic productivity. Disease and illness reduces personal economic well-being. This is due to a mix of direct loss of income due to disease, the loss of future earnings due to shortened life span, and the loss of productivity from psychological as well as physical well-being. The last component is becoming more important as the prevalence of chronic rather than acute illnesses grows and as contemporary treatment prolongs the life of patients with chronic illnesses and reduces, but does not eliminate, resulting disability.

In Madison County, certain chronic disease, specifically cancer, demonstrate rates higher than the State average. The cancer incidence rates for colon and rectum (61.5), and lung and bronchus (81.9) per 100,000 population in Madison County were significantly higher than for New York State (colon/rectum = 52.1; lung/bronchus = 64.5). Additionally, Madison County demonstrates significantly higher rates of early stage cancer for oral cavity and pharynx (59), and colon and rectum (54) compared to New York State rates (oral cavity/pharynx = 35; colon/rectum = 41).

Poor health has both current and future economic consequences that may span generations and affect health in later stages of life. Early childhood or even in utero diseases reduce both cognitive and physical capabilities later in life, both of which reduce economic productivity. These effects are due to direct biological consequences of disease as well as to lower educational attainment. Since 1998 the percent of women in Madison County receiving no or late prenatal care has increased from 2.7, in 1998, to 4.9 in 2007. Prenatal care improves the likelihood of a healthy pregnancy and provides improved outcomes for the infant/newborn by maintaining close observation of their growth and development.

Raising the average birth weight of low birth weight babies to the mean birth weight of all U.S. babies could increase their lifetime earnings by 26%.

22 New York State Department of Health. 2009
factors such as low income and lack of education are associated with the risk of having a low birth weight infant.

The health of the children impacts the productivity of parents. Parents commonly miss work to care for sick children. Likewise, the illness of a parent may cut short the education of a child and may reduce parental guidance and support.

The quality and duration of life directly impact a person's ability to generate income. Improved health that prolongs working years promotes income growth by extending the duration of economic productivity. Better health with better quality of life may increase economic value by raising the economic output of each year of life that is, increasing productivity. The financial consequences of health status on the economy has been estimated that each year of life lost to premature death leads to an economic loss equal to three times the annual earnings. Accordingly, the death of someone at age 20 years results in an economic loss of 100 times the person's annual earnings.

At the level of a single company, investments in the health of the workforce, just as in new information systems and advanced production technology, can lead to substantial returns to the bottom line. These activities may include, for example, efforts to promote healthful personal behaviors such as stopping smoking and increasing exercise and the use of effective preventive health care services such as blood pressure and cholesterol screenings among employees. And, because the impacts of health on productivity extend to upcoming generations of workers, extending these efforts to the community at large can yield substantial returns in the future.

Work limitations increase progressively as the number of health risk factors such as cigarette smoking and alcohol use increases. Each additional risk factor has been associated with a 2.4% reduction in individual productivity. Workers with chronic health

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For Every 100 Employees in America
77 Have Poor Nutrition Habits
68 Do Not Exercise Regularly
59 Are Overweight or Obese
34 Have High Cholesterol
25 Smoke
17 Binge Drink
10 Have Depression
9 Have Diabetes
8 Have had a Heart Attack or Stroke

Source: Presentation by C. Bush, BHL May 2007

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problems are 2.5 times more likely to miss six or more days of work per year because of illness than are those without chronic diseases.\textsuperscript{28}

For the past three years Madison County has conducted a health survey of its employees. The surveys revealed that overweight and obesity for both males and females increased over this three year period. Over this three year period, on average, 55% of the women and 89% of male respondents were identified as overweight or obese.\textsuperscript{29}

Illness impacts businesses by increasing employee benefit costs, increasing absenteeism, reducing productivity at work (that is, increasing presenteeism), and increasing employee turnover rates. Health benefits are the most rapidly growing cost among employee benefits, with a rate of growth exceeding the rate of growth of wages by almost 3 to 1 since 1991.\textsuperscript{30} Poor employee health may be expected to increase these costs by increasing direct outlays for care and by increasing risk ratings for insurance coverage.

Approximately 98.3\% of businesses in Madison County employ 99 people or less with about 77\% of these being businesses that employ less than 10 people.\textsuperscript{31} This employment base, with its dependence on small businesses, has significant implications for the health of our workers. Many small businesses are challenged to provide health benefits for their employees. A 2000 study of health care benefits provided by businesses of varying size in New York State shows that the percentage of businesses offering health benefits to their employees increases with the size of the company. Recognizing that a large proportion of Madison County businesses have a low number of employees then by inference it can be assumed that many do not provide health insurance. These figures

\textsuperscript{29} Madison County Health Quotient Report 2008
\textsuperscript{31} Michael Rosanio, CNY Regional Planning & Development Board. Personal correspondence. October 7, 2009.
don’t take into account the “non-employers” (unincorporated business with no paid employees, annual business receipts of $1,000 or more and subject to federal income tax). In 2006 there were 4,211 of these “non-employer” entities in Madison County. These could include self-employed contractors and/or part-time businesses of various types.\textsuperscript{31} Health insurance coverage for these individuals working in these businesses is unlikely as well.

Economic imbalances due to lack of employment and income opportunities promote out migration and regional “brain drain”. Those people left behind are frequently the least prepared to meet the challenges of the modern workplace. The lack of an educated and trained workforce has always been a major barrier to economic development efforts that focused on attracting high-wage employers.\textsuperscript{32}

Data from the NYS Department of Labor shows the unemployment rate for Madison County increased from 5.2% in December 2007 to 7.6% in December 2008. Furthermore, the rate of growth in the county population is small due to the exodus of major employers and jobs. Many young people leave the area to obtain employment. This decreased younger population affects health in a variety of ways including a smaller tax base to support public health and rising Medicaid/Medicare costs, and fewer skilled employees are available including public health and other health care workers.\textsuperscript{33}

Poor overall population health also impairs the economic well-being of the entire community beyond the cumulative impacts on individuals and specific businesses. The aggregate or macroeconomic effects of improved health are large in magnitude, and they impact everyone in a community - not just those who are ill. Illness in a society disrupts various social structures and functions.\textsuperscript{34} Governmental funds are reduced as tax collections fall, and the remaining communal funds are diverted to health-related services and away from other needed infrastructure projects. Community cohesion and social capital are also lost as illness disrupts family and societal structures,\textsuperscript{35} leading to lower economic growth.

The Madison County Department of Social Services reports that requests for services in 2008 increased by fifty-eight percent (58%), with safety net assistance increasing by

\textsuperscript{32} Madison County Forces of Change Proceedings September 2008.
seventy-four percent (74%). Within the Medicaid unit caseloads increased in 2008 by approximately seven percent (7.3%).

