



State of the County Health Report Madison County, North Carolina December 2008

In 2007, the Madison County Health Department completed a comprehensive community health assessment to gain an understanding of the health issues and concerns in our community. From the information that was gathered, the following priorities were identified:

- ▶ Chronic Disease Issues
- ▶ Child Health Concerns
- ▶ Mental Health Issues
- ▶ Access to Health Services
- ▶ Low Income/Poverty Concerns

This State of the County Health Report for Madison County will provide an update of actions taken to help address the above priorities; identify current health status data for Madison County residents; and examine new initiatives and emerging issues that may impact the county's health.

Review of Health Status Data

As of 2007, there were 20,502 people living in Madison County, reflecting a four percent population growth since 2000. Additional demographic data of interest includes the following statistics. There are more than 8000 households and 5,592 families residing in the county. Twenty-eight percent of these households have children under the age of 18 years living in them. The average household size is 2.34 persons and the average family size is 2.81. The county is predominantly Caucasian (97.6%) while small percentages of the population are Black, American Indian, Hispanic and Asian. Males comprise 49% of the population; females total 51%.

In 2000, per capita income in 2000 was \$16,076 compared to the state \$20,307. The median household income was \$30,985 compared to the state \$39,184. Over 19% of the elderly population in Madison County lives in poverty and nearly 22% of children are living in poverty. Almost 18% of the population is uninsured with nearly 400 children have no insurance. Socioeconomic status is often measured by income which provides a direct measure of the quality of food, housing, and health care an individual is able to acquire, as well as reflecting their position in society. Low socioeconomic status limits many from accessing preventive health care and participating in positive health behaviors. A trip to the doctor or dentist can mean missing time from work and loss of pay. Often practicing healthy behaviors is more costly. Residents with limited incomes find these behaviors must take a back seat when trying to meet basic needs for the family. These incomes may be related to poor health which limits or totally prevents someone to earn a living.



Review of Health Status Data (cont)

In a community survey for the 2007 Community Health Assessment, affordability of health care services was identified as a major concern. Many noted difficulty getting the health care, dental care and prescriptions they needed because of limited incomes.

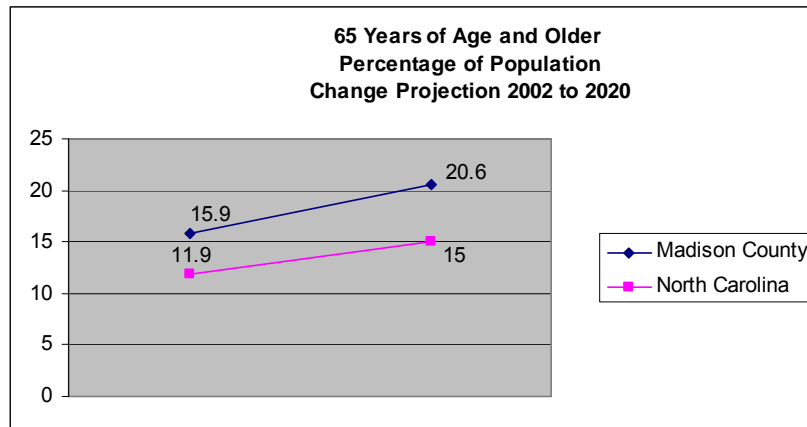
Thirty percent of Madison County residents have less than a high school education. This percent is higher in comparison to the state and to other rural North Carolina counties. Dropout rates are trending higher than state rates with 65% of students completing four years of high school. Children whose parents have not completed high school and who are unemployed are five times more likely to drop out of school. While there is some effect of health on education, the stronger effect is from education on health. Education has been shown to be an important predictor of health outcomes. Research shows that lower levels of education are associated with poor health while higher education levels are associated with better health. Overall mortality rates, including cancer and heart disease are higher for individuals with low educational status. Low education levels can negatively affect an individual's ability to process and understand health information and concepts. This must be considered when developing intervention strategies for the individual and the community.

Within the 2007 community survey, several respondents expressed concerns about environmental issues such as air and water pollution and illegal dumping. Madison County residents place a high emphasis on the environment and its protection. There are no major factories or industries in the county that emit hazardous pollutants. The percentage of impaired surface waters is very low. Substandard housing has contributed to straight-piping into area streams. The health department has led efforts to work with home owners, volunteer programs and other county agencies to reduce this problem. Poor water quality can directly affect the health of those who use local rivers for recreation such as fishing and rafting. Such pollutants can create food or water borne illnesses that impact individuals, families and communities. Managing our natural resources is vital to the economy of the county as well as the health of it.



