

Center for Health Statistics Report

Diabetes

Diabetes: The National Challenge

Diabetes is a serious disease that is a major concern in public health. In the United States there are over 20 million people living with diabetes, which includes about 14 million that are diagnosed and over 6 million that are undiagnosed. Diabetes is the 6th leading cause of death among all ages.¹

Types

There are two major types of diabetes. Type 1, previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. This type develops when the body's immune system destroys pancreatic beta cells, which are the only cells

in the body that make the hormone insulin that regulates blood glucose. This type of diabetes normally affects children and young adults, but the onset can occur at any age. Type 1 diabetes is often related to autoimmune, genetic, or environmental factors. At this time, there is not a known way to prevent Type 1 diabetes.

The other type, Type 2, is commonly called non-insulin dependent diabetes mellitus (NIDDM) or adult-onset diabetes. In the beginning, this type develops as insulin resistance, a disorder in which cells do not use insulin properly. As the need for insulin rises, the pancreas gradually loses its ability to produce it. This type

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Diabetes Disparities at the Local Level

Addressing health disparities is one of the goals of Healthy People 2010. Disparities are defined as differences in the incidence, prevalence, mortality and burden of diseases and other adverse health conditions that exist among specific populations. Health disparities are common between the black and white populations in Duval County.

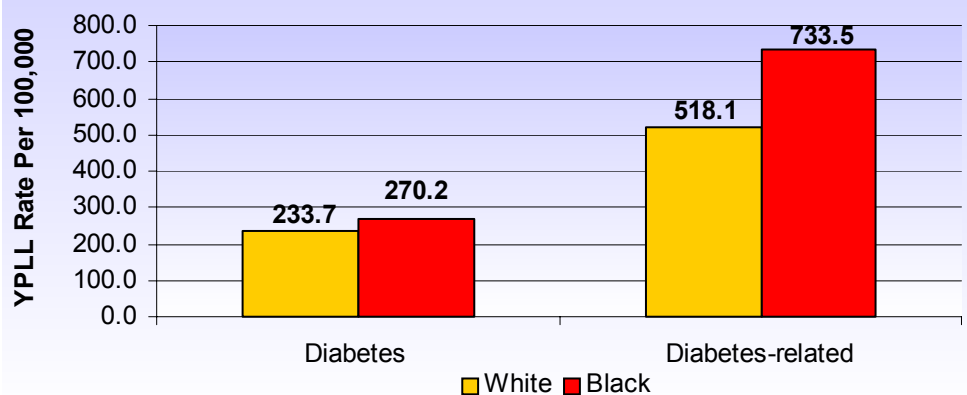
Blacks were more likely to die from diabetes and diabetes-related diseases than whites in 2005. Years of Potential Life Lost (YPLL) due to diabetes deaths in Duval County for the black population was 15.6%

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Figure 1 Years of Potential Life Lost Under Age 75, Diabetes and Diabetes-Related Mortality by Race, Duval County, 2005



Sources: Florida Department of Health, Office of Vital Statistics, 2005
Prepared by: Institute for Health, Policy and Evaluation Research, June 2007

Duval County Diabetes Report Card

| Obj # | Healthy People Diabetes Objectives | U.S. (2004) | FL (2005) | Duval (2005) | 2010 Target |
|------------|--|---------------------------|-----------------------------------|------------------------------------|-------------|
| 5-3 | Reduce the overall rate of diabetes that is clinically diagnosed. (Age-Adjusted Per 1,000) | 54 ¹ (2005) | 56.3 ^{2*} (Year?) | 45.9 ^{2*} (2002-2005) | 25 |
| 5-5 | Reduce the diabetes death rate, diabetes as primary or contributing cause. (Age-Adjusted Per 100,000) | 76 ³ | 51.1 ⁴ | 78 ⁴ | 46 |
| 5-5a ** | Reduce the diabetes death rate, diabetes as the primary cause only. (Age-Adjusted Per 100,000) | NA | 21.9 ⁴ | 32.4 ⁴ | NA |
| 5-6 | Reduce diabetes-related deaths among persons with diabetes. (Age-Adjusted Per 1,000 persons with diabetes) | 7.0 ^{1,2} | 4.4 ^{2,4} Not AA*** | 16.9 ^{2,4*} Not AA*** | 7.8 |
| 5-7 | Reduce deaths from cardiovascular disease in persons with diabetes. (Age-Adjusted Per 100,000 persons with diabetes) | 238 ^{1,2} | 317.4 ^{2,4} Not AA*** | 508.6 ^{2,4*} Not AA*** | 299 |
| 5-10 | Reduce the lower extremity amputations in persons with diabetes. (Age-Adjusted Per 1,000 persons with diabetes) | 4.4 ^{1,5} | 4.4 ^{2,6} Not AA*** | 7.9 ^{2,6*} Not AA*** | 2.9 |

Data Report Card Overview

There are two common ways to measure diabetes deaths: 1) deaths where diabetes is listed as the primary cause death on the death certificate, and 2) deaths where diabetes is listed on the death certificate as a primary cause *plus* deaths which list diabetes as a contributing cause or other significant condition. These deaths are also called diabetes-related deaths. Diabetes-related deaths are primarily cardiovascular diseases, such as heart and blood vessel disease and kidney related diseases. The data report card reflects data for Healthy People 2010 objectives

that are available. Healthy People 2010 targets are used as benchmarks to compare the status of Duval County, Florida and the U.S. for the related objectives.

