

Center for Health Statistics Report

# Heart Disease and Stroke

## Heart Disease and Stroke: National Challenges and Progress

Heart Disease is defined as any disorder that affects the heart's ability to function normally. The most common cause of heart disease is narrowing or blockage of the coronary arteries, which supply blood to the heart itself. This most often happens slowly over time.<sup>1</sup> Heart disease is the leading cause of death for both women and men in the United States. During the last two decades of the 20<sup>th</sup> century, the age-adjusted rate of deaths from Coronary Heart Disease (CHD) declined sharply, falling from nearly 350 per 100,000 in 1980 to 172 in 2003.<sup>2,3</sup> Approximately 30% of all deaths in the U.S. are due to heart disease.<sup>4</sup> The decrease is expected to continue, but more effort will be required to lower the rate enough in the intervening

years to reach the *Healthy People 2010* target of 166 per 100,000. Demographically, males died from CHD at a 38% higher rate than females in 2003.<sup>2,3</sup> Heart disease is also the leading cause of death for American Indians, Alaska Natives, blacks, Hispanics and whites.<sup>4</sup> Among racial/ethnic groups, blacks showed the greatest disparity from the average in 2003, with a CHD death rate of 220 deaths per 100,000.<sup>3</sup> Geographically, CHD death rates have tended to be higher in the southern and south-eastern states, particularly those  
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## Disparities in Heart Disease and Stroke at the Local Level

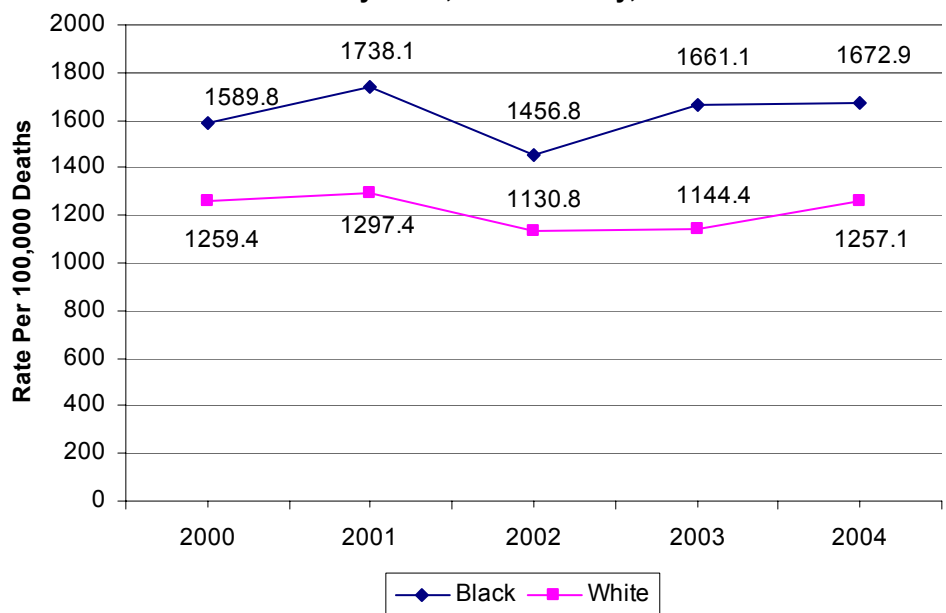
Eliminating health disparities among different population segments has been at the forefront of public health since it was recognized as one of the two goals of *Healthy People 2010*. While health outcomes have improved some among disparate populations, statistically significant changes have yet to be seen in many health areas among these populations. Health disparities are notable for  
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**Figure 1.**

**Years of Potential Life Lost (YPLL) Before Age 75 from Heart Disease by Race, Duval County, 2000-2004**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

## Jacksonville Heart Disease and Stroke Report Card

Obj #	Objective	U.S. (2004)	FL (2004)	Duval (2004)	2010 Target
12-1	Reduce coronary heart disease deaths. (Rates per 100,000)	172 <sup>4</sup>	168.0 <sup>1</sup> (2003)	164.9 <sup>1</sup>	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.	12.3 <sup>4</sup> (1999)	11.1 <sup>2</sup>	14.1 <sup>2</sup>	6.5
12-6b	Adults aged 75 to 84 years.	27.1 <sup>4</sup> (1999)	22.2 <sup>2</sup>	26.2 <sup>2</sup>	13.5
12-6c	Adults aged 85 and older.	50.4 <sup>4</sup> (1999)	37.4 <sup>2</sup>	39.8 <sup>2</sup>	26.5
12-7	Reduce stroke deaths. (Rates per 100,000)	53 <sup>4</sup> (2003)	40.1 <sup>1</sup> (2003)	47.6 <sup>1</sup>	48.0
12-9	Reduce the proportion of adults with high blood pressure.	32.8 <sup>4</sup>	29.3 <sup>4</sup> (2003)	26.1 <sup>3*</sup> (2002)	16
12-10	Increase the proportion of adults with high blood pressure whose blood pressure is under control.	80.3 <sup>3</sup>	DNA	81.6 <sup>3</sup> (2002)	50
12-14	Reduce the proportion of adults with high total blood cholesterol levels.	36.7 <sup>3</sup>	35.1 <sup>4</sup> (2003)	29.6 <sup>3</sup> (2002)	17
12-15	Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years.	93.2 <sup>3</sup>	80.0 <sup>4</sup> (2003)	91.2 <sup>3</sup> (2002)	80
12-15a*	Increase the proportion of adults who have ever had their blood cholesterol checked.	79.7 <sup>3</sup>	81.6 <sup>4</sup> (2003)	83.1 <sup>3</sup> (2002)	N/A
22-1	Reduce the proportion of adults who engage in no moderate physical activity	50.9 <sup>3</sup>	54.7 <sup>3</sup>	54.0 <sup>3</sup> (2002)	20
5-3a	Reduce the overall rate of diabetes that is clinically diagnosed. (Percent)	8.5 <sup>4</sup>	9.1 <sup>3</sup>	9.5 <sup>3</sup> (2002)	2.5
27-1a	Reduce cigarette smoking. (Percent)	20.2 <sup>3</sup>	20.2 <sup>3</sup>	23.0 <sup>3</sup> (2002)	12
27-5	Increase smoking cessation attempts by adult smokers. (Percent)	53.2 <sup>3</sup>	49.7 <sup>3</sup>	69.5 <sup>3</sup> (2002)	75
26-11	Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.	10.1 <sup>3</sup>	7.8 <sup>3</sup>	13.2 <sup>3</sup> (2002)	11

