Healthy Madison County

A Report on the Health and Well-Being of Madison County Residents

2006

Healthy Madison County: A Summary

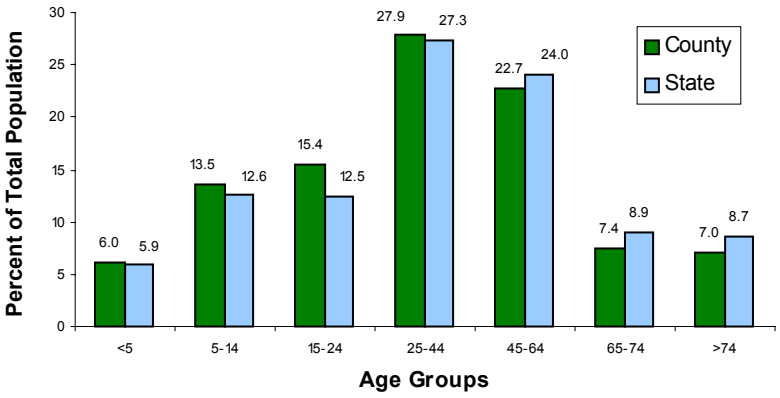
Madison County is located in north central Florida, nestled against the Georgia border just south of Valdosta. It is only a short drive from Tallahassee and Jacksonville. The town of Madison, with just over 3,000, is the county seat. There are two other municipalities in the county, each with fewer than 1,000 residents, as well as small population clusters in several outlying communities.

Madison is a rural county, with a population density of 27.1 persons per square mile — far less than the Florida average of 296.4 persons per square mile. This classifies Madison County as one of Florida's ten most sparsely populated counties. Madison County has five public schools and three private schools serving Pre-kindergarten through 12th grade students. The county is also home to the North Florida Community College.

Madison County's Economy

The bulk of the Madison County's workforce (76%) is employed in service fields, such as education, government, transportation and utilities. Since 30% of the county workforce commutes outside the county for employment, neighboring counties provide employment opportunities to Madison County residents, and many workers cross the state border to work in neighboring Georgia counties. This contributes to Madison County's dependence on larger metropolitan areas such as Tallahassee and Thomasville, Georgia for hospitals and specialized health care, consumer durables, automobiles, entertainment and specialized retail purchases. The median household income for 2000 was $26,533.

Population by Age Group (County and State), 2003



Data Source: Florida Legislature's Office of Population and Economic Research

Mortality Rates in Madison County and Statewide

Heart disease, cancer and stroke are the three leading causes of death in Madison County for all races. Madison County residents have higher heart disease and cancer mortality rates than the rest of the state. However, the county's mortality rate attributable to diabetes is among the highest in the state for all races.

Resident 3-Year, Age-Adjusted Death Rates, (2001-03) by Cause	Madison County			Statewide		
	White	Black	All Races	White	Black	All Races
Total Deaths	**886.4**	**1,082.1**	**948.1**	**750.3**	**1,026.4**	**773.0**
Heart Disease	240.5	263.0	249.6	212.2	291.5	217.9
Cancer	197.0	228.6	208.6	177.3	209.9	178.7
Stroke	46.4	66.0	51.0	41.7	80.6	44.7
Diabetes	37.1	76.4	48.9	18.7	50.7	21.1
CLRD*	30.0	22.0	27.1	40.2	29.3	39.4
Motor Vehicle Crashes	21.7	32.7	22.1	19.0	18.4	18.4
Pneumonia/Influenza	24.0	9.0	19.9	13.6	18.8	14.1
AIDS	0.0	30.9	10.2	4.7	44.2	10.3
Cirrhosis	8.6	5.6	7.8	11.5	8.0	10.9

*Data Source: Florida Office of Vital Statistics *Chronic Lower Respiratory Disease*

Next Steps for a Healthier Madison County

Based on a series of community meetings held in 2005 and a review of the available data, residents of Madison County have identified the following health issues as their primary concerns:

- Alcohol-related motor vehicle crash deaths
- Births to unwed mothers
- Activities for youth
- Promoting economic development

Among this group, alcohol-related motor vehicle crash deaths was designated as the top issue for a community-wide effort over the next several years because of the sudden and unexpected rise in deaths due to automobile crashes over the past year. Madison County, residents decided to establish a new committee, and to support one existing committee.

The residents established the “Traffic Safety Team” to address road safety issues and will pursue grants for remediation. They also decided to support and enhance the efforts of an existing School Health Advisory Committee, because traffic fatalities have had a noted impact on the young people in Madison County. Other issues that emerged from the process were:

High Mortality Rates

- The overall infant mortality rate in the county is among the worst in the state
- The infant mortality rate for blacks is substantially higher than the elevated Florida rate for blacks, and is about twice the rate for whites
- The diabetes-related mortality rate for whites and nonwhites is the third highest in the state — at twice the Florida average
- Injury age-adjusted death rates are above the state average
- Death rates for colorectal cancer are the fourth highest in the state, while the colorectal screening test rates are below the Florida average

Risky and Unhealthy Behaviors

- Alcohol-impaired driving rates are well above state average
- 30% of both passengers and drivers involved in vehicular crashes were not wearing seat belts
- The rate for sexually transmitted diseases, predominantly chlamydia, is 38% higher than the Florida average
- Madison County residents are the fifth most obese in Florida, with over one-third meeting the definition of obese. Blacks are more likely to meet the criteria, as one-half of blacks are obese, while one-quarter of whites are obese
- Poor individual health behavior choices dramatically influence health outcomes, contributing to higher rates of disease and premature death. These include low consumption of fruits and vegetables, limited regular exercise, and sedentary occupations
- The rate for sexually transmitted diseases, predominantly chlamydia, is 38% higher than the Florida average

Other Issues

- The proportion of births to unmarried women is the second highest in the state
- Dental access is slightly below the state average, yet less than one-third of Madison residents report no missing teeth (well below state norms)
- High blood cholesterol rates are among the highest in the state

As a result of the 2005 community meetings, recommendations were made to center attention on chronic health issues as well as the more acute motor vehicle injury prevention selected by the community through the Protocol for Assessing Community Excellence in Environmental Health (PACE-EH) and Mobilizing for Action through Planning and Partnerships (MAPP) processes.

Foreword

Beginning in late 2004, Kim Barnhill, Administrator of the Madison County Health Department, convened a group of interested citizens and invited them to participate as partners in an assessment and prioritization of Madison County's leading health issues. She proposed employing a modified Protocol for Assessing Community Excellence in Environmental Health (PACE EH or PACE) and Mobilizing for Action through Planning and Partnership (MAPP) framework. The intent was to lay the groundwork for further development of a broad-based community plan to improve the well-being of Madison County residents.

Ms. Barnhill indicated that once group priorities were identified, organizations like the Apalachee Regional Planning Council would work collaboratively with them and provide assistance in pursuing outside funding. In addition, Madison County's status as a "Rural County of Critical Economic Concern" would work in the county's favor in the grant application process. She also indicated that her staff would investigate possible funding options for safety-related issues that might be available through the Department of Transportation. Joyce Wilson was hired to be the coordinator of the effort, and Florida State University College of Medicine was retained to serve as a technical consultant to the project.

After a series of community meetings was held, kicking off with a review of the available data, the group overwhelmingly selected alcohol-related motor vehicle crash deaths (traffic safety) as its primary focus. The cornerstone of the planned intervention was to follow evidence-based recommendations of groups such as the National Highway and Traffic Safety Administration and the Centers for Disease Control and Prevention (CDC) to increase seatbelt use and decrease alcohol consumption of drivers.

In addition to selecting alcohol-related motor vehicle crash deaths as the leading health issue facing Madison County, the group, now known as Healthy Madison County, noted the contribution of three other issues to overall health and well-being of the community:

- Births to unwed mothers
- Activities for youth
- Promoting economic development

Issues which may merit attention in the future included:

- Community education (including life skills)
- Interconceptional care
- Obesity
- Eating disorders
- Access to health care services

Subject matter experts from the Florida Department of Health central office presented on motor vehicle safety at subsequent meetings of Healthy Madison County. Data was presented on both deaths and injuries occurring on Madison roadways. Not surprisingly, people who wore seat belts were less likely to suffer death or extensive injury than those not wearing seat belts. Injuries and death were more common on certain well traveled roads, helping to target interventions.

At subsequent meetings several potential strategies were explored to reduce motor vehicle death and disability. Some of those discussed included:

- Work more closely with the active students in the high school;
- Investigate the potential of establishing a Madison Students Against Drunk Driving (SADD) chapter;
- Explore the possibility of enacting county ordinances for injury prevention, including:
    - Primary enforcement of seat belts,
    - Strengthening existing bicycle helmet laws, and
    - Applying stricter drivers license requirements;
- Investigate the potential of establishing a Madison Mothers Against Drunk Driving (MADD) chapter;
- Discuss with Leon County the availability of its defensive driving program for Madison residents;
- Pursue grant options to build capacity for computer simulated driving experience; and
- Further refine traffic safety data for the county (technical assistance is available from the Florida Department of Health Injury Program).