Duval County showed the lowest rate of people diagnosed with diabetes compared to the U.S. and Florida. However, these low rates could also reflect the large number of Duval County residents who are diabetic but not diagnosed and therefore were not undergoing formal diabetes management. Supporting the under diagnosis is Duval County's high rate of diabetes-related deaths (78.4 per 100,000) compared to the U.S and Florida. Duval County was also 70%

higher than the Healthy People 2010 target of 46 per 100,000.

In addition, Duval County had the highest rate of deaths due to diabetes as the underlying cause compared to Florida with rates of 32.4 per 100,000 and 21.9 per 100,000. Rates for diabetes deaths increased for both Duval County and Florida although Duval County showed a 14.7% increase from 1996-2005, while the increase for Florida was 8.4% over these same years (see Figure 3). Individuals who die of diabetes as the primary cause of death may not have ever been clinically diagnosed with diabetes and therefore were not engaged in a formal management program.

(continued on page 4)

¹ National Health Interview Survey (NHIS), CDC, NCHS, 2004, 2005

² Behavior Risk Factor Surveillance System, Duval and Florida, 2002-2005

³ National Vital Statistics System, Mortality, CDC, NCHS, 2004

⁴ Florida Department of Health, Office of Vital Statistics, 2005

⁵ National Hospital Discharge Survey (NHDS), CDC, NCHS, 2004

⁶ Agency for Health Care Administration, Hospital and Emergency Room, 2005

* Based on small sample

** Not a Healthy People 2010 Objective

***AA = Age-Adjusted

Diabetes: Hospitalization and Emergency Room

| Indicator | Duval | Hillsborough | Orange | Florida |
|--|--------|--------------|--------|---------|
| Diabetes Hospitalizations (Age Adjusted Rate Per 100,000) | 228.4 | 183.2 | 198.6 | 162.7 |
| Diabetes Emergency Room Visits (Age Adjusted Rate Per 100,000) | 174.0 | 135.9 | 148.2 | 130.6 |
| Diabetes-related Hospitalizations (Age Adjusted Rate Per 100,000) | 2383.4 | 2084.2 | 2613.8 | 1920.0 |
| Diabetes-related Emergency Room Visits (Age Adjusted Rate Per 100,000) | 1666.4 | 1310.9 | 1548.9 | 1283.5 |

Agency for Health Care Administration, Hospital and Emergency Room, 2005



The Hospital and Emergency Room data provide an overall comparison between Duval County, Hillsborough County, Orange County, and the state of Florida. These

counties were used as comparisons as they are similarly sized counties and have distinct urban areas.

Hospitalizations

For diabetes and diabetes-related hospitalizations, Duval County had a higher rate than all other comparison counties and Florida. For specific diabetes complications, Duval County rates were higher than comparison counties for diabetes with ketoacidosis, diabetes with neurological manifestations, diabetes with peripheral circulatory disorders, and diabetes with unspecified complications. Of Duval County diabetes hospitalizations, 23.3%

were due to ketoacidosis, 23.2% were due to other specified manifestations, and 22.0% were due to neurological manifestations.

The rate for hospitalizations due to diabetes in Duval County (228.4 per 100,000) was 40% higher than the rate in Florida (162.7 per 100,000) in 2005. In Duval County, residents of Health Zone 1 had the highest rate (530.2 per 100,000) of hospitalizations due to diabetes. This is almost double the Health Zone with the 2nd highest rate, Health Zone 5, with a rate of 288.5 per 100,000 (see Figure 2). Health Zone 1 also has the highest black population of all the health zones.

The black hospitalization rate of 375.1 per 100,000 was 142% higher than the white rate (155.0 per 100,000). The rate for blacks in Florida was slightly less (11.5%) than for blacks in Duval County. There were no notable

differences in gender hospitalization rates for diabetes in Duval County, although women had a slightly higher rate than men. However, the rate for women in Duval County (235.3 per 100,000) was 41.3% higher than the rate for women in Florida (166.5 per 100,000) but the rate for men was much closer, 192.9 for Florida compared to 206.6 for Duval County.

Emergency Room

For emergency room (ER) visits due to diabetes, Duval County had a rate of 174 per 100,000 rate, higher than all other comparison counties and Florida. Over half of all diabetes ER visits (54.5%) were admitted for diabetes without complications. The rate for this diagnosis in Duval County was 93.2 per 100,000. As with diabetes, diabetes-related ER visits were also higher than all other comparison counties and Florida.

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Data Report Card Overview

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Most alarming was the increased rates of diabetes-related deaths among person with diabetics in Duval County compared to Florida and the U.S. This is a measure of those who have been clinically diagnosed with diabetes having died from a diabetes-related death. This is an important measure as it likely reflects individuals who have undergone formal diabetes management and still died of diabetes or related causes or those that have been given the opportunity for formal diabetes education but did not participate or adhere to program recommendations. The rate in Duval County (16.9 per 1,000) was 284% higher than Florida, 141% higher than the U.S, and 116% higher than the target. The same trend exists for deaths from cardiovascular diseases in persons with diabetes with Duval County being 60% higher than Florida, 114% higher than the U.S. and 70% higher than the target.

The rate in Duval County for diabetics with lower extremity amputations (Objective 5-10) was higher than the U.S. and Florida by 80% and 172% higher than the target of 2.9 per 1,000 persons with diabetes.

