

Heart Disease and Stroke

Heart Disease and Stroke: The National Challenge*

Heart disease and stroke—the principle components of cardiovascular disease—are the first and third leading causes of death in the United States. Heart disease and stroke continue to be major causes of disability. In 2003, the cost of heart disease and stroke is projected to be around \$351 billion and is a major factor that increase health care costs in the U.S.

Heart Disease

Heart disease killed more than 700,000 Americans in 2001. Coronary Heart Disease (CHD) is the most common form of heart disease. About 12 million people in the United States have CHD. CHD has declined in the U.S. general population over the past 35 years. But, the lifetime risk for developing CHD is very high in the United States. One

of every two males and one of every three females aged 40 years and under will develop CHD sometime in their life.

Strokes

In 2001 stroke accounted for more than 163,500 deaths in the U.S. According to the CDC, about 700,000 strokes occur each year in the United States. On average a stroke occurs every 45 seconds. Stroke is a major form of cerebrovascular disease (CVD or disease of the brain's blood vessels). About 4 million persons have cerebrovascular disease. Death rates for stroke are highest in the southeastern United States. Like CHD death rates, stroke death rates have declined over the past 30 years. Experts believe the declines are due to improvements in the detection and treatment of high blood pressure (hypertension).

Heart disease and stroke deaths rise significantly after age 65 years, accounting for more than 40 percent of all deaths among persons aged 65 to 74. Almost 75% of the nearly 5 million patients with heart failure in the United States are older than 65 years.

For more information on heart disease and stroke visit this web-site.

<http://www.healthypeople.gov>

National, State and Local Disparities In Heart Disease And Stroke

In the United States there are apparent health disparities related to heart disease and stroke. These disparities are readily seen in regards to race and gender. According to a CDC report, African Americans had a 29% higher heart disease mortality rate than whites in 1999. For stroke deaths the difference was even greater. African Americans had a 40% higher mortality rate than whites. When comparing gender, males had a 49% higher heart disease mortality rate than females.

In 2002, at the state level (Florida), the same disparities exist. Whites have a much lower heart disease mortality rate than African Americans (201.8 to 276.8 per 100,000 respectively). Just like the U.S., Florida has seen its largest racial disparity between whites and African Americans related to stroke mortality rates. The rates for African Americans are almost twice as much as whites (77.3 to 39.8 per 100,000 persons).

When looking at gender, males have a much higher heart disease

(Continued on page 6)

Inside this issue:

Heart Disease & Stroke: The National Challenge	1
National State and Local Disparities In Heart Disease and Stroke	1
Jacksonville Heart Disease and Stroke Report Card	2
CCHP Program: A Local Intervention	3
Trends in Heart Disease and Stroke	4

* From Healthy People 2010, U.S. Department of Health and Human Services .

Jacksonville Heart and Stroke Health Report Card

Obj #	Objective	U.S. (1998)	FL (2002)	Duval (2002)	2010 Target
12-1	Reduce coronary heart disease deaths. (Rates per 100,000)	208	173.4 ¹	178.8 ¹	166.0
12-6	Reduce hospitalizations of older adults with congestive heart failure as the principal diagnosis. (Rates per 1,000)				
12-6a	Adults aged 65 to 74 years	13.2	10.8 ²	15.2 ²	6.5
12-6b	Adults aged 75 to 84 years	26.7	21.0 ²	26.7 ²	13.5
12-6c	Adults aged 85 and older	52.7	41.6 ²	46.2 ²	26.5
12-7	Reduce stroke deaths (Rates per 100,000)	60.0	44.6 ³	60.4 ³	48.0
12-9	Reduce the proportion of adults with high total blood cholesterol levels. (Percent)	28	27.7 ⁴	26.1 ⁴	16
12-14	Reduce the proportion of adults with high total blood cholesterol levels. (Percent)	21	35.2 ⁴	29.6 ⁴	17
12-15	Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years. (Percent)	67	91.8 ⁴	91.2 ⁴	80

¹ Florida Department of Health, Office of Vital Statistics, 2002

² Agency for Health Care Administration, 2002

³ Florida Department of Health, Office of Planning, Evaluation, and Data Analysis

⁴ Behavioral Risk Factor Surveillance System, 2002

Data related to heart disease and stroke are readily available at the state and local level. Even behavioral data such as checking cholesterol level was accessible. In this report, most of the data were cited from the Office of Vital Statistics, the Agency for Health Care Administration and the 2002 Florida and Duval County Behavioral Risk Factor Surveillance Survey (BRFSS).