A decision was made to create the "Traffic Safety Team," which would examine roads and related safety issues, and pursue grants to fund priority initiatives. Proposed membership includes:

- Department of Transportation
- Madison County Sheriff
- Madison County Emergency Medical Services (EMS),
- Madison County Planning Department,
- Madison County School District
- Madison County Health Department

In addition, it was decided to strengthen the existing School Health Advisory Committee as a mechanism to work more closely with the schools and students. Staff from the Madison County Health Department also agreed to look for possible safety activity grants.

In April, guests from Sarasota County came to present their experiences with PACE-EH and community health planning. Jim Ley, County Administrator, and Bill Little, Administrator of the Sarasota County Health Department, shared their perspectives on how community engagement completely altered the traditional way decisions had been made previously. Now their community drives the prioritization process, and makes its needs known. They felt the same could become standard in Madison County with a strong commitment from the community and its leadership.

Further planning and development will come from the two proposed committees, the Traffic Safety Team and the enhanced School Health Advisory Committee. After they complete their work, Healthy Madison County will reconvene to review findings and consider further action.

The remainder of this report discusses the health data currently available for Madison County. It is organized as follows:

- Introduction
- Demographics
- Economy
- Overall Health and Safety
    - Access to Health Care
    - Mortality and Related Behaviors
    - Communicable Diseases
    - Maternal and Child Health
    - Environmental Health

Introduction

Madison County is located in north central Florida, nestled against the Georgia border just south of Valdosta. It is only a short drive from Tallahassee and Jacksonville. It is bordered on the east by the Withlacoochee and Suwannee rivers and on the West by the Aucilla River. It is a place where 'the crowds and confusion of big-city Florida are just far enough away to preserve Madison County as representative of the original Florida and native America.

Madison County was named in honor of founding father James Madison in 1827, when it was chartered as Florida's largest county. Florida was admitted to the Union in 1845. Since then, the county has "surrendered" Taylor, Lafayette and Dixie Counties, but there are still 716 square miles of forests, rivers, lakes and gently rolling hills to enjoy.

The town of Madison, with a population of just over 3,000, is the county seat, and has been designated one of the Best Little Towns in Florida by Visit Florida, the state tourism development agency. There are two other municipalities, Greenville and Lee, each with fewer than 1,000 residents. There are also smaller population clusters in the communities of Pinetta, Cherry Lake, Hamburg, Lovett, New Home, Sirmons and Eridu. In addition, the county is filled with still-visible burial grounds, and indications of churches built to serve long-gone neighborhoods.

The friendly people and peaceful atmosphere of the county make Madison a wonderful place to live. There are quiet star lit nights and slow southern days, lots of open fields and wooded lands for children to roam. There is also an unexpected wealth of pleasures for visitors: centuries-old landmarks, homes, communities and antique shops. It is the perfect place to 'drift down a lazy river or just pause for some quiet meditation.

Madison County has 5 public schools and three private schools serving Pre-K to 12th grade students. Madison County is also the home of North Florida Community College. During the 2001-2002 school year, 100% of Kindergarten children were assessed as being 'ready to learn.' However, several facts about the educational system make school age children a priority:

- The Madison County graduation rate (63.8% in 2002) is among the lowest in the state.
- The proportion of elementary school students in special education is almost twice the state average (28% vs.15% for Florida as a whole).
- The percent of students (K-12) with out-of-school suspensions during the 2002-03 school year was one and a half times the state rate (12% vs. 8.3%).

Madison County is fortunate to have a combined total of ten physicians and three dentists to serve its community. The county is also served by Madison County Memorial Hospital, which is licensed for 42 patient beds, and there are 238 nursing home beds in three facilities that provide both independent and communal living as well as full-service extended care. Tallahassee Memorial Hospital and Capital Regional Medical Center in Tallahassee, Doctor's Memorial Hospital in Perry, FL, and Archibald Memorial (Thomasville, GA) are also accessible through Life Flight emergency helicopter services.

Madison County's Emergency Medical Services provides emergency paramedic care, basic life support, and medical transport services to the county's residents. The City of Madison Fire Department provides fire/rescue services, along with seven volunteer fire departments throughout

the county. The county is also served and protected by the Madison County Sheriff's Office and the City of Madison Police Department.

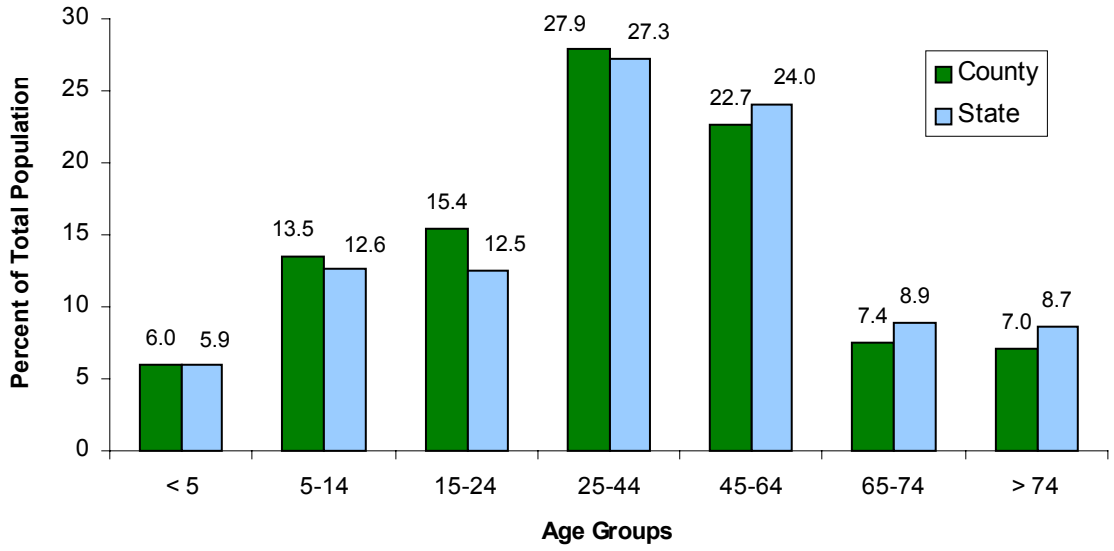
According to 2000 U.S. census data, Madison County has a population density of 27.1 persons per square mile, which is far less than the Florida average of 296.4 persons per square mile. This classifies Madison County as one of Florida's ten most sparsely populated counties and characterizes Madison's designation as a "rural" county.

The most recent population estimates from the Florida Legislature's Office of Population and Economic Research (2005) put the county's total population at 19,430. While high growth rates have typified most of the central and south Florida counties since the 1950s, Madison County has had more modest growth. County population continues to grow, but at a slower rate than the state as a whole, with a 13.1% increase in the population between the 1990 and 2000 censuses, compared with a 23.5% increase for Florida. This rate of growth has been typical since the 1970 census.

County Demographics

Madison County's population resembles the overall age-distribution of Florida's population, but it is slightly younger. The Madison County population between the ages of 15-24 is 3 percentage points larger than in Florida as a whole, and the population over 45 is 4 percentage points smaller. Madison County's median age is 36.3, comparable to Florida's 38.7 years.

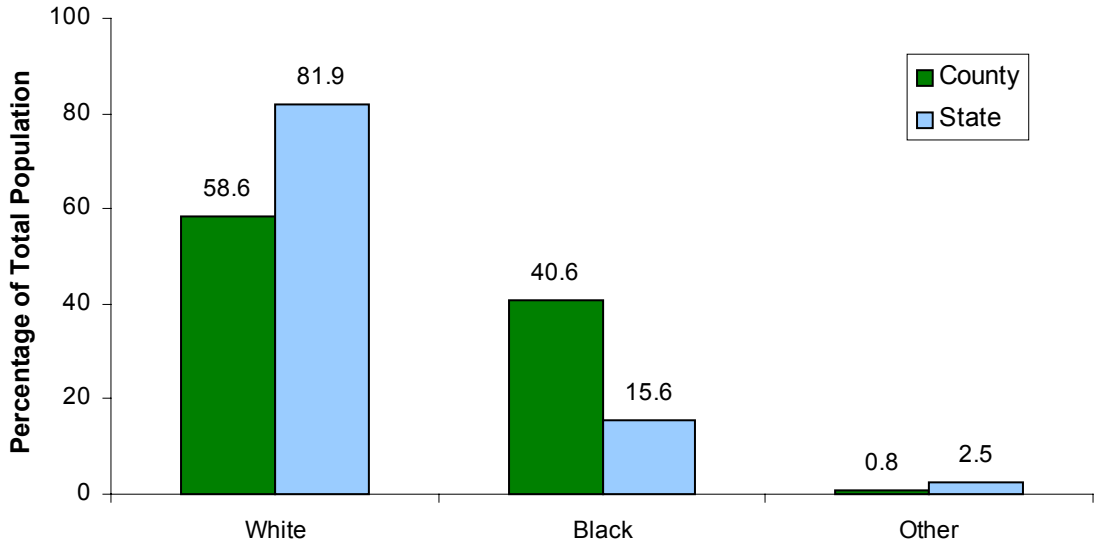
Population by Age Group (County and State), 2003



Data Source: Florida Legislature's Office of Population and Economic Research

The racial composition, however, is markedly different, with 41.4% of Madison County's population being non-white, compared with 18.1% for Florida as a whole. The relatively large size of the black population, in particular, means that it is important to pay special attention to those health conditions that disproportionately affect blacks. Less than 1% of the county's population is Hispanic.

