

HEALTH STATUS OF RURAL ALABAMIANS



PRESENTED BY

The Alabama Rural Health Association

January 1998



HEALTH STATUS OF RURAL ALABAMIANS

The Alabama Rural Health Association

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ACKNOWLEDGMENTS

Funded by

National Rural Health Association's
Development Funds for State Rural Health Associations

and

Alabama Office of Rural Health Federal Grant No. CSHSO 0001-07-0

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Appreciation

This publication was prepared in conjunction with the Alabama Rural Health Association by the Alabama Department of Public Health. The information was generated and compiled by the Division of Statistical Analysis, Center for Health Statistics. Health risk factor information was contributed by Jack Hataway, M.D., and staff in the Department's Chronic Disease and Prevention Division. Coordination of activities to produce this publication was led by the Office of Primary Care and Rural Health Development staff supported by the federally funded Cooperative Agreement for Primary Care Grant Number CSU010004-03-0, awarded by the Department of Health and Human Services, Public Health Service, Bureau of Primary Health Care. Special appreciation is extended to Dale Quinney, M.P.H., of the Center for Health Statistics. Without his dedication this publication could not have been developed.

The Alabama Rural Health Association appreciates the services of the initial planning committee for this project, which included Clyde Barganier, Dr. P.H., Al Fox, Toni Watson Hall, Ellen Stone, and John Wheat, M.D.

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Brochures of several individual health status factors not depicted in this publication are available. Using the order form appearing in the Appendix, copies of this publication and user-specified individual brochures may be secured at a minimum charge. Related questions should be addressed to:

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Additional information may be secured from resources listed in the Appendix.

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PREFACE

Health Status of Rural Alabamians provides dynamic, easily comprehended, critical information about the health of Alabamians residing in rural areas. It delineates an array of health status differences between Rural North and Rural South counties relative to the state's Metropolitan Statistical Area (MSA) Alabama counties, paired with relevant statewide and national information. The information should foster awareness of specific concerns, trigger development of intervention strategies, and facilitate maximum utilization of available resources. The Alabama Rural Health Association will also utilize the study's results in refining its strategic plan.

The Alabama Rural Health Association is a non-profit membership organization whose primary mission is to work for the preservation and enhancement of health for rural citizens of the state. This is being accomplished by bringing together a diverse constituency with a shared commitment to this mission to assume leadership in its accomplishment through communication, education, and advocacy. The Association serves as a forum for the unified voices of health care providers, public officials, health care workers, educators, and consumers working to improve health in rural Alabama; provides a forum for the exchange and distribution of ideas and information related to the improvement of rural health; serves as an advocate for rural health; and encourages the development of appropriate health resources for rural Alabama.

The Alabama Rural Health Association's membership is made up of individuals and organizations having an interest in rural health care in the State of Alabama. Its Board of Directors is comprised of 18 designated positions and 11 at-large members. The State Health Officer and the Commissioner of the State Medicaid Agency are also non-voting ex-officio members of the Board. The Board's designated positions are listed below:

Alabama Department of Public Health Office of Rural Health Care	The University of Alabama School of Medicine
Alabama State Health Planning & Development Agency	The University of South Alabama College of Medicine
Alabama Family Practice Rural Health Board	The Medical Association of the State of Alabama
Alabama Hospital Association	Alabama State Nurses' Association
Alabama Primary Health Care Association	Alabama Public Health Association
Alabama State Legislator	Association of County Commissioners of Alabama
Alabama Farmer's Federation	Governor's Office of Alabama
Rural Alabama Health Alliance	American Academy of Family Physicians Alabama Chapter
American Academy of Pediatrics Alabama Chapter	Alabama Society of Internal Medicine

INTRODUCTION

Defining “rural” and “urban” areas has been a complex challenge for many years. The final determination of areas to be used in the analysis of health status in Alabama’s urban and rural areas was made following consultation with rural health professionals and others interested in rural concerns. The availability of adequate data for use in this analysis restricted the definition of urban and rural areas to the county level.

Whether a county is included in a Metropolitan Statistical Area (MSA) or not is used to determine rural or urban residency in this publication. Alabama currently has 21 counties which are classified in Metropolitan Statistical Areas (also called Standard Metropolitan Statistical Areas or Statistical Areas) as defined by the U.S. Office of Management and Budget. These counties are considered urban and are referred to as “MSA counties” in this publication. The remaining 46 Alabama counties which are not classified in Metropolitan Statistical Areas are considered rural.

One-third of Alabama’s population resides in the vast, “rural,” geographic portion of the state. Findings from preliminary analysis of selected health status indicators revealed substantial variation in measurements for the rural Appalachian Region counties of North Alabama and the rural counties in South Alabama. Therefore, for this publication, rural counties are designated as “Rural North counties” and “Rural South counties” of the state.

Ultimately, *Health Status of Rural Alabamians* depicts significant health status differences between inhabitants of Alabama’s Rural North counties, Rural South counties, and Metropolitan Statistical Area (MSA) counties, paired with relevant statewide and available national information. Below are the definitions of residency and basic population composition information used in this study.

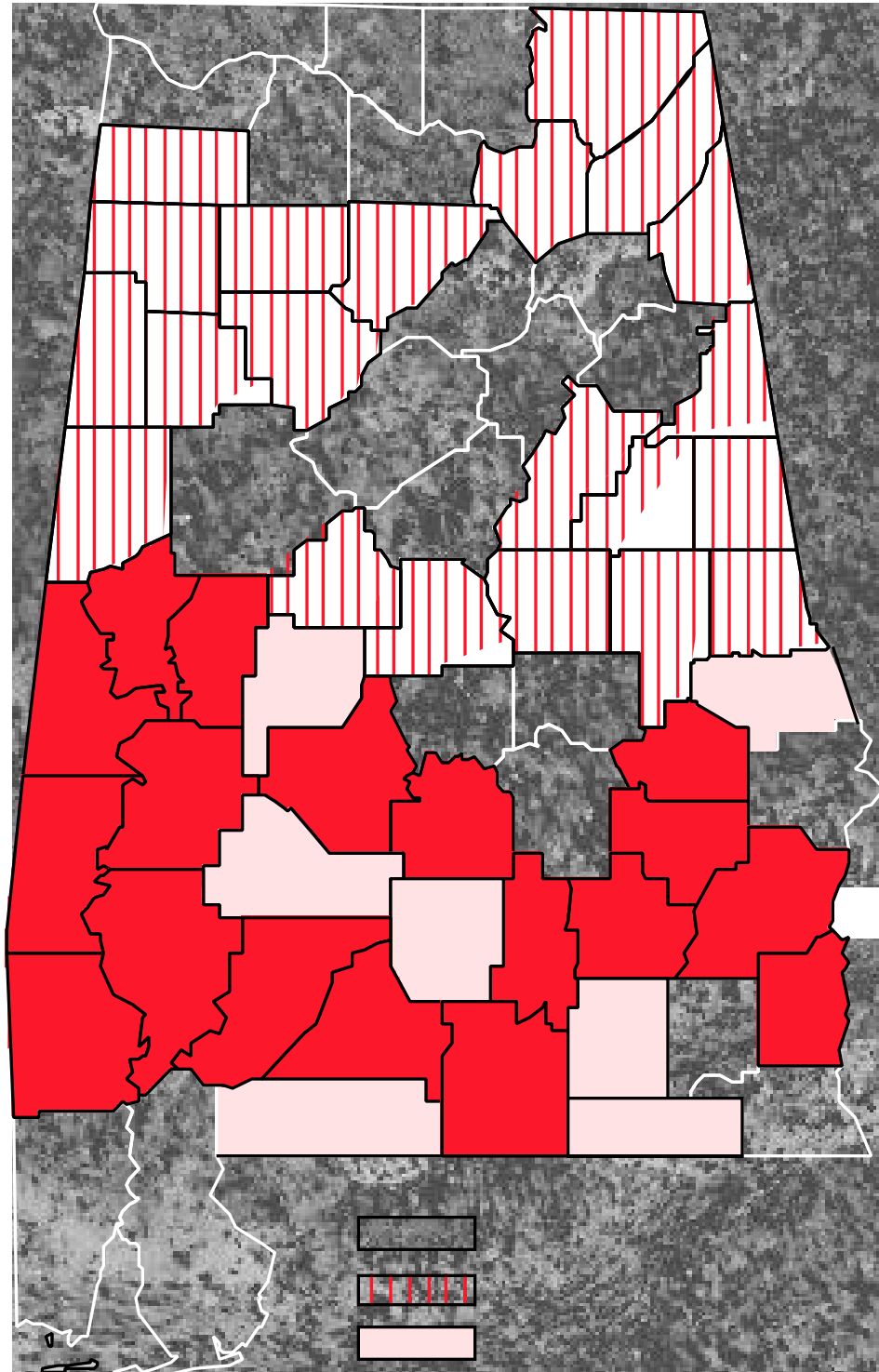
DEFINITIONS OF RESIDENCY

Urban residents are those citizens residing in one of the 21 counties that comprise Alabama’s Metropolitan Statistical Areas. They are residents of Autauga, Baldwin, Blount, Calhoun, Colbert, Dale, Elmore, Etowah, Houston, Jefferson, Lauderdale, Lawrence, Limestone, Madison, Mobile, Montgomery, Morgan, Russell, St. Clair, Shelby, and Tuscaloosa counties. This grouping is referred to as “MSA counties” in this publication.

Rural North residents are those citizens residing in one of the 21 non-MSA counties located in the Appalachian Region (northern portion of Alabama). They are residents of Bibb, Chambers, Cherokee, Chilton, Clay, Cleburne, Coosa, Cullman, DeKalb, Fayette, Franklin, Jackson, Lamar, Marion, Marshall, Pickens, Randolph, Talladega, Tallapoosa, Walker, and Winston counties. This grouping is referred to as “Rural North counties” in this publication.

Rural South residents are those citizens residing in one of the 25 non-MSA counties located in the southern portion of Alabama. They are residents of Barbour, Bullock, Butler, Choctaw, Clarke, Coffee, Conecuh, Covington, Crenshaw, Dallas, Escambia, Geneva, Greene, Hale, Henry, Lee, Lowndes, Macon, Marengo, Monroe, Perry, Pike, Sumter, Washington, and Wilcox counties. This grouping is referred to as “Rural South counties” in this publication.

Rural North, Rural South, Metropolitan Statistical Area Alabama Counties

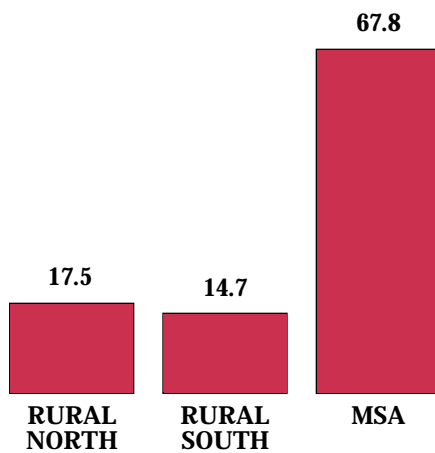


BASIC POPULATION COMPOSITION FACTS (1996 ESTIMATED POPULATION)

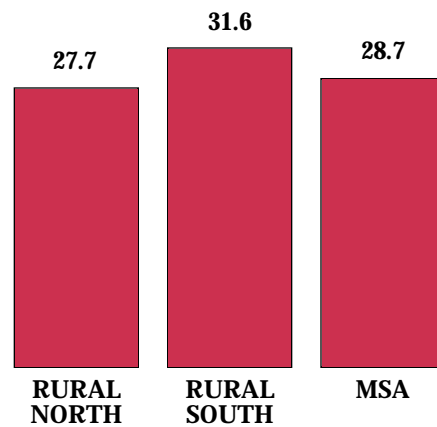
The populations of the three county groupings profiled in this publication are considerably diverse. Geographically, MSA counties cover roughly one-third of the state's land mass. However, approximately two-thirds of the state's population resides in these counties, as illustrated on the "Residential Distribution of Alabama Citizens" chart below.

RESIDENTIAL DISTRIBUTION OF ALABAMA CITIZENS

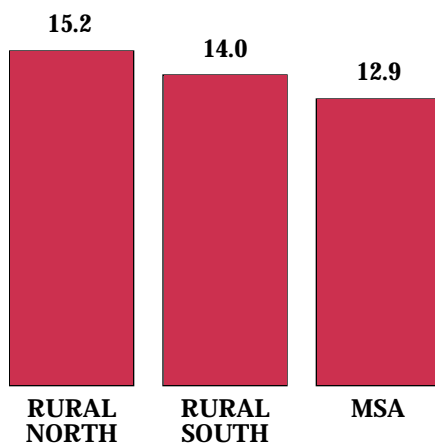
Percentage of Total
Alabama Population



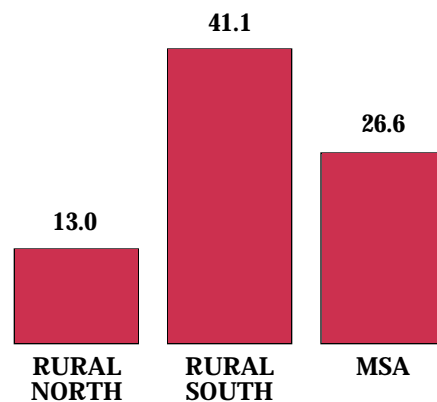
Percentage of Area Population
Under Age 20



Percentage of Area Population
Age 65+



Percentage of Area Population
Minority



Population variation must be considered in the interpretation of the data presented in this publication. Some of the important differences illustrated in the preceding chart are outlined below.

- Approximately one-third of Alabama's citizens reside in rural counties, including 17.5 percent in Rural North counties and 14.7 percent in Rural South counties; the remaining two-thirds reside in MSA counties.
- Rural counties are composed of slightly older populations. While the population aged 65 years and older comprises only 12.9 percent of the total population in MSA counties, these percentages are 15.2 in Rural North counties and 14.0 in Rural South counties.
- Residents under the age of 20 comprise nearly one-third (31.6 percent) of the total population in Rural South counties. The proportion of the total population comprised by youths is smaller in Rural North (27.7 percent) and MSA (28.7 percent) counties.
- The racial composition of these county groups is more divergent. Only 13.0 percent of Rural North counties' residents are minority compared to 41.1 percent of the inhabitants of Rural South counties and 26.6 percent for MSA counties.

OVERVIEW OF CONTENTS

This publication presents an analysis of the variation in health-related factors between rural and urban counties. Most of the selected factors are based on mortality or natality outcomes, supplemented by other sources. Current and historical vital events data are readily available and are indicators of health-related outcomes of behavior or other risks which can be modified.

Two uniform pages are provided for each of the selected health-related factors, when possible. The first page includes graphs and also totals, rates or percentages for a three-year period. Data are presented for three years to enhance stability over single-year figures.

Measurements for each of the three areas (Rural North, Rural South, and MSA) were tested for statistical differences from the other areas. Areas with measurements that are significantly different are identified and also appear in red color in the graphics on both pages. Significance tests are also presented for age-adjusted rates. Age-adjusted rates are calculations that remove age composition as a reason for differences in the three areas. Some factors such as mortality from chronic disease may be higher in one area simply because this factor is more common among the elderly population and that area has a greater percentage of elderly in its population.

To reflect time trends for each factor, the second page presents historical data and graphs, usually from 1980 to 1996. Even if there are no significant differences in the measurements of a particular factor in the three geographic areas, decreasing or increasing measurements over time may warrant concern and intervention.

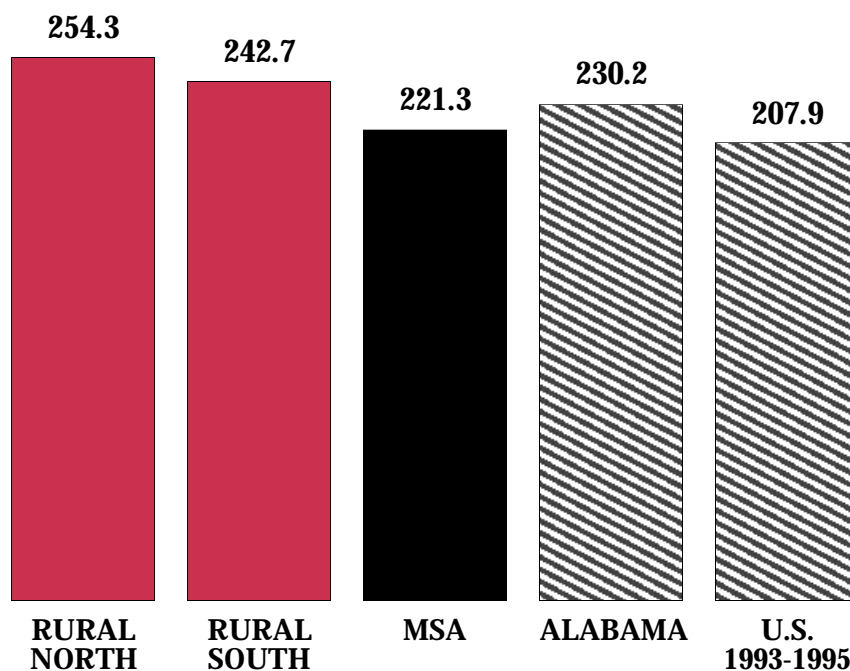
Known risk factors, specific populations at risk, and steps that can be taken to decrease risk are presented on the second page along with other interesting facts.



**HEALTH STATUS OF
RURAL ALABAMIANS**

CANCER MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
5,497	254.3	4,423	242.7	18,491	221.3

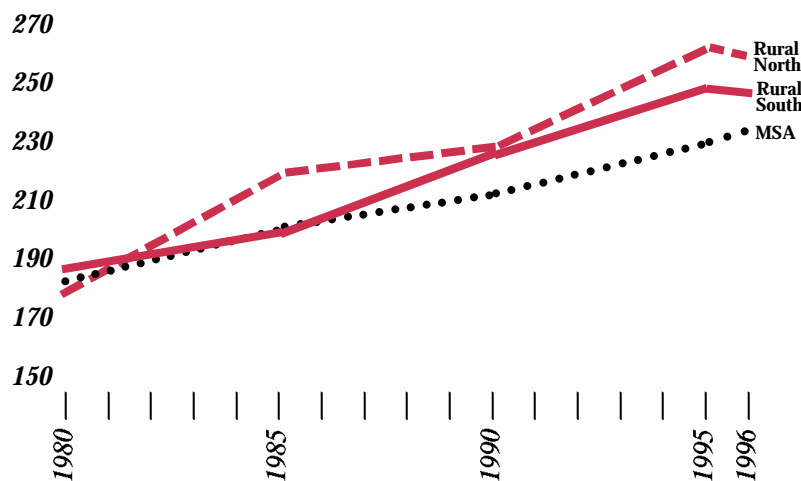
CANCER MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH AND SOUTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

**Mortality rate for Rural South Alabama counties remains significantly high.
Mortality rate for Rural North Alabama counties does not remain significantly
high after considering age difference in the population.**

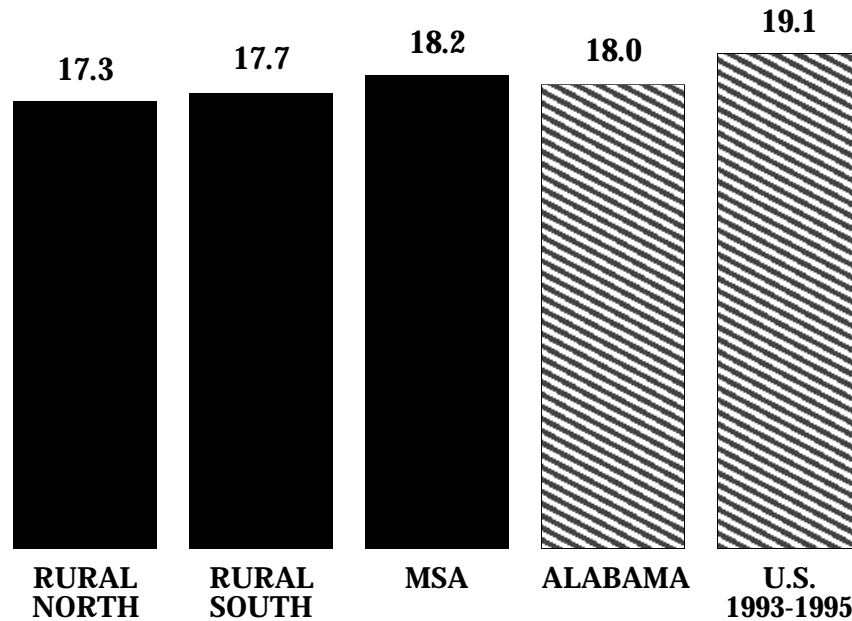
CANCER MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	1,253	175.8	1,545	216.0	1,624	226.2	1,846	256.2	1,832	254.4
Rural South	1,160	186.7	1,226	198.7	1,377	224.7	1,480	243.6	1,470	242.3
MSA	4,611	180.1	5,241	198.9	5,696	210.2	6,119	219.7	6,222	222.2

- Cancer is the 2nd leading cause of death in the U.S. and in Alabama.
- 9,524 Alabamians lost their lives due to cancer during 1996.
- Cancer occurs in individuals who usually:
 - smoke, use tobacco products, or are exposed to environmental smoke.
 - have low consumption of fruits, vegetables, and whole grain foods.
 - have excessive consumption of high fat foods, particularly from animal sources.
 - are physically inactive.
 - are obese.
 - have excessive alcohol consumption.
 - have excessive sun exposure.
- To prevent or detect cancer early, individuals at risk for cancer should:
 - avoid or eliminate exposure to cigarette smoke, tobacco products, or environmental tobacco smoke.
 - eat 5 or more servings of fruits and vegetables daily and 6 to 11 servings daily of breads, cereals, rice, pastas, and other grain products.
 - use more non-meat main dishes such as dried peas and beans, and tofu.
 - balance food and physical activity to maintain a healthy weight.
 - if alcohol is consumed, for men drink no more than two drinks a day, and for women, drink no more than one drink a day.
 - protect against excessive sun exposure with protective clothing and sun-screens with at least a sun protective factor (SPF) of 15 or higher.
 - have recommended screening tests as appropriate — for women, screening mammograms, Pap smears, tests for colorectal cancer, skin examinations; for men, testicular examinations, tests for colorectal cancer, and skin examinations.

CANCER MORTALITY RATES (1994-1996)
CANCER OF THE COLON
 (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
373	17.3	323	17.7	1,522	18.2

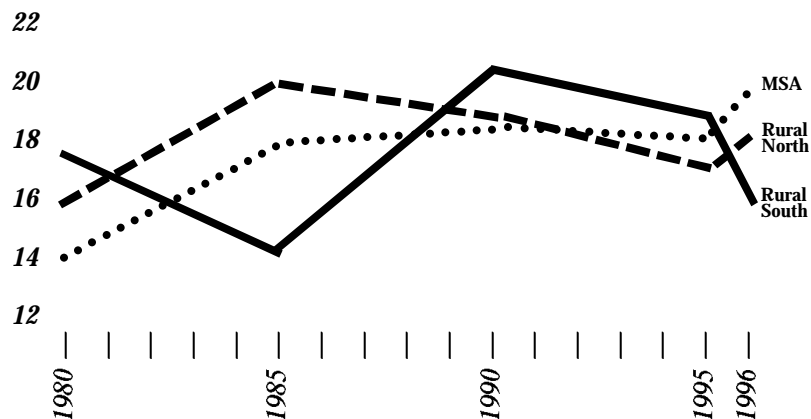
CANCER OF THE COLON MORTALITY RATES:
NO SIGNIFICANT DIFFERENCE BETWEEN RATES
FOR RURAL AND URBAN COUNTIES



Considering age difference in population composition
 of Rural and MSA counties:

No significant difference between mortality rates for Rural and
 Urban counties after considering age difference in the populations.

