Madison County Health Profile

State of Mississippi
Mississippi State Department of Health
Office of Science

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Office of Science

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Introduction

The Mississippi State Department of Health's mission is to promote and protect the health of the citizens of Mississippi. The Mississippi State Department of Health strives for excellence in government, cultural competence in the carrying out of our mission, and to seek local solutions to local problems.

This report is intended to be a general overview of health status for a specific County. Since health status and health needs vary by sex, age, and race, we are starting with a population snapshot of the County to show how it compares with the State as a whole.

Throughout this Profile, each chart is clearly labeled regarding health factors which were measured for that chart. Data was utilized from statistical reports from the Mississippi State Department of Health, the Mississippi Data Center, and the U.S. Census.

For most charts, we provide a basis for comparison. Sometimes it is how a health measure has changed over time, sometimes it is a comparison of the County to the State, or to the Nation.

The most difficult aspect of preparing this Profile was trying to address racial and ethnic sensitivities. Our largest minority group is that commonly referred to as “Black” or “African American.” In the reports which have been collected by Vital Statistics for years, the traditional nomenclature was “Non-White” and we have followed that tradition in our labels.

For most of the health indices reported in this County Profile, Non-White rates are considerably worse than White rates. This same trend is seen across Mississippi and the United States. We believe that this reflects lower average levels of personal income and educational attainment in the Non-White community, as compared to the White community.

Until the social and economic inequities between Whites and Blacks can be addressed, many of the gaps between Whites and Non-Whites in illness and death rates can be substantially reduced through the provision of public health, medical, and social services.

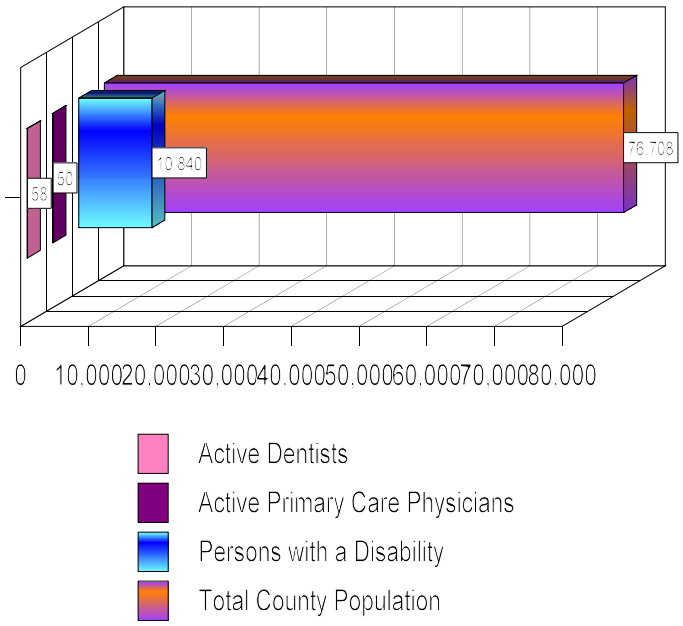
The Office of Science County Health Profiles are available on the web at: http://www.msdh.state.ms.us/County.

County Demographic Distribution

The availability and accessibility of health care services is essential to meet the needs of the state's population. **Sixty-four of Mississippi's 82 counties are designated as health professional shortage areas, including Madison County[1].** This is based on the desired ratio of one primary care provider for 3500 population.

County Total Population = 76,708 Projected Population 2005 = 89,199 [2].

Madison County

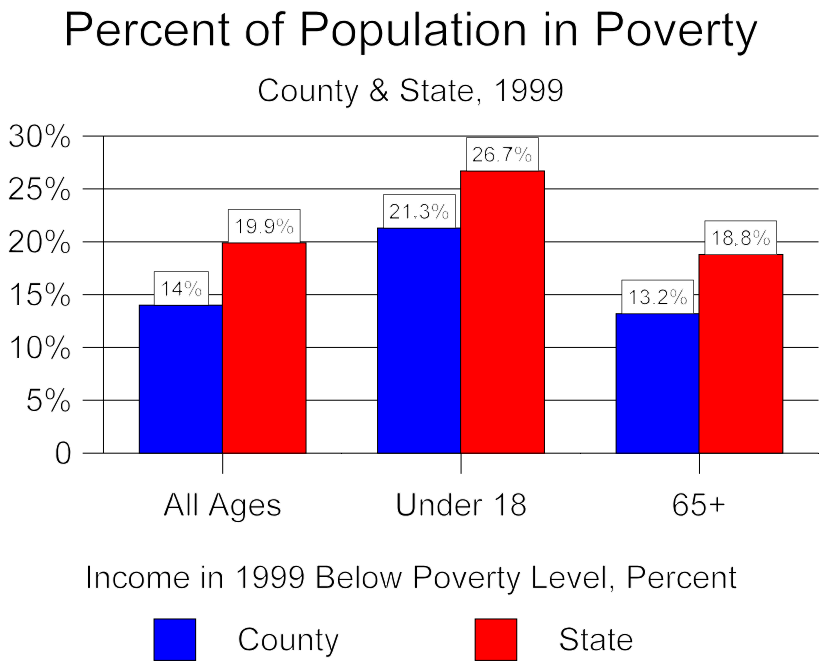


In FY 2002, Madison County had 50 Primary Care Physicians and 58 dentists.[3]

Income and Poverty

Madison County, 1999

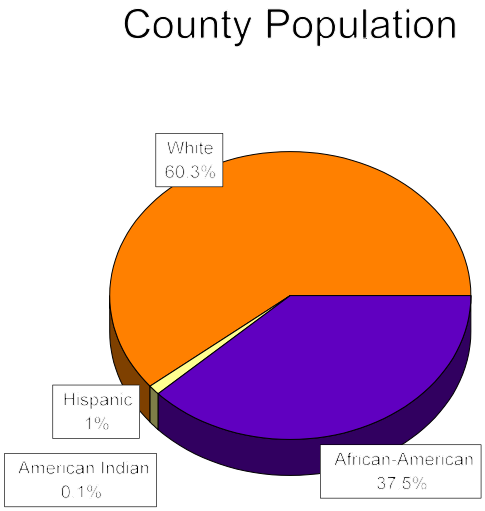
In Mississippi as a whole, 19.9% of the population, of all ages, had income in 1999 below poverty level.

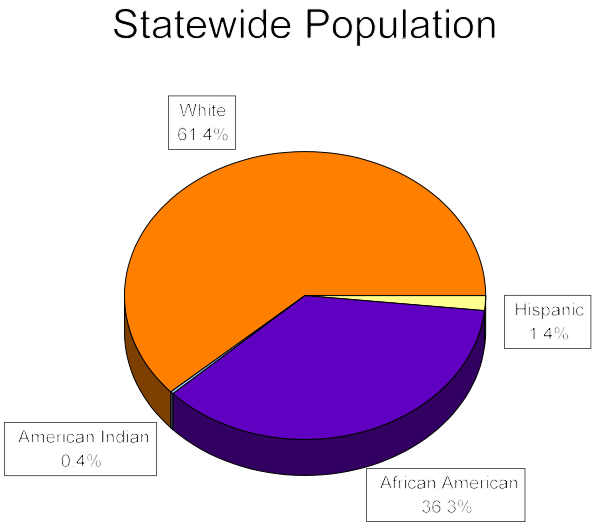


Source: US Census, 2000

The Madison County percentages of population living in poverty are lower than the Statewide percentages of population in poverty.

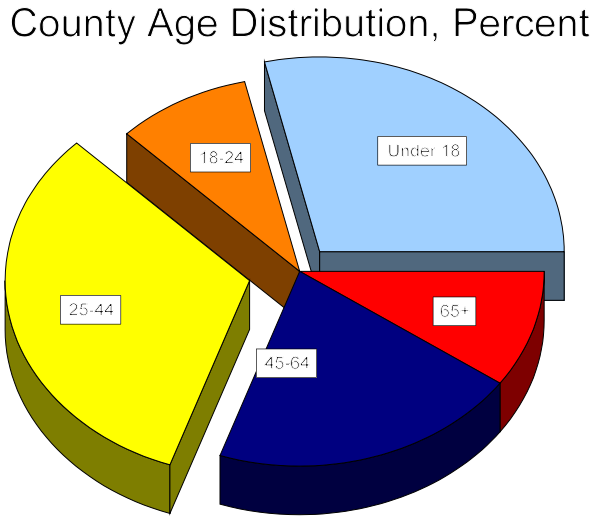
Racial Distribution

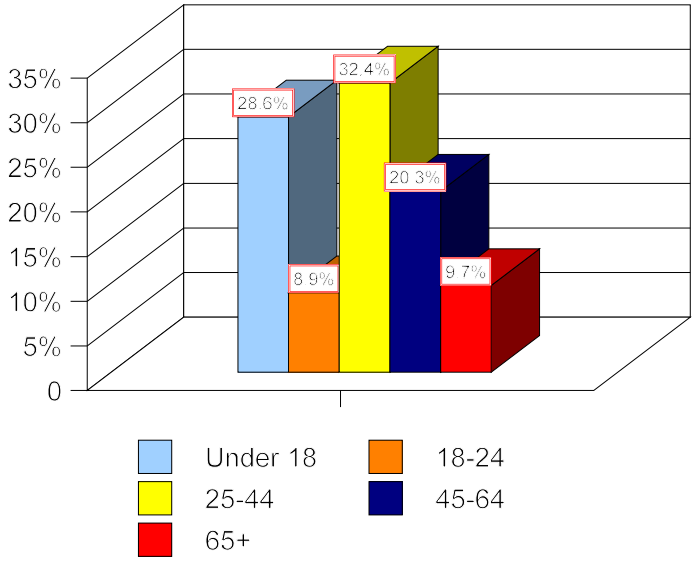




Source: U.S. Census 2000

Madison County has a similar racial distribution to that seen Statewide.