When comparing mortality rates for the state and county (objectives 12-1 and 12-7), the state has lower rates

for both heart disease and stroke. The same results are seen for the state and county for congestive heart failure hospitalization (objectives 12-6a-12.6c). However when examining BRFSS data (objectives 12-14 and 12-15), Duval County had better results than Florida.

Although progress has been made related to heart disease and stroke, Duval County only had one of the reported objectives meeting the Healthy People 2010 targets. The proportion of Duval County adults

who had their blood cholesterol checked (objectives 12-15) was 14% higher than the HP 2010 target..

These objectives highlight some of the compelling public health problems related to heart disease and stroke for Duval County. These issues will be addressed by state and local agencies including the Duval County Health Department, Healthy Jacksonville coalitions and its partners and collaborators. For information on available data, please contact Radley Remo at 665-3116.

Community Cardiovascular Health Program

Irmatine Bealyer, CCHP Manager

The purpose of Hearts With Spirit, Duval County’s Community Cardiovascular Health Program (CCHP) is to reduce the incidence of cardiovascular disease, delay the onset of disability and alleviate the severity of the disease, by addressing the major risk factors of cardiovascular disease. The major cardiovascular disease risk factors targeted by CCHP are adult tobacco use, elevated cholesterol, high blood pressure, physical inactivity and poor nutrition, including overweight, obesity and diabetes. This

program complements and enhances ongoing efforts to implement a community-wide Healthy People 2010 program to increase quality and years of healthy life and to eliminate healthy disparities.

According to Duval County’s 2002 Behavior Risk Factor Surveillance System (BRFSS), an estimated 26.1% of the county has heart disease and 9.5% of the county has diabetes. With an estimated adult population of 778,879 citizens in the county, approximately 203,287

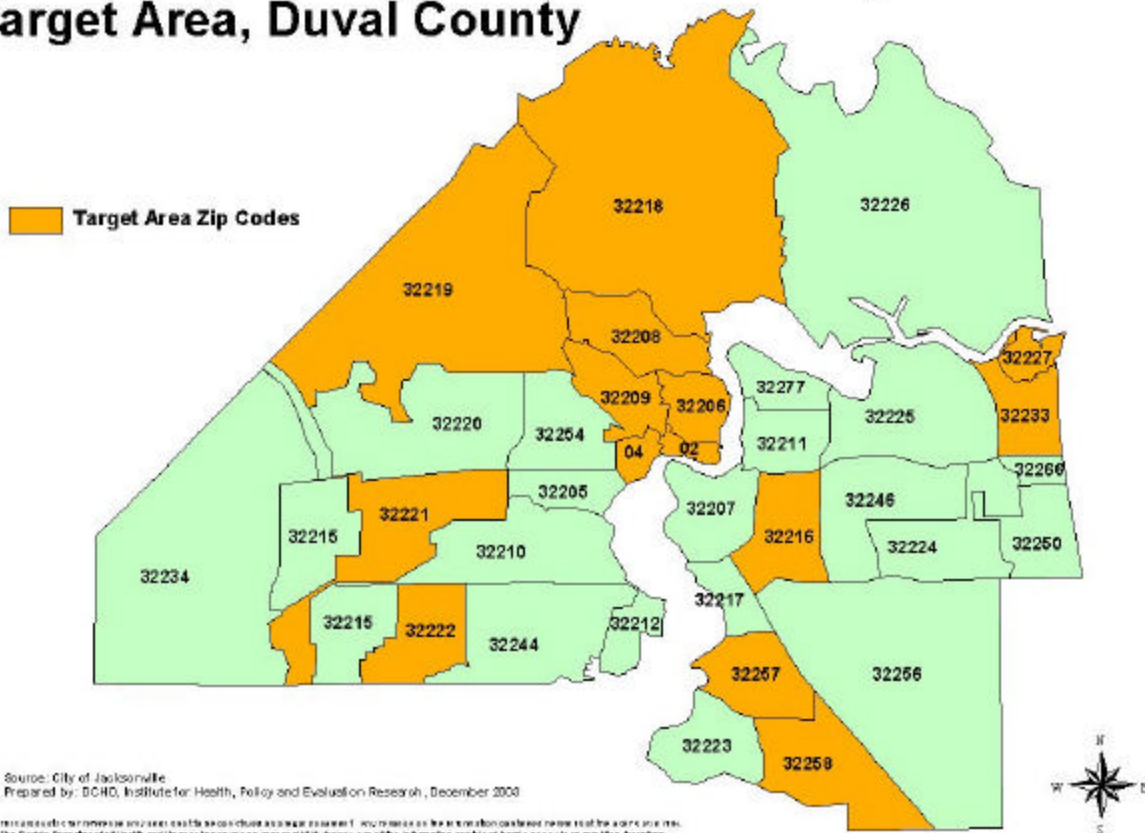
have heart disease and 73,994 have diabetes.