CANCER MORTALITY RATES (1980-1996)
CANCER OF THE COLON
(Per 100,000 Population)



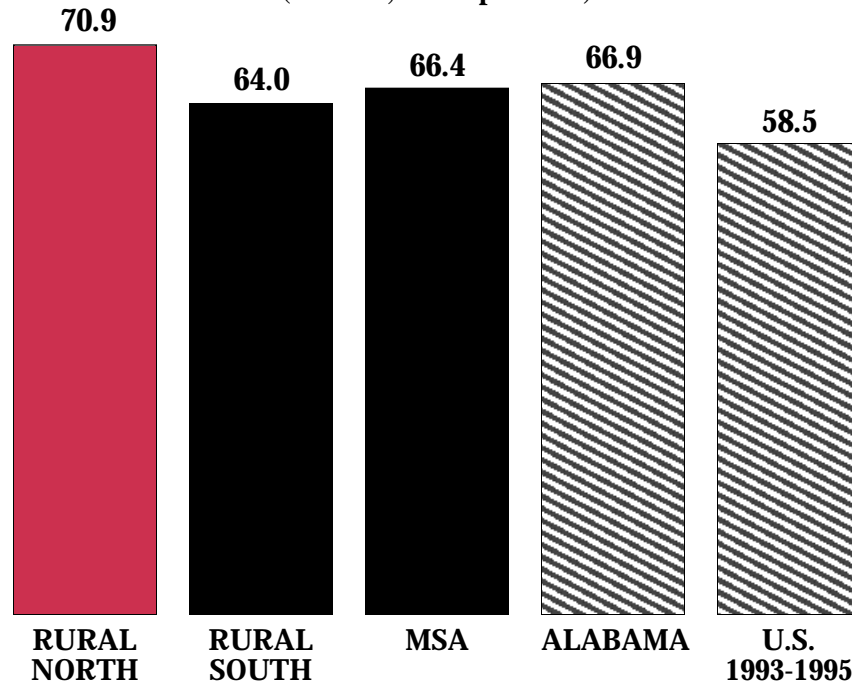
	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	113	15.9	142	19.9	130	18.1	119	16.5	128	17.8
Rural South	109	17.5	90	14.6	123	20.1	111	18.3	96	15.8
MSA	362	14.1	517	19.6	534	19.7	498	17.9	522	18.6

- Colon cancer is one of the five most common cancers in the U.S.
- Approximately 2,000 cases were expected to be diagnosed in Alabama during 1996.
- 746 Alabamians lost their lives due to colon cancer during 1996.
- Colon cancer affects men and women equally in occurrence.

- Individuals who are at risk for colon cancer usually:
 - are older.
 - have diets low in fiber.
 - have diets low in fruits and vegetables.
 - are physically inactive.
 - have a personal or family history of colon cancer or polyps of the colon.
 - have inflammatory bowel disease.
 - for females, may have higher risk based on excessive consumption of higher fat foods, particularly from animal sources.

- Individuals at risk for colon cancer should:
 - eat 6 to 11 servings daily of breads, cereals, rice, pastas, and whole grain products.
 - eat at least 5 servings daily of fruits and vegetables.
 - use more main non-meat sources for meals such as dried beans and peas, and tofu.
 - participate in regular moderate physical activity at least 4 to 5 times a week.
 - follow recommended screening for colon cancer, including digital examination annually after age 40, stool blood tests annually after age 50, and sigmoidoscopy every 3-5 years after age 50.
 - for persons with a family history of colon cancer or inflammatory bowel disease, discuss earlier screening with physicians.

CANCER MORTALITY RATES (1994-1996)
CANCER OF THE TRACHEA, BRONCHUS, LUNG, PLEURA
 (Per 100,000 Population)



RURAL NORTH COUNTIES		RURALSOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
1,532	70.9	1,167	64.0	5,551	66.4

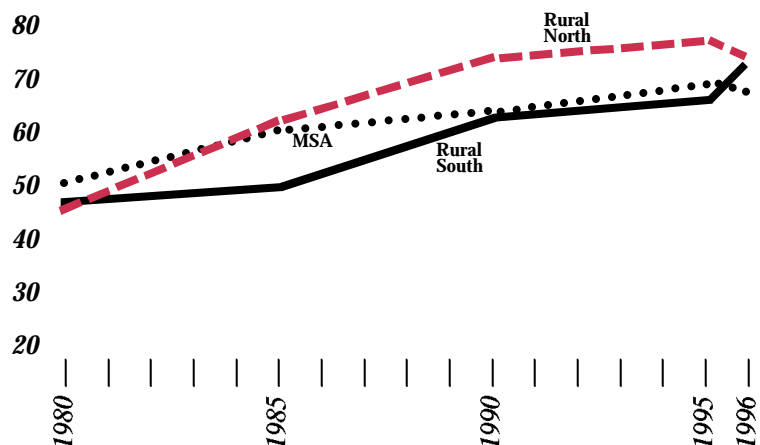
**CANCER OF THE TRACHEA, BRONCHUS,
 LUNG, PLEURA MORTALITY RATES:
 SIGNIFICANTLY HIGHER IN RURAL NORTH COUNTIES**



Considering age difference in population composition
 of Rural and MSA counties:

**Mortality rate for Rural North counties does not remain significantly high.
 After considering age difference in population composition, rate for MSA
 counties becomes significantly high.**

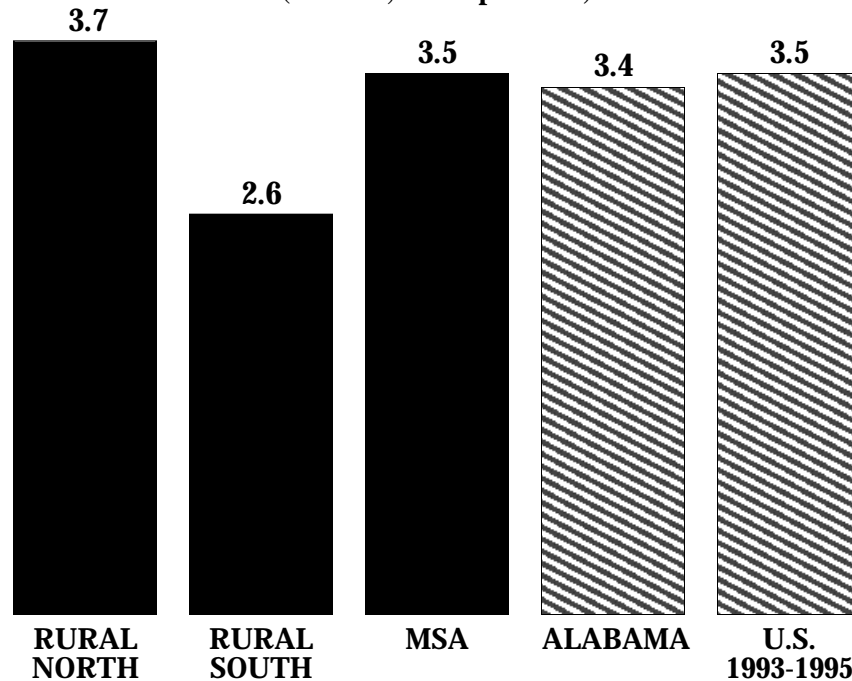
CANCER MORTALITY RATES (1980-1996)
CANCER OF THE TRACHEA, BRONCHUS, LUNG, PLEURA
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	324	45.5	436	61.0	517	72.0	542	75.2	502	69.7
Rural South	289	46.5	304	49.3	366	59.7	383	63.0	415	68.4
MSA	1,296	50.6	1,570	59.6	1,678	61.9	1,808	64.9	1,880	67.1

- Cancer of the trachea, bronchus, lung, pleura accounted for 33% of all 1996 cancer deaths in Alabama where the cancer site was specified.
- 2,797 Alabamians lost their lives due to cancer of the trachea, bronchus, lung, pleura during 1996.
- An estimated 3,100 cases of lung cancer were diagnosed in Alabama during 1996.
- Incidence rate of lung cancer cases (new cases) in women has increased dramatically over the past decades due to greater smoking by women.
- Cigarette smoking is responsible for 87% of all lung cancer deaths.
- Environmental tobacco smoke (ETS) causes lung cancer in exposed nonsmokers.
- An estimated 49 Alabamians died in 1996 due to exposure to ETS.
- Approximately 80% of all adult smokers tried smoking by age 18 with 50% of them becoming regular smokers at that age.
- Approximately 35% of high school students (in grades 9-12) in Alabama currently smoke.
- Daily as many as 50 Alabama youth become regular smokers, resulting in as many as 18,250 new teenage smokers each year.
- Individuals at risk for lung cancer usually:
 - are regular smokers or ex-smokers.
 - are nonsmokers regularly exposed to ETS at work, in public places, or at home.
 - consume diets low in fruits and vegetables.
 - may have exposure to high levels of radon.
- Individuals at risk for lung cancer should:
 - quit smoking as soon as possible.
 - continue to attempt to quit as much and as often as possible, in spite of returning to smoking.
 - avoid or eliminate any exposure to ETS at home, at work, or in public places.
 - eat at least 5 (preferably up to 9) servings of fruits and vegetables daily.
 - if at high risk, have regular checkups from a physician for early detection.

**CANCER MORTALITY RATES (1994-1996)
MELANOMA AND OTHER CANCER OF THE SKIN**
(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
79	3.7	48	2.6	294	3.5

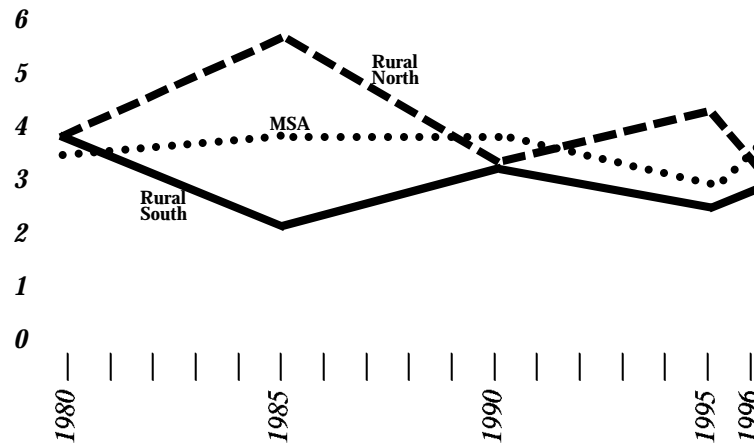
**MELANOMA AND OTHER CANCER
OF THE SKIN MORTALITY RATES:
NO SIGNIFICANT DIFFERENCE BETWEEN RATES
FOR RURAL AND URBAN COUNTIES**



Considering age difference in population composition
of Rural and MSA counties:

No significant difference between mortality rates for Rural
and Urban counties after considering age difference in the populations.

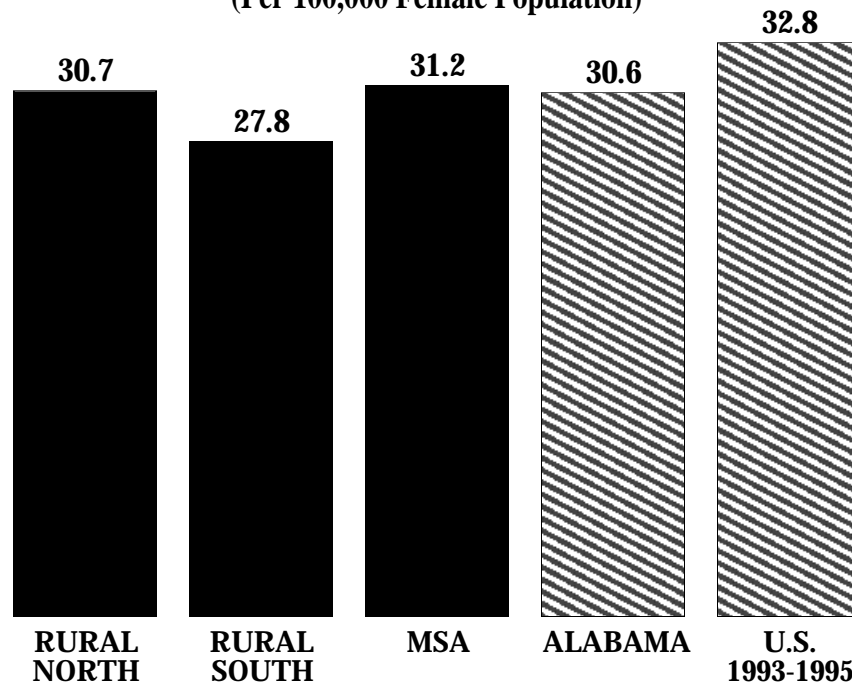
CANCER MORTALITY RATES (1980-1996)
MELANOMA AND OTHER CANCER OF THE SKIN
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	28	3.9	39	5.5	22	3.1	30	4.2	22	3.1
Rural South	24	3.9	13	2.1	18	2.9	15	2.5	17	2.8
MSA	86	3.4	94	3.6	98	3.6	82	2.9	102	3.6

- Deaths from melanoma, a skin cancer, have doubled since the 1950s in Alabama and the U.S.
- 141 Alabamians lost their lives due to melanoma and other cancer of the skin during 1996.
- An estimated 530 new cases of melanoma were expected in Alabama in 1996.
- Individuals at risk for melanoma and other skin cancer usually:
 - have excessive exposure to the sun.
 - have fair complexion with blue eyes.
 - become sunburned easily.
 - do not use sunscreens routinely when outside.
 - do not use protective clothing or hats to reduce sun exposure.
 - have a history of severe sunburn or sunburns as a child.
- Individuals who want to reduce risk for melanoma and other skin cancer should:
 - routinely wear protective clothing, including hats, when outdoors (especially young children and adolescents who develop sunburns easily).
 - routinely use sunscreens when outdoors, with a sun protective factor (SPF) rating of at least 15 or higher.
 - practice skin self-examination once a month.
 - see a physician annually for skin examination or promptly for any suspicious skin lesions.

CANCER MORTALITY RATES (1994-1996)
CANCER OF THE FEMALE BREAST
 (Per 100,000 Female Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
334	30.7	266	27.8	1,357	31.2

**CANCER OF THE FEMALE BREAST
 MORTALITY RATES:**

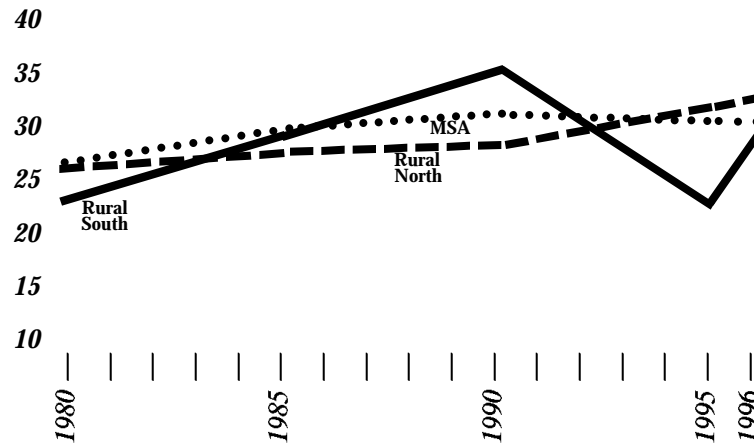
**NO SIGNIFICANT DIFFERENCE BETWEEN RATES
 FOR RURAL AND URBAN COUNTIES**



**Considering age difference in population composition
 of Rural and MSA counties:**

**No significant difference between mortality rates for Rural and
 Urban counties after considering age difference in the populations.**

CANCER MORTALITY RATES (1980-1996)
CANCER OF THE FEMALE BREAST
(Per 100,000 Female Population)



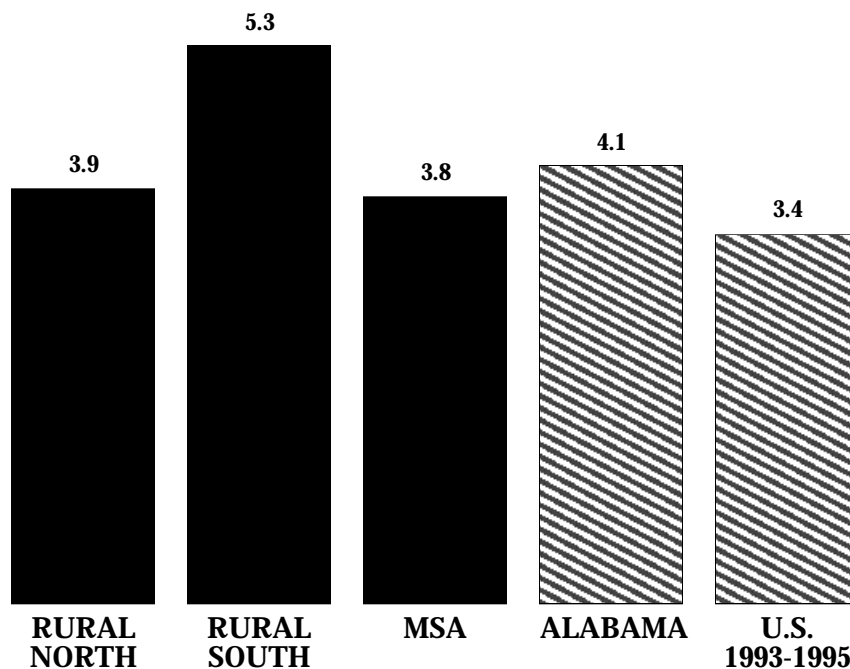
	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	96	26.1	101	27.3	105	28.2	122	32.7	126	33.7
Rural South	77	23.8	96	29.8	115	35.9	75	23.5	97	30.5
MSA	353	26.5	409	29.8	451	32.0	456	31.4	460	31.5

- Breast cancer is the most frequently diagnosed cancer in women.
- It is the 2nd leading cause of cancer-related mortality in women.
- 683 Alabamians lost their lives due to female breast cancer during 1996.
- An estimated 3,000 cases of breast cancer were diagnosed in Alabama in 1995.
- Breast cancer incidence (occurrence) is declining, due to increased mammography screening.
- Screening mammography can reduce deaths by 30 percent in women over age 50 and has recently been recommended for routine use by women aged 40-49.
- Death rates for African American females due to breast cancer are higher than those for white females.

- Individuals at risk for breast cancer usually are older and/or:
 - **have a personal or family history of breast cancer.**
 - **began menstruation at an early age and/or had menopause at a late age.**
 - **never had children or had them at a late age.**
 - **have a diet high in fat and low in fruits and vegetables.**
 - **are physically inactive, particularly before age 40.**
 - **have 20% increased risk for breast cancer occurrence and death if they gained from 4 to 40 pounds after menopause; those gaining over 40 pounds have 40% increased risk, particularly if they do not use hormone replacement therapy.**

- Individuals at risk for breast cancer should:
 - **have annual screening mammography beginning at age 40, with a clinical breast exam, and perform breast self exam monthly.**
 - **eat at least five servings of fruits and vegetables daily.**
 - **avoid weight gain as an adult.**

CANCER MORTALITY RATES (1994-1996)
CANCER OF THE CERVIX UTERI
 (Per 100,000 Female Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
44	3.9	51	5.3	167	3.8

CANCER OF THE CERVIX UTERI
MORTALITY RATES:

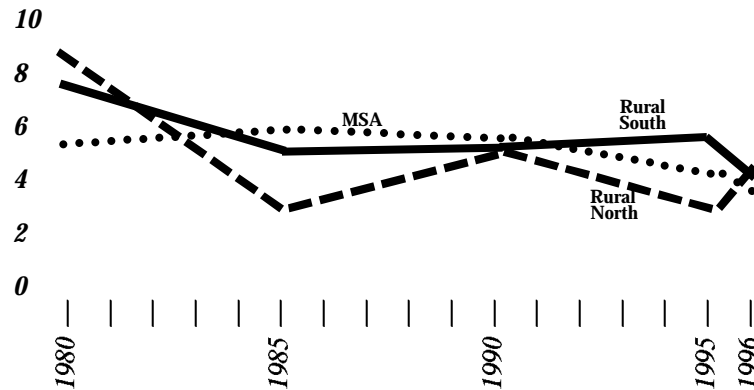
NO SIGNIFICANT DIFFERENCE BETWEEN RATES
FOR RURAL AND URBAN COUNTIES



Considering age difference in population composition
 of Rural and MSA counties:

No significant difference between mortality rates for Rural and
 Urban counties after considering age difference in the populations.

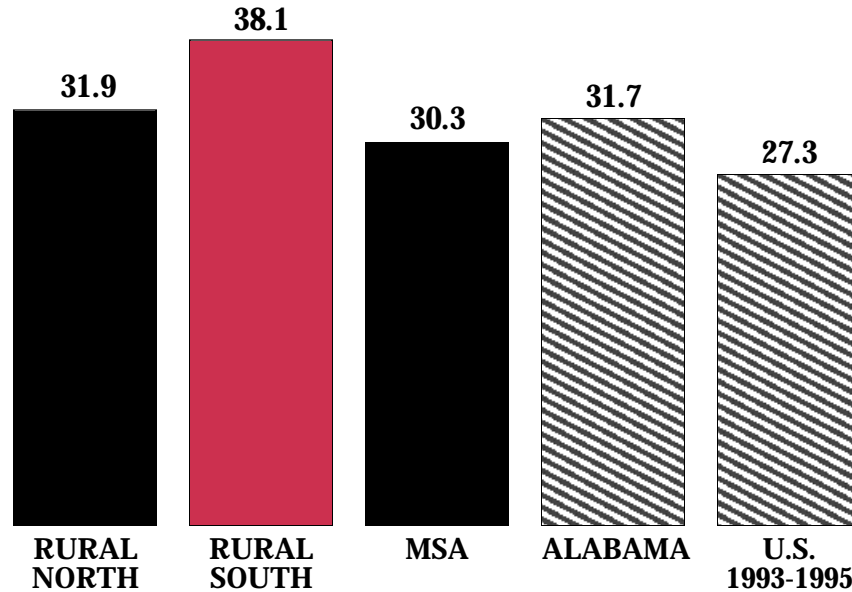
CANCER MORTALITY RATES (1980-1996)
CANCER OF THE CERVIX UTERI
(Per 100,000 Female Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	32	8.7	11	3.0	16	4.3	11	2.9	17	4.5
Rural South	24	7.4	16	5.0	14	4.4	17	5.3	13	4.1
MSA	72	5.4	81	5.9	71	5.0	59	4.1	55	3.8

- An estimated 300 cases of cervical cancer were diagnosed in Alabama in 1995.
- Screening for early cervical cancer or pre-cancer is highly effective, reducing deaths from cervical cancer by over 70 percent.
- Death from cervical cancer is much higher in African American females than in white females.
- 85 Alabamians lost their lives due to cervical cancer during 1996.
- The Pap smear test is the recommended screening test to detect early cervical cancer.
- Individuals who are at risk for cervical cancer usually:
 - **began sexual activity at an early age.**
 - **have had multiple sex partners.**
 - **smoke or have exposure to environmental tobacco smoke (ETS).**
 - **have been infected with a virus known as human papilloma virus.**
- To lower risk for cervical cancer, females should:
 - **delay beginning sexual activity.**
 - **avoid having more than one sex partner.**
 - **avoid tobacco use or exposure to ETS.**
 - **have annual Pap smears and pelvic examination, if sexually active or older than 18 years.**

CANCER MORTALITY RATES (1994-1996)
CANCER OF THE PROSTATE
 (Per 100,000 Male Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
332	31.9	330	38.1	1,214	30.3

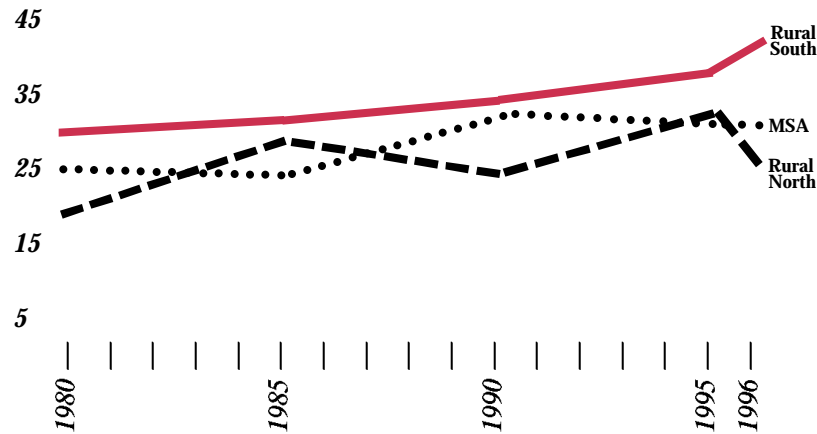
CANCER OF THE PROSTATE MORTALITY RATES:
SIGNIFICANTLY HIGHER IN RURAL SOUTH COUNTIES



Considering age difference in population composition
 of Rural and MSA counties:

Mortality rate for Rural South Alabama counties
 remains significantly high.

