Clay County Health Profile

State of Mississippi
Mississippi State Department of Health
Office of Science

Mississippi State Department of Health
Office of Science

Brian W. Amy, M.D., M.H.A., M.P.H.
State Health Officer

Peter J. Fos, Ph.D, M.P.H.
Chief Science Officer

Claudia Dvorak, M.L.S., M.B.A.
Mississippi State Department of Health
Office of Science
570 E. Woodrow Wilson
Jackson, MS 39215

Table of Contents

Table of Contents I
Introduction iii

I. County Demographic Distribution
County Demographic Distribution 1
Income and Poverty 2
Racial Distribution 3
Age Distribution 4
Workforce 5
County Population Change, 1990 - 2000 6
Projections for Population Over 64 Years 7
County Nursing Home Beds, Projection 8

II. Maternal and Child Health Indicators
Pregnancy, Infancy, Infant Mortality 9
Low Birthweight Newborns 10
Births to Unmarried Mothers 11
Unmarried Mother Births 1991 - 2001 12
Infant Mortality 13
Neonatal Mortality 14
Postneonatal Mortality 15
Births to Teenage Mothers 16

III. Illness and Death
Statewide Causes of Death 17
Causes of Death, All Races 18
Causes of Death, Whites 19
Cause of Death, Non-Whites 20
West Nile Virus, Human 21
West Nile Virus, Animal 22

IV. Injuries
Accidental Deaths, Causes 23
Spinal Cord Injuries 24
Injury Prevention 25
Tobacco, School Health Nurses 26

V. **Public Health Services to the County**
Women, Infants, Children & Child Health 27
Maternity/Perinatal Services 28
Genetics, Family Planning 29
Immunization 30
Tuberculosis, STD's 31
Environmental Inspections 32
Boiler and Pressure Vessel Safety 33
Public Water Supply 34

VI. **End Notes** 35

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.

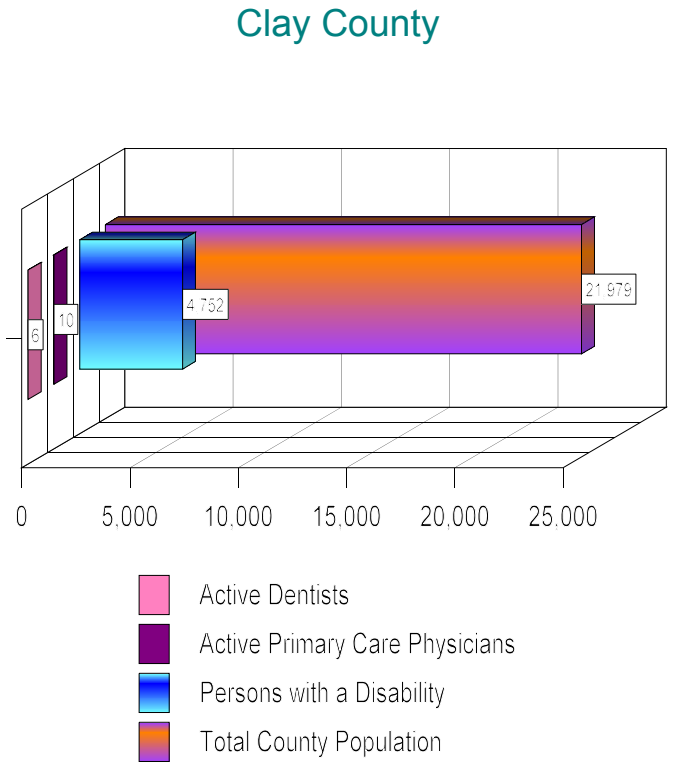
Until the social and economic inequities between Whites and Blacks can be addressed, many of the gaps between Whites and Non-Whites in illness and death rates can be substantially reduced through the provision of public health, medical, and social services.

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 Clay County[1].** This is based on the desired ratio of one primary care provider for 3500 population.

County Total Population = 21,979 **Projected Population 2005 = 22,753 [2].**

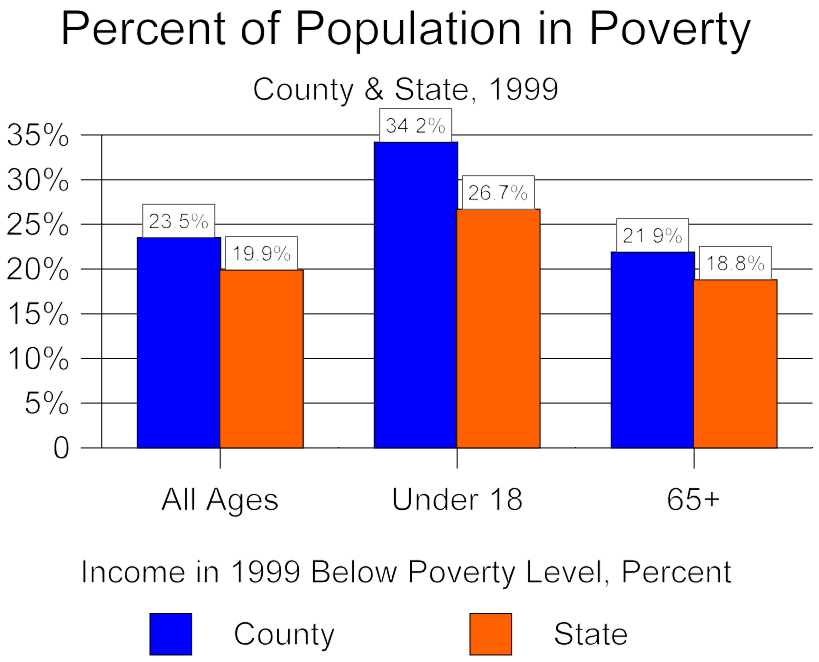


In FY 2002, Clay County had ten Primary Care Physicians and six Dentists.[3]

Income and Poverty

Clay County, 1999

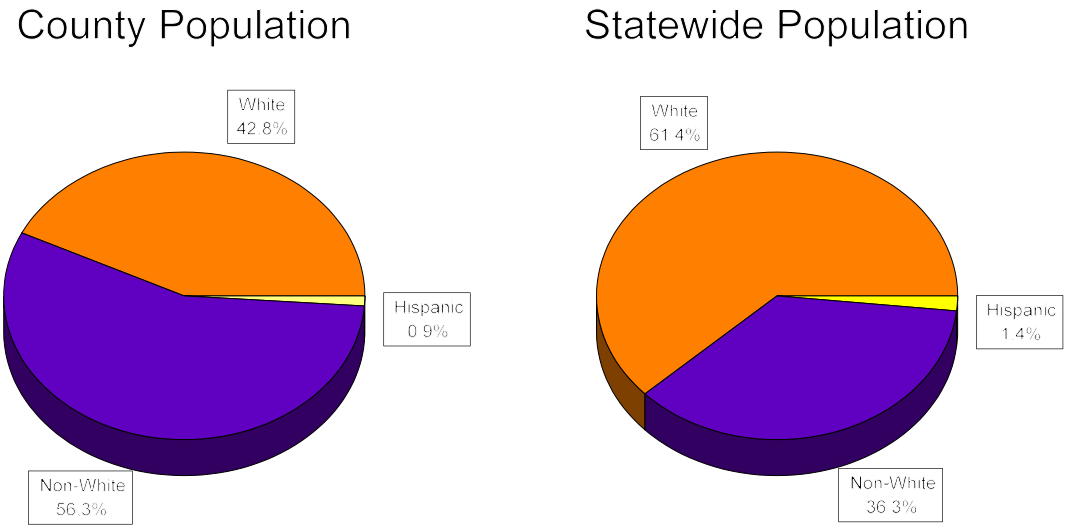
In Mississippi as a whole, 19.9% of the population, of all ages, had income in 1999 below poverty level.



Source: US Census, 2000

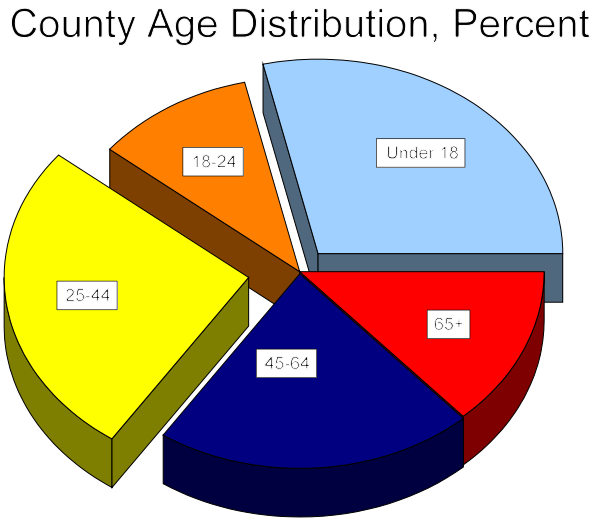
The Clay County percentages of population living in poverty are higher than the Statewide percentages of population in poverty.

