



2010

# Monroe County Health Profile



Broward Regional Health Planning Council

12/10/2010

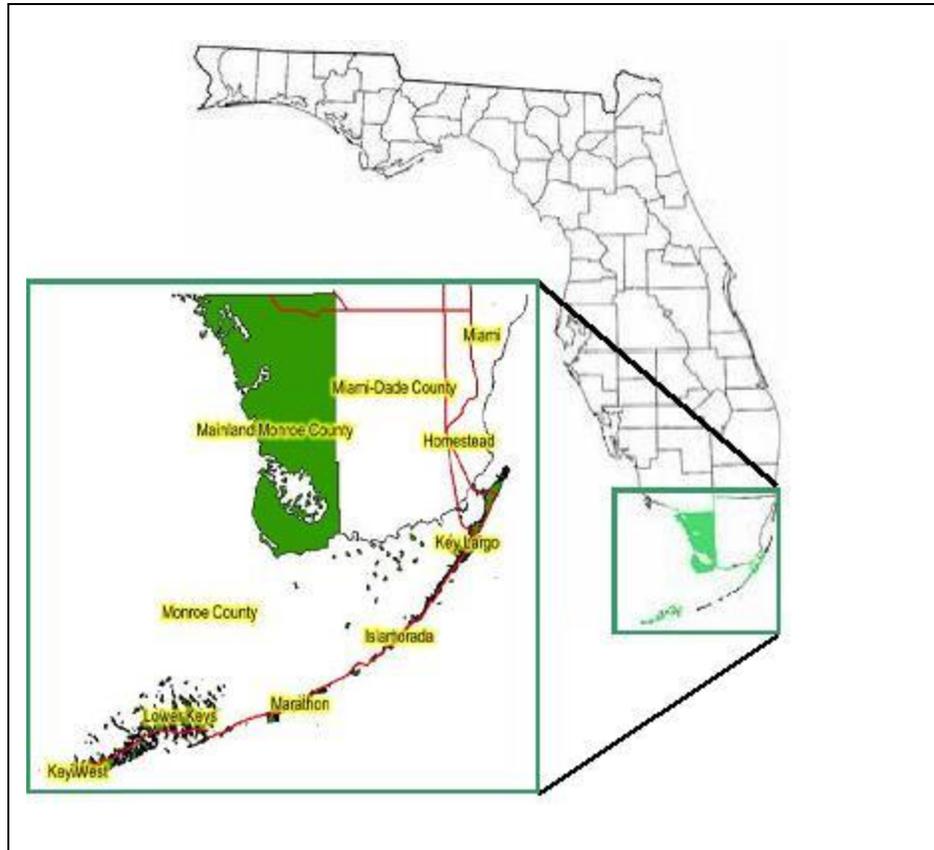
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# COMMUNITY PROFILE

## I. GEOGRAPHY

The geography of Monroe County is atypical of other Florida counties. As illustrated in the map below, there are mainland and Florida Keys' islands portions of Monroe County. Monroe County is comprised of 3,737 square miles and about 73% of it is made up of water.



The mainland portion of Monroe County is located on the southwestern tip of the Florida peninsula with Miami-Dade County located directly east and adjacent to it. The other portion of Monroe County, the Florida Keys, is a string of islands spanning nearly 220 miles and connected by only one major road, US Highway 1. In the most basic of terms, this geography results in the mainland portion being disconnected from the Florida Keys portion of the County.

The mainland portion of Monroe County contains isolated populations in unincorporated areas around Everglades National Park and Big Cypress National Preserve. It is important to note this geographic characteristic causes travel times and distances from some unincorporated mainland areas of Monroe County such as Flamingo to the County Seat in Key West of over 4 hours of driving time and spanning nearly 175 miles.

## II. DEMOGRAPHIC CHARACTERISTICS

Because Monroe County is so geographically atypical, the data provided in the demographic and socioeconomic profiles are shown as countywide aggregates. Often using zip code information leads to intriguing findings, but the issues associated to its use in Monroe County are clearly demonstrated in examples where homesteads and businesses near the Everglades National Park have zip codes in Miami-Dade County and those for the homesteads and businesses near Big Cypress National Preserve have zip codes in Collier County.

### A) POPULATION BY AGE, RACE, ETHNICITY

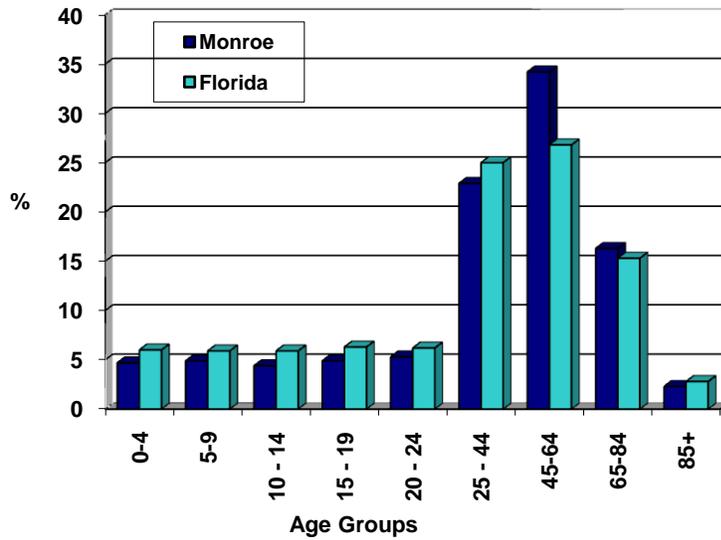
Table 1 provides a summary overview of key demographic characteristics for Monroe County and compares them to the state of Florida as a whole. In 2009, Monroe County's population was estimated at 74,518 with over one-third of the population located in the county seat, Key West. Monroe County's population is older than the state with the median age of 46 as compared to state population's median age of 41. The county is predominately white and has a significantly higher percentage of males than the state average. The "Other" race category includes American Indians, Asians, and Hawaiian/Pacific Islanders.

		Monroe County		Florida
		Number	Percent	Percent
Age in Years	Total	74,518	100%	4%
	0 – 4	3,479	4.7%	6%
	5-9	3,690	4.9%	5.9%
	10-14	3,272	4.4%	5.9%
	15-19	3,674	4.9%	6.3%
	20-24	3,936	5.3%	6.2%
	25-44	17,121	22.9%	25.0%
	45-64	25,466	34.2%	26.8%
	65-84	12,150	16.3%	15.3%
	85+	1,730	2.3%	2.8%
<b>Median Age 46</b>				<b>41</b>
Gender	Male	38,981	53.2%	48.8%
	Female	35,537	46.8%	51.2%
Race	Black	4,063	5.5%	16.5%
	White	69,249	92.9%	80.7%
	Other	1,206	1.6%	2.8%
Ethnicity	Hispanic	15,440	20.7%	21.5%
	Non-Hispanic	59,078	79.3%	78.5%

Source: Florida Legislature's Office of Economic and Demographic Research (EDR).

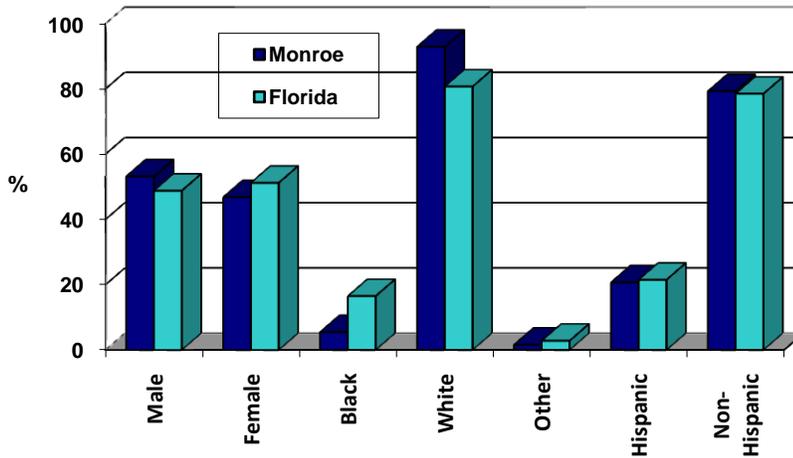
A majority (57%) of the County's population is between the ages of 25 and 64 in comparison to 51.6% for the state. Although the percent of population over 65 is similar to the state (18.6% and 18.1%, respectively), those younger than 25 only make up 24% of Monroe County while they represent over 30% of the population of the State.

**Comparison between Monroe County & Florida's Population by Age Group**



This distribution of population is important to health considerations because resources can be used for interventional education and preventive health care to assist adults within these age groups to adopt healthier lifestyles that are likely to impact the County's overall health outcomes.

