

Collier County

# COMMUNITY *Health* ASSESSMENT

2013

“Health begins where we live, learn, work and play. Opportunities for health start at home, in our neighborhoods and work places. And all people- regardless of background, education, or money- should have the chance to make choices that lead to a long and healthy life.”

-Robert Wood Johnson



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# Acknowledgements

This document represents a summary of the compilation of four community health assessments: Community Health Status, Local Public Health System, Community Themes & Strengths and Forces of Change. Each of these reports can be viewed in their entirety at [www.CollierHealthDept.org](http://www.CollierHealthDept.org). We would like to acknowledge the following individuals and groups for their participation in the various assessments. Their valuable input and expertise provided, not only representative voices from the community, but also credibility to a foundation from which our health care leaders and the community can continue to collaborate in addressing health care needs in Collier County.

The Community Health Status Assessment was conceived, designed, developed and written by a team consisting of Mark Crowley, MS; Muhammad Abbasi, MPH and Hugo Leon, RN within the Epidemiology and Health Assessment Program of the Florida Department of Health in Collier County.

The assessment benefits significantly from the guidance and input of Joan Colfer, MD, MPH; Susan Craig, RN, MA.; Stephanie Vick, RN, MS; Deb Millsap, MEd, RD, LD/N and Nancy Frees. We would like to thank Mike Riley, Chief Strategy Officer, NCH Healthcare System and Susan Manning, Director, Strategy, Quality and Performance Improvement, NCH Healthcare System for the provision of hospital data and their review and input into the analysis of the various health indicator chapters. Invaluable assistance was provided by Andrea McKinney, Shannon Kelley, MPH and Jeanna Money throughout the conception, design and finalization of the assessment document.

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# Executive Summary

## Overview

In the past two decades, Collier County has experienced tremendous growth and change in terms of population dynamics and demographics, socio-economic transitions and in patterns of the health of the community. Various characteristics of the population of Collier County correlate with select health status factors and outcomes which drive the quality of life throughout the county.

Between 1990 and 2010, the resident population of Collier County grew at a swift pace of 3.8 percent per year compared with Florida at 2.0 percent and the United States at 1.1 percent during the same period. This tremendous rate of population increase generated unprecedented economic growth and development throughout the county particularly between 1990 and 2007. Real median household income grew until 2007 after which the great recession was accompanied by rising unemployment and limited investment which placed a significant burden on the social safety net of the county. Between 1990 and 2010, the foreign born population in Collier County grew by 371 percent. This ethnic demographic transition has created a shift in a number of public health indicators at the county level. In 2010, almost one third of Collier County residents spoke a language other than English at home, up from 17 percent in 1990. The number of children living in poverty in Collier County increased by 138 percent over the past two decades.

The demographic dynamics of Collier County are being driven by the aging of the “Baby Boomer” cohort which began to turn 65 years of age during 2011. As this older population increases to an estimated 144,000 by the year 2030, other concurrent factors will affect the health and well-being of this cohort. Increased levels of life expectancy will translate into an increment in the necessity for increased geriatric health care service resources and availability. An increase in the demand for Assisted Living and Skilled Nursing beds is projected in the immediate future due to both increases in longevity and the projected number of Alzheimer’s disease cases.

## Communicable and Infectious Diseases

Three of the five leading communicable diseases in Collier County are enteric or gastrointestinal related. During 2011, salmonella, campylobacter and giardiasis accounted for 50 percent of all reported infectious diseases in the county. Between the years 2000 and 2011, the incidence of all communicable diseases increased by 20 percent in the county.

The prevention of human rabies in Collier County has always been a public health priority due to the high risk wild life species encountered naturally in the environment and the rapid land growth and development over the past two decades. This increase in population and expanded developed land growth has resulted in endemic levels of wild animal bites in Collier County. In 1996, the first human rabies case was reported in Collier County in a foreigner who acquired the disease in Mexico.

Tuberculosis, once considered to have been virtually eliminated from the United States, continues to be present in Collier County at a greater than average rate. In Florida and Collier County medically underserved low income populations tend to have a high rate of tuberculosis exposure and infection. These vulnerable population groups disproportionately represent the majority of tuberculosis cases in the county. The risk of mosquito-borne encephalitis, including West Nile virus, dengue and malaria remain an ever present underlying risk in Collier County due to the unique climate and weather conditions particularly during the rain season. Once confined in this hemisphere to the Caribbean and Central and South America, dengue has emerged in recent years in the keys of Monroe County, only a few hours away via highway and is an emerging threat to Collier County.

# Executive Summary

## Health Behaviors and Outcomes

The two most prevalent unhealthy behaviors or lifestyle related habits in Collier County are tobacco use and overweight and obesity. These two behaviors account for approximately 35 percent of all premature and preventable deaths in the county. While Collier County is healthier than the state of Florida with regard to overweight and obesity levels, these conditions account for 17 percent of all deaths annually in the county or about 1 out of every 6 deaths.

In 2010, 22.4 percent of Collier County adults indicated they were obese; this was almost 5 percentage points less than the proportion in Florida. Educational attainment is a protective factor against obesity in Collier County, with only 18.4 percent of adults with a four year college degree or beyond classified as obese compared with 34.8 percent with only a high school degree.

Cigarette smoking is the leading cause of preventable mortality in Collier County, followed by obesity. Approximately 1 out of every 5 deaths in the county can be attributed to smoking. Cigarette smoking has been scientifically associated as a cause in a myriad of diseases including numerous types of cancer, heart diseases and stroke, respiratory diseases and unfavorable maternal outcomes. In Collier County, 16.7 percent of the adult population identified themselves as current smokers; this is a decline of almost 3 percentage points since 2002.

A strong statistical association exists between alcohol consumption and alcohol impaired driving. Alcohol related motor vehicle collisions and fatalities constitute a significant proportion of alcohol related deaths. On average in Collier County 54 residents are killed annually in motor vehicle crashes with approximately 25 percent attributed to alcohol use.

The proportion of Collier County adult residents who engaged in heavy or binge drinking increased by over 2 percentage points between 2002 and 2010 to 19.2 percent. Males engaged in heavy or binge drinking at much greater rates than females in the county, 22.2 percent and 16.1 percent, respectively. Overall, Collier County residents are more likely than Florida residents to engage in heavy or binge drinking, 19.2 percent compared with 15.0 percent.

Income level is a predictor of heavy or binge drinking in Florida and in Collier County. The higher the annual income (\$ 50,000 or more), the more prevalent the overconsumption of alcohol. Collier County does have a significantly greater proportion of the population 65 years and older engaged in heavy or binge drinking than Florida, 12.6 percent compared to 6.8 percent, respectively. It is important to note that the community recognizes the high percentage of drinking and auto accidents associated with the older population in the county. When discussing potential health issues within the county, local focus groups consistently pointed out drinking and driving as contributors to illness and premature death.



# Executive Summary

## Chronic Disease and Mortality

The leading cause of cancer deaths in Collier County is lung cancer, which accounted for 27 percent of all cancer mortality in 2011. Collier County has seen a substantial decline in this site-specific mortality rate since 1992, directly attributable to the decrease in the percentage of adults engaged in cigarette smoking. Diabetes is the 7th leading cause of death in Collier County. The most significant risk factor for the development of diabetes is obesity and overweight. Diabetes is also a significant cause of heart disease and stroke and the leading cause of kidney failure. Obesity, as it relates to chronic diseases, has been identified by community health care leaders and the general public as a key focus area for improvement within the county. Additionally, although during the local public health system assessment, education and empowerment related to prevention strategies was identified as a strength of the system, it was also noted that more substantial partnerships need to be created in order to address issues such as chronic diseases and particularly to address obesity.

In 2011, the 10 leading causes of death in Collier County by rank order were: cancer, heart disease, chronic lower respiratory disease, stroke, unintentional injuries, Alzheimer's disease, diabetes mellitus, chronic liver disease and cirrhosis, kidney disease and Parkinson's disease. These 10 leading causes accounted for 77 percent of all deaths occurring in the county. It should be emphasized the 10 leading causes of death do not all necessarily coincide with the causes of major public health importance. Premature and preventable causes of death within a community tend to become public health priorities since these causes or conditions affect the health status of the total population and a reduction in morbidity and mortality levels increases life expectancy and the quality of life at the county level.

## Preventable Mortality

The actual causes of death are major external and modifiable influences and factors that contribute to specific causes of death in our communities and its populations. These lifestyle and behavioral factors are correlated and associated with a plurality, if not a majority, of all deaths. Almost one half of all deaths in Collier County are potentially preventable, based on the premise that major actual cause of mortality can be modified through education and access to care.



Tobacco use is the leading cause of preventable mortality followed by overweight and obesity resulting from physical inactivity and poor dietary habits. Together these two actual causes were responsible for 72 percent of all preventable causes of death in Collier County in 2011. Health education initiatives and other public health targeted programs are focused to assist in reducing the influence of these actual preventable causes of death.

# Executive Summary

## Injuries

Injuries remain a leading cause of death for residents of all ages in Collier County. Males experienced significantly higher mortality rates from injuries than females in any age group. The major cause of injury deaths vary by age in Collier County: motor vehicle fatalities between 15 to 34 years of age, falls among the older population 75 years of age and older, unintentional poisonings between the ages of 15 to 54 years and drowning particularly in the 1-4 year childhood ages. Animal bites from potentially rabid animals have been increasing exponentially in Collier County of the past 12 years. Between 2000 and 2011 potential rabies exposures increased by over 450 percent. While heightened public health epidemiologic surveillance and aggressive investigations may account for a portion of the realized increase in incidence, the rapid and extensive development of land in Collier County over the 12 year period has increased human to wild and stray animal contact.

## Maternal and Infant Health

Maternal and infant health is the foundation for a vibrant and prosperous society. The infant mortality rate for Collier County declined to a new low of 5.0 infant deaths per 1,000 live births in 2011. The Hispanic infant mortality rate in the county was almost 60 percent lower (2.8 per 1,000 live births) than the non-Hispanic rate (6.9 per 1,000 live births). Pregnant women in Collier County continue to improve upon their health behaviors by decreasing their reliance on alcohol and tobacco use. Collier County lags behind the state of Florida for three indicators related to adequate prenatal care: births with first trimester prenatal care, births with late or no prenatal care and births with adequate prenatal care. Community focus groups pointed to a good support system for receiving obstetrical care, but less access when pediatric services were needed. Respondents indicated sometimes access is available, but the mechanism needed to get immediate care outside of the emergency room is not well understood among new residents, generally due to language issues

## Health of the Older Population

During 2011 within Collier County over 11,000 residents 65 years of age and older had Alzheimer's disease; by 2030 using conservative population estimates, over 18,600 residents will be diagnosed with the disease. Not surprisingly, community members identified the need for more nursing home beds within the county and specifically indicated facilities that accept lower income residents were needed. The needs of the older population clearly rises to a position of being a priority topic to address while working on the Community Health Improvement plan.

## Oral Health

Oral health is central to a person's overall health, well-being and quality of life. Between 2001 and 2011, the number of licensed dentists increased by 71 percent in Collier County. The majority of the dental care in the county is provided by dentists in private practice. Persons without private insurance receive care at the County Health Department, federally qualified health centers, and the NCEF Dental Center. The only dental care option for many low income people who lack access to preventative dental services is the hospital emergency room. Collier County residents with higher income and higher education are more likely to visit a dentist or dental clinic than persons with lower income and education. Oral Health, particularly for the adult population in the county, has emerged as another strategic health care area of concern.



# Executive Summary

## Access to Health Care

Private health insurance coverage is an integral mainstay for access to healthcare services for the core working population 18-64 years of age and vital to the personal well-being and health of individuals. In Collier County as throughout the country rates of health insurance coverage have been declining over the past two decades. This downward movement in health insurance coverage beginning in 2006 was exacerbated by the recession, which pushed the uninsured population to historical heights as unemployment spiraled upwards. In 2011, almost 24 percent of the total resident population of Collier County was uninsured compared with just under 21 percent of the population of the state of Florida. Of the core working population 18-64 years of age in Collier County, 38.5 percent were without health insurance compared with 29.5 percent in Florida, a difference of nine percent. When controlling for race and ethnicity, whites, blacks and Hispanics in Collier County are more likely to be uninsured than their counterparts in the state of Florida. Health insurance coverage rates in Collier County and Florida are highly correlated with the education attainment and income level. As the education level and income level increases, the percentage of the uninsured population decreases- a classic inverse correlation. The association being that within the core working population 18-64 years of age, persons with higher education status are more likely to be employed at an income level that provides for or facilitates health insurance coverage as benefits to the employee.

## Mental Health

Collier County residents experienced a remarkable increase in the percentage of individuals that reported poor mental health from 2007 to 2010. Over this four year period the percentage of residents reporting poor mental health status increased to 17.2 percent, or 1 in 6 persons. Males were much more likely to have experienced poor mental health than females and those in the age group 18 – 44 years of age had the highest incidence while those 65 years and older had the lowest. Both income level and educational attainment correlate with mental health status in Collier County. The higher the income and the more education both translated into improved mental health status. Still, the community has been highly verbal about the need for more mental health services, especially in specialized areas such as prenatal/post-partum substance abuse. The community sees traditional faith-based centers providing much of the community mental health support but clearly feels the professional resources are lacking.



## Conclusion

Health status analysis combined with the local public health system assessment results and community focus groups plus community surveys were used to identify key strategic focus areas for Collier County. The strategic issues identified are: the Health of the Older Population, Chronic Diseases (and the main contributor of obesity), Oral Health, Mental Health and Substance Abuse and finally, Access to Care. Specific assessment tools and their results may be reviewed as follows.

# I. Community Health Status Assessment

## Community Characteristics

### Geography

Collier County is comprised of the highly populated coastal urban/suburban area of Greater Collier County and the less populated inland rural, agricultural community of Immokalee and the Estates. The inland communities are located 30 - 45 miles from the coast.

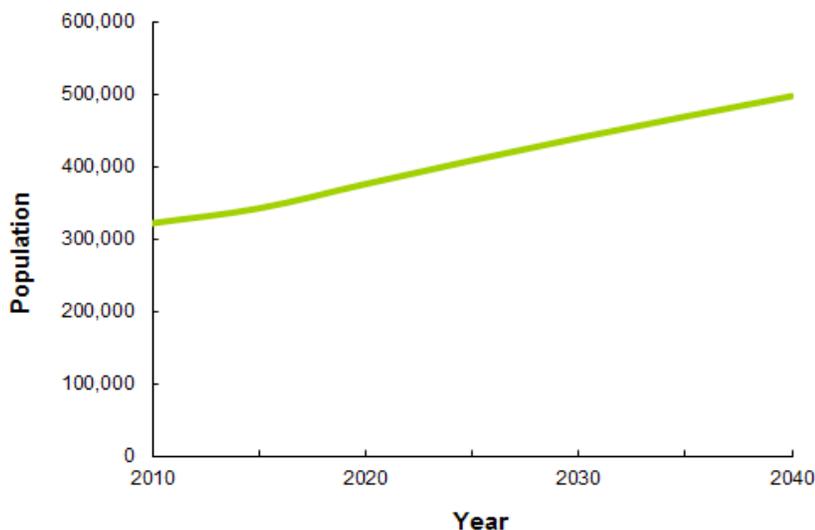
### Resident Population

Population trends allow for health care professionals to strategically plan for utilization of health services within the community and to assess current un-met and future health needs in specific sub-groups and vulnerable populations.

Between 1990 and 2010, the resident population of Collier County grew at a swift pace of 3.8 percent per year. This compares to Florida at 2.0 percent and the United States at 1.1 percent during the same time period. Immokalee comprises 7.5 percent of the population while Greater Collier comprises 92.5 percent of the population.

While the annual average growth rate was the greatest between 1990 and 2000, 5.2 percent, the resident population of Collier County is projected to increase by 175,491 by 2040, resulting in a significantly slower rate of growth of 1.5 percent per year for the period 2010 to 2040.

**Total Population Projections, Collier County, 2010 - 2040**



Source: Bureau of Economic and Business Research, Florida Population Studies, Bulletin 163

### Seasonal Population

During the late fall and winter months Collier's population increases significantly as seasonal residents, tourists and farm workers flow into the community. The largest proportion of seasonal residents tend to be those 65 years and older with the average age just over 48 years. Between 1990 and 2010, the peak season population of Collier grew by 84 percent from 210,719 to 387,183. In 1990, Greater Collier County and Immokalee accounted for 87.4 percent and 12.6 percent, respectively, of the peak population.

# Population

Over the next 20 years the peak population in Greater Collier grew by 3.4 percent annually while in Immokalee the peak population decreased by 0.5 percent annually.