<sup>1</sup> FDOH, Office of Vital Statistics, 2004<sup>2</sup> Agency for Health Care Administration, 2004<sup>3</sup> Behavioral Risk Factor Surveillance System, 2002 for DC, 2004 for FL, & 2005 for US<sup>4</sup> CDC, <http://wonder.cdc.gov>, 2003

\* Not a HP 2010 Objective

DNA = Data Not Available

N/A = Not Applicable

## Data Report Card Overview

The data report card provides an overall comparison between local, state, and national data for heart disease, stroke, and related risk factors for Healthy People 2010 Objectives. The objectives shown are those for which data could be obtained. Confidence Intervals of 95% are used to provide statistical markers to gauge real trends versus differences that are more likely to reflect insignificant variation of data from year to year.

In 2004, data show that Duval County had an age adjusted coronary heart disease death rate of 164.9 per 100,000 (95% CI=155.7-174.1). The rate for Duval County has statistically significantly decreased from 2000, with a rate of 214.2 deaths per 100,000 (95% CI=202.9-225.4). This 2004 rate was 2% lower than Florida (2003) with a rate of 195.5 per 100,000 (95% CI=193.6-197.4). The state and national rates were similar, however, both were above the Healthy People 2010 objective. Hospitalizations of older adults with congestive heart failure were also higher than Florida among all age categories. However, Duval County was better than the national rate in adults aged 75 and older. Likewise, the Florida rate was better than the national rate for

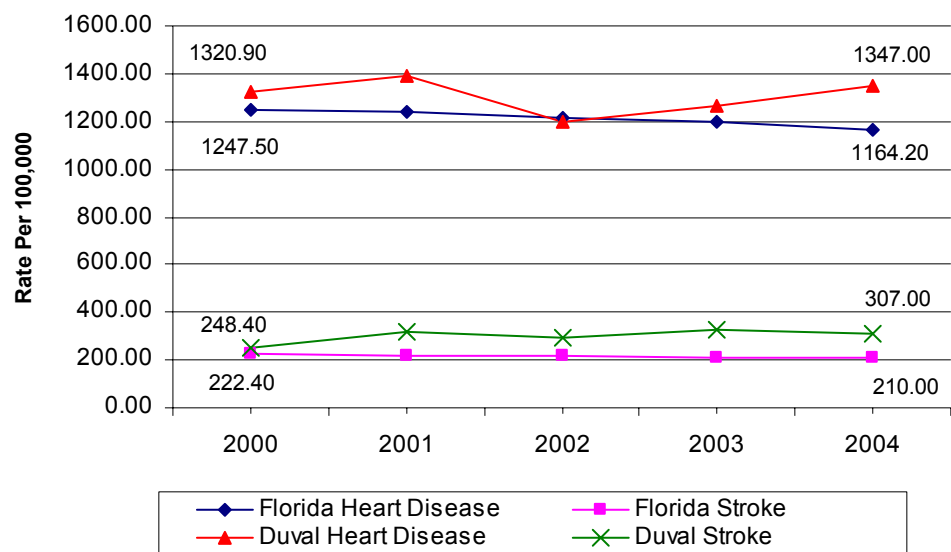
all age categories. There were significant differences between Duval and Florida for heart disease for Years of Potential Life Lost (YPLL). YPLL is an estimate of premature mortality that has been defined as the number of years of life lost among persons who die before a predetermined age, which is 75 in the state of Florida. YPLL in Duval County was 1347 per 100,000 in 2004 (95% CI= 1321.6-1372.4), statistically significantly higher than Florida with YPLL at 1164.2 per 100,000 (95% CI=1158.9-1169.5).

Duval County is making progress in terms of stroke deaths. Duval County was below the national rate in stroke deaths with a rate of 47.6 per 100,000 but above the state rate with 40.1 per 100,000. Both Duval County and Florida were below the Healthy People 2010 target. YPLL in Duval County for 2004, was 307 per 100,000 (294.9-319.1), statistically

significantly higher than Florida with 210 per 100,000 (95% CI=207.8-212.2). For Stroke and Heart Disease, from the years 2000-2004, Duval County showed an upward trend, although not statistically significant for heart disease and a statistically significant increase for stroke. However, Florida shows a statistically significant decrease for both Heart Disease and Stroke from 2000-2004 (see Figure 2).