A map of CCHP’s target area is shown below (see Fig. 1). The area was identified based on zip codes with the highest heart disease and diabetes mortality rates.

For more information, contact Irmatine Bealyer, RD, LD/N, MHA, Program Manager, Division of Community Nutrition Services, Duval County Health Department, 904-665-2351.

Figure 1

Community Cardiovascular Health Program Target Area, Duval County



Source: City of Jacksonville
 Prepared by: BCHD, Institute for Health, Policy and Evaluation Research, December 2009
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Heart Disease and Stroke Trends in Duval County

Before the 1960's, heart disease has been the leading cause of death in the United States. In 2001, heart disease accounted for 29.0 percent of all mortality in the U.S. However from 2000 to 2001 there was a 3.8 percent decrease in the age-adjusted death rates. Except for a slight increase in 1993, heart disease has steadily declined in the U.S. since the early 80's.

In the past 10 years, Duval County has seen a decreasing trend in the overall heart disease mortality rate, from a high of 325.5 per 100,000 persons in 1995 to a low of 225.5 per 100,000 persons in 2002. Even when looking by race, there has

been dramatic decreases (See Fig. 2). This is not true for hospitalizations with heart disease as the primary diagnosis. Although from 1997 to 2002 the hospitalization rates varied, there was no significant downward trends (see Fig. 3).

Stroke, the third leading cause of death, accounted for 6.2 percent of all mortality in the U.S. in 2001. As with heart disease, stroke also saw a decrease (4.9 percent) in age-adjusted death rates from 2000 to 2001. Since 1958, strokes rates have declined with one exception between 1992 and 1995.

Locally, in the past ten years, Du-

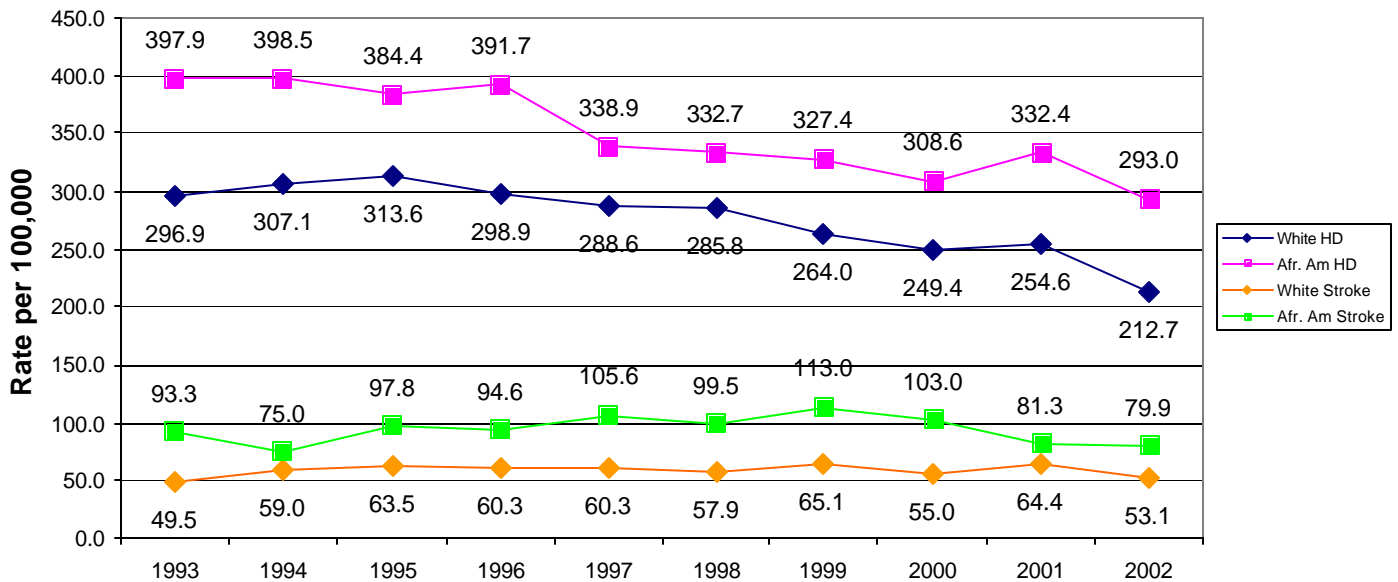
val County has not seen a declining trend in stroke mortality rates. Similar to the overall rate, specific stroke mortality rates for whites and African Americans have been relatively consistent. (see Fig. 2). When looking at stroke hospitalization, the rates fluctuate from year to year, but do not show a statistically significant trend (see Fig. 3).