A myriad of socio-economic and political factors account for this reversal in Immokalee's resident and peak season growth trend; namely, economic international trade dynamics and changes in federal immigration policies and enforcement.

## Age Distribution, Gender and Population Growth

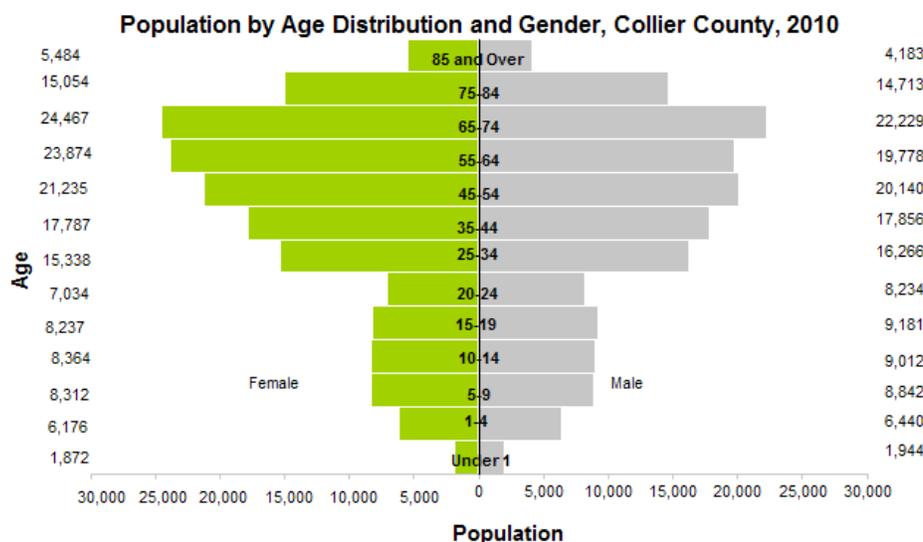
The resident population rate of growth has slowed significantly and is expected to be 1.5 percent per year for the period 2010 – 2040 with a projected population of 497,011 in 2040. There have been dramatic shifts in the age distribution over the past 20 years as the “baby boomer” generation reaches retirement age and move to Collier seeking a healthy quality lifestyle. This highly visible demographic shift will have a significant impact on health care access and provision and socio-economic dynamics for Collier County and Florida during the 21st century.



- Population characteristics are associated with quality of life which is a predictor of the health status of the community.

- Peak season population grew by 84 percent from 210,719 (1990) to 387,183 (2010).

- Immokalee has seen a reversal in growth of its population since 1990, owing to economic trade dynamics and changes in federal immigration policies and enforcement.



Source: CHARTS/U.S. Census Bureau

## Households

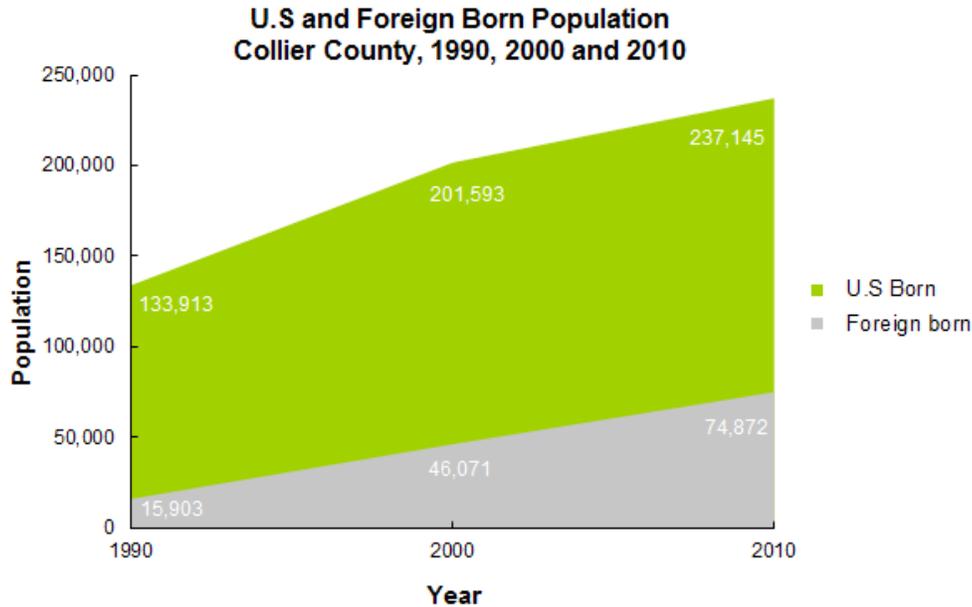
In 2010, family households accounted for 67 percent of all households which was down from 71 percent in 1990. Non-family households (those where the householder either lives alone or with non-relatives only) accounted for 33 percent of all households in 2010. This transition in social habitation trends may be related to the increasing prevalence of marginal economic conditions resulting from the recession which began in 2007 and from the deaths among aging couples.

## Diversity

Collier has a very diverse population which adds to the richness of the community. Collier's diversity also has implications for the economics, the educational system and the health care system of the community.

## Place of Birth

Collier is a popular destination for persons immigrating to the U.S. In 2010, 24 percent of the residents were foreign-born with the majority immigrating from Latin America (76 percent), Europe (15.6 percent), Northern America (4.2 percent) and Asia (3.9 percent).



Source: U.S. Census Bureau, 2005 - 2011 American Community Survey

## Language

In 2010, 31 percent of residents spoke a language other than English at home, up from 17 percent in 1990.

## Race

During the period 1990 to 2010, the black population increased by 196 percent, from 7,342 to 21,762, while the white population decreased to make up 90.5 percent of the population.

## Ethnicity

Between 1990 and 2010 the Hispanic population in Collier grew by 301.2 percent. While Hispanics constituted less than 14 percent of the population in Collier in 1990, by 2010 the proportion increased to almost 26 percent. This upward trend is expected to increase at an annual rate of approximately 2.3 percent between 2010 and 2040, when the Hispanic population in Collier County is projected to surpass 160,000.

## **Socio-Economic Features**

The relationship between socio-economic levels, living standards, health status, the quality of life and life expectancy have been well documented, studied and proven scientifically for centuries. There is a well-established statistical association existing between income level and educational attainment which, consequently, leads to healthier communities and populations.

An individual's health does not occur in isolation. Many social, economic, physical and lifestyle factors combine together to influence the health of individuals, families and communities. Together these factors are referred to as "determinants of health". The determinants of health significantly influence outcomes such as prevalence and severity of chronic illnesses.

The most discussed determinants of health include: poverty or economic status, housing, transportation, health services, education and lifestyle behaviors.

# Aging Population

Collier's population is increasingly growing older:



- In the past 20 years the population aged 75-84 years increased by 176% while those 85 years and older increased 340%.

- Persons 65 years and older represent 27% of the total Collier population. For Naples City and Marco Island they comprise 47% of the population.

- A rapidly aging population has significant implications for the health care system.

# Seasonal Population

In 2010 the number of tourists visiting Collier was 1,338,800.

# Households

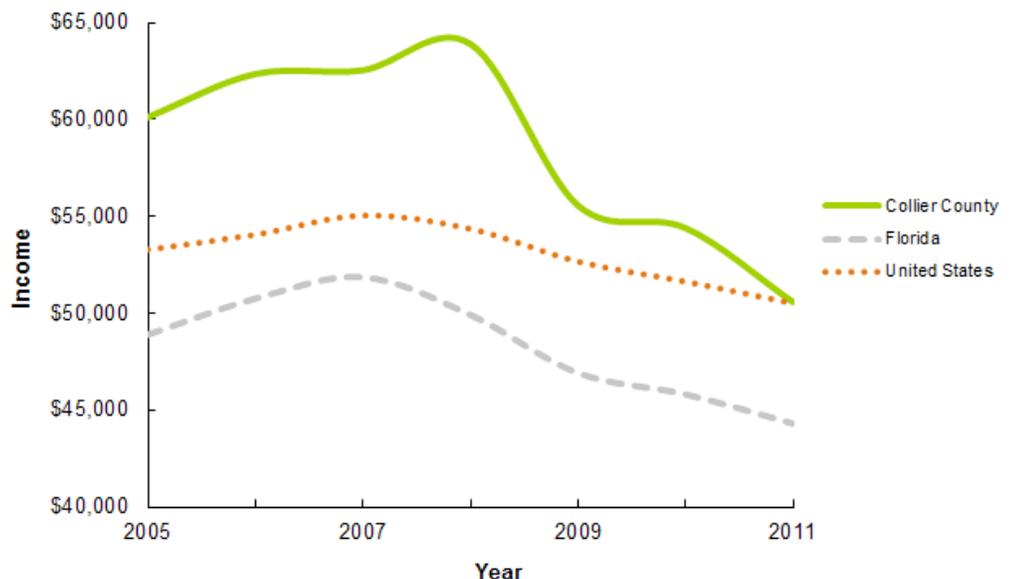
The proportion of family households declined from 71% of all households in 1990 to 67% by 2010.



The correlation between income level, health status and health related outcomes has been documented by health economists and public health experts during the last century. Since the recession of 2007, these relationships have become more evident as they emerge in various socioeconomic indicators.

Between 1990 and 2010, median household income increased in Collier County by 75 percent, from \$30,883 to \$53,934 respectively. However, the comparison of median income adjusted in 2011 dollars indicates median household income has been declining in Collier since 2008. In 2011, the adjusted median household income was \$50,569 which is still below the peak median household income of \$57,976 for 1999. The recent recession coupled with increased unemployment between 2007– 2009 has been a significant driver of the decrease in the adjusted median household income.

**Median Household Income in Collier County, Florida and the United States, 2005 - 2011 (Adjusted in 2011 dollars)**



Source: U.S. Census Bureau, 2005-2011 American Community Survey

Forbes listed Collier County as the top county where America's wealthy were moving to in 2010. The average reported income was \$76,161 per person moving to Collier in 2008. During that same year slightly more taxpayers moved out of Collier than into it with the departing residents' average income at \$26,128 per person. Households with incomes of \$75,000 or greater increased by 14.5 percent between 1990 and 2010 while households with incomes of \$10,000 - \$49,999 decreased by 16.3% during the same time period.

### Poverty Indicators

Collier is one of the wealthiest counties in Florida with a per capital income of \$37,335 for 2011 which is 1.4 times that of the state. However, there are pockets of significant poverty. Four Collier communities have per capital incomes ranging from \$9,496 to \$24,556. Immokalee is one of those communities and the other three are in the Greater Naples area (Naples Manor, Golden Gate City and Naples Park). Additionally, 5 of Collier's zip codes are designated as Low Income Areas by U.S. Department of Health and Human Services (34142, 34114, 34104, 34113, and 34116).

#### Population Living in Poverty

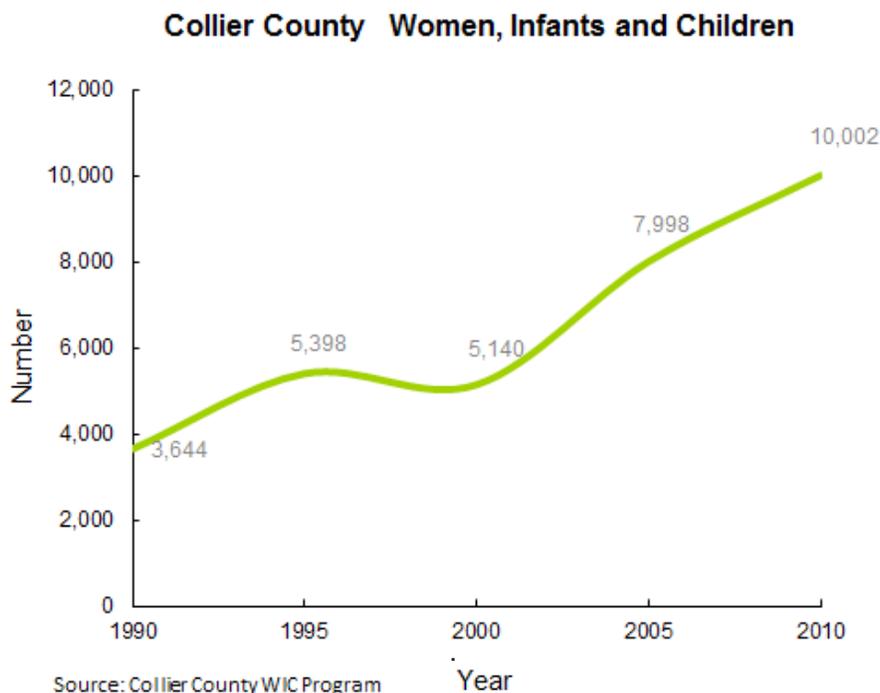
The number of persons living in poverty increased 56 percent from 14,891 in 1989 to 39,648 in 2009.

#### Children Living in Poverty

Children under the age of 18 years living in poverty in Collier increased by 138 percent for the 20 year period 1989 – 2009 while in Florida the overall increase was 44 percent.

#### Women, Infants, Children's (WIC) Nutrition Program

The WIC Nutrition Program of the USDA provides food and nutritional assistance to pregnant and new mothers and children through 5 years of age. Between 1990 and 2010, the number of WIC participants in Collier County increased by over 174 percent, from 3,644 to 10,002.



#### Food Assistance Program

The Supplemental Nutrition Assistance Program of the USDA provides benefits used to purchase food for eligible households with monthly net incomes of less than 100 percent of the federal poverty guideline. Between 2007– 2011 the number of children receiving food assistance increased by 330 percent while during the same period the number of adults increased by 309 percent.

# Poverty

“Poverty and health are intertwined. Poor people have worse health outcomes than better-off people. This association reflects causality in both directions: poverty breeds ill-health, and ill-health keeps poor people poor.”

-World Health Organization

## Homelessness

Between 2007 – 2009 admissions to St. Matthews House in Naples increased by 92 percent from 1,028 to 1,979 at the peak of the recession. By 2011 this number had declined to 1,514 which is 47 percent above the 2007 admissions. On average males comprise 77 percent of all of the homeless in Collier County.

## Education

The relationship between health outcomes and educational attainment is well known. Health insurance is linked to access to health care and access to health insurance is usually linked to jobs requiring a specific level of education. Also, unemployment rates in the U.S. are higher for individuals without a high school diploma compared to those who are college graduates.

Between 1990 and 2010 there has been an increase in the percent of persons with a bachelor’s degree or higher for the population 25 years and older in Collier. In 1990 the percent of persons in this population with a bachelor’s degree or higher was 22.3 percent as compared to 30.8 percent in 2010. During this same period the percent of persons 25 years and older with less than a high school education decreased from 21 percent to 15.2 percent.

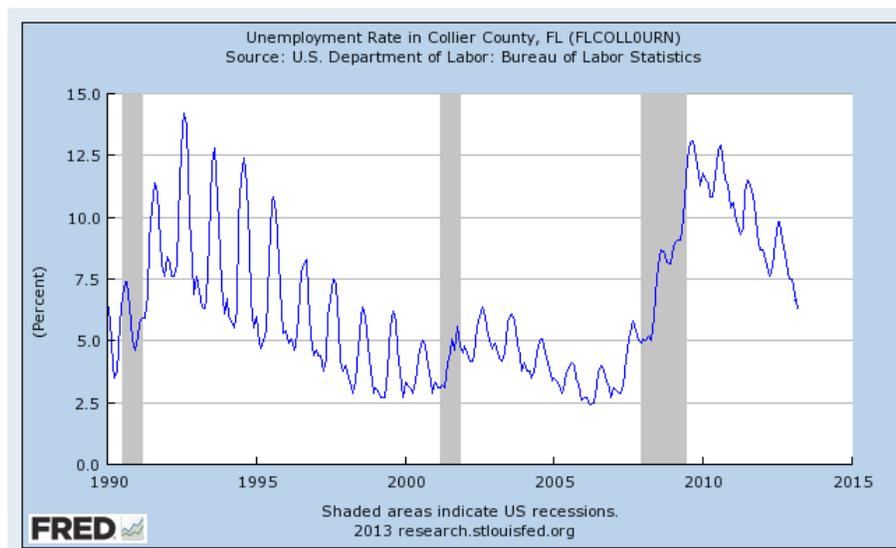
## Unemployment

The unemployment rates of the county have been highly correlated with those of the state of Florida over the past two decades. Beginning in 2007 the rates for Collier and the State spiraled upward around 12 percent in 2010. The rate has been dropping since 2010. Economic data from the Federal Reserve shows Collier’s unemployment rate at 6.3 percent for March 2013.