Duval County was also below the state and national rate for the percent of people with high blood pressure and high cholesterol. In addition, a higher percentage of Duval County residents had their blood cholesterol checked at least one time in their life and within the last 5 years. For other modifiable risk factors, Duval County remains higher than the state and national rate for lack of physical activity,

**Figure 2. Years of Potential Life Lost (YPLL) Before Age 75 from Heart Disease and Stroke, Duval County and Florida, 2000-2004**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

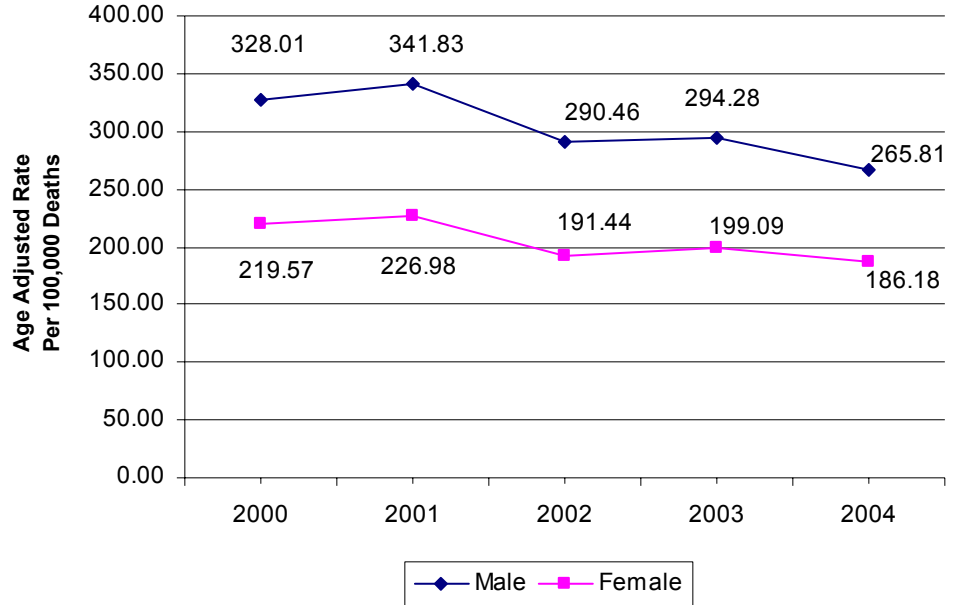
**Disparities in Heart Disease and Stroke** (continued from page 1)

heart disease, stroke and related morbidities in Duval County. Statistically significant disparities were seen among race and gender. Confidence Intervals of 95% are used to provide statistical markers to gauge real trends versus differences that are more likely to reflect insignificant variation of data from year to year.

Heart Disease There were statistically significant racial disparities for heart disease shown in Years of Potential Life Lost (YPLL). YPLL is an estimate of premature mortality that has been defined as the number of years of life lost among persons who die before a predetermined age, which is 75 in the state of Florida. YPLL is a particularly useful gauge of health disparities because it is especially sensitive to premature death, (deaths that are not primarily attributable to the aging process). Blacks had a YPLL rate of 1672.9 per 100,000 (95% CI=1621.4-1724.4) in 2004 while whites YPLL rate was 1257.1 per 100,000 deaths (CI=1227.1-1287.7). While rates haven't statistically significantly increased or decreased since the year 2000, the black rate had increased slightly by 5% while whites have remained relatively un-

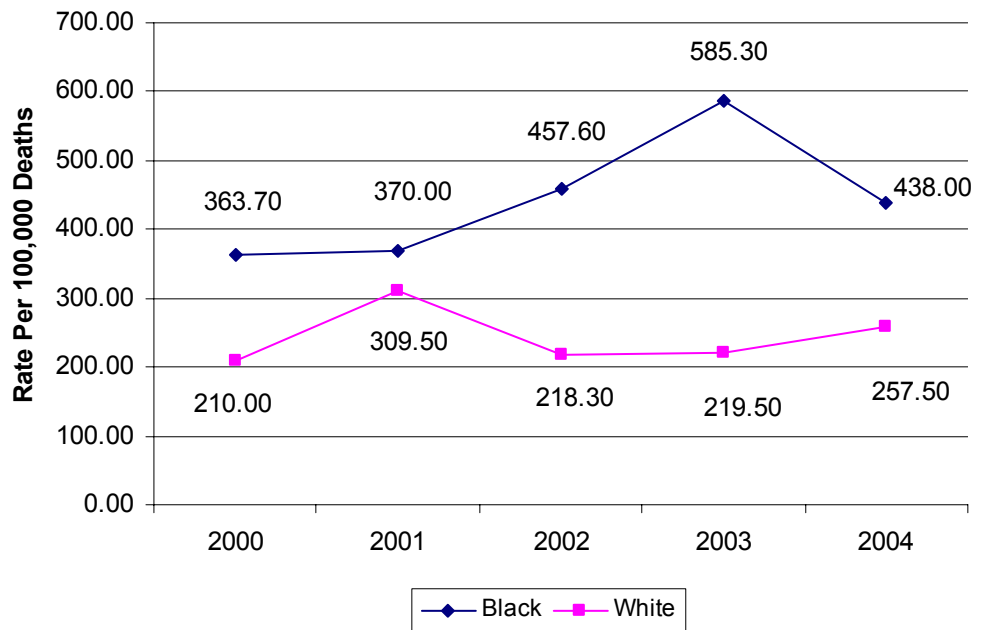
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**Figure 3. Heart Disease Deaths by Gender Duval County, 2000-2004**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

**Figure 4. Years of Potential Life Lost (YPLL) Before Age 75 from Stroke by Race, Duval County, 2000-2004**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