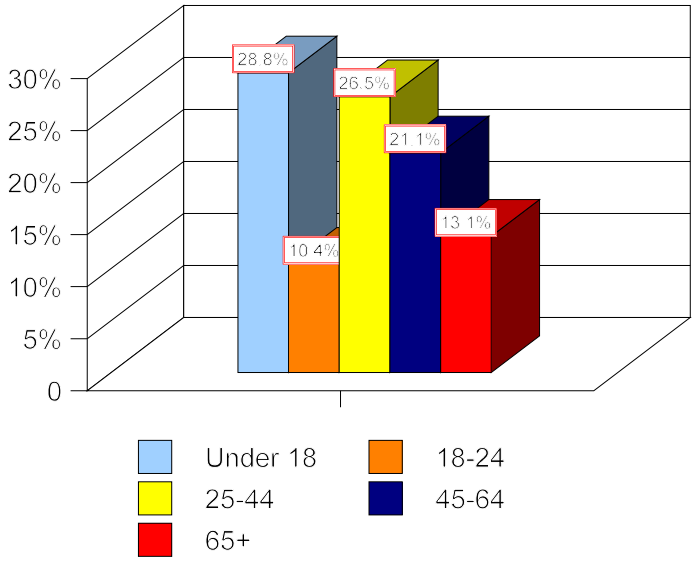
Racial Distribution



Source: U.S. Census 2000

Clay County has a higher percentage of Non-White population than seen Statewide.

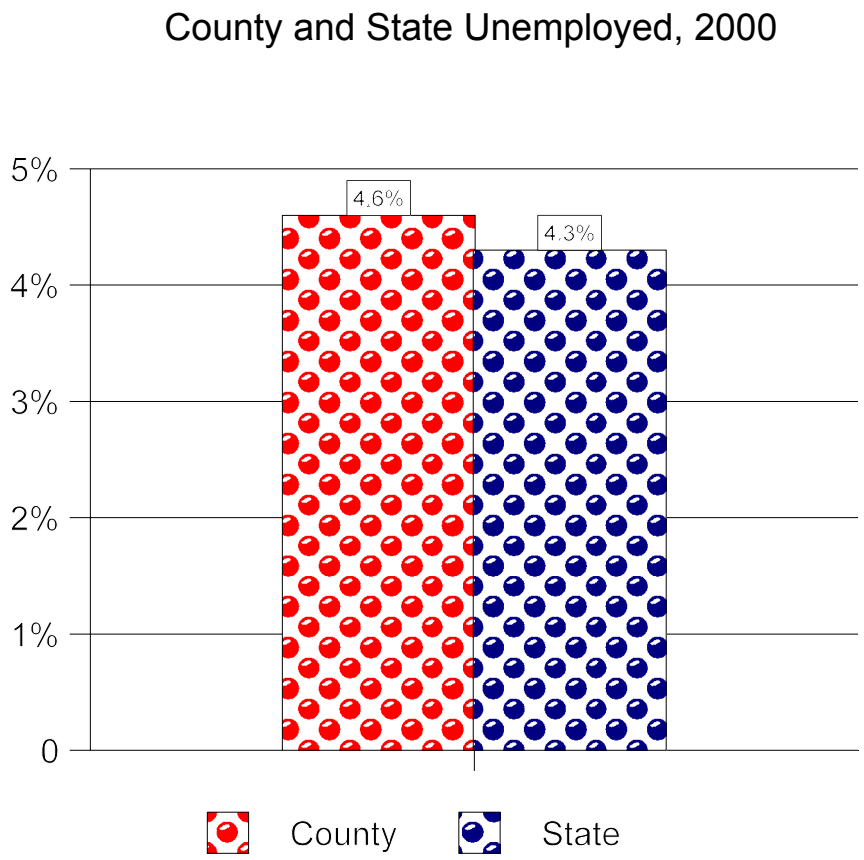




Source: U.S.Census 2000

Clay County population shows a predominance of three age groups: those under 18, those aged 25-44 and those aged 45-64. Clay County has a comparable age distribution to that seen Statewide.

Workforce

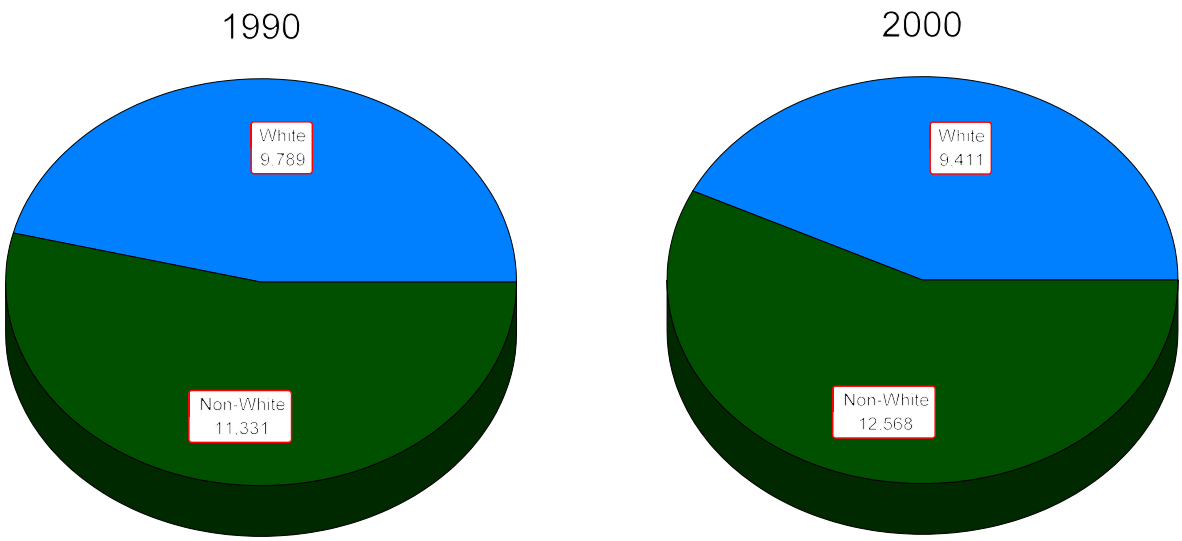


Source: U.S. Census 2000

As of 2000, Clay County unemployment was 4.6% . Statewide, 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.

Clay County had a higher percent of unemployment than Statewide in 2000.

County Population Change, 1990 - 2000

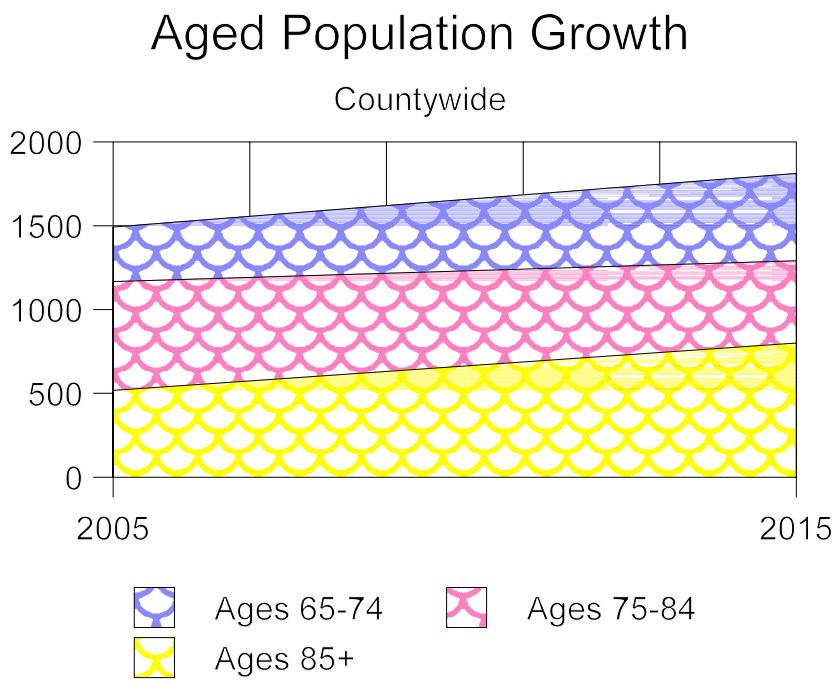


Source: Vital Statistics Mississippi 2000, MSDH

Total Clay County Population increased 4.1% from 1990 - 2000, with the White population decreasing -3.9% and the Non-White population increasing 10.9%.

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.

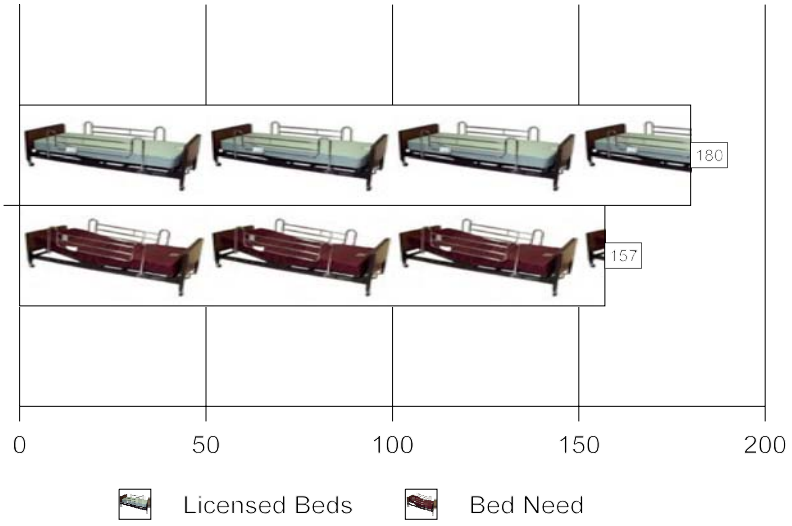
The number of Clay County population over age 65 will show a steady increase.