Population Percentage by Race (County and State), 2003



Data Source: Florida Legislature's Office of Population and Economic Research

Economy

Madison County's primary employment sectors are government (30%); services (22%), manufacturing (22%), and retail trade (17%). The bulk of the workforce (76%), however, is employed in service fields, such as education, government, transportation and utilities. This is considerably less than Florida as a whole, where 87% of the population is employed in service industries. The county's largest employers include: Smithfield Packaging, Johnson and Johnson Petroleum, Nestle Waters North America, Madison County School District, and North Florida Community College.

The county's limited employer resources contribute to the fact that 30% of the county workforce commutes outside the county for employment, compared with 18% for Florida overall. Neighboring Florida counties such as Taylor, Columbia, Suwannee, and Leon all provide employment opportunities to Madison County residents, and many workers cross the state border to work in neighboring Georgia counties. This limited availability also contributes to Madison County's dependence on larger metropolitan areas such as Tallahassee and Thomasville, Georgia for hospitals and specialized health care, consumer durables, automobiles, sports and entertainment, and specialized retail purchases.

According to the 2000 Census, the median income, $26,533 per capita, is 32% lower than Florida's median income. Also, the proportion of families living below the poverty level in Madison County (18.9%) is twice the proportion in Florida as a whole (9.0%), and is among the worst in the state. The situation is not much better for children through age 18. (30.2% vs. 17.2%). Overall, the proportion of county residents living in poverty has decreased since the 1990 census. Madison County's unemployment rate is about the same as the state average, at 5.4% vs. 5.6%. Just over two-thirds of the county's over-25 population has a high school diploma (compared to almost 80% for the state as a whole).

Table 1: Economic Summary

	Madison County			State
Economic Status	**1990**	**2000**	**Quartile**	**2000**
Percent of total population below poverty level	25.9	23.1	4	12.5
Percent of families below poverty level	19.7	18.9	4	9.0
Percent of population under 18 below poverty level	36.2	30.2	4	17.2
Percent of civilian labor force which is unemployed	6.7	5.4	3	5.6
Median household income	18,153	26,533	1	38,819
Percent of population > 25 with a high school diploma	56.5	67.5	1	79.9

Data Source: 2000 U.S. Census

Overall Health and Safety

Perhaps the best predictor of an individual's health is 'perceived health status,' i.e., how healthy one thinks one is. About a quarter of Madison County residents over the age of 18 consider themselves to be in 'fair' or 'poor' health, based on the 2002 Behavioral Risk Factor telephone survey. This is higher than the state average, which is about 17%. There are five counties in the state where the average is in the 10% range. Poor perceived health status appears to be most salient in the population over age 65, where 45% of respondents reported a fair or poor health status (compared with 28% for Florida as a whole). Residents aged 45-64 also report a less favorable health status than the state as a whole. Those between 18 and 44 are about the same as the Florida average. Race is not an important factor in this instance, as residents of both races in Madison County are more likely to report fair or poor health status than are residents of Florida as a whole (whites 22% vs.15% and blacks 27% vs. 18%). In addition, men and women in the county report equal health status.

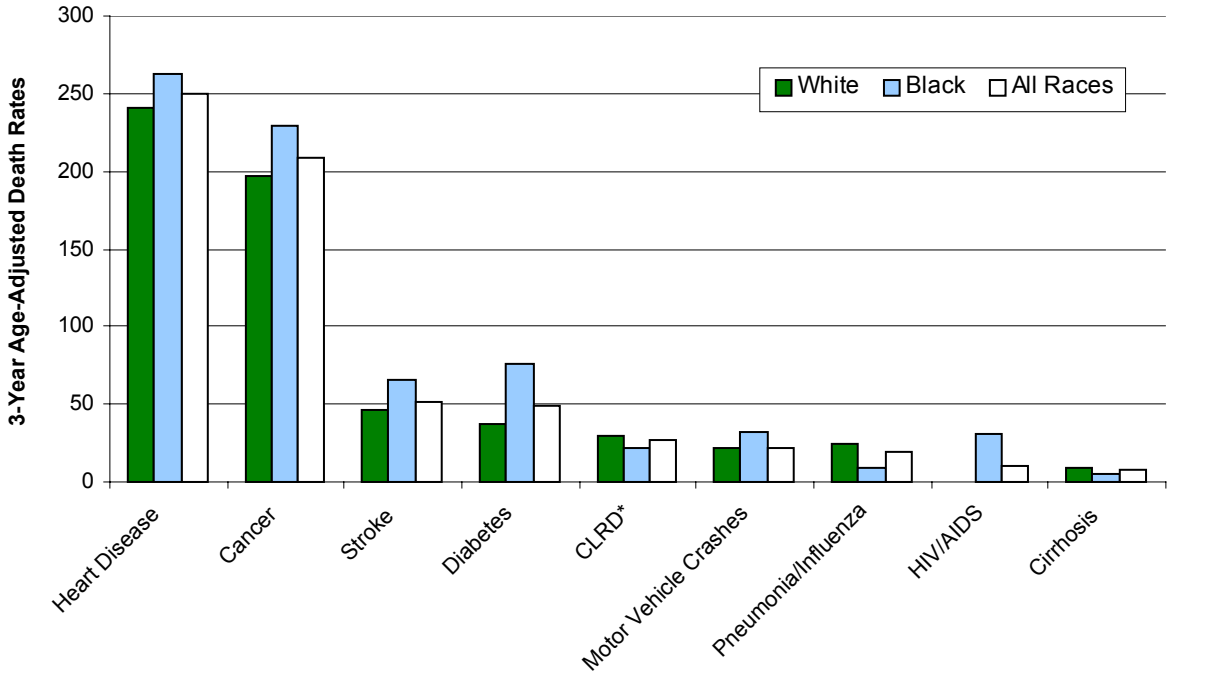
Table 2: Health Status of Madison County Residents as Compared to the State, 2002

	Madison County			State	
Health Status	**Percent**	**95% CI (+/-)**	**Quartile**	**State Percent**	**95% CI (+/-)**
Adults mostly sitting/standing at job	56.3	7.5	2	62.8	1.7
Adults with health status "Fair" or "Poor"	23.8	4.0	3	16.7	1.0

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology.
Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county.
95% CI = 95% Confidence Interval

Poor health status may lead to premature death, and many Madison County residents die prematurely. While the major causes of death in Madison County essentially mirror those of the state as a whole, the age-adjusted mortality rate (AADR) for all causes of death (948.1 per 100,000) is substantially higher than the overall state rate of 773 per 100,000. The AADR is used instead of a crude death rate to adjust for differences in the age distribution between the population of Madison County and the rest of Florida.

Three-Year Age-Adjusted Death Rates by Race for Major Causes of Death in Madison County, 2001-03



Data Source: Florida Office of Vital Statistics

The AADR is an important indicator because it measures *premature* death. Premature death is related to three major factors:

- heredity;
- access to care; and
- personal health behaviors.

Since we cannot change inherited traits, it is important to make people aware of the importance of family history and to examine Madison County residents' access to care and modifiable health behaviors. The remainder of this report will focus on:

- overall access to care;
- major causes of death and specific access and behavior issues related to each;
- communicable diseases;
- maternal and child health issues; and
- physical and social environments.

Access to Health Care

Madison County residents' access to primary care is largely through resident family practice physicians. Overall provider ratios look poor, but do not reflect the fact that county residents also have access to providers in Tallahassee, Lake City, and Valdosta, Georgia for specialist care and for hospitalization. In contrast, the Madison County Health Department resources are proportionately among the best in the state.

Table 3: Health Care Providers and Facilities in Madison County vs. Statewide, 2002

	Madison County			State
	Number	Rate Per 100,000	Quartile	Rate per 100,000
Providers				
Total Licensed Dentists	3	15.8	1	51.9
Total Licensed Physicians	6	31.5	1	209.1
Total Licensed Family Physicians	4	21.0	4	12.9
Total Licensed Internists	0	0.0	1	35.4
Total Licensed OB/GYN	0	0.0	1	8.6
Total Licensed Pediatricians	0	0.0	1	14.6
Facilities				
Total Hospital Beds	42	221.4	2	334.3
Total Acute Care Beds	42	221.4	2	275.2
Total Specialty Beds	0	0.0	1	59.2
Total Nursing Home Beds	238	1,251.4	4	495.4
County Health Department				
County Public Health Department FTEs	26	134.5	3	61.4
County Public Health Department Expenditures	1,316,014	6,919,834.7	3	3,421,523.4

Data Sources: Division of Medical Quality Assurance and Office of Planning, Evaluation and Data Analysis, Florida Department of Health, Florida Agency for Health Care Administration

Only 18% of Madison County residents report that they have no personal health care providers, which is better than the state as a whole (24%). Young adults (aged 18-44) were most likely to report not having a personal provider (25%), as is true for Florida as a whole. This is an important finding because it is during these ages that adults have their first experiences with many chronic diseases and establish poor behaviors that may contribute to chronic diseases later in life. White males were least likely to have a personal provider, and black and white males were both more likely than women of either race not to have a personal provider. This finding is not surprising, given that most women experience pregnancy and gynecological issues during this age period.