For the U.S., heart disease and stroke represent more than a third (35.2 percent) of all mortality deaths. In Duval County, these diseases account for over 30 per-

(Continued on page 5)

Figure 2

Heart Disease & Stroke Mortality Trends by Race, Duval County 1993-2002



Source: Florida Department of Health, Office of Planning, Evaluation and Data Analysis
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, February 2004

Health Disease and Stroke Trends in Duval County

(Continued from page 4)

cent of all mortality. In order to reduce these percentages, issues such as high blood cholesterol and high blood pressure must be addressed. High blood cholesterol and high blood pressure are major modifiable risk factors to heart disease and stroke. It is recommended to have cholesterol checked every 5 years and blood pressure checked periodically. Maintaining and/or reducing blood cholesterol and blood pressure may reduce the risk of heart disease and stroke. Other risk factors related to heart disease and stroke are tobacco smoke, overweight and obesity, physical inactivity and diabetes mellitus.

Note:

In the last heart disease and stroke data report (Vol. 1 Issue 2, May 2002), rates for the state and county were based on the 1990 census. Specifically the population estimates (the denominator) were underestimated. As a result, the underestimation inflated the rates. In 2003, the National Center for Health Statistic (NCHS) released more accurate estimates for populations prior to 2000 based on the 2000 census. This has changed most of the previous published rates. Some rates, such as infant mortality and birth, were not affected because the denominators

were based on the number of live births and not on an estimated population.

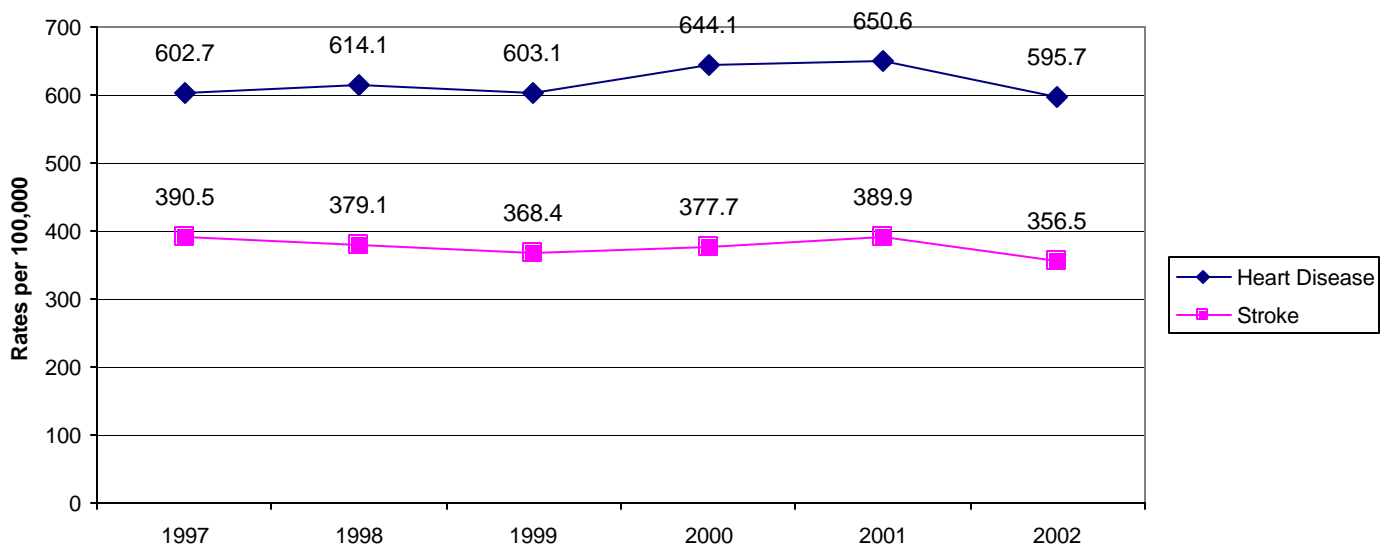
The DCHD Center for Health Statistics has implemented the use of the new NCHS population estimates and plans to update previous state and county rates. Currently, zip code level NCHS population estimates are not available. Upon release of the NCHS estimate methodology, Duval county zip codes rates will be updated.