CANCER MORTALITY RATES (1980-1996)
CANCER OF THE PROSTATE
(Per 100,000 Male Population)



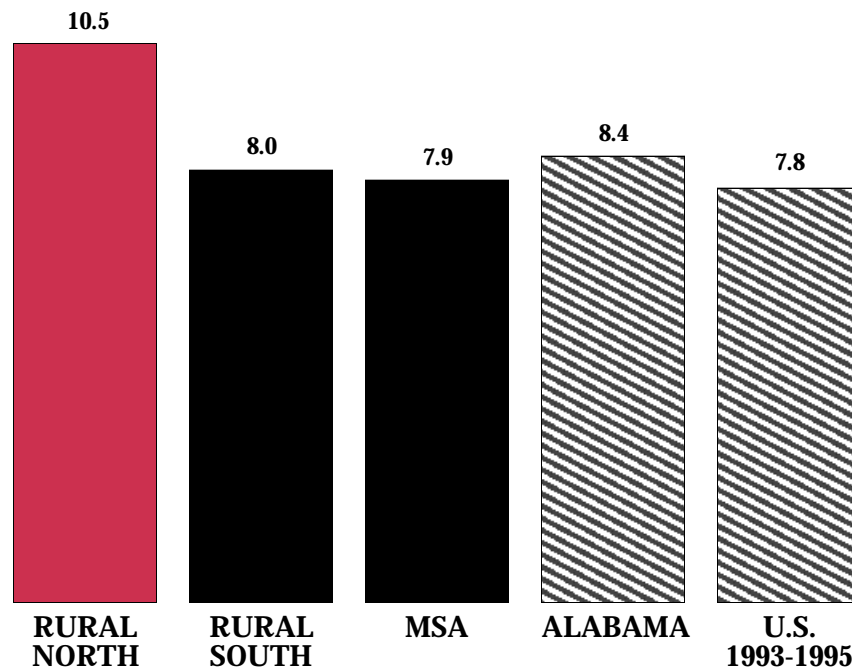
	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	66	19.1	92	26.6	84	24.3	113	32.6	92	26.5
Rural South	89	29.9	86	29.2	96	32.9	109	37.7	121	42.0
MSA	308	25.1	284	22.5	368	28.3	423	31.7	417	31.1

- Prostate cancer is the most common cancer in males.
- Approximately 3,900 new cases were expected to be diagnosed in 1995.
- Prostate cancer incidence rates (occurrence) are much higher for African American males than for white males.
- Prostate cancer is the second leading cause of cancer deaths among males.
- 630 Alabamians lost their lives due to prostate cancer during 1996.

- Individuals at risk for prostate cancer usually are:
 - **over age 65.**
 - **consuming diets low in tomato-based products.**

- Individuals at risk for prostate cancer should:
 - **have digital rectal exams each year beginning at age 40.**
 - **discuss the value of having prostate specific antigen (PSA) tests with a physician beginning at age 50 to help detect prostate cancer; for African American males, discussion of testing might be done earlier.**
 - **consider eating more tomato-based foods 3 to 4 times a week.**

CANCER MORTALITY RATES (1994-1996) LEUKEMIA (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
226	10.5	145	8.0	660	7.9

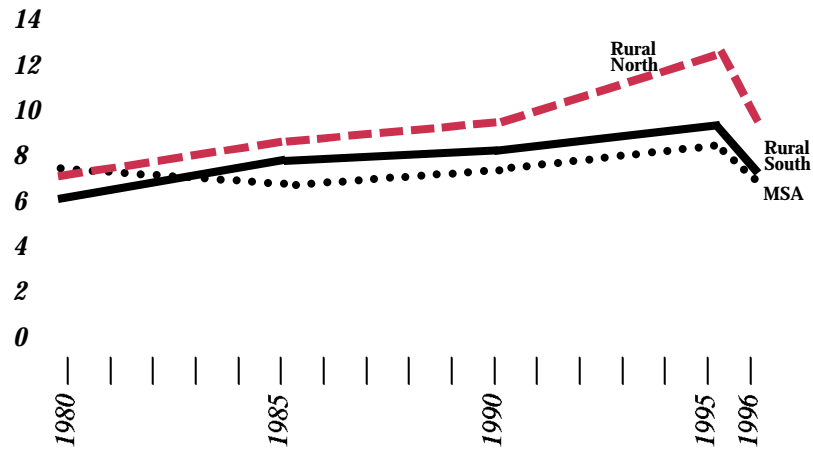
LEUKEMIA MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural North Alabama counties
remains significantly high.

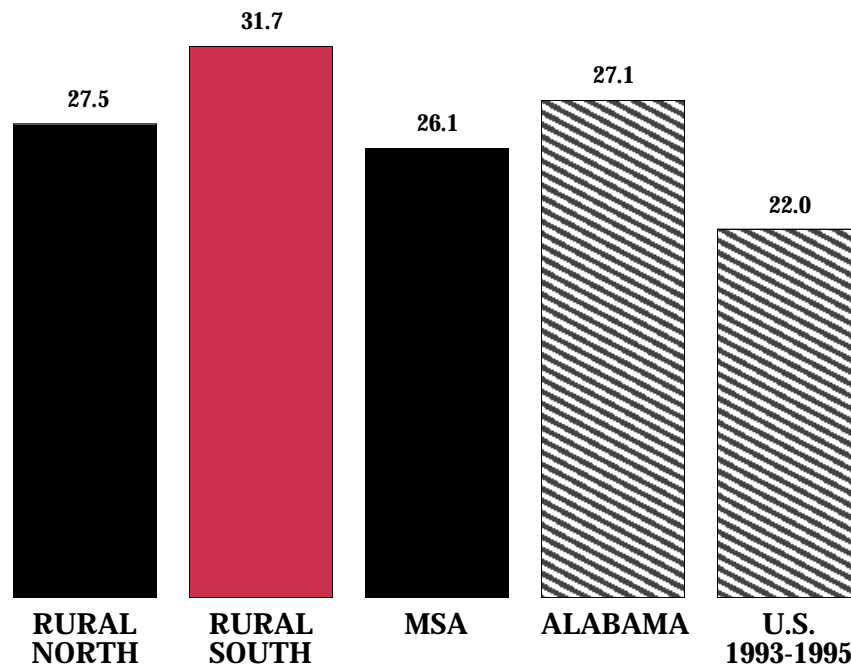
CANCER MORTALITY RATES (1980-1996)
LEUKEMIA
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	52	7.3	59	8.2	66	9.2	92	12.8	69	9.6
Rural South	38	6.1	48	7.8	49	8.0	56	9.2	45	7.4
MSA	189	7.4	175	6.6	196	7.2	232	8.3	198	7.1

- 312 Alabamians lost their lives due to leukemia during 1996.
- The leukemia death rate for children has declined to nearly one half of what it was only 15 years ago.
- Most cases of leukemia have no identifiable cause so early detection is important.
- Individuals at higher risk for leukemia usually:
 - **work with certain chemicals known to increase risk, such as benzene and other aromatic hydrocarbons.**
 - **have occupational radiation exposure.**
- Individuals at risk for leukemia should:
 - **for children, follow recommended well child check-up guidelines.**
 - **for children, see physicians for persistent infections or unusually easy bruising problems.**
 - **follow recommended safety guidelines to reduce occupational radiation exposure or exposure to leukemia-causing chemicals.**

DIABETES MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
594	27.5	578	31.7	2,177	26.1

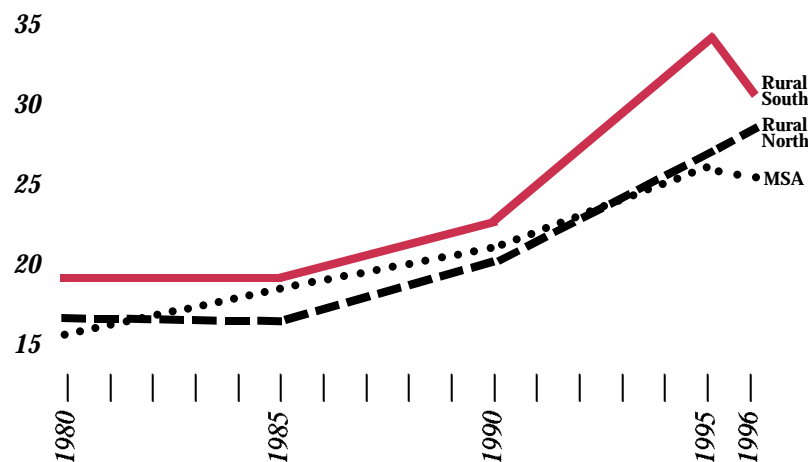
DIABETES MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL SOUTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural South Alabama counties
remains significantly high.

DIABETES MORTALITY RATES (1980-1996)
(Per 100,000 Population)



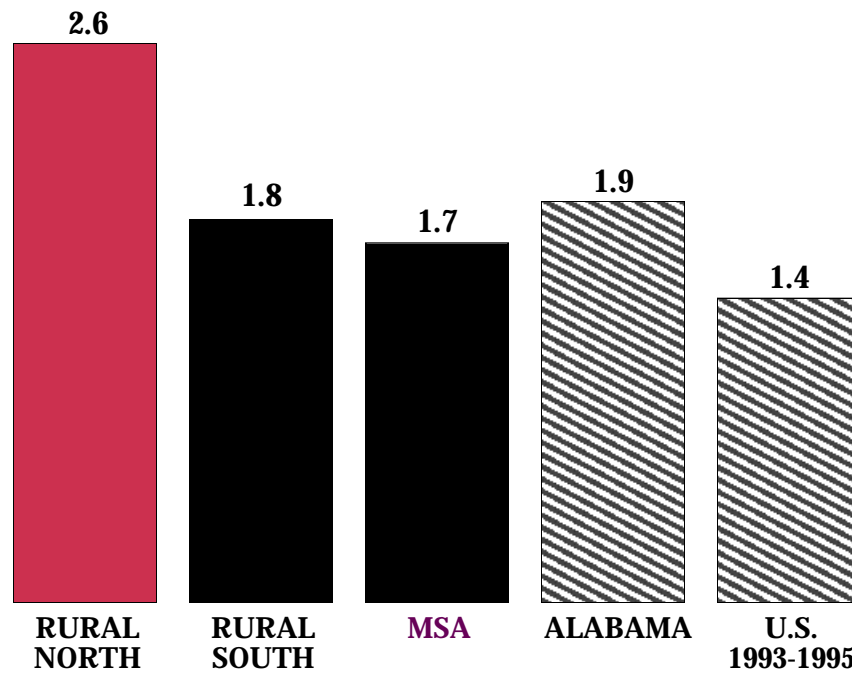
	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	126	17.7	122	17.1	140	19.5	199	27.6	208	28.9
Rural South	121	19.5	118	19.1	144	23.5	212	34.9	185	30.5
MSA	417	16.3	480	18.2	566	20.9	740	26.6	734	26.2

- 1,127 Alabamians lost their lives due to diabetes during 1996.
- Alabama's 1995 diabetes mortality rate ranked 7th highest among all 50 States.
- More than 250,000 Alabamians are estimated to have diabetes, only half of whom have been diagnosed.
- In 1992, diabetes contributed to the death of more than 2,300 residents of Alabama.
- Untreated diabetes can cause blindness, crippling, heart attack, stroke, and birth defects.

- People who are most likely to get diabetes:
 - are overweight.
 - are 40 years of age or older.
 - have a family history of diabetes.
 - do not perform physical activity regularly.
 - have had a baby weighing more than 9 pounds at birth.
 - have had diabetes during pregnancy.
 - have high blood pressure.
 - are African American, Hispanic American, or Native American.

- To prevent or delay the complications of diabetes, individuals with diabetes should:
 - maintain optimal blood sugar control through diet, physical activity, and medication.
 - test blood sugar daily and have annual dilated eye exams.
 - visit a physician frequently and have foot exam on each visit.
 - maintain ideal body weight, normal blood pressure, blood sugar, and cholesterol.
 - avoid tobacco and alcohol.

NUTRITIONAL DEFICIENCY MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
56	2.6	32	1.8	143	1.7

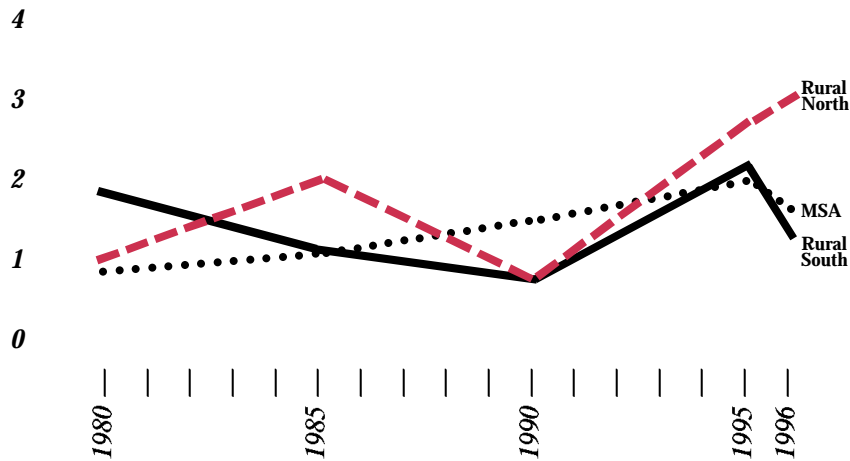
NUTRITIONAL DEFICIENCY MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural North Alabama counties
remains significantly high.

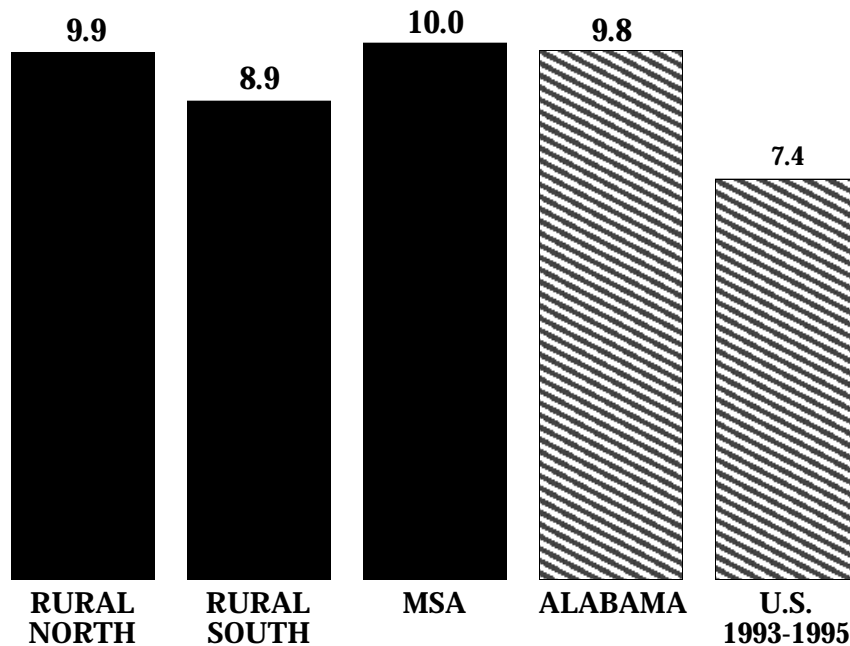
NUTRITIONAL DEFICIENCY MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	7	1.0	14	2.0	6	0.8	20	2.8	22	3.1
Rural South	11	1.8	8	1.3	5	0.8	14	2.3	8	1.3
MSA	24	0.9	34	1.3	41	1.5	56	2.0	45	1.6

- 75 Alabamians lost their lives due to nutritional deficiencies during 1996.
- 55 or over 73 percent of these decedents were at least 75 years of age.
- Individuals at risk for nutritional deficiency usually:
 - are poor.
 - are elderly.
 - are individuals with diseases requiring repeated or lengthy hospitalizations.
 - are individuals with eating disorders.
 - are individuals addicted to drugs and/or alcohol.
 - are hungry or homeless children.
 - are former blue-collar or white-collar workers who lost their jobs and took on minimum-wage jobs, also referred to as the *new poor*.
- Individuals at risk for nutritional deficiency should receive assistance if they:
 - are on multiple medications that decrease appetite, change tastes, or affect nutrient absorption or use.
 - experience tooth loss or oral pain.
 - experience economic hardship.
 - live in social isolation.
 - are depressed.
 - are losing weight involuntarily.
 - need assistance with daily living activities (food purchasing, preparation, feeding).
 - use alcohol excessively.

ALZHEIMER'S DISEASE MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
215	9.9	162	8.9	832	10.0

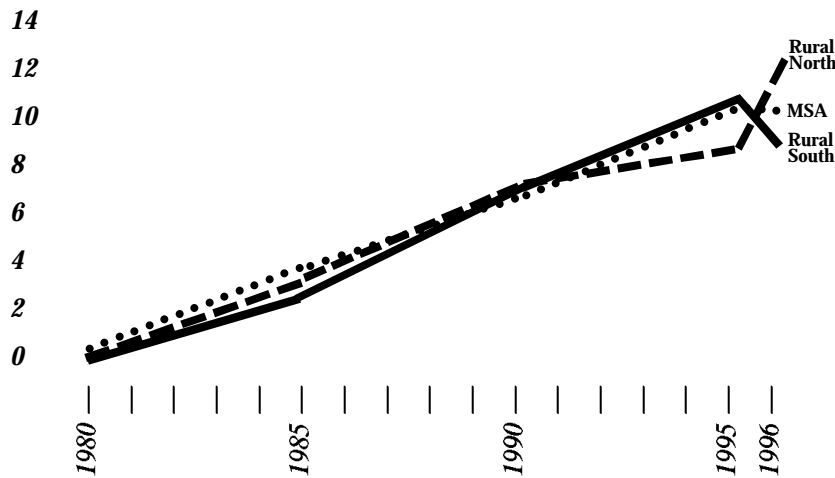
ALZHEIMER'S DISEASE MORTALITY RATES: NO SIGNIFICANT DIFFERENCE BETWEEN RATES FOR RURAL AND URBAN COUNTIES

• • •

Considering age difference in population composition
of Rural and MSA counties:

No significant difference between mortality rates for Rural
and Urban counties after considering age difference in populations.

ALZHEIMER'S DISEASE MORTALITY RATES (1980-1996)
(Per 100,000 Population)



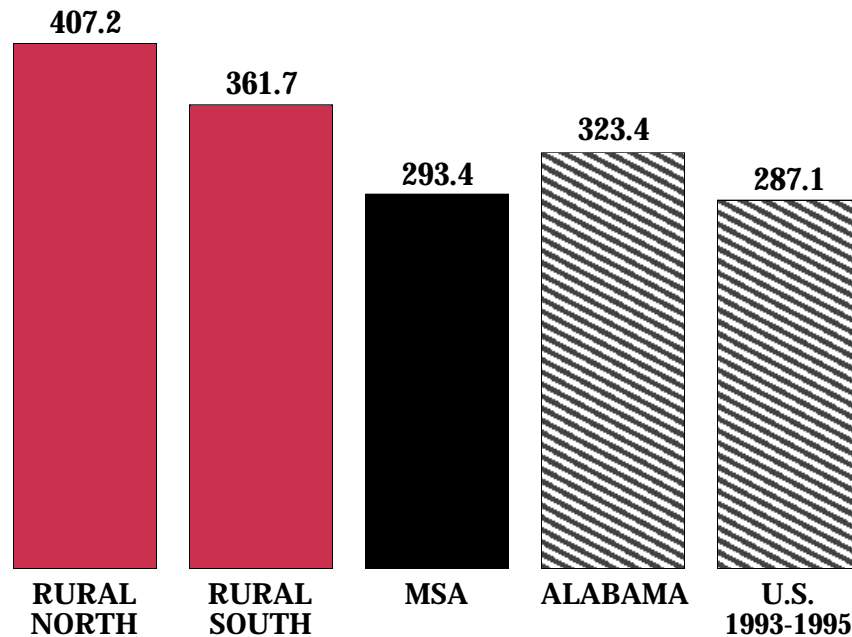
	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	2	0.3	22	3.1	51	7.1	61	8.5	92	12.8
Rural South	1	0.2	14	2.3	44	7.2	66	10.9	54	8.9
MSA	11	0.4	100	3.8	180	6.6	299	10.7	295	10.5

- 441 Alabamians died due to Alzheimer's disease during 1996.
- Medications are available to treat symptoms from Alzheimer's if it is recognized at an early state.
- Alzheimer's symptoms are frequently unrecognized by family members until it has progressed significantly.
- Medication therapies may soon be available to delay the onset or progression of Alzheimer's disease.

- Individuals with Alzheimer's disease usually:
 - **have symptoms that go unrecognized for some time.**

- Individuals with Alzheimer's disease should:
 - **be considered for medication to reduce or minimize symptoms.**
 - **be evaluated for other treatable conditions that mimic Alzheimer's disease.**

HEART DISEASE MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
8,803	407.2	6,593	361.7	24,518	293.4

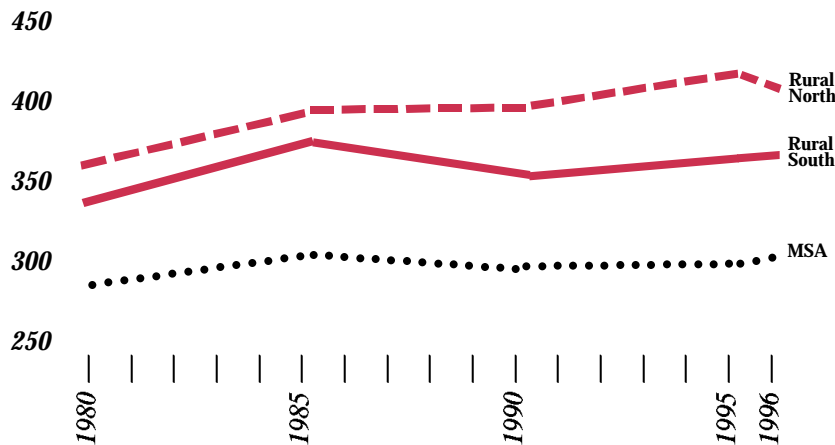
HEART DISEASE MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH AND SOUTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rates for Rural North and South Alabama counties
remain significantly high.