Diabetes: Hospitalization and Emergency Room (continued from page 3)

For ER visits due to diabetes, Health Zone 1 had the highest rate with 427.4 per 100,000. Health Zone 5 had the next highest rate (160.4 per 100,000) although 62% lower than Health Zone 1.

The rate for blacks visiting the ER due to diabetes was triple that of whites, 314.4 per 100,000 and 104.4 per 100,000, respectively. The black ER visit rate in Duval County was 10.2% higher than the rate for blacks in Florida (285 per 100,000). Women (181.9 per 100,000) in Duval County were more likely to visit the ER due to diabetes than men (159.3 per 100,000). In addition, women in Duval County had a higher rate than for women in Florida with 141.5 per 100,000. Likewise, men in Duval County also had a higher rate of ER visits than Florida with 142.4 per 100,000).

Figure 2 Hospitalizations Due to Diabetes by Health Zone, Duval County, 2005

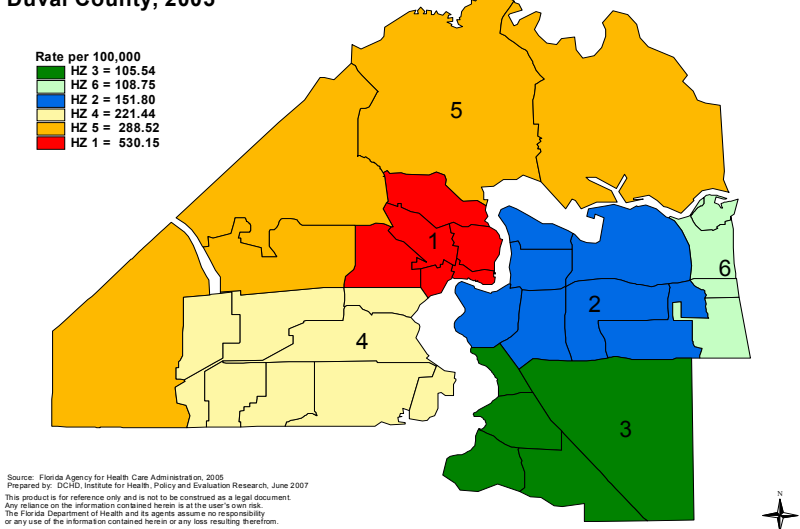
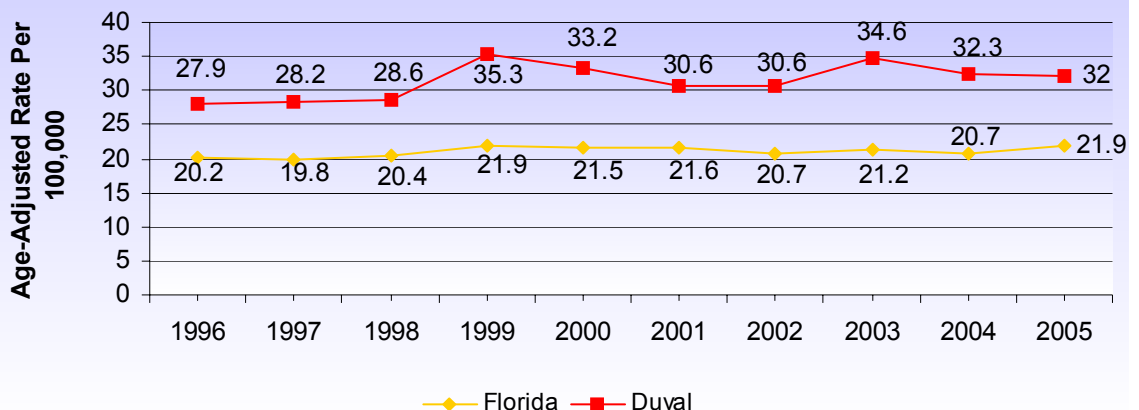