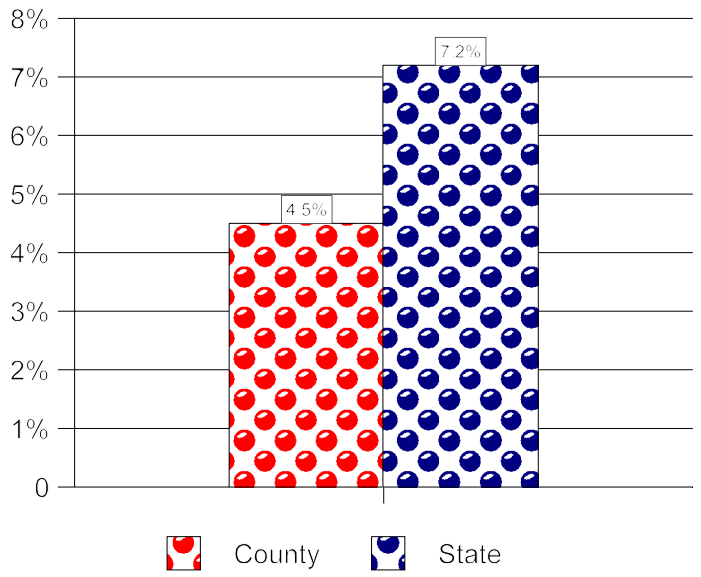


Source: U.S.Census 2000

Madison County population shows a predominance of two age groups: those under 18 and those aged 25-44.

Workforce

County and State Unemployed for the Month of July, 2003

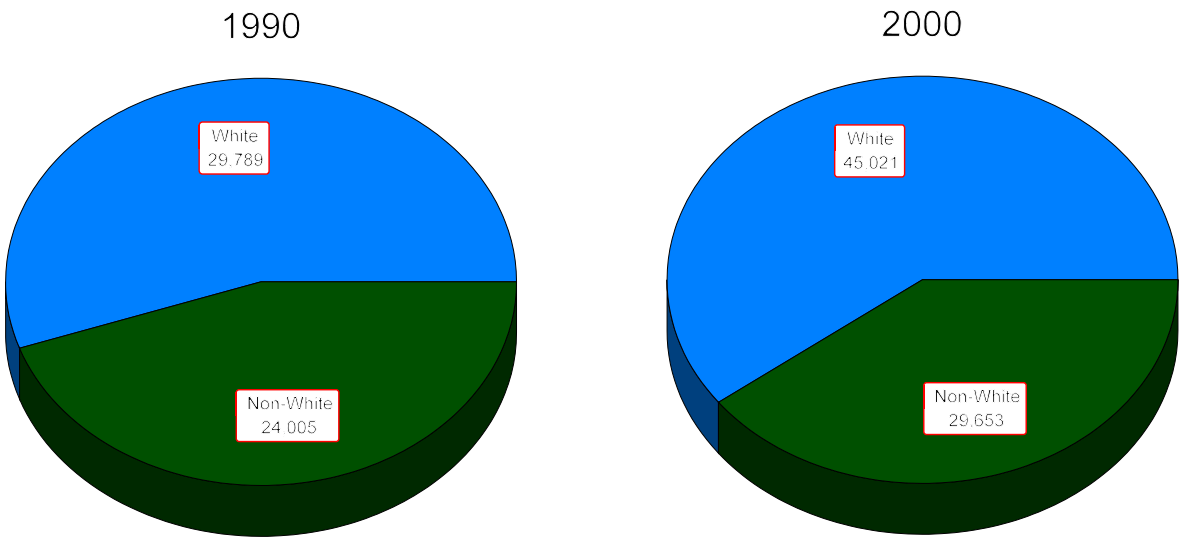


Source: U.S. Census 2000

Statewide in 2000, 4.3% of the workforce was unemployed. County residents who are employed will typically have improved opportunities to access health care through employer-supported health plans. Those residents who are not employed will have greater needs for Public Health services.

Madison County had a lower percent of unemployment than Statewide for the month of July, 2003.

County Population Change, 1990 - 2000



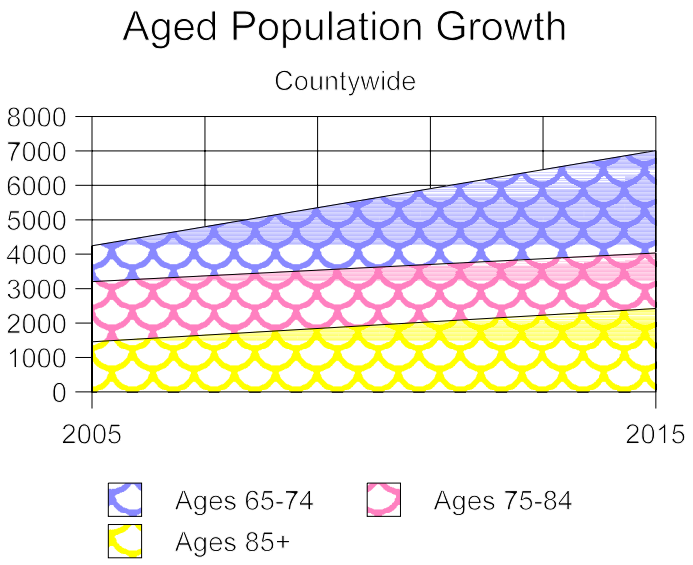
Source: Vital Statistics Mississippi 2000, MSDH

Total Madison County Population increased from 1990 - 2000 by +38.8%.

During that time, White population increased 51.1% and Non-White population increased 23.5%.

Projections for Population Over 64 Years of Age

As people get older, their risk for disease and debilitating chronic conditions increase, as well as their need for more medical care. This trend becomes noticeable at about age 65 and directly increases with age.



Source: Center for Policy Research & Planning, Mississippi Institutions of Higher Learning

As the population ages, the need for hospital, nursing home and chronic illness care increases. In addition, as age increases a dramatic increase in the need for home health and case management services, especially for persons over the age of 85 who live in their own homes, is also observed.

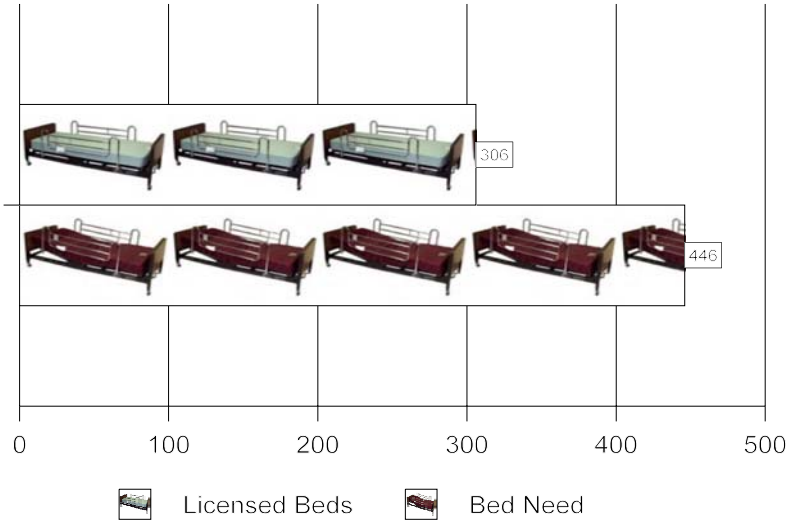
The number of Madison County population over age 65 will increase under current population projections, with the age group of 65-74 showing the highest increase.