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 Clay 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.

Under current population projections, Clay County will have sufficient nursing home beds to accommodate elderly County residents.

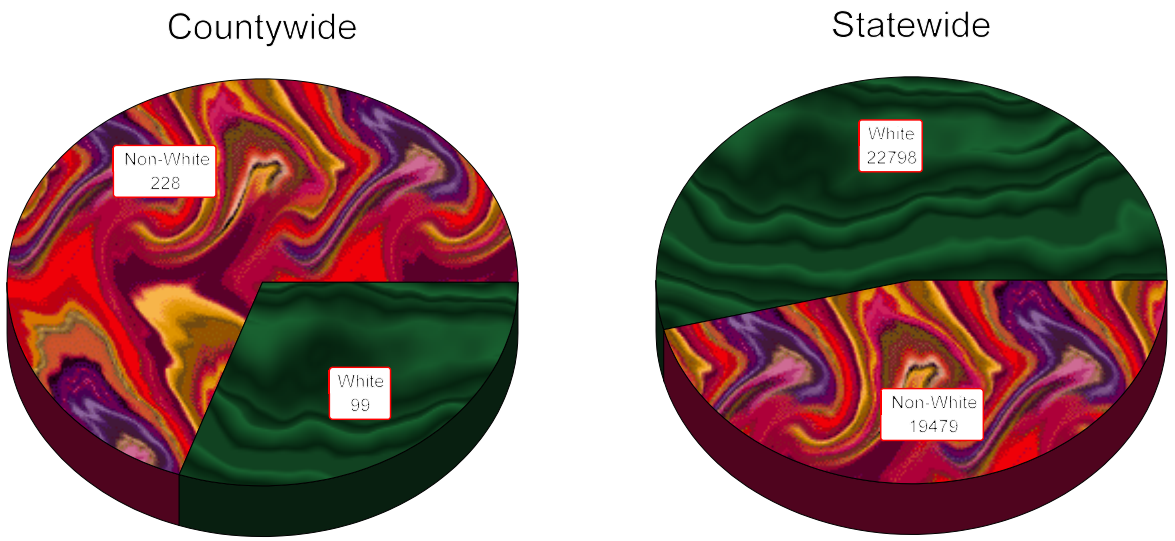
Source: MSDH State Health Plan 2003

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.

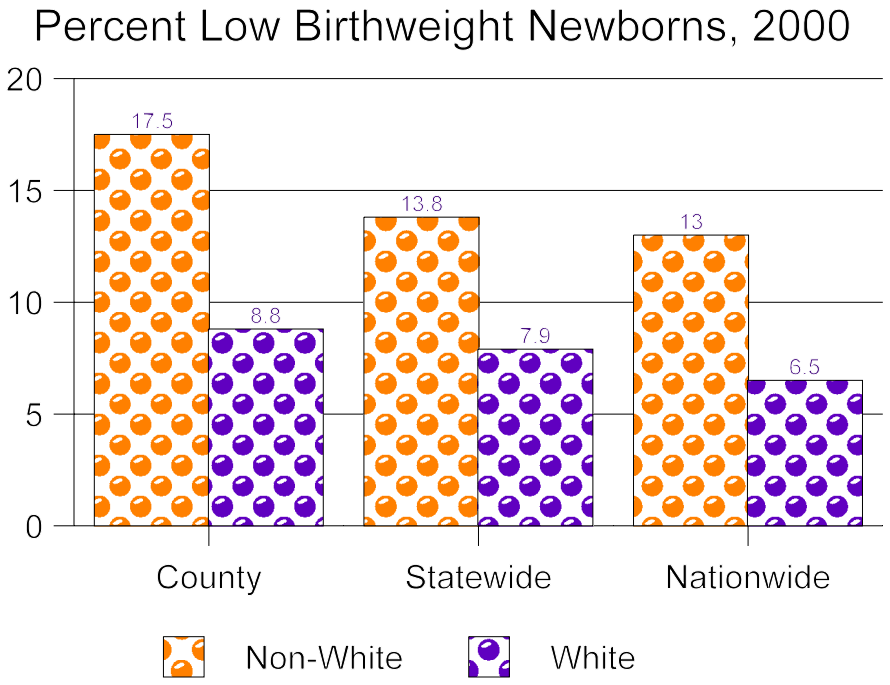
Live Births by Race 2001
Number of Births, County and State



Clay County has a live birth rate of 14.9 per 1,000 population, the same as the live birth rate Statewide.

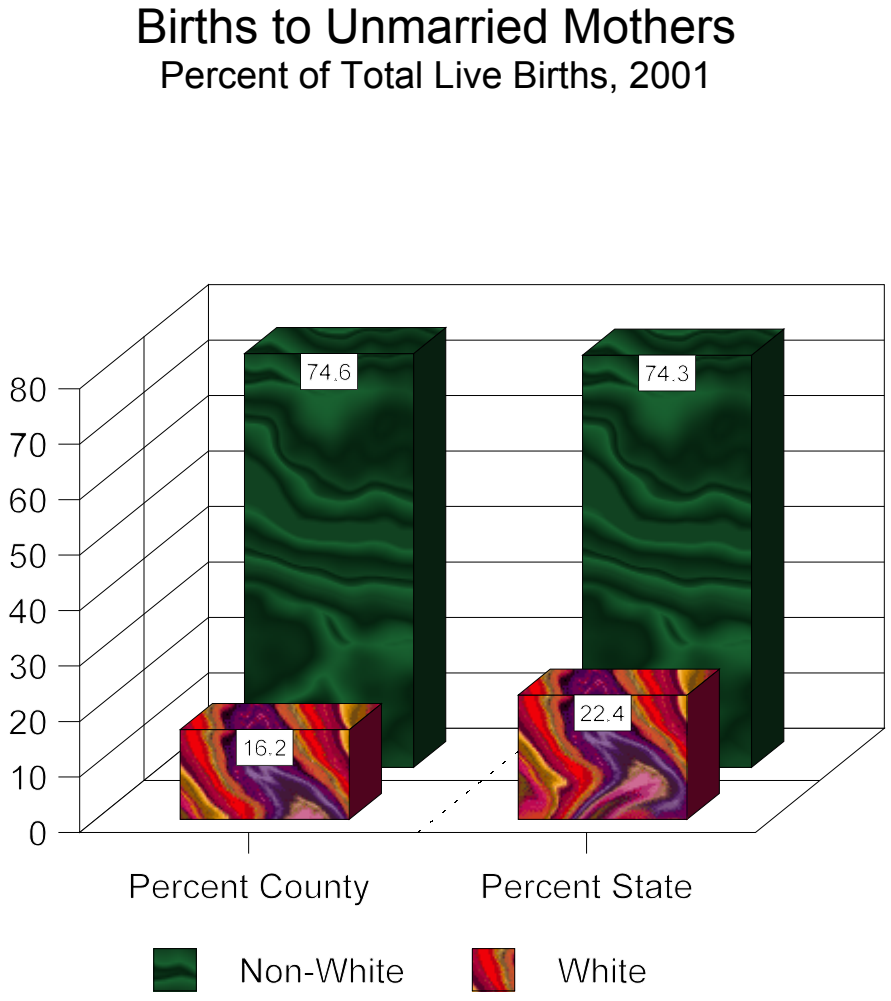
Percent Low Birthweight Newborns

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 Clay County, the percent of low birthweight newborns is higher than State and National percentages.

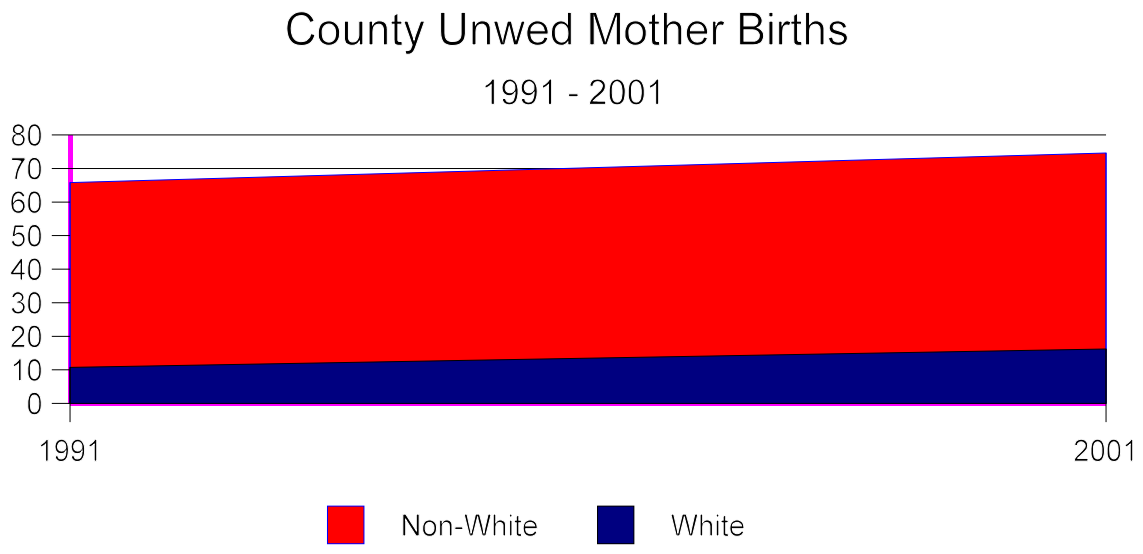
Source: CDC National Vital Statistics Report 2002 and Vital Statistics 2000, MSDH



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[4]. Children who grow up with married parents generally enjoy a higher standard of living than those living in single-parent households[5].