### Unemployment Rate in Collier County, FL (FLCOLL0URN)

2013-03: **6.3** Percent [Last 5 Observations](#)

Monthly, Not Seasonally Adjusted, Updated: 2013-05-01 12:17 PM CDT



## Pockets of Poverty

Census data for 2007-2011 indicates the communities of Naples Manor (36.1%), Golden Gate (26.1%) and Immokalee (43.9%) have disproportionately higher levels of poverty.

## High School Graduation Rates

The percentage of students graduating high school in Collier has increased steadily by 8.8% since 2004. The graduation rate for school year 2010-11 for the district was 81.3%.

# Chronic Diseases

Approximately 1 out of every 2 adults in Florida and Collier County have at least one chronic condition or disease. Most major chronic diseases are caused either directly or indirectly by four contributory factors which are modifiable health risk behaviors: tobacco use, lack of physical activity (resulting in overweight and obesity), excessive alcohol consumption, and poor nutrition. Chronic disease accounts for approximately 7 out of every 10 deaths among Collier County residents every year.

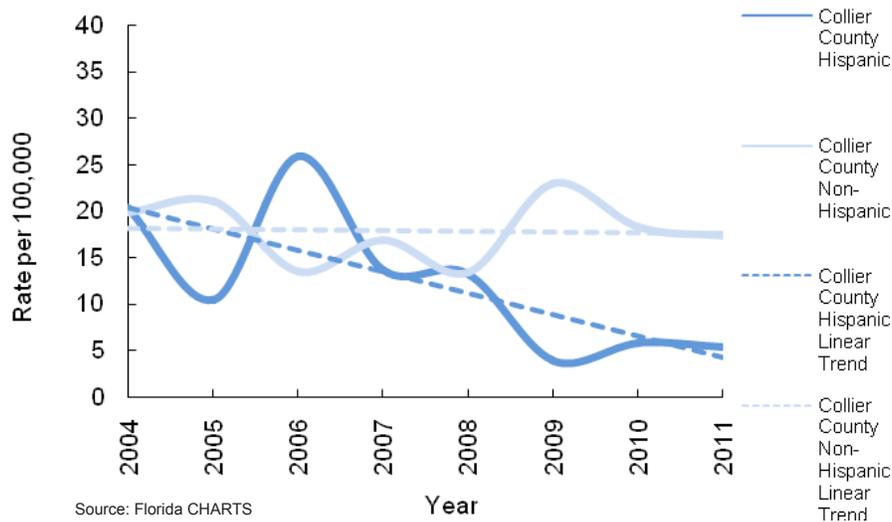
## Lung Cancer

Lung cancer, the leading cause of cancer deaths in the United States and Collier County. Accounting for 27 percent of all cancer deaths in 2011, lung cancer is the most prevalent high case fatality cancer in the U.S. and in Florida. In 1992, the lung cancer mortality rate in Collier County was 13 percent less than that of the state of Florida. By 2011 Collier County's rate was 29 percent less than the state's rate.

## Breast Cancer

Between 1992 and 2011 the mortality rate from breast cancer declined by 24 percent in Collier County and by 30 percent in Florida. By ethnicity, both Collier County and Florida female residents experienced a similar decline in mortality of between 11 and 13 percent during the period 2004-2011, with the exception of Collier County Hispanics who experienced a steep 74 percent consistent reduction in the breast cancer death rate.

**Breast Cancer Mortality Rate by Ethnicity, Collier County, 2004 - 2011**



## Melanoma

The melanoma mortality rate for Collier County and Florida for the period 1992 to 2011 has stayed relatively the same. It is evident for both areas that over the 20 year period, mortality from melanoma has not decreased in real terms.

## Leukemia

Between 1992 and 2011, the mortality rate for leukemia in Collier County remained virtually unchanged while in the state of Florida the linear trend was slightly downward.

## Cerebrovascular Disease

Cerebrovascular disease, more commonly referred to as stroke, is the fourth leading cause of death in the United States and Collier County. In 2011, stroke accounted for 164 deaths in Collier County or 5.7 percent of all deaths. Stroke was the fifth leading cause of death for males and the fourth leading cause for females, accounting for 41 percent more deaths than in males in Collier County in 2011.

## Chronic Diseases

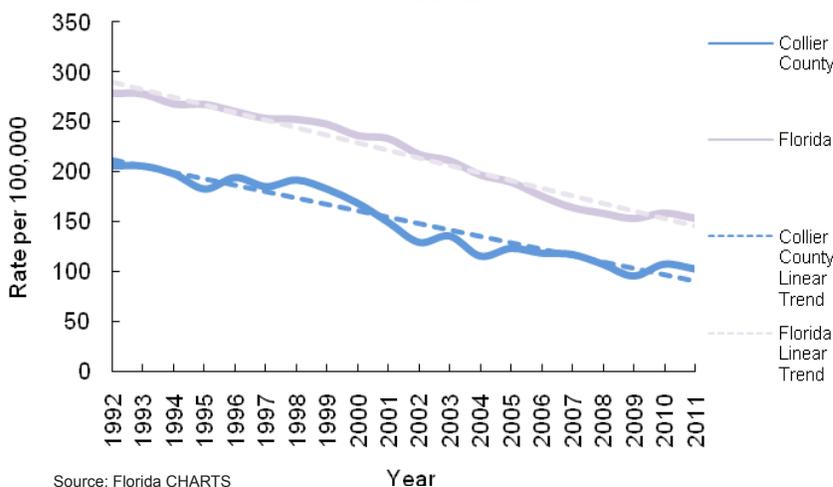
- Approximately 1 out of every 2 adults in Florida and Collier County have at least one chronic condition or disease.
- Chronic diseases account for approximately 7 out of every 10 deaths among Collier County residents every year.
- Most major chronic diseases are caused either directly or indirectly by four contributory factors:
  - 1) Tobacco use
  - 2) Lack of physical activity
  - 3) Excessive alcohol consumption
  - 4) Poor nutrition

### Cardiovascular Disease

While the percentage of adults ages 18 to 64 years with heart disease was similar for both males and females, for adults 65 years of age and over disease prevalence was significantly higher for males in 2011 in Collier County. The age-adjusted death rate for males for heart disease was 54 percent greater than the mortality rate for females. There were a total of 359 heart disease deaths for males in Collier County in 2011 compared with 275 deaths for females, a difference of 31 percent.

At the same time that progress has been made with this reduction in the mortality rate for heart disease, the major dominant competing cause of death, cancer, has become the number one cause of mortality due to its high incidence and prevalence in the older population groups, in particular those 45 years of age and over. The decrease in the heart disease rates is impressive, with stable steady declines across the board for both the county and the state.

**Heart Disease Mortality Rate, Collier County and Florida, 1992 - 2011**



Source: Florida CHARTS

### Diabetes

Diabetes is the 7th leading cause of death in Collier County and the 6th leading cause in Florida. While the non-Hispanic population mortality trends increased, the Hispanic population showed downward diabetes mortality trends from 2004 to 2011 in Collier County.

### Chronic Liver Disease

Chronic liver disease and cirrhosis is the 8th leading cause of death in Collier County. In Collier County the death rate has been steadily surging over the last two decades while in Florida the mortality rate has been trending slowly downward.

### Chronic Lower Respiratory Disease (CLRD)

In 2011 CLRD was the third leading cause of death in Collier County and Florida. By sex in Collier County, it was the third leading cause among females and the fourth among males. From 1992 through 2011, the mortality rates from CLRD declined slightly in Collier County but the rate remained essentially unchanged in the state of Florida.

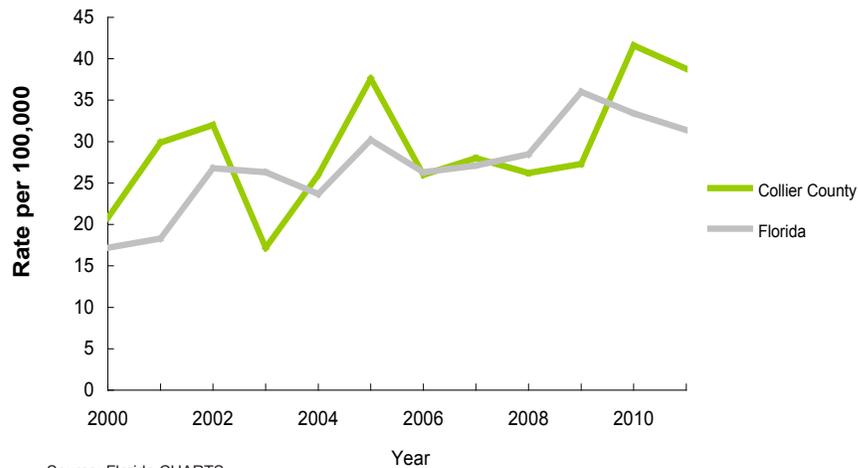
# Infectious Diseases

Between the year 2000 and 2011 the incidence of infectious diseases in Collier County increased by 20 percent. Three of the five leading communicable diseases in Collier County are enteric or gastrointestinal related. Salmonella, campylobacter and giardiasis accounted for 50 percent of all reportable conditions in 2011.

## Salmonella

Salmonella is a bacterial infection usually causing diarrhea, fever and abdominal cramps. The incidence in Florida and in Collier County has been increasing over the past 10 years.

**Reported Cases of Salmonella in Collier County and Florida, 2000 - 2011**

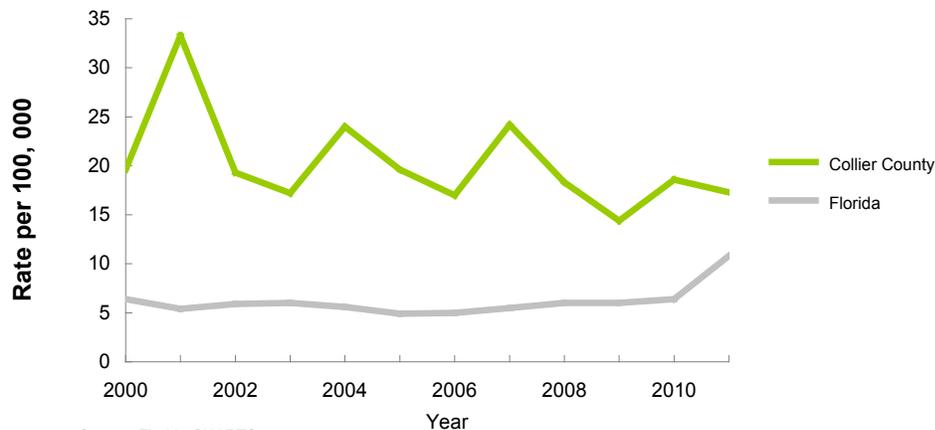


Source: Florida CHARTS

## Campylobacter

Campylobacter is one of the most common bacterial causes of diarrheal illness in the United States. It is estimated over 2.4 million persons in the country every year are affected by this disease; therefore the majority of cases go undiagnosed and unreported.

**Reported Cases of Campylobacteriosis in Collier County and Florida, 2000-2011**



Source: Florida CHARTS

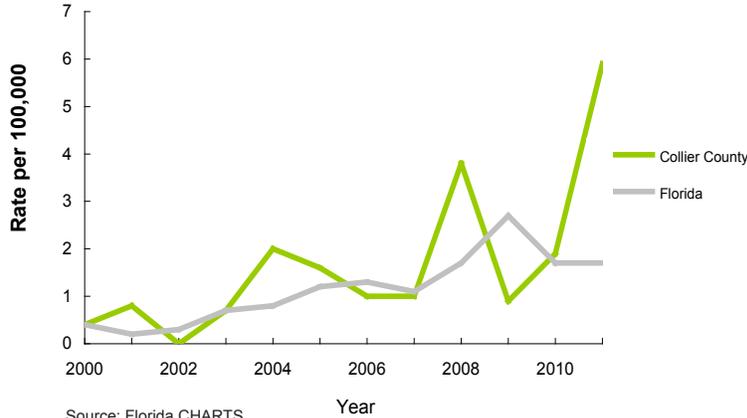
## Giardiasis

Giardiasis is a diarrheal disease caused by a microscopic parasite. The parasite is found in soil, food or water that has been contaminated with feces of infected humans or animals. One of the major correlates of the giardiasis incidence in Collier County has been the total number of refugees received through the Federal Refugee Resettlement Program. Between 2005 and 2011 Collier County absorbed 3,399 foreign refugees. As a mandatory requirement, all participating refugees are tested for select communicable and infectious diseases.

## Pertussis

Pertussis or whooping cough remains the major public health problem among children in developing countries with an estimated 300,000 deaths resulting from the disease annually. The disease is also endemic within the United States. The incidence of Pertussis, a vaccine preventable disease, can be significantly reduced through health education.

Reported Pertussis Cases in Collier County and Florida, per 100,000 Population, 2000-2011

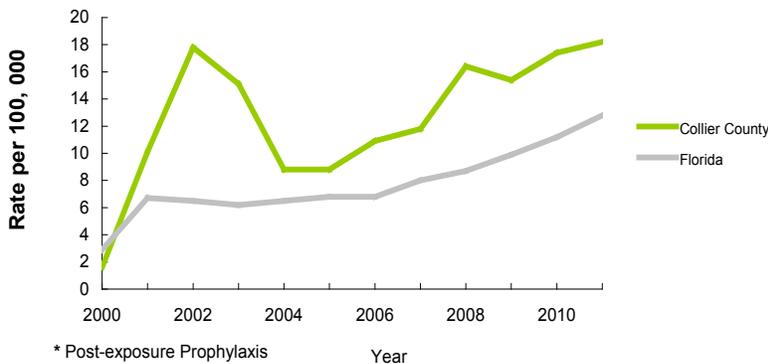


Source: Florida CHARTS

## Animal Bites

In Collier County the third leading reportable health condition during 2011 involved animal bites requiring post-exposure prophylaxis (PEP) in order to prevent the potential onset of human rabies. Between 2000 and 2011 the number of animal bites in Collier County to humans increased by over 90 percent.

Reported Animal Bites Requiring PEP\* in Collier County and Florida, 2000 - 2011.



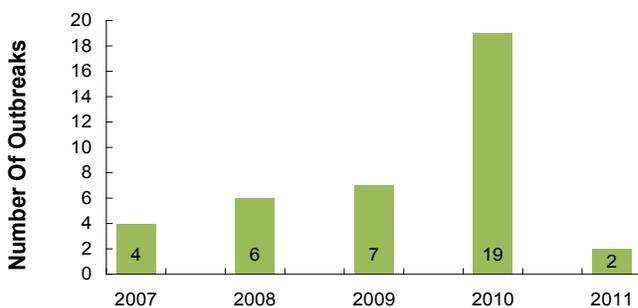
\* Post-exposure Prophylaxis

Source: FDOH-Collier, Epidemiology and Health Assessment Program

## Norovirus

Norovirus is the most frequent viral cause of acute gastroenteritis in the U.S. annually affecting about 1 out of every 14 Americans per year, in effect causing 21 million cases every year.

Number of Confirmed and Suspected Reported Norovirus Outbreaks, Collier County, 2007-2011



Source: FDOH-Collier, Epidemiology and Health Assessment Program

## Pertussis

Between 2000 and 2011, the number of reported cases of pertussis in Collier County increased 1,375%.

## Chlamydia:

- During the period 2005 - 2011 the highest incidence rates of Chlamydia were in the 20 -24 year age group for both females and males.

- Almost 3 times as many cases of Chlamydia are reported in females compared to males in Collier County.

- Between 2005-2011 the Chlamydia rate for males and females increased dramatically.

## Gonorrhea:

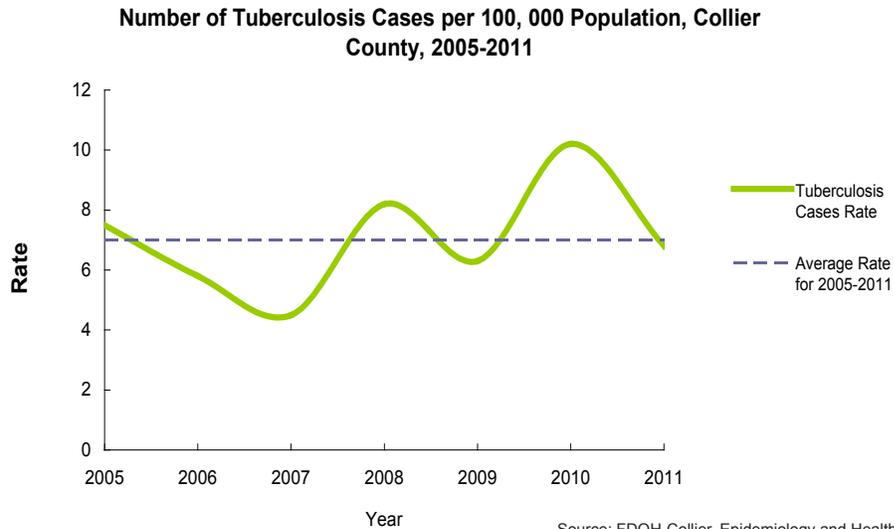
- Unlike chlamydia where the risk of disease is on average 3 times greater for females than males, the risk of acquiring gonorrhea in Collier County appears to be equivalent on average for both males and females.