County Nursing Home Beds, Projection (2005)

The MSDH uses population projections prepared by the Center for Policy Research and Planning of the Institutions of Higher Learning to calculate bed need. The need for nursing home care beds is established at:

0.5 beds per 1,000 population aged 64 and under
14 beds per 1,000 population aged 65-74
59 beds per 1,000 population aged 75-84
179 beds per 1,000 population aged 85 and older

County Nursing Home Bed Need, 2005



In Madison County, an increase in the number of elderly is projected. This expectation indicates a greater need for elderly health care services, including nursing home facilities. Madison county has 306 licensed beds with an additional 80 beds approved. **Under current population projections, Madison County will not have sufficient nursing home beds to accommodate elderly County residents.**

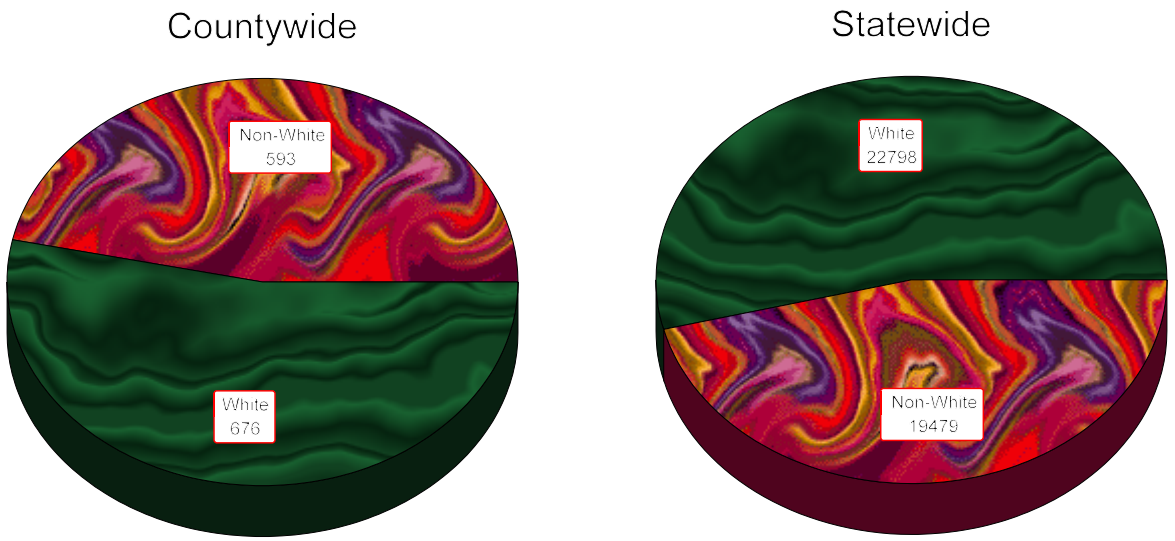
Source: MSDH State Health Plan 2003

Maternal and Child Health Indicators

Pregnancy, Infancy and Infant Mortality

Pregnancy and infancy are periods of rapid growth and development, and high vulnerability. This is the period when a small investment in preventive services can pay the greatest dividends concerning preventing illness, disability and premature death. For these reasons, infant mortality has become the measure used to compare states and nations in terms of the quality of life and access to the most basic of health-related services.

Live Births by Race 2001
Number of Births, County and State

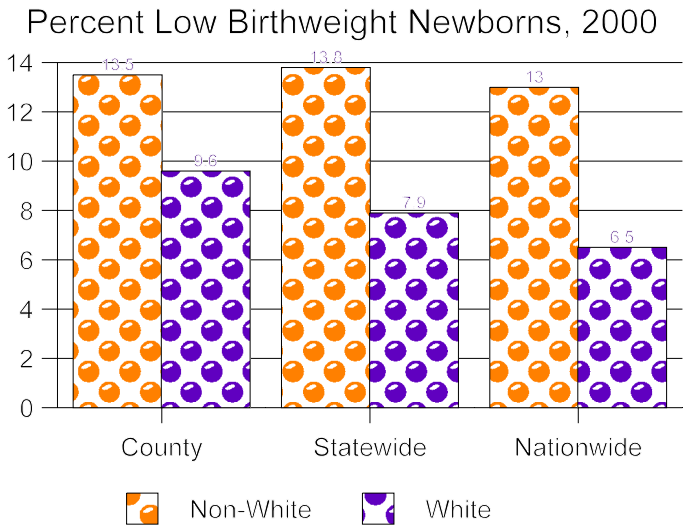


Madison County's White live birth rate of 15.0 per 1,000 population is higher than the State rate of 13.0 per 1,000 population.

Madison County's Non-White live birth rate of 20.0 per 1,000 population is higher than the State rate of 17.7 live births per 1,000 population.

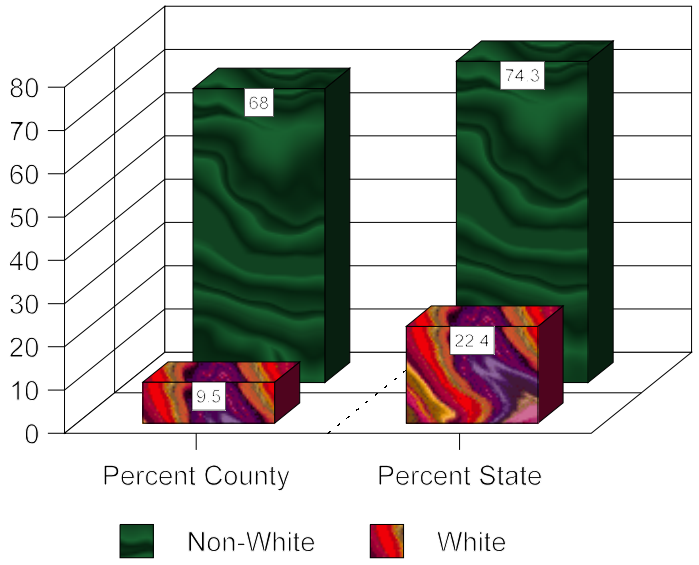
Percent Low Birthweight Newborns

A low birthweight baby is one that weighs less than five and a half pounds (2,500 grams) at birth. These babies have more illnesses and higher death rates. Low birthweight can be due to teenage mothers, poor nutritional status of the mother, prematurity, maternal or infant illness, maternal exposure to tobacco smoke, alcohol, drugs, or other causes. Adolescents, women over 35, women with pregnancies spaced too close together, and those that do not receive adequate prenatal care are all at high risk of having a low birthweight infant. **The risk of dying during the first year of life for low-birthweight babies is 24 times that for babies of normal birthweight.**



In Madison County, the percent of low birthweight newborns is comparable for Non-Whites and higher for Whites than State and National percentages[4].

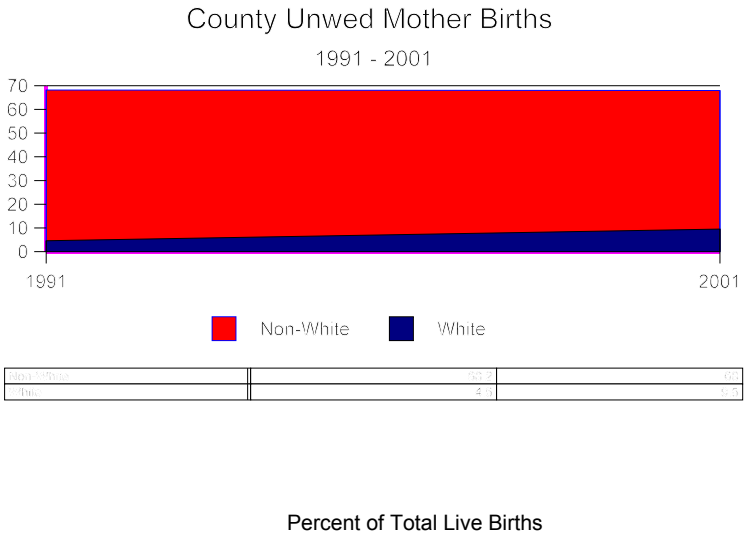
Births to Unmarried Mothers
Percent of Total Live Births, 2001



Children of unmarried mothers are substantially less likely to graduate from high school than the children of married mothers, regardless of the mother's age at the time of birth[5]. Children who grow up with married parents generally enjoy a higher standard of living than those living in single-parent households[6].

In Madison County, the percent of births to unmarried mothers is lower for both Whites and Non-Whites than the Statewide percentages.

Percent Change, 1991 - 2001
Unmarried Mother Live Births



Percent of Total Live Births

Out-of-wedlock childbearing has risen dramatically nationwide, from 5.3% of all births in 1960 to 33% of all births in 1999[7]. The percent of births to unmarried mothers in Mississippi statewide is 22.4% among Whites and 74.3% among Non-Whites.