Review of Health Status Data (cont)

The median age for Madison County is 39.3 years. For North Carolina, the median age is 35.8 years. One-fourth of the county’s population is 45-64 years of age. Nearly 16% of the population is 65 years of age and older compare to the state’s 12%. Trend data from the North Carolina Division of Aging notes that 20.6% of the population will be 65+ years of age by the year 2020.



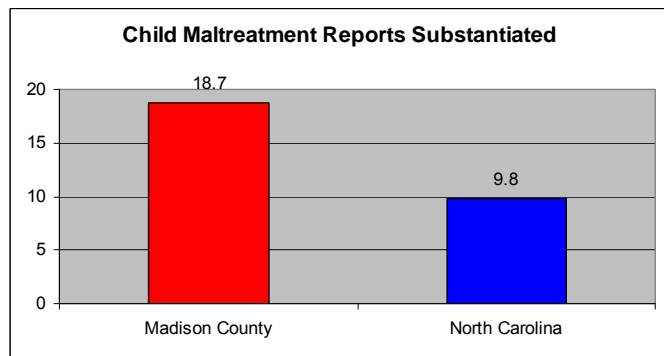
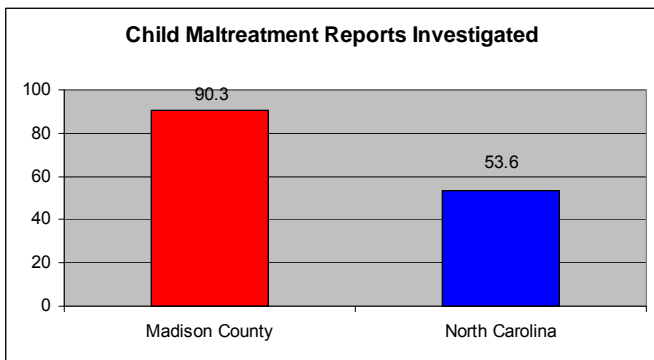
Due to the small population of the county, many vital statistics such as morbidity and mortality data must be assessed by three- or five-year rates in order to obtain a true picture of the population’s health status. According to the North Carolina State Center for Health Statistics, the ten leading causes of death for all ages, the death rate for Madison County and the death rate for North Carolina (2002-2006) are listed below:

Rank	Cause of Death	Madison County Rate	N.C. Rate
1	Diseases of the Heart	265.9	209.0
2	Cancer-All Sites	263.9	193.0
3	Cerebrovascular Disease	81.4	57.8
4	Chronic Lower Respiratory Disease	58.5	45.1
5	Alzheimer’s Disease	54.6	25.6
6	Septicemia	42.7	14.4
7	Pneumonia and Influenza	40.7	21.2
8	Other Unintentional Injuries	33.7	26.4
9	Motor Vehicle Injuries	21.8	19.3
10	Nephritis, Nephritic Syndrome, Nephrosis	18.9	17.4



Review of Health Status Data (cont)

As one of the leading health concerns in the county, child health data reflects many areas in need of improvement. There were five child deaths for ages 0-17 years from 2002-2006. Each death had a different cause, showing no special trends. Child health concerns are directed more toward child maltreatment. Rates of child maltreatment for cases that are investigated are nearly twice the rates for the state of North Carolina. And unfortunately, the rates for substantiated child maltreatment is double the state rates. Clearly, the community is aware of how to report suspicions of child maltreatment. However, there are few resources available to address preventive measures.



Other child health concerns are related to mothers smoking during pregnancy, which is nearly twice the state rate; high rates of childhood obesity; and high rates of child poverty.

There are some positive child health statistics of note such as the five year birth rate for Madison County is 10.7 compared to the North Carolina rate of 14.1. The five-year rate from 2002-2006 for infant mortality is 1.9 compared to the state rate 8.4. Teen pregnancy rates for ages 15-19 years have consistently been lower than state rates for many years.



Health Disparities

While Americans as a group are healthier and living longer, segments of the population continue to suffer poor health status. Differences in the incidence and prevalence of health conditions and health status between groups are referred to as health disparities. Most health disparities affect groups because of socioeconomic status, race/ethnicity, disability status, geographic location or a combination of these. People in such groups experience worse health and also tend to have less access to social determinants that support health such as healthy food, good housing, and good education.