Fewer than 9% of Madison County respondents reported that they were unable to get medical care in the previous 12 months, which is about average for Florida. Blacks were more likely to report access problems than were whites (10.2% vs. 7.8%). Women reported more problems than men. Respondents in the 45-64 age range were the most likely to report an inability to get care. This is a troubling finding, since complications of chronic diseases multiply and lead to premature mortality if not properly managed. Overall, the data suggest that most Madison County residents have access to medical care when they think they need it, but the lack of a 'personal' provider might contribute to insufficient preventive care, and, in turn to unrecognized chronic conditions that contribute to premature death.

Table 4: Health Care Coverage and Access in Madison County versus Statewide, 2002

	Madison County			State	
Indicator	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
Health Care Coverage and Access					
Adults who were unable to get medical care in the last 12 months	8.8	2.8	3	8.7	1.0
Adults with no health care coverage	23.4	4.4	3	18.7	1.0
Adults with no personal health care providers	18.4	4.0	1	23.9	1.2

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology. Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county. 95% CI = 95% Confidence Interval

The Florida Health Insurance Study released by the Agency for Health Care Administration in 2004 indicates that the large rural area in which Madison County is located accounts for 4.4% of the population under age 65 and 4.8% of Florida's uninsured.

Children's access to care may be more of an issue. In 2000, the most recent year for which county-level data were available, only 83% of eligible children under age 19 were covered by one of the state-sponsored insurance programs, compared with 89% of Florida children as a whole, placing Madison County among the counties with the lowest coverage.

Access to oral health care in Madison County is slightly lower than in the rest of the state. About 60% of the adults surveyed reported that they had visited a dentist and/or had their teeth cleaned within the previous year. The highest rate in the state, Collier County, is 90%. Just over 30% of Madison County residents over age 18 reported that they had no missing teeth, compared with the Florida average of 47%. The county with the lowest population of people missing teeth is Leon, where 64% of those surveyed indicated that they have no missing teeth.

Table 5: Oral Health in Madison County Versus Statewide

	Madison County			State	
	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
Adults who have had their teeth cleaned within past year	58.9	5.5	1	70.5	1.3
Adults who visited a dentist within past year	61.6	4.9	2	70.2	1.4
Adults with no teeth removed	32.3	5.0	1	46.7	1.3

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology. Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county. 95% CI = 95% Confidence Interval

Mortality and Related Health Behaviors

Heart disease, cancer and stroke are the three leading causes of death in Madison County for all races, and Madison County residents have higher heart disease and cancer mortality rates than the rest of the state. However, the county's mortality rate attributable to diabetes is among the highest in the state for all races.

Table 6: Mortality Rates in Madison County and Statewide, by Cause and Race

Resident 3-Year, Age-Adjusted Death Rates, 2001-03, by Cause	Madison County						State		
	White	Quartile	Black	Quartile	All Races	Quartile	White	Black	All Races
Total Deaths	**886.4**	**3**	**1,082.1**	**2**	**948.1**	**3**	**750.3**	**1,026.4**	**773.0**
Heart Disease	240.5	3	263.0	2	249.6	3	212.2	291.5	217.9
Cancer	197.0	3	228.6	2	208.6	3	177.3	209.9	178.7
Stroke	46.4	3	66.0	2	51.0	2	41.7	80.6	44.7
Diabetes	37.1	4	76.4	4	48.9	4	18.7	50.7	21.1
CLRD*	30.0	1	22.0	1	27.1	1	40.2	29.3	39.4
Motor Vehicle Crashes	21.7	2	32.7	3	22.1	2	19.0	18.4	18.4
Pneumonia/Influenza	24.0	4	9.0	1	19.9	3	13.6	18.8	14.1
AIDS	0.0	1	30.9	3	10.2	4	4.7	44.2	10.3
Cirrhosis	8.6	1	5.6	2	7.8	1	11.5	8.0	10.9

Data Source: Florida Office of Vital Statistics
**Chronic Lower Respiratory Disease*

Heart Disease and Stroke

Madison County residents have slightly higher mortality rates for coronary heart disease and strokes compared with residents of other Florida counties, but lower rates of hospitalization. This may reflect access to specialty services, such as cardiology and neurology, as well as ancillary services. The death rate for congestive heart failure is among the worst in the state (16.6 per 100,000 vs. 7.4 for Florida as a whole). In addition, the heart disease death rate in Madison County is about the same for blacks as it is for whites.

Table 7: Deaths and Illness from Heart Disease in Madison County and Statewide

		Madison County			State
	Year(s)	Avg. Annual # of Events	Age-Adjusted Rate[1]	Quartile[2]	Age-Adjusted Rate
Coronary Heart Disease					
Deaths	2001-03	37	171.7	3	166.7
Hospitalizations	2001-03	122	589.7	1	748
Stroke					
Deaths	2001-03	11	51	2	44.7
Hospitalizations	2001-03	71	336.7	2	345.2
Congestive Heart Failure					
Deaths	2001-03	4	16.6	4	7.4
Hospitalizations from congestive heart failure	2001-03	69	323.5	2	319.8

Data Sources: Florida Office of Vital Statistics and AHCA hospital discharge data

Patients report they are getting the diagnostic information and treatment that is crucial to dealing with heart disease and stroke. Over 80% of county residents have had their blood cholesterol checked, which is fortunate, since Madison County residents have among the highest rates in the state when it comes to having high blood cholesterol. This 80% screening rate is comparable to the state rate, but still somewhat lower than the best rate in the state, 90% in Glades County. More Madison County residents have been told that they have high blood pressure than residents in half of Florida counties, and over 80% of those with high blood pressure are taking hypertension medications. The highest medication-taking behavior reported in Florida is 88%.

Table 8: Risk Factors for Heart Disease in Madison County and Statewide

	Madison County			State	
	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
High Cholesterol					
Adults who have ever had their blood cholesterol checked	80.5	4.1	2	83.1	1.1
Adults who have had their cholesterol checked within the last 2 years (if they have ever been checked)	90.8	3.7	2	91.8	0.7
Adults whose blood cholesterol is high	41.2	5.6	4	35.2	1.3
Hypertension					
Adults now taking HBP medicine (if they have HBP)	81.4	6.2	3	76.0	2.0
Adults who have been told by a health professional that they have high blood pressure	36.4	4.9	4	27.7	1.1

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology. Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county.
95% CI = 95% Confidence Interval

There are many behavioral issues involved with heart disease and stroke mortality. The first of these is *smoking*. There is extensive evidence connecting smoking to heart disease and stroke (as well as to chronic lung disease). In a 2002 survey, approximately 20% of adults in Madison County reported that they were currently smokers, which is about the same as the Florida proportion. Fifty-one percent of respondents reported they had quit smoking within the previous 12 months, which places Madison County right at the state average. It is unknown what percent relapsed, but it appears that county residents find the support they need to quit smoking.

Table 9: Alcohol and Tobacco Use in Madison County and Statewide, 2002

	Madison County			State	
	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
Adults who currently smoke	20.8	4.4	2	22.2	1.1
Adults who engage in heavy smoking or binge drinking	8.3	3.5	1	14.1	1.0
Adults who have ever quit smoking in the last 12 months	50.7	12.3	2	55.3	2.6

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology.
Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county.
95% CI = 95% Confidence Interval

Nutrition and *exercise* also play an important role in preventing heart disease and stroke. Although 38% of Madison County residents surveyed reported that their health care providers advised them to eat more fruits and vegetables – the fourth highest in the state – the proportion of residents who actually eat fruits and vegetables is lower than the state average. Only about 20% of Madison County respondents reported that they eat at least five fruits or vegetables daily. The same pattern holds for physical activity. A larger proportion of Madison County respondents report that their health care providers advise them to get more exercise than do residents of other counties, yet county residents rank lower than residents of most Florida counties when asked if they actually get regular leisure-time exercise. The lack of exercise is particularly important; since 56% also report that they mostly sit or stand at their jobs.

Table 10: Nutrition and Exercise in Madison County and Statewide

	Madison County			State	
	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
Physical Activity					
Adults who have been advised by a health professional to be more physically active	33.1	4.9	4	28.0	1.3
Adults with no leisure time physical activity	35.5	4.8	4	26.4	1.2
Adults with no regular moderate physical activity	60.2	5.0	4	55.1	1.3
Adults with no regular vigorous physical activity	80.3	4.5	4	75.6	1.2
Nutrition					
Adults who consume <5 fruits and vegetables a day	77.8	4.4	4	74.3	1.2
Adults who have been advised by a health professional to eat fewer high fat or cholesterol foods	26.7	4.6	4	21.0	1.1
Adults who have been advised by a health professional to eat more fruits and vegetables	38.3	5.0	4	27.9	1.2

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology.
Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county.
95% CI = 95% Confidence Interval

Again, although more Madison County residents reported having received advice from a health professional about their weight in the previous year than in most of Florida, more than a third of Madison County residents across all age groups are obese. This ranks Madison County as the fifth most obese county in the state. Half of the county's black residents are obese, while one-quarter of whites are obese. An additional 37% of black and white residents can be characterized as overweight.