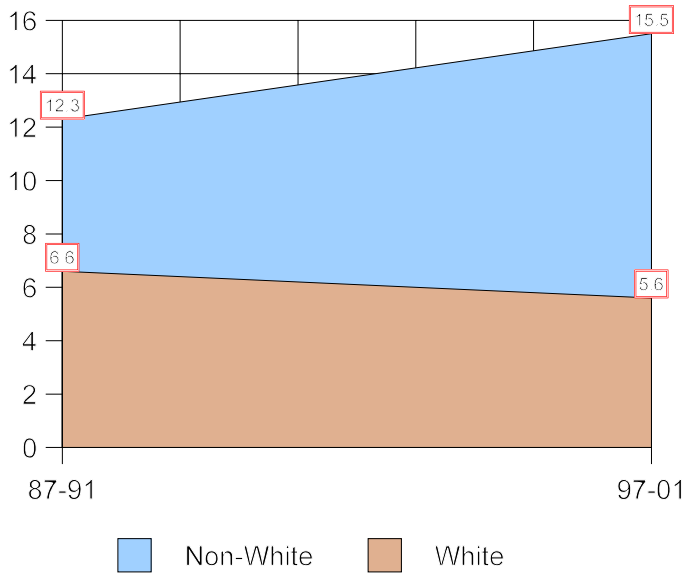
The percentage of births to unmarried mothers in Madison County has remained constant for Non-Whites, at 68%, and increased for Whites from 4.6% to 9.5% during the last decade[8].

Infant Mortality

Infant mortality reflects deaths in the first year of life, and is measured using the infant mortality rate. Infant mortality rate is measured as the proportion of deaths in the first year of life in every 1,000 live births.

Having babies when the mother is too young or too old, having them too closely together, poor maternal health or poor nutrition all increase the risk of infant death. Chemical toxins such as alcohol, drugs and tobacco smoke also increase the risk. After the first month of life, poor infant nutrition, poor hygiene and infectious diseases all increase risk.

Madison County Infant Mortality Rate, 1987 - 2001



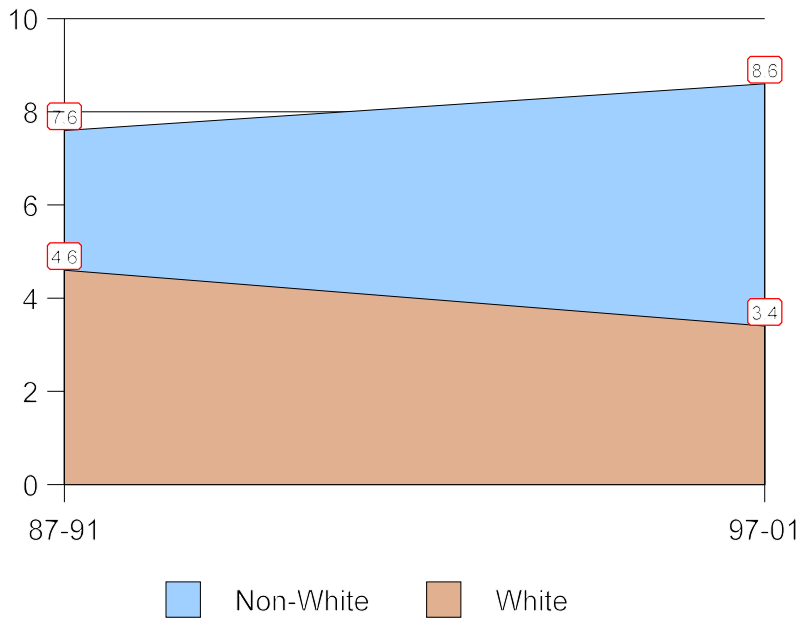
Rate per 1,000 Births, Infants aged less than one year
Madison County, 1987-1991 through 1997-2001

The rates of infant mortality have increased for Non-Whites and decreased slightly for Whites in Madison County over the last ten years.

Neonatal Mortality

Neonatal mortality represents infant deaths in the first 28 days of life. Deaths during this time are generally due to causes affecting the mother before and during pregnancy. Neonatal mortality rate is measured as the proportion of deaths in the first 28 days of life in every 1,000 live births.

Madison County Neonatal Mortality Rate 1987 - 2001



Rate per 1,000 Live Births, Madison County
1987-91 through 1997-2001

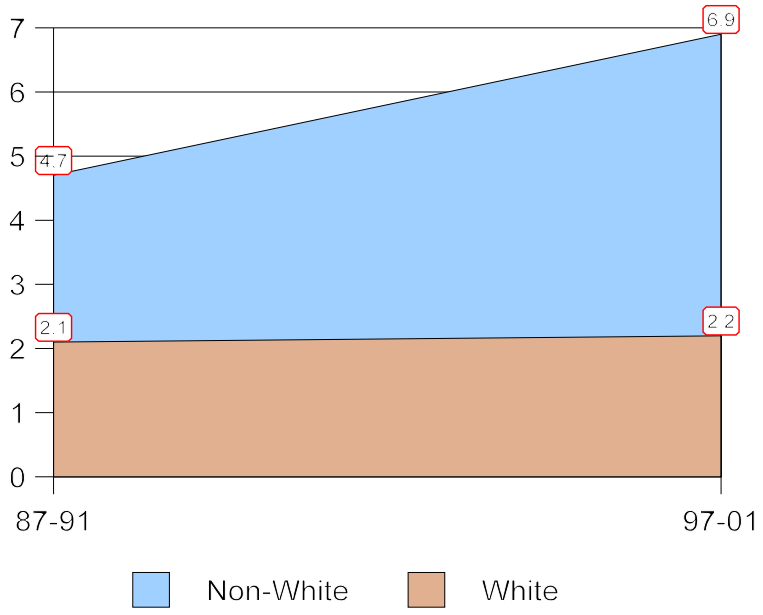
White Neonatal mortality rates have decreased while Non-White rates have increased in Madison County over the last ten years.

Source: MSDH Vital Statistics

Postneonatal Mortality

Postneonatal Mortality is measured as the proportion of deaths among infants aged 28 days to one year in every 1,000 live births. The Postneonatal mortality rate is an important measure of health, because nearly half of these deaths are caused by preventable causes such as SIDS, infections, and injuries. With education and health care interventions, postneonatal mortality rates can be reduced and the racial gap in these deaths can be narrowed.

Madison County Postneonatal Mortality Rate, 1987 - 2001



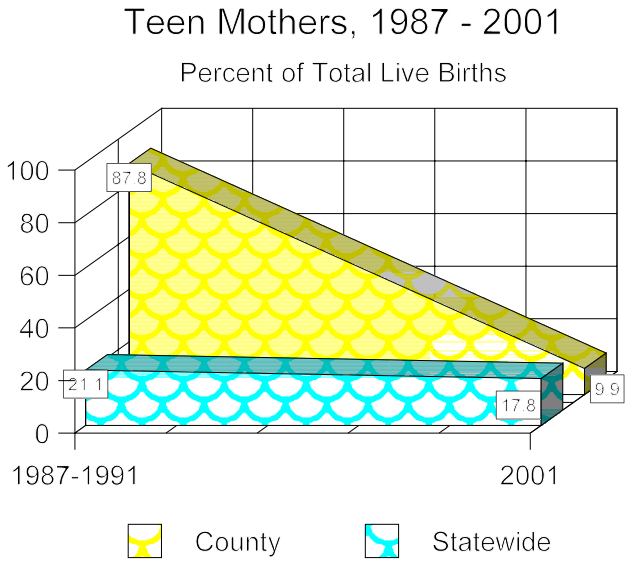
Rate per 1,000 Live Births, Madison County
1987-1991 through 1997-2001

The Postneonatal Mortality rate in Madison County has increased for Non-Whites and remained constant for Whites over the past ten years.

Source: MSDH Vital Statistics

Births to Teenage Mothers
1987 - 2001

Mississippi has the highest rate in the nation of births to teens. Teen mothers are more likely to drop out of school, require long-term financial support, and be involved in child abuse. Unplanned pregnancies account for a majority of the births among women with family incomes below the poverty level[9].



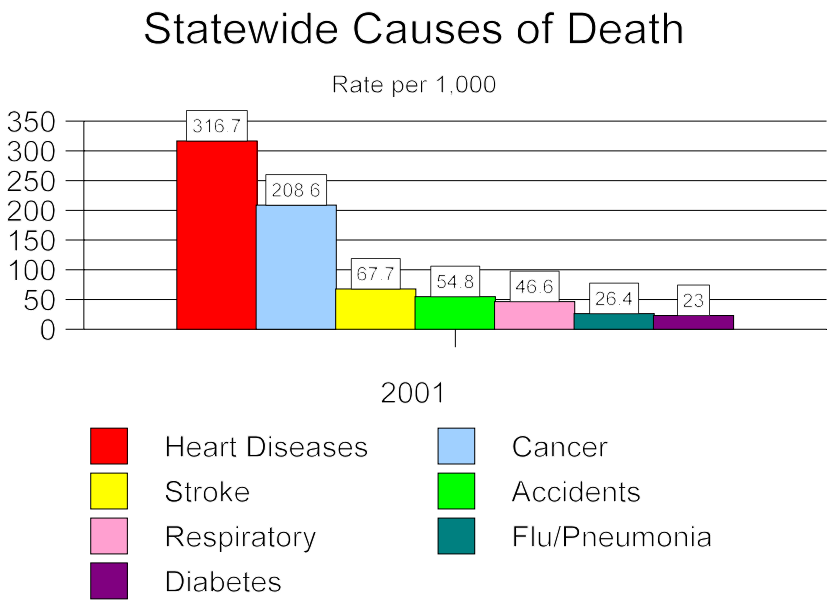
MSDH Vital Statistics 2001

County teenage motherhood in Madison County has shown a sharp decrease over the past decade. After beginning 1987-1991 with a teenage motherhood percentage well above the Statewide percentages, Madison County teenage motherhood has dropped to 9.9% of births, well below the Statewide percentage of 17.8%.