Within Madison County, health disparate groups include the unemployed, the uninsured/underinsured, the graying population and those without a high school education. The geographic layout of the county and a lack of transportation services are disadvantages that add to the health inequities experienced by such groups. Adults with less than a high school education are less likely to visit a doctor and are three times more likely to be unemployed. Lower income and fixed income families are less likely to have access to transportation and other health resources. Interventions must consider the county's societal conditions, health behaviors of disparate groups, and their access to health care in order to affect health outcomes.

Madison Community Health Consortium

The Madison Community Health Consortium is a partnership that seeks to improve the overall health of Madison County citizens by networking with community agencies and groups in an on-going process of needs assessment, project development, implementation, and evaluation. The health consortium is a certified Healthy Carolinians' partnership and has been active for 18 years. It provides a forum for citizens, community agencies, groups and businesses to identify health issues of Madison County and to seek solutions for those needs.

The Madison Community Health Consortium welcomes volunteers that may have a special interest in the health needs of the community. Interested individuals may contact the Madison County Health Department for consortium information and meeting dates.



Tracking Progress of Health Priorities

The Madison Community Health Consortium, a Healthy Carolinians’ partnership, selected three priorities to actively address: Chronic Disease, Child Health; and Mental Health. Consortium and committee members opted to incorporate access to health services and low income/poverty concerns within the action plans for each of the three main priorities.

<i>Priority- Chronic Disease Issues</i>	<i>Progress</i>
<p>▶ Consortium Objective: Decrease the number of hospitalizations related to chronic conditions such as heart disease, respiratory disease, diabetes, and cerebrovascular disease.</p> <p><i>The Healthy People 2010 Objective is to reduce heart disease and diabetes death rates.</i></p>	<ul style="list-style-type: none"> ✓ Partnering with Land of Sky Regional Council on Aging to offer free skill building program “Living Healthy”, in the community to help people living with one or more chronic conditions (diabetes, heart disease, cancer, hypertension, etc) learn to manage their condition and their life. ✓ Trained two health department staff members to teach the “Living Healthy” program free of charge and train other community members to teach this program. (Two workshops have been offered to date). ✓ Promoting opportunities for physical activity for adults 55 years of age and older through collaboration with local physical activity providers, Madison Community Services, Mars Hill College, and Senior Games. ✓ Collaboration to offer special activities free of charge during “Active Aging Week” ✓ Collaborate with Madison County Health Department and Hot Springs Health Program to provide flu immunizations at a minimal cost and free blood glucose screenings to seniors at the annual Senior Health Fair. Also collaborating with other health care providers to offer free services such as prescription education, blood pressure screening, hearing screening, stress relief, etc during the annual Senior Health Fair. ✓ Publishing articles in the local newspaper promoting healthy living and “Eat Smart Move More North Carolina” programs.



Tracking Progress of Health Priorities

Priority- Child Health Concerns	Progress
<p>▶ Consortium Objective: Reduce the percent of children who are overweight or obese by 5%.</p> <p><i>The Healthy People 2010 Objective is to reduce the percent of children who are overweight or obese.</i></p>	<p>√ Partnering with Smart Start, Cooperative Extension and the Madison County Health Department to offer “Color Me Healthy”, nutrition education training sessions and materials at no cost to child care providers of preschool children.</p> <p>√ Collaborating with Cooperative Extension to provide training and materials for “Syber Shop”, an interactive program for youth ages 13-19 which focuses on healthy eating and physical activity to middle school and high school students, free of charge.</p> <p>√ Promoting low cost/no cost physical activity opportunities for school age children during the summer months through the Madison County Parks and Recreation Department to offer “Terrific Tuesdays and Thursdays”.</p> <p>√ Collaborating with the School Health Advisory Council to collect height/weight/BMI data for all school children Kindergarten through 8th Grade.</p> <p>√ Partnering with the Madison County Health Department in the establishment of a school-based health center at Madison Middle School, with plans to offer nutrition counseling to students and families.</p>
<p>▶ Consortium Objective: Increase the awareness of positive parenting behavior and techniques.</p> <p><i>The Healthy People 2010 Objective is to reduce the rate of repeat substantiated maltreatment reports (abuse and neglect) of children.</i></p>	<p>√ + Working with other community agencies such area mental health agencies and the Department of Social Services to promote opportunities for positive parenting education.</p> <p>+ Collaborating with the health department to offer childbirth and parenting classes free of charge.</p> <p>+ Utilizing consortium membership to increase awareness among public officials and the community about child abuse and neglect concerns.</p>