## Mosquito-Borne Disease

Mosquito-borne diseases are an indigenous risk in Southwest Florida due to the geographical location, climate and its wet and warm season and conditions which favor significant breeding and propagation of the mosquito population annually.

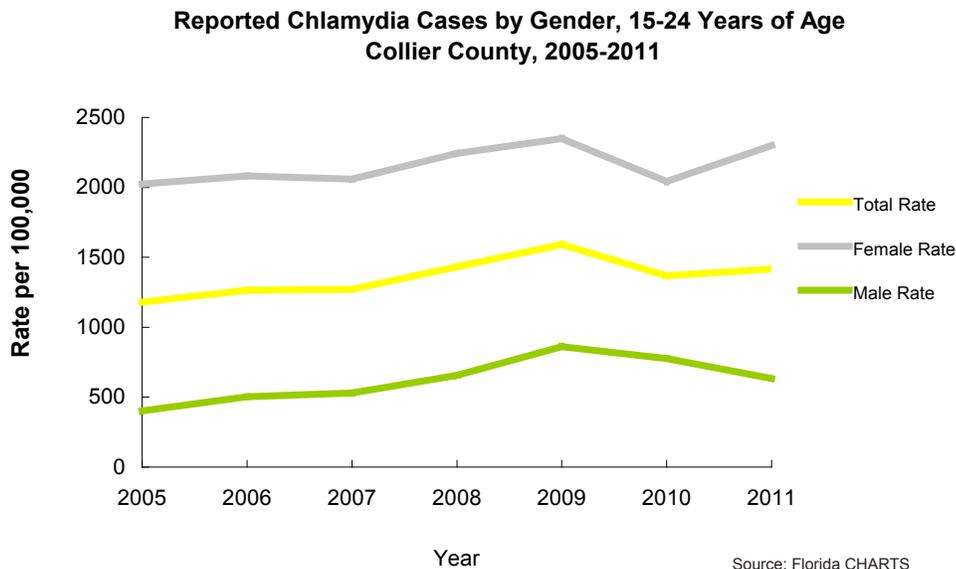
## Tuberculosis

Historically, the incidence of tuberculosis in Collier County has been higher than that of the state of Florida, particularly for the time period prior to the 1970 through the 1990's and more recently from 2008 -2011. In Florida medically underserved low income populations, many of which are high risk social and ethnic minorities, have a high rate of tuberculosis exposure and infection. These population groups disproportionately represent the majority of TB cases in Collier County and the state.



## Sexually Transmitted Diseases

Chlamydia is the most prevalent STD in females in the United States and Collier County as well as the most frequently reported infectious disease. Chlamydia infection in women are usually asymptomatic and can result in pelvic inflammatory disease which is a major cause of ectopic pregnancy and chronic pelvic pain. Pregnant women with chlamydia can also pass the infection to their infants during delivery and chlamydia infection can facilitate the transmission of HIV. Due to this burden of disease and the risk associated with infections, it is recommended that all sexually active women younger than 25 years of age receive an annual chlamydia screening.



## Infant Health:



- The infant mortality rate for Collier County declined by 31% to a new low of 5.0 deaths per 1,000 live births between 1990 and 2011.

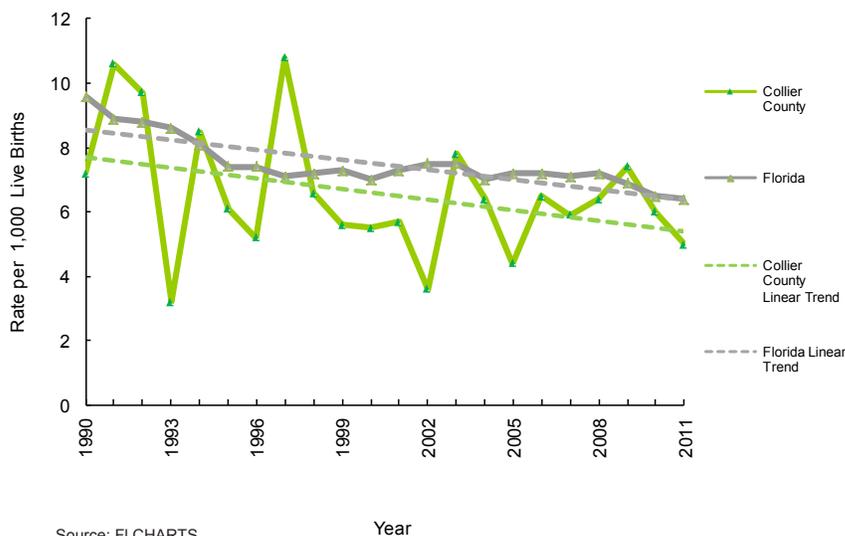
- Between 2000 and 2011 the percentage of live births with very low birthweight increased by 7.1% in Collier County and by 6.7% in Florida.

- Between 1990 and 2011, the birth rate decreased from 16.2 to 9.9 per 1,000 population, or 39%.

## Infant Mortality

The infant mortality rate for Collier County declined by 31 percent to a new low of 5.0 deaths per 1,000 live births between 1990 and 2011. During this 21 year period, the highest rate occurred in 1997, 10.8 per 1,000 live births. In Collier County and the state of Florida the Hispanic infant mortality rate is lower than that of the non-Hispanic population. In 2011, the Hispanic infant mortality rate in Collier County was almost 60 percent lower than the non-Hispanic rate, 2.8 compared to 6.9 per 1,000 live births, respectively.

Figure 1. Infant Deaths per 1,000 Live Births, Single Year Rates, Collier County and Florida, 1990-2011

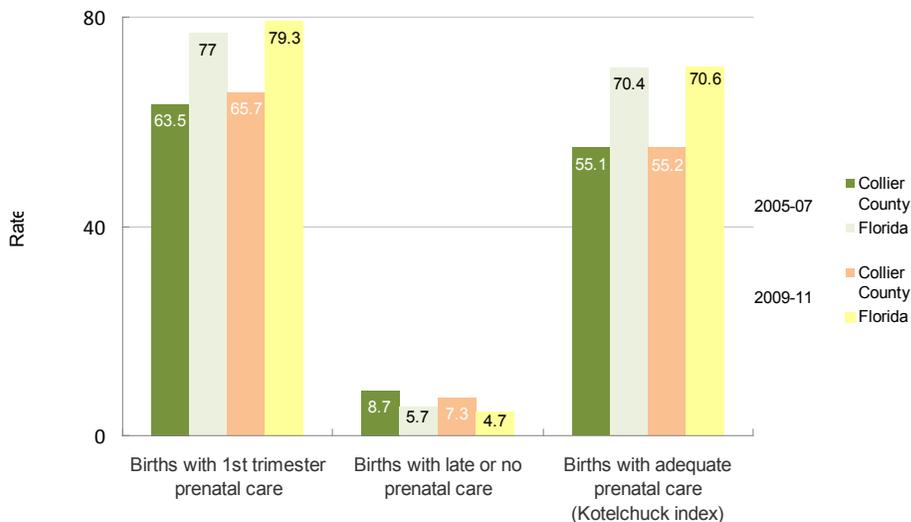


Source: FI CHARTS

## Prenatal Health and Lifestyle Behaviors

Collier County lags behind Florida for all 3 indicators related to adequate prenatal care: births with 1st trimester prenatal care, births with late or no prenatal care and births with adequate prenatal care.

Rates in Access to Prenatal Care, Collier County and Florida, 2005-2007 and 2009-2011



Source: Florida CHARTS

In Collier County births to underweight mothers increased slightly by 2.5 percent while almost 45 percent of mothers giving birth were either overweight or obese. Births to unwed mothers ages 15 to 19 years increased during the four year time period, 2006-2010, by over six percent, while unwed mothers ages 20 to 54 years also gave birth more frequently by one percent.

Pregnant women continued to improve their health behaviors by decreasing their reliance on alcohol and tobacco use. Only 3.8 percent of mothers who gave birth during 2009-2011 reported smoking during pregnancy, a decline of almost 12 percent from four years prior. The percentage of females 17 years of age and older who engage in heavy or binge drinking declined by 16 percent during 2010 compared with 2006.

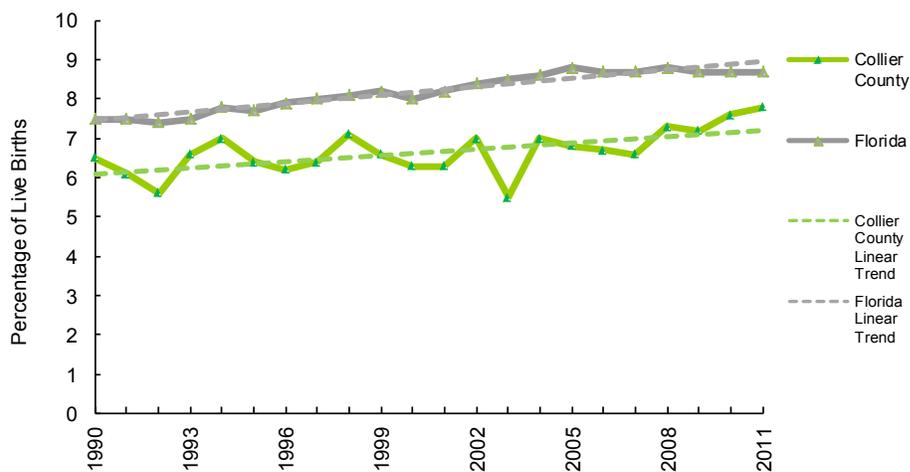
Between 2006<sup>a</sup> and 2010<sup>b</sup> the number of women 15-34 years with sexually transmitted diseases per 100,000 population declined by four percent in Collier County while in the state of Florida the rate increased by almost 24 percent. <sup>a)</sup> Indicators are for 2005-2007, <sup>b)</sup> Indicators are for 2009-2011

### Birth Outcomes

Infants born with very low birthweight have a 24 percent chance of dying during their first year of life. Risk factors among pregnant women for low birth weight outcomes include: maternal smoking, low maternal weight gain or low pre- pregnancy weight, teenage pregnancy, multiple births, violence and abuse during pregnancy.

Between 2000 and 2011 the percentage of live births with very low birthweight increased by 7.1 percent in Collier County and by 6.7 percent in Florida. The percentage of live births under 2500 grams between 1990 and 2011 increased in Collier County by over 23 percent and in Florida by over 8 percent. This slight trend upwards is mainly attributed to the increase over the past two decades of multiple births.

Percentage of Live Births Under 2500 Grams (Low Birthweight), Collier County and Florida, 1990-2011



Source: Florida CHARTS

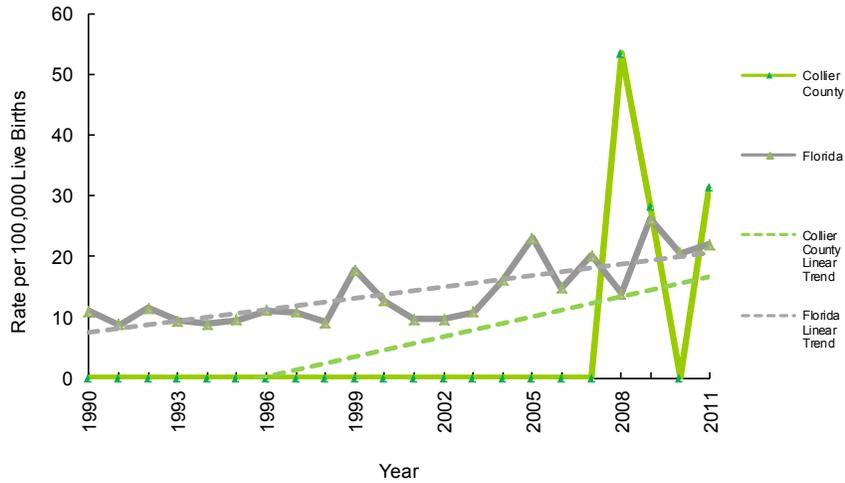
### Teenage Births

Between 1990 and 2011, the teenage birth rate for mothers 15-19 years of age declined by 74 percent in Collier County and by 59 percent in Florida, with black and Hispanic experiencing a steeper decline than white teenagers. By race, repeat births to teenage mothers dropped dramatically in Collier County among blacks and whites, minus 62 percent and minus 40 percent, respectively, from 28.2 to 10.6 for whites and from 38.6 to 23.1 for blacks. A disparity in the repeat teenage birth rate among black mothers still exists in Collier County as the rate was 2.2 times higher in 2011 than white teenagers 15-19 years of age.

## Maternal Mortality

Between 1990 and 2007, Collier County did not experience any maternal deaths. During 2008, 2009 and 2011, 2, 1 and 1 maternal deaths respectively occurred thereby increasing the rates for those years to very high levels due to the concept of small number random variation.

Maternal Death Rate per 100,000 Live Births, Single Year Rates, Collier County and Florida, 1990-2011

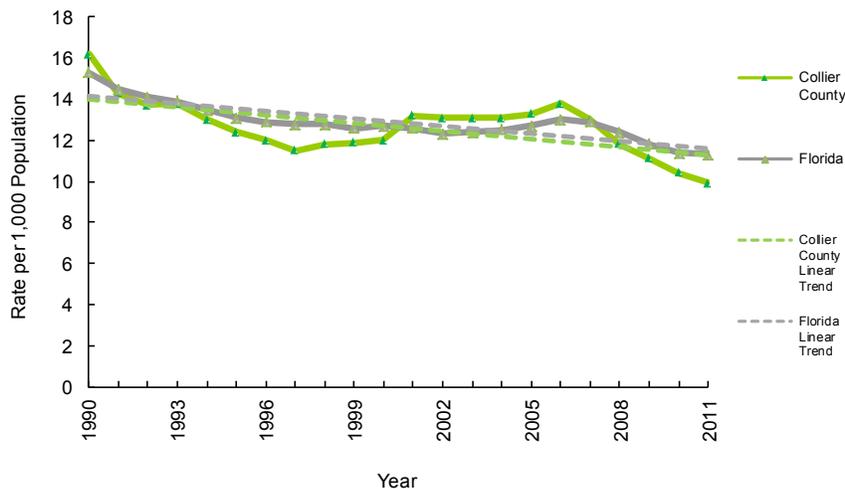


Source: Florida CHARTS

## Live Births

During 2011, 3,197 resident live births were reported in Collier County, 4 percent less than in 2010 (3,339). Between 1990 and 2011, the birth rate decreased from 16.2 to 9.9 per 1,000 population, or 39 percent. Births to Hispanics decreased by over 43 percent from 2004 to 2011 in Collier County.

Total Resident Live Birth Rate per 1,000 Population, Collier County and Florida, 1990-2011



Source: Florida CHARTS

## Prenatal Care



Collier County lags behind Florida for all 3 indicators related to adequate prenatal care:

1. Births with 1st trimester prenatal care
2. Births with late or no prenatal care
3. Births with adequate prenatal care

## Health Behaviors

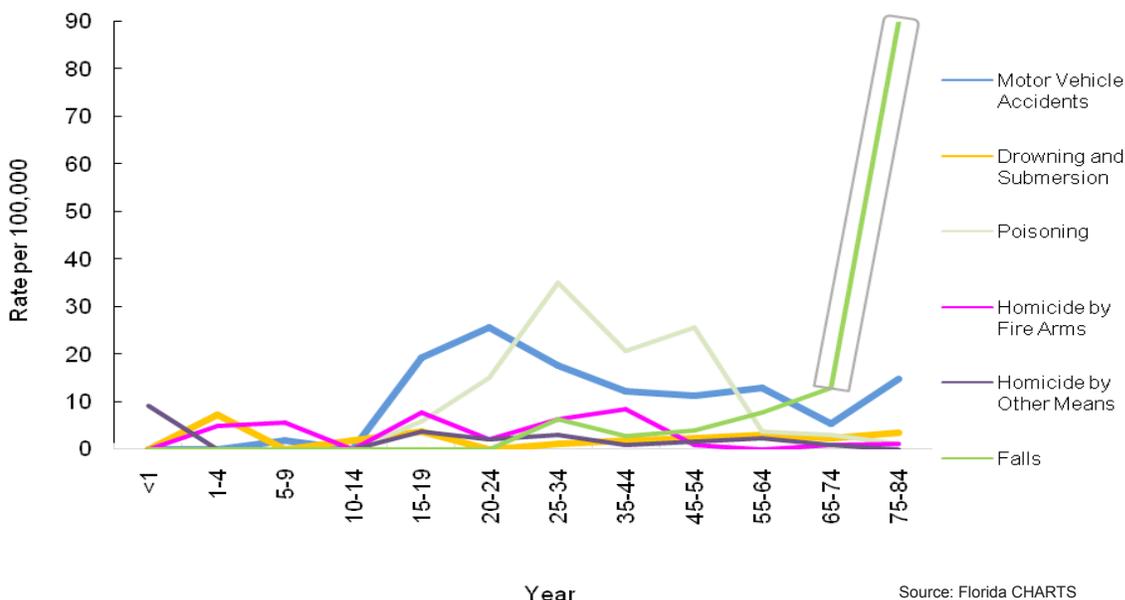
In Collier County, pregnant women continued to improve their health behaviors by decreasing their reliance on alcohol and tobacco use.