Illness and Death

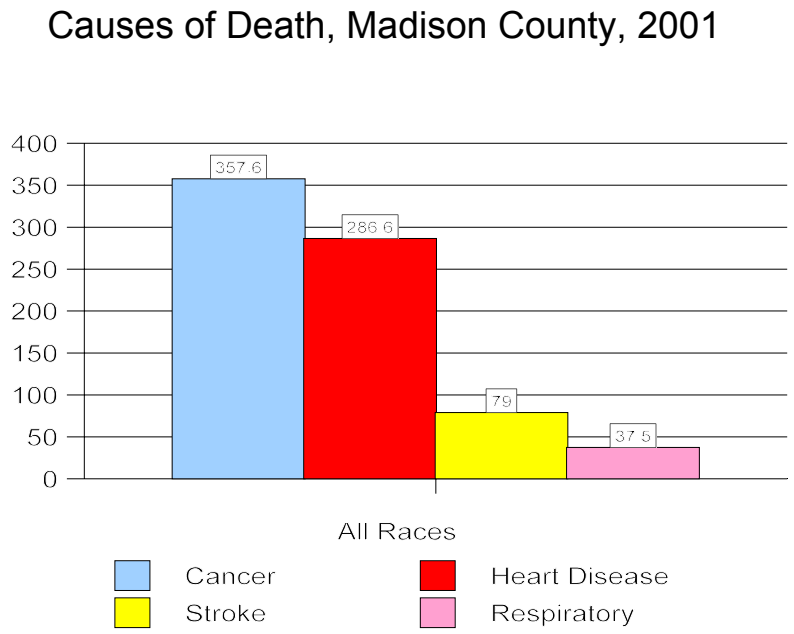
Many premature deaths can be prevented, allowing the person to have more productive years of life. The majority of deaths result from heart disease, cancer, stroke and injury. By looking at the numbers of deaths, the age, sex and race adjusted rates, and the years of potential life lost by premature deaths, much can be learned about the health of a community. Deaths during childhood, adolescence and young adulthood especially reflect community health.

This section of the County Health Profile addresses those causes of death that are most common and most preventable.



Statewide, the leading causes of death are Heart Disease, Cancer, Stroke and Accidents.

Causes of Death, All Races

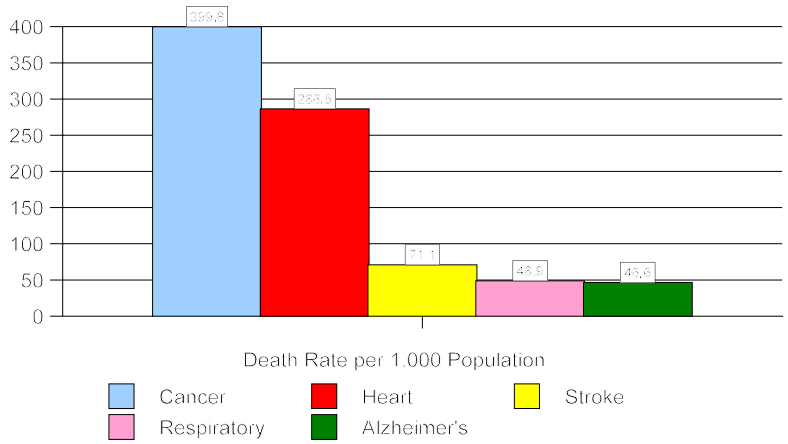


Rate per 1,000 population. Source: MSDH Vital Statistics, 2001

The leading cause of death in Madison County for all races is from Cancer, followed by Heart Disease.

Causes of Death, Madison County

White Population, 2001

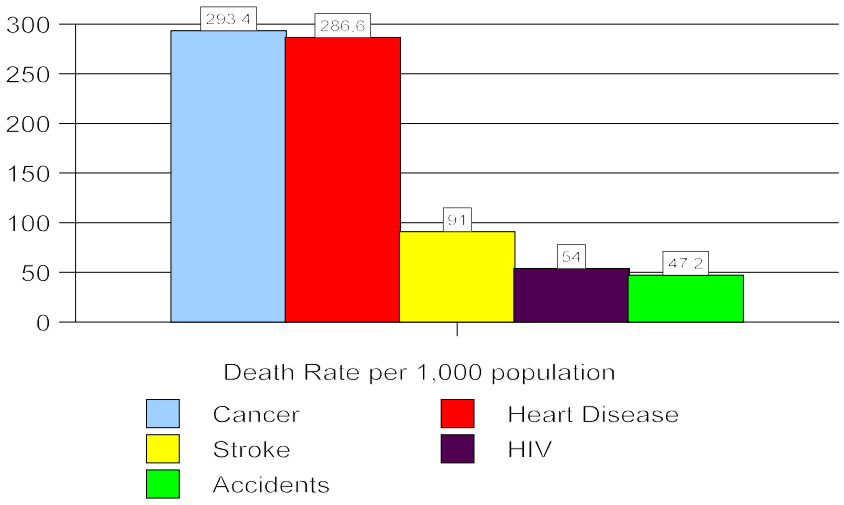


Vital Statistics 2001, MSDH

Smoking is the single most important modifiable risk factor for cardiovascular disease and coronary heart disease. Approximately 24% of adult Mississipians are smokers. Although this percentage has decreased since the 1940's when 50-60% of all adults smoked, there have not been decreases in the percentage of current smokers in Mississippi since 1990[10].

In Madison County, the highest rate of death for Whites is from Cancer, followed by Heart Disease.

Causes of Death, Madison County
Non-White Population, 2001



Mortality Rate per 1,000 population
Source: Vital Statistics 2001, MSDH

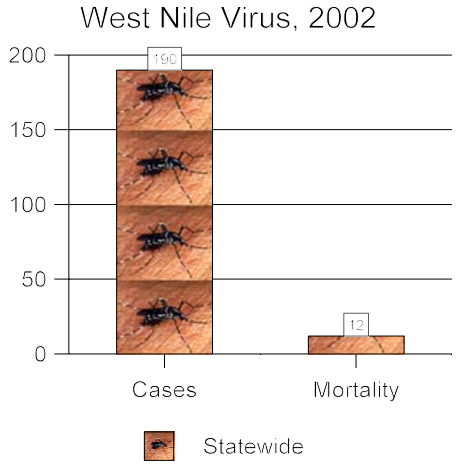
For reasons that are not understood, Non-Whites have about a 33% higher death rate for all cancers than Whites, according to the American Cancer Society.[11] Additionally, Non-Whites have a higher rate of death due to injury[12].

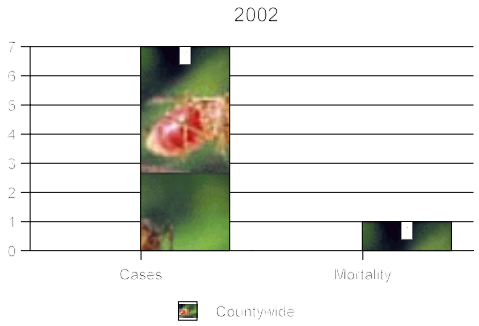
In Madison County in 2001, the highest rate of death for Non-Whites was from Cancer, followed by Heart Disease.

West Nile Virus

West Nile virus is spread by the bite of an infected mosquito, and can infect people, horses, and many types of birds. Most people who become infected with West Nile Virus will have either no symptoms or only mild ones. However, West Nile Virus infection can result in severe and sometimes fatal illnesses.

State and County Human Cases and Mortality





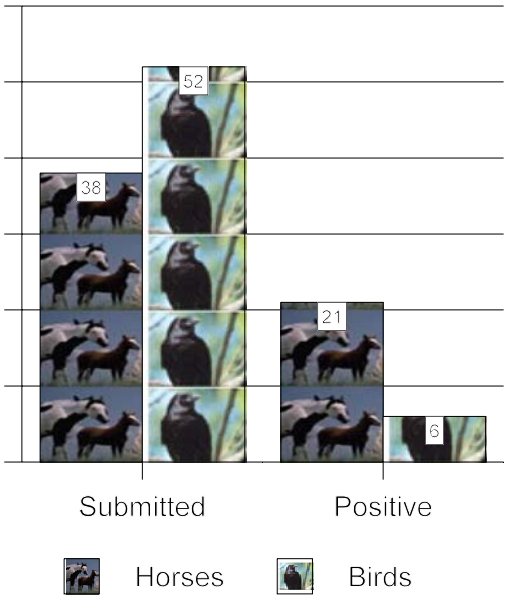
In Mississippi in 2002, there were 190 human cases with 12 mortality from West Nile Virus. In Madison County, there were 7 human cases and one mortality in 2002.