A Healthy Investment

The economic rates of return for specific health care interventions are high. The outpatient treatment costs for 10 common health conditions are only 11% of the productivity costs of these conditions; that is, treatment results in a 9:1 return on investment. Thus, many medical interventions result in highly favorable cost-benefit ratios. The returns on investment from basic and relative inexpensive health interventions such as childhood immunizations may equal or exceed those from education. In 2007, immunization assessments conducted in Madison County provider's offices and the county’s immunization clinic revealed that one out of every four children was not fully immunized by two years of age.

The health sector plays an important role in local economic development by creating jobs and income for residents through the normal operations of hospitals and other health-related enterprises. Health care is one of the largest industries in Madison County. Oneida Healthcare Center and Community Memorial Hospital combined employ approximately 1,100 individuals. The health sector represents a vital component of a community’s economic activity and can be responsible for generating considerable employment and income in other businesses in the community.

Engaged Scholarship – Making a High Performance Engine

The role of higher education is absolutely critical to the economic development and future health agenda. Their mission, their students, their partnerships, their physical location and stability, and their resources are most likely to make a difference in an emerging knowledge economy that seeks new approaches to producing health and economically productive residents and communities. Universities are ideally suited to

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produce a new kind of citizen who is better prepared to facilitate the kind of partnership to produce a healthy community. 44

A message from previous Director Jill Tiefenthaler of Colgate’s Upstate Institute clearly recognizes this role; “These institutions [colleges and universities] make an important economic impact. They create jobs, bring dollars into the area, advance knowledge, and build expertise. The combined research and development base of central New York’s largest research institutions account for more than $1.2 billion in non-industrial research and development spending. The presence of higher education institutions in the region has also resulted in a higher-than-average percentage of residents in college and a higher level of educational attainment relative to the national average.”42

Engaged scholarship is how institutes of higher education prepare graduates to be effective in their jobs and in practices; how they translate research into practice, and how they develop interventions for complex problems, such as obesity, or health disparities. If there is to be a transformation in economic development and health status, then it must be linked to a transformation of our institutions of higher education to a comprehensive engaged scholarship approach.

Healthy Future

At a basic level, better population health reflects the improved health and, hence, the economic productivity of many individuals. The aggregation of these individual effects to the community level translates into better macroeconomic performance. For Madison County, efforts to promote economic development need to assess and improve the health of the community as well as other core systems such as transportation. Economic growth is dependent upon effective policies and institutions (such as governance, economic policy, and public systems) and factor inputs (such as human resources and technology). Health has a critical role in economic development by impacting both parts of the equation directly on human resources and indirectly on public systems and public policies.

http://findarticles.com/p/articles/mi_m1YLZ/is_1_31/ai_n27926008/
**Suggested Strategies**

- Implement a county planning committee to develop a comprehensive strategic community Development Plan and identify in each community what we want to maintain, develop and sustain.
- Advocate for health representation on the Madison County Transportation Coordination Steering Committee.
- Conduct a promotional campaign regarding assets of the county to attract and maintain business.
- Identify funding sources.
- Create a workshop forum for communities to share best practices (include education component to public) from places in county and other examples of smart growth for planners.
**Public Policy**

**Definition:** That which the law encourages for the promotion of the public good, including health.

**Goal:** Improve the health of the community through legislative action at the federal, state and local levels.

**Overview**

*Healthy Public Policy*

The health of individuals and populations is affected positively or negatively by an intricate set of underlying factors or determinants that interact throughout each stage in life. Good health requires safe employment, living wages, safe and affordable housing, nutritious food for the body, mind, and spirit, a positive self-image, and a clean and safe natural, built, and social environment in which to live. Access to quality and affordable healthcare, good health insurance and good doctors, equal and quality treatment, and adequate healthcare infrastructure – is also critical. As these determinants of health are multiple and interactive, any actions to improve health must rely on interventions from many areas other than the health sector, including economic, public safety, energy, public transportation, industry and others.\(^\text{43}\) The policies that guide, shape and affect these areas in turn affect health, beneficially or detrimentally.\(^\text{44}\) Therefore to improve health we need to have some bearing on policies and practice in all these areas, i.e., encourage healthy public policy.

In the fall of 2008, seventy individuals, representing various agencies that comprise Madison County’s local health system, assessed the performance of our local public health system and identified, among others, the need to ‘develop policies…that support individual and community health efforts’ as a priority area for further improvement.

Public policies arise from a web of decisions and actions rather than a single decision. Policies are developed incrementally, with only slight adjustments to existing policies and structures. These adjustments are limited to what is considered possible on the


basis of value judgments and careful negotiations with interested parties. Healthy policy
an opportunity to influence policy. Incorporating health and assessing the impacts on health can contribute to healthy policy formulation.

Healthy public policy is defined as a policy that ‘is characterized by an explicit concern for health and equity in all areas of policy and accountability for health impact.’ Healthy public policy can positively influence the determinants of health at higher levels including socio-economic, cultural and environmental conditions, living and working conditions, and social and community influences. Individual lifestyle factors together with age, sex and heredity also determine health but are less important than the higher level determinants. Health services, while important in determining the outcome of episodes of illness, are relatively unimportant in determining population health.

For most policies the influence on health is indirect, and often through several pathways that may act in conflicting directions. For example, closing a factory may reduce pollution emissions resulting in a health benefit, however, the resulting unemployment due to the closure create negative health consequences in the form of lost health insurance coverage for the unemployed worker. Such conflicting health consequences are features of most policies and require trade-offs to reach optimal decisions.

Policy making is complicated because the harmful and beneficial impacts usually fall on different groups, and the subsequent policy may increase or decrease health inequalities. A basic principle, therefore, of healthy public policy must be the achievement of equity in health. Societies must provide equal opportunities for people to make the optimal use of their health potential. Equity implies reducing differences in health status and opportunities for health as far as possible—not only achieving equal access to care. Health inequalities are currently regarded as one of the most important public health challenges, with the reduction in health inequalities advocated

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as an essential feature of healthy public policy.\textsuperscript{50} It has been stated that “a good health policy includes a well developed social policy.”\textsuperscript{49}

Policy making can occur in several sectors (workforce, education, health, environment) and at all levels of government (federal, state, county, town, village). It is important therefore, when making policy to identify the different paths through which health may be benefited or harmed, and by estimating the balance of harm and benefit. By assessing the relative importance of impacts through different routes it provides information to help the trade-offs which are inherent in all policy making.

Building healthy public policy includes policies designed specifically to promote health (for example, the New York State Clean Air Act) and policies not dealing directly with health but acknowledged to have a health impact (for example, public transportation, education, economics). Accepting a broad model of health suggests that virtually any area of public policy can have health impacts.