Figure 3 Diabetes Mortality, Duval County and Florida, 1996-2005

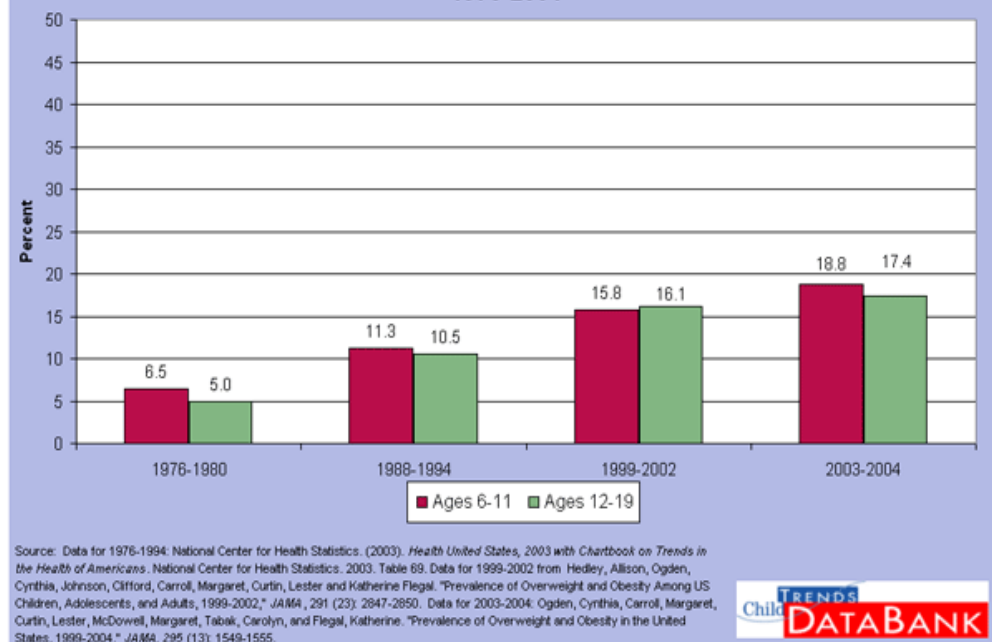


Physical Activity: One Healthy Behavior to Address Obesity and Diabetes in Youth

Overweight rates in youth ages 6-11 have more than doubled in the past 20 years, increasing from 7% in 1980 to 18.8% in 2004. In adolescence (ages 12-19) the figure has more than tripled in the same time frame (5% to 17.4%).¹ This dramatic increase in obesity prevalence has had a negative impact on chronic diseases especially diabetes (Type II). There has been an increase in the prevalence of diabetes and many are being diagnosed at a younger age (pre-adult). Previously, Type II diabetes was known as adult onset diabetes however this term is not used because this type of diabetes is now being diagnosed in youth.²

One of the major behavioral

Figure 4 Percent of Overweight Children Ages 6 to 19, by Age, Selected Years 1976-2004

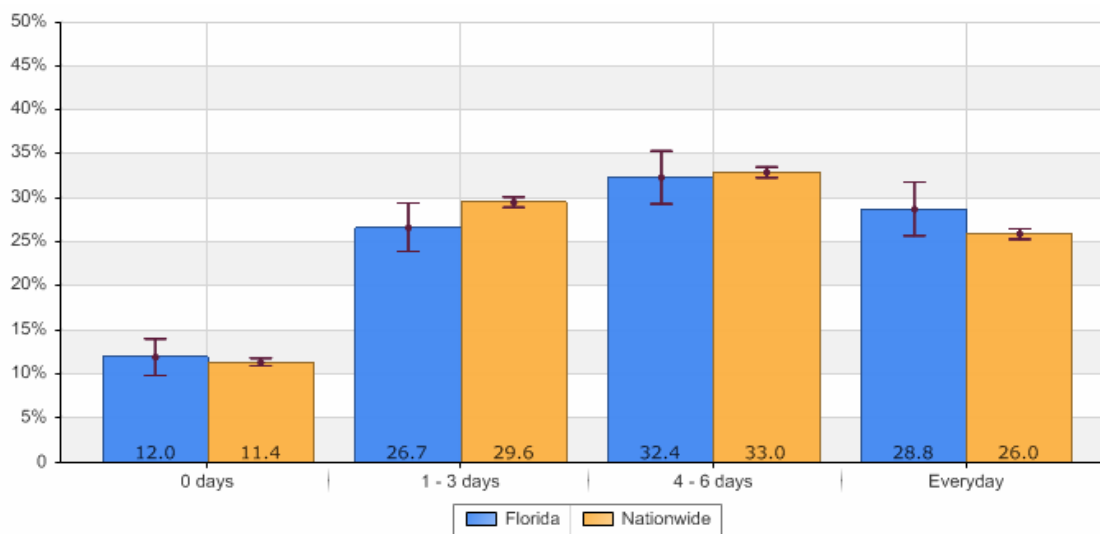


risk factors that may explain the increase in youth diabetes is lack of physical activity. What exacerbates

the problem is that many school districts have reduced or completely excluded physical education from the curriculum to gain

more time in the classroom. Furthermore, when not in school children are spending a fair amount of time in front of a television or computer. A 2003 study conducted by Child and Adolescent Health Measurement Initiative found that in both the US and Florida, almost 45% of children spent 2 or more hours watching TV, videos or playing video games on an average school day

Figure 5 Number of days during past week children/youth (ages 6-17) engaged in vigorous physical activity, Nationwide and Florida, 2005



Citation format: Child and Adolescent Health Measurement Initiative (2005). *National Survey of Children's Health*, Data Resource Center on Child and Adolescent Health website. Retrieved 06/07/2007 www.nschdata

D-RAP- Diabetes Rapid Access Program

Eric Stewart, MD, Elizabeth Means, RN, MSHA, FCHC, Bobby Marcus, RN, CDE, Shands at the University of Florida

D-RAP is a program that allows patients with diabetes access to care every three days and more often if needed. Purpose of the program is to improve the quality of chronic disease care and improve access to needed screening and treatment. Nurses are available to provide the support needed for patients to make lifestyle changes. Adjustments in medications are made as needed.

Originally, patients with an HgbA1c greater than 9.0 were placed in the program. HgbA1c, also known as Glycosylated Hemoglobin, is hemoglobin to which glucose is bound. HgbA1c is a measure used to determine the long-term control of diabetes. Recently D-RAP has expanded to include all 3,000 patients in the satellite system. The insured, underinsured and none insured are accepted into the program.

The patients are identified by a diagnosis of *Diabetes*; labs are reviewed, if HgbA1c is elevated the patient is then called to come in for assessment. If unable to reach the patient by phone, a letter is then sent for the patient to come in for assessment. When the patient has the initial

visit, lab results are reviewed, and the patient is given one on one and group education concerning diabetes. The patient is provided the support needed to overcome some of the barriers that patients experience when faced with life changing issues. The patient is then started on the appropriate medication per their primary care physician's choice. Every three days the patient comes in for monitoring, education based on American Diabetes Association guidelines, and/or medication adjustment. The medication regimen is kept simple, once a day dosing. Sometimes more than once a day medication is required to get glucose under control. One goal is that when the patient can see that the medication is making a difference they are motivated to making lifestyle changes.