Tracking Progress of Health Priorities

Priority- Mental Health Issues	Progress
<p>▶ Consortium Objective: Increase the proportion of adults with mental illnesses who receive treatment.</p> <p><i>The Healthy People 2010 Objective is to increase the proportion of adults with mental illnesses who receive treatment.</i></p>	<ul style="list-style-type: none"> √ Organized mental health committee including community mental health providers as members. √ Organizing quarterly community Mental Health Forums in the areas of Mental Health/Substance Abuse/Developmental Disabilities to share information, collaborate among providers, and identify service gaps, etc. √ Promoting new residential substance abuse treatment programs. √ Collaborating with Mountain AHEC and the Madison County Health Department to begin “Telepsychiatry Program” in efforts to address service provider gaps. √ Partnering with the Madison County Health Department to offer mental health/behavioral health services to children and families through new school based health center at Madison Middle School. √ Madison County Schools and Alpha Omega Health collaborating to provide suicide prevention and awareness information to 9th grade students at Madison High School and Early College. √ Madison County Sheriff’s Department is promoting a new HELP line for teens who want to report a crime, talk with someone about personal issues, or are at risk for suicide. Special meetings for Madison High School students have been held to increase awareness of this service. √ Families Together, a Crisis Response Program, has initiated a mobile crisis management service for children and adults in Madison County.



New Initiatives

Dental Center- The Madison County Health Department opened a new dental center in September 2008. The ratio of dentists to population prior to the opening of the center was 1:10,000 compared to the state ratio of 1:2,302. The 2008-2009 dental survey of children in Kindergarten through fifth grade identified 12% of children with untreated dental decay. One-fifth of all children with untreated decay are in Kindergarten. With the addition of this service, access to dental care services for children and adults has increased within the county. The center accepts Health Check/Health Choice, private insurance, and offers a sliding fee scale for uninsured patients.

Tobacco Free Programs- In January 2008, all school campuses in the Madison County School system became tobacco free. The health department provides technical assistance and support for high school students in the S.T.A.R.T. Club (Students Teaching About Risks of Tobacco). These students focus on educating about the dangers of tobacco use and help advocate for tobacco free policies and environments. They have sponsored expert speakers for high school presentations and have been trained to lead the TATU (Teens Against Tobacco Use) program. The goal of the program is for teens to serve as positive role models for younger students and presentations are made to fifth grade students across the county. The health department introduced the "Smoke-Free Dining Campaign" in Madison County in October 2008. Twenty-two of thirty (73%) restaurants in the county are currently smoke free.

Early College- In 2006-2007, the drop out rate for the Madison County Schools system was 6.04 compared to a state rate of 5.24. Madison High School has established a new program to help improve drop out rates in the county. Students can complete a high school diploma, technical college certificate, an Associate Degree or up to two years of college transfer credits in a five year time frame. Thirty-seven students have been accepted into the program its first year

School Health Advisory Council- A renewed effort is in place to increase the council's impact on school health policies and programs. Guidance from the "Successful Students Scorecard" has served as a resource for council members. Collaboration with school health nurses has resulted in recent data collection efforts to collect height, weight, and BMI results for all students through 8th grade. Surveys of teachers about nutrition and physical/health education were also obtained for review. The council is working to develop action plans for future implementation



New Initiatives (cont)

Wellness Center- A new wellness center/gymnasium has opened at Madison High School. Opportunities for increased youth league sports and community participation in physical activity are being promoted. There are open gym times for the community and the Madison County Parks and Recreation Department has initiated a walking program for community members.

Health Information System- The Madison County Health Department will begin converting to an electronic system that will enhance efficiency in program services and billing capability. It is anticipated that the system will be in place in early to mid-2009. In addition, the health department has recently begun electronic surveillance and reporting for communicable diseases that occur or impact the community.

Health Department Website- A website for the Madison County Health Department will be accessible in early 2009. Up to date community health information, education, applications/permits, available services, and public health links will be accessible through this new public service venue.

Public Health Accreditation- Senate Bill 804 was signed in the fall of 2005 creating and funding North Carolina Local Health Department Accreditation, an act to improve the public health infrastructure by establishing an accreditation system for local health departments. The Madison County Health Department will go through the accreditation process May 2009.