Healthy public policy can range across a variety of sectors in our community and can have a positive health impact. The following examples demonstrate that implementation was feasible if political will was present and if advantage was taken of strong public support for action: \textsuperscript{49}

- Policies which provide for a physical and social environment conducive to health, such as town planning, pollution control and tax incentives for lead-free gas.
- Educational policies which ensure that all children have good education for health and nutritious school meals;
- Food and nutrition policies which provide physical and economic access to a healthy diet for all groups;
- Transportation policies which include legislative and educational measures pertaining to the use of seat-belts and reduced speed limits, better road design, traffic control and equality of access to public services;
- Policies relating to tobacco products and alcohol, which combine public and educational measures to reduce supply and demand
- Employment policies which enhance worker’s participation, job creation, and job satisfaction and provide for statutory health-based regulations at work.

\textsuperscript{50} World Health Organization Regional Office for Europe (1999) Health 21 – Health for All in 21st century (European Health for All Series No. 6). WHO, Copenhagen, Denmark.
Health service policies which specifically seek to reduce inequity between social groups or the sexes in their productive or reproductive roles, and legal provisions allow for maternity and/or paternity leave.

Within New York State and Madison County we observe similar public policy that result in health benefits such as:

- Law approving leave for breast and prostate exams for employees.
- Use of Electronic Banking Transfer (EBT) machines for purchase of produce at farmer’s markets,
- State law requiring schools to maintain children’s Body Mass Index information within their school medical record;
- The Clean Air Act prohibiting smoking in restaurants; and most recently
- Mandatory influenza vaccinations for health care workers.

Several key factors have been identified that are important in the development of public policies for health. 49

- The establishment of an organizational focus for policy analysis and development. This including research and training needs, will require an initial investment which is marginal compared to the expected health benefits;
- The development of a health information system for policy planning and monitoring. Such a system should be accessible not only to policy-makers but also to consumer groups and to the general public.
- The publication of the health impact relating to major policies
- The development of mechanisms for collaboration at all levels of public policy-making.

The major responsibilities rest with governments to develop explicit public policies for health. Health impact must be a concern and responsibility for all sectors and organizations in society, including industry and the private sector. The development of healthy public policies involves major challenges. These include:

- The achievement of a balance between providing a supportive environment and a focus on personal lifestyles. In doing so, public policies should be consistent with people’s need for variety, opportunity and choice;
- The development of political will to overcome likely conflict between public
health interests and commercial and other vested interests;

- Recognition that policy development is a process which involves a wide variety of organizations, agencies and individuals. Consultation, partnership and the establishment of new alliances are essential.

Local is Better

An especially important arena for healthy public policy development is the local community and its settings, such as schools and workplaces. Much of the critical decision-making affecting health and well-being occurs at the community level. For example, states set policies for curriculum but local policy will be needed when addressing such issues as bullying that can contribute to mental health related problems.51

Policy-making at the macro level may not be sensitive to the diversity of local conditions that directly affect the health and well-being of residents of different communities. Beyond that, important health related planning, policy-making and action originate at the local level. Also, the motivation of local leaders to practice healthy public policy making should be high, since they are affected by their own decisions. Community policy makers live where they work. They are identifiable with their policies. Important social ties between public policy makers and those affected by policy exist at the local community level.

The bureaucracies of communities are less complex than at the national and state levels and there is greater likelihood of collaboration at the local level.52 Potential policy “backlash” could by avoided by a local level analysis of social and health impacts that could provide reasonable modifications to policy so that implementation fits local conditions and needs. A participatory community health development process, such as the recent MAPP process undertaken in Madison County, can shift peoples’ thinking beyond the illness problems of individuals to consideration of how programs and policies could support or weaken community health, and clarify a community’s capacity and control to improve local conditions for a healthier society. 51

New York State is considered a Home Rule state, i.e., government has authority and control at the most local level. Home rule has meant control over a community’s

character, primarily through zoning. But the principle has evolved to include different levels of communities, from school districts to condominium owners. Home Rule, therefore, can be conducive to healthy public policy formulation.

Unfortunately, home rule can also create barriers that affect health policy development as home rule can be used as a “shield” against such “not in my backyard” issues as landfills, and highways, as well as reinforce racial and socio-economic segregation.\(^{53}\) Additionally, home rule can contribute to negative health impacts; for example independent and uncoordinated land use development activities between municipalities could create unhealthy conditions e.g., traffic congestion or locating industry near residential neighborhoods.

Recent trends towards centralization and regionalization has eroded home rule in New York State. Increasingly county and state planners are bypassing local zoning authority through such activities as state laws protecting wetlands and other environmentally sensitive areas. This trend has placed the county level of government in a key position as a maker of local public policy.

**Health Impact Assessment: A means for healthy public policy**

Advancement of healthy public policy requires that the health consequences of policy should be correctly foreseen and that the policy process should be influenced so that those health consequences are considered.\(^{45}\) An evidence-based approach to these tasks requires an assessment of: the ways that each policy might have an impact on health, how to improve this impact, and how to ensure that the combined effects of diverse policies avoid contradictory effects and create synergistic benefits.\(^{54}\)

Health impacts have been defined as the overall effects, direct and indirect, of a policy, strategy, program or project on the health of a population and include impacts on health determinants.\(^{55}\) Health Impact Assessments (HIA) represent a new, “...formal, systematic analysis to prospectively assess the potential health impacts of proposed projects, programs and policies and communicate this information to policy makers and stakeholders. ”\(^{56}\)


The process of HIA requires broad participation of all stakeholders involved in order to adequately identify the potential health impacts. Concerned also with the distribution of impacts within the population, HIA is a means of addressing inequities in health. HIA can also find opportunities to maximize health gain and be a positive way to work across sectors to define and to promote healthy public policy. This is an important difference from environmental assessments where the priority is to reduce damage.57

The basic concepts of health impact assessment are not new and will be familiar to those working in public health. It builds on and brings together methods including policy appraisal, health consultation and advocacy, community development; evidence based health care and environmental impact assessment.

However, in order for such assessments to be of value, the assessments must conform to the policy-making timetable, furnish information in a form that is policy relevant58 and fit the administrative structures of the policy makers. Health impact assessments must be based on an understanding of, and aim to add value to, the policy-making process. Equally as important, policy makers need to look beyond short-term targets and budget cycles to secure investment for long-term improvement in public health.