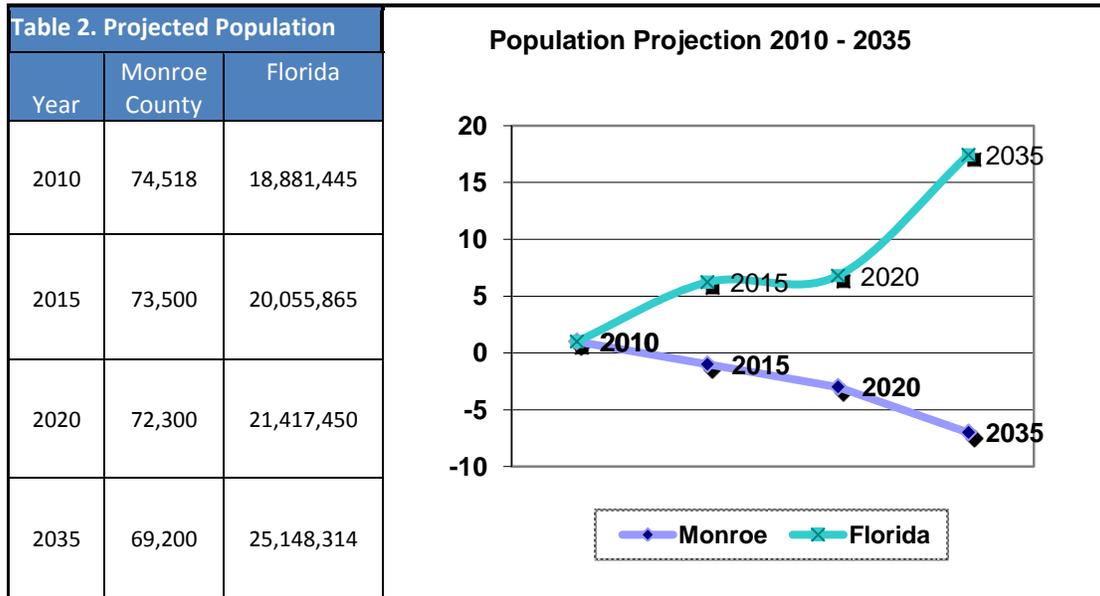
**Population Characteristics**



As shown in the chart above, Monroe County's population is racially less diverse than that of Florida as a whole. As compared to Florida, Monroe County is estimated at having about 7% of its population made up of Black and "Other" races, compared to over 19% for those populations as a whole in Florida. Although the race for the population as a whole in Monroe County is less diverse than that of the State, the proportion of the Monroe County population that is Hispanic (20.7%) is comparable with the Hispanic population of Florida at nearly 22%.

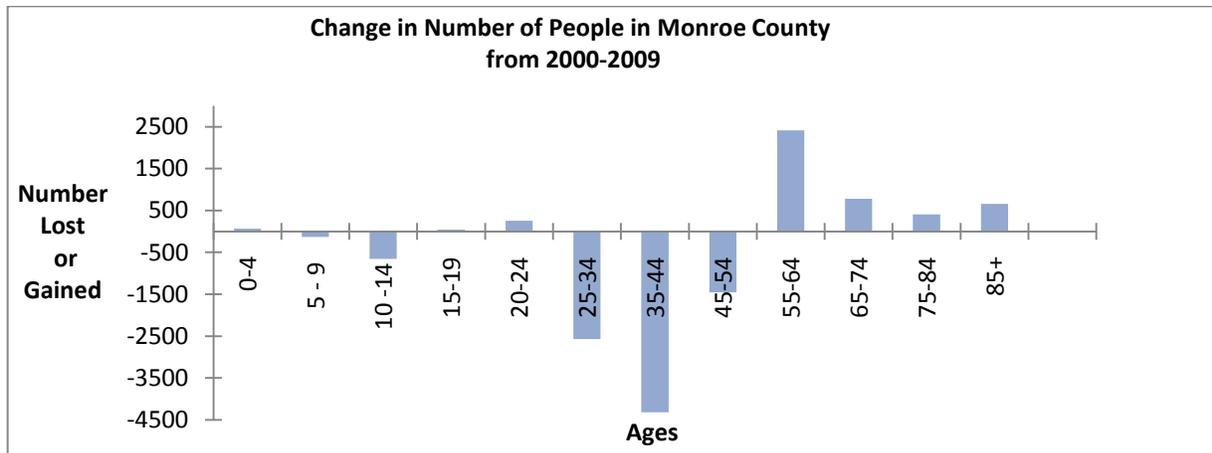
## B) POPULATION PROJECTIONS

The U.S. Census estimates Monroe County lost nearly 8.1 % of its population between April 1, 2000 and July 1, 2009 while the state as a whole increased its population by 16%. Over the next 25 years, Monroe County's population is projected to continue to fall by over 7% while that of the State continues to increase by over 30%.



Source: Florida Legislature - EDR FL Demographic Forecasting Conference Annual Population Data in Monroe County

The greatest decrease in population from 2000 to 2009 was for persons ages 35 – 44. This represents a substantial decrease in the number of people in this population's age group during this time period. The greatest increase in population for this time period was for persons ages 55 – 64 years of age.



Source: Florida Legislature - EDR FL Demographic Forecasting Conference Annual Population Data in Monroe County

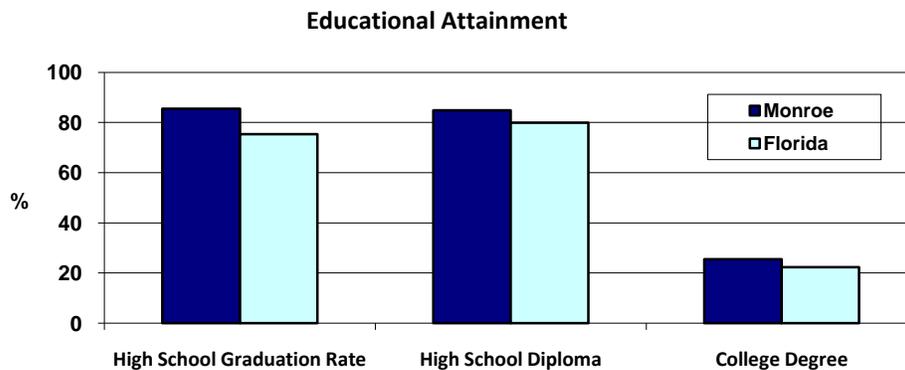
These changes in the ages of the population in Monroe County will affect the available workforce as well as influence health outcomes and will require interventions, education and screening for diseases that affect older persons.

### III. SOCIOECONOMIC CHARACTERISTICS

Health outcomes are generally positively impacted by higher income, lower poverty, years of education, better employment opportunities, access to health care and healthy lifestyle choices. Although Monroe County's indicators of income, education and employment are better than that of the State, the number of people without health insurance is greater than that of the State and many of the lifestyle choices made by those living in Monroe County are not as healthy as of those in the State.

#### A) EDUCATION

Nearly 85% of Monroe County's population has attained at least a high school diploma or its equivalent as compared to 79.9% for Florida as a whole. In addition, a higher percentage of Monroe County residents have a college diploma (25.5%) than for Florida residents as a whole (22.3%). Also, the high school graduation rate for the 2007 school year was 85.5% as compared to the State's rate of 75.4%.



Source: School-aged Child and Adolescent Profile, Monroe County, Florida CHARTS.com

#### B) INCOME

Recent labor market information show that in the first quarter of 2010, the average weekly wage in Monroe County was estimated at \$667 while the wage for Florida as a whole is estimated as \$794. However, as noted in Table 3, Monroe County has better other economic indicators with per capita income of \$33,019, nearly 18% higher than Florida's per capita income of \$27,128. Monroe County's median income is greater than that of Florida (\$54,614 and \$50,413, respectively) and has lower unemployment rates (7% in Monroe County compared to 10.5% in the State). Over 35% of the population in Monroe County has household incomes between \$50,000-100,000. High incomes may be the result of the retiree population residing in Monroe County.

Table 3. Income Overview and Comparison			
	Indicator	Monroe County	Florida
	Per Capita Income (2009)^	\$33,019	\$27,128
	Average Weekly Wage (1 <sup>st</sup> Q 2010)*	\$667	\$764
	Unemployment Rate (Sept 2010)*	7.0%	10.5%
Household Income^	Amount	Percentage	Percentage
	<\$25K	19.7%	21.9%
	\$25K-50K	25.6%	27.6%
	\$50K-100K	35.8%	33.8%
	\$100K-150K	11.0%	9.8%
	\$150K+	7.9%	6.8%
Median	\$54,614	\$50,413	

Sources: ^Community Sourcebook America 2009 Edition, ESRI

\*Florida Research and Economic Database, <http://fred.labormarketinfo.com>

### C) POVERTY

According to the U.S. Census' 2006-2009 American Community Surveys, the estimated percentage of all persons living in poverty in Monroe County was 10.4% in 2008, compared to an average of 13.3% across all of Florida. Monroe County is estimated to have 6.8% of families living below the poverty level. For those most vulnerable to poverty the very young and old, 11.8% of those under the age of 18 and 8.80% of those 65 and older are living below the poverty line in Monroe County. In 2006-2008, 7% of all families and 23% of families with a female as head of household had incomes below the poverty level.

In addition, the percent of children in school-readiness programs eligible for free or reduced lunch programs in 2005 – 2007 was 79% for those children living in Monroe County as compared to 59% for the State as a whole. There are a significant number of children under 5 in Foster Care in Monroe County.