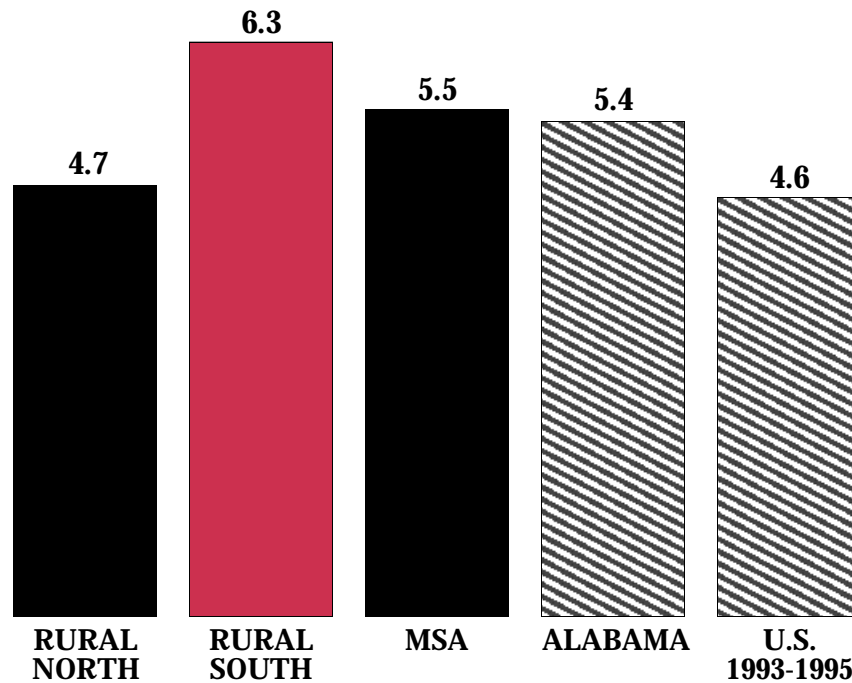
HEART DISEASE MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	2,529	354.9	2,794	390.6	2,833	394.6	2,965	411.5	2,929	406.8
Rural South	2,131	343.1	2,345	380.0	2,156	351.8	2,233	367.5	2,236	368.5
MSA	7,147	279.2	7,909	300.2	7,904	291.7	8,143	292.3	8,301	296.5

- Heart disease is the leading cause of death in the U.S. and in Alabama.
- 13,466 Alabamians lost their lives due to heart disease during 1996.
- Heart disease usually occurs in individuals who:
 - have high blood pressure.
 - have high blood cholesterol.
 - are physically inactive.
 - smoke or are exposed to environmental tobacco smoke (ETS).
 - have diabetes.
 - are obese.
 - have high low density (LDL) cholesterol.
 - have low high density (HDL) cholesterol.
 - have a family history of early heart disease (before age 55).
- To prevent or delay the complications of heart disease, persons with heart disease should:
 - control high blood pressure.
 - reduce dietary fat, saturated fat and cholesterol to lower blood levels of cholesterol.
 - participate in moderate physical activity four to five times a week.
 - avoid or eliminate cigarette smoking, including environmental tobacco smoke (ETS).
 - maintain blood sugar levels within normal ranges.
 - eat five or more servings of fruits and vegetables daily.
 - eat 6 to 11 servings daily of breads, cereals, rice, pastas, and other grain products.
 - manage diet and physical activity to maintain a healthy weight.
 - lose excess weight, be physically active, and avoid smoking to increase blood HDL levels.
 - lose excess weight and reduce dietary fat to reduce blood LDL levels.
 - visit physician regularly and take medication as directed.

HYPERTENSION MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
102	4.7	114	6.3	456	5.5

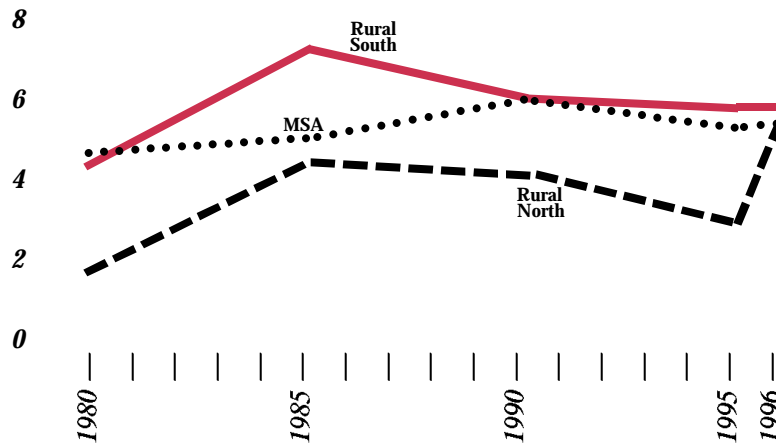
HYPERTENSION MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL SOUTH COUNTIES

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**Considering age difference in population composition
of Rural and MSA counties:**

**Mortality rate for Rural South Alabama counties
remains significantly high. Mortality rate for MSA counties becomes
significantly high after considering age difference in the population.**

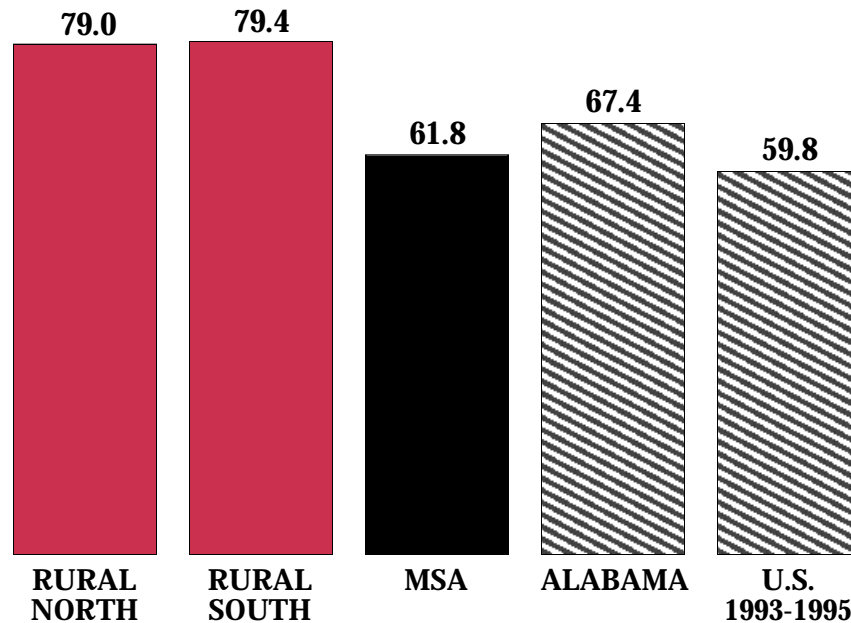
HYPERTENSION MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	13	1.8	29	4.1	29	4.0	20	2.8	41	5.7
Rural South	27	4.3	47	7.6	29	6.0	36	5.9	36	5.9
MSA	117	4.6	126	4.8	165	6.0	150	5.4	157	5.6

- 234 Alabamians lost their lives due to hypertension (high blood pressure) during 1996.
- Hypertension is the “silent killer” because it frequently has no symptoms.
- Hypertension is a risk factor for stroke, heart attack, and kidney failure.
- The prevalence (occurrence) of high blood pressure increases with age, is greater for blacks than for whites, and in both races is more common in lower socioeconomic groups.
- Hypertension usually occurs in individuals who:
 - are obese.
 - are physically inactive.
 - eat excessive sodium (salt).
- To prevent or delay the complications of hypertension, individuals with high blood pressure should:
 - maintain good blood pressure control through diet, physical activity, and medication.
 - check blood pressure regularly and see physician regularly.
 - balance food and physical activity to reduce weight; ideal weight need not be achieved.
 - reduce dietary sodium by limiting processed foods and adding salt sparingly in cooking and not adding salt at the table.
 - participate in moderate physical activity four to five times a week.
 - reduce alcohol consumption, if it is used.
 - eat five or more servings of fruits and vegetables daily.

STROKE MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
1,708	79.0	1,447	79.4	5,164	61.8

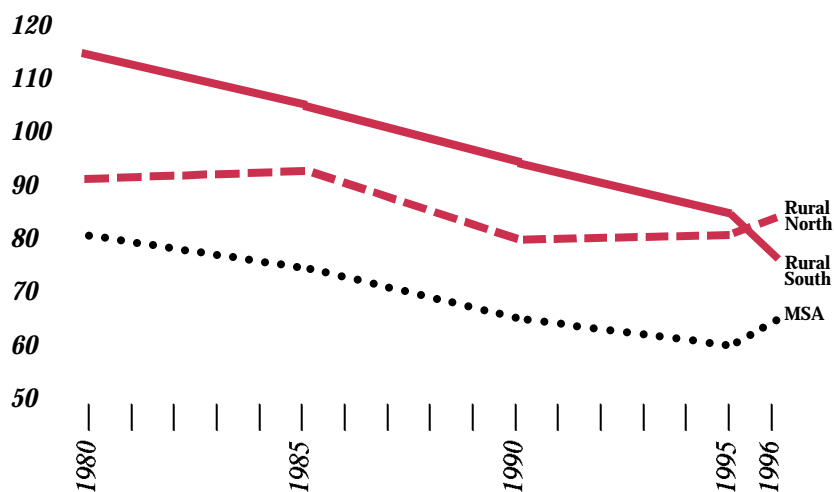
STROKE MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL SOUTH AND NORTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural South Alabama counties remains
significantly high. Mortality rate for Rural North counties does not remain
significantly high after considering age difference in the population.

STROKE MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	651	91.4	672	93.9	575	80.1	584	81.0	598	83.1
Rural South	717	115.4	656	106.3	583	95.1	519	85.4	471	77.6
MSA	2,097	81.9	1,976	75.0	1,773	65.4	1,690	60.7	1,821	65.0

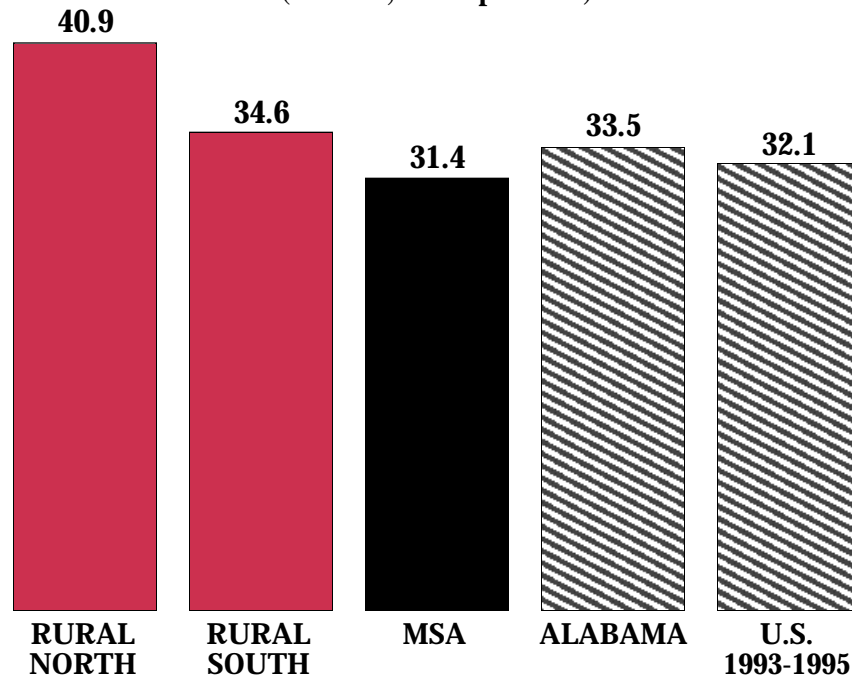
- Cerebrovascular disease (stroke) is the number three killer in the U.S. and Alabama.
- 2,890 Alabamians lost their lives due to strokes during 1996.
- The American Heart Association estimated the 1993 cost of stroke-related health care to be \$18 billion.
- Alabama lies in the heart of the stroke belt along with ten other southeastern states.
- African Americans have a higher stroke rate than whites.

- Stroke usually occurs in individuals who:
 - **have high blood pressure (hypertension).**
 - **smoke.**

- To prevent stroke, individuals should:
 - **balance food and physical activity to maintain a healthy weight.**
 - **eat five or more servings of fruits and vegetables daily.**
 - **be physically active four to five times a week.**
 - **avoid or eliminate use of cigarettes, including exposure to environmental tobacco smoke (ETS).**
 - **visit physician regularly to check blood pressure.**
 - **take blood pressure medication as directed.**

PNEUMONIA & INFLUENZA MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
885	40.9	631	34.6	2,622	31.4

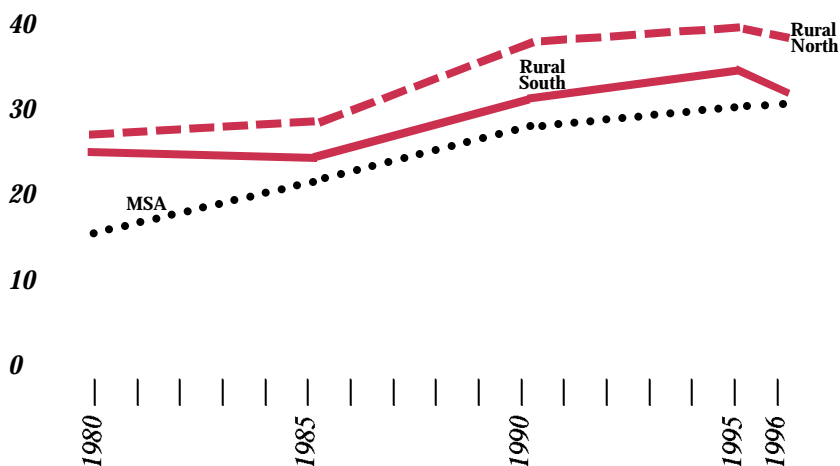
PNEUMONIA & INFLUENZA MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH AND SOUTH COUNTIES

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Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural North Alabama counties remains
significantly high. Mortality rate for Rural South Alabama counties does not
remain significantly high after considering age difference in the population.

PNEUMONIA & INFLUENZA MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	187	26.2	208	29.1	272	37.9	287	39.8	278	38.6
Rural South	151	24.3	148	24.0	194	31.7	215	35.4	198	32.6
MSA	419	16.4	586	22.2	792	29.2	867	31.1	873	31.2

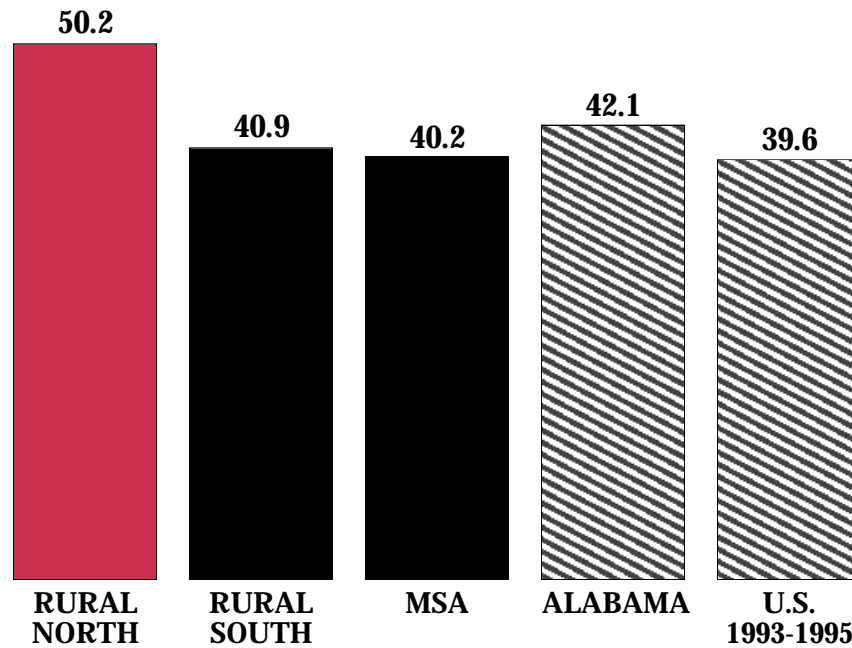
- 1,349 Alabamians lost their lives due to pneumonia or influenza during 1996.
- Streptococcus pneumonia, a bacteria, causes 15-20 percent of all cases of pneumonia.
- As many as 60 percent of persons with pneumonia caused by Streptococcus die from the infection.
- A vaccine to protect against pneumonia from Streptococcus has a 60 percent protective effect.
- Only 20 percent of persons at risk for developing pneumonia from Streptococcus have received the vaccine to prevent the infection.
- Influenza is a virus which causes significant amounts of illness and deaths in people it infects.
- Eighty to ninety percent of influenza deaths occur in persons over age 65.
- Vaccination for influenza is 30-40 percent effective in preventing symptoms and 80 percent effective in preventing deaths among older adults.

- Pneumonia or influenza usually occurs in individuals who:
 - are over age 65.
 - have chronic heart problems.
 - have chronic lung problems.
 - have diabetes.

- Individuals who are at risk for pneumonia or influenza should:
 - be immunized at least once against Streptococcus especially if over age 65.
 - be vaccinated against influenza virus every year especially if over age 65.
 - make behavioral changes that reduce risks for developing heart disease, lung disease, and diabetes.

CHRONIC OBSTRUCTIVE PULMONARY DISEASES MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
1,085	50.2	746	40.9	3,362	40.2

CHRONIC OBSTRUCTIVE PULMONARY DISEASES MORTALITY RATES:

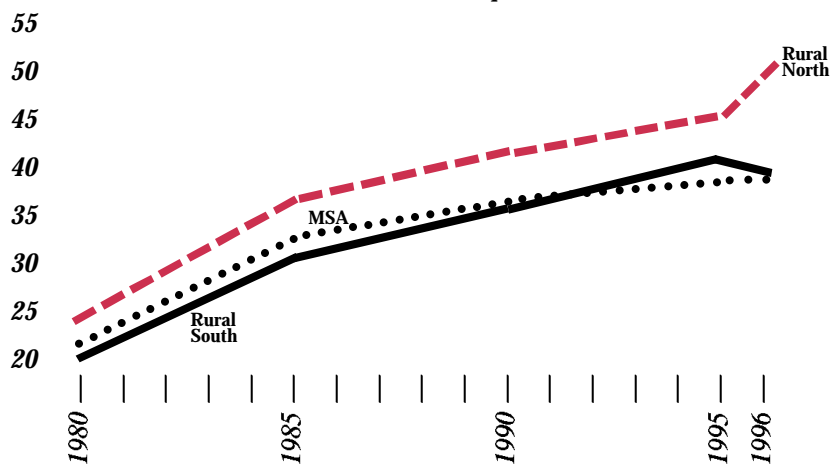
SIGNIFICANTLY HIGHER IN RURAL NORTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural North Alabama counties
remains significantly high.

**CHRONIC OBSTRUCTIVE PULMONARY DISEASES
MORTALITY RATES (1980-1996)**
(Per 100,000 Population)

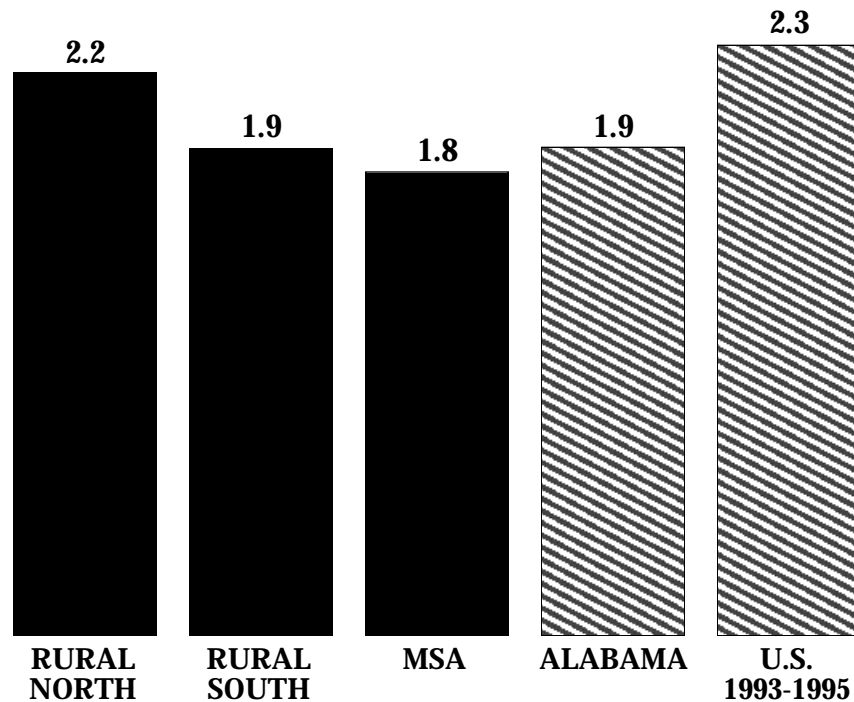


	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	172	24.1	270	37.7	302	42.1	327	45.4	372	51.7
Rural South	129	20.8	190	30.8	218	35.6	260	42.8	242	39.9
MSA	580	22.7	880	33.4	984	36.3	1,076	38.6	1,110	39.6

- 1,724 Alabamians lost their lives due to chronic obstructive pulmonary diseases (COPD) during 1996.
- Deaths due to COPD and the COPD mortality rate have approximately doubled since 1980.
- As much as 90 percent of COPD is attributable to cigarette smoking.
- Exposure to environmental tobacco smoke (ETS) aggravates symptoms of COPD.
- Exposure to high levels of ozone in the air aggravates illnesses and deaths among people with COPD.
- Individuals with COPD usually:
 - are cigarette smokers or ex-smokers.
 - are frequently exposed to ETS in public places, work places, or at home.
 - eat diets low in fish.
 - live in areas which may have high levels of ozone in the air throughout the year.
- Individuals with COPD should:
 - eliminate any use of cigarettes.
 - avoid all exposure to ETS.
 - eat fish three to four times a week.
 - follow public health authorities recommendations when high levels of ozone are detected in the air.