Suggested Strategies

- Encourage professional organizations to make health literacy issues a high priority on their policy, research, and practice agendas and to develop positions and issue policy statements and papers (e.g., CNY Academy of Medicine)
- Establish public health and adult literacy education policy and funding that provides opportunities for the health and literacy education communities to come together for program and staff development.
- Develop and adopt a Madison County Sanitary Code that addresses local health issues to include modifying 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.
- Pass and promote laws and regulations to create new or expand existing efforts to promote active living. Local governments should examine planning, zoning

opportunities for play and active lifestyles. Funding should also be prioritized to support specific evidence-based goals, such as building sidewalks in new and existing neighborhoods to create safe corridors to schools and neighborhood parks

- County and municipal governments should serve as a model for communities. Whenever possible:
  - New government buildings should be sited within walking distance of public transportation, walking trails, and residential areas to promote active living.
  - Encourage county government and local organizations/businesses to establish an Environmental Purchasing Policy and/or local ordinance that would incorporate guidance and requirements to purchase environmentally preferable products whenever practical.
  - Encourage county government to implement an Environmental Management System in accordance with, as appropriate, the requirements of ISO 14001 to coordinate actions and resources across the county.
  - Encourage county government and local organizations/businesses to adopt and implement effective management of natural assets through actions to protect biodiversity, habitats and species from the adverse effects of these organizations activities.
  - Strengthen school based wellness policies to ensure healthy environments for kids.
  - Encourage county government and local organizations/businesses to adopt a renewable energy and related economic development policy that would require that a certain percentage (e.g. 50%) of Madison County's total non-transit energy use come from renewable energy sources by the year 2015.
  - Advocate for adequate Medicaid reimbursement for dental services
  - Determine whether laws and regulations provide the authority to carry out the essential public health services
    - Determine the impact of existing laws and regulations on the health of the community
    - Assess the opinions of constituents of the Local Public Health System
    - Determine whether laws and regulations require updating
    - Assess compliance with public health laws and regulations
  - Engage key state and regional stakeholders in this process
  - Educate policymakers regarding priority issues identified in the Community Health assessment
  - Review public health policies at least every two years
NYS Prevention Agenda

In 2008 NYSDOH Commissioner Richard F. Daines, MD, launched the Prevention Agenda for the Healthiest State to support the goals of health care reform. This agenda sets ten statewide public health priorities and asks local health departments, hospitals and other community partners to work together to address them. The emphasis of this public health initiative is on prevention strategies to improve the health of all New Yorkers and foster healthy communities. Priority areas include:

- Access to Quality Health Care
- Chronic Disease
- Community Preparedness
- Healthy Environment
- Healthy Mothers, Healthy Babies, Healthy Children
- Infectious Disease
- Mental Health and Substance Abuse
- Physical Activity and Nutrition
- Tobacco Use
- Unintentional Injury

NYSDOH encouraged local health departments and hospitals to “collaborate...to assess community health needs” and “identify two-three local priorities among the Prevention Agenda list, and work together to address those needs.”

The NYS Prevention Agenda Priority Areas were included and considered throughout strategic issue, goal and strategy development, and health prioritization activities. The MAPP Committee determined that to affect greater change and have a more significant impact on the health of our community, our efforts should be directed at underlying systemic issues; issues that occur further “upstream” from the disease and health outcome focal points of past efforts, to those that better address the underlying social determinants that affect health outcomes and create health disparities within our communities.

The strategic issues identified through the Madison County MAPP process activities best reflect where overall system improvements need to occur, regardless of the specific health issue. Except for Access to Health Systems, Madison County’s issues do not directly correlate with the State’s Agenda items.
The MAPP Committee, including our hospital partners, agreed that the Prevention Agenda items should be incorporated into the development and tactical implementation of the strategies identified for the priority issues. For example:

<table>
<thead>
<tr>
<th>Strategic Area:</th>
<th>Health Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy:</td>
<td>Improve usability of health information</td>
</tr>
<tr>
<td>Prevention Agenda Item:</td>
<td>Chronic Disease</td>
</tr>
<tr>
<td>Tactical Strategy:</td>
<td>Improve usability of health information specific to chronic diseases.</td>
</tr>
</tbody>
</table>

Based upon the assessment data, and in agreement with our community partners, the following NYS Prevention Agenda Areas were selected for tactical implementation within our priority health areas:

- Access to Quality Health Care
- Chronic Disease
- Healthy Environments

*A Healthy Life in Healthy Places*

At each stage of life our health is affected by a diverse and numerous set of factors. 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.59

This life stage and healthy places approach, when used in conjunction with the Ten Essential Services of Public Health (see Appendix B) 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?” or “How do we design communities in ways that support healthy behaviors, e.g., physical activity for older adults and the elderly?”

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59 Olson, Christine, Principal Investigator, Wells, Nancy and Allan Green, Co-Investigators Promoting healthy weights in childbearing women and their infants. Project No. 2005-35215-15427
The communities’ vision for Madison County is a “place where families and individuals thrive.” Understanding and subsequently addressing those factors that affect our ability to thrive at each stage in a person’s life therefore, is vitally important. At the February 2008 MAPP Committee meeting, members discussed the need to look at health at each stage of a person’s life and within the environments that they “live, work, learn and play.” After further review of the literature and best practices, the Committee adopted, with minor modification, two of the four Centers for Disease Control and Prevention’s Health Protection Goals – Healthy People in Every Stage of Life and Health People in Healthy Places (see Appendix C).

The Committee further agreed that health profiles describing the specific health issues and objectives for each life stage and healthy place should be developed. Advisory groups were established and potential subject experts identified that could assist in the development of the profiles. Initial discussions were held to craft the framework for the health profiles. The Committee agreed that the profiles should be developed separately but in concert with the Health Improvement Planning Report for Madison County. The County Health Department was identified as the lead agency to advance the development of the health profiles in 2010.
Section 6

Moving Forward

From planning to implementation – opportunities for action

The first phase of the MAPP process concluded with the completion of the community health assessment and the issuance of the Health Improvement Planning Report for Madison County. The Report will provide the basis for the second phase of the MAPP process – The Action Cycle.

While the health department has the responsibility for the continuing assessment and evaluation of the community, it will be the community's responsibility to take the necessary steps to implement the strategies outlined in the plan.

The Action Cycle: Fall/Winter 2009

The second phase of the MAPP process involves the development and implementation of an action plan. During this phase the strategies identified during the community health assessment activities will be further refined to incorporate the selected NYS Prevention Agenda Priority Areas (Access to Health Care, Chronic Disease and Cancer, and Healthy Environments). Action plans will be developed detailing specific activities to implement along with responsible agencies and resource allocation.

To guide the action planning and implementation phase, a steering committee comprised of key community partners will be established. Four working groups, one for each priority area, have been identified to develop the action plans. At the Health Summit held in July 2009, several individuals signed up to work on one or more of the priority area work groups. Additional group members were identified for future recruitment.

Initial personal contact has been made with several key individuals in the community seeking their participation on the priority work groups. Presentations to stakeholder groups, e.g. Oneida Rotary and the Madison County Industrial Development Agency, were made to discuss the health priorities for Madison County and encourage individuals and agencies to participate on the workgroups.
Initial Opportunities

The Madison County’s Comprehensive Economic Development Strategy Committee discussed the MAPP process and health priority areas at their August 2009 meeting. Members were very excited to hear that Madison County citizens recognize economic development as a key component of a "healthy MC" and were eager to figure out how to incorporate MAPP’s results in the strategic plan. They have requested a copy of the Health Improvement Planning Report and have invited the Director of Public Health to present at a future committee meeting.