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

Percent Change, 1991 - 2001
Unmarried Mother Live Births



Non-White	65.8	74.6
White	10.7	16.2

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[6]. The percent of births to unmarried mothers in Mississippi statewide is 22.4% among Whites and 74.3% among Non-Whites.

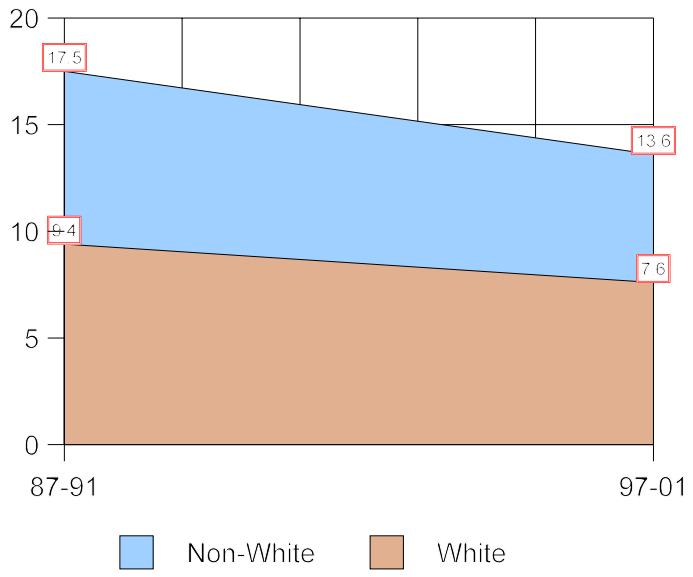
The percentage of births to unmarried mothers in Clay County increased during the last decade[7].

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.

Clay County Infant Mortality Rate, 1987 - 2001



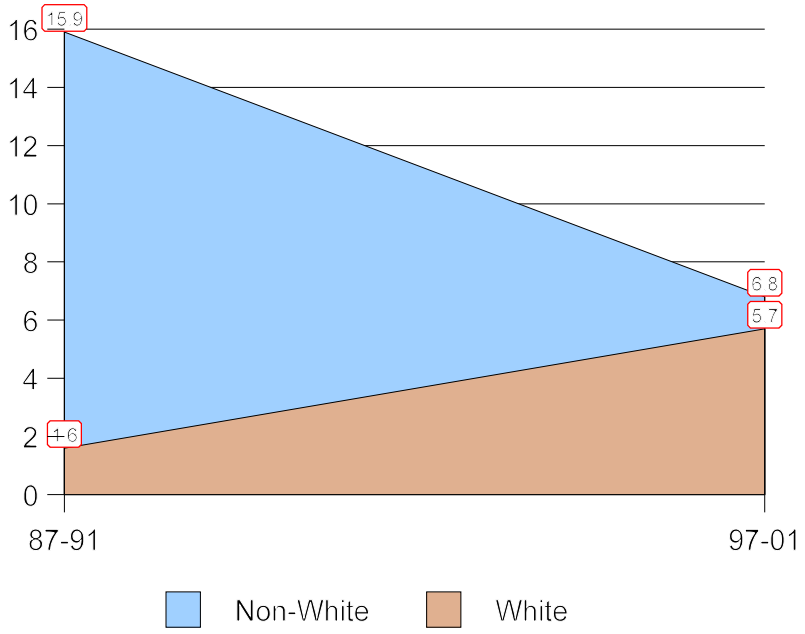
Rate per 1,000 Births, Infants aged less than one year
Clay County, 1987-1991 through 1997-2001

The rates of infant mortality have decreased in Clay 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.

Clay County Neonatal Mortality Rate 1987 - 2001



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

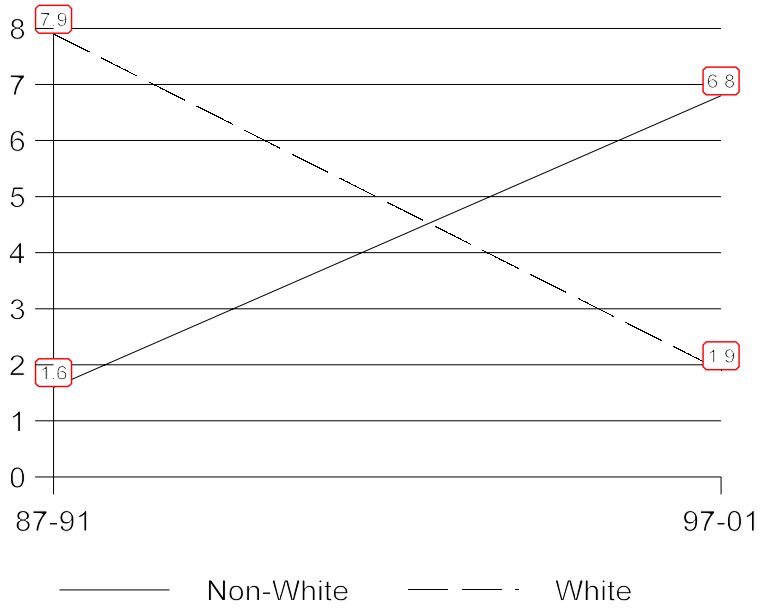
White and Non-White Neonatal mortality rates have taken different paths in Clay County over the last ten years. The rate of Non-White Neonatal morality has decreased, while the White Neonatal morality rate increased over the same time period.

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.

Clay County Postneonatal Mortality Rate, 1987 - 2001



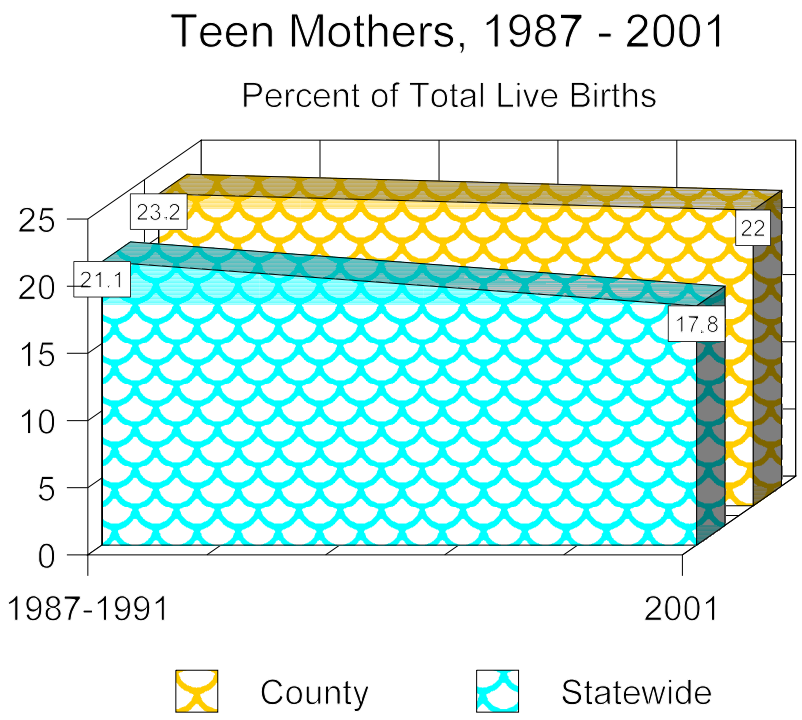
Rate per 1,000 Live Births, Clay County
1987-1991 through 1997-2001

The Postneonatal Mortality rate in Clay County has differed for Whites and Non-Whites over the past ten years. The rates for Non-Whites decreased as the rates for Whites increased during the ten year time period.

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[8].



MSDH Vital Statistics 2001

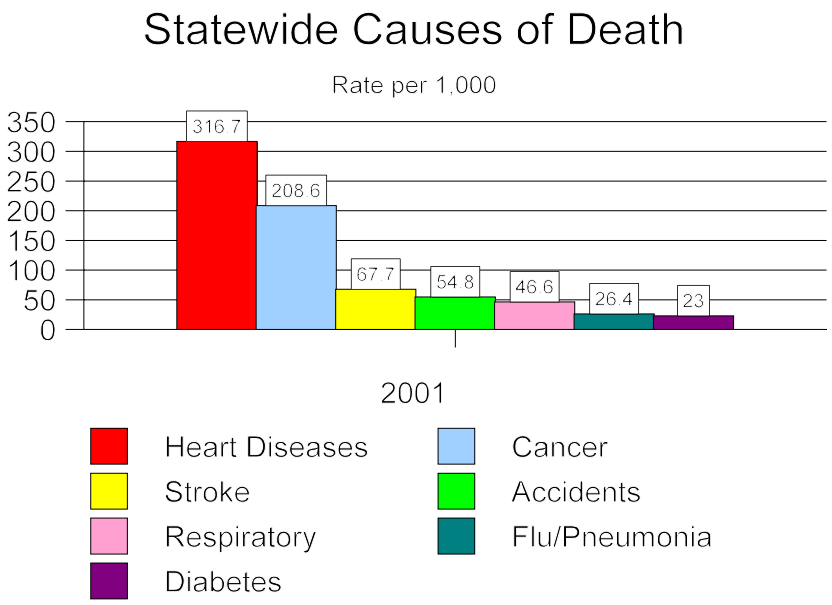
County teenage motherhood in Clay County occurs at a higher percentage than seen Statewide, and has only slightly decreased over the past ten years.