STOMACH ULCER MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
47	2.2	34	1.9	151	1.8

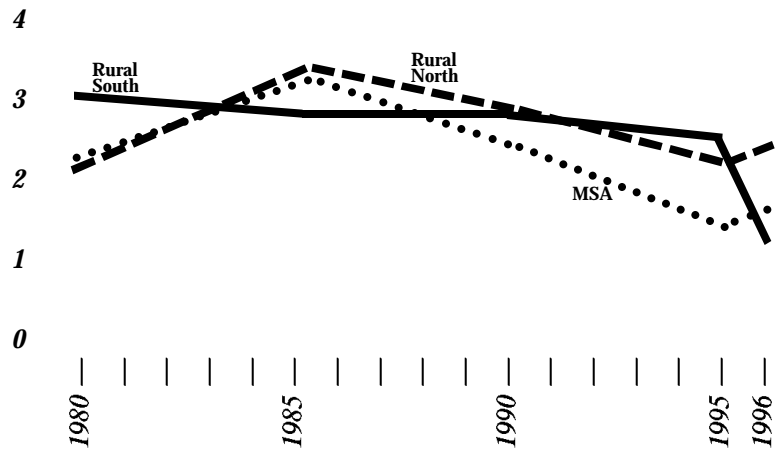
**STOMACH ULCER MORTALITY RATES:
NO SIGNIFICANT DIFFERENCE BETWEEN RATES FOR RURAL
AND URBAN COUNTIES**



Considering age difference in population composition
of Rural and MSA counties:

No significant difference between mortality rates for Rural and
Urban counties after considering age difference in the populations.

STOMACH ULCER MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	16	2.2	24	3.4	21	2.9	16	2.2	17	2.4
Rural South	19	3.1	17	2.8	17	2.8	15	2.5	8	1.3
MSA	60	2.3	86	3.3	64	2.4	38	1.4	45	1.6

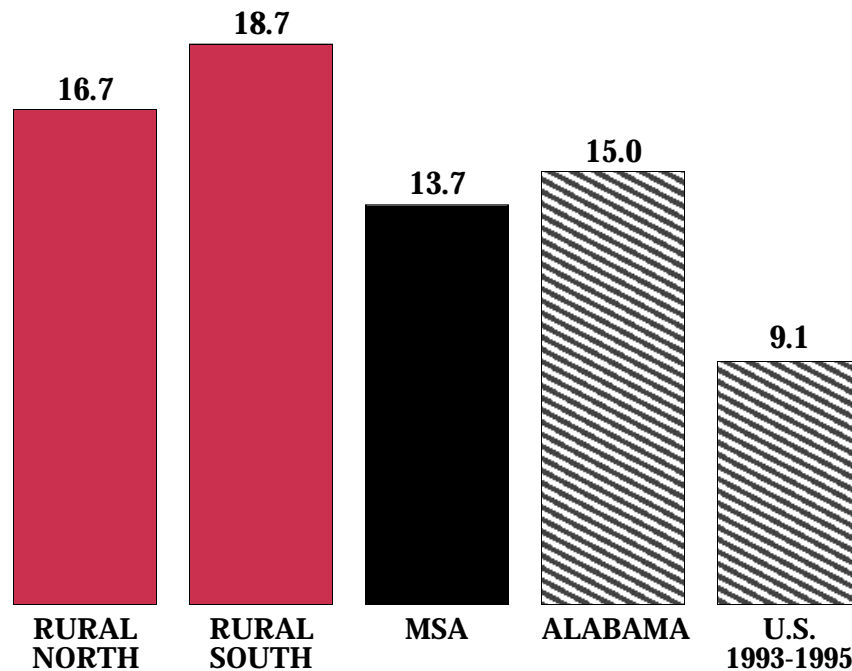
- 70 Alabamians lost their lives due to stomach ulcers during 1996.
- A bacterium, *Helicobacter Pylori* (*H. Pylori*), has been shown to be the causative factor for 70-85 percent of stomach ulcers.
- Treatment for the bacterium, *H. Pylori*, can eradicate stomach ulcers in over 90 percent of the cases.
- Effective screening is available for *H. Pylori*.

- Individuals at risk for stomach ulcers usually:
 - **have evidence of *H. Pylori* on screening.**
 - **smoke cigarettes.**
 - **are frequent users of medications to relieve arthritis pain known as non-steroidal anti-inflammatory drugs (NSAIDS).**

- Individuals with stomach ulcers or suspected stomach ulcers should:
 - **talk with physician about being tested for *H. Pylori*.**
 - **quit smoking; if not successful, continue trying until successful.**
 - **minimize use of NSAIDS as directed by physician.**

NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
361	16.7	341	18.7	1,144	13.7

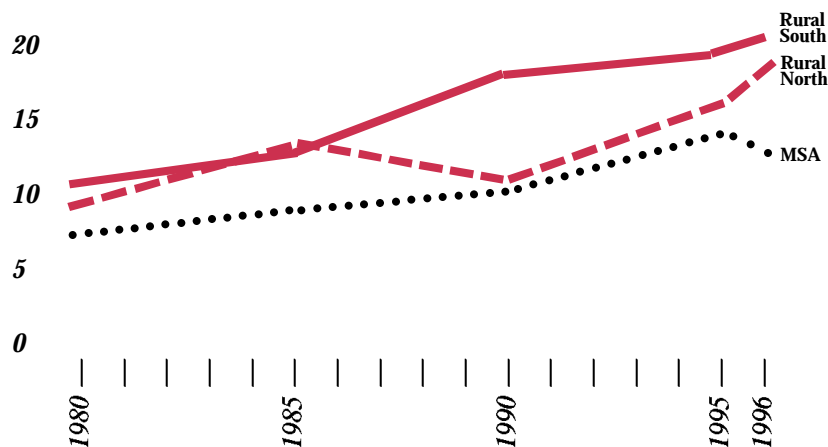
NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH AND SOUTH COUNTIES



**Considering age difference in population composition
of Rural and MSA counties:**

Mortality rate for Rural South Alabama counties remains significantly high. Mortality rate for Rural North Alabama counties does not remain significantly high after considering age difference in the population.

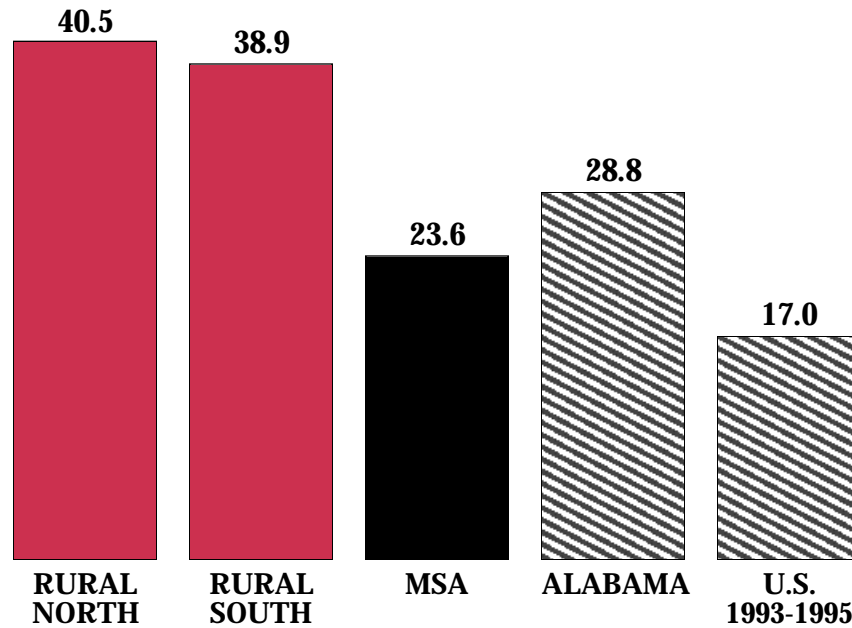
**NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS
MORTALITY RATES (1980-1996)**
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	64	9.0	98	13.7	88	12.3	116	16.1	132	18.3
Rural South	74	11.9	83	13.5	112	18.3	116	19.1	122	20.1
MSA	200	7.8	222	8.4	299	11.0	395	14.2	382	13.6

- 636 Alabamians lost their lives due to nephritis, nephrotic syndrome, or nephrosis during 1996.
- Many cases of nephritis and nephrotic syndrome are due to delayed complications of either infections of the throat or skin with a bacteria, Streptococcus, or from poorly controlled diabetes.
- Long-term complications of nephritis or nephrosis include frequent problems with blood pressure control, congestive heart failure, and kidney function, requiring dialysis or kidney transplantation.
- Individuals at risk for nephritis or nephrosis usually:
 - **have not been seen for proper treatment of a throat or skin infection due to Streptococcus.**
 - **have lower socioeconomic status.**
 - **have poorly controlled diabetes.**
- Individuals at risk for nephritis or nephrosis should:
 - **for children, particularly, be seen promptly for throat or skin infections to determine if Streptococcus is present.**
 - **have adequate treatment for a skin or throat infection due to Streptococcus.**
 - **maintain optimum blood sugar control through diet, regular physical activity, and medication, if diabetes is present.**
 - **visit physician regularly and check blood sugar daily if diabetes is present.**

MOTOR VEHICLE ACCIDENT MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
875	40.5	709	38.9	1,975	23.6

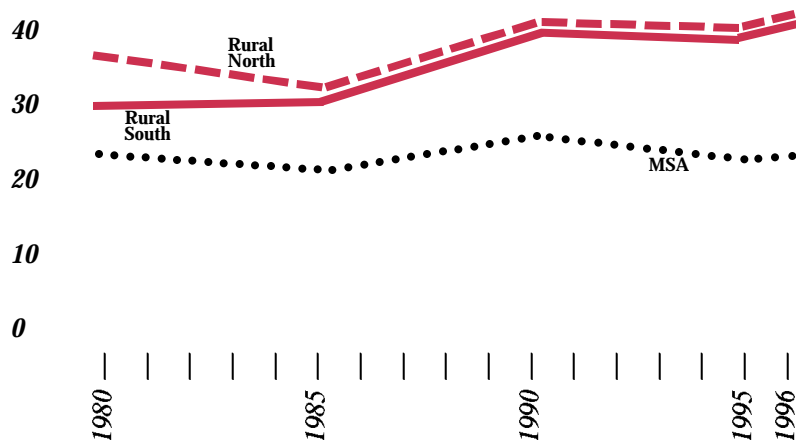
MOTOR VEHICLE ACCIDENT MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH AND SOUTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rates for Rural North and South Alabama
counties remain significantly high.

MOTOR VEHICLE ACCIDENT MORTALITY RATES (1980-1996)
(Per 100,000 Population)

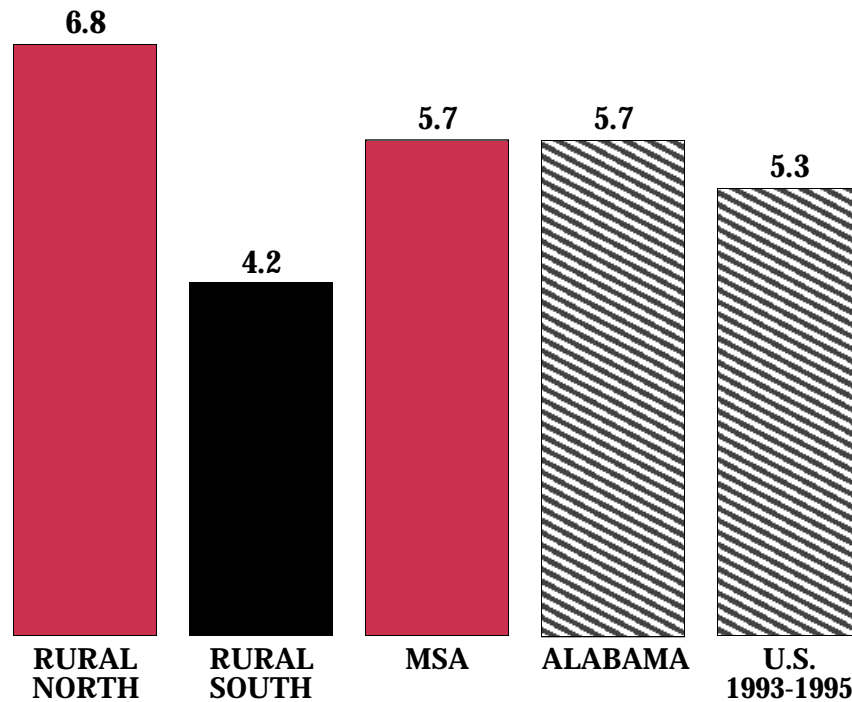


	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	266	37.3	239	33.4	298	41.5	292	40.5	302	41.9
Rural South	190	30.6	197	31.9	247	40.3	240	39.5	248	40.9
MSA	625	24.4	581	22.1	709	26.2	640	23.0	658	23.5

- Alabama’s 1995 motor vehicle accident mortality rate ranked 3rd highest among all 50 States.
- 1,208 Alabamians lost their lives due to motor vehicle accidents during 1996.
- Nearly 40 percent of all deaths to Alabama’s children aged 15-19 years were the result of motor vehicle accidents.
- More than 50 percent of all deaths to Alabama’s white children aged 15-19 years resulted from motor vehicle accidents.
- Older persons have a greater risk of a crash per mile driven than younger persons, and in a crash, are more vulnerable to injury and death.
- Speeding is a major factor in many crashes.
- Seat belt usage rate in Alabama is significantly lower in rural counties as compared to urban counties.
- Lap/shoulder safety belts, when used correctly, reduce the risk of death to front seat passengers by 45 percent; for light truck occupants, seat belt use reduces the risk of fatal injury by 60 percent.
- Air bags reduce the risk of death and injury but do not substitute for use of seat belts; children six and under are advised to sit in the back seat of any car with air bags on the passenger side.
- Individuals at risk of death from motor vehicle accidents usually:
 - are teens and older adults.
 - are in accidents involving excessive speed.
 - are not wearing lap/shoulder belts.
 - are in accidents with inexperienced or impaired drivers.

ACCIDENTAL FALLS MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
147	6.8	76	4.2	479	5.7

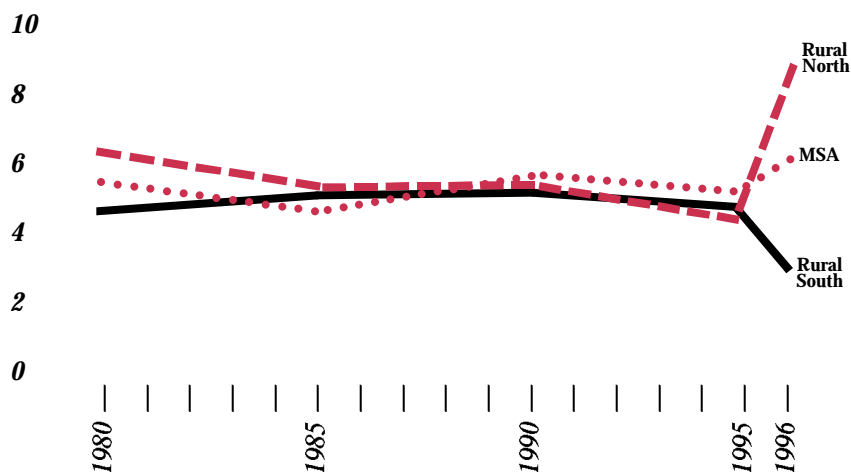
ACCIDENTAL FALLS MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH AND MSA COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rates for Rural North and MSA counties
remain significantly high.

ACCIDENTAL FALLS MORTALITY RATES (1980-1996)
(Per 100,000 Population)

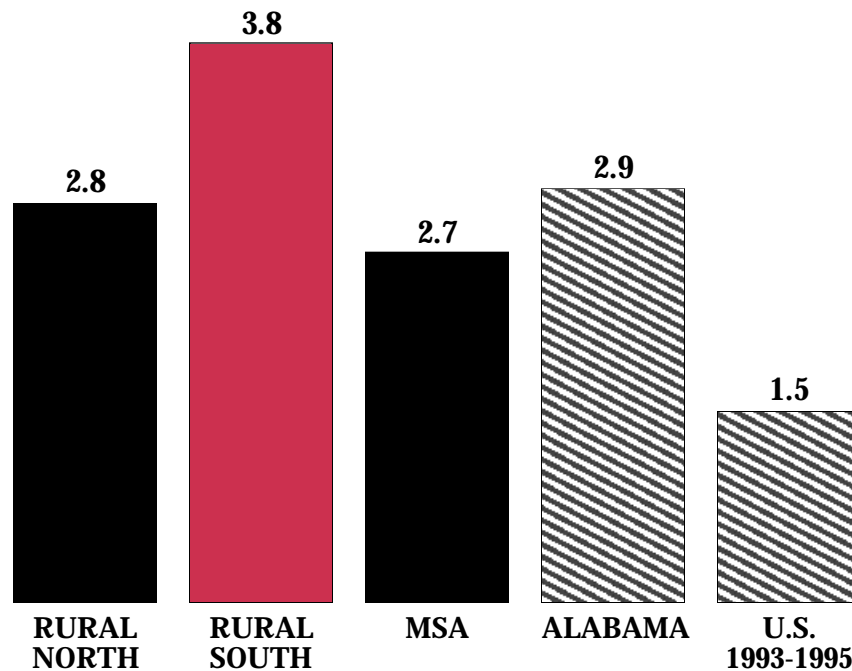


	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	45	6.3	41	5.7	40	5.6	31	4.3	65	9.0
Rural South	29	4.7	34	5.5	33	5.4	29	4.8	19	3.1
MSA	144	5.6	121	4.6	154	5.7	144	5.2	170	6.1

- Falls are the leading cause of death from injury for persons over age 65.
- 254 Alabamians lost their lives due to falls during 1996.
- Over 80 percent of fall-related deaths in Alabama from 1994-1996 involved persons over age 65.
- Fall-related disability is a significant problem for children.
- Individuals at risk from falls usually:
 - are over age 65 or are children.
 - have underlying medical conditions such as osteoporosis (thin bones) which make the fall more hazardous.
 - may be on sedative prescription medications which increase the chance of falling.
 - have medical conditions which predispose to a fall.
 - have dwellings with poor lighting or objects such as throw rugs which make it easy to fall.
 - for children, have playgrounds which do not have safe playground equipment.
 - for children whose residence is above the ground floor, may not have protective bars on upper-story windows.
- Individuals at risk for falls should:
 - have safe playground equipment installed on playgrounds.
 - have protective bars on upper-story windows.
 - improve lighting in residences and remove throw rugs and loose wiring across floors which could cause a fall.
 - review medications with physician to reduce or eliminate those which are sedating and substitute nonsedating medications when possible.
 - ask physician to determine if a condition such as osteoporosis is present through use of screening tests and determine if bones can be strengthened through diet, physical activity, and medication.
 - ask physician or health care provider for directed leg-strengthening exercises to improve ability to stand up safely.

ACCIDENTAL FIRE AND FLAMES MORTALITY RATES (1994-1996)

(Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
60	2.8	69	3.8	227	2.7

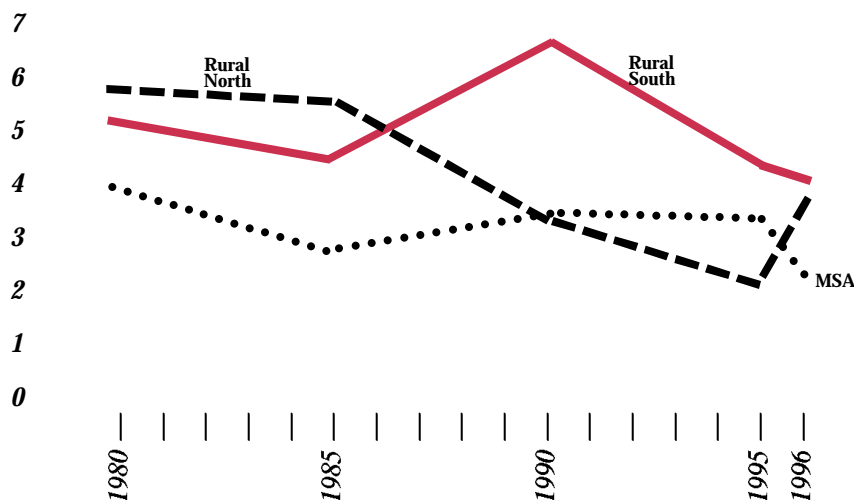
ACCIDENTAL FIRE AND FLAMES MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL SOUTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

**Mortality rate for Rural South
counties remains significantly high.**

ACCIDENTAL FIRE AND FLAMES MORTALITY RATES (1980-1996)
(Per 100,000 Population)



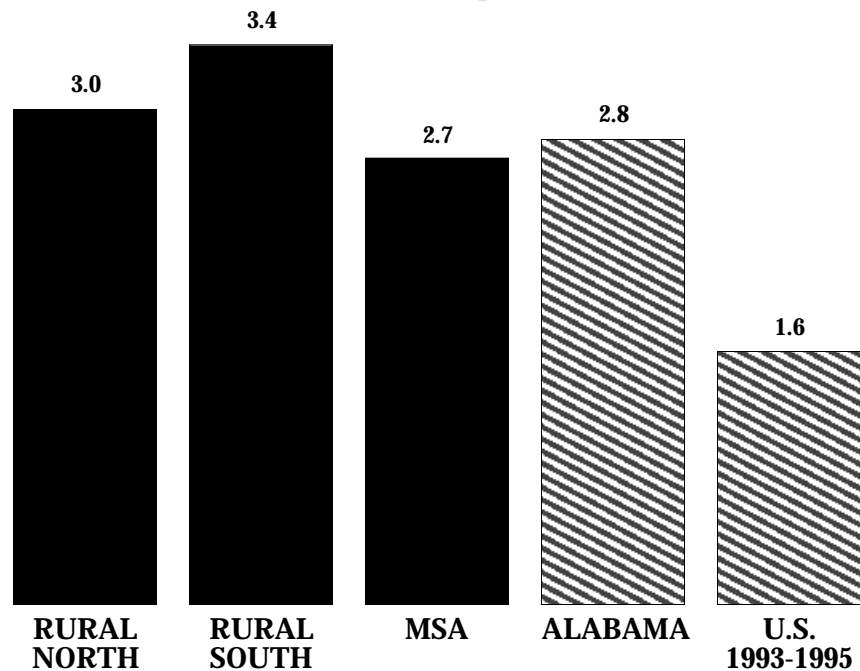
	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	41	5.8	40	5.6	23	3.2	16	2.2	27	3.8
Rural South	32	5.2	27	4.4	41	6.7	26	4.3	24	4.0
MSA	102	4.0	74	2.8	89	3.3	96	3.4	61	2.2

- In the U.S., about eight out of ten fire-related deaths occur in homes.
- Preschool children under age five and older adults over age 65 are over represented in fatalities from house fires.
- Fatality rates in Alabama from fires and burns are almost twice the national average.
- Alabama ranks third highest in the nation for the number of fire-related deaths per capita.
- 112 Alabamians lost their lives due to fires and flames during 1996.
- Fire-related fatalities usually occur in home fires where no smoke detector is present, particularly in one and two family residences.
- In homes destroyed by fire, smoke detectors were 71 percent effective in saving lives.

- Individuals at risk for fire-related deaths usually:
 - are under age five or over age 65.
 - do not have any smoke detectors present in the house or dwelling.
 - have smoke detectors that do not work due to being disconnected or missing batteries.

- Individuals at risk for fire-related deaths should:
 - have at least one working smoke detector in the residence, preferably one detector protecting each bedroom area of the home.
 - properly connect existing non-working detectors or put in new batteries and replace as needed.