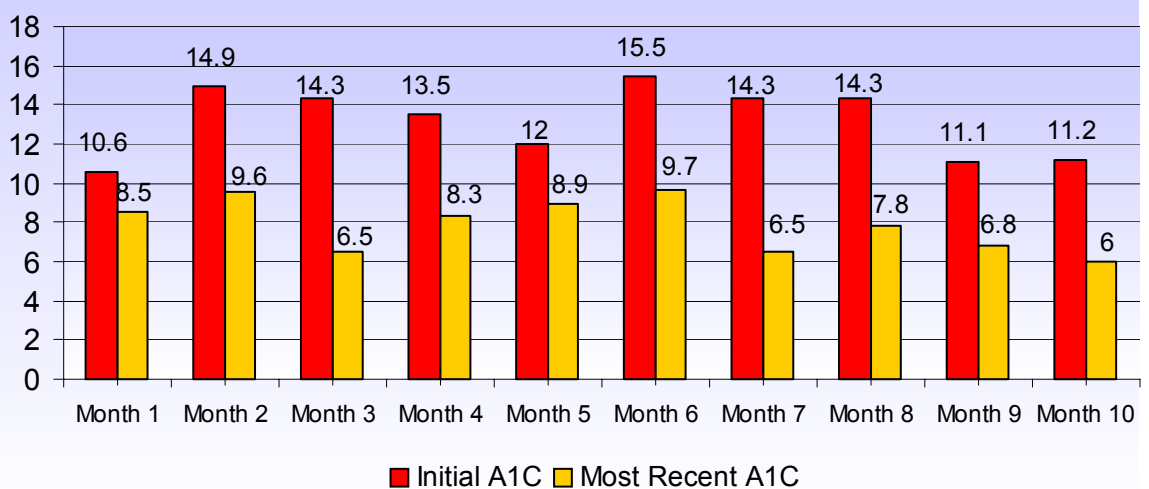
Labs are monitored every three months and results are recorded in

the registry. Along with the A1c the patient's, lipids, bun and creatinine are monitored. Blood pressure is monitored each visit and weight is checked monthly. Patients can call daily with glucose results or questions. Every encounter is an opportunity to educate the patient. Patients are given the appropriate referrals, i.e. podiatrist, ophthalmologist and endocrinologist and patients are encouraged to keep appointments and follow-up as needed.

Patient's who are uninsured are assisted with medication through the Patient Assistance Programs. Each patient and/or family member is provided education with the primary goal to educate and empower the patient to make better choices. Nurses are available to give support and answer questions to help the patients overcome some of the barriers preventing patients from reaching their goal of getting their glucose under control. By lowering the patient's HgbA1c and

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Figure 6 Preliminary Results of D-RAP



“A New DEAL” to a Healthier Community

Anta James, Program Manager, A New Deal Diabetes Program, Healthy Jacksonville, Duval County Health Department

Every week, P. Reeves, T. Mayhew and D. Johnson scour the community in North Jacksonville, FL and set up shop outside grocery and convenience stores or in the flea markets and other popular venues where they can talk to people about diabetes. Meanwhile, their counterpart, P. Denson is working down her list of over 200 churches in the area, calling their health ministry contacts or pastors to set up education events to increase their congregations’ awareness and help them take action. These ladies are all community health workers for the Duval County Health Department’s latest Chronic Disease program addition, “A New DEAL,” a program directed at African-Americans in the city’s north side and whose aim is to “Defeat Diabetes through Education, Awareness and Leadership,” hence its

acronym DEAL. The community health workers carry the American Diabetes Association inspired risk test everywhere they go, and ask people to fill one out to assess their own risk for diabetes, based on major risk factors such as family history, excess weight, age, physical inactivity and a history of gestational diabetes for women. See Figure 7 for potential contributing risk factors for diabetes.

The program’s workers do not stop at assessing risk. They thoroughly follow up with participants to make sure those at risk seek medical attention and testing, those diagnosed receive free diabetes self-management education classes, and those with low risk remain that way by adjusting their lifestyle with proper diet and exercise. Group wellness events are also regularly held to help people who have pre-

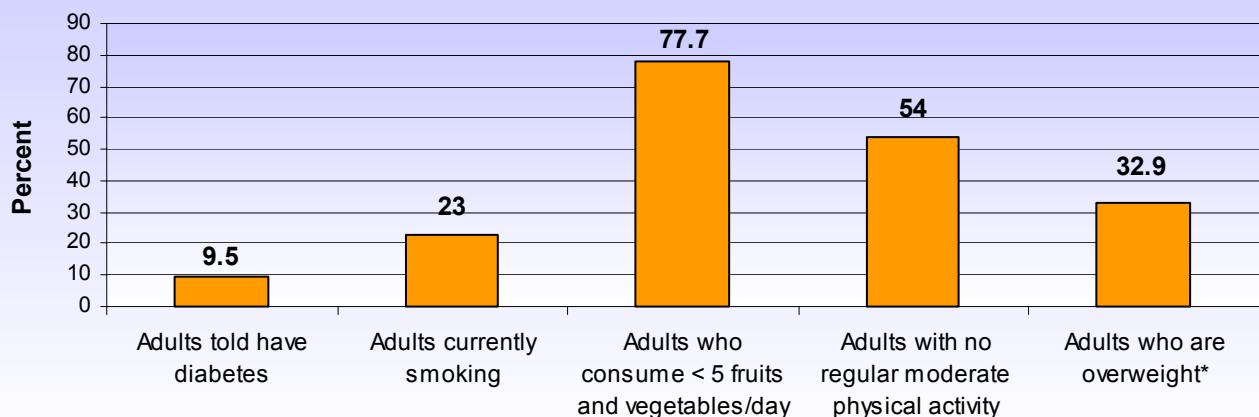
diabetics and those at risk but not diagnosed, and their families, learn about effective ways to successfully delay or avoid diagnosis.