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.

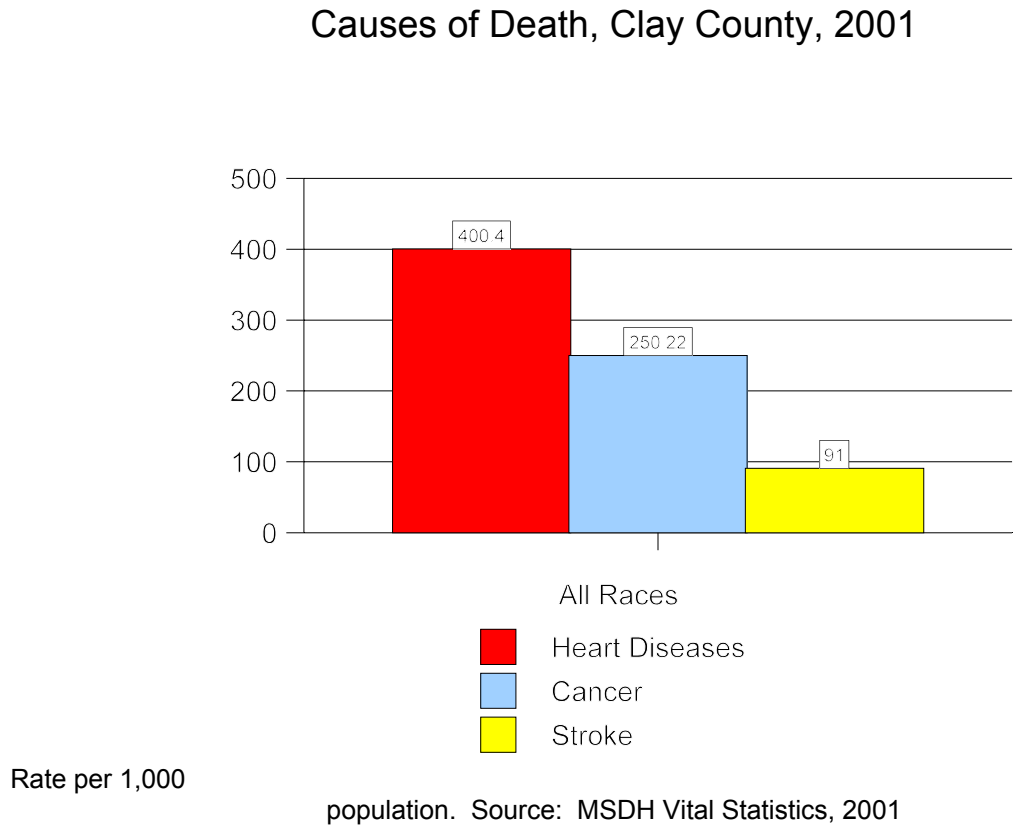
By looking at the numbers of deaths, the age, sex and race adjusted rates, and the years of potential life lost by premature deaths, much can be learned about the health of a community. Deaths during childhood, adolescence and young adulthood especially reflect community health.

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

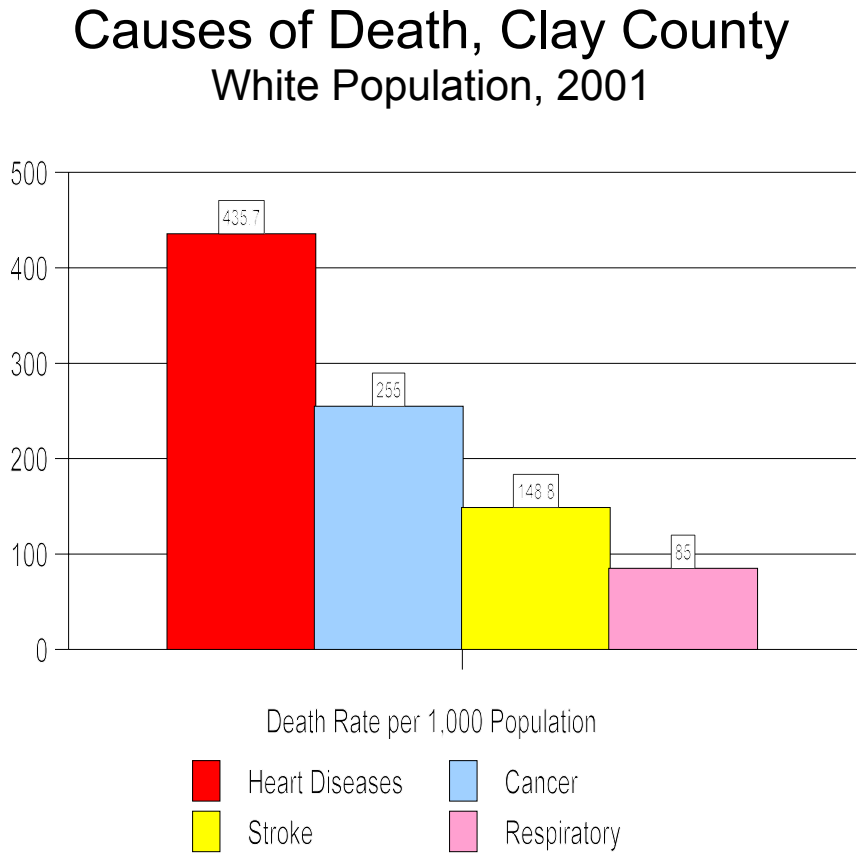


Statewide, the leading causes of death are Heart Disease, Cancer, Stroke and Accidents.

Causes of Death, All Races



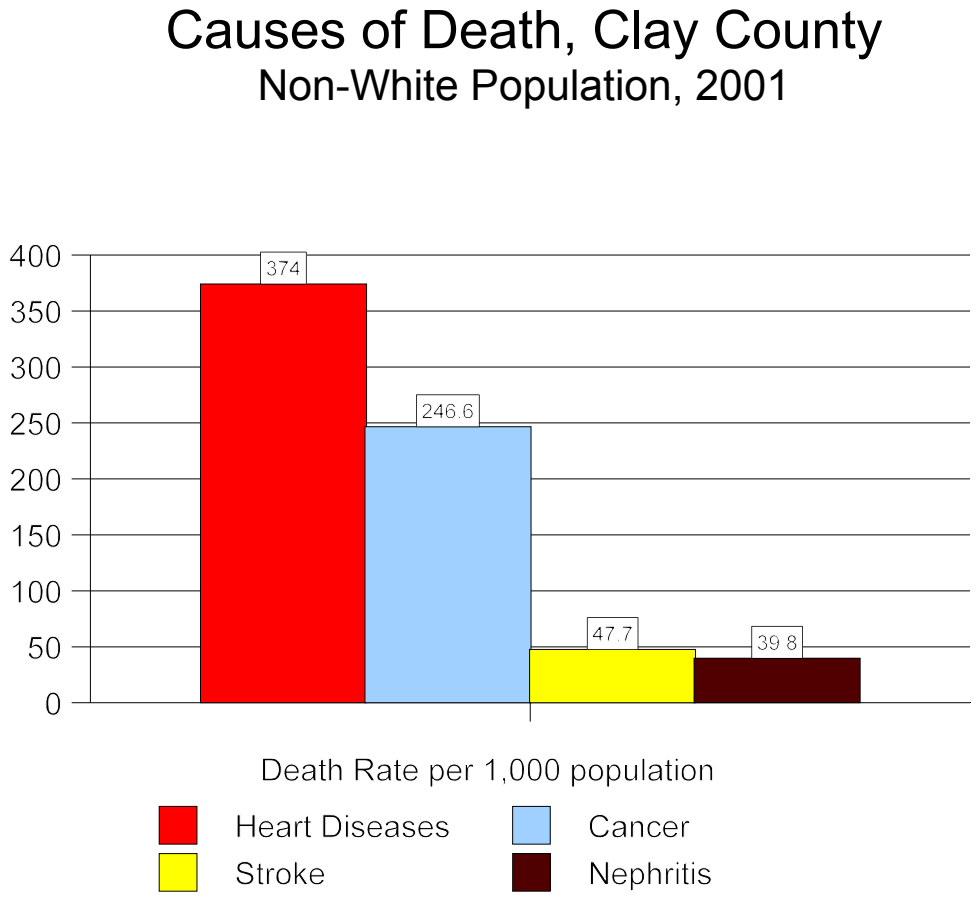
The leading cause of death in Clay County is Heart Disease, followed by Cancer.



Vital Statistics 2001, MSDH

Smoking is the single most important modifiable risk factor for cardiovascular disease and coronary heart disease. Approximately 24% of adult Mississippians 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[9].