# Injuries

Injuries remain a leading cause of death for residents of all ages, in Collier County as well as Florida. Males have significantly higher death rates from injuries than those for females, at any age group while the older population have the highest injury fatality rates. Unintentional injuries continue to be the fifth leading cause of death in Collier County accounting for almost 6 percent of all deaths annually.

The major causes of injury deaths vary by age: unintentional poisoning for 35-54 age group, falls for the older population, and motor vehicle accidents for all other age groups combined. In Collier County the mortality trend for injuries for males has been slowly moving lower from 1990 through 2011, while the trend for females has been the opposite, gradually trending higher during the same period. In Collier County the Hispanic mortality rate has been trending upward since 2004 while the non-Hispanic injury mortality rates have remained fairly constant.

Death Rates for Leading Causes of Injuries per 100,000 Population, 0-84 Years of Age, Collier County, 2009-2011

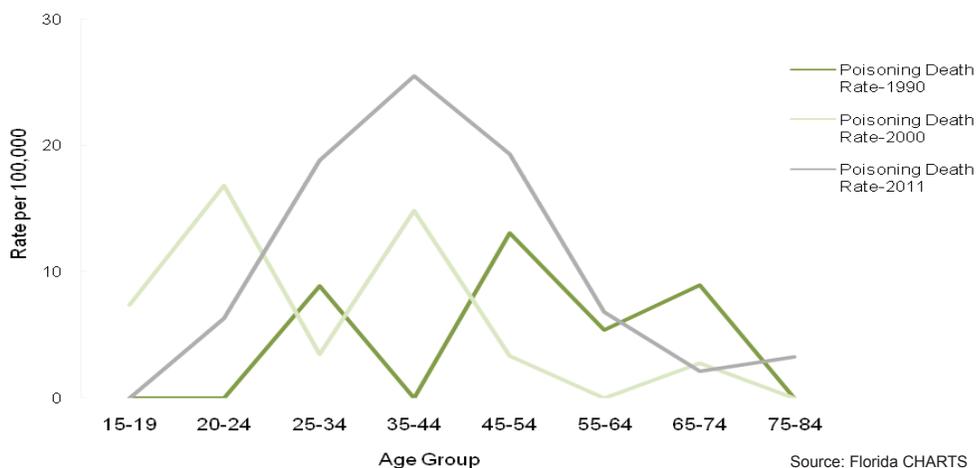


Source: Florida CHARTS

## Unintentional Poisoning

A concerning trend over the last 30 years has been the dramatic growth in poisoning deaths. The mortality rate for unintentional poisonings increased by 715 percent in Collier County and by 515 percent in Florida during this 20 year period. This increase has been largely fueled by surge in drug overdose deaths among those 15-64 years of age.

Deaths from Unintentional Poisoning per 100,000 Population, by Age, Collier County, 1990, 2000 and 2011



Source: Florida CHARTS

## Injuries:

- Unintentional injuries continue to be the fifth leading cause of death in Collier County accounting for almost 6 percent of all deaths annually.

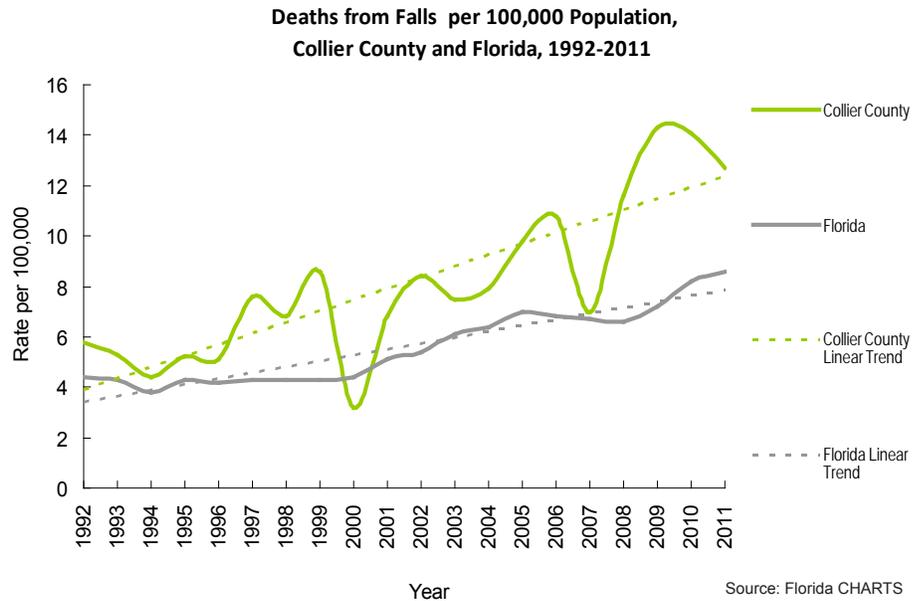
- The major causes of injury deaths vary by age:

1. Unintentional poisoning for 35-54 age group
2. Falls for the older population
3. Motor vehicle accidents for all other age groups combined

- Notable increases have occurred in both unintentional poisoning and falls in Collier County from 1990 to 2011. Also, there has been a significant increase in potential rabies exposures.

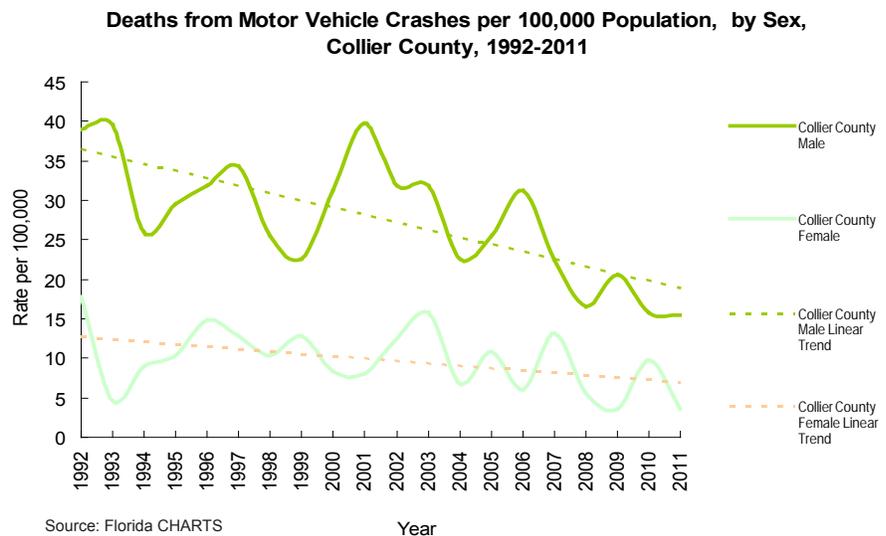
## Falls

Over the past 10 years, death rates from falls have started to accelerate for the older populations. The graph below displays the dramatically sharp increase in the mortality rate from falls for the 75 – 84 age group from 2009 to 2011. Between 1992 and 2011, the mortality rate due to falls increased in Collier County by 119 percent and in Florida by 95 percent. In Collier County the mortality rates from falls are increasing steadily and in parallel for both males and females.



## Motor Vehicle

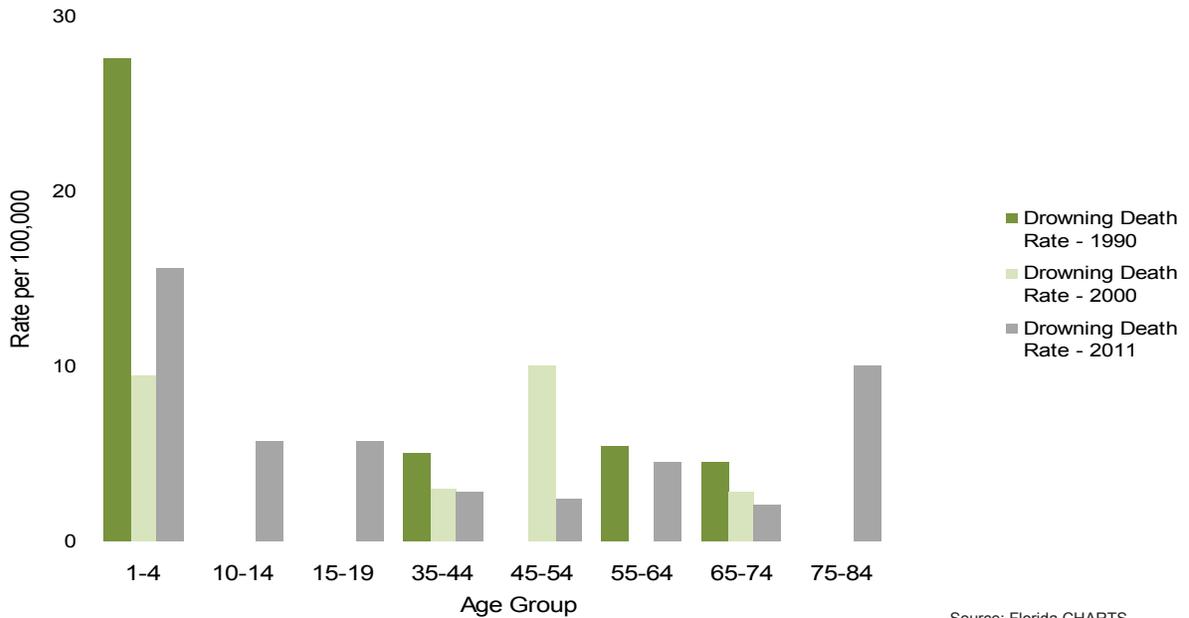
Unintentional injuries continue to be the fifth leading cause of death in Collier County accounting for almost six percent of all deaths annually. The mortality rate from motor vehicle crashes per 100,000 population for Collier County and Florida for the period 1992-2011 is shown in the graph below. There has been a reduction in the percentage of fatally injured motor vehicle drivers who were legally intoxicated declined to about 33 percent. Deaths from motor vehicle injuries are highest between the ages of 15 to 34 years of age, particularly with males.



## Drowning

The figure below shows the age specific death rates for drowning deaths in Collier County for the years 1990, 2000 and 2011. Drownings rank fifth among the leading causes of unintentional injury deaths in America. Among children ages 1 to 4, drownings are the leading cause of injury death.

**Deaths from Drownings per 100,000 Population, by Age, Collier County, 1990, 2000 and 2011**

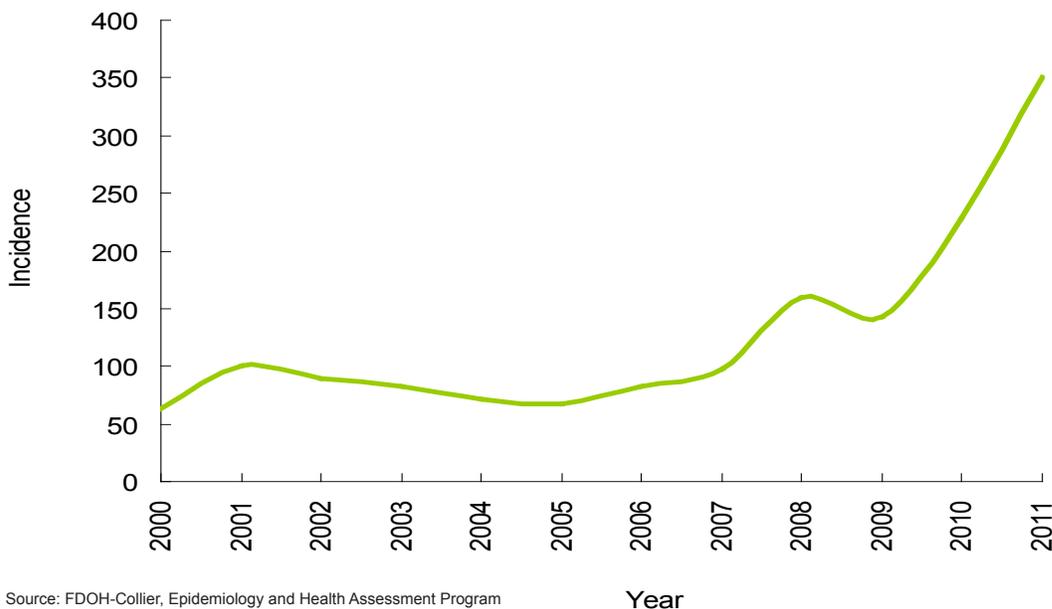


Source: Florida CHARTS

## Animal Bites

Between 2000 and 2011, potential rabies exposures in Collier County increased exponentially by over 450 percent, far exceeding the rate of population growth within the county. While heightened public health epidemiologic surveillance and aggressive investigations may account for a portion of the realized increase in incidence, the rapid and extensive development of land in Collier County over this 12 year period has increased human to wild and stray animal contact.

**Incidence of Animal Bites and Potential Exposures Collier County, 2000-2011**



Source: FDOH-Collier, Epidemiology and Health Assessment Program

# Access to Health Care

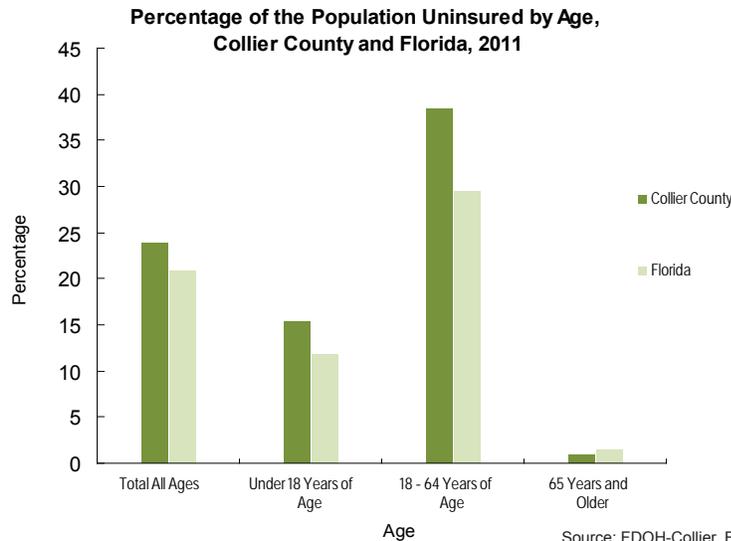
Access to health care and health services means the timely availability and use of personal health service in order to achieve the best health status outcomes. Lack of access to health care has a direct impact and effect on the health status of a community, county and state.

## Health Insurance Coverage in Collier County

Health insurance coverage assists patients in gaining access to healthcare system. Lack of health insurance is highly correlated with failure to receive medical care and with early and premature death and with overall poor health status. In Collier County and the state of Florida as well as the United States rates of health insurance coverage have declined over the past two decades.

In 2011 almost 24 percent of the total resident population of Collier County was uninsured compared with under 21 percent of the population of the state of Florida. For the population less than 18 years of age in Collier County 15.5 percent are uninsured compared with 11.9 percent in Florida, a difference of 3.6 percent. Of the core working population 18-64 years of age, in Collier County 38.5 percent were without health insurance compared with 29.5 percent in the state of Florida, a difference of 9 percent.

For the population 65 years of age and older in Collier County only 1.1 percent were without health insurance while in Florida only 1.5 percent lacked insurance. This very low proportion of the uninsured, is due to the “Medicare effect”, currently those 65 years of age and above are eligible for Medicare.