Since 2008, these percentages may have increased as a result of the economic downturn that has impacted most of the nation in 2009 and 2010.

### D) EMPLOYMENT

Monroe County has a lower unemployment rate of 7.0% than the 10.5% estimated for the State. Considering Monroe County is largely comprised of the Everglades National Park, Big Cypress National Preserve and the Florida Keys, it is easy to see how tourism and tourist related businesses are the major industry in Monroe County.

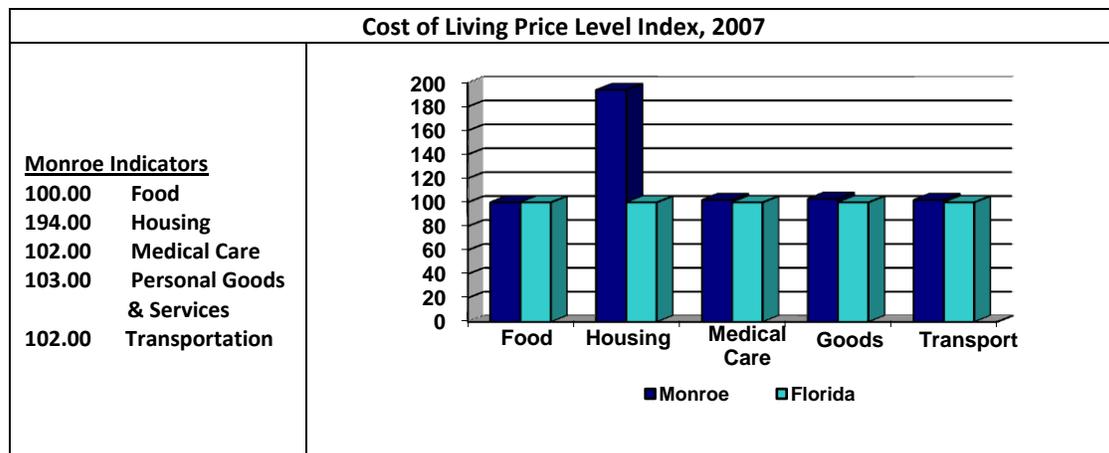
The largest major industry sector was Leisure & Hospitality (31%), followed by Retail Trade (20%), and Education & Health Services (11.9%). In September 2009, Monroe County had the highest location quotient in the is Gulf area (2.9), indicating that Monroe had nearly 3 times the percentage of workers employed in leisure and hospitality as the percentage employed in the Nation.

Table 4. Major Sources of Employment, 2009		
Industry	Monroe County	Florida
Leisure & Hospitality	31.2%	11.9%
Trade, Transportation Utilities	20.2%	20.5%
Education & Health Services	11.9%	19.4%
Professional & Business Services	8.2%	14.4%
Public Administration	8.1%	5.9%
Construction	7.6%	6.5%
Financial Activities	6.6%	6.6%
Other Services,	3.8%	3.2%
Information	1.2%	2.0%
Manufacturing	0.7%	4.7%
Natural Resources Mining	0.5%	1.2%
Unclassified	0.1%	0.1%

Source: Community Sourcebook America 2009 Edition, ESRI

#### E) COST OF LIVING

As seen in Table. 3, "Income Overview and Comparison," although there are relatively positive income indicators for Monroe County, it is clear from the figure below that the cost of living, especially housing, is greater in Monroe County than that of the State (142.82 versus 100, respectively). Housing is almost twice as expensive as the state average.

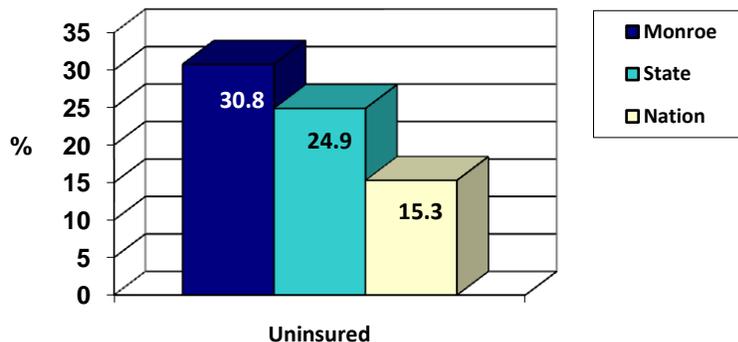


Source: EFlorida.com reporting University of Florida Bureau of Economic & Business Research data

#### F) HEALTH INSURANCE COVERAGE

According to the U.S. Census' 2006-2009 American Community Surveys, eighty-five percent of the people employed in Monroe County were either self-employed or private wage/salary workers. Since many people gain health insurance benefits from their employer, the number of self-employed and hospitality workers account for the uninsured rate of the residents being 30.8%, which is greater than that of Florida (24.9%) and that of the Nation (15.3%) in 2007.

**Uninsured Rate, 2007**



Sources: Data Source: SAHIE//State and County by Demographic and Income Characteristics/2007  
 U.S. Census Bureau, Current Population Reports; Income, Poverty, and Health Insurance Coverage in the United States: 2007, P60-235; (issued August 2008). Table HI05. Health Insurance Coverage Status and Type of Coverage by State and age for all People: 2007

#### IV. HEALTH STATUS

Community health status can be examined with a variety of health indicators. This section of the report considers five broad health categories: Healthy Lifestyle Choices, Morbidity (communicable diseases and chronic illnesses), Mortality, Maternal and Child Health, and Behavioral Health.

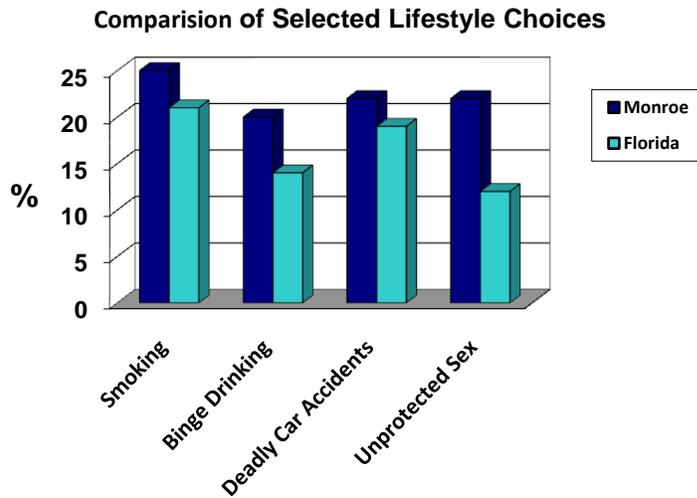
##### A) HEALTHY LIFESTYLE CHOICES

The Robert Wood Johnson Foundation, in collaboration with the University of Wisconsin Population Health Institute, has developed "County Health Rankings" for each State. On the whole, Monroe County is ranked 16 out of the 67 Florida counties in terms of overall Healthy Outcomes. If you examine Monroe's ranking by the major categories of the determinants of health, the county ranks 55<sup>th</sup> in the Clinical Care Category due to low access to care, high uninsured rate and low quality of care.

Table 5. Determinants of Health			
BEHAVIORS	CLINICAL CARE	SOCIO-ECONOMIC	PHYSICAL ENVIRONMENT
Alcohol Use Tobacco Use Diet and Exercise High-Risk Sex	Access to Care Uninsured Adults Quality of Care	Education Employment Income Family/Social Support Community Safety	Air Quality Access to Healthy Foods Availability of Alcohol
Monroe County Rating: 19 <sup>th</sup>	Monroe County Rating: 55 <sup>th</sup>	Monroe County Rating: 7 <sup>th</sup>	Monroe County Rating: 27 <sup>th</sup>

When specific lifestyle choices of the adult population of Monroe County are examined more closely it appears they:

- smoke more;
- engage in considerably more incidents of binge drinking;
- have more car accidents resulting in death and,
- have unprotected sex at rates higher than the state.



## B) COMMUNICABLE DISEASES

Communicable diseases are infectious bacterial or viral organisms transmitted communicably from one source to another. Monroe County has higher rates of Hepatitis A and B, HIV and AIDS than the state average.

<b>Table 6. Communicable and Infectious Diseases, 2006-2008</b>			
	<b>Monroe County</b>		<b>Florida</b>
	Number of Cases 2006-2008 (annual average)	3 yr Rate per 100,000 2006-2008	3 yr Rate per 100,000 2006-2008
Infectious Syphilis	4.0	5.1	4.8
Gonorrhea	23.7	30.3	126.0
Chlamydia	84.3	107.9	316.9
Hepatitis A	1.0	1.3	1.0
Hepatitis B	2.7	3.4	2.0
HIV	29.0	37.8	32.2
AIDS	24.0	30.7	23.7
Tuberculosis	3.0	3.8	4.3

Source: Florida Office of Vital Statistics, Florida CHARTS

Prevention - either through vaccination or using protection during sexual contact - is the key to fighting the most significant communicable and infectious diseases in Monroe County. Those diseases most commonly transmitted through unprotected sex and/or exchange of bodily fluids and blood, such as Infectious Syphilis, Hepatitis A and B, and HIV/AIDS, are higher in Monroe County than that of the State.