ACCIDENTAL SUFFOCATION MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
64	3.0	62	3.4	223	2.7

ACCIDENTAL SUFFOCATION MORTALITY RATES:

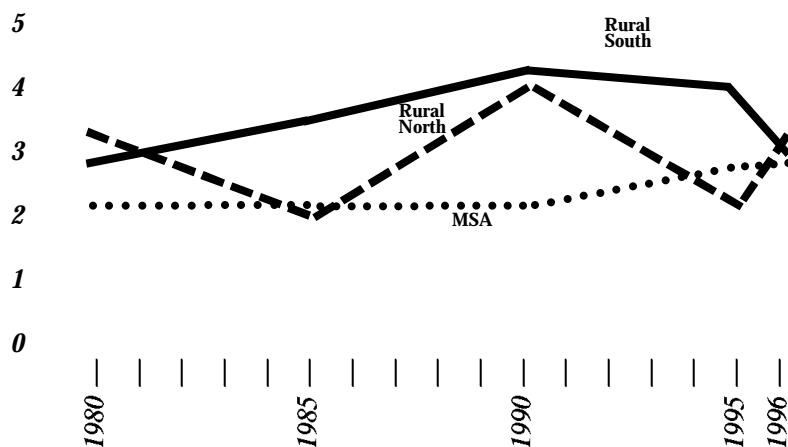
**NO SIGNIFICANT DIFFERENCE BETWEEN RATES
FOR RURAL AND URBAN COUNTIES**

• • •

**Considering age difference in population composition
of Rural and MSA counties:**

**No significant difference between mortality rates for Rural
and Urban counties after considering age difference in the populations.**

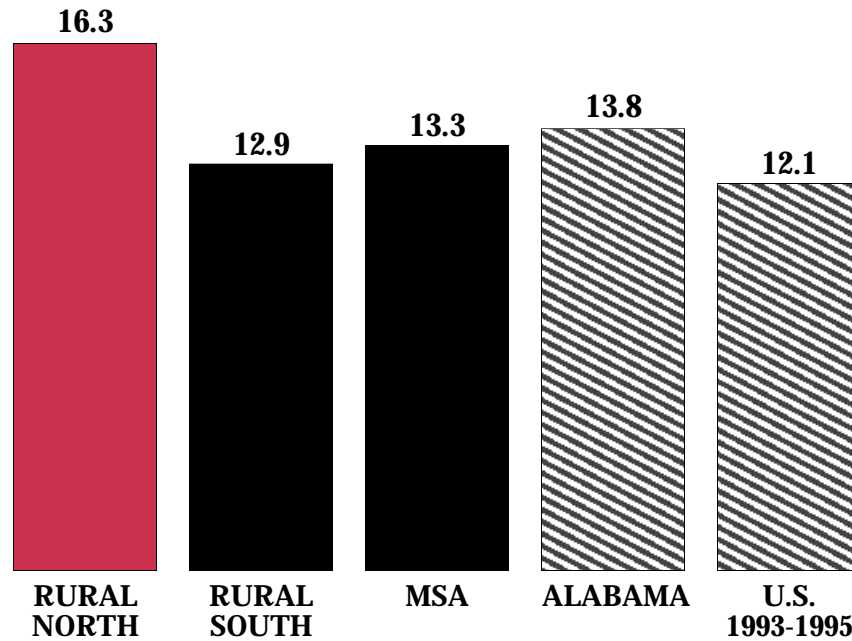
ACCIDENTAL SUFFOCATION MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	23	3.2	14	2.0	29	4.0	15	2.1	24	3.3
Rural South	18	2.9	21	3.4	26	4.2	24	4.0	19	3.1
MSA	53	2.1	57	2.2	60	2.2	77	2.8	80	2.9

- 123 Alabamians lost their lives due to accidental suffocation during 1996.
- Nearly 92 percent of all accidental suffocation in Alabama results from the inhalation or ingestion of food or other objects. Approximately 8 percent results from mechanical suffocation or being smothered by a source outside of the body.
- Deaths due to accidental suffocation are approximately equal to fire and flame deaths, being surpassed only by motor vehicle fatalities as the leading cause of accidental death in Alabama.
- Accidental suffocation is the leading cause of accidental death to Alabama infants under one year of age.
- Suffocation among young children primarily involves round food products such as candies and hot dogs or undersized objects such as toys.
- Accidental suffocation is surpassed only by falls as the leading cause of accidental death to Alabamians aged 85 years or more.
- Suffocation among the elderly primarily results from underchewed food, the use of sedative medications, or diseases that affect coordination or mental function.
- Persons at greater risk from suffocation usually are:
 - **young children or infants.**
 - **elderly.**
 - **using sedative medications.**
 - **affected by conditions impairing coordination or mental function.**
- Efforts at reducing the risk of accidental suffocation include:
 - **modifying products to make them safer through voluntary or regulated actions.**
 - **educating parents and caretakers to recognize choking and smothering hazards as well as conditions which increase the possibility of suffocation.**
 - **training parents and caretakers in the Heimlich maneuver.**

SUICIDE MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
353	16.3	236	12.9	1,108	13.3

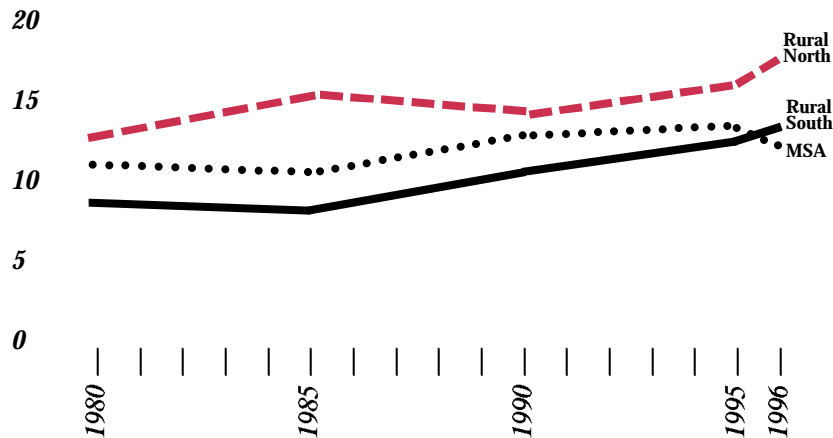
SUICIDE MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL NORTH COUNTIES



**Considering age difference in population composition
of Rural and MSA counties:**

**Mortality rate for Rural North Alabama counties
remains significantly high.**

SUICIDE MORTALITY RATES (1980-1996)
(Per 100,000 Population)

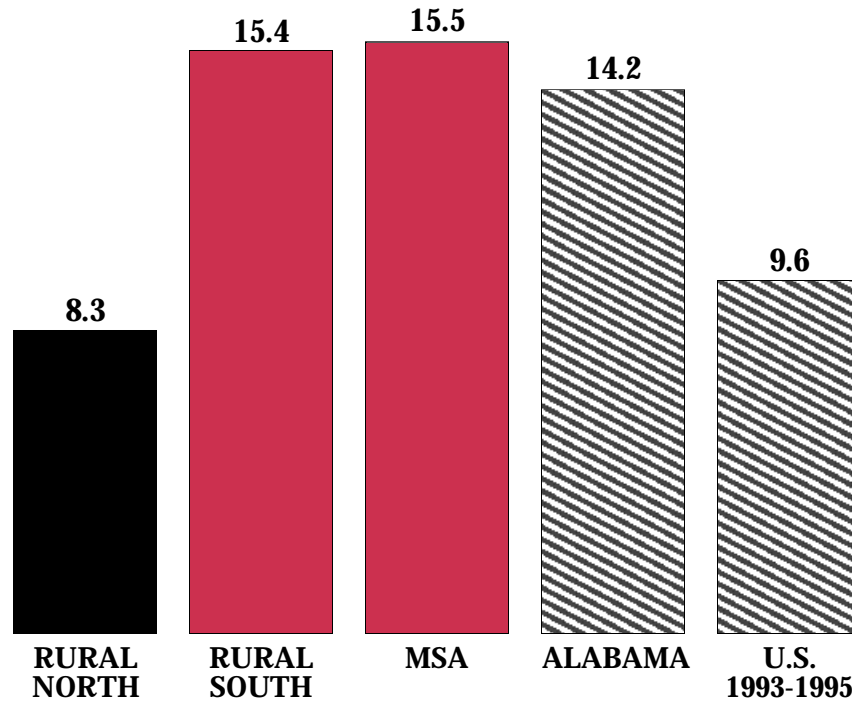


	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	95	13.3	108	15.1	104	14.5	116	16.1	124	17.2
Rural South	55	8.9	43	7.0	71	11.6	77	12.7	82	13.5
MSA	294	11.5	291	11.0	352	13.0	371	13.3	343	12.3

- Alabama’s suicide mortality rate has exceeded that for the nation since 1990.
- 549 Alabamians lost their lives due to suicide during 1996.
- Over 67 percent of all Alabama suicide victims are white males.
- Suicide is the 2nd leading cause of death among white males and females aged 15-24 years, only exceeded by accidents.
- Suicide rates are the highest among the elderly.
- Nearly 76 percent of all Alabama suicide victims used a firearm in the suicide.
- The single greatest cause of suicide is untreated depression.
- According to the National Center for Injury Prevention and Control (NCIPC), males are at least four times more likely to commit suicide than are females; however, females are more likely to attempt suicide than are males.
- NCIPC also notes that 84 people die from suicide and an estimated 1,900 adults attempt suicide on an average day in the U.S.

- Danger signs of suicide include:
 - **discussing or mentioning suicide.**
 - **making apparent final arrangements such as giving things away.**
 - **deepening depression and expressions of hopelessness.**
 - **a sudden elevated mood of happiness.**
 - **preoccupation with death.**
 - **elevated risk-taking or destructive behavior.**
 - **an unusually elevated urge to visit or contact people one cares about.**
 - **loss of interest in things which would normally be of interest.**

HOMICIDE MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
180	8.3	280	15.4	1,296	15.5

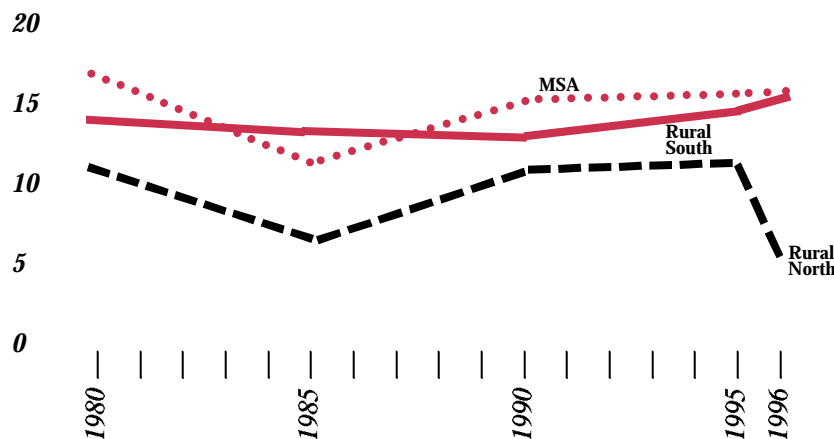
HOMICIDE MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL SOUTH AND MSA COUNTIES



**Considering age difference in population composition
of Rural and MSA counties:**

**Mortality rates for Rural South and Alabama MSA counties
remain significantly high.**

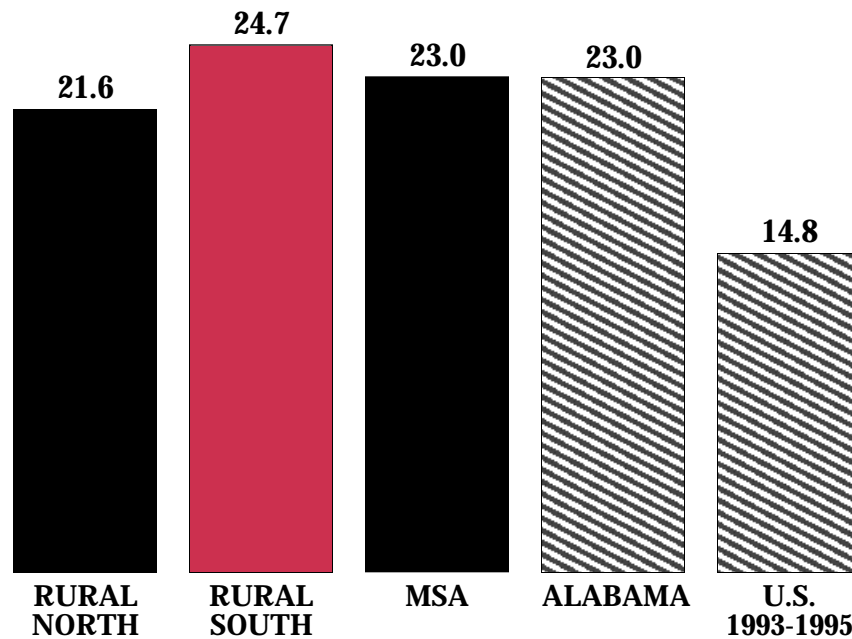
HOMICIDE MORTALITY RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	85	11.9	48	6.7	75	10.4	77	10.7	38	5.3
Rural South	87	14.0	84	13.6	79	12.9	89	14.6	92	15.2
MSA	442	17.3	336	12.8	408	15.1	422	15.2	431	15.4

- Alabama's 1995 homicide mortality rate ranked 6th highest among all 50 States.
- 561 Alabamians lost their lives due to homicide during 1996.
- Nearly 62 percent of all Alabama homicide victims are African American.
- Homicide accounts for approximately one-half of all deaths to Alabama's African American males aged 15-24 years.
- An African American male in Alabama aged 15-19 years is at 6 times greater risk of becoming a homicide victim today than 10 years ago.
- Nearly 78 percent of all 1996 Alabama homicide victims were killed with a firearm.
- According to the National Victim Assistance Academy, in 1993, for the first time in history, Americans were more likely to be killed by a stranger than by a known assailant.
- Homicide intervention strategy varies from other strategies in that there are two subjects for intervention, the victim and the perpetrator. Success with either can possibly prevent a homicide from occurring.
- Many programs aimed at decreasing violence are being studied. There is much agreement that intervention should be initiated during the developmental years in a child's life. Potentially successful violence intervention strategies include:
 - **prevention of unwanted pregnancy.**
 - **visitation, assistance, and counseling programs aimed at establishing a home environment during childhood which discourage potentially violent behavioral development.**
 - **innovative educational programs which will provide adequate supervision while teaching problem-solving skills.**
 - **innovative policing practices targeting high crime areas.**

FIREARM-RELATED MORTALITY RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
468	21.6	450	24.7	1,922	23.0

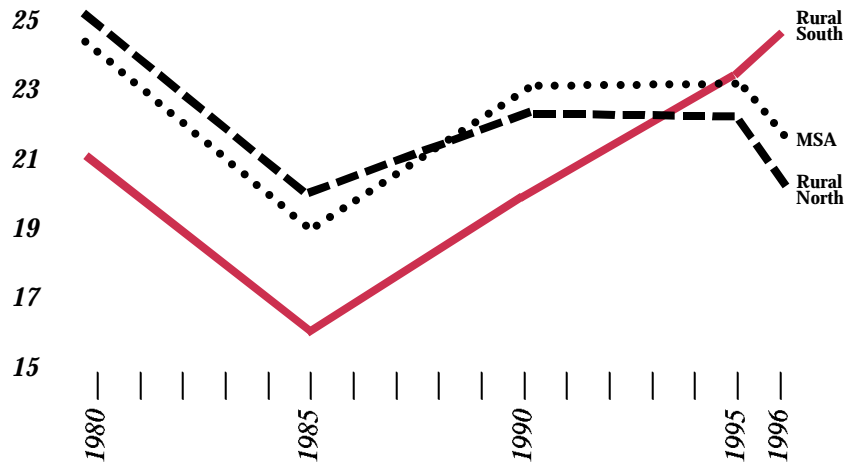
FIREARM-RELATED MORTALITY RATES: SIGNIFICANTLY HIGHER IN RURAL SOUTH COUNTIES



Considering age difference in population composition
of Rural and MSA counties:

Mortality rate for Rural South Alabama counties
remains significantly high.

FIREARM-RELATED MORTALITY RATES (1980-1996)
(Per 100,000 Population)

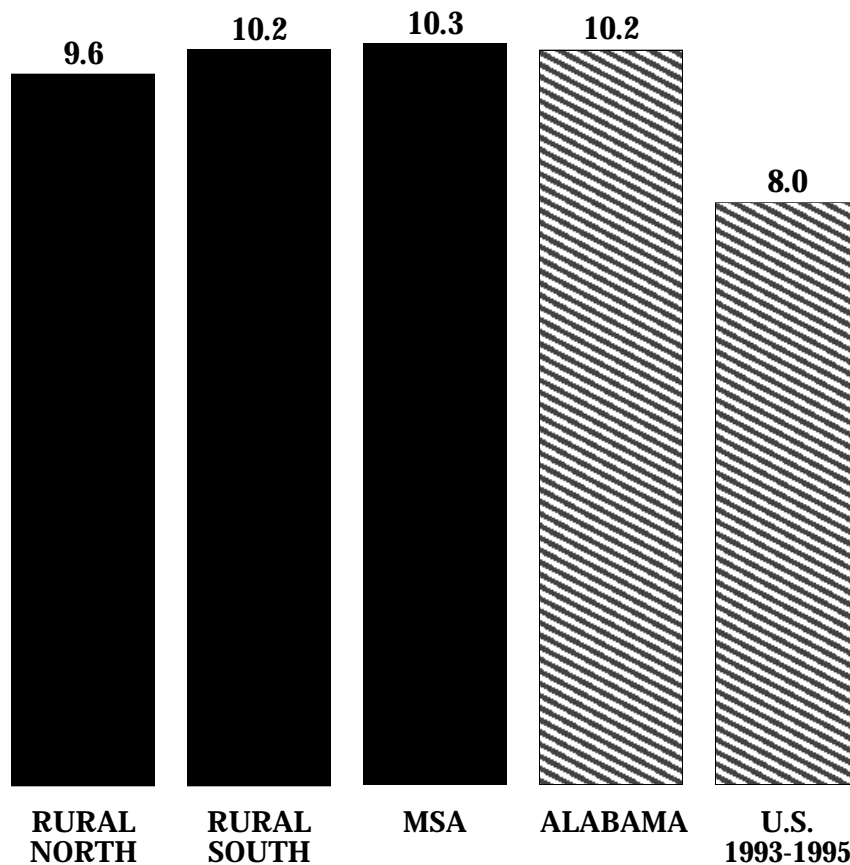


	1980		1985		1990		1995		1996	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rural North	181	25.4	147	20.6	164	22.8	162	22.5	146	20.3
Rural South	133	21.4	100	16.2	123	20.1	144	23.7	150	24.7
MSA	625	24.4	500	19.0	626	23.1	650	23.3	604	21.6

- Alabama’s 1995 firearm-related mortality rate ranked 4th highest among all 50 States.
- 900 Alabamians lost their lives due to accidental or intentional firearm usage during 1996.
- Nearly 76 percent of all 1996 Alabama suicides involved the use of a firearm.
- Nearly 78 percent of all 1996 Alabama homicide victims were killed with a firearm.
- Alabama’s homicide rate increased by nearly 20 percent during the past 10 years. This increase involved homicides where a firearm was used. The homicide rate for all means other than firearms actually decreased.
- Males in Alabama are at more than five times greater risk than females of becoming a victim of firearm-related death.
- Approximately one-half of all 1996 deaths to Alabama’s African American males aged 15-24 years involved the use of a firearm.
- Alabama’s African American males aged 15-24 years are at nearly 3 times greater risk of becoming a victim of firearm-related death today than ten years ago.
- The Bureau of Alcohol, Tobacco, and Firearms (ATF) reports that there were over 211 million firearms privately owned in the U.S. in 1991, of which nearly 71 million were handguns.
- Firearms are currently the second leading source of injury-related death in the U.S., behind motor vehicles. If this trend continues, firearm-related deaths should exceed motor vehicle fatalities by the year 2003.
- Many programs aimed at decreasing firearm-related injury are being studied. These include:
 - **educational programs for children and adults on gun handling, violence prevention, and safe storage of guns.**
 - **legislation designed to restrict access and/or usage of guns or to augment punishment for improper usage.**
 - **product or environmental modifications such as ammunition restriction, barrel length modification, or gun buy-back programs.**

INFANT MORTALITY RATES (1994-1996)

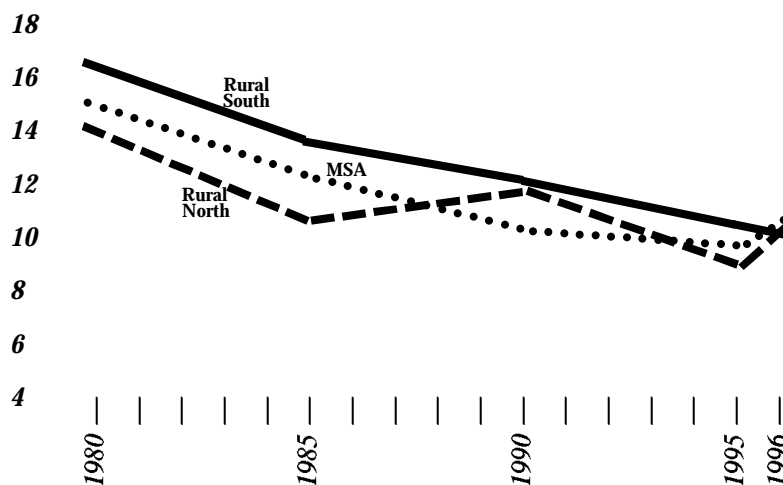
(Per 1,000 Live Births)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Deaths	Rate	Deaths	Rate	Deaths	Rate
291	9.6	281	10.2	1,271	10.3

**INFANT MORTALITY RATES:
NO SIGNIFICANT DIFFERENCE BETWEEN RATES
FOR RURAL AND URBAN COUNTIES**

INFANT MORTALITY RATES (1980-1996)
(Per 1,000 Live Births)



	1980		1985		1990		1995		1996	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Rural North	153	14.2	105	10.9	120	11.8	90	9.0	108	10.5
Rural South	180	16.5	133	13.9	120	12.1	97	10.6	93	10.1
MSA	627	15.0	514	12.7	449	10.4	405	9.9	433	10.6

- Alabama’s infant mortality rate has declined rapidly during this century and is only one-sixth as high as it was in 1940.
- Alabama continues to have one of the highest infant mortality rates among all States.
- More than one-third of all infant deaths occur in the first day of life and almost two-thirds occur in the first four weeks.
- Congenital anomalies (birth defects) is the leading cause of infant mortality.
- The mortality rate for infants born to African American mothers is approximately double that for Caucasian mothers.
- The mortality rate for infants born to teenage mothers is approximately one and one-half times that for adult mothers.