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



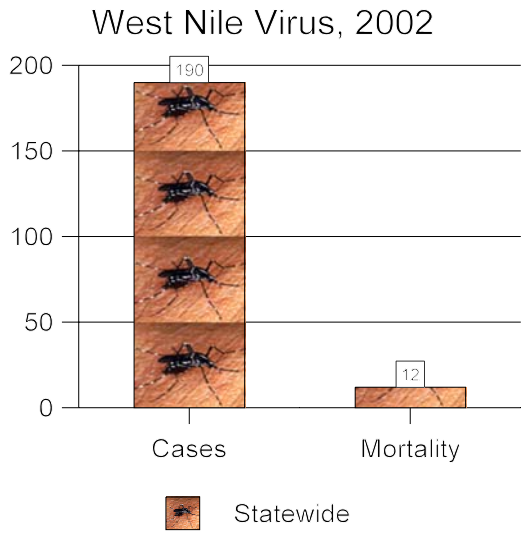
Mortality Rate per 1,000 population
Source: Vital Statistics 2001, MSDH

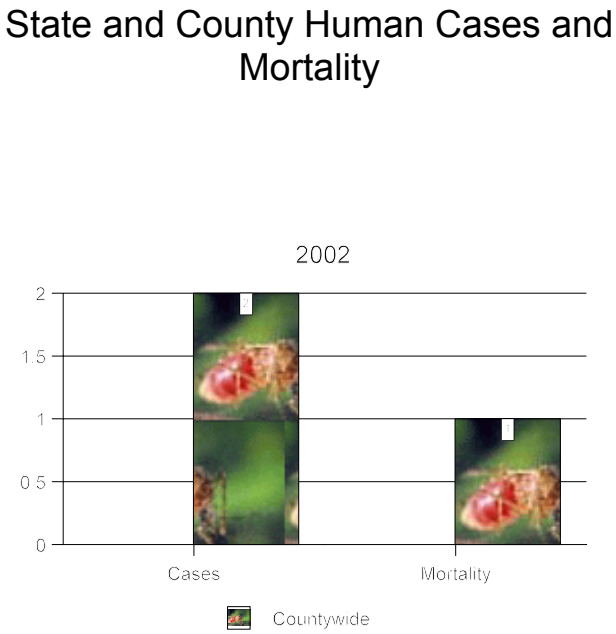
For reasons that are not understood, Non-Whites have about a 33% higher death rate for all cancers than Whites, according to the American Cancer Society.[10] Additionally, Non-Whites have a higher rate of death due to injury[11].

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

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.





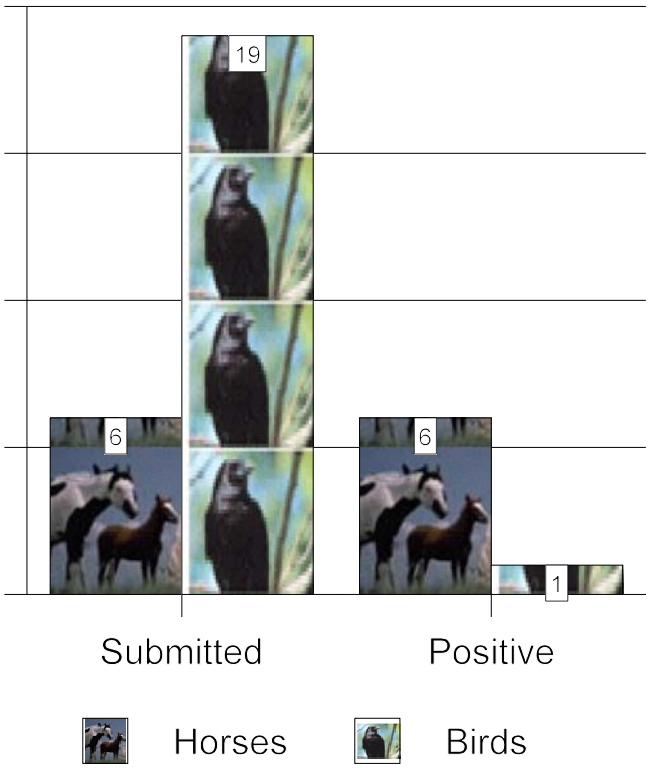
In Mississippi in 2002, there were 190 human cases with 12 mortality from West Nile Virus. In Clay County, there were two human cases and one mortality in 2002.

West Nile Virus

Clay County, 2002

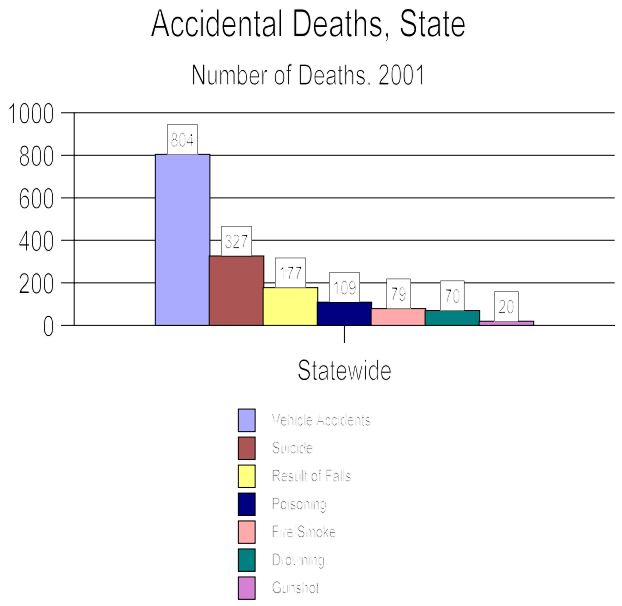
Since the original 1999 outbreak in New York City, the finding of dead birds that test positive for West Nile Virus has always been a precursor to human cases of the virus. Testing dead birds is the best early detection method for the presence of the virus in the area. Horses are also tested, since approximately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

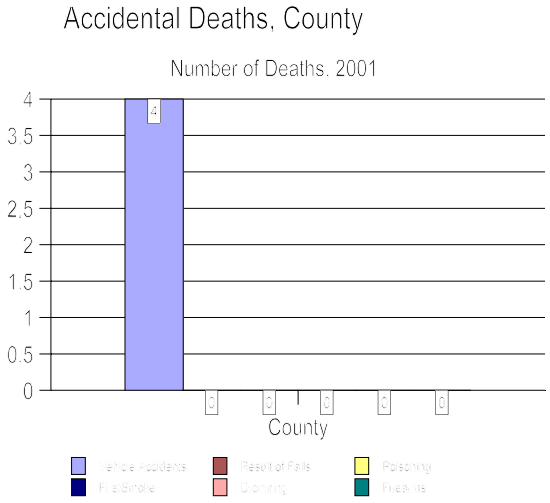
Clay County Bird and Horse West Nile Virus



In Clay County in 2002, of the six horses and nineteen birds submitted for testing, one bird tested positive for West Nile Virus and six horses tested positive for the virus.

Injuries
Accidental Deaths, State and County



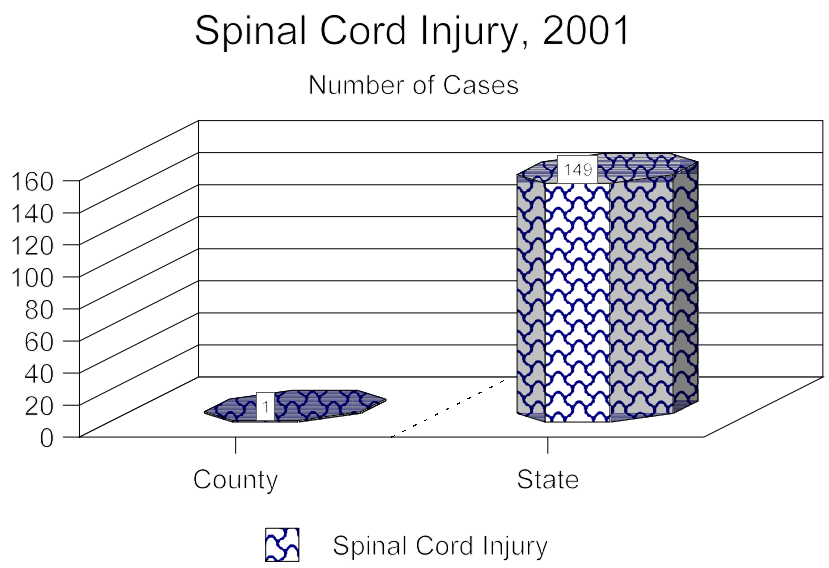


The leading cause of accidental death in Clay County during 2001 was motor vehicle accidents.

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.