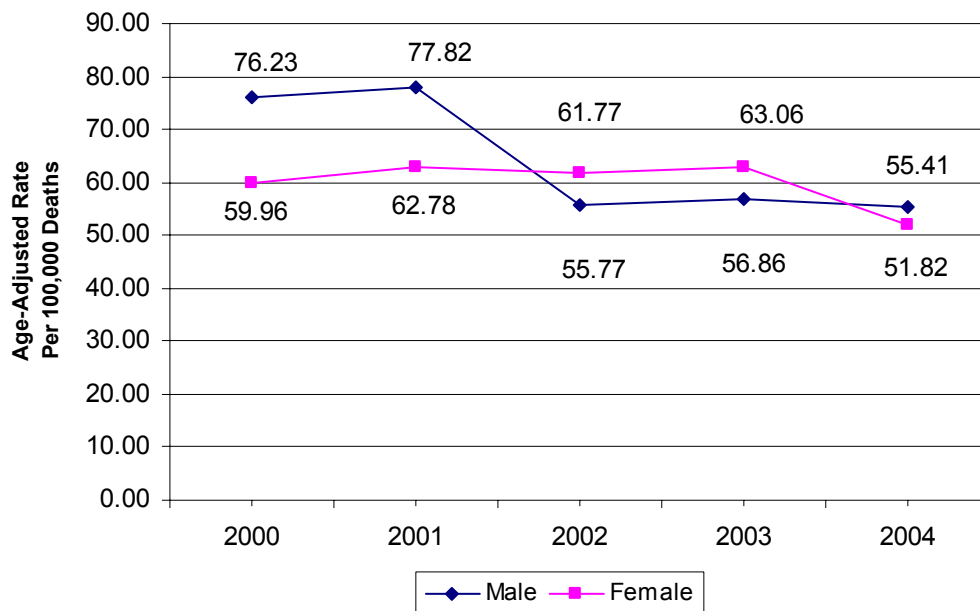
## Disparities in Heart Disease and Stroke (continued from page 4)

changed. However, statistically significant increases in YPLL rates can be seen in both black and white populations from 2002-2004 (see Figure 1 on page 1).

Gender Disparities were statistically significant for heart disease deaths in Duval County in 2004, with males having an age adjusted rate of 265.8 per 100,000 deaths (95% CI= 247.2-284.5) and females having a rate of 186.2 per 100,000 deaths (95% CI=173.6-198.8). Overall rates of heart disease deaths have statistically significantly declined since 2001, 328.0 per 100,000 deaths for males (95% CI=305.1-351.0) and 219.6 per 100,000 deaths for females (95% CI=205.2-234.0). Females showed a 2% increase in deaths from 2002 to 2003, although not statistically significant (see Figure 3 on page 4).

For gender/race disparities, there were no statistically significant differences among white and black men and among white and black women. There were also no statistically significant differences for black male or black females since 2000, however, both white men and white women show statistically significant decreases from 2000-2004.

**Figure 5. Stroke Deaths by Gender Duval County, 2000-2004**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

### Stroke

In contrast, less gender and race disparities were seen for stroke deaths in Duval County in 2004. For YPLL, blacks had a YPLL rate of 438 per 100,000 Deaths (95% CI=411.7- 464.3) in 2004 while whites YPLL rate was 257.5 per 100,000 Deaths (CI=243.8-271.2). Overall, rates had statistically significantly increased from 2000 to 2004 for both the black and white population. In addition, rates statistically significantly increased for blacks from the years 2001 to 2002, 2002 to 2003, and then statistically significantly decreased from 2003-2004. Whites show a statistically significant increase from 2000 to 2001, a significant decrease from 2001 to 2002; and a significant increase

from 2003 to 2004. (see Figure 4 on page 4).

For gender disparities, there were no statistically significant differences between the male and female populations in 2004, with males having a rate of 55.4 per 100,000 deaths (95% CI=46.9-63.9) and females with a rate of 51.8 per 100,000 deaths (95% CI=45.1-58.5). Rates have also decreased in both genders since 2000, 13.6% for females and 27% for males, however decreases were only statistically significant for males (see Figure 5).

For gender/race disparities, black men had a rate of 83.9 per 100,000 deaths (95% CI=63.2-109.2) and

(continued on page 6)

## Disparities in Heart Disease and Stroke (continued from page 5)

white men had a rate of 48.2 per 100,000 deaths (95% CI= 39.1-57.2), showing a statistically significant difference. Likewise, the rate for black females was higher than for white females, although not statistically significantly higher, with white females having a rate of 52 per 100,000 deaths (95% CI= 44.3-59.6) and black females having a rate of 54 per 100,000 deaths (95% CI=40.1-71.2). higher.

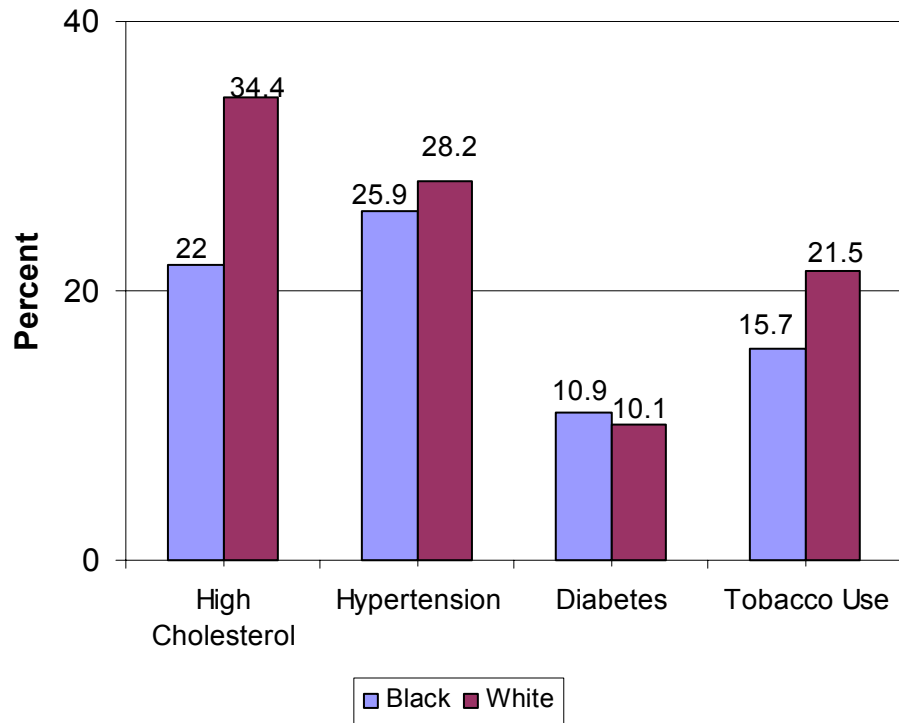
### Risk Factors for Heart Disease and Stroke