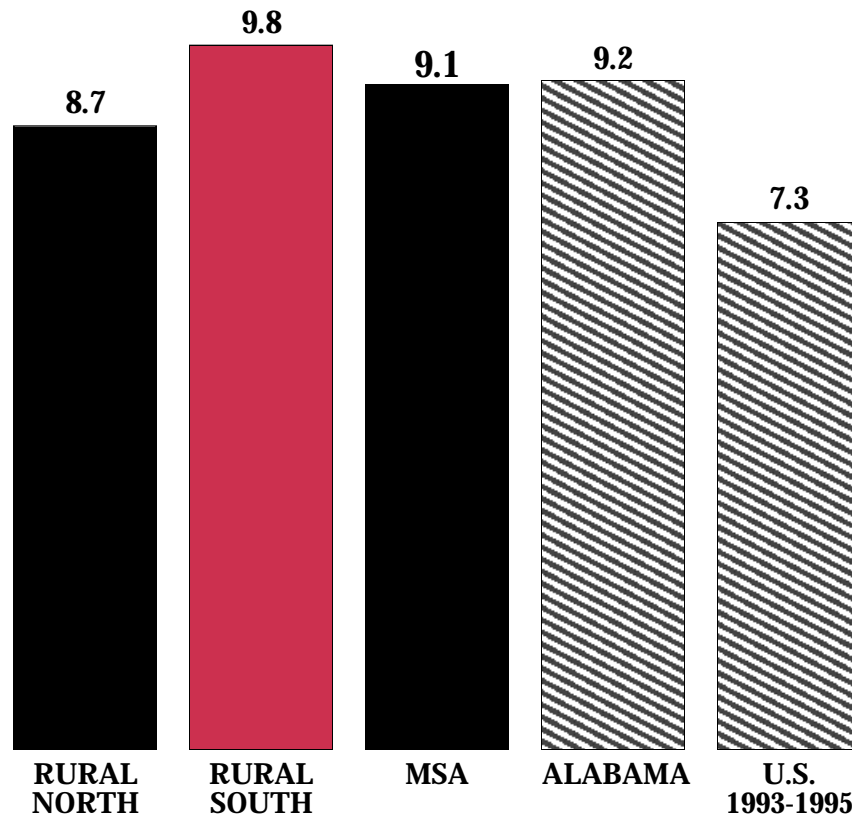
- Mothers at greater risk of losing an infant are those who:
 - **began prenatal care late in their pregnancy or had no prenatal care at all.**
 - **are less than 20 years of age.**
 - **are experiencing multiple pregnancies, especially triplets or greater plurality.**
 - **used tobacco during their pregnancy.**
 - **are undereducated.**

- The risk of losing an infant could be lowered by:
 - **encouraging pregnant women to begin prenatal care early and follow their doctor’s advise.**
 - **expanding family planning activities to prevent unwanted pregnancies.**
 - **encouraging teenagers to avoid pregnancy and to remain in school.**
 - **expanding Medicaid coverage so that more working mothers will have insurance coverage.**



**HEALTH STATUS OF
RURAL ALABAMIANS**

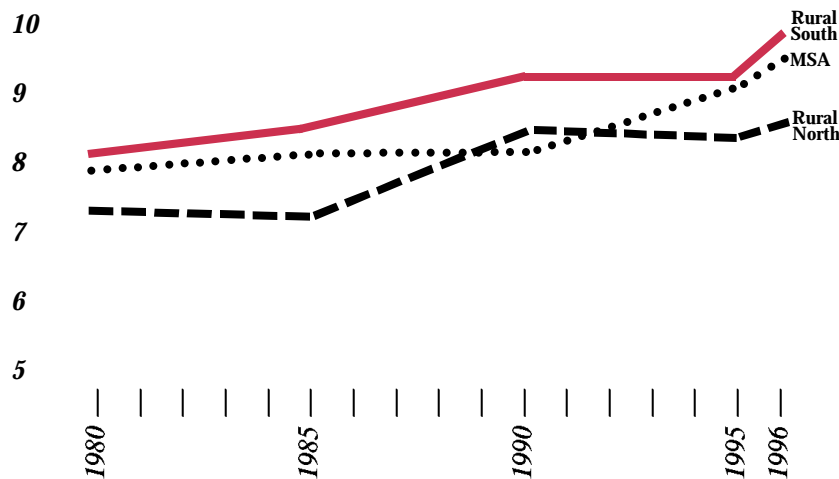
**LOW WEIGHT (UNDER 2,500 GRAMS)
BIRTHS (1994-1996)**
(As a Percentage of all Births)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Births	Percent	Births	Percent	Births	Percent
2,629	8.7	2,708	9.8	11,279	9.1

**PERCENTAGE OF LOW WEIGHT BIRTHS:
SIGNIFICANTLY HIGHER FOR RURAL
SOUTH ALABAMA COUNTIES**

LOW WEIGHT (UNDER 2,500 GRAMS) BIRTHS (1980-1996)
(As a Percentage of all Births)

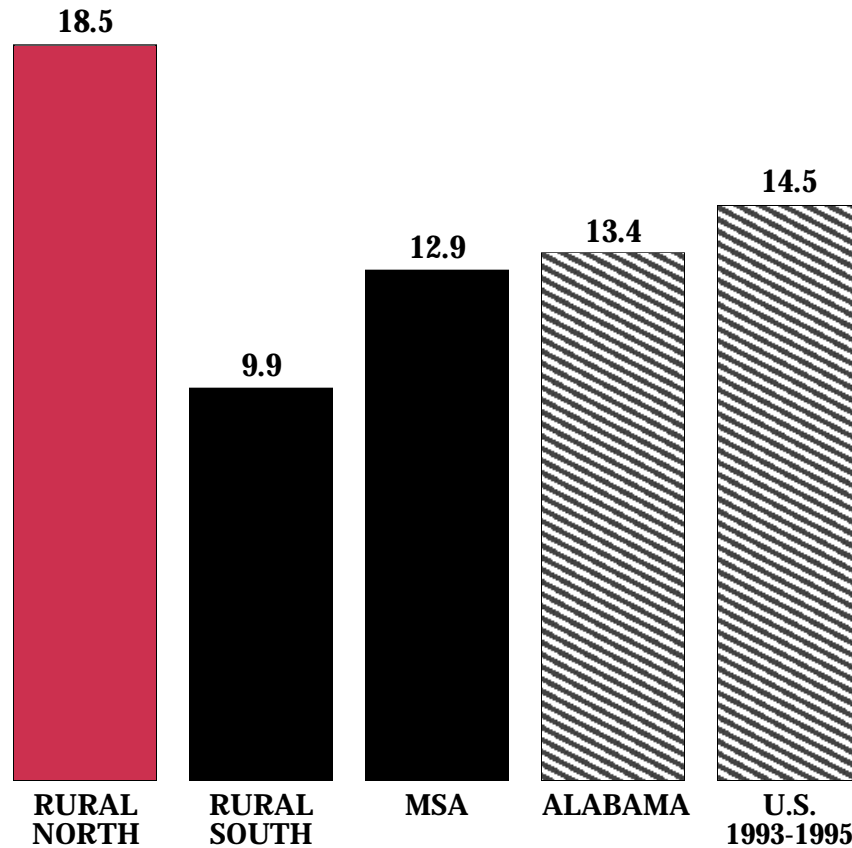


	1980		1985		1990		1995		1996	
	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.
Rural North	786	7.3	699	7.2	869	8.5	845	8.4	883	8.6
Rural South	887	8.1	805	8.4	923	9.3	849	9.3	913	9.9
MSA	3,312	7.9	3,281	8.1	3,539	8.2	3,754	9.1	3,839	9.4

- 9.3 percent of all 1996 births were of low birth weight (less than 5 pounds and 8 ounces or 2,500 grams). This was the highest percentage on record.
- 5,635 Alabama babies were born of low birth weight during 1996.
- Low weight births in Alabama have increased by 16% since 1988.
- The infant mortality rate for babies born of low weight is over 18 times greater than the rate for normal weight babies.
- The proportion of low weight births among African American mothers is approximately double that for Caucasians.
- Mothers are at greater risk of delivering a low weight infant if they:
 - **received less than adequate prenatal care during their pregnancy.**
 - **are experiencing an unplanned pregnancy.**
 - **are experiencing a plural pregnancy (twins, triplets, etc.).**
 - **used tobacco during their pregnancy.**
 - **are undereducated.**
 - **are teenagers or younger.**
 - **are African American.**
- The risk of delivering a low weight baby could be decreased by:
 - **starting prenatal care earlier and having the recommended number of visits.**
 - **following doctor's advice on nutrition and gaining an adequate amount of weight during pregnancy.**
 - **stopping tobacco use during pregnancy.**
 - **expanding family planning activities to prevent unwanted pregnancies.**

BIRTHS WITH MATERNAL TOBACCO USAGE DURING PREGNANCY (1994-1996)

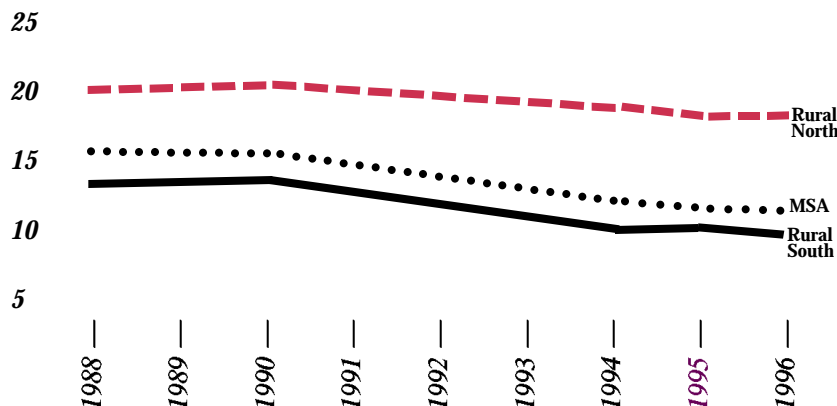
(As a Percentage of all Births)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Births	Percent	Births	Percent	Births	Percent
5,559	18.4	2,720	9.8	15,886	12.8

**PERCENTAGE OF BIRTHS WITH MATERNAL
TOBACCO USAGE:
SIGNIFICANTLY HIGHER FOR RURAL
NORTH ALABAMA COUNTIES**

**BIRTHS WITH MATERNAL TOBACCO USAGE
DURING PREGNANCY (1988-1996)**
(As a Percentage of all Births)



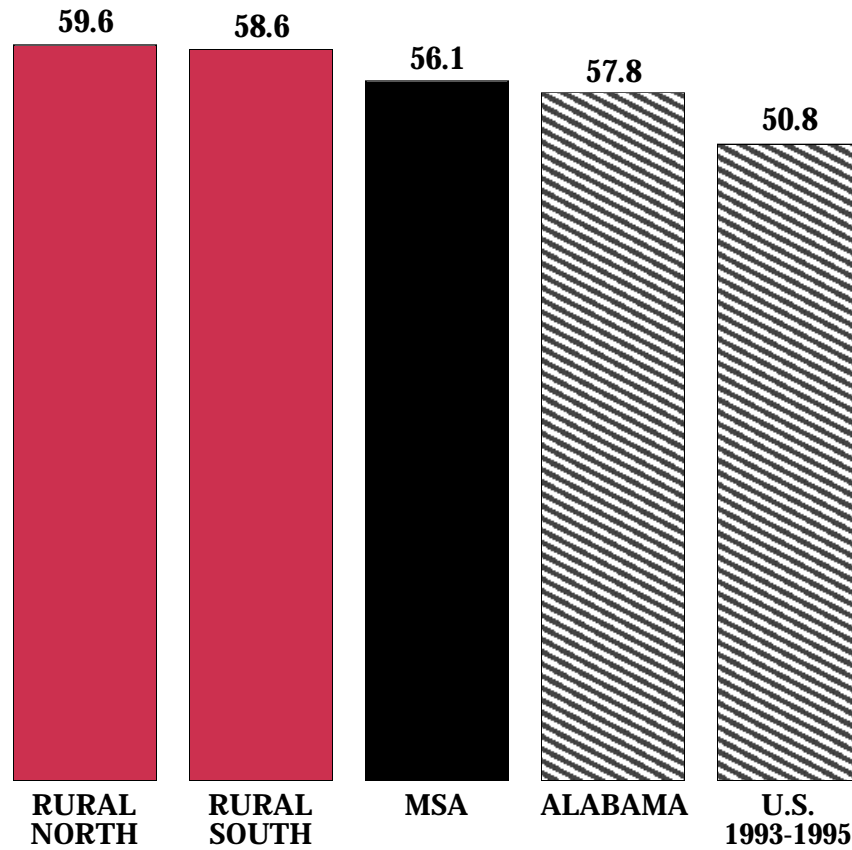
	1988		1990		1994		1995		1996	
	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.	Births	Pct.
Rural North	1,789	20.6	2,100	20.8	1,875	19.1	1,822	18.2	1,862	18.3
Rural South	1,065	13.2	1,320	13.4	936	10.1	943	10.4	841	9.2
MSA	6,497	16.3	7,003	16.2	5,466	13.2	5,283	12.9	5,137	12.6

- Tobacco usage during pregnancy increases the risk of prematurity and low birth weight.
- Babies born to mothers who used tobacco during their pregnancy are more likely to die in infancy, especially from sudden infant death syndrome and respiratory conditions.
- The infant mortality rate for infants born to mothers who used tobacco during their pregnancies is 29 percent higher than the rate where tobacco is not used.
- Colds and other respiratory ailments are more common among babies born to mothers who used tobacco during their pregnancy.
- Mothers who used tobacco during their pregnancy are less likely to begin prenatal care early and are more likely to have other poor health behaviors.
- Most mothers using tobacco during their pregnancy started using tobacco as a teenager.

- Maternal tobacco usage has the following patterns:
 - **Caucasian mothers are more likely to use tobacco than are mothers of other races.**
 - **Undereducated mothers are more apt to use tobacco than are more educated mothers.**
 - **Tobacco usage decreases with age among Caucasian mothers but increases with age among mothers of black and other races.**
 - **Poorer mothers are more likely to use tobacco than are wealthier mothers.**
 - **Mothers using tobacco during pregnancy are more likely to continue usage following delivery, exposing herself and her baby to an ongoing risk.**

TEENAGE PREGNANCY RATES (1994-1996)

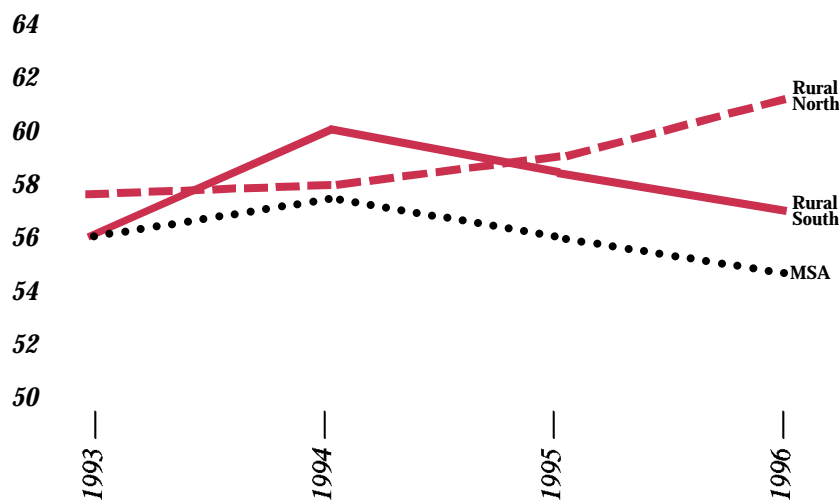
(Per 1,000 Females Aged 10-19 Years)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Births	Rate	Births	Rate	Births	Rate
9,073	59.6	8,750	58.6	32,815	56.1

**TEENAGE PREGNANCY RATES:
SIGNIFICANTLY HIGHER FOR RURAL
NORTH AND SOUTH ALABAMA COUNTIES**

TEENAGE PREGNANCY RATES (1993-1996)
(Per 1,000 Females Aged 10-19 Years)



	1993		1994		1995		1996	
	Pregnancies	Rate	Pregnancies	Rate	Pregnancies	Rate	Pregnancies	Rate
Rural North	3,004	57.7	2,988	58.2	2,995	59.0	3,090	61.6
Rural South	2,846	56.0	3,028	60.2	2,912	58.5	2,810	57.0
MSA	10,974	56.0	11,228	57.5	10,915	56.0	10,672	54.8

- 16,572 Alabama teenagers under 20 years in age were pregnant during 1996.
- These pregnancies resulted in 11,115 live births, 2,932 induced terminations, and 2,525 fetal losses.
- Teenagers account for approximately one in every five births to Alabamians.
- Almost 80 percent of all babies born to teenagers are the result of an unintended pregnancy.
- Teenage mothers are less likely to receive adequate prenatal care and their babies are at greater risk of being born of low weight and/or dying during infancy.
- Over 70 percent of all teenage mothers are unmarried.
- Becoming a mother at an age when life-long options are being developed limits these options for many teenagers.

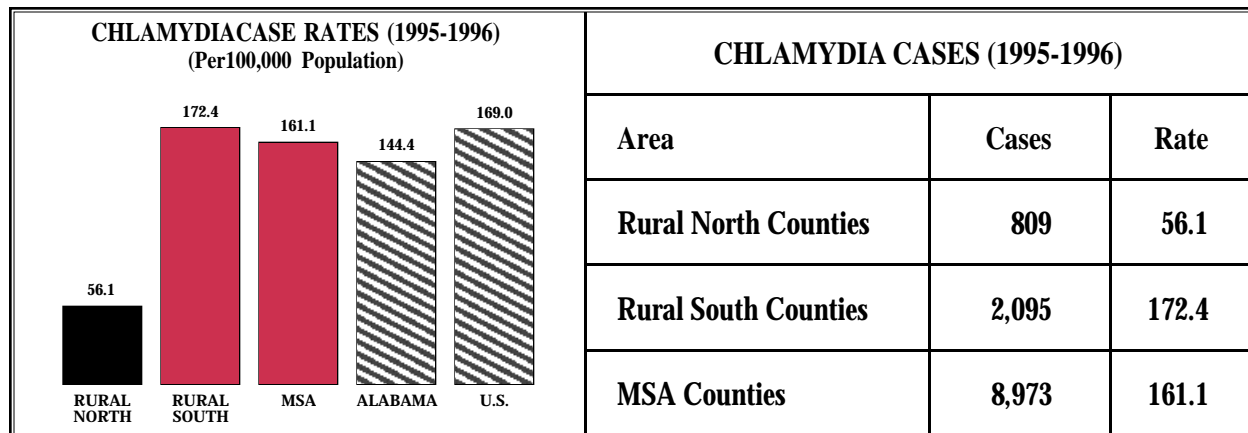
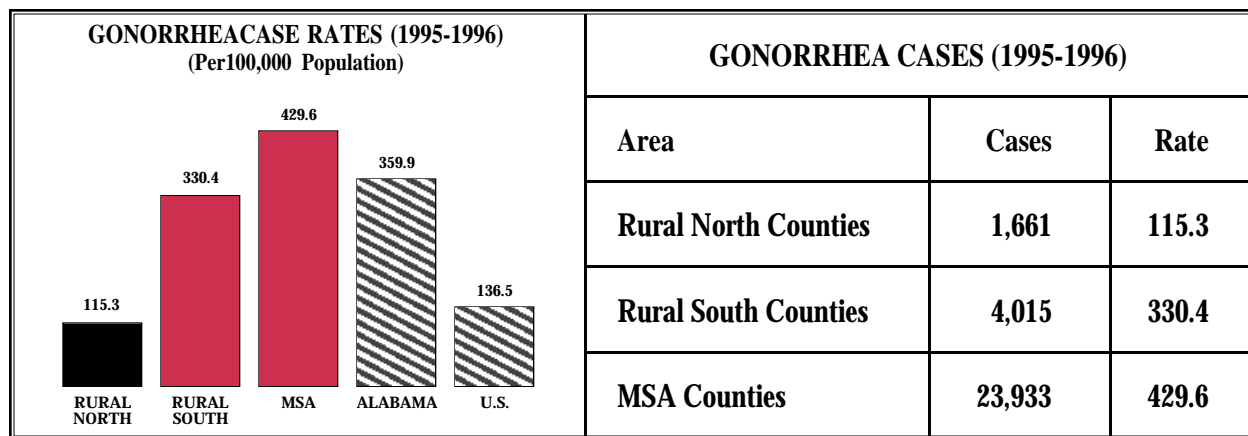
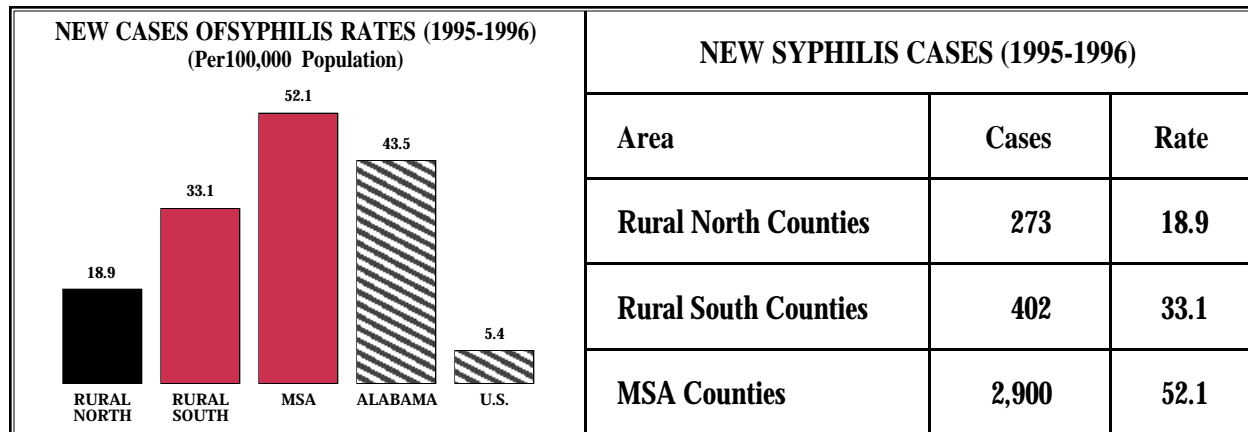
- Teenagers at greater risk of becoming pregnant include:
 - **those who were born to a teenage mother.**
 - **those who live in poverty.**
 - **African American teenagers (risk is approximately twice that for Caucasians).**
 - **those who engage in other high risk behaviors such as tobacco and /or alcohol usage.**

- The risk of becoming pregnant could be decreased by:
 - **participation in family planning clinics.**
 - **participation in school-based abstinence programs.**
 - **the use of baby-think-it-over dolls to teach teenagers more about the reality of caring for a baby.**
 - **expanding family planning activities to prevent unwanted pregnancies.**



**HEALTH STATUS OF
RURAL ALABAMIANS**

SEXUALLY TRANSMITTED DISEASES



SEXUALLY TRANSMITTED DISEASE CASE RATES:

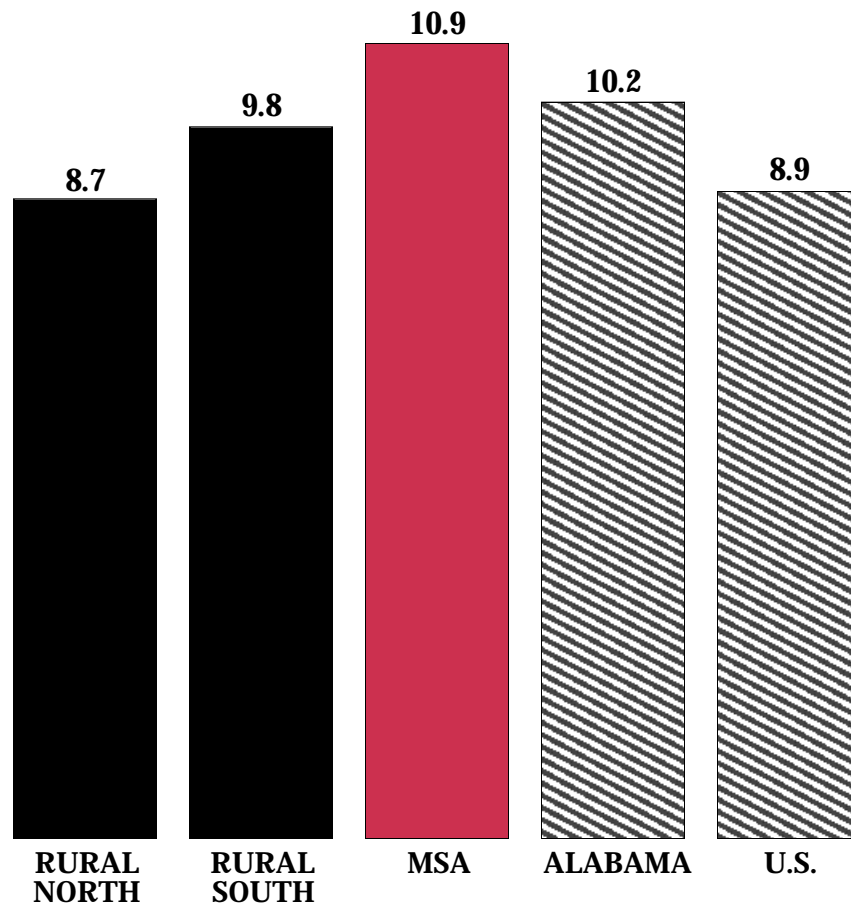
**RATES FOR RURAL SOUTH AND MSA COUNTIES
ARE SIGNIFICANTLY HIGHER FOR ALL THREE
MAJOR SEXUALLY TRANSMITTED DISEASES**