### C) CHRONIC DISEASES

People who suffer with chronic diseases— such as heart disease, stroke, cancer, diabetes, and arthritis – do so for long periods of time. According to the Centers for Disease Control (CDC), chronic diseases are estimated to account for 7 of every 10 deaths and affect the quality of life of 90 million Americans. In addition, 1 of every 10 Americans (or 25 million people) has chronic disabling conditions that limit their activities. Chronic diseases are among the most common and costly health problems.

The good news is chronic diseases are also among the most preventable. According to the Centers for Disease Control, adopting healthy behaviors such as eating nutritious foods, being physically active, and avoiding tobacco use can prevent or control the devastating effects of these diseases. The CDC notes the following four modifiable behaviors are responsible for much of the illness, suffering, and early death related to chronic disease:

1. Lack of physical activity;
2. Poor nutrition;
3. Tobacco use; and,
4. Excessive alcohol consumption.

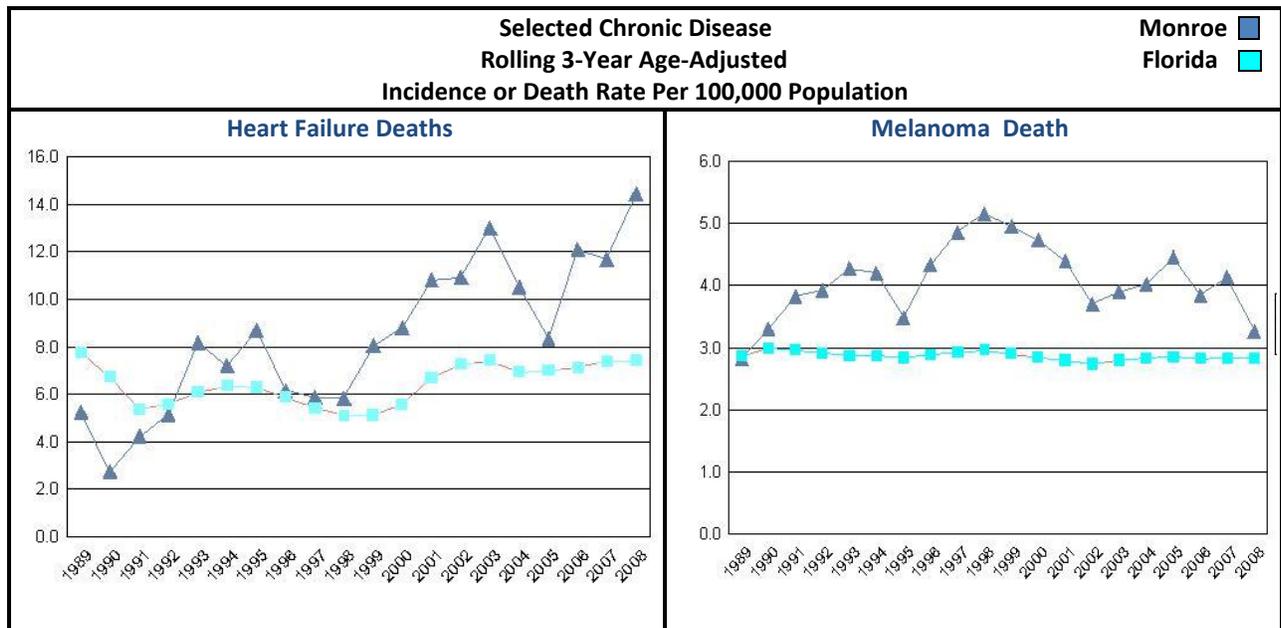
The following table highlights common chronic diseases affecting residents in Monroe County and their impact on deaths, hospitalizations and other complications. Monroe County has higher death rates than the state for heart failure, prostate and cervical cancer, and skin cancer and a higher incidence of colorectal cancer. The percent of adults with diabetes in Monroe County is also higher than the state (11.6% and 8.7%, respectively).

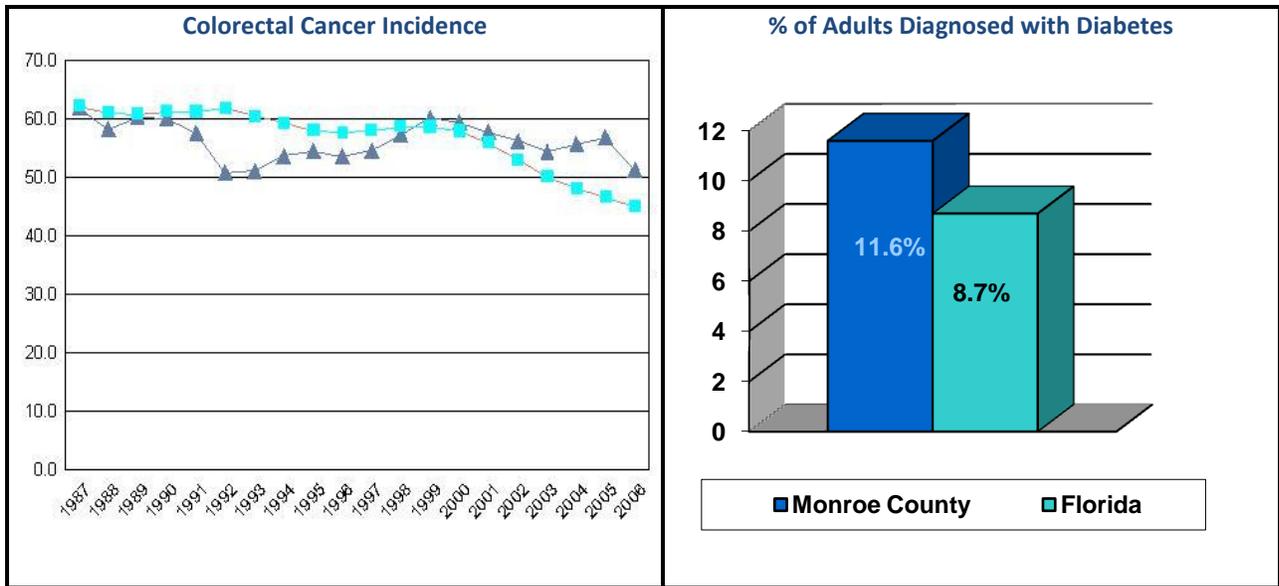
	<b>Monroe County Age-Adjusted Rate</b>	<b>State Age- Adjusted Rate</b>
<b>Coronary Heart Disease</b>		
Deaths	96.2	116.2
Hospitalizations	422.7	487.6
<b>Stroke</b>		
Deaths	28.6	33
Hospitalizations	174.6	272.8
<b>Heart Failure</b>		
Deaths	14.5	7.4
Hospitalizations from congestive heart failure	180.4	227.2
<b>Chronic Lower Respiratory Diseases (CLRD)</b>		
Deaths	27.1	36.2
CLRD Hospitalizations	262.8	321.4
Percentage of adults who currently have asthma	6.1%	6.2%
Asthma Hospitalizations	526.8	708.3
<b>Diabetes</b>		
Deaths	10.2	20.6
Hospitalizations	1,131.50	2,083.00
Hospitalizations from amputation due to diabetes	13.8	23.8
Percentage of adults with diagnosed diabetes	11.6%	8.7%

**Table 7 cont. Chronic Diseases and Cancers, 2008**

	Monroe County Age-Adjusted Rate	State Age- Adjusted Rate
<b>Lung Cancer</b>		
Deaths	43	47.7
Incidence	70.2	70.2
Percentage of adults who are current smokers	22.3%	19.3%
<b>Colorectal Cancer</b>		
Deaths	11.8	15
Incidence	51.2	45
Percentage of adults 50 years old and older who received a sigmoidoscopy or colonoscopy in the past five years	42.2%	53.7%
<b>Breast Cancer</b>		
Deaths	19.7	20.4
Incidence	91.2	108.3
<b>Prostate Cancer</b>		
Deaths	19.7	18.9
Incidence	61.8	124.2
<b>Cervical Cancer</b>		
Deaths	3.4	2.6
Incidence	NA	9.1
Percentage of women 18 years of age and older who received a Pap test in the past year	65.0%	64.8%
<b>Skin Cancer</b>		
Deaths	3.3	2.8
Incidence	18.2	16.6

**Data Sources:** Deaths - Florida Department of Health, Office of Vital Statistics,  
 Risk Factor (BRFSS) - Florida Department of Health, Bureau of Epidemiology  
 Hospitalizations - Florida Agency for Health Care Administration (AHCA),  
 Cancer Incidence - University of Miami (FL) Medical School, Florida Cancer Data System





**D) LEADING CAUSES OF DEATH**

Although Monroe County has similar leading causes of death as compared to both Florida and the Nation, there are some differences that may provide insight as to how and where to use resources related to morbidity and mortality. The following table provides a ranking of the leading causes of death based a 3 year average age adjusted death rate to allow comparisons across different populations. Unlike the state and the nation where heart disease is leading cause of death, cancer is the number one cause of death in Monroe County.