In addition to administering risk assessments, following up with participants, offering free diabetes classes and education seminars, A New DEAL will be starting walking clubs and expanding on its diabetes support groups in the community starting this summer. The idea behind such initiatives is that people tend to do better when they have support. Exercising always seems more fun and draws more commitment when done in a group setting. The support groups will focus on people living with diabetes and those newly diagnosed patients who need a support system to get them through the early stages; they will be lead by a nurse. The walking club will target the community at large, with a particular focus on people at risk and their families,

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Figure 7

Contributing Risk Factors for Diabetes, Duval County, 2002



Source: Behavioral Risk Factor Surveillance System, 2002
Prepared by: Institute for Health, Policy and Evaluation Research, June 2007

Local Chapter of Diabetes Educators Serves the Community, Jean Kilts BSN,RN,CDE, Baptist Medical Center, Past President, Jacksonville Association of Diabetes Educators

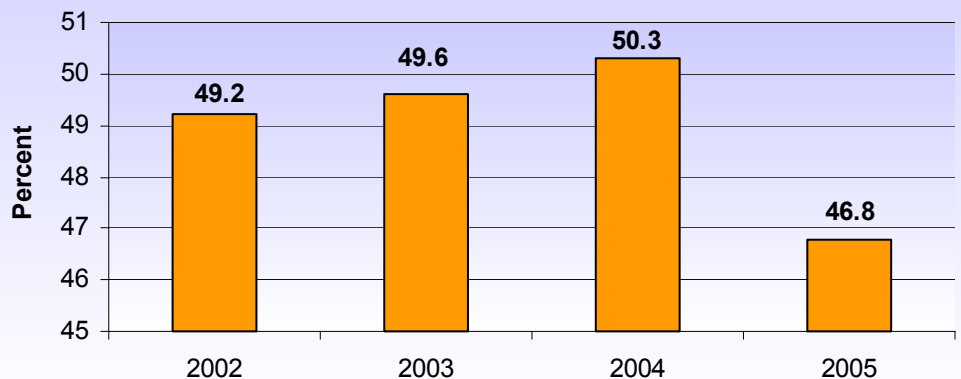
The Jacksonville Association of Diabetes Educators (JADE) is a local chapter of the American Association of Diabetes Educators (AADE). The purpose of JADE is to provide educational opportunities for the professional growth and development of diabetes educators, promote and aid the growth and development of quality diabetes education for the person with diabetes, and foster communication and cooperation among individuals and organizations involved in diabetes education. Members consist of anyone interested in diabetes education in the surrounding communities.

JADE develops diabetes educator's growth by offering educational programs at nine monthly meetings and one annual all day seminar.

JADE members promote quality diabetes education for people with diabetes by offering free diabetes education at health fairs and at the Volunteers in Medicine clinic (VIM). The classes at VIM are taught six times a year by Certified Diabetes Educators and are based on national education standards.

JADE, along with the American Diabetes Association, plans the annual Diabetes Exposed event which offers opportunities for the public to hear all the latest in

Figure 8 Adults Who Have Taken a Course or Class to Learn How to Manage Their Diabetes



*Note—Florida was used as Duval Counties data were statistically unreliable for this indicator.
Source: Behavioral Risk Factor Surveillance System, 2002-2005
Prepared by: Institute for Health, Policy and Evaluation Research, June 2007

diabetes management. JADE members will conduct many of the classes at Diabetes Exposed this year on November 17.

In addition JADE members developed a brochure listing the Diabetes Education Programs in the Jacksonville area. This brochure is handed out at various health fairs and to patients in the hospital to foster follow-up education.

JADE members volunteer each year at Diabetes Camp, a day camp for youngsters with Type 1 or Type 2 diabetes. JADE donates money each year to sponsor camper's tuition.

JADE members participate in many community organizations

such as; the Healthy Jacksonville Diabetes Coalition, American Diabetes Association, and the American Dietetic Association.

JADE members participate in ADA fund raisers such as tour de Cure, and Diabetes Walk.

For more information on JADE, contact the Diabetes and Nutrition Resources at Baptist Medical Center Jacksonville at 904-202-1152.



Diabetes Disparities at the Local Level (continued from page 1)

higher than for the white population in 2005 (see Figure 1). 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).

The YPLL rate for diabetes-related deaths was 733.5 per 100,000 for blacks, 41.6% higher than the white rate of 518.1 per 100,000. Blacks have remained consistently higher than whites over time with little decrease in the gap.

Diabetes-related deaths are much higher in the black population as they are also related to diseases that disproportionately affect them. These diseases are primarily cardiovascular diseases, such as heart and blood vessel disease. In Duval County, the YPLL for heart disease among blacks was 33% higher than for whites in 2005.