As expected for both Collier County and Florida, as the educational level increases, the percentage of the uninsured population decreases, a classic inverse correlation. Comparing Collier County’s uninsured population with less than a high school diploma to that of Florida, there exists a significant variance of 20.8 percent. The proportion of the population in Collier County uninsured with less than a high school education was 54.8 percent in 2011, while in Florida it was 34.0 percent.

The percentage of uninsured population by income group for Collier County and the state of Florida as with the inverse correlation between education level and the uninsured population, the same correlation exists between income level and the probability of having health insurance. Some interesting contrasts exist between Collier County’s income-specific uninsurance rates.

## Access to Healthcare:

- Uninsured children are **20 to 30 percent** more likely to lack their immunizations, prescription medications, asthma care and basic dental care.

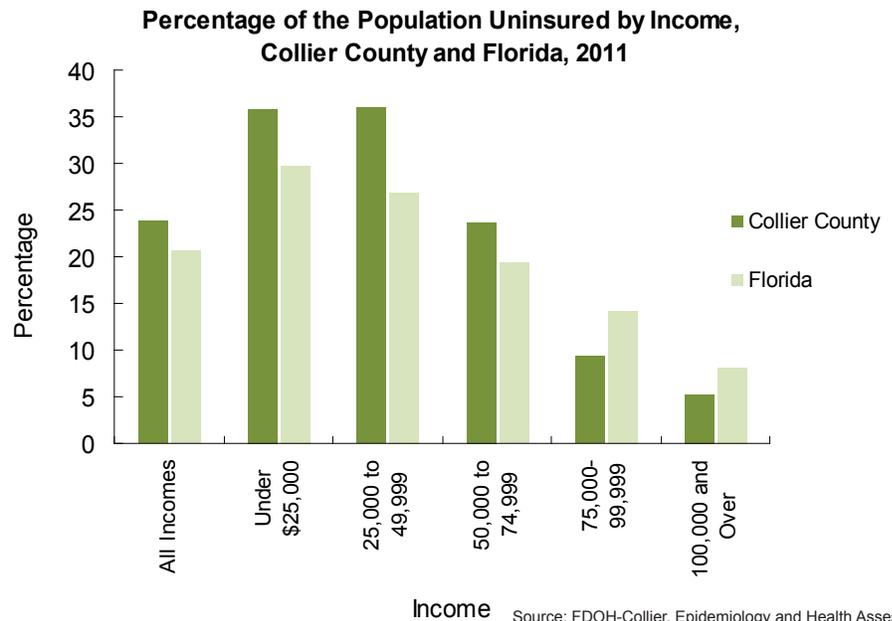
- Uninsured adults with chronic conditions are **2 to 4 times** more likely than insured adults to have received no medical attention during the prior year.

- A rapidly aging population has significant implications for the health care system.

- Uninsured adults are also **more likely** to be diagnosed with later stage cancer compared to the insured.

- Uninsured adults are **25 percent** more likely to die prematurely than insured adults from all causes and for conditions such as heart disease, diabetes or cancer. The risk of early mortality can be **40 to 50 percent** higher than the insured population.

For those earning under \$ 25,000 in Collier County 35.9 percent are uninsured, while for Florida it was 29.8 percent. For those earning \$ 25,000 to \$ 49,999 in Collier County the uninsured rate was 36.0 percent compared with 26.9 percent for Florida. Persons earning \$ 50,000 to \$ 74,999 had an uninsurance rate of 23.7 percent in Collier County compared to Florida's rate of 19.5 percent. Only after incomes of \$ 75,000 and over did Collier experience lower rates of the uninsured than the state of Florida.



### Detrimental Effects of Lack of Health Insurance for Adults with Select Chronic Conditions and Disease.

Condition	Effects
Heart Attack	The uninsured are more likely than the insured to have a fatal outcome.
Stroke	The uninsured are more likely than the insured to result in extremely poor outcomes, including neurological impairment, intracerebral hemorrhage and death.
Cancer	The uninsured are more likely than the insured to be diagnosed at an advanced stage of cancer, especially for those sites with available effective treatments and available early screening detection (breast or colorectal cancer) or by clinical assessment of symptoms (melanoma, bladder cancer).
Diabetes	The uninsured adults have significantly worse glycemic control than the insured
Congestive Heart Failure	The uninsured are at greater risk of death than the insured.
Hypertension	The uninsured are less likely than the insured to be aware of hypertension and, if hypertensive, more likely to have inadequate blood pressure control.
Hospital Inpatients with Serious Acute Conditions	The uninsured are at greater risk than the insured of higher mortality in hospitals and for at least 2 years after following admission.
Serious Injury or Trauma	After an unintentional injury, the uninsured are less likely than the insured to fully recover and are more likely to report subsequent declines in health status, the uninsured in severe automobile accidents have a substantially higher mortality rate than those insured.

Source: Florida CHARTS

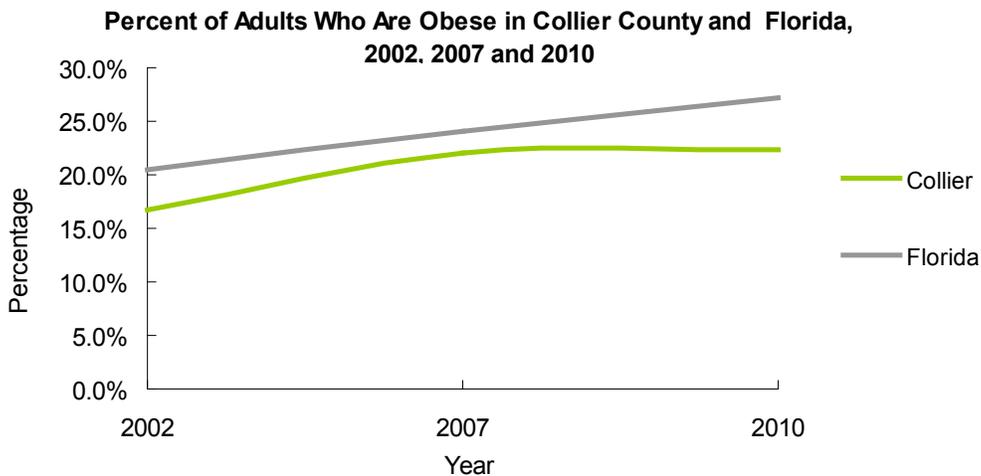
## Health Behaviors and Health Status

It is estimated the two most prevalent unhealthy behaviors or lifestyle related habits (tobacco use and overweight and obesity) account for almost 35 percent of all preventable and premature deaths annually. These results, from the Florida Department of Health's Behavioral Risk Factor Surveillance System (BRFSS) randomly selected scientific sample survey for select year intervals 2002, 2007 and 2010, are statistically valid and are representative of the community and population of Collier County.

### Obesity and Overweight

In 2010, 22.4 percent of Collier County adults indicated they were obese; this was almost 5 percentage points lower than the proportion in Florida. Men are more likely to be obese than females in both Collier County and in Florida. Women in Collier County are 1.5 times less likely to be obese than the State of Florida (16.3 percent vs. 24.7 percent), based on the 2010 survey results. Education is also a protective factor with 18.4 percent of obese adults in Collier County with a four year college degree or beyond, compared with 34.8 percent with only a high school degree. Income level of a population is statistically correlated with prevalence of obesity. In Collier County, the 18-44 years group has the greatest prevalence of obesity. It is estimated obesity and overweight in the general population accounts for approximately 17 percent of all annual deaths. This amounts to about 1 out of every 6 deaths in Collier County.

Overweight individuals are at an increased risk for developing obesity and other related chronic diseases like stroke and diabetes. In Collier County, there is no pattern between income and overweight status but older residents and married individuals have a higher prevalence compared to younger and non-married residents.



### Tobacco Use

In Collier County, at least 18 percent of all deaths (1 in 5) are associated with cigarette smoking. In 2010, the percent of adults who were currently smoking in Collier County and Florida was practically identical, 16.7 and 17.1 percent, respectively. Males are more likely than females to be smokers in Collier County. Income and educational attainment are inversely associated with smoking prevalence in both Collier County and Florida. Younger adults (18-44 years old) and unmarried individuals are more likely to smoke. In Collier County the percent of former smokers 65 years and over, 45-64 and 18-44 years of age is substantially greater than that of the state of Florida. Females are much more likely to have never smoked among Collier County and Florida residents. Also reversing the trends in Collier County, beginning in 2007, the population 18-44 years of age who had never smoked plummeted from 61.2 percent to 47.2 percent in 2010.

# Obesity and Overweight

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- It is estimated obesity and overweight in the general population accounts for approximately 17 percent of all annual deaths, about 1 out of every 6 deaths in Collier County.

## Tobacco Use

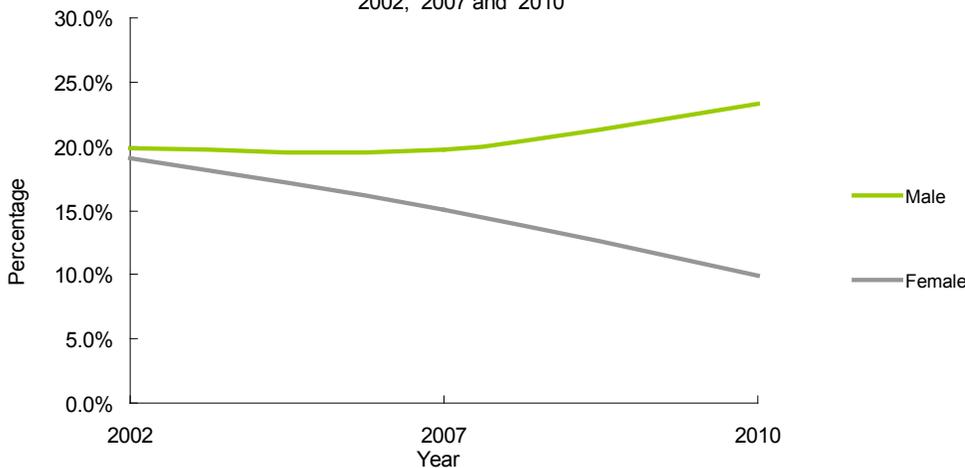
In Collier County, at least 18 percent of all deaths (1 in 5) are associated with cigarette smoking.

## Alcohol Use

- Between 2002 and 2010, the proportion of Collier adult residents who engaged in heavy or binge drinking increased by over 2 percentage points to 19.2 percent.

- Collier County has a higher proportion of the older population engaged in heavy or binge drinking than in Florida.

Percent of Adults Who are Currently Smokers, by Sex in Collier County, 2002, 2007 and 2010



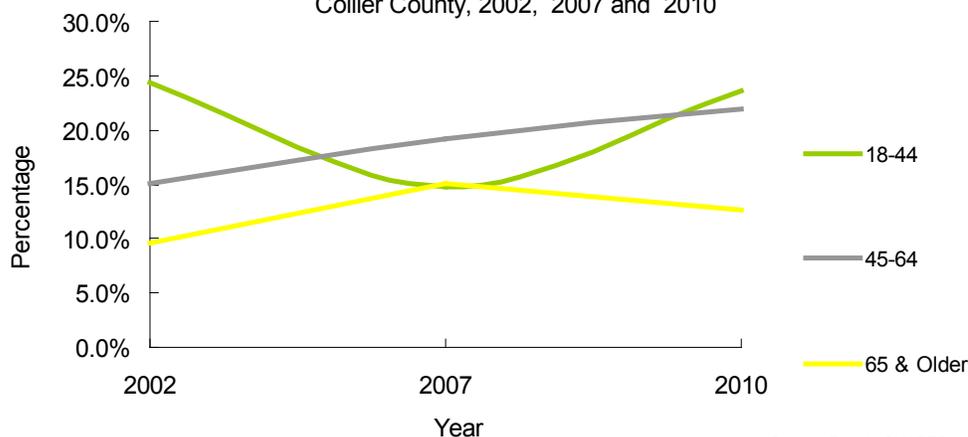
Source: Florida CHARTS

## Alcohol Use

In Collier County, on average, approximately 54 residents are killed annually in motor vehicle crashes (about 1 every week) with an average of about 25 percent attributed to alcohol use.

The figure below shows the percent of adults who engage in heavy or binge drinking in Collier County and Florida for 2002, 2007 and 2010. Between 2002 and 2010 the proportion of Collier adult residents who engaged in this activity increased by over 2 percentage points to 19.2 percent. By sex, males engaged in heavy or binge drinking at significantly higher rates than females in both Collier County (38 percent greater) and Florida. Income levels are correlated with the proportion of the population engaging in heavy or binge drinking. The highest prevalence of heavy or binge drinking is the age group, 18 to 44 years. Collier County does have a higher proportion of the older population engaged in heavy or binge drinking than in Florida. Unmarried persons are usually more likely to engage in heavy or binge drinking behavior mainly due to life style and responsibility. In Collier County between 2007 and 2010 a very interesting change occurred as the prevalence of this behavior increased among married persons by almost 5 percent.

Percent of Adults Who Engage in Heavy or Binge Drinking, by Age Group in Collier County, 2002, 2007 and 2010

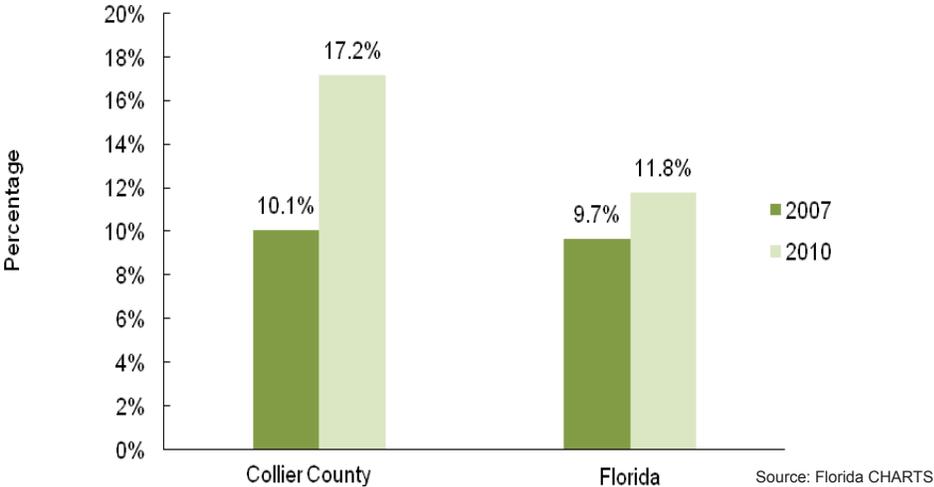


Source: Florida CHARTS

# Mental Health

Collier County residents are surveyed about their mental health status in the Behavioral Risk Factor Surveillance System (BRFSS) Survey. Collier County experienced a remarkable increase in the percentage of individuals that reported poor mental health from 2007 to 2010. In 2007, 10.1 percent of Collier County residents reported having poor mental health on 14 or more of the past 30 days compared to 17.2 percent in 2010. The state of Florida saw a much smaller increase from 9.7 percent in 2007 to 11.8 percent in 2010.

Adults who Had Poor Mental Health on 14 or More of the Past 30 Days,  
Collier County and Florida, 2007 and 2010



By gender, in Collier County, males reporting poor mental health days more than doubled, from 9.7 percent in 2007 to 20.4 percent in 2010. By age, the percentage of people reporting poor mental health days in the 18-44 age group sharply increased from 12.4 percent in 2007 to 30.8 percent in 2010. Other factors that related to poor mental health status was income (\$25,000 to \$49,999 experienced the greatest increase from 2007 to 2010) and lower education level.

It is evident that mental health status of the population in 18 – 64 years age group deteriorated between 2007 and 2010. This age group was greatly affected by the economic recession of 2007. This decline in mental health status between 2007 and 2010 persists when analyzing by income and education.