Table 11: Obesity in Madison County and Statewide

	Madison County			State	
	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
Adults who are obese (BMI >=30)	34.1	4.8	4	22.3	1.0
Adults who are overweight (BMI>=25 to < 30)	36.6	5.0	4	35.1	1.2
Adults who have received advice from a health profession about their weight in the past 12 months	26.3	4.8	4	21.1	1.1

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology. Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county. 95% CI = 95% Confidence Interval

Diabetes

Diabetes is the fourth leading cause of death in Madison County regardless of race. Diabetes mortality rates in Madison County are the third highest in the state, and are twice the state average. The death rate from diabetes for blacks is twice the rate for whites. The county has higher than average age-adjusted rates of diabetes-related hospitalizations overall, and for amputations due to diabetes (36.5 per 100,000 vs. 25 for Florida).

Table 12: Diabetes in Madison County and Statewide

		Madison County			State
	Year(s)	Avg. Annual Number of Events	Age-Adjusted Rate	Quartile	Age-Adjusted Rate
Deaths	2001-03	10	48.9	4	21.1
Hospitalizations	2001-03	460	2,232.2	4	1,813
Hospitalizations from amputation due to diabetes	2001-03	7	36.5	4	25.1
Percent of adults who have ever been told by a health professional that they have diabetes*	2002		14.40%	4	8.2%

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology. Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county. 95% CI = 95% Confidence Interval

Cancer

Madison County has a higher than average overall cancer death rate compared with other counties in the state, with an age-adjusted average of 209 deaths annually per 100,000 residents, compared with the Florida rate of 179 per 100,000 residents. Rates do not differ substantially by race.

Table 13: Cancer in Madison County and Statewide

		Madison County			State
	Year(s)	Avg. Annual Number of Events	Age-Adjusted Rate[1]	Quartile[2]	Age-Adjusted Rate
Breast Cancer					
Deaths	2001-03	3	29.1	4	22.9
Incidence	2000-02	8	NA	NA	122.2
Prostate Cancer					
Deaths	2001-03	3	35.8	4	23.3
Incidence	2000-02	10	101.6	NA	150.3
Cervical Cancer					
Deaths	2001-03	< 1	2.9	2	2.8
Incidence	2000-02	2	NA	NA	10.5
Percent of adult (18+) women who have had a pap test in past three years	2002		82.20%	3	82.20%

Data Sources: Florida Office of Vital Statistics and AHCA hospital discharge data

The mortality rate for *Breast cancer* is higher than the state average, and deaths from *cervical cancer* are about average for Florida, although the incidence of each type of cancer is relatively low. Pap screening rates and the proportion of women over 40 who reported having a mammogram within the previous two years compare favorably with the rest of the state.

Table 14: Mammogram and Pap Smears in Madison County and Statewide

	Madison County			State	
Indicator	Percent	95% CI (+/-)	Quartile	Percent	95% CI (+/-)
Mammogram and Pap Smears					
Adult women who have ever had a pap smear test	95.1	3.4	3	93.5	1.0
Adult women who have had a pap smear test in past two years	82.2	5.6	2	82.2	1.5
Women over 40 who have had a mammogram within past two years (for those who have had a mammogram)	78.6	5.7	3	79.0	1.5

Data Source: 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology. Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county. 95% CI = 95% Confidence Interval

Madison County has lower than average incidence of lung cancer, a lower than average mortality from *lung cancer*, and a slightly higher rate of hospitalization related to chronic lung disease.

The incidence rate for *colorectal cancer* in Madison County is lower than the state average, but death rates for colorectal cancer are the fourth highest in the state. Colorectal screening test rates are below the Florida average. On average, there is fewer than one diagnosed case a year of *skin cancer*.

Table 15: Other Cancers and Lung Disease in Madison County and Statewide

		Madison County			State
	Year(s)	Avg. Annual Number of Events	Age-Adjusted Rate	Quartile	Age-Adjusted Rate
Chronic Lower Respiratory Diseases (CLRD)					
Deaths	2001-03	6	27.1	1	39.4
CLRD Hospitalizations	2001-03	79	389.3	3	363.9
Lung Cancer					
Deaths	2001-03	15	69.2	3	53.6
Incidence	2000-02	14	64.6	NA	73.9
Percent of Adults who currently smoke	2002		20.80%	2	22.20%
Colorectal Cancer					
Deaths	2001-03	5	24	4	17.3
Incidence	2000-02	10	46.9	NA	53
Percent of Adults 50 and over who have ever had a sigmoidoscopy	2002		47.90%	4	52.60%
Percent of Adults 50 and over who have had a blood stool test in past two years	2002		31.10%	3	33.50%
Skin Cancer					
Deaths	2001-03	< 1	1.6	1	2.8
Incidence	2000-02	1	NA	NA	16.2

Data Sources: Florida Office of Vital Statistics; University of Miami (FL) Medical School, Florida Cancer Data System 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology.
Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county.
95% CI = 95% Confidence Interval

Injury and Violence

Although injury-related deaths in Madison County account for a small percentage of all deaths, injuries and violence are public health concerns, and can be prevented by both personal health behavior change and systemic intervention.

Between 2001-2003, the age-adjusted death rate for injuries in Madison County was higher than the Florida average (73 per 100,000 vs. 61 per 100,000).

Drowning, an important cause of death and injury for Florida as a whole is not a problem in Madison County, nor is poisoning.

Table 16: Injuries Age Adjusted Rates for Madison County and Statewide, 200103

	Madison County		State
	3-Year Average Number of Events	3-Year Rate Per 100,000	3-Year Rate Per 100,000
Total injuries	**14**	**72.2**	**61.0**
Drowning deaths	1	4.9	2.2
Poisoning deaths	1	7.4	9.4
Homicide	1	7.2	6.1
Suicide	2	12.9	13.1
Motor vehicles:			
Crashes	233	1227.3	1489.5
Crash deaths	4	22.1	18.4
Alcohol-related crashes	28	145.5	136.4
Alcohol-related deaths	4	19.3	6.2

Florida Office of Vital Statistics; Florida Department of Highway Safety & Motor Vehicles

The total number of motor-vehicle crashes that take place in Madison County has stayed about the same since 1999, and the crash rate, which is considerably lower than the state average, has declined slightly.

Alcohol use plays an important role in Madison County motor-vehicle crashes. Twelve percent of all vehicular crashes that took place in Madison County were alcohol-related, compared with 9% for Florida as a whole. Mortality rates related to these crashes are average for Florida. Drinking and driving may be amenable to public awareness programs, but also might be countered by enforcing very strict penalties for drunk drivers.

Examining more detailed data from the Florida Department of Highway Safety and Motor Vehicles reveals a few other trends worth noting. During the five-year period from 1999-2003 there were a total of 234 vehicle crashes involving 329 vehicles and 481 occupants. 56% of the vehicles in the crashes were cars. Light trucks accounted for 21% of the involved vehicles. Residents of Madison County comprised 52% of the crash vehicle occupants. Remarkably, three roads accounted for 44% of the total crash events: Interstate 10, U.S. 90, and State Road 53. Among both drivers and passengers, 30% were not wearing seat belts. Injuries were much less likely to be severe for those individuals who had buckled up. Impaired drivers were more likely to suffer serious injury or death compared with those who had not used alcohol or drugs.

The Madison County *suicide* rate (13 per 100,000), and *homicide* rate (7 per 100,000) are about average for Florida. Both, however, reflect small numbers of deaths and have been declining in the county and at the state level over the last 9 years.

Communicable Diseases

Madison County has had mixed results in the communicable disease area. There were no cases of vaccine preventable diseases (mumps, rubella, pertussis, tetanus, Hepatitis B) between 2001 and 2003. Low rates of vaccine preventable diseases are maintained thanks to immunizations provided by local private providers and the health department.

Table 17: Vaccine Preventable Disease in Madison County and Statewide

	Madison County			State
	Number of Cases (Annual Average) 2001-03	3-Year Rate Per 100,000 2001-03	Quartile	3-Year Rate Per 100,000 2001-03
Total	**0.7**	**3.5**	**3**	**3.6**
Hepatitis B Cases	0.7	3.5	4	3.2
	0.0	0.0	1	
Mumps	0.0	0.0	1	0.0
Rubella	0.0	0.0	1	0.0
Pertussis	0.0	0.0	1	0.3
Tetanus	0.0	0.0	1	0.0

Data Source: Division of Disease Control, Florida Department of Health

The AIDS case-rate for 2001-2003 is about half the Florida rate, and the rates for meningitis and tuberculosis during the same timeframe are also much better than for the rest of the state. The average annual number of Hepatitis A cases is fewer than one.