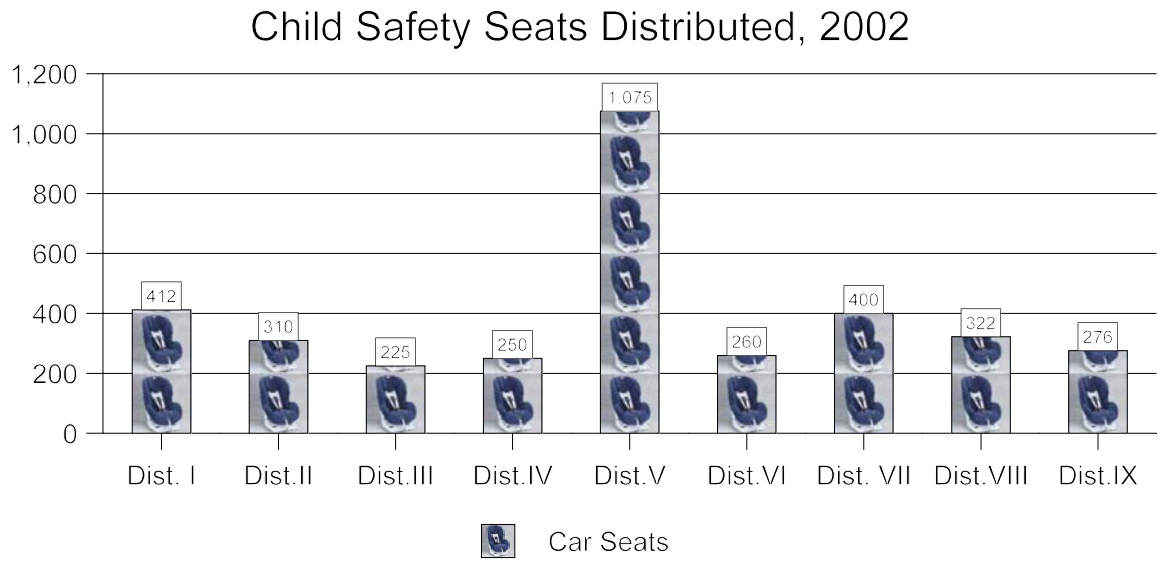
The leading causes of spinal cord injury vary by age. Among persons under age 65, motor vehicle crashes are the leading cause. Among persons over 65, most spinal cord injuries are caused by falls.

Throughout the State, 149 people sustained spinal cord injuries. **In 2001, Clay County had one case 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.

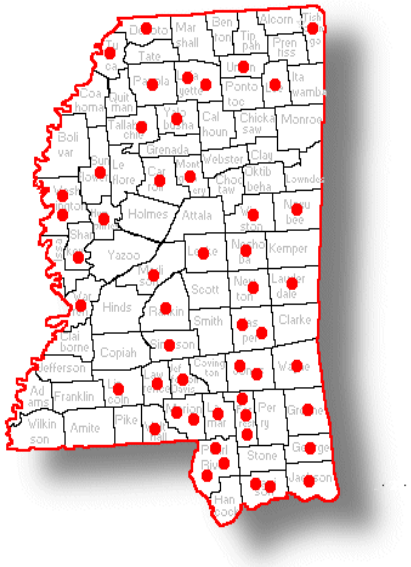


In Public Health District IV, which includes Clay County, 250 car seats were purchased and distributed by the MSDH in 2002.

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.



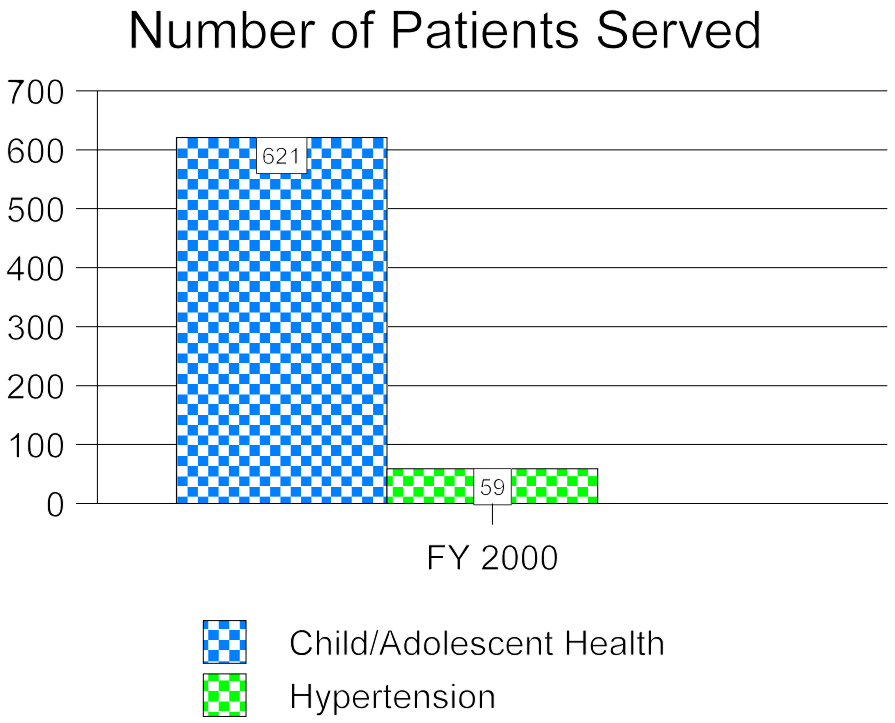
Currently, the Partnership for a Healthy Mississippi funds 51 school districts statewide with the tobacco prevention program. **Clay County does not have a Tobacco School Nurse program.**

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[1].

[1] Mississippi Youth Tobacco Survey 2000, MSDH.

Public Health Services to the County

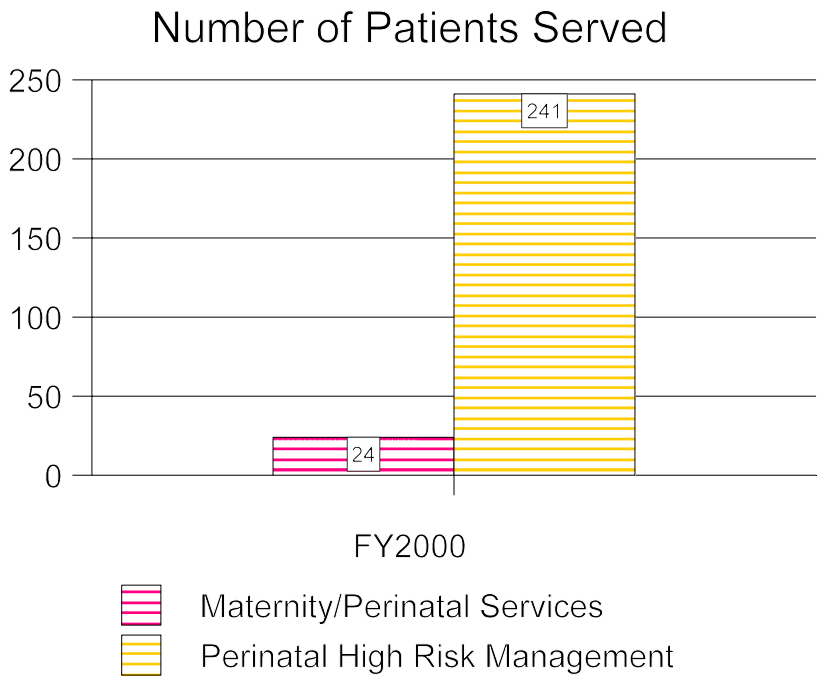
Patients Served by MSDH, Clay County, 2000



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 multi disciplinary 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, Clay County, 2000

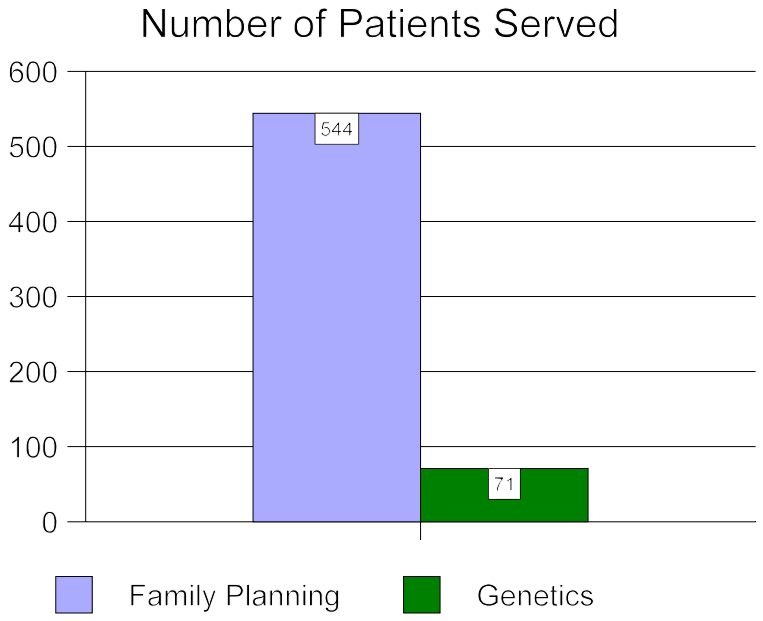


Maternity services are provided by the Department of Health statewide to more than 12,400 women through County Health Departments, targeting low-income pregnant women.