Adults Who Had Poor Mental Health on 14 or More of the Past 30 Days by Income,  
Collier County, 2007 and 2010



# Mental Health

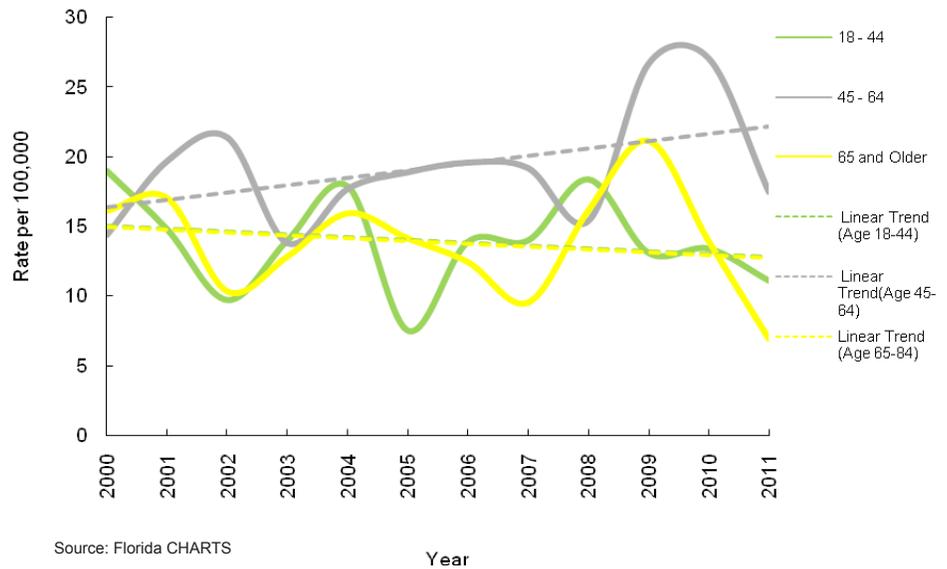
- The prevalence of the percentage of people reporting poor mental health increased from 10.1 percent in 2007 to 17.2 percent in 2010.
- Factors that related to a greater increase in the percentage include following:
  1. Gender (Male)
  2. Age (18- 44 age group)
  3. Income (\$25,000 to \$49,999)
- The suicide death rate in the total population has decreased by 22% from 2000 to 2011.
- The sub-populations that experienced an increased percentage in suicide death from were: males, non-Hispanics, and the 45-64 age group.

## Suicide

In 2011, suicide ranked as the 11th leading cause of death in Collier County. Collier experienced a significant decrease (22 percent) in suicide deaths, from 12.7 deaths per 100,000 population in 2000 to 9.9 deaths per 100,000 population in 2011.

Factors related to death rate from suicide in Collier County include gender, race, and age. In Collier County, death rate from suicide for males was 8 times higher than females in 2011. The death rate from suicide for non-Hispanics in Collier County was 3.5 times the rate of Hispanics, in 2011. The 45 – 64 age group suicide death rate increased by 21.5 percent, from 14.4 deaths per 100,000 population in 2000 to 17.5 deaths per 100,000 population in 2011.

Suicide Death Rate per 100,000 Population, by Age, Collier County, 2000-2011



Source: Florida CHARTS

## Mental Health Facilities

Collier County has four facilities which provide psychiatric/substance abuse services to local residents. These four facilities offer a combined total of 206 treatment beds for these services.

Number of Substance Abuse/Psychiatric Beds by Facility, Collier County, 2012

Facility	Substance Abuse Beds	Psychiatric Beds	Dual Use Beds	Total Beds
Hazelden	47	--	--	47
The Willough of Naples	36	63	--	99
David Lawrence Center	15	24	--	39
Naples Community Hospital	--	--	21	21

\*All facilities except Naples Community Hospital (NCH) offer both inpatient and outpatient treatment services. NCH only offers inpatient treatment services. Source: FDOH-Collier, Epidemiology and Health Assessment Program

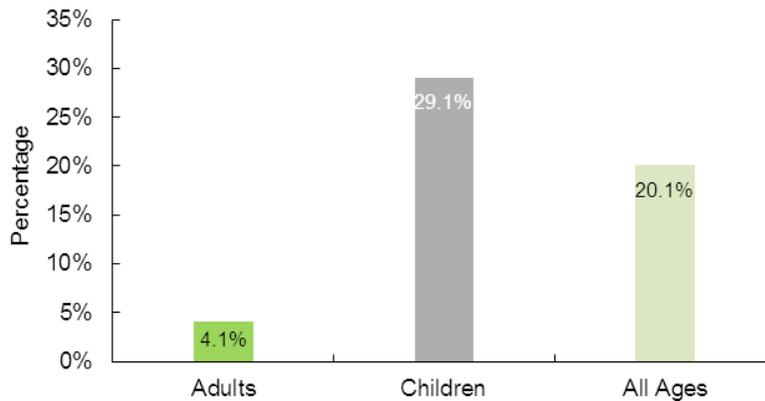
# Oral Health

Oral health is central to a person's overall health, well-being and quality of life. There has been significant improvement in oral health over the past 50 years, in part, due to prevention efforts which include community water fluoridation. Dental services focused upon treatment and prevention have also influenced the improvement in oral health

## Collier County Specifics

An individual's ability to access dental care is a major factor in achieving optimal oral health. In Collier County, between the years of 2002 and 2011, the number of dentists increased by 71 percent. The majority of dental care in Collier County is provided by dentists in private practice. Individuals who can afford to pay out of pocket and those with private insurance receive their dental care from private dentists. People who cannot afford out of pocket expenses receive care at the County Health Department or federally qualified health centers. Low reimbursement rates discourage the vast majority of private practice dental providers from accepting Medicaid. In 2012 there were only four dental providers in Collier County who accepted Medicaid. The picture is more bleak for low income adults as opposed to low income children. In 2011 29.1 percent of Medicaid eligible children received Medicaid dental services as opposed to only 4.1 percent of adults. The only dental care option for many low income adults who lack access to preventative dental services is the hospital emergency room.

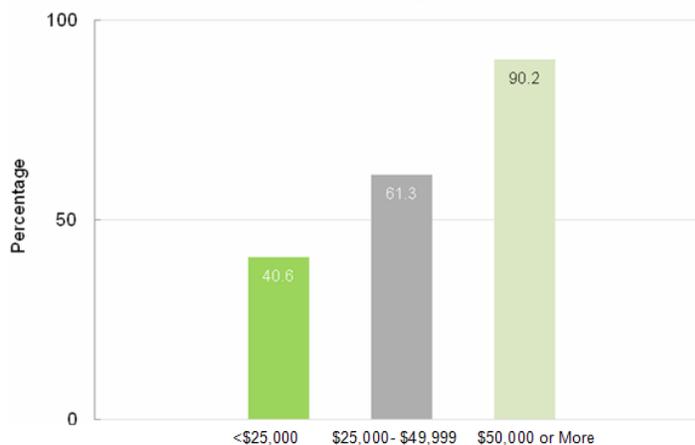
Collier County Medicaid Dental Utilization Rates, 2011



Source: Florida CHARTS

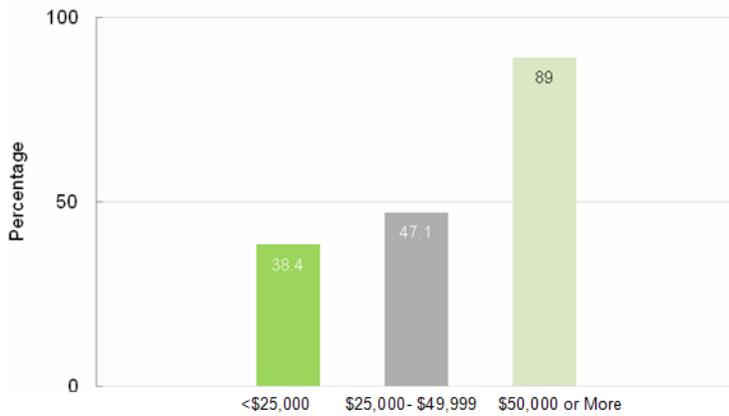
In 2010, 48.4 percent of Collier County adults reported having at least one permanent tooth removed because of tooth decay or gum disease. Females, young adults and people with higher income and education are less likely to have a permanent tooth removed because of tooth decay or gum disease. People with higher incomes and education are more likely to visit a dentist or dental clinic than people with lower income and education.

Adults Who Visited a Dentist or Dental Clinic in the Past Year, By Income, Collier County, 2010



Source: Florida CHARTS

Adults Who Had Their Teeth Cleaned in The Past Year, By Income, Collier County, 2010



Source: Florida CHARTS

### Dental Care Resources

There are a number of dental care resources which mainly serve low income residents in Collier County. Most of the high volume sites, however, focus first upon children as the main priority and therefore services for adults remain limited for preventative and restorative care. Emergency care is more easily obtained for adults. Significant resources have been committed to improving the oral health care for children. These providers are the Florida Department of Health in Collier County (FDOH-Collier), Healthcare Network of Southwest Florida, Ronald McDonald Care Mobile and the Naples Children and Education Foundation Pediatric Dental Center. The NCEF Dental Center is the latest edition to services for children and it is a collaborative effort between University of Florida College of Dentistry, Edison State College, the Naples Children and Education Foundation (providing funding) and management assistance from the Healthcare Network of Southwest Florida. The center provides specialized dental care to children and is staffed by University of Florida Pediatric Dentistry Residents.

Several options also exist for adults, however the options are limited by the number of available appointments and/or hours and days of operation. The FDOH-Collier County provides emergency services to adults on a daily basis but has limited appointment availability for preventative and restorative work. Healthcare Network of Southwest Florida has adult dental care access at only its Immokalee site with limited appointment availability. The Senior Friendship Center is limited to one operatory and limited hours of operation. There has been an addition of one dental chair to the Neighborhood Health Clinic, strictly for working adults and it also has limited hours and days of operation. The newest resource for adults is a cooperative arrangement between two private dentists and James Lorenzo Walker Vo-Tech which allows use of its simulator operatory sites and assistance from its dental assistant students to operate the clinic. Again, days and hours of operation are severely limited.

## Oral Health



- Almost 70 percent of the U.S. population receives fluoridated water through public water systems. In Collier County 80.2 percent of the water systems provide optimally fluoridated water.
- In Collier County, between 2000 and 2011, there was a 192 percent increase in hospitalizations from preventable dental conditions for people under 65 years of age.

# Health of the Older Population

The population dynamics of Florida and Collier County are being driven by the aging of the “Baby Boomer” cohort which began to turn 65 years of age during 2011. This demographic transition will cause a significant exponential growth in this older age grouping through the year 2030.

As this older population category increases to an estimated 144, 000 by the year 2030, other factors currently will affect the health of this cohort in Collier County. Increased levels of life expectancy translate into an increment in the necessity for increased geriatric health care services resources and availability. An increase in the demand for Assisted Living Facilities and Skilled Nursing Facilities is projected in the immediate future. There will also be additional responsibilities and stresses placed on the families of the aging population group.

## Population

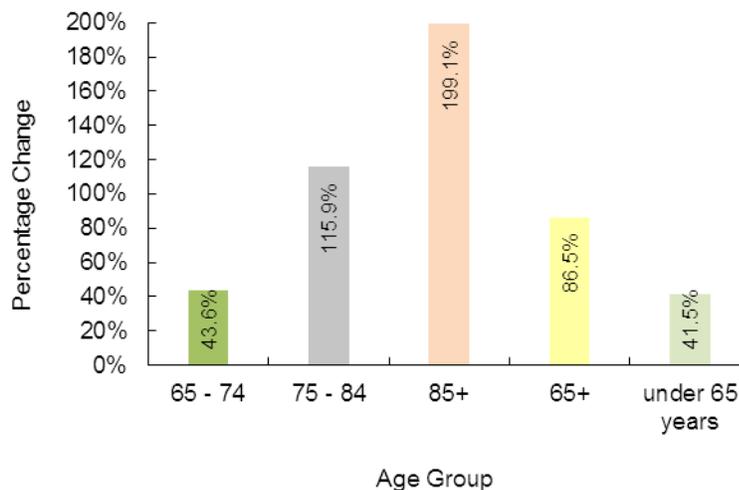
The population 65 years and older in Collier County in 2030 is projected to be 2.3 times as large as it was in the year 2000, increasing from 62,257 (2000) to 143,630 in 2030 and consisting of one third of the total county population by that year.

**Population by Age Distribution (Total Population)  
Collier County, 2011, 2020, 2030 and 2040.**

Age Group	2011	2020	2030	2040
< 65	237,634	245,812	295,737	336,301
65+	86,151	110,983	143,630	160,710
65-74	46,434	55,789	70,594	66,690
75-84	29,779	40,505	50,903	64,298
85+	9,938	14,689	22,133	29,722

Source: Florida CHARTS

**Percentage Change in the Population by Select Age Groups,  
2011 - 2040, Collier County**



Source: FDOH-Collier, Epidemiology and Health Assessment Program

This older population group will also have an impact on the socioeconomic future of Collier County as healthcare and financial resources target the myriad of needs of this demographic.

## Population

- In 2011, more than one every 4 Collier County residents was 65 years of age or older. Since 1990, this cohort has increased by 148 percent.
- Life expectancy at age 65 in Collier County has increased by 2.5 years for males and by 1.7 years by females since 2000.

## Cause of Death

- In 2001 cancer surpassed heart disease as the leading cause of death in Collier County in the population 65 years and over.
- In 2011 among those 85 years of age and over, Alzheimer's was the 3rd leading cause of death.

## Alzheimer's disease

- In 2011, over 11,000 residents 65 years of age and older had Alzheimer's disease. It is estimated that almost one-half of the population 85 years and older in Collier County are presently living with Alzheimer's disease.

## Leading Causes of Death of the Older Population

As this cohort continues to increase in size, select specific causes of mortality unique to this demographic will increase in incidence. While Alzheimer's disease was the 7th leading cause of death in the population 65 years of age and older in 1990, by 2011, this emerging cause of mortality had become the 5th leading cause of death in that age group in Collier County.

Utilizing conservative population estimates by 2030, almost 18,700 Collier residents 65 years of age and over will be diagnosed with Alzheimer's, 47 percent of these cases 65-84 years of age and 53 percent or almost 10,000 residents 85 years and older. Between 2010 and 2030 the number of residents 85 years and older with Alzheimer's in Collier County will increase by 133 percent.

**Estimated Number of Collier County Residents with Alzheimer's disease by Age for 2010 and Projections Utilizing Current Prevalence Rates for 2015 - 2030**

Age Group	65 and Over	65-84	85+
2010	11,044	6766	4,278
2015	12,204	6804	5,400
2020	14,428	7818	6,610
2025	16,096	7479	8,617
2030	18,672	8712	9,960

Source: FDOH-Collier, Epidemiology and Health Assessment Program

The age-adjusted death rate for Alzheimer's disease in Collier County increased by 57.2 percent between 1999 and 2010, while the mortality rate for Florida during the same time period increased by 33 percent.

**Alzheimer's Disease Age Adjusted Death Rates, 3-Year Rolling Rates, Collier County and Florida, 1990-2011**



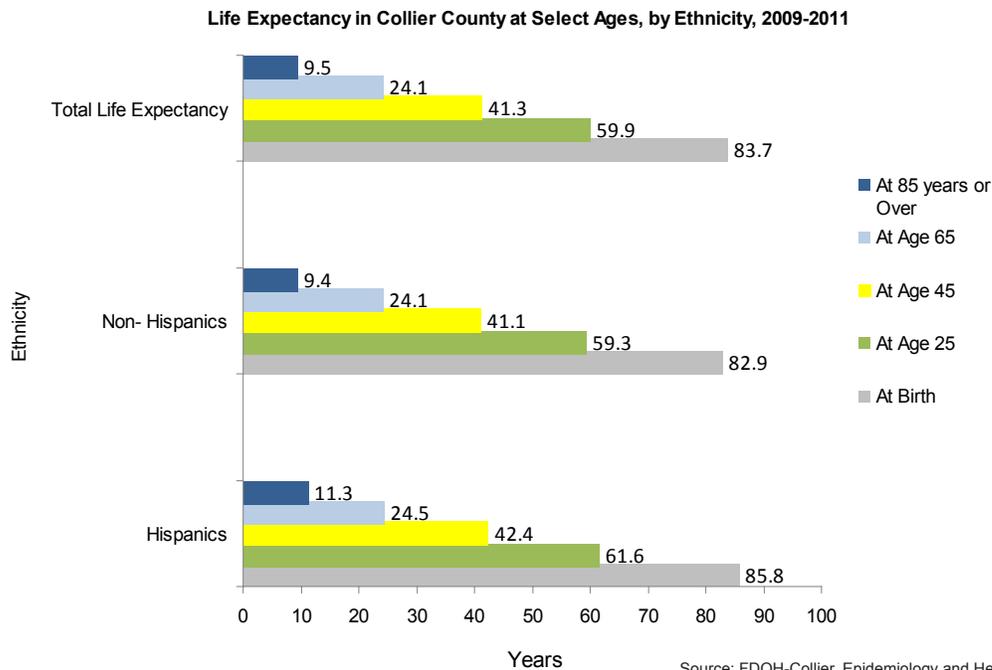
Between 2000 and 2011 deaths from falls in Collier County increased by 52 percent. There is a highly correlated parallel associated between the increase in the mortality rate due to falls and the exponential growth of the older population in Collier County.