Table 18: Other Communicable Diseases in Madison County and Statewide

	Madison County			State
	Number of Cases (Annual Average) 2001-03	3-Year Rate Per 100,000 2001-03	Quartile	3-Year Rate Per 100,000 2001-03
AIDS Cases	3.3	17.5	3	30.2
Meningococcal Meningitis	0.0	0.0	1	0.3
Hepatitis A Cases	0.7	3.5	4	4.3
Tuberculosis Cases	0.3	1.8	1	6.5

Data Source: Division of Disease Control, Florida Department of Health

The most problematic communicable diseases in Madison County are sexually transmitted diseases, predominantly chlamydia. The Madison County rate is 38% higher than the Florida average, and the county has among the highest rates in the state. Age, race and gender differences were not available, but this might be worth further investigation. Only 17% of adults surveyed in Madison County report that their doctors have talked with them about preventing STDs, so this may be a provider education issue as well as a patient education issue.

Table 19: Sexually Transmitted Diseases in Madison County and Statewide

	Madison County			State
	Number of Cases (Annual Average) 2001-03	3-Year Rate Per 100,000 2001-03	Quartile	3-Year Rate Per 100,000 2001-03
Total Gonorrhea, Chlamydia and Infectious Syphilis	**96.7**	**508.5**	**3**	**368.8**
Infectious Syphilis Cases	0.0	0.0	1	3.5
Gonorrhea Cases	23.3	3.5	4	122.8
Chlamydia	73.3	1.8	1	242.4

Data Source: Division of Disease Control, Florida Department of Health

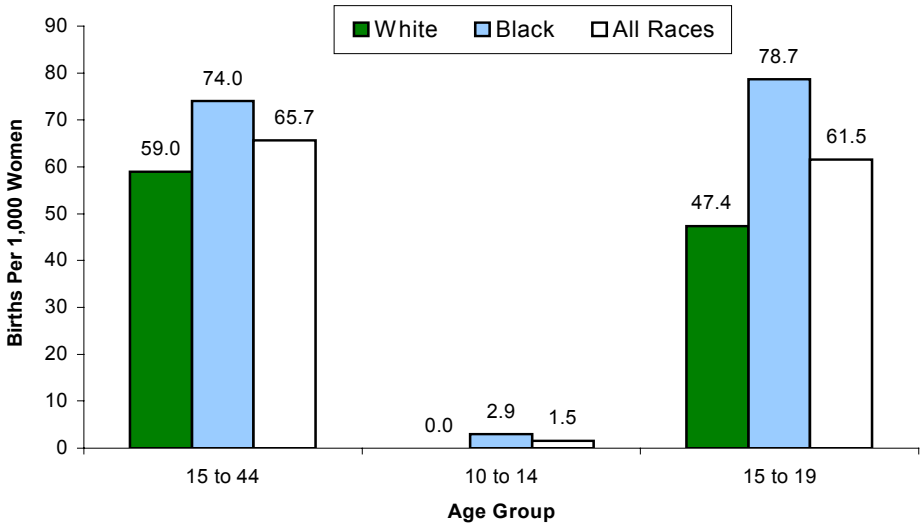
Maternal and Child Health

Pregnancy and Infancy

An average of 232 babies was born annually in Madison County between 2001-2003, with a nearly even number born to black and white mothers. The county's overall birthrate per 1,000 women between the ages of 15-44 is 65.7, which is just over the state average. The birthrate for black mothers (74 per 1000 black women of childbearing age) is higher than the rate for black women in half of the counties in the state.

Madison County's rate of births to girls between the ages of 15-19 (62 per 1000) is about the same as the state average (45 per 1000). This is particularly true for white adolescents, (47 per 1000 girls aged 15-19 vs. Florida's rate of 38 per 1000). The rate for nonwhite adolescents (45 per 1000) is considerably lower than the Florida rate. The absolute number of births to women in this age group is approximately 40 per year, and the rate has been declining since 1990.

Madison County Births Per 1,000 Women by Age and Race of Mother, 2001-03



Data Sources: Florida Office of Vital Statistics and AHCA hospital discharge data

Madison County's proportion of births to unmarried women (52.4%) is the second highest rate in the state. The difference is largely due to the high proportion of births among unmarried black women (74% vs. 61% for Florida). This is important because Madison County has a disproportionately large black population. It will be important in selecting priorities to include a look at access to well-women care among black women.

Between 2000-2003, almost 90% of women began prenatal care during the first trimester, which approaches the best rate in the state (93% in Hernando County). Early, regular prenatal care is associated with more desirable birth outcomes. Black women were almost as likely to get early care as were white women (84 % vs. 90 %).

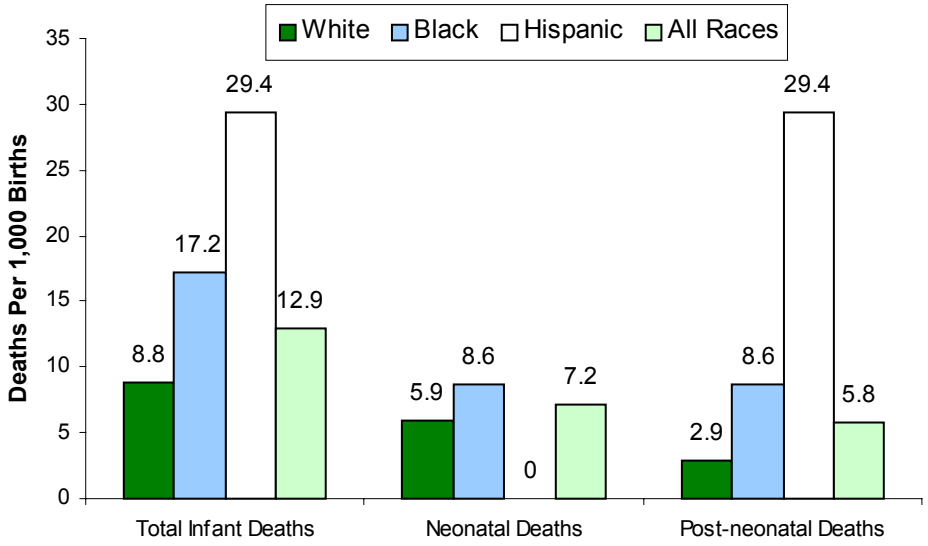
Table 20: Births and Prenatal Care in Madison County and Statewide, 2001-03

	Madison County								State
	White**	Quartile	Black**	Quartile	Hispanic	Quartile	All Races	Quartile	
Births									
Total Births (3-Year Annual Average)	113.3	1	116.3	2	11.3	1	231.7	1	
Births to Mothers ages 15-44, per 1,000*	59.0	2	74.0	3			65.7	3	62.6
Births to Mothers ages 10-14, per 1,000*	0.0	1	2.9	4			1.5	4	0.8
Births to Mothers ages 15-19, per 1,000*	47.4	2	78.7	3			61.5	3	44.6
Percent of Births to Unwed Mothers	29.7	1	75.4	3	58.8	4	52.4	4	39.4
Prenatal Care									
Percent of Births with 1st Trimester Prenatal Care	90.4	3	84.1	4	84.8	3	87.2	3	85.1
Percent of Births with Late or No Prenatal Care	1.5	1	3.5	1	6.1	3	2.5	2	3.0

Data Source: Florida Department of Health
**Hispanic data not available after 1999, ** Non-Hispanic*

Between 2000 and 2003, an average of three babies in Madison County died before their first birthdays. Although the overall infant mortality rate in the county, 12.9 per 1000 live births appears to be high, the numbers are too small to validate the rate. The infant mortality rate for blacks is substantially higher than the Florida rate, and is about twice the rate for whites. Again, the numbers are small, but it would be worth examining racial disparity issues related to the pregnancy and birth experience in the county over time, perhaps as part of a fetal and infant mortality review (FIMR).

Madison County Infant Deaths Per 1,000 Live Births, 2001-03



Data Sources: Florida Office of Vital Statistics and AHCA hospital discharge data

Babies born too small or too soon are disproportionately at risk for chronic health problems and developmental delay, placing extra demands on family resources and increasing parental stress levels. Increased parental stress levels not only affect parental health, but may increase the risk of child abuse and neglect.

Madison County mothers have a higher rate of delivering very low birth weight (under about 3 lbs.) babies than do women in most of Florida, although the high rate may partly reflect the low number of cases. The percentage of low birth weight babies (under about 5 lbs.) is also substantially higher than the state average.

Table 21: Infant Mortality and Morbidity in Madison County and Statewide, 2001-03

	Madison County								State
	White**	Quartile	Black**	Quartile	Hispanic	Quartile	All Races	Quartile	
Infant Deaths									
Infant deaths (0-364 days) per 1,000 live births	8.8	4	17.2	4	29.4	4	12.9	4	7.4
Neonatal deaths (0-27 days) per 1,000 live births	5.9	4	8.6	3	0.0	1	7.2	4	4.9
Post-neonatal deaths (28-364 days) per 1,000 live births	2.9	3	8.6	4	29.4	4	5.8	4	2.5
Low Birth Weight									
Percent of births < 1500 grams	0.9	1	3.2	3	2.9	4	2.0	4	1.6
Percent of births < 2500 grams	9.4	4	14.6	3	17.6	4	11.9	4	8.4

Data Source: Florida Vital Statistics

Mothers who smoke during pregnancy are much more likely to have small or preterm babies. While data from birth certificates shows a decline for Florida as a whole, the rate of maternal smoking in Madison County has remained relatively stable. Rates for non-whites in the county are increasing, and the rates between 2001-2003 are considerably higher than state rates. Smoking among pregnant white women in Madison County appears to be stable, but it is substantially higher than the Florida average (19% in Madison County, compared with 10% for white women in Florida as a whole). Twice as many white pregnant women in Madison County smoke as non-white pregnant women.