The Perinatal High Risk Management/Infant Services System program is designed to reduce low birth weight and infant mortality through a multi disciplinary, 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, Clay County, 2000

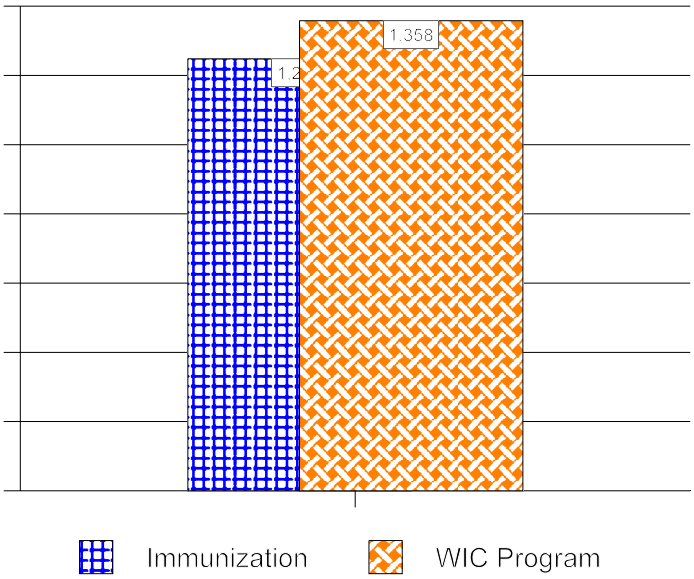


Mississippi leads the nation in births to teens. **The Family Planning Program** seeks to provide counseling, medical examination, education, and contraceptives for teenagers at risk and low-income women to allow individuals to prevent unplanned pregnancies and to space children.

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, Clay County, 2000

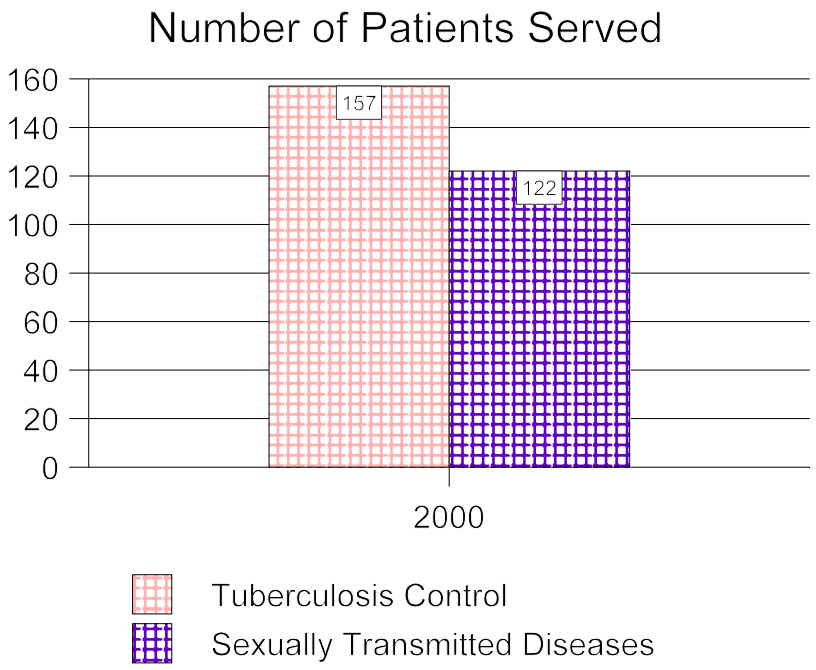


Vaccines are among the safest and most effective measures for the prevention of infectious and communicable diseases. The Division of Immunization provides services designed to limit illness and death due to childhood vaccine-preventable diseases.

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, Clay County, 2000

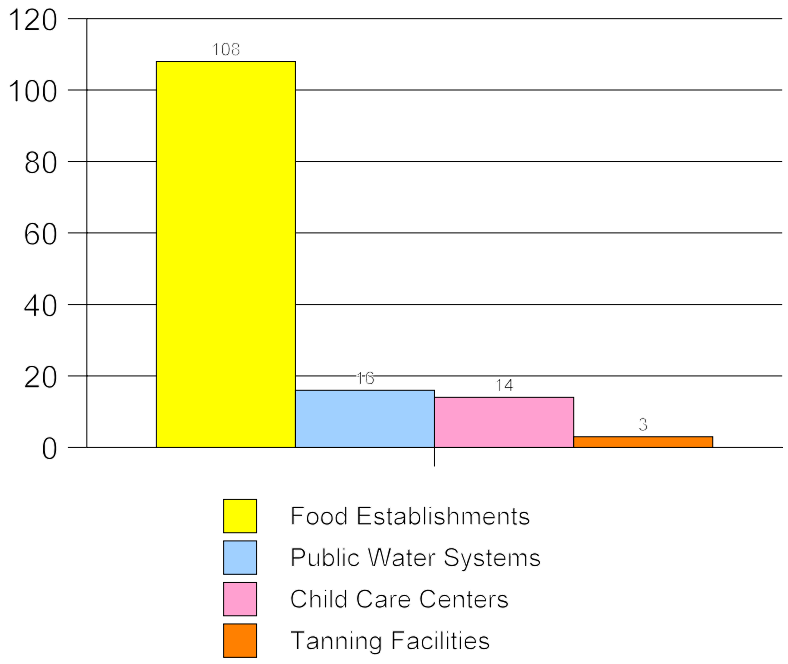


There were 154 new cases of tuberculosis (TB) reported in Mississippi during 2001. The TB program provides early and rapid detection of persons with or at risk of developing TB; treatment and follow-up of diagnosed cases; preventive therapy to persons at risk of developing TB; and technical assistance 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, Clay County, 2000



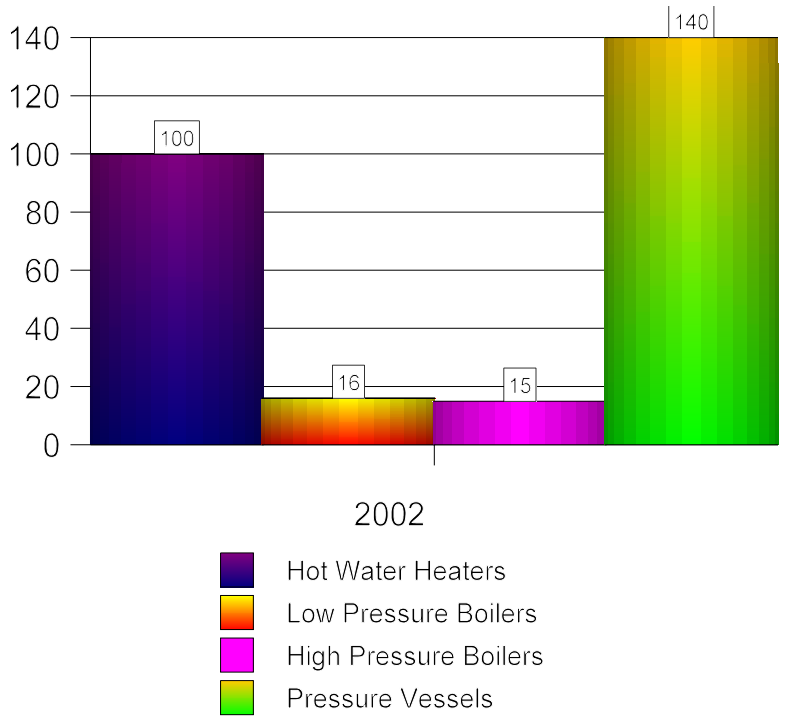
Health Protection for the people of Mississippi is one of the chief responsibilities of the Mississippi State Department of Health. From the quality of our food and water, to child care and professional licensing, our concerns embrace every aspect of life across the state. Our goal is to achieve and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

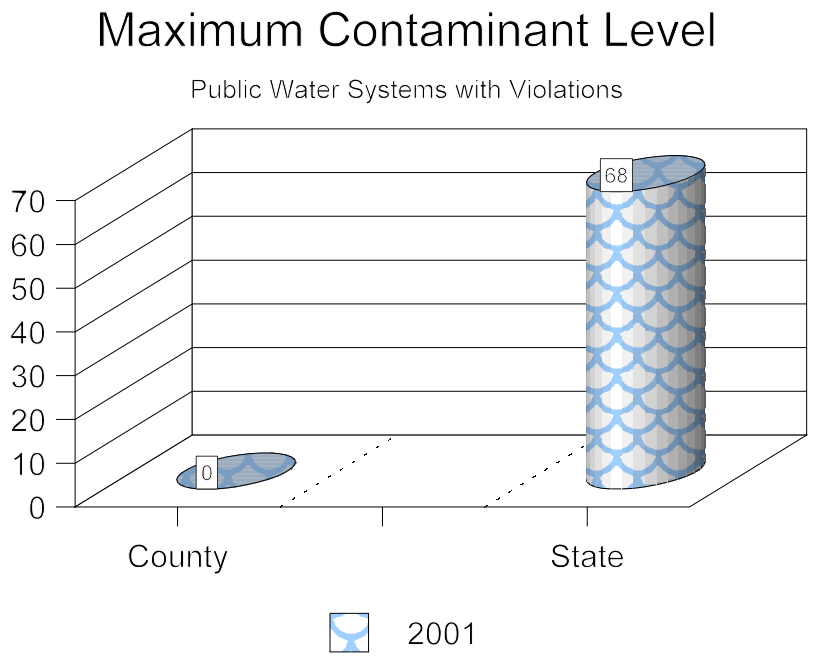
Clay County, Number of Inspections, 2002



In 2002 in Clay County, the Boiler and Pressure Vessel Safety Program inspected 271 boilers, pressure vessels and heaters in Clay 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.

No public water supply in Clay County incurred MCL violations in 2001.

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. *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.

5. *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.

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

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

8. MSDH Strategic Plan 2003 - 2007

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

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

11. 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.