Table 8. Top Ten Leading Causes of Death based on 3 year average (2006-08)			
Ranking	Monroe County	State of Florida	United States
1	Cancer	Heart Disease	Heart Disease
2	Heart Disease	Cancer	Cancer
3	Unintentional Injury	Chronic Lower Respiratory Diseases	Stroke
4	Stroke	Unintentional Injury	Chronic Lower Respiratory Diseases
5	Chronic Lower Respiratory Diseases**	Stroke	Unintentional Injury
6	Liver Disease & Cirrhosis	Alzheimer's Disease	Alzheimer's Disease
7	Suicide	Diabetes	Diabetes
8	Diabetes**	Suicide	Influenza and Pneumonia
9	Alzheimer's** Disease	Nephritis (Kidney diseases)	Nephritis (Kidney diseases)
10	AIDS/HIV**	Liver Disease & Cirrhosis	Septicemia

Sources: FloridaCHARTS.com, Florida Department of Health, National Vital Statistics Reports.

\*\*The rankings above are the 3-year Age adjusted Death Rate per 100,000. The actual number of death for 2008 show Stroke #4, Respiratory Disease Ranked #5, Alzheimer's Disease ranked #8, followed by AIDS/HIV ranked #9, Pneumonia/Flu ranked #10 and then Diabetes ranked 11th.

The actual number of deaths by race is provided below in order to understand the magnitude of cases in the county by racial categories. Cancer is the leading cause of death for whites while heart disease is the leading cause of death for African Americans.

Table 9. Leading Causes of Death by Race, 2008						
Cause of Death	Monroe County			State of Florida		
	White	Black	Other	White	Black	Other
ALL	604	33	9	149,966	18,286	2,179
Cancer	145	3	2	36,031	3,941	572
Heart Disease	131	12	4	37,427	4,029	468
Unintentional Injury	60	4	1	7,845	894	175
Chronic Lower Respiratory Diseases	34	1	0	9,565	517	72
Stroke	25	1	0	7,253	1,099	118
Liver Disease & Cirrhosis	21	0	0	2,148	149	26
Suicide	15	0	1	2,556	123	43
Alzheimer's Disease	15	0	0	4,448	247	27
Influenza and Pneumonia	10	0	0	2,032	225	31
HIV	9	1	0	523	872	16
Diabetes	9	0	0	4,135	922	96

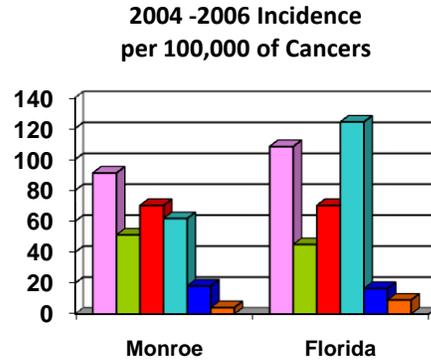
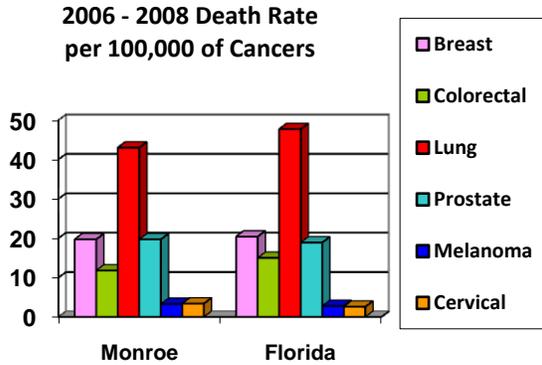
Source: FloridaCHARTS.com, Florida Department of Health

## Cancers

Smoking is the most significant risk factor in many types of cancers. The National Cancer Institute estimated that smoking causes about 30 percent of all U.S. deaths from cancer. Secondhand smoke also continues to be a leading environmental hazard for people of all ages. Secondhand smoke is the smoke exhaled from a smoker or a lit cigarette, pipe or cigar. This smoke contains more than 60 known carcinogens. Avoiding tobacco use is the single most important step Americans can take to reduce the cancer burden in this country. Twenty-two percent of the adults in Monroe identify themselves as current smokers and 48% of non-smokers reported being subjected to second-hand smoke.

The incidence of Colorectal Cancer is higher in Monroe County than the State (51.2 and 45 per 100,000, respectively). Since the greatest numbers of people in Monroe County's population are nearly 50 or over, it is important to reach adults who are nearing 50 years (or above) and increase their knowledge of as well as the importance of regular testing colorectal screening. Only 42.2% of those 50 and older in Monroe County received a sigmoidoscopy or colonoscopy compared to Florida's average of 53.7%. Those who received a blood stool test in the past year are also less in Monroe (15.9%) than Florida (21.21%). Reminders about when to screen, in addition to relieving social stigma around colorectal cancer and screening can increase the amount of at-risk adults who follow screening guidelines.

Healthy lifestyle behaviors, such as good **nutrition**, being **physically active** and not using **tobacco or alcohol in large quantities**, decrease the risk of developing many cancers.

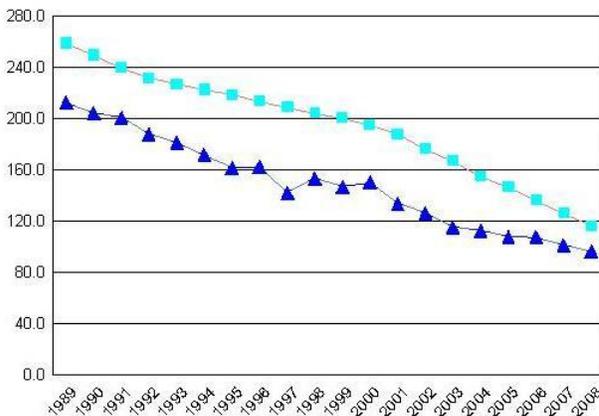


Source: FloridaCHARTS.com, Florida Department of Health

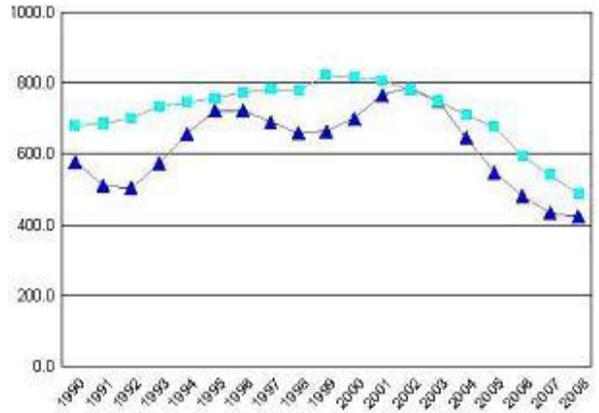
### Heart Disease

The 2006-2008 age-adjusted coronary heart disease death and hospitalizations in Monroe County were better than that of the State. However, heart disease is the leading cause of death of persons who are African American in Monroe County. In addition, as illustrated below, both the county and the state showed a healthier trend regarding heart disease.

2006-2008 Age-Adjusted Coronary Heart Disease Death Rate



2006-2008 Age-Adjusted Coronary Heart Disease Hospitalization Rate



▲ Monroe  
■ State Total

Source: FloridaCHARTS.com, Florida Department of Health

### Unintentional Injury

In 2006 – 2008, Monroe County had the highest rate of alcohol-related motor vehicle traffic crashes in Florida more than double that of the State (275.9 for Monroe County as compared to the State rate of 121.4 per 100,000) resulting in the County having the highest rate of alcohol-related traffic injuries.

## **Chronic Lower Respiratory Diseases**

Chronic lower respiratory diseases are a group of diseases that affect the airways and lungs. The biggest killer is chronic obstructive pulmonary disease, a lung disease that makes it hard to breathe. Chronic obstructive pulmonary disease includes two main illnesses: **Emphysema** and **Chronic bronchitis**.

Cigarette smoking is the main cause of respiratory diseases. Smokers are 12 times as likely to die of respiratory diseases are men who have never smoked. Emphysema and chronic bronchitis also are strongly associated with lung cancer.

## **Stroke**

Hypertension is the single most important risk factor for stroke. Health disparities exist in Florida as demonstrated in Florida's 2007 Behavioral Risk Factor Surveillance Survey (BRFSS). With the exception of tobacco use, risk factors for cardiovascular disease, which includes strokes, hypertension, diabetes, elevated cholesterol, obesity, and physical inactivity, are higher among racial and ethnic minorities. Among adults who have been screened, non-Hispanic blacks are 84% more likely to have physician-diagnosed hypertension than their non-Hispanic white counterparts (1990-2000). Blacks had the highest prevalence of obesity (34.7%) in 2007. The stroke death rate for blacks was nearly double the death rate for whites in 2007.

In Monroe County, due to the lack of racial diversity, these State statistics are not reflected in the County.