**SEXUALLY TRANSMITTED DISEASE CASES AND RATES
SELECTED YEARS, (1985-1996)**

	1985		1990		1995		1996	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
NEW CASES OF SYPHILIS								
Rural North	77	10.8	154	21.4	143	19.8	130	18.1
Rural South	207	33.5	579	94.5	171	28.1	231	38.1
MSA	1,090	41.4	2,265	83.6	1,473	52.9	1,427	51.0
GONORRHEA CASES								
Rural North	1,122	156.9	815	113.5	872	121.0	789	109.6
Rural South	3,080	499.2	2,628	428.8	2,179	358.6	1,836	302.6
MSA	19,452	738.3	17,079	630.3	13,104	470.5	10,829	386.8
CHLAMYDIA CASES (Chlamydia was not a notifiable disease in Alabama prior to October, 1994)								
Rural North	N.A.	N.A.	N.A.	N.A.	179	24.8	630	87.5
Rural South	N.A.	N.A.	N.A.	N.A.	592	97.4	1,503	247.7
MSA	N.A.	N.A.	N.A.	N.A.	2,692	96.6	6,281	224.3

- In 1995 and 1996, the 15-24 age group represented 63.7% and 63.4%, respectively, of Alabama's gonorrhea morbidity.
- In 1995 and 1996, the 15-19 age group contributed the largest proportion of reported chlamydia cases representing 41.2% and 40.8%, respectively.
- In Alabama in 1995 and 1996, African Americans represented 87.2% of the total reported syphilis, 81.0% of the gonorrhea, and 46.9% of the chlamydia morbidity.
- The following trends for 1995 and 1996 are noted for reported sexually transmitted disease (syphilis, gonorrhea, and chlamydia) cases:
 - **The racial distribution is Caucasian (8.2%), African American (71.8%), Hispanic (0.5%), American Indian (0.02%), and other or unknown races (19.4%).**
 - **The gender distribution is 60% female and 40% male.**
 - **The 15-19 age group represents the largest proportion of the reported cases accounting for 33.3% of all cases.**
- Sexually transmitted diseases can be prevented through the following risk-reduction practices:
 - **sexual abstinence.**
 - **participating in a mutually monogamous relationship.**
 - **using condoms during intercourse.**
 - **limiting the number of sexual partners.**
 - **not sharing needles.**

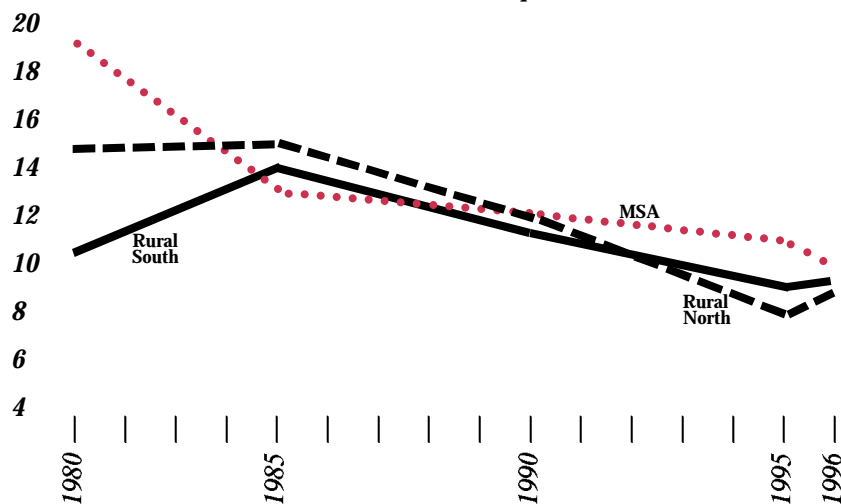
NEW CASES OF TUBERCULOSIS RATES (1994-1996) (Per 100,000 Population)



RURAL NORTH COUNTIES		RURAL SOUTH COUNTIES		MSA COUNTIES	
Cases	Rate	Cases	Rate	Cases	Rate
189	8.7	178	9.8	908	10.9

**NEW CASES OF TUBERCULOSIS RATES:
RATE FOR MSA COUNTIES IS SIGNIFICANTLY HIGHER THAN
THAT FOR RURAL NORTH COUNTIES AND IS NOT SIGNIFICANTLY
HIGHER THAN THE RATE FOR RURAL SOUTH COUNTIES.**

NEW CASES OF TUBERCULOSIS RATES (1980-1996)
(Per 100,000 Population)



	1980		1985		1990		1995		1996	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Rural North	105	14.7	107	15.0	86	12.0	58	8.0	64	8.9
Rural South	65	10.5	88	14.3	70	11.4	56	9.2	57	9.4
MSA	493	19.3	349	13.2	328	12.1	306	11.0	301	10.8

- 422 cases of tuberculosis were reported in Alabama during 1996 for a case rate of 10.2 per 100,000 population.
- 21,337 cases of tuberculosis were reported in the U.S. during 1996 for a case rate of 8.0 per 100,000 population.
- Globally, there are approximately 8 million new cases of tuberculosis and 3 million deaths due to tuberculosis each year.
- It is estimated that there are more than 200,000 people in Alabama infected with the organism that causes tuberculosis.
- One-third (approximately 2 billion people) of the world's population are infected with the organism that causes tuberculosis and are potential cases.
- Males are at nearly twice the risk of becoming a tuberculosis case than are females.
- Nationally, the new cases of tuberculosis reported during 1996 were comprised of 33% African Americans, 26% Caucasians, 21% Hispanics, 18% Asian and Pacific Islanders, and 1% American Indians and Alaskan Natives.
- Those at highest risk of exposure and progression to tuberculosis include:
 - **persons positive with the Human Immunodeficiency Virus (HIV).**
 - **residents of correctional facilities.**
 - **homeless persons.**
 - **residents of long-term care facilities.**
 - **health care workers.**
 - **substance abusers.**
 - **persons born outside the United States.**



**HEALTH STATUS OF
RURAL ALABAMIANS**

TECHNICAL NOTES

CLASSIFICATION OF DATA BY RESIDENCE

Data on health-related factors presented in this publication are by place of residence rather than place of occurrence. Mortality factors are expressed by the area (Rural North, Rural South, or MSA counties) where the decedents resided. Natality factors are presented by the area where the mothers resided. Notifiable disease factors are presented by the area of residence of victims.

DATA SOURCES

MORTALITY DATA:

Mortality or cause of death data presented in this publication were obtained from death certificate files maintained in the Alabama Center for Health Statistics. The cause of death used in tabulating death data is the “underlying cause” as determined from information provided on death certificates by the attending physician, coroner, or medical examiner. The “underlying cause” is defined as that cause deemed responsible for the sequence of morbid events leading directly to death. All causes of death are classified according to the *International Classification of Diseases, Ninth Revision, (ICD)*. Specific ICD codes comprising the various causes of death analyzed in this publication are presented in the following table.

CAUSE OF DEATH	ICD CODE(S)
Cancer	140-208
Colon Cancer	153,159.0
Trachea, Bronchus, Lung, Pleura Cancer	162.0-163.9
Melanoma and Other Skin Cancer	172.0-173.9
Female Breast Cancer	174
Cervix Uteri Cancer	180
Prostate Cancer	185
Leukemia	202.4,203.1,204-208
Diabetes	250
Nutritional Deficiency	260-269
Alzheimer’s Disease	331.0
Heart Disease	390-398,402,404-429
Hypertension	401,403
Stroke	430-438
Pneumonia and Influenza	480-487
Chronic Obstructive Pulmonary Diseases	490-496
Stomach Ulcer	531-533
Nephritis, Nephrotic Syndrome, and Nephrosis	580-589
Motor Vehicle Accidents	E810-E825
Accidental Falls	E880-E888
Accidental Fires and Flames	E890-E899
Accidental Suffocation	E911-E913
Suicide	E950-E959
Homicide	E960-E978
Firearm-Related Deaths	E922,E955.0-E955.4, E965.0-E965.4, E985.0-E985.4

NATALITY DATA:

Nativity data included in this publication was obtained from birth certificate and induced termination of pregnancy files maintained in the Alabama Center for Health Statistics. The estimated number of pregnancies is comprised of live births, induced terminations of pregnancy, and estimated fetal losses. Births and induced terminations of pregnancy are reported to the Alabama Center for Health Statistics and are readily obtainable. The estimated number of fetal losses is determined by using a widely accepted formula developed by The Alan Guttmacher Institute. This formula is presented in the section entitled "Formulas Used in This Publication."

Additional mortality and natality information is available by contacting:

Alabama Department of Public Health
Alabama Center for Health Statistics
Division of Statistical Analysis
Post Office Box 5625
Montgomery, Alabama 36103-5625
Telephone: (334) 206-5429

NOTIFIABLE DISEASE DATA:

Sexually transmitted disease data included in this publication was provided by the Sexually Transmitted Disease Division and tuberculosis data was provided by the Division of Tuberculosis Control. Both Divisions are in the Bureau of Disease Control, Alabama Department of Public Health.

These offices can be contacted at the following addresses:

Alabama Department of Public Health
Bureau of Disease Control
Sexually Transmitted Disease Division
Post Office Box 303017
Montgomery, Alabama 36130-3017
Telephone: (334) 206-5350

Alabama Department of Public Health
Bureau of Disease Control
Division of Tuberculosis Control
Post Office Box 303017
Montgomery, Alabama 36130-3017
Telephone: (334) 206-5330

POPULATION DENOMINATOR DATA USED IN CALCULATING RATES

Projections developed by the Alabama State Data Center, Center for Business and Economic Research, College of Commerce and Business Administration, The University of Alabama were used as population denominator data in calculating the rates appearing in this publication. The following population estimates were used for each year comprising the denominator in calculating three-year rates:

<u>AREA</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>
Alabama	1,970,030	2,143,498	4,113,528
Rural North Counties	346,768	373,827	720,595
Rural South Counties	288,717	318,851	607,568
MSA Counties	1,334,545	1,450,820	2,785,365

USING TOTALS OR RATES/PERCENTAGES

Events can be reported as totals, rates, or percentages. Totals will suffice when the user needs to know how many times a certain event occurred and no relationship or comparison is to be made with other areas or different time periods.

When different areas or time periods are being studied it may be best to use rates or percentages. Populations vary between areas, which is true of the three areas being analyzed in this publication. Populations also vary over time within the same area. It is possible that variations in the occurrence of events could result primarily from differences in the population(s) and do not indicate a new or significant trend.

Rates or percentages express the occurrence of events in relation to a set standard. For example, the cause-specific crude death rate is expressed per 100,000 population. This comparison removes differences between populations of areas or over time in the same area.

Age-adjusted mortality rates are tested for significant differences between the three rural/urban areas. The merits of using age-adjusted rates and a general explanation of what these are follows in the section entitled "Mortality Factor Deaths, Crude Rates, and Age-Adjusted Rates."

DEFINITIONS

Abortion - In this publication, the terms *abortion* and *induced termination of pregnancy* are used synonymously.

Cause of Death - The cause of death presented in this publication is the “underlying cause” which is defined as the cause deemed responsible for the sequence of morbid events leading directly to death. Deaths, by cause, are classified according to the *International Classification of Diseases, Ninth Revision*, following instructions established by the National Center for Health Statistics.

Death - Death is generally defined as no spontaneous respiratory or cardiac function and no expectation of recovery of these functions. For definitions of death determination under other than general circumstances, the Code of Alabama should be consulted.

Estimated Total of Fetal Losses - This term, which is a component used in determining the number of pregnancies, is used in describing the estimated number of fetal deaths, regardless of gestational age. “Estimated total fetal losses” is considered to be equal to the sum of 20 percent of live births and 10 percent of abortions. This formula was developed by the Alan Guttmacher Institute and is widely accepted and used. “Estimated total fetal losses” should be distinguished from the term “fetal deaths” which describes events of at least 20 weeks in gestation which are reported as required by Alabama law.

Estimated Population - Estimated population as of April 1 of the year for which the estimate is made. Population estimates used in this publication were developed by the Center for Business and Economic Research at the University of Alabama.

Estimated Pregnancies - The sum of live births, abortions, and estimated total fetal losses.

Induced Termination of Pregnancy - The purposeful interruption of an intrauterine pregnancy with the intention other than to produce a liveborn infant and which does not result in a live birth. This definition excludes management of prolonged retention of products of conception following fetal death. In this publication, the terms *induced termination of pregnancy* and *abortion* are used synonymously.

Infant Death - Death of a liveborn infant under one year of age.

Infant Mortality - This is used synonymously with infant death.

Live Birth - The complete expulsion or extraction from the mother of a product of human conception, irrespective of the duration of the pregnancy, which, after such expulsion or extraction, breathes, or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps.

Low Weight Birth - A weight at birth of under 2,500 grams or 5 pounds and 8 ounces.

Morbidity - The relative incidence of disease.

Mortality - The relative incidence of death.

Pregnancy - The condition of having a developing embryo or fetus in the body, after union of an ovum and spermatozoon.

Teenage - In this publication, references to teenagers include those persons aged 10 years through 19 years.

FORMULAS USED IN THIS PUBLICATION

$$\text{CAUSE - SPECIFIC MORTALITY RATE} = \frac{\text{Number of Deaths for Specific Cause}}{\text{Total Population for Specified Years}} \times 100,000$$

$$\text{CAUSE - SPECIFIC AGE - ADJUSTED MORTALITY RATE} = \left(\frac{\text{Decedents Under 1 Year of Age}}{\text{Total Population Under 1 Year of Age for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Under 1 Year of Age}}{\text{Under 1 Year of Age}} \right) +$$

$$\left(\frac{\text{Decedents Aged 1 - 4}}{\text{Total Population Aged 1 - 4 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 1 - 4}}{\text{Aged 1 - 4}} \right) +$$

$$\left(\frac{\text{Decedents Aged 5 - 14}}{\text{Total Population Aged 5 - 14 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 5 - 14}}{\text{Aged 5 - 14}} \right) +$$

$$\left(\frac{\text{Decedents Aged 15 - 24}}{\text{Total Population Aged 15 - 24 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 15 - 24}}{\text{Aged 15 - 24}} \right) +$$

$$\left(\frac{\text{Decedents Aged 25 - 34}}{\text{Total Population Aged 25 - 34 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 25 - 34}}{\text{Aged 25 - 34}} \right) +$$

$$\left(\frac{\text{Decedents Aged 35 - 44}}{\text{Total Population Aged 35 - 44 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 35 - 44}}{\text{Aged 35 - 44}} \right) +$$

$$\left(\frac{\text{Decedents Aged 45 - 54}}{\text{Total Population Aged 45 - 54 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 45 - 54}}{\text{Aged 45 - 54}} \right) +$$

$$\left(\frac{\text{Decedents Aged 55 - 64}}{\text{Total Population Aged 55 - 64 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 55 - 64}}{\text{Aged 55 - 64}} \right) +$$

$$\left(\frac{\text{Decedents Aged 65 - 74}}{\text{Total Population Aged 65 - 74 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 65 - 74}}{\text{Aged 65 - 74}} \right) +$$

$$\left(\frac{\text{Decedents Aged 75 - 84}}{\text{Total Population Aged 75 - 84 for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 75 - 84}}{\text{Aged 75 - 84}} \right) +$$

$$\left(\frac{\text{Decedents Aged 85 or more}}{\text{Total Population Aged 85 or more for Specified Years}} \times \frac{1940 \text{ U.S. Standard Million Population Aged 85 or more}}{\text{Aged 85 or more}} \right)$$

1940 Total U.S. Standard Million Population

x 100,000

FORMULAS (continued)

<p>INFANT MORTALITY RATE</p>	=	$\frac{\text{Number of Deaths Under 1 Year of Age}}{\text{Number of Live Births for Specified Years}}$	x 1,000
<p>PERCENTAGE OF BIRTHS BY CHARACTERISTIC</p>	=	$\frac{\text{Total Number of Births by Characteristic During Specified Years}}{\text{Total Number of Births During Specified Years}}$	x 100
<p>TOTAL ESTIMATED FETAL LOSSES</p>	=	$20 \text{ Percent of Live Births During Specified Years} + 10 \text{ Percent of Abortions During Specified Years}$	
<p>PREGNANCY RATE</p>	=	$\frac{\text{Number of Live Births During Specified Years} + \text{Number of Abortions During Specified Years} + \text{Total Estimated Fetal Losses During Specified Years}}{\text{Estimated Female Population Aged 15 - 44 During Specified Years}}$	x 1,000
<p>SEXUALLY TRANSMITTED DISEASE/ TUBERCULOSIS RATE</p>	=	$\frac{\text{STD or Tuberculosis Cases During Specified Years}}{\text{Total Estimated Population for Specified Years}}$	x 100,000

MORTALITY FACTOR DEATHS, CRUDE RATES, AND AGE-ADJUSTED RATES

Cause of death or mortality factors in this publication are presented for three-year periods of time (1994-1996) to diminish the impact of substantial annual variation which can result for causes with relatively few deaths. Information presented for each specific cause includes the number of deaths and unadjusted (crude) mortality rates. Tests for significant differences between the crude rates for the three areas of analysis (Rural North, Rural South, MSA counties) are conducted and the findings presented. Cause-specific crude rates are expressed per 100,000 population. Rates for gender-specific causes of death are per 100,000 population for that gender.

Age-adjusted mortality rates are desired in many situations where differences in crude rates may primarily reflect variation in the age composition of the population(s) being analyzed. This is especially true for chronic diseases where mortality rates tend to be considerably higher among older populations. Age-adjusted rates remove age as a factor and allow for rate comparison between areas without having the age of a population confound your analysis. Tests for significant variation between age-adjusted mortality rates were conducted and the findings presented on the bottom of the first page for each mortality factor. Since age-adjusted rates are based on a standardized and non-existent population (the 1940 U.S. population in this publication), these can only be used for comparison purposes. For this reason, age-adjusted rate values were not indicated in the body of this publication. However, these values are displayed in the following table along with unadjusted rates and the number of deaths.

CAUSE OF DEATH	RURAL NORTH COUNTIES			RURAL SOUTH COUNTIES			MSA COUNTIES		
	DEATHS	CRUDE RATES	AGE-ADJ. RATES	DEATHS	CRUDE RATES	AGE-ADJ. RATES	DEATHS	CRUDE RATES	AGE-ADJ. RATES
Cancer	5,497	254.3	143.1	4,423	242.7	149.8	18,491	221.3	141.4
Colon Cancer	373	17.3	8.5	323	17.7	10.0	1,522	18.2	10.5
Trachea, Bronchus, Lung, Pleura Cancer	1,532	70.9	41.8	1,167	64.0	41.6	5,551	66.4	44.4
Melanoma and Other Skin Cancer	79	3.7	2.2	48	2.6	1.8	294	3.5	2.4
Female Breast Cancer	344	30.7	18.6	266	27.8	18.7	1,357	31.2	21.0
Cervix Uteri Cancer	44	3.9	3.2	51	5.3	3.3	167	3.8	2.8
Prostate Cancer	332	31.9	15.7	330	38.1	20.6	1,214	30.3	17.9
Leukemia	226	10.5	6.1	145	8.0	4.8	660	7.9	5.1
Diabetes	594	27.5	13.4	578	31.7	17.8	2,177	26.1	15.2
Nutritional Deficiency	56	2.6	1.0	32	1.8	0.5	143	1.7	0.7
Alzheimer's Disease	215	9.9	3.1	162	8.9	3.1	832	10.0	3.6
Heart Disease	8,803	407.2	185.9	6,593	361.7	179.9	24,518	293.4	154.1
Hypertension	102	4.7	1.8	114	6.3	3.1	456	5.5	2.8
Stroke	1,708	79.0	31.6	1,447	79.4	36.7	5,164	61.8	30.0
Pneumonia and Influenza	885	40.9	15.1	631	34.6	13.3	2,622	31.4	13.5
Chronic Obstructive Pulmonary Diseases	1,085	50.2	24.4	746	40.9	20.5	3,362	40.2	21.8
Stomach Ulcer	47	2.2	1.1	34	1.9	1.0	151	1.8	0.9
Nephritis, Nephrotic Syn- drome, and Nephrosis	361	16.7	6.7	341	18.7	8.2	1,144	13.7	7.0
Motor Vehicle Accidents	875	40.5	41.4	709	38.9	38.6	1,975	23.6	23.2
Accidental Falls	147	6.8	3.2	76	4.2	2.1	479	5.7	2.8
Accidental Fires and Flames	60	2.8	2.3	69	3.8	3.2	227	2.7	2.2
Accidental Suffocation	64	3.0	1.7	62	3.4	2.1	223	2.7	1.8
Suicide	353	16.3	15.3	236	12.9	12.1	1,108	13.3	12.4
Homicide	180	8.3	8.5	280	15.4	16.4	1,296	15.5	16.4
Firearm-Related Deaths	468	21.6	20.9	451	24.7	25.0	1,924	23.0	23.3

OTHER CAUSE OF DEATH RURAL/URBAN ANALYSES AVAILABLE BY REQUEST

Individual pamphlets presenting analysis similar to those contained in this publication will soon be available on the selected major causes of death listed below. These pamphlets will be available by special request.

CAUSE OF DEATH	ICD CODE(S)
Septicemia	038
Buccal Cavity and Pharynx Cancer	140-149
Esophagus Cancer	150
Stomach Cancer	151
Rectum, Anus, Rectosigmoid Cancer	154
Liver and Intrahepatic Bile Duct Cancer	155
Gallbladder and Extrahepatic Bile Duct Cancer	156
Pancreatic Cancer	157
Larynx Cancer	161
Connective and Other Soft Tissue Cancer	171
Uterus, Excluding Cervix Cancer	179, 181-182
Ovarian Cancer	183.0
Urinary Bladder Cancer	188
Kidney and Renal Pelvis Cancer	189.0-189.1
Brain and Other Nervous System Cancer	191-192
Non-Hodgkin's Lymphomas	159.1, 200, 202.0-202.2, 202.6, 202.8-202.9
Multiple Myeloma	203.0, 203.8
Benign Neoplasm	210-239
Anemia	280-285
Atherosclerosis	440
Abdominal Cavity Hernia	550-553, 560
Chronic Liver Disease and Cirrhosis	571
Cholelithiasis and Other Gallbladder Disorder	574-575
Congenital Anomalies	740-759
Perinatal Conditions	760-779
Accidental Drowning	E830, E832, E910
Accidental Poisoning	E850-E869

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