Table 22: Resident Live Births to Mothers Who Smoked During Pregnancy (2001-03)

	Average Number of Smoking Mothers	Average Number of Total Births	Percent
State Total	17,043	207,074	8.6
Madison County	31	232	13.4
White	22	113	19.1
Non-white	9	110	7.9

Florida Office of Vital Statistics

Children

Determining child health is a more complex issue since the only real direct markers of health between infancy and school age are the child death rate and child nutrition indices.

Madison County's average 1-4 year old child death rate in 2002 (5.3 per 1000 children) is much higher than the state average of 1.9, but this may be because the actual number of deaths is small, and therefore statistically unstable.

Child nutrition information is available only for those low-income children under age two that are eligible for the WIC (Women, Infants and Children Supplemental Nutrition) Program. The Florida Department of Health estimates that as of March 2005, about 22% of Madison County children in this population are either already overweight or at risk for being overweight. This is somewhat lower than the state average (31%). In addition, the Florida Department of Health 2000-2003 data reveal that 7% of WIC children under age 2 were deemed to have stunted growth (under 5th percentile of height for age), compared with 5% for Florida. Madison County is comparable to the rest of the state in terms of the proportion of WIC children that are severely underweight (under 5th percentile of weight for height), with 6% of the WIC children in that category.

Blood hemoglobin is a measure of a child's overall nutritional status, and is important because iron affects brain growth particularly during the crucial birth to age two period when the greatest brain growth occurs. Madison County regularly reports good hemoglobin levels for its young children, unlike Florida as a whole where almost 20% of children were found to have low hemoglobin. Because WIC children are not a random sample of children in the county and are already considered to be nutritionally at-risk if they are accepted for the program, these percentages should be considered a worst-case estimate of the nutritional status of Madison County's young children. Except for obesity, which has been identified as a problem across age groups, this speaks well of the physical status of the county's young children.

Hemoglobin and weight information, however, do not provide a very good picture of how county children are faring overall. To get a more global feel, we can look at risk and protective factors associated with child well-being, including such issues as birth spacing, exposure to domestic violence, 2-parent families, divorce rate, availability of childcare and access to health insurance. Madison County does well on many of these markers. In fact, it is among the best in terms of the rate of calls for domestic violence (581 per 100,000 population vs. 731 for Florida), and the divorce rate is among the lowest in the state (3.5% vs. 5% for Florida). Madison County is right at the Florida average (19%) for the percent of two-parent households and slightly worse than the state average for the percentage of children on the waiting list for subsidized childcare (about 6% vs. 5%). The child insurance rate (83%), however, is among the lowest in the state. Almost half of all births occur within 18 months of a previous pregnancy (43.8%) which is among the highest percentages in the state. (Source of risk/protective factor data: Florida's Children: Needs Assessment 2003/2004.)

Health status of the mother and 'wantedness' of the pregnancy are two other factors associated with child well-being. Healthy Start screening data is a good source of this type of information about pregnant women in Florida. Seventy-three percent of Madison County women giving birth between March 2002-2005 received this free screening in conjunction with their prenatal care. While this exceeds the state average, four counties in Florida have Healthy Start screening rates over 95%, so there is room for improvement.

Problems with depression were reported by about 21% of the mothers screened in Madison County and in the state as a whole. In eighteen Florida counties, fewer than 5% of women report having depression. Figures were also comparable for high stress levels, with approximately 14% of women reporting this problem, compared with twelve counties where only 1% of women screened reported high stress levels. The fact that only 10% of Madison County and 8% of Florida women indicated they were receiving or had received mental health counseling highlights one area across the state where need has outpaced available resources. Twelve percent of the mothers indicated regular alcohol or drug use (Florida's rate was 15% while there were 11 counties where the rate was one percent or lower).

Wantedness appears to be more of an issue in Madison County. Thirteen percent of those intending to give birth indicated that their pregnancies had been unwanted, compared with 9% for Florida as a whole. There are 34 counties in the state where fewer than 5% of women report that their pregnancies are unwanted. An additional 44% of Madison County women indicated that their pregnancies were 'unintended', compared with the state average of 37%. Unintended pregnancies are those that mothers would rather have had later rather than the time at which they occurred. Fifteen counties in the state have fewer than 5% of women reporting that their pregnancies are unintended. Since only 10% of Madison County women giving birth indicated that they had been in ongoing medical care at the time they started prenatal care, these findings may be of assistance in making future decisions about access to a broad range of services.

Environmental Health

Social Environment

The social environment is developed from the qualities that support a sense of community, including such protective factors as freedom from victimization, and family and neighborhood stability.

Statistics show that Madison County is a relatively safe place to live. The crime rates for domestic violence offenses, motor vehicle theft, robbery, forcible sex offenses and murder are low compared

to the Florida averages. Burglary and aggravated assault rates are about the same as the state rate, and the larceny rate is slightly above average.

Table 23: Crime and Motor-Vehicle Incidents in Madison County and Statewide

	Madison County			State
	3-Year Average of Events 2001-03	3-Year Rate Per 100,000 2001-03	Quartile	3-Year Rate Per 100,000 2001-03
Crime and Domestic Violence				
Larceny	718.3	3,778.4	4	3,036.8
Burglary	197.7	1,039.7	3	1,037.4
Total Domestic Violence Offenses	125.3	659.2	2	728.0
Aggravated Assault	89.0	468.1	3	486.0
Motor Vehicle Theft	21.0	110.5	1	515.0
Robbery	19.0	99.9	3	192.1
Forcible Sex Offenses	8.7	45.6	1	76.1
Murder	0.7	3.5	2	5.4
Alcohol-related Motor Vehicle Crashes				
Alcohol-related Motor Vehicle Crashes	27.7	145.5	2	136.4
Alcohol-related Motor Vehicle Crash Injuries	23.0	121.0	3	107.7
Alcohol-related Motor Vehicle Crash Deaths	3.7	19.3	4	6.2

Data Sources: FDLE Uniform Crime Report, DHSMB "Traffic Crash Facts,: Florida Office of Vital Statistics

Madison residents tend to put down roots. At the time the 2000 census was taken, over 78% of Madison County residents owned their own homes, compared with 71% for Florida as a whole. In addition, over 65% of the population was living in the same house they had lived in five years previously, compared with the state average of 49%.

The physical environment deals with the quality of the water we drink, the soil in which we grow our food, and the air we breathe. It also includes the availability of recreational opportunities.

Forty-six percent of the population of Madison County is served by community water systems, compared with the Florida average of 91%. Of these, 86% receive fluoridated water, meaning that roughly 40% of the population receives fluoridated water. No other system in the county is deemed feasible to fluoridate. Fluoride is important because it fortifies children's teeth while they are still forming, resulting in decreased tooth decay and ultimately in decreased school absences. About 70% of Florida's population receives fluoridated water.

Almost 6800 septic tanks have been installed in Madison County since 1970, averaging about 150 units annually since the early 90's. The number of repair permits has increased gradually since 1996.

Air quality is not regularly monitored in Madison County because the county has no large urban centers and no heavy industry. The proportion of adults with asthma, however, is among the highest in the state (12.6% vs. 10.7 for Florida). Yet, Madison County has a lower rate of asthma-related hospitalizations than the Florida average.

Table 24: Asthma in Madison County and Statewide

		Madison County			State
	Year(s)	Avg. Annual Number of Events	Age-Adjusted Rate	Quartile	Age-Adjusted Rate
Percent of Adults (18+) with asthma	2002		12.60%	3	10.70%
Asthma Hospitalizations[4]	2001-03	95	500.6	2	592.7

Data Source: AHCA Hospital Discharge Data; 2002 Behavioral Risk Factors Surveillance Telephone Survey conducted by the Florida Department of Health, Bureau of Epidemiology.
Overall, 34,551 adults were randomly selected and interviewed for the survey; about 500 adults were surveyed in each county.
95% CI = 95% Confidence Interval

In addition to assessing air, water and soil directly, it is important to look at problems that occur when the water or soil are contaminated, such as Hepatitis A, giardia and e-coli, and at high blood-lead levels, which are related to retardation in young children. These illnesses provide clues that the normal mechanisms for monitoring water and soil may not be adequate.

This is an area in which Madison County shines. There were fewer than 2 cases of giardia per year in Madison County between 2000 and 2003, and there were no cases of Hepatitis A. High blood-lead levels are not a problem for Madison County children: fewer than one child per year is found with high concentrations of lead in his blood.