## **Liver Disease & Cirrhosis**

Robert Wood Johnson's County Health Ranking showed that Monroe County has the second to the most liquor stores per 100,000 population in the state and more than three times the state's average number of liquor stores. Researchers have documented a variety of problems associated with the physical availability of alcohol including assault, violence, motor vehicle accidents, drinking and driving, riding with a drinking driver, high mortality rates due to liver cirrhosis, and binge drinking. Furthermore, liquor stores sell larger quantities of alcohol that is available for immediate consumption than do taverns and restaurants serving alcoholic beverages. This may be one of the major contributing factors for Monroe County having the highest rate of alcohol-related motor vehicle traffic crashes in Florida.

In addition to adults with behaviors that are less than healthy, Monroe County's high school aged children have the highest percent of students who used alcohol in the past 30 days and who engaged in binge drinking in the state. Furthermore, Middle School aged children's alcohol and substance abuse percentages are greater than that of other students in the State.

Table 10. Student Alcohol and Drug Use, 2008		
	Monroe County	Florida
Percent of students who used alcohol in past 30 days		
Middle school	18.7%	17.3%
High school	58.3%	39.5%
Percent of students reporting binge drinking		
High school	37.8%	21.5%
Percent of students using marijuana/hashish in past 30 days		
Middle school	7.3%	4.4%
High school	27.6%	16.2%

Source: 2008 Florida Youth Substance Abuse Survey (FYSAS).

### Human Immunodeficiency Virus (HIV)

Monroe County has an HIV incidence rate of 30.7 as compared to 23.7 for the State. Avoiding behaviors that might result in contact with infected blood, semen, or vaginal fluids can prevent HIV. Practicing safe sex, always using a condom during sexual activity, avoid alcohol and drugs which may impair judgment (and one's immune system); and not sharing intravenous needles, syringes, or other drug paraphernalia will prevent HIV.

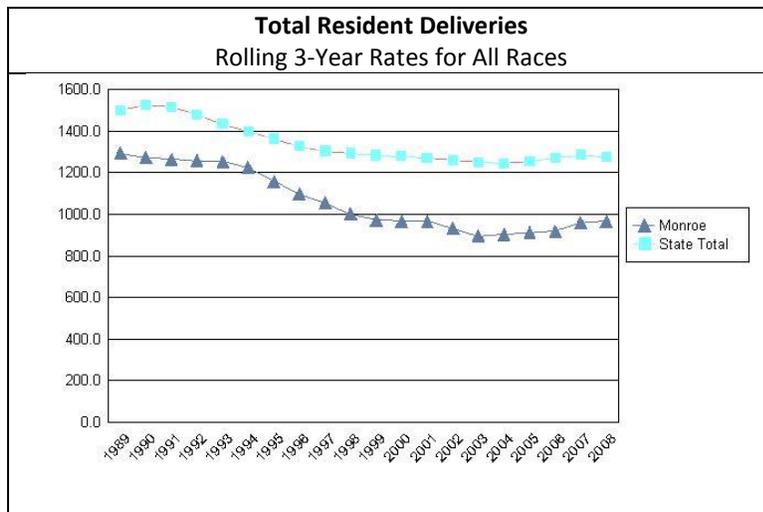
### E) MATERNAL/CHILD HEALTH

The birth rate has been steadily declining in Monroe County and in Florida. Approximately one-third of the births in Monroe are from Hispanic mothers. Monroe County has a lower birth rate in all age categories as compared to the state. Babies born to young mothers under the age of 18 are more likely to experience poor birth outcomes than those born to mothers between the ages of 18 and 45.

Table 11. Birth Indicators 2006-2008					
	Monroe County				State
	White	Black	Hispanic*	Total	
Total Births (3-yr annual avg.)	653	63	248	749	235,901
Births to Mothers ages 15-44, per 1,000	55.4	74.0	75.0	58.1	66.2
Births to Mothers ages 10-14, per 1,000	0.2	0.0	0.7	0.2	0.6
Births to Mothers ages 15-19, per 1,000	24.2	43.6	53.4	25.5	42.5
Percent of Births to Unwed Mothers	39.4	62.1	54.8	40.9	45.8

\* Hispanic births are also included in the White and Black categories

Source: Florida Department of Health



Infant mortality is one of the most important indicators of the health of a nation, as it is associated with a variety of factors such as maternal health, quality and access to medical care, socioeconomic conditions, and public health practices. Monroe County infant death rates in all categories are lower than the state averages. However, the county has a higher percentage of very low birth weight babies (<1500 grams) than the state average, especially in the black population.

Table 12. Infant Mortality and Low Birth Weight Deliveries, 2006-2008						
	Indicator	Monroe County				State
		White	Black	Hispanic	All Races	
Infant Deaths	Infant Deaths (0-364 days) per 1,000 Births	5.6	5.3	5.4	5.3	7.2
	Neonatal Deaths (0-27 days) per 1,000 Births	4.6	5.3	4.0	4.5	4.6
	Post-neonatal Deaths (28-364 days) per 1,000 Births	1.0	0	1.3	0.9	2.6
Low Birth Weight	Percent of Births < 1500 Grams	1.5	4.2	1.5	1.7	1.6
	Percent of Births < 2500 Grams	7.7	12.1	7.1	8.1	8.7

Source: Florida Department of Health

## F) SOCIAL AND MENTAL HEALTH INDICATORS

While the Monroe County ranks 7<sup>th</sup> of Florida counties in terms of health related quality of life measure, those adults in Monroe County reporting of poor physical (3.7) and mental (3.6) health was greater than the days reported by Floridians (3.5) as a whole, and 15% of Monroe respondents identified themselves in term of poor of fair health.

In addition, Monroe County Monroe County was ranked 7<sup>th</sup> in the State in the number of suicides in 2006 – 2008 with 18.9% per 100,000 death rate compared to Florida's 13.0 and has seen a rise in the number of suicides.

While most of the criminal behavior arrests have gone down over the past two years, there has been an increase in the number of arrests for drugs, vandalism and prostitution. Interestingly, even though Monroe County has the most liquor stores and numbers of deadly alcohol-related crashes, the DUI arrests have gone down.

<b>Table 13. Comparison of Selected Crime and Suicide Indicators, 2006-2008</b>			
	<b>3-Yr Rate Per 100,000 Indicator</b>	<b>Monroe County</b>	<b>Florida</b>
<b>Crime and Domestic Violence</b>	Larceny	3,397.5	2,625.0
	Burglary	1,005.5	965.4
	Total Domestic Violence Offenses	426.9	613.5
	Motor Vehicle Theft	402.6	381.2
	Aggravated Assault	368.0	431.9
	Robbery	72.9	129.0
	Forcible Sex Offenses	66.1	60.0
	Murder	3.8	6.2
<b>Suicide</b>	Age-Adjusted Suicide 3-Year Death Rate	18.9	13
<b>Alcohol-related Motor Vehicle Incidents</b>	Alcohol-related Motor Vehicle Traffic <b>Crashes</b>	275.9	121.4
	Alcohol-related Motor Vehicle Traffic <b>Crash Injuries</b>	191.9	86.2
	Alcohol-related Motor Vehicle Traffic <b>Crash Deaths</b>	11.9	6.3

Source: [www.fdle.state.fl.us](http://www.fdle.state.fl.us), Florida Office of Vital Statistics, Florida CHARTS

## V. HEALTHCARE RESOURCES

This section provides an overview of healthcare resources currently available in Monroe County. This includes Hospitals, and Nursing Homes, as well as other healthcare providers and programs. Monroe County has three acute care hospitals: Mariner’s Hospital located in Tavernier Key, Fisherman’s Hospital located in Marathon, Lower Keys Medical Center located in Key West. DePoo Hospital in Key West provides adult psychiatric and substance abuse care.

Only two nursing homes are operating in Monroe County, one in Tavernier and one in Key West.

<b>Table 14. Health Resources Availability, 2008</b>			
	<b>Monroe County Number</b>	<b>Monroe County Rate</b>	<b>State Rate</b>
<b>Providers</b>			
Total Licensed Dentists	37	48.9	62.6
Total Licensed Physicians	171	225.8	298.6
Total Licensed Family Practice Physicians	15	19.8	20.1
Total Licensed Internists	23	30.4	51.8
Total Licensed OB/GYN	6	7.9	10.5
Total Licensed Pediatricians	7	9.2	20.0
<b>Facilities</b>			
Total Hospital Beds	267	352.6	316.9
Total Acute Care Beds	207	273.4	263.3
Total Specialty Beds	60	79.2	53.6
Total Nursing Home Beds	240	317.0	437.6
<b>County Health Department</b>			
County Public Health Department Full-time Employees	81	107.3	63.8

Sources: Division of Medical Quality Assurance and Office of Planning, Evaluation and Data Analysis, Florida Dept. of Health; Florida Agency for Health Care Administration

The Monroe County Health Department is located in Key West, Marathon, Key Largo and Tavernier and provides primary care services, family planning, STD testing and counseling and immunizations.

Good Health Clinic, located in Tavernier, provides free primary, specialty and sub-specialty care to all patients below 200% of poverty. Community Health of South Florida, a federally qualified health center based in Miami, has a clinic site located in Marathon and offers a wide array of primary care services for free or reduced rates, depending on income. The Rural Health Clinic located in Marathon, provides primary care services at a sliding scale fee based on income.