The Madison County Department of Planning recently established a Transportation Steering Committee for the purpose of creating a comprehensive Transportation Plan for the County with a special focus on health and human services. The ultimate goal of the plan will be to develop a comprehensive transportation plan that efficiently and effectively links existing vulnerable populations (i.e., elderly, disabled, low income, and those without personal transportation) to key destinations (place of employment, hospitals and clinics, human service agencies, etc.). Several of the MAPP Committee representatives were invited to be members of the Transportation Steering Committee.

The Madison County Literacy Report was published in 2008. The report included the issue of health literacy as an important component of the overall literacy issue in Madison County. Through a focus group format, representatives from the local health and medical system identified the impacts of literacy on health and medical care and the potential barriers to accessing care due to low health literacy levels. Recommendations from the plan include the formation of work groups to address targeted issues, such as health literacy. The work groups are slated to begin at the end of October 2009.

In August, the Madison County Board of Health conducted a one day strategic planning session to set the course for health in Madison County. The Board identified opportunities to strengthen its activities in the area of health policy development. The BOH has called for the development of a County Sanitary Code, and to include in this code language that addresses key health issues and emerging concerns (e.g., tattoo businesses, gas drilling, health impact assessments, land use planning and zoning, immunization and vaccination requirements, etc.).

In 2008, the Madison County Department of Health issued its first health profile on obesity and overweight. The Profile describes the obesity and overweight issue in
Madison County and introduces approximately 235 strategies to address obesity in Madison County, based on an ecological model and state and national reports. The Report also identified new and ongoing activities in the county including the Childhood Obesity Prevalence Study, a collaborative partnership between the Morrisville State College, Baccalaureate School of Nursing, the Madison-Oneida BOCES, and the Madison County Department of Health. Through a unique relationship between the MSC Nurses and the school districts, over 4000 children between pre-k and twelfth grade were measured and BMI's determined. Preliminary data shows that national childhood overweight and obesity figures are significantly under estimated for Madison County children. Most recently, the Madison County Department of Health received additional state funding through the Healthy Communities Capacity Building Initiative (NYSDOH). These funds will assist Madison County's further efforts to address this chronic disease-related issue.
Section 7

Community Partners and Resources

Working together to build a healthier Madison County

The Madison County Health Improvement Plan is the culmination of the diligent efforts and generous support of various organizations and individuals who live and work in Madison County. Many work and personal hours were expended in this undertaking. Professionals and residents alike committed personal skills, talents, and knowledge to the process of researching, discussing, analyzing and creating this master health plan. Though words cannot adequately express our appreciation to everyone who has been involved thus far, it is hoped that by including their names on the following pages, the Madison County community will sense the magnitude of this endeavor and will feel pride in their efforts. As a final note, this project has truly just begun. We are just now embarking on an exciting journey in which we will work together to achieve our community’s priority health goals and objectives.

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Bailey, Haskell, & LaLonde Insurance  
Bassett Healthcare  
Madison County Board of Health  
BRiDGES  
Catholic Charities  
Chenango County Department of Health  
CNY Community Foundation Inc.  
Community Action Program (CAP)  
Community Health Foundation of Western and CNY  
Community Memorial Hospital  
Cornell Cooperative Extension  
Crouse Community Center  
Eagle Newspapers  
Enable  
Faxton St. Lukes Health Care - Tobacco Cessation  
Kliman Technology  
Liberty Resources  
Loretto Lifeline  
Madison Bounty  
Madison-Cortland ARC  
Madison County Children’s Advocacy Center & Multi-Disciplinary Team  
Madison County Department of Health  
Madison County Department of Mental Health  
Madison County Department of Social Services  
Madison County Head Start  
Madison County Literacy  
Madison County Planning Department  
Madison County Youth Bureau  
Madison-Oneida BOCES  
M.E.I.D. Construction, LLC  
Mid-York Child Coordinating Council  
Morrisville State College  
New York State Department of Health  
Central New York Regional Office  
New York State Parent Teacher Association  
Onondaga-Cortland-Madison BOCES  
Office for the Aging  
Oneida County Department of Health  
Oneida Healthcare Center  
Oneida Public Library  
REACH CNY  
RSVP  
Rural Health Initiatives  
St. Elizabeth’s Hospital  
Tobacco Free Madison County  
Tobacco Prevention  
Tri-County Tobacco Cessation  
United Methodist Church in Earlville/Poolville  
Upstate Institute at Colgate University  
Village Veterinary Hospital  
YMCA of the Greater Tri-Valley, Inc
APPENDIX A: STRATEGIC ELEMENTS

The Rest of the Story
**Access to Health Systems**

**Definition:** The ability and means to obtain, and sustain access to preventive services and health education, primary care, chronic disease care, mental health care, oral health care, and vision and hearing services. It includes the concept of universal health coverage that ensures access to health care regardless of income, age, employment or health status in a manner that will increase positive health outcomes and improve the health status and health equity of all persons. This definition includes both the use and effectiveness of health services. The concept of access also encompasses physical accessibility of facilities.

**Goal:** Improve access to comprehensive, high quality health care services.

**Strategic Area Components**

**Wellness & Preventive Care:** Encouraging healthy lifestyles so citizens can live longer and healthier lives, saving families, businesses and the community the high cost of care and treatment; businesses offering wellness programs allow employees to manage their personal health, adequate prenatal care reduces the risk of medical problems and infant mortality, while healthy behaviors and preventative healthcare (e.g. cholesterol screening) increase productivity and economic prosperity.

**Primary Care:** When health care is hard to find or expensive, people may delay treatment, often making their health and economic problems worse. Having a regular primary care provider or other source of ongoing health care (e.g., clinic, health center) provides integrated, accessible health care services by clinicians who address a majority of personal health needs and sustain a partnership with patients while practicing in the context of family and community, and with a level of cultural competency that reflects the diversity of our residents.

**Emergency Services:** High quality emergency services improve health outcomes. Pre-hospital emergency medical services, poison control centers, and hospital based emergency departments provide prompt first-contact care for all individuals and serve as a gateway to additional health care.

**Tertiary Care:** The provision of effective, safe, timely, patient-centered care in a hospital and/or specialty care setting is essential in meeting patient needs; from staying healthy, to getting better, to living with illness and disability, to coping with the end of life.

**Long-Term Care & Rehabilitative Services:** People with physical or mental conditions that limit their capacity for self-care need long term care and rehabilitative services. Such services strive to return individuals to their optimal level of functioning in the least restrictive environment.