There are various risk factors for heart disease and stroke. Racial and gender disparities differ by each risk factor. The following are some of the major factors that contribute to both heart disease and stroke morbidity and mortality.

#### *Diabetes*

For race and gender differences were seen in individuals having diabetes. According to the 2002 Behavioral Risk Factor Surveillance System (BRFSS) men were just as likely to have diabetes as women, 9.6 (95% CI=4.7-14.5) and 9.4 (95% CI=5.1-13.7), respectively. Similarities were also seen for race populations, with blacks having diabetes at 10.9% (95% CI=1.4-20.3) and whites at 10.1% (95% CI=6.4-13.8 (see Figure 6)). There were no differences seen in diabetes rates between white

**Figure 6. Risk Factors for Heart Disease and Stroke by Race Duval County, 2002**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

men, black men, white females and black females.

#### *Hypertension*

As with diabetes, few differences were seen in hypertension outcomes among race and gender. From the BRFSS survey, in 2002, 26.3% (95% CI=18.4-34.3) of men versus 25.9% (95% CI=16.9-35.0) of women had hypertension. For racial differences, 28.2% (95% CI=22.8-33.6) of whites and 25.9% (95% CI=5.6-46.2) of blacks had hypertension (see Figure 6). There were no differences in hypertension among white men, black men,

white women and black women. However, black women had the lowest percent of hypertension at 24.2 % (95% CI=0.0-48.8) and black men had the highest percent of hypertension at 31.7 (95% CI=14.8-48.4).

#### *High Cholesterol*

There were no statistically significant differences between race or gender populations for high cholesterol. From the 2002 BRFSS Survey, 28% of men had hypertension (95% CI=18.6-37.8) while 30.7% of women had

(continued on page 10)

## Duval County and the use of the Automated External Defibrillators (AEDs)

By: Irmatine Bealyer, MHA, RD, LD/N Cardiovascular Health Director

The automated external defibrillator (AED) is a computerized medical device. An AED can check a person's heart rhythm, recognize a rhythm that requires a shock, and advise the rescuer when a shock is needed. The AED uses voice prompts, lights, and text messages to tell the rescuer the steps to take. AEDs will NOT shock someone who does not need defibrillation.

Public access to Automated External Defibrillators is necessary to reduce deaths from sudden cardiac arrest or myocardial infarction. Myocardial infarction is a major cause of death in Duval County. From 2002-2004, Duval County reported 348, yielding a rate of 48.2 deaths per 100,000 from myocardial infarctions and Florida's total death from the same time frame was 10,773, with a rate of 45.9 deaths per 100,000. Myocardial infarction claims an estimated 340,000 lives in the U.S. While death from myocardial infarction is still substantial for Duval County and Florida, rates have declined since 2000 (see Figure 7).

Victims of sudden cardiac arrest should be treated immediately with an AED in order to have a better chance to survive. Early defibrillation is critical in

saving lives from sudden cardiac arrest. A victim of sudden cardiac arrest who is not defibrillated within 8-10 minutes has little chance of survival.

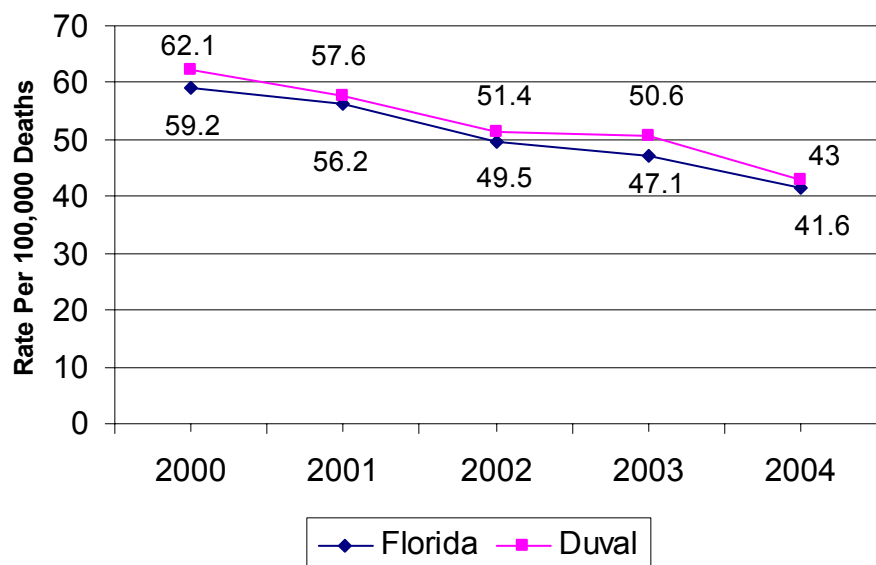
AEDs should be placed in the community to ensure that defibrillation is available. People other than traditional emergency care personnel should be trained and equipped with defibrillators. Any facility where people congregate should consider the benefits of establishing a public access to AEDs. This includes airports, churches, schools, gated communities, high security buildings, shopping malls, high-rise buildings, crowded sports and enter-

tainment venues, public parks and other heavily populated or remote facilities.