## VI. HEALTH DATA WAREHOUSE

The Broward Regional Health Planning Council has developed the Health Data Warehouse, a web-based data warehouse and analytical engine with the following query module functions:

- Prevention Quality Indicators/Avoidable Admission
- Inpatient Chronic Conditions (ICD-9)
- Suicide Incidence
- ED Acuity Stratification (CPT)
- NYU Algorithm ED Preventable/ Avoidable

Information derived from these queries is utilized to identify, prioritize and address community health issues.

### A) PREVENTION QUALITY INDICATORS

Prevention Quality Indicators (PQIs) are a set of measures used with hospital inpatient discharge data to identify "ambulatory care sensitive conditions" (ACSCs) in adult populations. ACSCs are conditions for which adequate outpatient care can potentially prevent the need for hospitalization, especially for chronic conditions for which early intervention can prevent complications and disease severity. PQIs consist of the 14 ACSCs, measured as hospital admission rates. Hospitals and community health planners can use PQI data to identify geographic high incidence areas and develop targeted community-based interventions to reduce these unnecessary hospitalizations.

INDICATOR	2007		2008		2009	
	Admissions	Rate	Admissions	Rate	Admissions	Rate
Bacterial Pneumonia	145	224.7	164	261.6	149	237.6
Congestive Heart Failure	166	257.2	145	231.3	140	223.3
Chronic Obstructive Pulmonary Disease	78	120.8	80	127.6	103	164.3
Dehydration	37	57.3	45	71.8	74	118
Urinary Tract Infection	69	106.9	75	119.6	69	110
Adult Asthma	53	82.1	47	75	57	90.9
Angina Admission -No Procedure	42	65.1	32	51	33	52.6
Diabetes Long-term Complication	36	55.8	20	31.9	28	44.7
Perforated Appendix (% of all admissions for appendicitis)	27	31.4%	26	26.8%	22	25.0%
Diabetes Short-term Complication	32	49.6	18	28.7	18	28.7
Hypertension	10	15.5	12	19.1	13	20.7
Uncontrolled Diabetes	15	23.2	11	17.5	12	19.1
Low Birth Weight (% of births)	15	2.0%	10	1.4%	7	1.0%
Diabetes Lower Extremity Amputation	7	10.8	5	8	7	11.2

Source: Broward Regional Health Planning Council

Bacterial pneumonia, congestive heart failure and chronic obstructive pulmonary disease (COPD) are the top three causes of avoidable admissions. Over 40% of these admissions are from residents in zip code 33040.

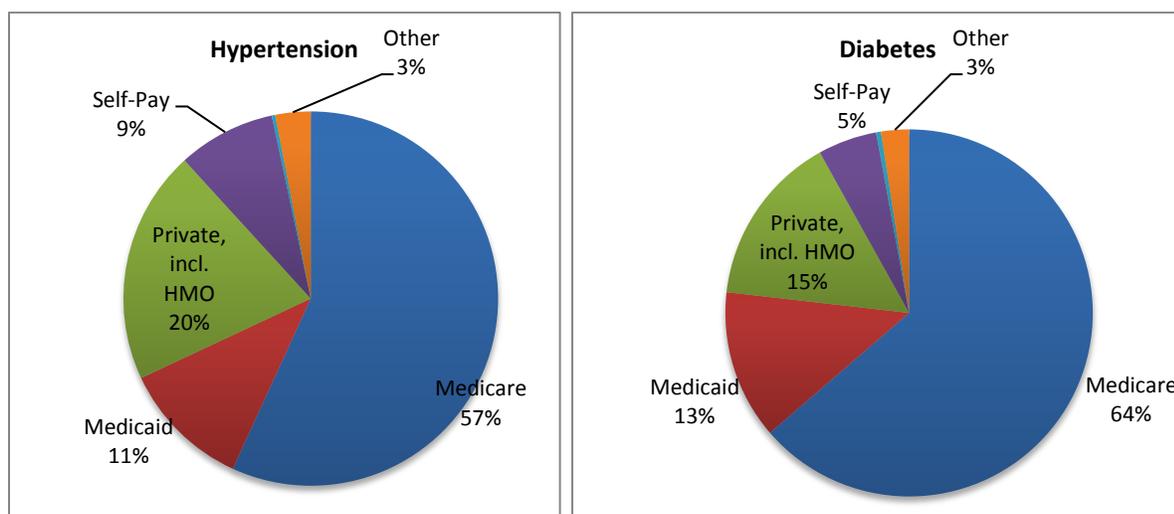
## B) CHRONIC DISEASE HOSPITALIZATIONS

BRHPC's web-based analytical engine allows public access to utilization by chronic disease for AIDS, Asthma, Congestive Heart Failure (CHF) and Hypertension. The Chronic Condition Indicator tool, developed as part of the Healthcare Cost and Utilization Project (HCUP), stratifies chronic diseases based on ICD-9-CM diagnosis codes. A chronic condition is a condition lasting 12 months or longer and meeting one or both of the following tests: (a) the condition places limitations on self-care, independent living and social interactions; (b) the condition results in the need for ongoing intervention with medical products, services and special equipment. The identification of chronic conditions is based on all five-digit ICD-9-CM diagnosis codes, excluding external cause of injury codes (E codes).

	Diabetes	Asthma	CHF	Hypertension	AIDS
<b>33001</b>	3	0	4	4	0
<b>33036</b>	8	6	24	41	0
<b>33037</b>	61	12	57	140	2
<b>33040</b>	415	219	169	989	56
<b>33041</b>	2	0	0	10	0
<b>33042</b>	50	17	15	92	3
<b>33043</b>	43	16	18	89	3
<b>33045</b>	5	2	2	8	0
<b>33050</b>	52	11	36	78	9
<b>33051</b>	9	0	3	16	0
<b>33052</b>	0	0	1	3	0
<b>33070</b>	52	9	39	100	0
<b>Total</b>	700	292	368	1570	73

Source: Broward Regional Health Planning Council

Hypertension and diabetes are the two highest chronic conditions based on hospital admissions. Zip code 33040 (Key West) has the highest prevalence for all of the chronic diseases.



C) AMBULATORY ED VISIT STRATIFICATIONS

Hospital Emergency Departments (ED) are intended to provide urgent and lifesaving care; however, EDs have increasingly been utilized as a safety net provider by the uninsured, underinsured and persons with limited or no primary care services. This is likely due to federal law requiring hospital EDs to accept, evaluate and stabilize all those who present for care, regardless of their ability to pay. Consequently, hospital EDs are providing increasing levels of primary care services to millions of Americans. BRHPC’s database provides two methods for analyzing ambulatory emergency department visits (visits resulting in inpatient admissions): 1) Acuity/Severity and 2) New York University (NYU) Algorithm. These two types of analyses allow for a better understanding of healthcare utilization.

Ambulatory ED visits were aggregated by CPT Evaluation and Management codes delineating the relative severity of the condition upon arrival at the ED.

<b>Table 17. Evaluation and Management Acuity Classification</b>
<b>Low Acuity ED Visit (9981 – 9982)</b>
<b>99281</b> - Requires three key components: a problem focused history; a problem focused examination; a straightforward medical decision making. Presenting problem(s) <b>self-limited or minor</b> .
<b>99282</b> - Requires three components: expanded problem focused history; expanded problem focused examination; medical decision making of low complexity. Presenting problem(s) <b>low to moderate severity</b> .
<b>HIGH ACUITY (9983 – 9985)</b>
<b>99283</b> - Requires three components: expanded problem focused history; expanded problem focused examination; medical decision making of moderate complexity. Presenting problem(s) <b>moderate severity</b> .
<b>99284</b> - Requires three components: a detailed history; a detailed examination; medical decision making of moderate complexity. Presenting problems <b>high severity, and require urgent evaluation</b> but no immediate significant threat to life or physiologic function.
<b>99285</b> – Requires three key components: comprehensive history; comprehensive examination; medical decision-making of high complexity. Counseling/coordination of care with other providers or agencies provided consistent with nature of problem(s) and patient's/family's needs. Usually, presenting problem(s) are of <b>high severity and pose an immediate threat to life or physiologic function</b> .