West Nile Virus

Madison County, 2002

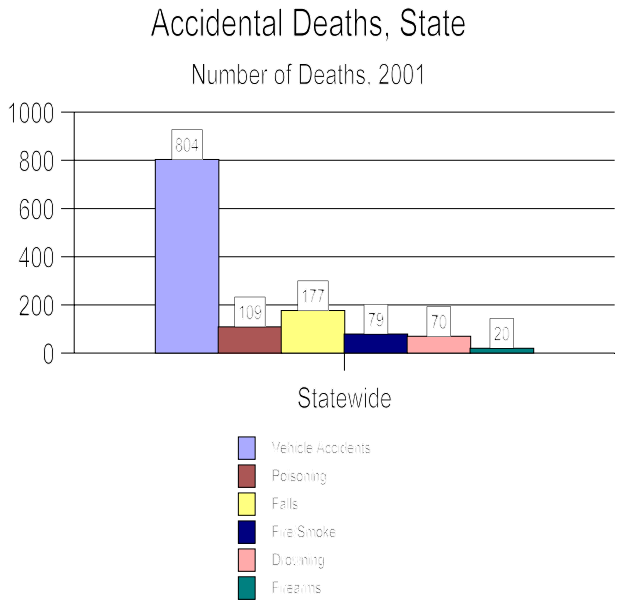
Since the original 1999 outbreak in New York City, the finding of dead birds that test positive for West Nile Virus has always been a precursor to human cases of the virus. Testing dead birds is the best early detection method for the presence of the virus in the area. Horses are also tested, since approximately 40% of equine West Nile Virus cases result in the death of the horse.

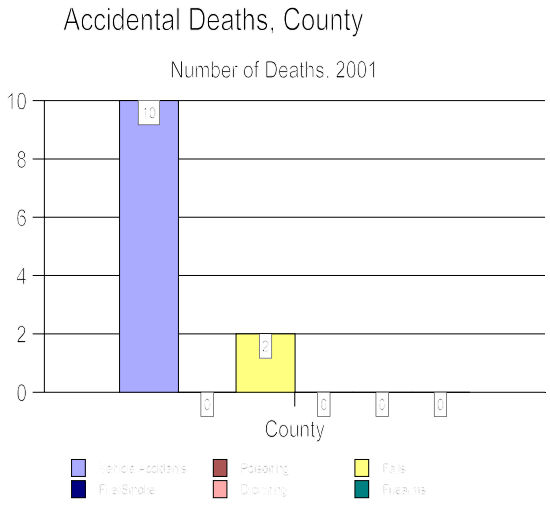
Madison County Bird and Horse West Nile Virus



In Madison County in 2002, of the horses and birds submitted for testing, 6 birds tested positive for West Nile Virus and 21 horses tested positive for the virus.

Injuries
Accidental Deaths, State and County



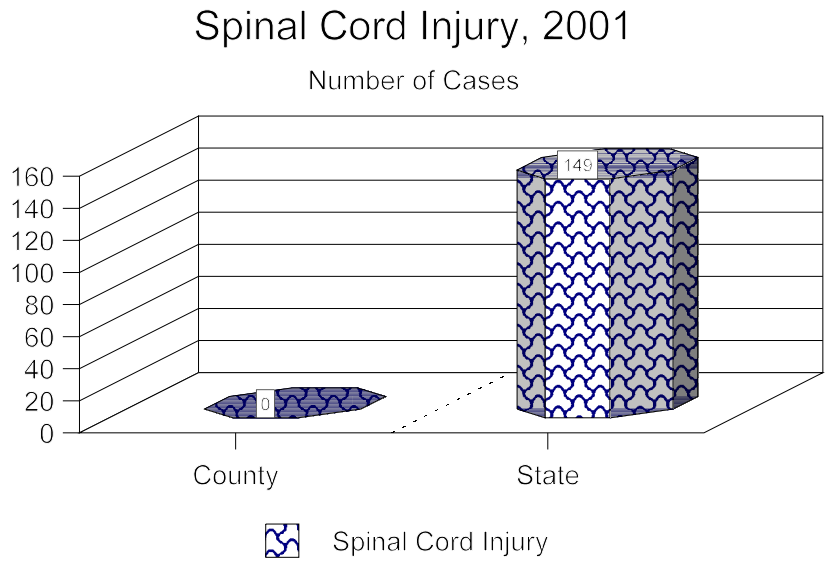


The leading cause of accidental death in Madison County during 2001 was Motor Vehicle Accidents.

Spinal Cord Injuries

Statewide and Countywide, 2001

Spinal Cord Injuries have a profound effect on the future of Mississippians, since they often remove an individual from study and work during their most productive ages. These injuries cause many people to need state support for the remainder of their lives.



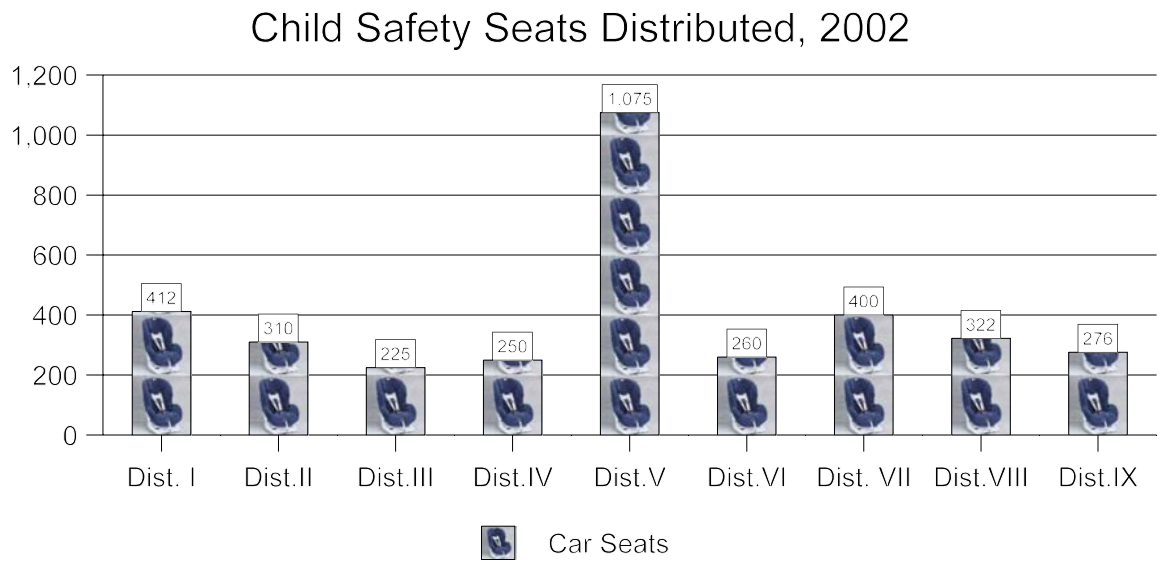
The leading causes of spinal cord injury vary by age. Among persons under age 65, motor vehicle crashes are the leading cause. Among persons over 65, most spinal cord injuries are caused by falls.

Throughout the State, 149 people sustained spinal cord injuries. In 2001, Madison County had no cases of spinal cord injury. From 1992 through 2001, Madison County had 42 cases of spinal cord injury.

Injury Prevention

Injuries are the single greatest cause of mortality in Mississippi for persons between the ages of 1 and 44. Mississippi's mortality rate from injuries is the second highest in the nation. The Injury Prevention Program manages activities aimed at reducing injuries by coordinating the MSDH child safety seat program and other injury prevention efforts including bicycle safety projects and fire prevention projects.

In 2002, a total of 3,530 child safety seats were purchased by the MSDH and distributed statewide. Child passenger safety packets were distributed along with the car seats.

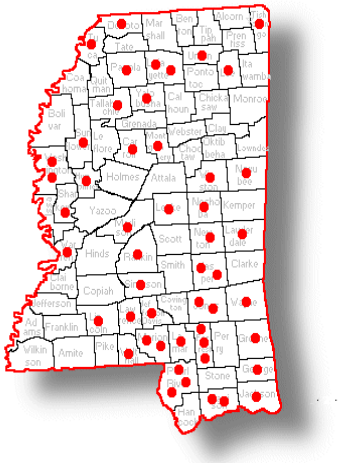


In Public Health District V, which includes Madison County, 1,075 car seats were purchased and distributed by the MSDH in 2002.

School Health Nurses for a Tobacco-Free Mississippi

The School Health Nurses for a Tobacco-Free Mississippi program places school nurses into Mississippi's public school system whose major job function, other than their normal day-to-day nursing duties, is to teach Mississippi school age children the dangers of tobacco use.

During the 2000 - 2001 school year, nurses in the tobacco program conducted activities aimed at reducing or preventing youth tobacco use for 44,250 students in Mississippi.