Gender disparities exist for diabetes as well. As

with race, men and women have similar diagnoses rates, 9.6% for men and 9.4% for women. However, men were more likely to die from diabetes or from diabetes-related diseases (see Figure 9). The age-adjusted rate for diabetes deaths for men was 39.8 per 100,000 compared to 32.8 per 100,000 for women. The disparity is much larger for diabetes-related deaths. The rate for men (99.2 per 100,000) was 29% higher than women (76.7 per 100,000).

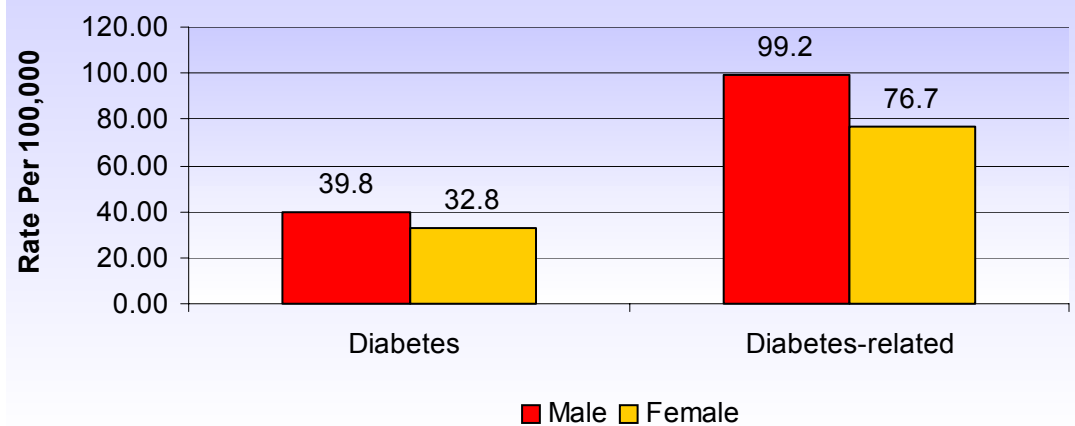
Geographical disparities in diabetes exist in Duval County. Specifically Health Zone 5 had the highest rate of diabetes deaths and Health Zone 1 had the highest rate of diabetes-related deaths (see Figures 10 and 11). Health Zone 1, the urban core of Jacksonville, also has the highest rate of poverty and the lowest education level in Duval County. Diabetes deaths for blacks in Duval County were actually 10.1% lower than for Florida



in 2005; however, the diabetes death rate for whites in Duval County was 25.3% higher than for Florida.

Disparities around diabetes exist in the prevention stage as well as the treatment stage. Disparities exist for race and gender in regard to risk factors for diabetes, such as diet and exercise as well as those receiving formal diabetes education once diagnosed. In addition, deaths from diseases in which diabetes is a complication and diabetes deaths as the underlying cause of death also show disparities among race and gender.

Figure 9 Diabetes and Diabetes-Related Mortality Rate by Gender, Duval County, 2005



Sources: Florida Department of Health, Office of Vital Statistics, 2005
Prepared by: Institute for Health, Policy and Evaluation Research, June 2007

Physical Activity: One Healthy Behavior to Address Obesity and Diabetes in Youth (continued from page 5)

(see Figure 4).

In addition, 26% of youth (ages 6-17) in the U.S. responded they engaged in vigorous physical activity on a daily basis in the past week while *11.4% exercised less than 1 day per week*. Similar results are seen in Florida where 28.8% of youth engaged in vigorous physical activity on a daily basis while *12% spent exercised less than 1 day per week* (see Figure 5). A number of studies have suggested that increased television watching associated with a decrease in physical activity may contribute to the emergence of Type II diabetes in youth.

Given the increased rates of children being overweight and the startling rates of diabetes and other health problems among youth, Florida's Governor Charlie Crist signed House Bill-967 on May 17, 2007. The bill **requires** 150 minutes of physical education a week for public school students in grades K-5. This legislation calls for elementary school students to get 30 minutes of physical activity each day at school. This is a notable change from the past. Previously, the law only encouraged elementary students to participate in physical education.

Providing and encouraging more physical education in schools is a positive step toward improving the health of Florida's youth. In the future, Florida hopes to see a

marked increase in physical activity and decreases in the prevalence of obesity and diabetes.

Providing the opportunity to get more physical activity at school will also help assist our children in meeting the Centers for Disease Control recommended daily physical activity requirements. Other positive outcomes from the law would be the development of knowledge and skills regarding teamwork and fair play; the development of knowledge and skills regarding nutrition and physical fitness as part of a healthy lifestyle; and the development of positive attitudes regarding sound nutrition and physical activity as a component of personal well-being.

¹Ogden, CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of Overweight and Obesity in the US., 1999-2004, JAMA 2006; 295:1549-1555.

²Centers for Disease Control and Prevention, National Health Interview Survey, 1990-2005; Retrieved from <http://www.diabetes.org>

"A New DEAL" to a Healthier Community (continued from page 7)

encouraging people to include and/or use physical activity as quality time with family and friends. Orientations and support for the clubs will be provided by a physical activity professional.

Jacksonville's urban core residents are now ready to **Defeat Diabetes** with more access to **education** on risk factors, symptoms, complications and proper management of

diabetes. They also have community health workers actively seeking to increase their **awareness** and assess their risk, while letting them know that in order to be in control, they have to be involved and compliant with their own care and play a **leadership** role within their own healthcare team. Our community is in fact getting "A new **DEAL**" to a healthier lifestyle!!

For more information on "A new DEAL," contact Anta James at Healthy Jacksonville at 904-665-2520.