Table 18. Monroe ED CPT Acuity Stratification , 2007, 2008 and 2009						
CPT	Visits			Charges		
	2007	2008	2009	2007	2008	2009
<b>Fisherman's Hospital</b>						
99281	166	159	125	\$47,468	\$48,054	\$37,093
99282	740	591	619	\$439,246	\$326,190	\$330,470
99283	1913	1833	2137	\$2,664,853	\$2,427,289	\$2,733,420
99284	896	1026	1130	\$2,854,301	\$3,192,121	\$3,339,501
99285	542	721	908	\$2,778,972	\$3,825,221	\$4,469,968
<b>Total</b>	<b>4257</b>	<b>4330</b>	<b>4919</b>	<b>\$8,784,840</b>	<b>\$9,818,875</b>	<b>\$10,910,452</b>
<b>Lower Keys Medical Center</b>						
99281	948	1032	659	\$146,147	\$186,862	\$125,781
99282	3105	3520	3105	\$1,743,284	\$1,994,842	\$1,804,872
99283	6542	6760	7167	\$7,587,271	\$8,799,578	\$9,382,484
99284	2086	2190	2463	\$4,602,179	\$6,069,885	\$6,922,173
99285	826	809	1503	\$3,307,331	\$3,703,785	\$7,214,939
<b>Total</b>	<b>13507</b>	<b>14311</b>	<b>14897</b>	<b>\$17,386,212</b>	<b>\$20,754,952</b>	<b>\$25,450,249</b>
<b>Mariner's Hospital</b>						
99281	2869	2549	2747	\$3,961,434	\$3,450,430	\$4,330,963
99282	1163	1106	1275	\$3,011,404	\$3,421,548	\$4,655,678
99283	736	950	779	\$3,897,246	\$5,545,218	\$5,668,318
99284	420	580	613	\$2,671,162	\$5,806,455	\$7,892,521
99285	209	434	429	\$1,878,130	\$6,247,587	\$7,268,670
<b>Total</b>	<b>5397</b>	<b>5619</b>	<b>5843</b>	<b>\$15,419,376</b>	<b>\$24,471,238</b>	<b>\$29,816,150</b>

Source: Broward Regional Health Planning Council

Fisherman's Hospital Emergency Department visits are predominately classified as moderate severity accounting for over 43% of the visits in 2009. Fisherman's Hospital only had 2.5% of their ED visits in the lowest acuity category (99281). Lower Keys Medical Center has a similar acuity profile as compared to Fisherman's Hospital with 48% of their ED visits in the moderate acuity category (99283) and 4.4% in the lowest acuity category (99281).

Mariner's Hospital experiences a significantly different acuity profile in the Emergency Department than the other two hospitals in the Keys with the majority of their visits in the low or moderately low acuity range (68% in 2009).

#### D) ED AMBULATORY: EMERGENCY VS. AVOIDABLE

New York University (NYU) has developed an Emergency Department classification algorithm based on the patient's principal diagnosis (ICD-9) and other factors at the time of the visit to determine if the visit was non-emergent and possibly avoidable if the patient had proper outpatient care. Data abstracted for the algorithm from ED records include the initial complaint, presenting symptoms, vital signs, medical history, age, gender, diagnoses, procedures performed and resources used in the ED. Based on this information, each case is classified into one or more of the following categories:

1. Non-Emergent
2. Emergent But Primary Care Treatable
3. Emergent, Ed Needed, But Preventable/Avoidable

4. Emergent, Ed Needed, Not Preventable/ Avoidable
5. All Other Conditions (conditions related to injury, mental health, alcohol and substance abuse, and all other unclassified conditions)

Because few diagnostic categories are clear-cut in all cases, the algorithm assigns cases probabilistically on a percentage basis, reflecting this potential uncertainty and variation. The unit of analysis is the county resident ED visit not resulting in a hospital inpatient admission. ED visits for an individual whose place of residence was not identical to the county hospital or was unknown were excluded.

<b>Table 19. Monroe County Emergency Department (ED) NYU Algorithm Data, 2009</b>					
<b>All NON-Drug/ Alcohol, Psychiatric, Injury &amp; Unclassified</b>					
<b>CPT</b>	<b>99281</b>	<b>99282</b>	<b>99283</b>	<b>99284</b>	<b>99285</b>
<b>Fisherman’s Hospital</b>					
Non-Emergent	46.7%	43.1%	36.1%	28.9%	20.2%
Emergent Primary Care Treatable	37.6%	41.4%	40.2%	35.9%	31.0%
Emergent Preventable	6.4%	9.5%	12.9%	12.7%	14.3%
Emergent Non-Preventable	9.3%	6.0%	10.8%	22.5%	31.5%
<b>Lower Keys Medical Center</b>					
Non-Emergent	48.2%	43.5%	36.4%	26.8%	20.4%
Emergent Primary Care Treatable	37.1%	40.7%	39.5%	37.6%	36.1%
Emergent Preventable	6.2%	10.0%	11.9%	10.6%	11.1%
Emergent Non-Preventable	8.5%	5.9%	12.2%	24.9%	32.4%
<b>Mariner’s Hospital</b>					
Non-Emergent	41.5%	33.9%	27.8%	17.3%	11.4%
Emergent Primary Care Treatable	38.5%	38.7%	34.6%	32.8%	31.9%
Emergent Preventable	9.0%	11.3%	9.0%	15.6%	10.7%
Emergent Non-Preventable	11.0%	16.1%	28.6%	34.2%	46.0%

Source: Broward Regional Health Planning Council

Fisherman’s Hospital and Lower Keys Medical Center have similar profiles with regards to the percentage of patients in the algorithm categories. Mariner’s Hospital has a higher percentage on

The Florida Agency for Health Care Administration (AHCA) developed the following recommendations to address and inappropriate emergency department utilization:

- 1) Healthcare access initiatives emphasizing early intervention and early access to appropriate care on behalf of uninsured persons can significantly improve the health status of Floridians and greatly reduce the financial burden on the healthcare system. This concept is embodied in the Department of Health’s Low Income Pool (LIP) Primary Care/Emergency Room Diversion projects. These projects emphasize aggressive outreach to identify high risk uninsured residents, linking these persons to primary care medical homes and disease management services, assisting in obtaining third party coverage and working to provide people with the medications they need to avoid hospitalization.
- 2) The expansion of health information technology will allow providers to access a continuity of care record for their patient providing health information on pharmacy use, hospitalizations, diagnoses, procedures and lab tests ordered across the full range of healthcare providers. This information will be especially valuable for patients accessing primary care services in clinic settings where they may not see the same provider for each service rendered.

- 3) Urgent care centers provide an alternative to the emergency department for urgent but non-life threatening emergencies such as lacerations, fractures, sore throats, ear aches, sciatic pain and sports injuries.

#### E) HOSPITAL DISCHARGES BY MAJOR MEDICAL SERVICE

All hospitals in Florida report detailed hospital discharge information to the Agency for Healthcare Administration. The following table represents the hospital discharges of residents of Monroe in 2009 by major medical grouping. Cardiology and respiratory health conditions were the top two causes for hospitalizations, followed by Orthopedic and GI conditions.

<b>Table 20. Monroe County Hospital Discharges by Medical Service, 2009</b>		
<b>Medical Service</b>	<b>Discharges</b>	<b>Discharges (%)</b>
Cardiology	954	10.53
Respiratory	816	9.00
Orthopedics	745	8.22
Gastroenterology	741	8.18
Delivery	714	7.88
Surgery, General	674	7.44
Normal Newborn	581	6.41
Psychiatry	580	6.40
Neurology	319	3.52
Drug & Alcohol Dependency	305	3.36
Medicine, General	264	2.91
Intervention Cardiology	264	2.91
Endocrine, Metabolic Disorders	233	2.57
Oncology	217	2.39
Nephrology	202	2.23
Dermatology	192	2.12
Urology	186	2.05
Gynecology	175	1.93
Neonatology	169	1.86
ENT/Oral Maxillary	150	1.65
Trauma, Burns, Poisoning	134	1.48
Cardio-Vascular Surgery	89	0.98
Obstetrics	88	0.97
Thoracic Surgery	85	0.94
Vascular Surgery	77	0.85
Neurosurgery	59	0.65
HIV	42	0.46
Ophthalmology	9	0.10
<b>TOTAL</b>	<b>9064</b>	<b>100.0%</b>

Source: Broward Regional Health Planning Council

## F) PAYER MIX OF HOSPITAL DISCHARGES

Insurance coverage of county residents is difficult to obtain unless they are participating in public programs (Medicare and Medicaid) or a survey of residents is performed. Therefore, an analysis of the insurance coverage represented from hospital discharges provide insight on the overall distribution of health insurance coverage, even though it may be skewed by the fact that older individuals are more likely to be admitted to a hospital (higher Medicare rate). The following table provides a detailed analysis of the insurance coverage of Monroe residents who were hospitalized in 2009.

<b>Table 21. Monroe County Hospital Discharges by Payer, 2009</b>		
<b>Payer</b>	<b>Discharges</b>	<b>Discharges (%)</b>
Medicare	2736	30.16
Medicare HMO/PPO	94	1.03
Medicaid	1606	17.72
Medicaid HMO	93	1.03
Commercial	1537	16.96
Commercial HMO	198	2.18
Commercial PPO	864	9.53
Worker's Compensation	51	0.60
CHAMPUS/VA	525	5.79
Other State and Local (includes Kidcare)	21	0.23
Self Pay/Uninsured/Underinsured	1281	14.13
Charity	53	0.61
Other	5	0.05
<b>TOTAL</b>	<b>9064</b>	<b>100.0%</b>

Source: Broward Regional Health Planning Council

Medicare discharges were the highest with over 30% of the hospital discharges in Monroe County, followed by Medicaid, Commercial Insurance and Self pay.

## RECOMMENDATIONS

To be completed after community stakeholder meeting