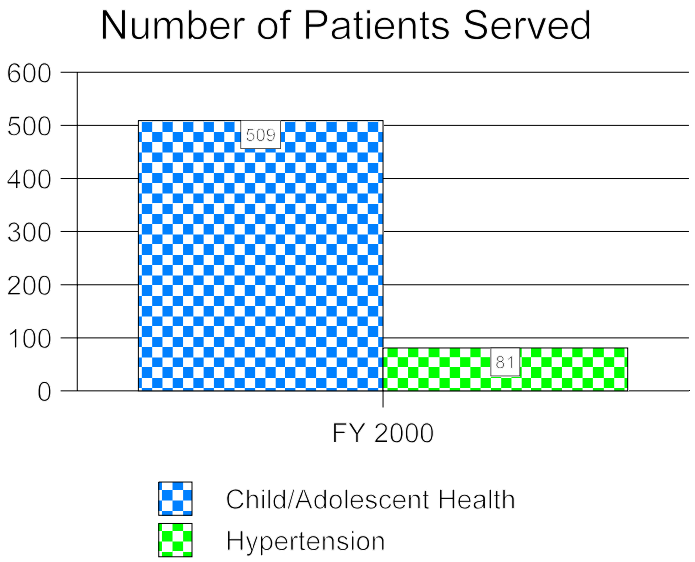


Currently, the Partnership for a Healthy Mississippi funds 51 school districts statewide with the tobacco prevention program. **Madison County has a Tobacco School Nurse program.**

Students exposed to the School Nurses for a Tobacco-Free Mississippi program were significantly more likely to know tobacco can hurt and kill; that cigarettes contain drugs; that tobacco causes cancer and heart disease; and that second-hand smoke is dangerous[13].

Public Health Services to the County

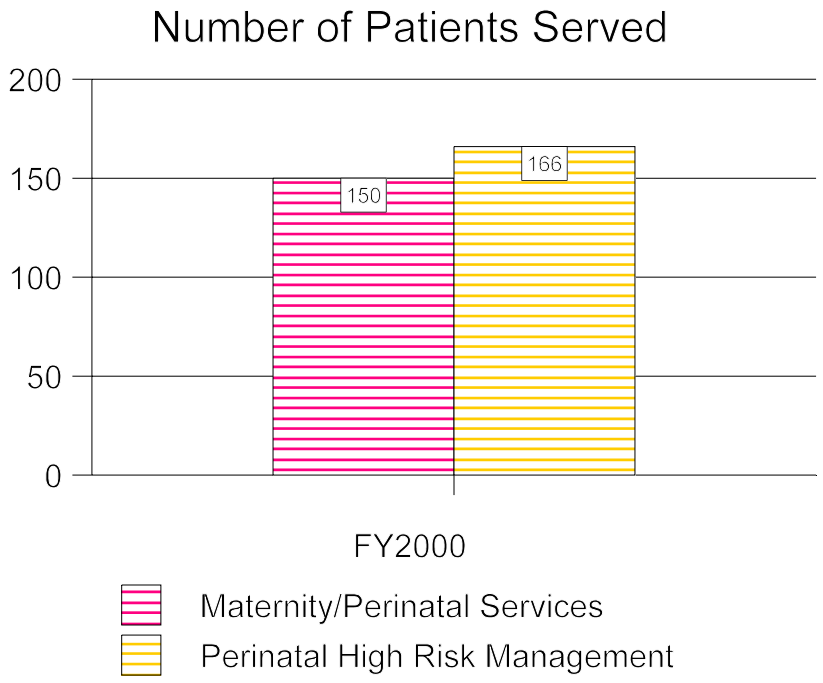
Patients Served by MSDH, Madison County, 2000



The Child and Adolescent Health Program provides childhood immunizations, well child assessments, limited sick child care, and tracking of high-risk children. Services are provided via a multidisciplinary team including medical, nursing, nutrition, and social work. Through local county health departments, the MSDH offers hypertension screening, diagnosis, treatment, and follow-up services.

Public Health Services to the County

Patients Served by MSDH, Madison County, 2000

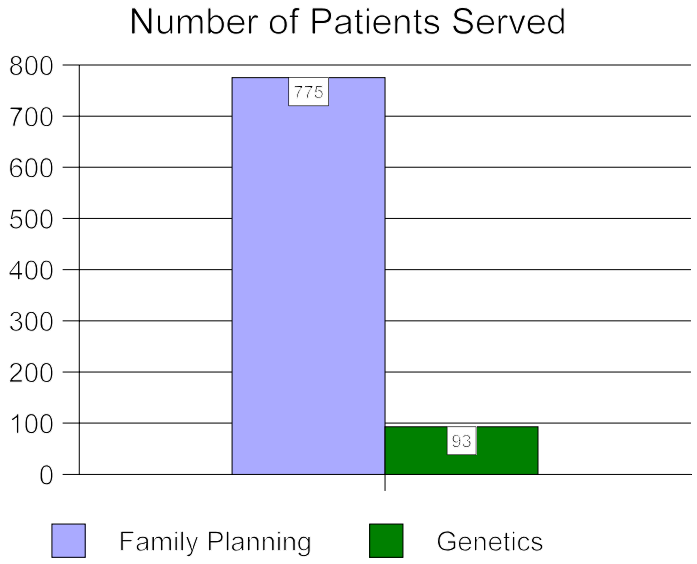


Maternity services are provided by the Department of Health statewide to more than 12,400 women through County Health Departments, targeting low-income pregnant women.

The Perinatal High Risk Management/Infant Services System program is designed to reduce low birth weight and infant mortality through a multidisciplinary, family-oriented, risk reduction program that provides an array of supplemental services including nutrition and counseling.

Public Health Services to the County

Patients Served by MSDH, Madison County, 2000

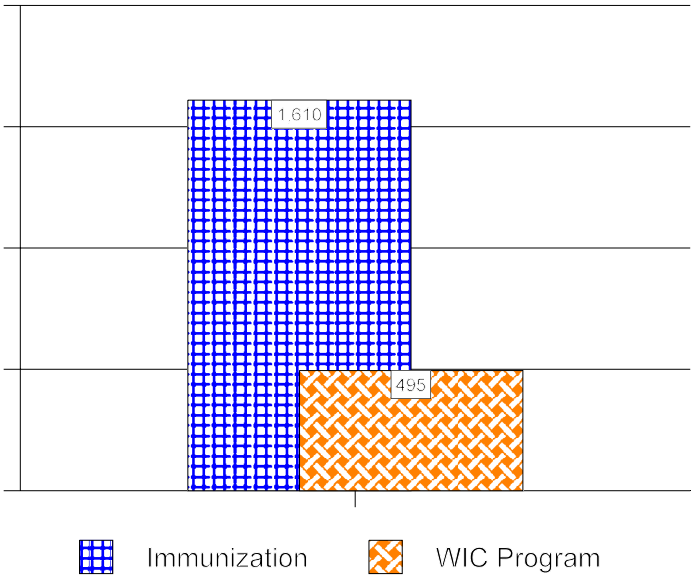


Mississippi leads the nation in births to teens. **The Family Planning Program** seeks to provide counseling, medical examination, education, and contraceptives for teenagers at risk and low-income women to allow individuals to prevent unplanned pregnancies and to space children.

The Genetics Program provides screening, diagnosis, counseling, and follow-up for a range of genetic disorders and has developed comprehensive genetic services statewide. The Genetics Program also collects data for the birth defects registry.

Public Health Services to the County

Number of Patients Served, Madison County, 2000

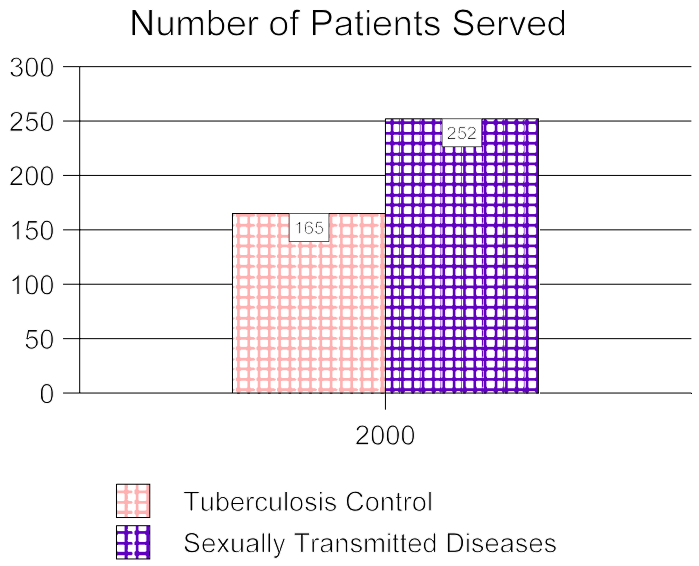


Vaccines are among the safest and most effective measures for the prevention of infectious and communicable diseases. The Division of Immunization provides services designed to limit illness and death due to childhood vaccine-preventable diseases.