**Health Information Systems:** Appropriate data systems allow providers and administrators to identify those services and groups of people where the biggest gaps exist in receiving needed health care services. Information systems allow both cross-sectional comparisons of performance by providers, plans, systems and localities as well as long-term analysis of the health and health care of individuals. Systems that support surveillance activities and facilitate data sharing between agencies can further improve access to health care.

**Insurance coverage:** Health insurance coverage is considered to be one of the best indicators of access to healthcare. Healthcare for the uninsured is a community-wide concern because unpaid expenses are spread to providers and those with insurance.

**Mental Health & Social Wellbeing:** When untreated, mental health disorders can lead to school failure, family conflicts, drug abuse, violence, and even suicide. Untreated mental health disorders can be very costly to families, communities, and the health care system.

**Dental Health:** Oral health means much more than healthy teeth, and is integral to the general health and well-being of all individuals. Safe and effective means of maintaining oral health can prevent disease, enhance overall health and well-being, and lessen financial and social costs that significantly diminish the quality of life.

**Partnerships:** Closer collaboration and integration between the local public health system agencies and organizations may enhance the capacities of such agencies to improve overall population health.
**Built Environment**

**Definition:** The buildings, roads, utilities, homes, fixtures, parks and all other man-made entities that form the physical characteristics of a community.

**Goal:** Communities are designed, built and maintained so that individuals and families can thrive.

**Strategic Area Components**

**Safe, Affordable Housing:** The home is a place that can support not only basic physical needs (such as air, water, food, and shelter), but also the psychological and social health of its occupants. A home’s physical features can support occupants through a wide range of developmental stages, promote health and safety, and support mental and emotional health. How much a family pays for rent or housing greatly impacts how self-sufficient a family can be; a Housing Affordability Index measures whether a typical family earning median wages could qualify for a mortgage loan, especially important because housing is usually a family’s largest expense but transportation costs rise dramatically when families live farther away from the area they work and shop.

**Land use balance & Sensitivity:** The way the region grows as a community affects how much we drive, traffic congestion, and ultimately our air quality; infill building permits and high-density housing reduce sprawl and the cost to build and maintain roads, develop public transportation, and improve air quality, whilst maintaining open space attracts quality companies and tourism, and provides natural benefits including purifying the air and water, and flood control.

**Mobility & Convenience:** Public transit is critical to our economy and traffic congestion; surveying access to affordable and reliable transportation, alternative transit and transportation mode split that includes special populations (e.g., disabled) and the “rural-ness” of our County indicates an effective transportation system with a diversity of options.

**Physical Environments & Structures:** The physical environments including where we, live, work, receive healthcare, learn, house inmates should be healthy and safe, free from hazards and promote healthy lifestyles. Safe environments enhance worker productivity, foster student growth and development, enhance quality of care, while contributing to reduced costs including health care and insurance costs.

**Neighborhood Livability & Recreation:** Acres dedicated for public recreation vs. new development and new housing units, in conjunction with surveying access to public parks, multi-use trails and pedestrian-friendliness indicates planning for active healthy lifestyles.
Community Economic Development

**Definition:** Action taken locally by a community to provide economic opportunities and improve social conditions in a sustainable way. CED is a community-centered process that blends social and economic development to foster the economic, social, ecological and cultural well-being of communities.

**Goal:** Improve economic opportunities and social conditions in a sustainable way.

**Strategic Area Components**

**Individual & Family Wellbeing:** The Cost of Living Index compares living costs (such as housing, transportation, utilities, childcare, groceries and healthcare) for the typical middle-class family; keeping the cost of living close to the national average helps economic development organizations bring quality jobs to the region.

**Economic Vitality:** Strong employment growth and revitalization are signs of and contribute to a healthy economy; employment by sector indicates a diverse economy, while increased wage rates make the region more affordable for citizens to be self-sufficient.

**Workforce Development:** Strengthening our workforce by assisting job seekers, workers and businesses and connecting businesses and job seekers using personal and high-tech delivery of information and services can increase the employment, retention, and earnings of individuals; increase occupational skill attainment by individuals; leading to improvements in the quality of the workforce; reductions in welfare dependency; and enhances the productivity and competitiveness of our local businesses.

**Entrepreneurship:** Venture funding and other sources of capital, along with new patents, point to a supporting environment to foster start-up companies and enhance economic diversity in the region.

**Renewable Energy:** Renewable energy sources and the amount of renewable energy brought back from utility customers directly impacts the health of our economy and environment, and provides natural resource stewardship for future generations.

**Technology Infrastructure & Engagement:** Surveying if you have the right technology for your life needs, as well as the knowledge to use that technology, denotes ability to access and use new technology for productivity, advancement, enrichment and innovation.

**Transformative Community Initiatives:** Surveying what major community transformations have made a positive impact in your life, living and working in the region, suggest new or innovative programs that improve the community and contribute to the long-term viability of the economy, while also removing barriers to greater creativity for responsible citizens building vital communities.

**Agricultural Economic Development:** Creating marketing opportunities and encouraging value-added enterprises will ensure that farmers receive the highest value for their products, which in turn maintains the vibrancy of our agricultural economy, including: increased employment generation; and, the maintaining of open space and environmental stewardship.
**Health Literacy**

**Definition:** Health literacy is the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions.

**Goal:** Improve the degree to which people can obtain and process basic health information and services they need to make appropriate health decisions.

**Strategic Area Components**

**Educational Infrastructure to Meet Community Needs:** School capacity vs. enrollment, including technology for learning and other specialized needs signify access to educational opportunities to be ready for life.

**Educational Success:** Graduating from high school, higher education and formal training, in addition to educational attainment, imply skills for employment, social responsibility and economic self-sufficiency.

**Community Wide Involvement in Education:** Parental involvement in their children’s education, volunteering in schools, supporting the local education system, and business collaboration with education all enhance education as students see parents as role models along side generous community leaders.

**Literate Community:** Functional literacy and quality libraries are some of the keys to educational success, including the ability to complete GED programs.

**Provider Competency:** Good communication between physician and patient is a cornerstone of good health care. Providers that are sensitive to, can understand, and recognize, patients with low literacy skills can adapt patient care delivery and improve patient care and overall patient health. Businesses and organizations that provide services to residents must communicate these services at literacy level understandable to the public.

**Navigating the Healthcare System:** Health literate individuals are able to find health care and health information, and maintain good health, because of their understanding of written information (e.g. insurance coverage/policies). Health literate individuals are less likely to use emergency rooms for primary care, more likely to seek treatment and care earlier, more likely to undergo health screening (e.g. mammogram), and follow medication instructions and complete necessary health forms, all contributing to overall improved patient care.
Health Marketing

**Definition:** Involves creating, communicating, and delivering health information and interventions using customer-centered and science-based strategies to protect and promote the health of diverse populations.