The American Heart Association (AHA) states that Duval County has documented 159 known AEDs. This list can be viewed at <http://apps2.coj.net/rescueaed/CurrentAEDList.asp>. Currently all city owned buildings have either one or multiple AEDs in them depending on size and occupancy of the buildings per Fire and Rescue Chief Charles E. Moreland in his May 21, 2004 letter explaining his Heart Ready initiative, in the use of AEDs by the Fire and Rescue staff. The

(continued on page 9)

**Figure 7. Deaths from Myocardial Infarction Duval County and Florida, 2000-2004**



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

## Stroke Hospitalizations and Deaths in Duval County

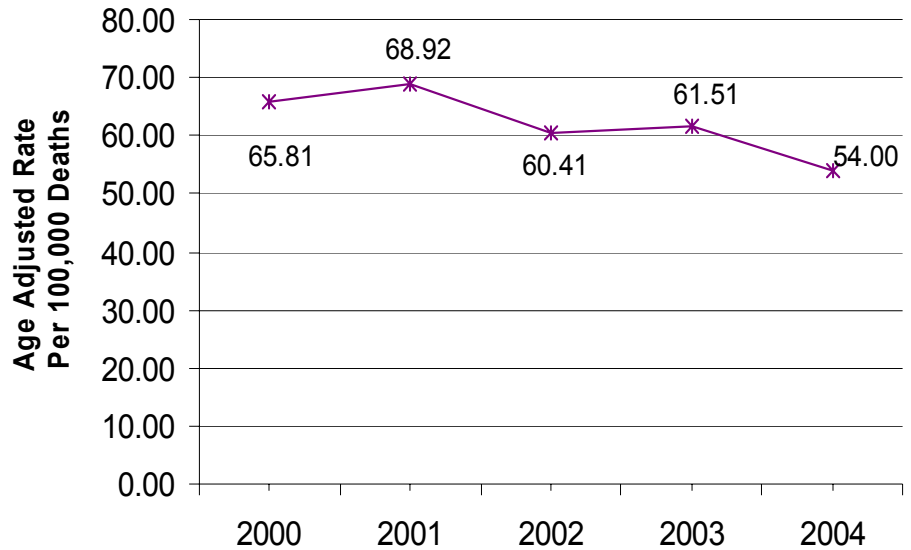
By: Daniyel Macomber, MS, RD, LD/N

A stroke occurs when blood flow to the brain stops. This is due to either an ischemic stroke or a hemorrhagic stroke. An ischemic stroke is caused by a blood clot that blocks a vessel in the brain preventing the passage of blood to the brain. A hemorrhagic stroke is caused by a blood vessel that breaks and bleeds into the brain.

In the US, Florida, and Duval County, stroke is the third leading cause of death and the leading cause of long-term disability. Of all deaths in Duval County, stroke accounts for 5.8% of the deaths. Only two counties in Florida had greater than 5.8% of their deaths due to stroke. Duval County with 402

Figure 8.

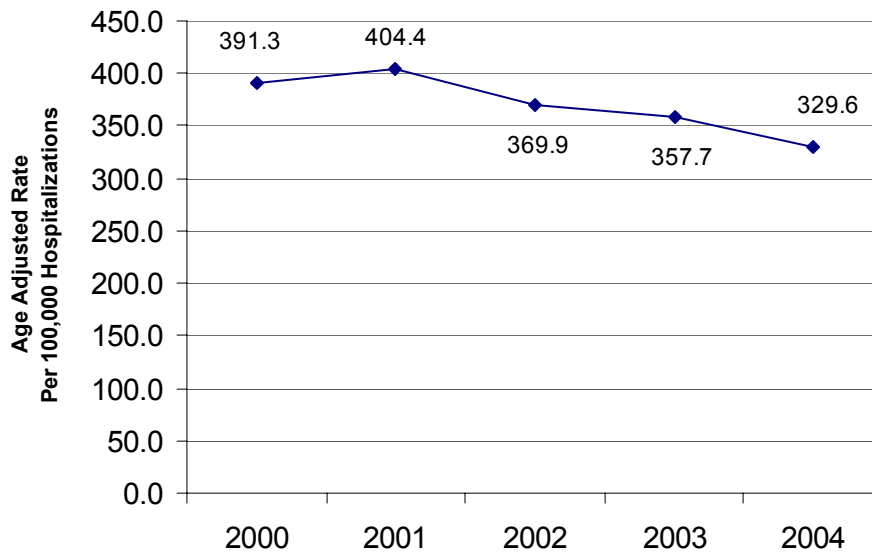
### Stroke Death Rates, Duval County, 2000-2004



Source: Florida Department of Health, Office of Vital Statistics, 2000-2004  
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

Figure 9.

### Hospitalization from Stroke, Duval County, 2000-2004



Source: Agency for Health Care Administration, Hospital Files, 2000-2004  
 Prepared by: DCHD, Institute for Health, Policy and Evaluation Research, May, 2006

deaths in 2004 due to stroke has the 6<sup>th</sup> highest number of deaths from stroke of all the 67 counties of Florida with 54 per 100,000 deaths (see Figure 8). Stroke was also a major cause of hospitalization in Duval County with 2,781 people being hospitalized in 2004 due to stroke. (see Figure 9). These individuals require immediate medical intervention for acute stroke. People who survive stroke usually require rehabilitation including physical, occupational, cognitive, speech, neuropsychological, and other therapies to be as functional as possible. Many experience some degree of permanent disability such as paralysis, difficulty or loss of speech, and weakness of limbs. Disability and death from stroke

(continued on page 9)

## Duval County and the use of the Automated External Defibrillators (AEDs)

(continued from page 7)

Fire and Rescue Department is working with the AHA to put AEDs in law enforcement vehicles. This will assist in providing measurable data from the Fire and Rescue database on the number of cardiac arrest within each zone that is patrolled.