D-RAP - Diabetes Rapid Access Program (continued from page 6)

glucose, the risk of developing diabetes complications are reduced. Results from the program show the average A1c at the beginning of the program was 12.6. After 10 months of program operation, the overall average A1c at this time 7.9.

In conclusion, patients in D-RAP have demonstrated a significant improvement in HgbA1c. The patients are motivated to make lifestyle changes needed to control their glucose. The reduction in HgbA1c and glucose reduces the risk of developing complications of diabetes, improves the patient's quality of life and saves money that would normally be spent treating preventative complications.

For more information about diabetes services offered at Shands at UF, call 352-265-8000 or toll free at 1-800-749-7424.

Diabetes: The National Challenge (continued from page 1)

accounts for roughly 90% to 95% of all diagnosed cases of diabetes.³ Type 2 diabetes is often related to older age, obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity. Common treatment for Type 2 diabetes includes meal planning for blood sugar control, weight loss, high blood pressure control and exercising.

There has been a lot of discussion in public health related to pre-diabetes. This is when blood glucose levels are higher than normal but not yet high enough to be diagnosed as diabetes. Pre-diabetes in most cases is the diagnoses before developing type 2 diabetes. There are 54 million people in the United States who have pre-diabetes.²

A less prevalent type of diabetes is gestational diabetes. This type is a form of glucose intolerance during pregnancy. This type occurs more frequently in African Americans, Hispanic/Latino American and American Indians. It also may be more frequent in women who are obese or have a family history of diabetes. After pregnancy, 5%-10% of women who had gestational diabetes are found to have Type 2 diabetes. Among the women who have had gestational diabetes 20% to 50% have a chance of developing diabetes in the next 5-10 years.³

Other types of diabetes result from specific genetic conditions (such as maturity-onset diabetes of youth), surgery, drugs, malnutrition, infections, and other illnesses.² These other types account for a small percent of the United States population.

Complications of Diabetes in the United States

There are many complications of diabetes. Diabetes deaths in which complications are present are also called diabetes-related deaths. Heart disease and stroke account for about 65% of deaths in people with diabetes.³ High blood pressure is another complication of diabetes and in most cases most people with diabetes have high blood pressure. Other complications include blindness, kidney disease, nervous system disease, amputations, and dental disease. All



of which can be prevented in most cases.

Financial Burden of Diabetes

The total direct and indirect cost of diabetic care in the United States is over 130 billion. Diabetes costs can be reduced drastically through comprehensive primary or even secondary prevention.

Sources:

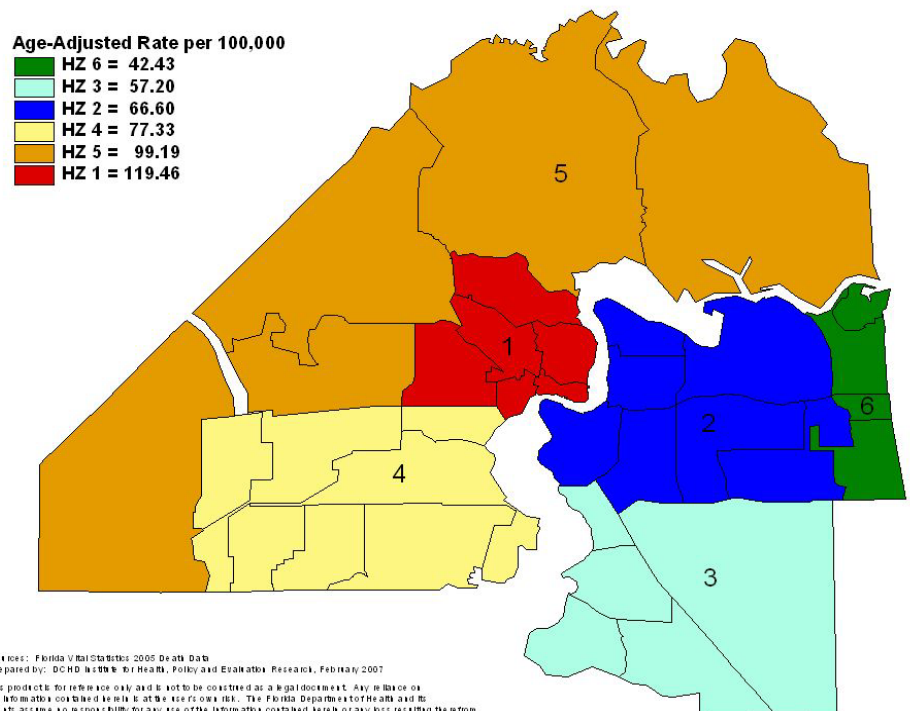
¹ <http://webapp.cdc.gov/cgi-bin/broker.exe>

² <http://www.diabetes.org/pre-diabetes.jsp>

³ <http://www.cdc.gov/diabetes/pubs/factsheet05.htm>

Figure 10

Diabetes-Related Mortality Rate by Health Zone, Duval County, 2005



Sources: Florida Vital Statistics 2005 Death Data
Prepared by: DCHD Institute for Health, Policy and Evaluation Research, February 2007
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Duval County Health Department
Institute for Health, Policy & Evaluation Research
900 University Blvd. North, Suite 604 (MC-99)
Jacksonville, Florida 32211

Phone: 904-630-3255

Fax: 904-665-3111



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Figure 11
Diabetes Mortality Rate By Health Zone, Duval County, 2005