For more information on the NCHS population estimates please visit their web site at

<http://www.cdc.gov/nchs/default.htm>

Figure 3

Heart Disease and Stroke Hospitalization Rates, Duval County 1997-2002



Source: FDOH, Office of Planning, Evaluation and Data Analysis, 1997-2002

Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2003

National, State and Local Disparities In Heart Disease And Stroke

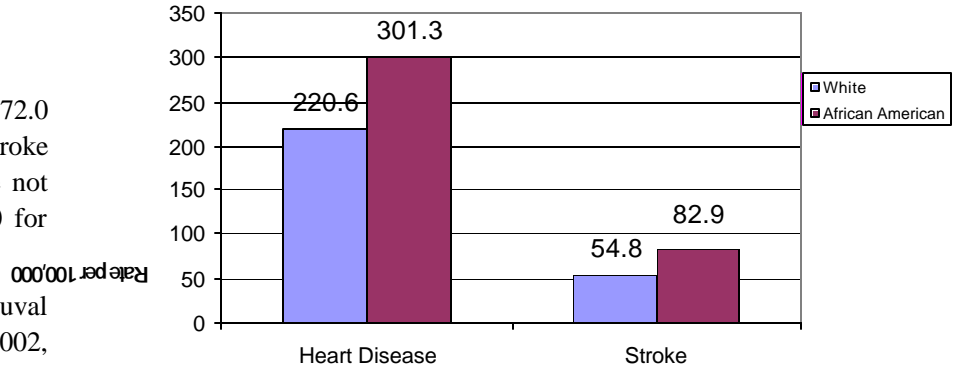
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death rate than females (269.1 versus 172.0 per 100,000) in Florida. However for stroke deaths, gender differences in rates are not significantly different 44.9 per 100,000 for males versus 43.8 100,000 for females.

And just like the U.S. and Florida, Duval County shows similar disparities. In 2002, African Americans had a higher death rate than whites for heart disease (see Fig. 4). When comparing gender an even larger disparity is seen. Males had almost 100 more deaths per 100,000 than females. Looking at both race and gender, white males had a significantly lower rate than African American males. The same is true for white females and African American females (see Fig. 5).

Stroke death rates for African Americans were also higher than whites in 2002 (see Fig. 4). However, unlike Florida, females had a higher stroke death rate than males, 61.8 as compared to 55.8. When examining

Figure 4 Heart Disease and Stroke Mortality Rates by Race, Duval County 2002



Source: FDOH, Office of Vital Statistics, 2002
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, December 2003

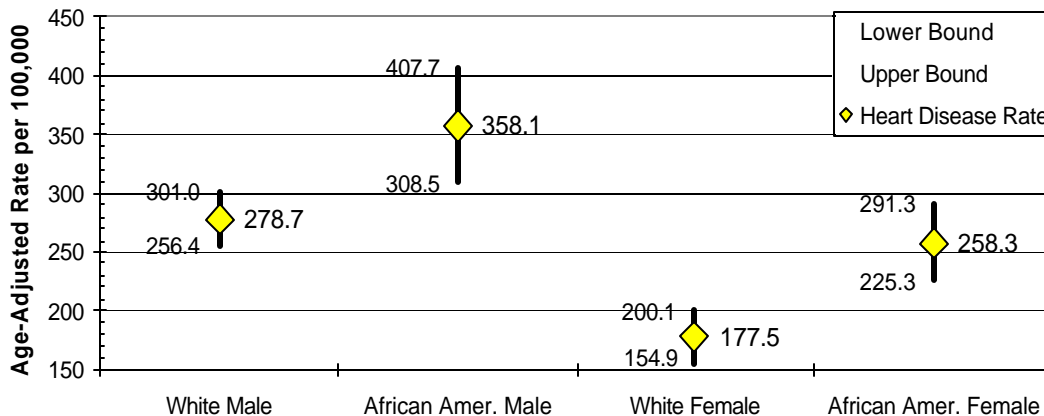
race and gender together, African American females had a significantly higher rate than white females while African American males and white males did not (see Fig. 6).