State law provides liability protections for businesses that acquire AEDs and for persons who use an AED. Legislation passed in Florida in 1997 and in 2001 provides liability protections for businesses that deploy AEDs on their premises. A business receives liability protections if they maintain their AED, train ex-

pected users, notify their local Emergency Medical Service agency that they have acquired an AED, and call 911 when a medical emergency occurs. An individual who uses an AED in good faith to save a person life receives Good Samaritan protections.

The Fire and Rescue department is looking into outcome measures to document the success of the program through conversions that are made in the pre-hospital setting by law enforcement or EMS personnel along with the percentage of actual saves in which patient leaves the hospital and returns home. Some cardiac arrests are

inevitable and we can make a measurable difference through training and utilization of that training as it relates to using an AED. Our goal is to see a marked increase in the survival rates by having our entire community Heart Ready. For more information on AEDs, visit [www.americanheart.org](http://www.americanheart.org) or contact Irmatine Bealyer at 904-665-2351.

### Sources:

[www.americanheart.org](http://www.americanheart.org)  
[www.floridacharts.com](http://www.floridacharts.com)  
<http://www.coj.net/Departments/Fire+and+Rescue/Rescue/Automated+External+Defibrillator/default.htm>

## Stroke Hospitalizations and Deaths in Duval County (continued from page 8)

can be reduced by prevention and early intervention. According to Behavioral Risk Factor Surveillance System (BRFSS) survey results in 2002, adults in Duval County reported the following risk factors for heart disease and stroke: 26.1% had high blood pressure, 29.6% of those screened reported having high blood cholesterol, 9.5% had diabetes, 23.0% were current smokers, 56.8% were overweight or obese (Body Mass Index greater than or equal to 25.0) and 54% reported no moderate physical activity.

Lifestyle changes such as controlling blood pressure and diabetes, regular physical activity, not smoking, and healthy eating habits could greatly reduce the risk of having a stroke that may

lead to disability and death.

Receiving early medical treatment is a key factor in determining outcome after a stroke. However, many people are not aware of the signs and symptoms of a stroke and what to do in the event of a stroke. In the Florida 2003 Signs and Symptoms Module of the BRFSS, only 36.3% of people knew all symptoms of a stroke and indicated they would call 911 if they thought someone was having a stroke. The signs and symptoms of a stroke include numbness or weakness of the face, arm or leg, confusion, trouble speaking, seeing, walking or understanding, dizziness, loss of balance or coordination, or severe headache with no known cause. During a stroke every minute counts. The longer

blood is cut off from the brain, the more damage that occurs to the brain which leads to disability and death. To receive early medical intervention, the people of the community need to know the sudden signs and symptoms of a stroke and to call 911 immediately in response to the signs and symptoms. By calling 911 immediately, early medical intervention can be received and reduce the risk of death and disability from stroke in Duval County. For more information on Strokes in Duval County, visit [www.Americanheart.org](http://www.Americanheart.org) or contact Daniyel Macomber at 665-2639.

### Sources:

[www.floridacharts.com](http://www.floridacharts.com)  
[www.cdc.gov](http://www.cdc.gov)  
[www.americanheart.org](http://www.americanheart.org)

## Disparities in Heart Disease and Stroke (continued from page 6)

hypertension (95% CI=18.6-42.7). Larger differences were seen between blacks and whites with 22% of blacks having high cholesterol (95% CI=2.3-41.7) and 34.4% of whites having high cholesterol (95% CI=28.2-40.7), although still not statistically significant (see Figure 6). Likewise, there were no real differences between white males, black males, white females and black females, although black females had the lowest percentage of high cholesterol at 18.3%. Differences were seen between blacks and whites being advised by a health professional to eat fewer high fat or cholesterol foods, with whites being advised 35% more

than blacks. In addition, women were advised 21% more often than men. More specifically, white women were advised 112% times more than black women.

### *Tobacco Use*

There were also no statistically significant differences between race or gender populations in tobacco use. According to 2002 BRFSS data, 15.7% of blacks smoke (95% CI= 2.7-28.7) compared to 21.5% (95% CI=16.7-26.3) of whites. (see Figure 6). In addition, 31.2% of men smoke (95% CI=17.5-44.9) while only 16.2% of women smoke (95% CI=9.9-22.6), however this was also not a statistically significant

difference. For gender/race differences, black men had the highest percentage of smokers, 37.9% (95% CI=19.3-56.5), with white men at 22.6% (95% CI=15.0-30.1). Among females, white women smoke more than black women, 20.5% (95% CI=14.4-26.7) and 8.9% (95% CI=0.0-18.7) respectively. However, the only statistically significant difference was that between black women and black men.