**Goal:** Improve access to customer-centric health information.

**Strategic Area Components**

**Available Health Services:** Effective marketing of health programs and services can improve access to health services and programs and enhance the adoption and implementation of health behaviors and practices, specifically, evidence-based prevention strategies. Furthermore, the effective marketing of evidence-based health programs/services can help close the gap that exists between public health research and everyday practice.

**Health Information:** Providing accessible, accurate, relevant, culturally sensitive, and timely health information can reinforce and affect positive health behaviors for individuals, families and communities.

**Technology:** Effective marketing will require an ability to respond to ever-changing technology used in developing, receiving, and distributing health information. Younger generations are more techno-savvy and obtain their information via such means as Face book, YouTube, MySpace etc.

**Literacy:** Health messages and information must be understandable to the public and be available at a literacy level that aids in understanding such information.
**Natural Environment**

**Definition:** Commonly referred to simply as the environment, is a term that comprises all living and non-living things that occur naturally on Earth or some part of it which directly or indirectly affects human life and economic activity.

**Goal:** Preserve, protect, and conserve our natural resources and environment to ensure economic and social well-being.

**Strategic Area Components**

**Air Quality:** The Pollution Standard Index measures the region's air quality that affects the health of our more vulnerable citizens and impacts an active outdoor lifestyle, important for tourism and attracting young professional to the region.

**Clean & Available Water:** A “living river” system helps improve river water quality for many uses from drinking water to recreation to wildlife habitat; efficient water consumption and conservation are key to ensuring water sources into the future.

**Open Space Access & Connectivity:** Miles of connected multi-use trails and acres of public land acquired as open space, including publicly funded access points and connections to trail networks and greenways, point to preservation of access to government lands and open spaces for future generations.

**Climate Protection:** Climate-friendly transportation, clean fuels, clean energy, energy efficiency, land use, building design and infrastructure help reduce greenhouse gas emissions that could affect our climate and subsequently our health (e.g., injuries and illnesses from severe weather events, floods, and heat exposure.)

**Forest & Farmland:** Farmland preservation is crucial for the economic viability of rural Madison County and helps ensure a reliable source of fresh nutritious food for our residents. Forests naturally regulate storm water runoff, provide habitat for many species and maintain healthy streams and rivers for fish and other freshwater organisms.

**Biodiversity:** Health depends on society’s capacity to manage the interaction between human activities and the environment. Sustaining the diversity of “living things” in our environment has positive health benefits including minimizing the spread of human diseases, providing medical models, a source of raw materials for drug discovery and biotechnology, and contributes to food production and water quality.

**Resource Consumption:** Fossil fuels, water, and other raw materials are just a few of the resources we rely on every day. We must understand and monitor our use of these resources because the earth does not provide an endless supply. Our ability to reuse or recycle the wastes we generate reduces demand for new resources. Decreasing waste generation - through conservation or recycling - also reduces the waste we send to landfills.
Public Policy

Definition: That which the law encourages for the promotion of the public good, including health.

Goal: Improve the health of the community through legislative action at the federal, state and local levels.

Strategic Area Components

Health: Policies that address costs and affordable care, choice of doctors and health plans, and assures quality contribute towards ensuring a healthcare home for our residents. Policies that support and ensure systems are in place for surveillance of the health of a population, the identification of its health needs, promote health, evaluate health services availability and access, prevent exposures to health hazards, encourage behaviors amongst citizens that will produce better health, and limit health disparities ensure conditions in which individuals and families can be healthy.

Environment: Environmental policy focuses on problems arising from human impact on the environment and aim to prevent, reduce or mitigate effects on nature and natural resources, and ensure man-made changes to the environment do not have harmful effects on humans, animal, plants and the overall environment. Such policies may include (but are not limited to) air and water pollution, waste management, ecosystem management, biodiversity protection, and the protection of natural resources, wildlife and endangered species, and the communication of environmental issues.

Organizational: Policies and rules determine or strongly influence how work is done and how people behave and are treated in the organization. What an organization says and does through its policies and rules has a major impact on how that organization is perceived by its employees (and in some cases, by its customers, suppliers and the community). As such, policies that include such things as wellness programs, health insurance coverage, day care, worker safety, and "going green" add to our quality of life and overall health and well being.

Built Environment: Policies directed towards a pattern of development that is efficient, compact, and environmentally sensitive, and concentrates future growth near existing and planned public facilities and job centers. Healthy community design policy considerations, such as; building codes, land use and zoning, e.g., whether farmers' markets and community gardens are permitted uses; where fast food establishments locate; public transportation; and the construction of places that are more attractive to pedestrians and cyclists, present opportunities to enhance the built environment and offer health, social, environmental and economic benefits.

Social Capital: Policies that support existing social capital and where to build social capital. To build on and with social capital the internal social capital policies of institutions and organizations have to be built at the same time. Inclusion of social capital into policies would address such aspects as stronger participation, inclusion of the poor and assessment of their own assets in form of networks, trust and norms. For example, social capital concerns could be standard considerations in municipal planning activities (e.g. building codes, zoning and land use).

Public Well-being: Policies that provide protections for individuals in their homes, worksites, schools, institutions and neighborhoods from crime, disasters and injury. Policy considerations may involve the built environment (e.g., street lighting, sidewalks), work policies (mandated trainings, "buddy systems", panic buttons), neighborhood watch programs, and police, fire, and EMS response times.

Education: Education occurs in many forms for many purposes through many institutions (e.g., school, colleges, job training). Therefore, education policy can directly affect the education people engage in at all ages and could address such issues as school infrastructure investment, literacy and access to technology.

Community Economic Development: Policies that pertain to increasing access to capital, technology, affordable housing, stable jobs, agricultural development, smart growth, and quality education in Madison County.
Public Well-Being

**Definition:** Safe neighborhoods, schools and workplaces; secure families from fear about personal safety and security of property. The community accepts and exercises responsibility for their needs, cares for the community’s most vulnerable, and ensures that others are provided opportunities to achieve their full potential in a nurturing environment.

**Goal:** Improve public well-being.

**Strategic Area Components**

**Perception of Safety:** The “feeling of safety” has more of an impact on an individual’s daily life; seniors can be more self-sufficient in safe homes and neighborhoods, students can focus on learning in safe schools, employees can feel safe traveling to and at work, and families can feel safe at home from crime, disasters and injury; at the same time, average fire, police and ambulance response times reflect quality emergency services in the community.

**Secure Families:** Substantiated and reported cases of child, spousal/partner, senior abuse and neglect are indicators of volatile family situations; shelter capacity, motions and orders granted indicate that support services are in place for families in need.