The Supplemental Food Program for Women, Infants, and Children (WIC) provides health screening, certification, and nutrition education to pregnant, breast-feeding, and postpartum women, infants, and children who qualify. Monthly food packages are distributed directly to participants through 93 distribution centers located in every county in the state.

Public Health Services to the County

Number of Patients Served, Madison County, 2000

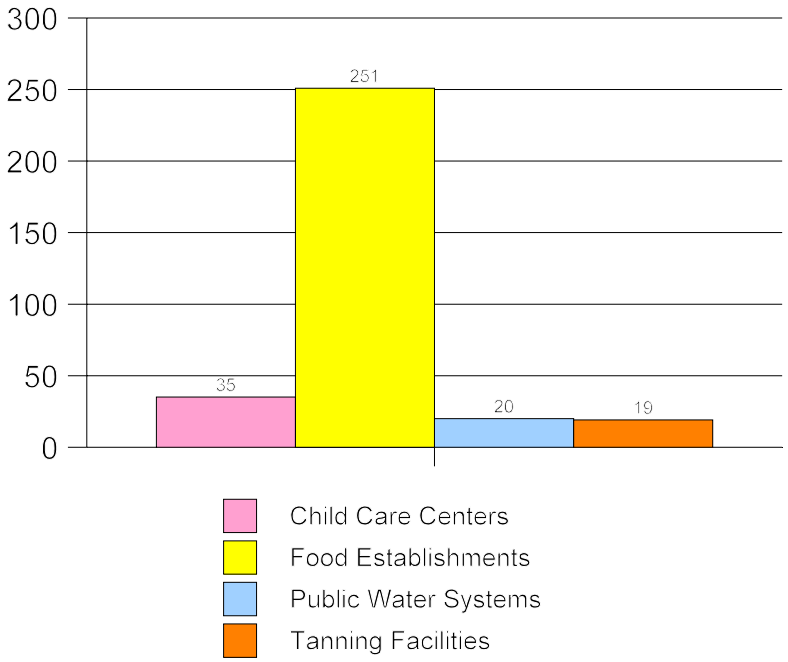


There were 154 new cases of tuberculosis (TB) reported in Mississippi during 2001. The TB program provides early and rapid detection of persons with or at risk of developing TB; treatment and follow-up of diagnosed cases; preventive therapy to persons at risk of developing TB; and technical assistance to public and private agencies and institutions, particularly hospitals, nursing homes, mental institutions, and penal institutions.

Sexually Transmitted Diseases (STDs) are infections spread from one person to another person during sexual contact. The goal of the STD control program is the reduction and practical management of STD in Mississippi.

Environmental Health Services

Number of Facility Inspections, Madison County, 2000



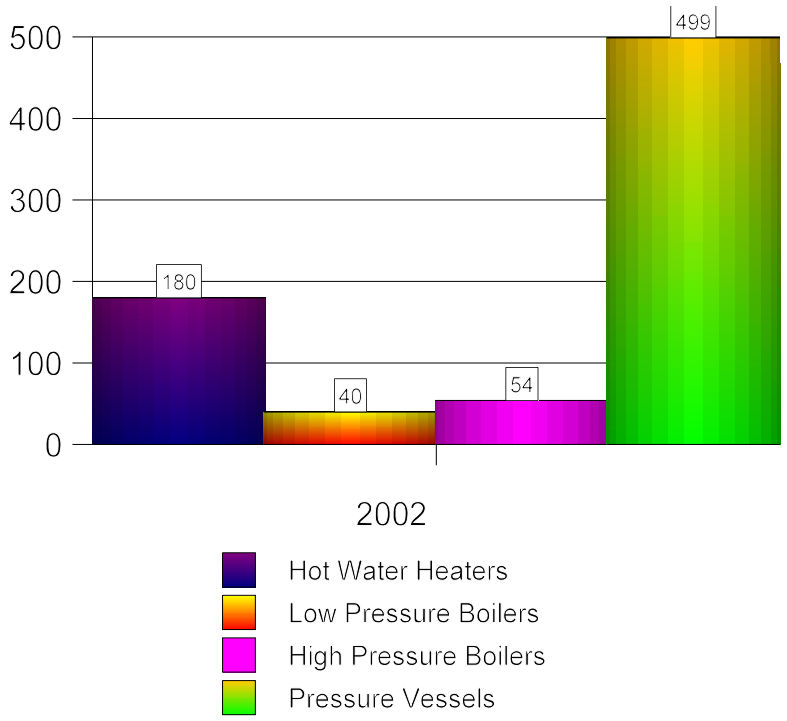
Health Protection for the people of Mississippi is one of the chief responsibilities of the Mississippi State Department of Health. From the quality of our food and water, to child care and professional licensing, our concerns embrace every aspect of life across the state. Our goal is to achieve and maintain the highest standard of health for all Mississippians.

Boiler and Pressure Vessel Safety

Citizens and their properties, both public and private, are endangered by unsafe boiler and pressure vessels. Explosions have caused fatalities and considerable property damage. Tanks storing compressed air are the objects most frequently involved in such explosions.

The Boiler and Pressure Vessel Safety Branch conducts inspections and certifies the use of all boilers and pressure vessels covered by law. Violations were found in state-owned buildings, schools, hospitals, nursing homes and small businesses.

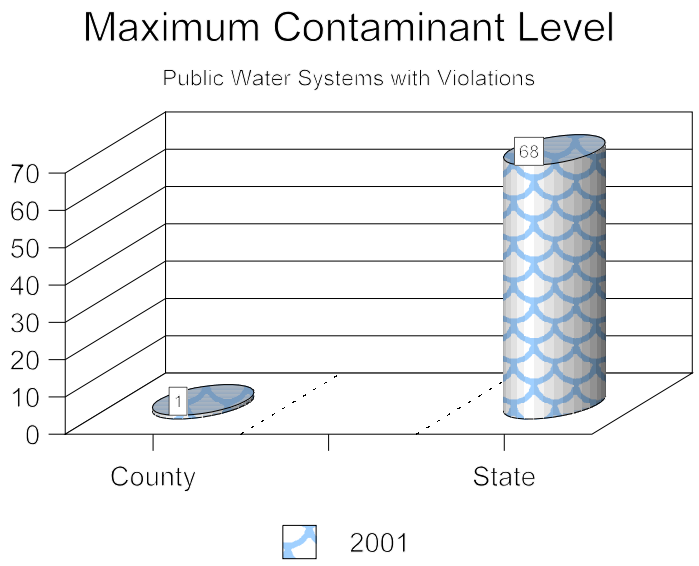
Madison County, Number of Inspections, 2002



During 2002, the Boiler and Pressure Vessel Safety Program inspected boilers, pressure vessels and heaters in Madison County on either an annual or biennial basis.

Public Water Supply

Public water supplies provide drinking water to 96% of the state's citizens. The Public Water Supply Program monitors drinking water quality, follows-up and resolves water quality violations and works toward the goal of ensuring public water supplies comply with all Safe Drinking Water Act water quality standards.



The Environmental Protection Agency sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels. During 2001, 68 Public Water Supplies incurred Maximum Contaminant Level (MCL) violations statewide.

In Madison County in 2001, there was one MCL violation by Public Water Supplies.

1. The US Dept. of Health and Human Services defines a health professional shortage area as a geographic area encompassing 30 minutes travel time and containing at least 3,500 persons per primary care physician. MS State Health Plan FY2003, p. V-2.

2. US Census 2000 and MS Population Projections, MS Institutions of Higher Learning, Sept. 1998.

3. MSDH State Health Plan FY2003.

4. CDC National Vital Statistics Report 2002 and Vital Statistics 2000, MSDH.

5. *Out of Wedlock: Causes and Consequences of Nonmarital Fertility,* ed. Lawrence L. Wu and Barbara Wolfe [New York: Russell Sage Foundation, 2001], pp. 287-316.

6. *Marriage, Poverty, and Public Policy: A Discussion Paper from the Council on Contemporary Families*. Prepared for the Fifth Annual CCF Conference, April 26, 2002. Stephanie Coontz and Nancy Folbre.

7. National Center for Health Statistics, National Vital Statistics Reports, vol. 48, no.16, Oct. 18, 2000.

8. Mississippi Health Futures County Data Book, MSDH, 1993; and Vital Statistics 2001, MSDH.

9. MSDH Strategic Plan 2003 - 2007

10. Penman AD, Johnson D. The 2000 Mississippi State of the Heart Report. MSDH and the American Heart Association, Southeast Affiliate, March 2000.

11. Cancer Facts & Figures 2002, American Cancer Society, 2002.

12. Differences in Death Rates due to Injury Among Blacks and Whites, 1984. Jama A. Gulaid, Chukwudi Onwuachi-Saunders, CDC, MMWR, Surveillance Summaries, July 01, 1988/ 37 (SS-3); 25-31.

13. Mississippi Youth Tobacco Survey 2000, MSDH.