"Unnatural Causes"- This documentary has been shown in the community setting in order to increase community awareness of how social, economic and physical environments in which we are born, live and work can profoundly affect longevity and health as much as smoking, diet and exercise. Through this effort, the Madison Community Health Consortium hopes to engage the community to work together for more equitable social policies that directly affect county residents.

WiseWoman Program- Heart disease is the number one cause of death in Madison County. For women living in North Carolina, heart disease is the number one cause of death and stroke is the third leading cause. The North Carolina WiseWoman Program strives to prevent these two disabling diseases. The Madison County Health Department established this program in July 2008. The mission of the program is to provide low-income, uninsured women ages 40-64 years with the knowledge, skills, and opportunities to improve their diet, physical activity and other like habits in order to prevent, delay or control cardiovascular and other chronic diseases.



New Initiatives (cont)

Childbirth and Parenting Classes- The Madison County Health Department has hired a public health nurse who will become certified to lead free childbirth and parenting classes through the health department. There are no formal courses in the county at present. Some counseling and education is provided through a local mental health agency to families under the Department of Social Service supervision.

School Based Health Center- Grant funding has been procured to establish a school based health center at Madison Middle School. Additional grant funding is sought to assist with staffing of the center. Services will begin no later than Fall 2009. The center will offer medical care, preventive care with comprehensive health assessments, behavior risk assessments, nutrition counseling and behavioral/mental health counseling for students and families. Future expansion is planned in order to offer services to students at an adjoining elementary school.

Emerging Issues

Inadequate Building Space- The health department relocated into a more modern facility in 2007. While the new location has much to offer, the health department has seen an increase in patients and service delivery. There are two examination rooms for patients and one room for interviewing patients. This limits the number of patients that can be seen during clinic hours and often increases the waiting time for services. Lack of space also limits the ability to initiate new programs for the community. Future effort will be given to the identification of outside funding to increase square footage.

Funding Decreases- State and federal budget shortfalls directly impact the delivery of local public health services. With an uncertain economy, funding for public health programs and services may decrease at the same time community needs for services increase. Needs for local public health services will increase if more patients face unemployment and/or loss of insurance. Management within the health department and county government will be faced with difficult fiscal decisions while assuring the provision of health care services in the community. In addition, state and federal program expectations for local health departments increase with no additional funding to the local agency. Currently, decreases in funding for public health preparedness requirements leave the local health department struggling to meet contract requirements.



Emerging Issues (cont)

Graying Population- Nearly 16% of county residents are 65 years of age and older. This rate is higher than the state (12%) and other rural North Carolina counties (13.5%). Population projections through the year 2020 indicate an additional 4.6% county increase compared to a 3% state increase in this age group. In addition, population projections reflect a decrease in the percentage of children 17 years of age and younger who live in Madison County. Special consideration will need to be given to enhancing health promotion/disease prevention programs for this graying population. According to the North Carolina Division of Aging, nearly 26% of Madison County adults over 65 years of age have two or more disabilities. The poverty rates for older adults in Madison County are also greater than the state rates, with 19.2% living in poverty compared to a state rate of 13.2%. With limited incomes, many older adults may opt to forego medical, dental and prescription needs in order to make ends meet.

Child Obesity- Obesity is a serious health concern for children and adolescents. Obese children and adolescents are at risk for health problems during their youth and as adults such as coronary heart disease, diabetes, cancer, high blood pressure, stroke, respiratory problems and more. In 2004, the percent of overweight children up to 21 years of age was 19.7%, compared to the state 17%. The health department and the school system, recently conducted school health screenings that included baseline data for height, weight and BMI for children in Kindergarten through 8th grade. Twenty-six percent of 990 Madison County children in elementary school were identified as overweight, while seventeen percent were at risk for overweight. Additional data is forthcoming. Community solutions are needed for this community problem and this data will be helpful in future program development and intervention strategies.

Limited Physical Fitness Opportunities- As a small rural county, physical fitness activities are limited at best. There are few sidewalks and bike paths, one community swimming pool, and two small fitness centers. Youth league team sports are organized within the individual communities who are required to find sponsorship and manage the facilities. The Madison County Parks and Recreation Department is small, staffed by two persons and few resources to access. Transportation and low income factors can have a negative impact on participation rates. Fitness opportunities for adults are also limited and can be costly. As the rate for child obesity increases, the community must incorporate this concern within the intervention strategies for child obesity. Overweight children can become overweight adults that develop serious health problems such as heart disease, high blood pressure, diabetes, and stroke.