**Community Responsiveness to its Most Vulnerable Populations:** The number of homeless individuals, the count of students without shelter, basic food security and poverty measures, in conjunction with information and referral systems indicate the community’s response to family difficulties.

**Emergency Preparedness:** Households with emergency kits and emergency evacuation plans, and businesses and communities with disaster recovery plans bring a sense of personal safety and security for our families and our community.
Social Capital

**Definition:** The individual and communal time and energy that is available for such things as community improvement, social networking, civic engagement, personal recreation, and other activities that create social bonds between individuals and groups. The central premise of social capital is that social networks have value. Social capital refers to the collective value of all “social networks” [who people know] and the inclinations that arise from these networks to do things for each other [“norms of reciprocity”].

**Goal:** Improve bonds between networks of individuals and groups.

**Strategic Area Components**

**Voter Turnout:** The percentage of eligible citizens registered and casting votes indicates they are invested in our community and see the value in working to make it even better.

**Effective Government Engagement:** Civic responsibility includes having the ability to effectively participate in the governing process, while the diversity of elected or appointed members of community boards, councils, commissions, as well as government staff, demonstrate that government is representative of and responsive to our citizens.

**Civility and Neighborhood Pride:** Individuals have a vested interest in their community and a civic and social connectivity that strengthen inclusion, provides a sense of pride in community, and builds a healthy interdependence.

**Philanthropy and Volunteerism:** Surveying volunteer hours per month and annual contributions, in combination with economic development recruitment of companies giving back to the community, are all measures of value, social responsibility and community improvement efforts.

**Access to Faith Communities and Spiritual Wellbeing:** Surveying ability to participate in spiritual opportunities when needed or wanted, suggest access barriers to overcome for personal fulfillment.

**Recreation:** Having access to the types of recreation and recreational facilities (such as parks programs, public trails, museums, music venues, sporting events, community service facilities) allows everyone, from all age groups, to regularly participate in opportunities enriching life and health, while at the same time retaining skilled workers

**Expression of Culture Through the Arts:** Civic investment and grants allow for public art, tours in historical areas, cultural & arts districts, and multiple venues for expression.

**Participation in the Arts & Cultural Activities:** People creating art and attendance at arts & cultural events enhance not only our lives but also our economic base, contributing to the region’s bottom line, and offering ways for the community to come together.

**Collaborative Partnerships:** A healthy community is one that has high levels of social, ecological, human and economic ‘capital’, the combination of which may be thought of as ‘community capital’. The challenge for communities will be to increase all four forms of capital simultaneously. This means organizations and agencies from each of these sectors partnering and collaborating, making human development the central purpose of governance, and more closely integrating social, environmental and economic policy.
APPENDIX B: 10 Essential Public Health Services
PUBLIC HEALTH FUNCTIONS AND TEN ESSENTIAL SERVICES

Public health encompasses three core functions: *assessment* of information on the health of the community, comprehensive public health *policy development*, and *assurance* that public health services are provided to the community. These functions have been defined further and expanded into 10 essential public health services.

The 10 Essential Services

*Monitor health status to identify and solve community health problems:* This service includes accurate diagnosis of the community’s health status; identification of threats to health and assessment of health service needs; timely collection, analysis, and publication of information on access, utilization, costs, and outcomes of personal health services; attention to the vital statistics and health status of specific-groups that

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are at higher risk than the total population; and collaboration to manage integrated information systems with private providers and health benefit plans.

**Diagnose and investigate health problems and health hazards in the community:** This service includes epidemiological identification of emerging health threats; public health laboratory capability using modern technology to conduct rapid screening and high volume testing; active infectious disease epidemiology programs; and technical capacity for epidemiological investigation of disease outbreaks and patterns of chronic disease and injury.

**Inform, educate, and empower people about health issues:** This service involves social marketing and targeted media public communication; providing accessible health information resources at community levels; active collaboration with personal health care providers to reinforce health promotion messages and programs; and joint health education programs with schools, churches, and work sites.

**Mobilize community partnerships and action to identify and solve health problems:** This service involves convening and facilitating community groups and associations, including those not typically considered to be health-related, in undertaking defined preventive, screening, rehabilitation, and support programs; and skilled coalition-building ability in order to draw upon the full range of potential human and material resources in the cause of community health.

**Develop policies and plans that support individual and community health efforts:** This service requires leadership development at all levels of public health; systematic community-level and state-level planning for health improvement in all jurisdictions; development and tracking of measurable health objectives as a part of continuous quality improvement strategies; joint evaluation with the medical health care system to define consistent policy regarding prevention and treatment services; and development of codes, regulations and legislation to guide the practice of public health.

**Enforce laws and regulations that protect health and ensure safety:** This service involves full enforcement of sanitary codes, especially in the food industry; full protection of drinking water supplies; enforcement of clean air standards; timely follow-up of hazards, preventable injuries, and exposure-related diseases identified in occupational and community settings; monitoring quality of medical services (e.g. laboratory, nursing homes, and home health care); and timely review of new drug, biologic, and medical device applications.
Link people to needed personal health services and assure the provision of health care when otherwise unavailable: This service (often referred to as "outreach" or "enabling" services) includes assuring effective entry for socially disadvantaged people into a coordinated system of clinical care; culturally and linguistically appropriate materials and staff to assure linkage to services for special population groups; ongoing "care management"; transportation services; targeted health information to high risk population groups; and technical assistance for effective work site health promotion/disease prevention programs.

Assure a competent public and personal health care workforce: This service includes education and training for personnel to meet the needs for public and personal health service; efficient processes for licensure of professionals and certification of facilities with regular verification and inspection follow-up; adoption of continuous quality improvement and life-long learning within all licensure and certification programs; active partnerships with professional training programs to assure community-relevant learning experiences for all students; and continuing education in management and leadership development programs for those charged with administrative/executive roles.

Evaluate effectiveness, accessibility, and quality of personal and population-based health services: This service calls for ongoing evaluation of health programs, based on analysis of health status and service utilization data, to assess program effectiveness and to provide information necessary for allocating resources and reshaping programs.

Research for new insights and innovative solutions to health problems: This service includes continuous linkage with appropriate institutions of higher learning and research and an internal capacity to mount timely epidemiological and economic analyses and conduct needed health services research.

Effectively provided, these services will reduce the substantial burden of preventable illness and injury. Further, costly medical services needed to treat preventable conditions are avoided. Prevention is not only cost-effective; it is fundamental to assuring quality of life for all Madison County residents. While no definition of public health’s essential role in our county’s health system will ever be final, this statement of essential services is used as a tool for moving forward with greater clarity of purpose in a time of challenging changes.
APPENDIX C: Life Course Dimensions and Healthy Places
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*NOTE: Life Course Dimension Categories based on CDC’s Healthy People in Every Stage of Life; Health Places based on CDC’s Healthy People in Healthy Places.*