At all three geographical levels (U.S., Florida and Duval County), racial and gender disparities related to heart disease and stroke exist. In order to ‘close the gap’ a concen-

trated effort of primary prevention must focus on these high risk groups. Interventions such as reducing high blood pressure, cigarette smoking, high cholesterol and overweight/obesity are a major strategy to reduce the development of heart disease and stroke. For more information visit the American Heart Association at www.americanheart.org.

Figure 5

Heart Disease Mortality Rates (with Confidence Intervals) by Race and Gender, Duval County 2002

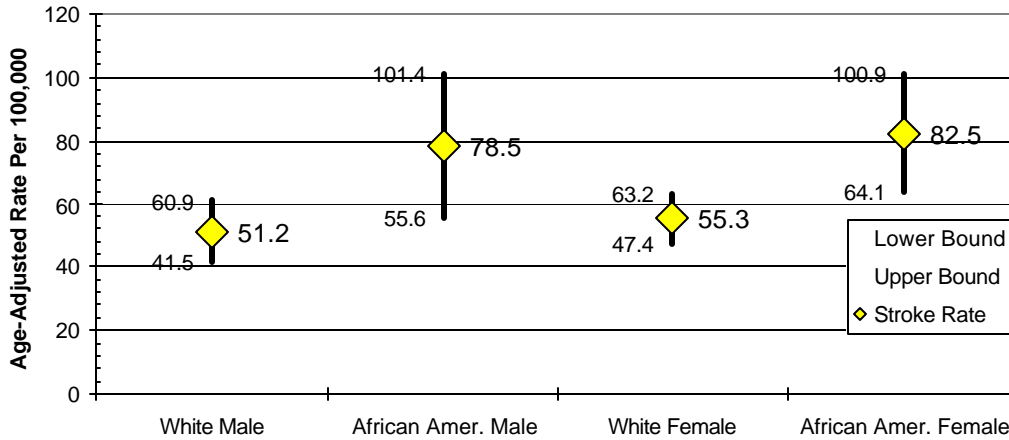


Source: FDOH, Office of Vital Statistics, 2002
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, February, 2004

Confidence intervals: When comparing two rates, there is a statistical difference if the confidence intervals for the observed rates do not overlap.

Figure 6

Stroke Mortality Rates (with Confidence Intervals) by Race and Gender, Duval County, 2002