The Departments of Environmental Protection and Health regularly collect information related to potential contaminants in soil and water. For the most part, these programs monitor industrial and agricultural sites that may release environmental toxins. Fifty-three Madison County sites are being followed. Most of the 31 actively monitored sites are near Madison and Greenville. Through ongoing water and soil testing, actionable levels of contaminants can be detected, and adverse health impact averted. There is one site in Madison County, a truck stop, in which chemical contamination exceeds the recommended limits, and remediation is in progress. Overall, the environmental threat posed by hazardous substances in Madison County is low compared with other counties.

There are multiple recreational outlets in the county, including Blue Springs State Park, six county parks, and city parks in Madison, Lee, and Greenville. Madison County offers large expanses of forests, rivers, lakes and springs, where bike trails, canoe trails, equestrian paths and hiking trails abound, offering countless acres of wilderness for hiking, biking, hunting, fishing, birding, and camping.

Despite the abundant wonders of nature in Madison County, there are relatively limited options available for organized physical activity. However, there have been recent additions, such as walking trails at Lanier Field and behind the Madison County Health Department. Proximity to all county residents may not be optimal. In addition, indoor fitness alternatives are entirely lacking. This lack of facilities certainly attributes to the high rates of sedentary life style and limited physical activity during leisure time among the county's residents.

Summary

Based on a series of community meetings and a review of the available data, citizens of Madison County, as part of a PACE-EH and MAPP project identified health issues of critical importance to the well-being of Madison County residents:

- Alcohol-related motor vehicle crash deaths
- Births to unwed mothers
- Activities for youth
- Promoting economic development

For the current five-year planning cycle, the citizens have opted to focus on reducing motor vehicle crash deaths. Further planning and intervention development will occur under the auspices of two committees: the Traffic Safety Team and the School Health Advisory Committee. Recommendations will then be made to Healthy Madison County for further guidance and implementation.

Issues that may merit attention in the future include:

- Community education (including life skills);
- Interconceptional care;
- Obesity;
- Eating disorders; and
- Access to health care services.

Madison County has many strengths upon which to build:

- Madison County Health Department resources are proportionately among the best in the state;
- 90% of women residing in the county began prenatal care during the first trimester of their pregnancies;
- The proportion of residents whose health care providers advise them on healthy behaviors, specifically eating more fruits and vegetables, is the fourth best in the state; and
- The divorce rate is among the lowest in the state.

However, the county also faces serious challenges, such as:

- The high school graduation rate is among the lowest in the state;
- The proportion of families living below the poverty level in Madison County is twice the proportion in Florida as a whole, with median income 32% less than the state norm;
- One quarter of county residents consider their health fair or poor, with the greatest concentration above age 65;
- Children are less likely to benefit from state health insurance programs in Madison County than in other parts of the state;

- Cardiovascular and cancer age adjusted death rates exceed the state average;
- Death rates for colorectal cancer are the fourth highest in the state and the colorectal screening test rates are below the Florida average;
- The overall infant mortality rate in the county is among the worst rates in the state;
- The infant mortality rate for blacks is substantially higher than the elevated Florida rate for blacks, and is about twice the rate for whites;
- The diabetes-related mortality rate for whites and nonwhites is the third highest in the state, at twice the Florida average;
- Elevated blood cholesterol rates are among the highest in the state;
- Madison County residents are the fifth most obese in Florida, with over one-third meeting the definition of obese. Blacks are more likely to meet the criteria, as one-half of blacks are obese, while one-quarter of whites are obese;
- County residents make poor individual health behavior choices that directly contribute to higher rates of disease and premature death. Specifically, residents have:
    - Low consumption of fruits and vegetables,
    - Limited regular exercise, and
    - Sedentary occupations;
- The rate for sexually transmitted diseases, predominantly chlamydia, is 38% higher than the Florida average;
- The proportion of births to unmarried women is the second highest in the state;
- Dental access is slightly below the state average
- Injury age adjusted death rates are above the state average
    - Alcohol impaired driving rates are well above state average,
    - During the five year period from 1999-2003 there were a total of 234 vehicle crashes involving 329 vehicles and 481 occupants,
    - Among both drivers and passengers, 30% were not wearing seat belts, and
    - Three roads accounted for 44% of the total crash events;
- Rates of very low birth weight infants and low birth weight infants exceed state rates;
- Unwanted and unintended pregnancies are more common in Madison County than in other parts of the state;
- Limited access to mental health services for pregnant women;
- Fluoridated water is less available to Madisonians, and community water systems serve a smaller proportion of county residents than in the rest of the state;
- Although Madison is rich with opportunities for recreation, there is limited infrastructure to support regular, ongoing physical activity.

The majority of health issues identified in this report relate to chronic diseases and their impact on the health of Madison County residents. Although the community driven PACE-EH and MAPP activities have identified the more acute concern of motor vehicle injury prevention for their initial focal issue, it will be important to also address obesity, interconceptional care, and community health education. Healthy Madison County may wish to consider additional projects that focus on these issues and take action to improve them.

Alternatively, these issues may be addressed by the School Health Advisory Committee, if a youth-centered focus is more desirable. In addition, it would be beneficial to examine racial disparity issues related to the pregnancy and birth experience in the county. Perhaps this could be done as part of a fetal and infant mortality review (FIMR).

Data Resources

Used in Preparing this Report

Florida's Children: Needs Assessment 2003/2004, available at
http://www.teamfla.org/downloads/Spring2004NeedsAssessment.pdf

http://www.floridacharts.com – for a wide variety of data on the health of Florida's residents, including population composition and distribution and an interactive mapping feature.

http://labormarketinfo.com/library/census.htm - for workforce-related census information.

http://www.madisonfla.com/home.html – for information about county history and resources, including education and economy.

http ://www.state.fl.us/edr/population.htm - for Florida population estimates from the Office of Economic and Demographic Research, Florida Legislature.

http://ahca.myflorida.com/Medicaid/Research/Projects/fhis2004/PDF/profile-final_feb2005.pdf for information on the Florida Health Insurance Study.

http://quickfacts.census.gov/qfd/index.html for a variety of county level data from the 2000 census.

http://www.teamfla.org/downloads/Spring2004NeedsAssessment.pdf

Special Reports from the Florida Department of Health:

Office of Planning, Evaluation and Data Analysis on Healthy Start

WIC Program on childhood obesity

Dental Program on community water supply and fluoridation

Statistical Notes

Quartiles

Quartiles allow you to compare data from one county to data from all other counties in the state. Quartiles are calculated by ordering an indicator from lowest to highest value by county and then dividing it into 4 equal-size groups. Ones (1) always represent lower numbers while fours (4) always represent higher numbers.

It is important when analyzing this data that you consider each indicator and quartile number separately. In some cases a high quartile number (4) may be a positive indicator (i.e. median income) and in others it may be a negative indicator (i.e. infant mortality).

Confidence Intervals

A confidence interval is a range around a measurement that conveys how precise the measurement is. For most chronic disease and injury programs, the measurement in question is a proportion or a rate (the percent of Floridians who exercise regularly or the lung cancer incidence rate). Confidence intervals are often seen on the news when the results of polls are released. This is an example from an Associate Press release:

"The latest ABC News-Washington Post poll showed 56 percent favored Kerry while 39 percent would vote for Bush. The ABC News-Washington Post telephone poll of 1,014 adults was conducted March 8-10 and had a *margin of error of plus or minus 3.5 percentage points*. (Emphasis added). "

Although it is not stated, the margin of error presented here was probably the 95 percent confidence interval. In the simplest terms, this means that there is a 95 percent chance that between 35.5 percent and 42.5 percent of voters would vote for John Kerry (39 percent plus or minus 3.5 percent). Conversely, there is a 5 percent chance that fewer than 35.5 percent of voters or more than 42.5 percent of voters would vote for George Bush.

The precise statistical definition of the 95 percent confidence interval is that if the telephone poll were conducted 100 times, 95 times the percent of respondents favoring George Bush would be within the calculated confidence intervals and five times the percent favoring Bush would be either higher or lower than the range of the confidence intervals.

What Does a Confidence Interval Tell You?

The confidence interval tells you more than just the possible range around the estimate. It also tells you about how stable the estimate is. A stable estimate is one that would be close to the same value if the survey were repeated. An unstable estimate is one that would vary from one sample to another. Wider confidence intervals in relation to the estimate itself indicate instability. For example, if 5 percent of voters are undecided, but the margin of error of your survey is plus or minus 3.5 percent, then the estimate is relatively unstable. In one sample of voters, you might have 2 percent say they are undecided, and in the next sample, 8 percent are undecided. This is four times more undecided voters, but both values are still within the margin of error of the initial survey sample.

Age-adjusted Death Rates (AADR)

An AADR is a mortality or death rate that has been adjusted for age distribution. AADRs are calculated using the U. S. standard million population for 2000 with age groups under 1, 1-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, and 85 plus.

Crude Rates (Rates per population)

These indicators will provide the rate of an indicator per total population. The most common of these is the rate per 100,000 population. This is calculated by using the following formula:

Number of events / (total population/100,000)

… where total population is the population of a given area (i.e. a county). You can also calculate rates per 10,000 or per 1,000 using this formula.

3-Year Rates

In this document all rates are 3-year rates unless otherwise noted. These are calculated using the above formula but using the three-year average number of events and average total population. This allows for analysis of counties with small populations and highly unstable single-year rates.