### Sources:

Florida Department of Health, Office of Vital Statistics, 2000-2004  
Behavioral Risk Factor Surveillance System, 2002

## Heart Disease and Stroke: National Challenges and Progress (continued from page 1)

along the Ohio and Mississippi river valleys and in the Appalachian region, as well as in New York, Oklahoma, Michigan, Rhode Island, and a portion of California.<sup>2</sup>

Stroke is the 3<sup>rd</sup> leading cause of death in the U.S.<sup>3</sup> The age-adjusted death rate for stroke declined during the 1980s and early 1990s (from 96.4 per 100,000 in 1980), plateaued in the early 1990s, then resumed a downward trend with a rate of 53 per 100,000 deaths in 2003. Of 5 racial/ethnic groups for whom data were available, the higher age-adjusted stroke death rate in 2003 was recorded for blacks (74) and the lowest for Hispanics (40). The age-adjusted average annual stroke death rates were highest in the southeastern States,

particularly in the so-called “stroke belt,” a region comprising Georgia, South Carolina, eastern North Carolina, and adjacent parts of neighboring states. Rates were lowest in the Southwest.<sup>2</sup>

Extensive clinical and statistical studies have identified several factors that increase the risk of heart disease and heart attack. Major risk factors are those that research has shown significantly increase the risk of heart and blood vessel (cardiovascular) disease. Risk factors that can't be changed are increasing age, gender and heredity. Modifiable major risk factors include tobacco smoke, high blood pressure, high blood cholesterol,

physical inactivity, obesity and overweight and diabetes mellitus.<sup>5</sup> Other contributing factors include stress and alcohol use. CHD and stroke are two of the largest components of cardiovascular disease (CVD). As such, they are exacerbated by many of the same risk factors, including obesity, cigarette smoking, and lack of physical activity. Of the chronic risk factors for CVD, comparison of data from the survey periods 1988-1994 and 1999-2000, shows a downward trend in high blood cholesterol levels in adults of all gender and racial/ethnic groups for who data are available. Regarding the prevalence of high blood pressure (hypertension), there has been little change over a decade in the degree of disparity between blacks on the

(continued on page 11)



Duval County Health Department  
 Institute for Health, Policy & Evaluation Research  
 900 University Blvd. North, Suite 604 (MC-99)  
 Jacksonville, FL 32211

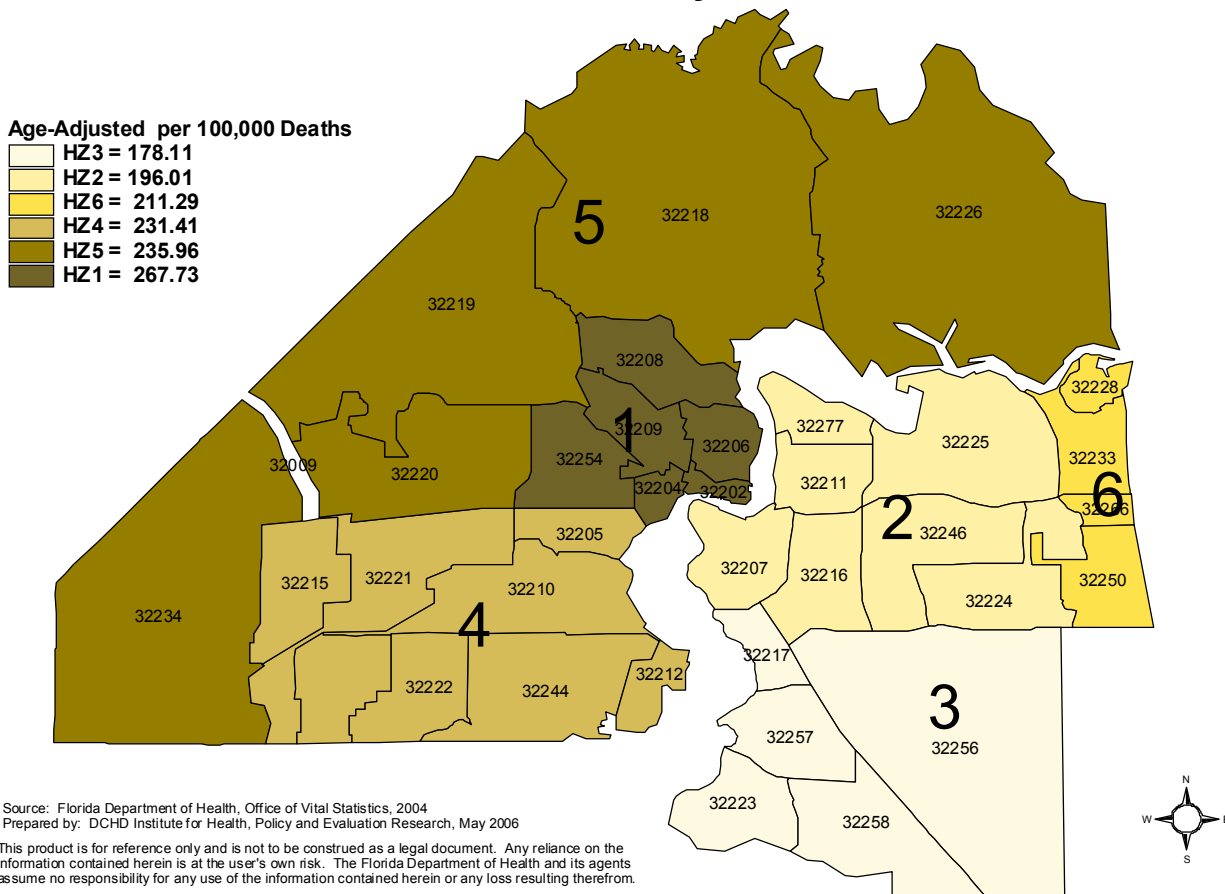
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**Figure 11** Heart Disease Death Rates per 100,000 by Health Zone, Duval County 2004



Source: Florida Department of Health, Office of Vital Statistics, 2004  
 Prepared by: DCHD Institute for Health, Policy and Evaluation Research, May 2006  
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