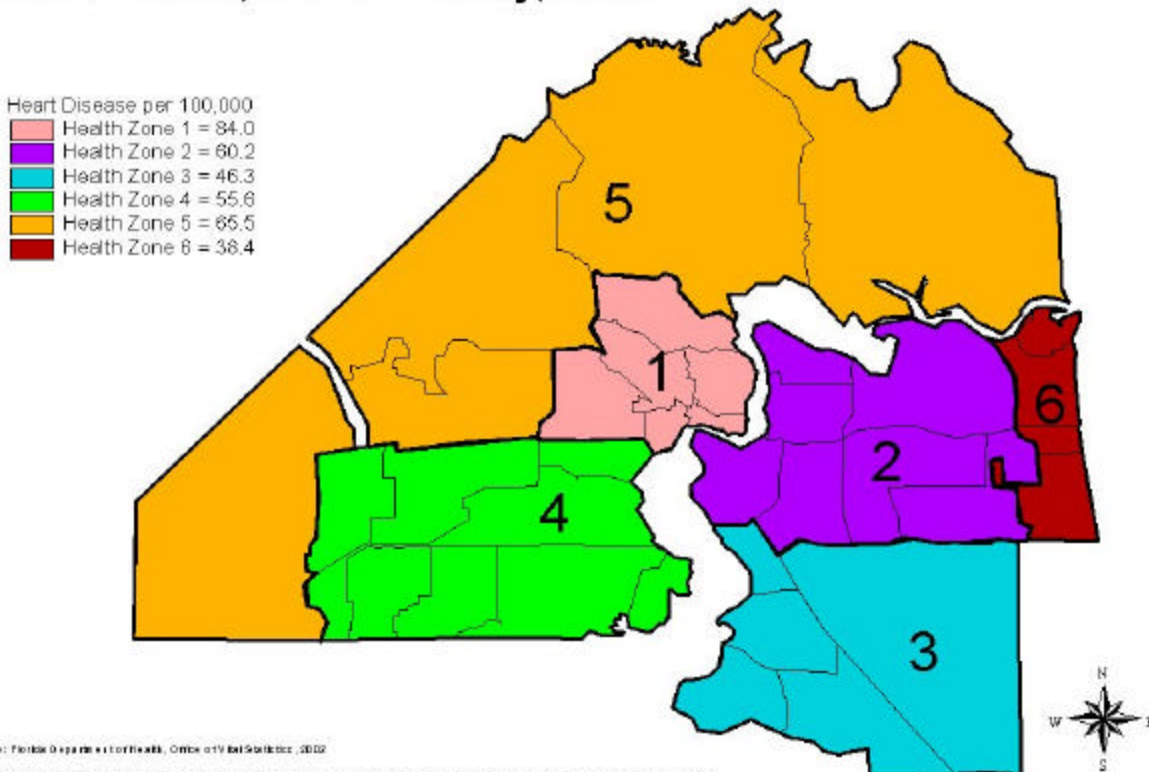


Confidence intervals: When comparing two rates, there is a statistical difference if the confidence intervals for the observed rates do not overlap.

Source: FDOH, Office of Vital Statistics, 2002
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, February, 2004

Figure 7

Stroke Mortality Rates per 100,000 by Health Zone, Duval County, 2002



Source: Florida Department of Health, Office of Vital Statistics, 2002

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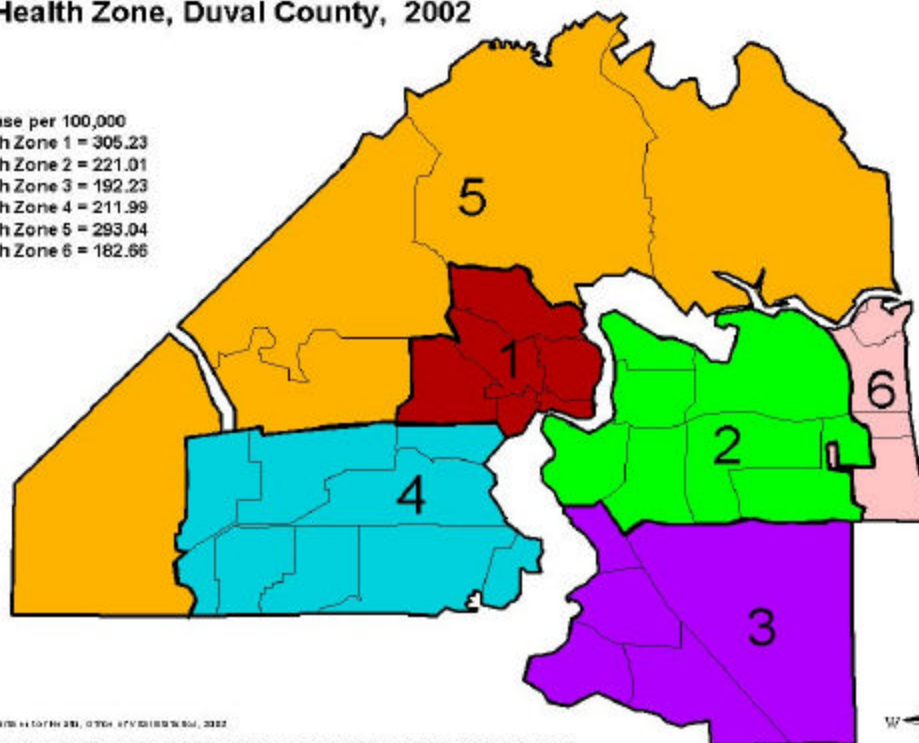
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Heart Disease Mortality Rates per 100,000 by Health Zone, Duval County, 2002

Heart Disease per 100,000	
	Health Zone 1 = 305.23
	Health Zone 2 = 221.01
	Health Zone 3 = 192.23
	Health Zone 4 = 211.99
	Health Zone 5 = 293.04
	Health Zone 6 = 182.66



SOURCE: FLORIDA DEPARTMENT OF HEALTH, DIVISION OF COMMUNITY HEALTH, 2002

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