# Mortality

## Life Expectancy

Collier County has the distinction of having the highest female life expectancy at birth, among all of the counties in the United States, at 85.8 years. Females experience a life expectancy on the order of approximately 5 percent greater than males resulting in greater longevity. Men in Collier County also have a very high level of life expectancy at birth when compared to the rest of the country and is only surpassed by 3 other counties in the United States.

Between 1990 and 2010, life expectancy in Collier County increased by 5.7 years, exceeding the national average increase. Males in Collier County experienced a greater rate of life expectancy increase than their female counterparts during this 20 year period, however females continued to maintain a significantly higher life expectancy level than that of males, 85.8 years compared to 81.7 years respectively. This dominance in life expectancy by females has been a biological reality throughout recorded history worldwide.



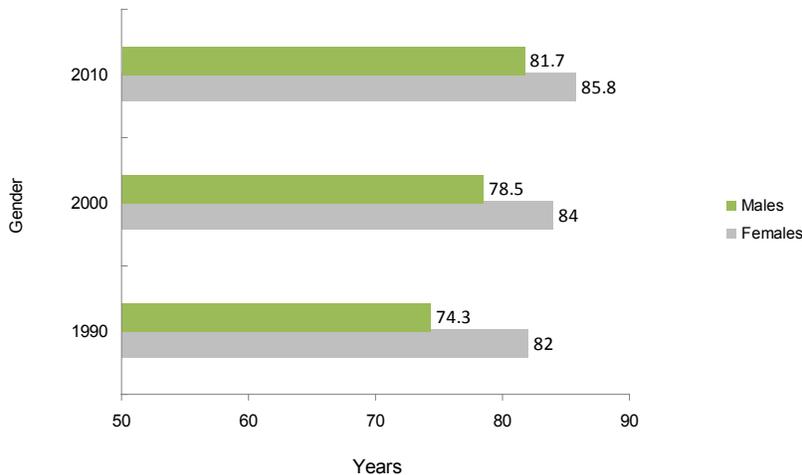
The Hispanic population in Collier County on average will live almost 3 years longer than the non-Hispanic over the course of a lifetime. This trend of higher life expectancy levels among the Hispanic population is in agreement with national U.S data for the country. The statistical force driving a healthier Hispanic population are multi-faceted and encompass the important social determinants of family support and education and the life style behaviors including: very low levels of tobacco use, drug and alcohol abuse particularly within the female Hispanic population.

**Life Expectancy in Collier County at Select Ages, by Ethnicity, 2009-2011**

Life Expectancy by Age	Hispanics	Non-Hispanics	Total Life Expectancy by Age
At Birth	85.8	82.9	83.7
At Age 25	61.6	59.3	59.9
At Age 45	42.4	41.1	41.3
At Age 65	24.5	24.1	24.1
At 85 years or Over	11.3	9.4	9.5

# Life Expectancy

Life Expectancy at Birth by Sex, Collier County, 1990, 2000 and 2010

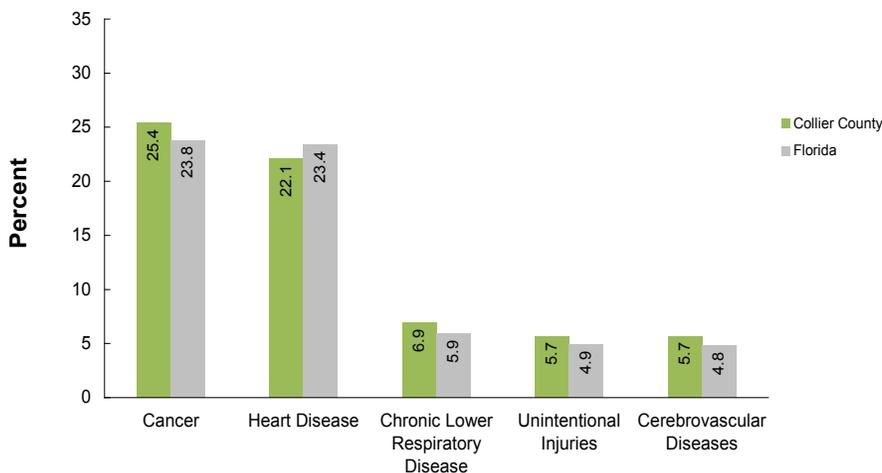


Source: FDOH-Collier, Epidemiology and Health Assessment Program

## Leading Causes of Death

In 2011, the ten leading causes of death in Collier County were cancer, heart disease, chronic lower respiratory disease, stroke, unintentional injuries, Alzheimer's disease, diabetes mellitus, chronic liver disease and cirrhosis, kidney disease and Parkinson's disease. Between 1990 and 2011 a major shift occurred when cancer replaced heart disease as the leading cause of mortality in Collier County.

Five Leading Causes of Death as a Percentage of All Deaths, Collier County and Florida, 2011



Source: FDOH-Collier, Epidemiology and Health Assessment Program

Deaths from Alzheimer's disease are increasing annually as the population in Collier County and the country continues to age. Mortality due to stroke has been declining in Collier County since 1990 while deaths from chronic lower respiratory disease have been gradually increasing over the past 20 years reflecting historical tobacco smoking patterns of the adult population. Deaths from chronic liver disease and cirrhosis were the 8th leading cause of death in 2011, up from the 9th cause in 1990.



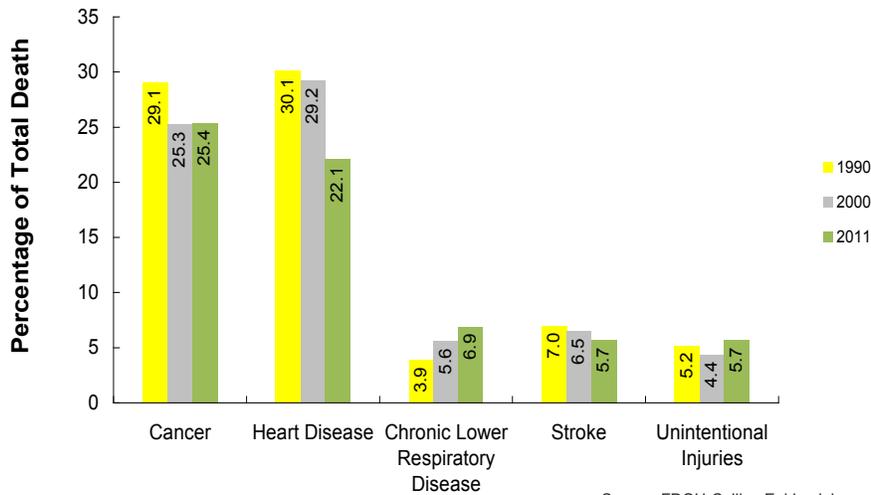
- Life expectancy at birth among females in Collier County is the highest of all counties in the United States at 85.8 years.

- Levels of life expectancy in the United States are strongly correlated with educational attainment, employment, and income level.

- In the last 20 years, numerous counties in the southern United States have seen a decline in life expectancy levels among females with less than a high school education.

- The Hispanic population of Collier County and the United States experience a higher level of life expectancy at birth.

**Five Leading Causes of Death as a Percentage of all Deaths, Collier County, 1990, 2000 and 2011**



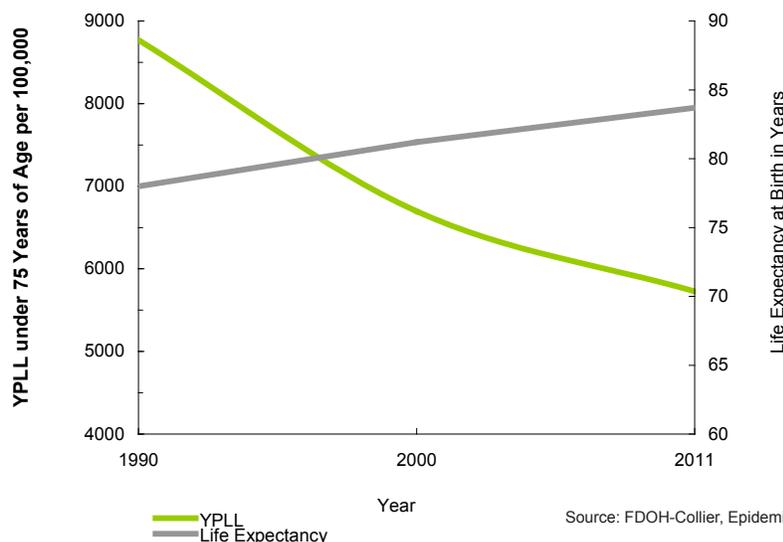
Source: FDOH-Collier, Epidemiology and Health Assessment Program

In 1990, 2.5 percent of all deaths in Collier County were caused by influenza and pneumonia, by 2011 this proportion declined to less than 1 percent. This dramatic decrease in mortality can be attributed to a steady increase in the number of adults 65 years and over receiving influenza and pneumonia vaccination. Public health education campaigns have been consistent during the past two decades on the importance of immunizations to persons of all ages. The emergence of the 2009 H1N1 Influenza Pandemic was instrumental in increasing awareness of the risk of influenza and one of its most severe complications, pneumonia.

**Years of Potential Life Lost**

Years of Potential Life Lost (YPLL) places an emphasis on the process underlying premature mortality or deaths prior to expected life expectancy in a geographical area. YPLL places a public health priority on quantifying deaths, which are considered for the most part preventable. YPLL, by definition, may be interpreted as a measure of preventable mortality for causes particularly those that are associated with life style choices and behavioral risks. The level of YPLL within a county is highly correlated with the educational attainment and income level of the population coupled with public health prevention and planning initiatives and priorities of a community.

**Relationship Between Years of Potential Life Lost Under 75 Years of Age per 100,000 Population and Life Expectancy at Birth, Collier County, 1990, 2000 and 2011**



Source: FDOH-Collier, Epidemiology and Health Assessment Program

# Leading Causes of Death

- In 2011 the 10 leading causes of death accounted for 77 percent of all deaths in Collier County.
- The patterns of causes of death are influenced heavily by the age distribution of the population of a community as well as the lifestyle behavior, income levels and education attainment within the county and state.
- Cancer now accounts for over 25 percent of all deaths in Collier County, while heart disease accounts for 22 percent.
- Alzheimer’s disease was the 6th leading cause of death in 2011. In 1990 it was the 12th leading cause in Collier County.

While suicide and homicide are not among the 10 leading causes of death in Collier County, these two causes create a heavier burden on public health particularly among males than other causes such as chronic lower respiratory disease, diabetes and stroke since most chronic and infectious diseases contribute to mortality as expected at ages 75 and over. These select violent causes of death tend to occur at younger healthier ages thus subtracting years from an otherwise expected average life expectancy.

## Actual Causes of Death

The actual causes of death are the major external and modifiable influences and factors that contribute overwhelmingly to mortality levels in our community. The life style and behavioral factors are correlated and associated with a plurality if not a majority of all deaths in every county and state within the United States.

Over 48 percent of all deaths in Collier County are potentially preventable. Tobacco has remained the leading cause of preventable mortality. Overweight/obesity may overtake tobacco as the leading actual cause of death in the near future. In Collier County, mortality from all cancers and heart disease accounts for almost 48 percent of all deaths annually.

**Actual Preventable Causes of Death for Comparison**

Actual Preventable Causes of Death	Estimated Number in 2011	Percentage Distribution
Tobacco	520	18.1
Overweight and Obesity	477	16.6
Alcohol Consumption	100	3.5
Infection Diseases	89	3.1
Toxic and Chemical Agents	66	2.3
Motor Vehicle Crashes	52	1.8
Firearms	34	1.2
Sexual Behavior	23	0.8
Illicit Drug Use	20	0.7
<b>Actual Total Preventable Causes of Death</b>	<b>1381</b>	<b>48.1</b>

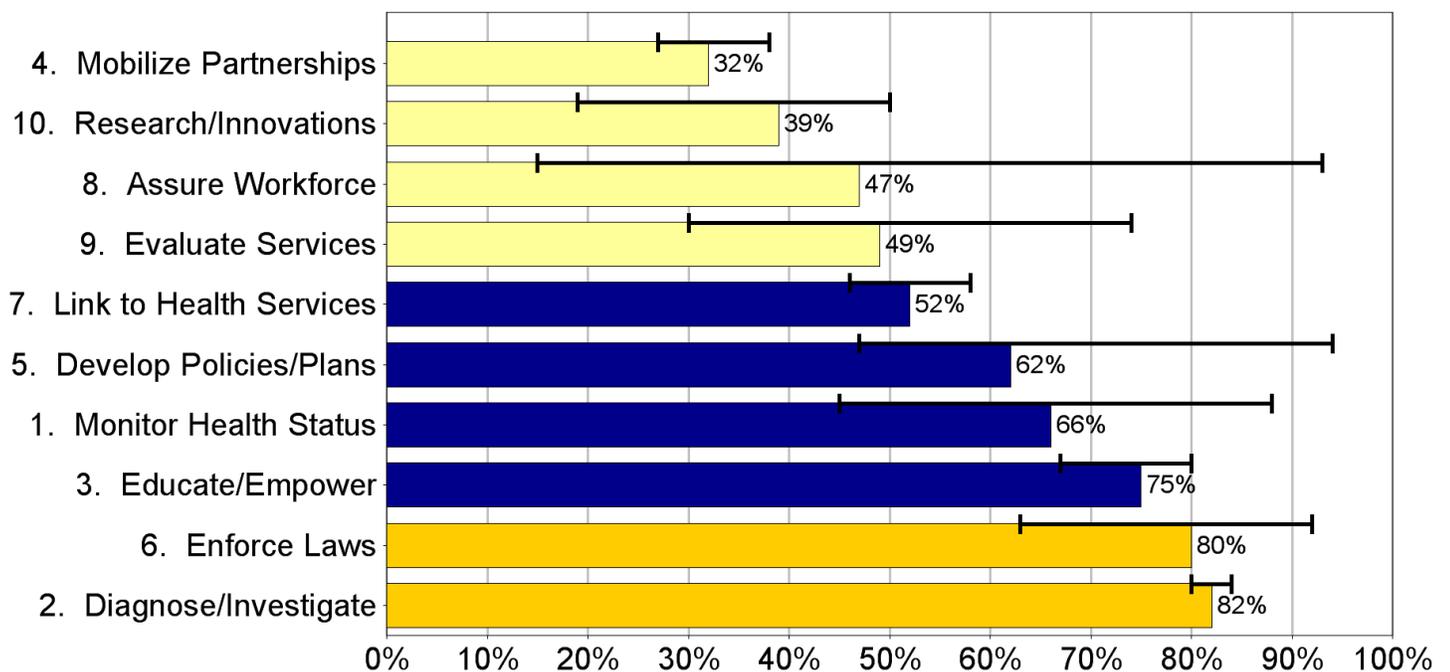
Source: FDOH-Collier, Epidemiology and Health Assessment Program

## II. Local Public Health System Assessment

In March of 2012, the Collier County Health Department led the second Local Public Health System Assessment for the County. The assessment was originally conducted in 2005 with broad representation from the community. This assessment focuses upon standards from the National Public Health Performance Standards Program (NPHPSP) and measures the performance of all community partners in service delivery as it applies to each of the ten essential health services.

### Summary of Overall Results of 2012 Assessment

#### Rank Ordered Performance Scores for each Essential Service



\*White=No Activity, Grey=Minimal Activity, Yellow=Moderate, Blue=Significant, Orange=Optimal. The range lines show the range of responses within an Essential Service.

The color coded bars make it easier to identify which of the Essential Services fall in the five categories of performance activity. Source: National Public Health Performance Standards Program (NPHPSP).

# III. Community Themes and Strengths/ Forces of Change

## Overview

During the month of April 2012, staff from NCH Healthcare System, Physician's Regional Healthcare System and FDOH-Collier came together to form the Collier County Community Assessment Design Group. The initial project of the group was to design and implement the Community Themes and Strengths survey and the Forces of Change Assessment. The Collier County Community Assessment Design Group prepared a survey to be used with Health Care Leaders, Community Focus Groups and Health Care Staff interest groups in Collier County. A total of 91 individuals participated with the survey and 94 participated within designated focus groups. The Community Themes and Strengths Survey Summary Report is found in Appendix A. The most important strategic issues found are referenced in Section V: Access to Health Care, Oral Health, Chronic Disease, Mental Health, and Health of the Older Population.

Exhibit A

### We Care What You Think!



**You Are Invited to Share Your Thoughts about the Health of Our Community.**

Please plan to attend one of the following meetings:

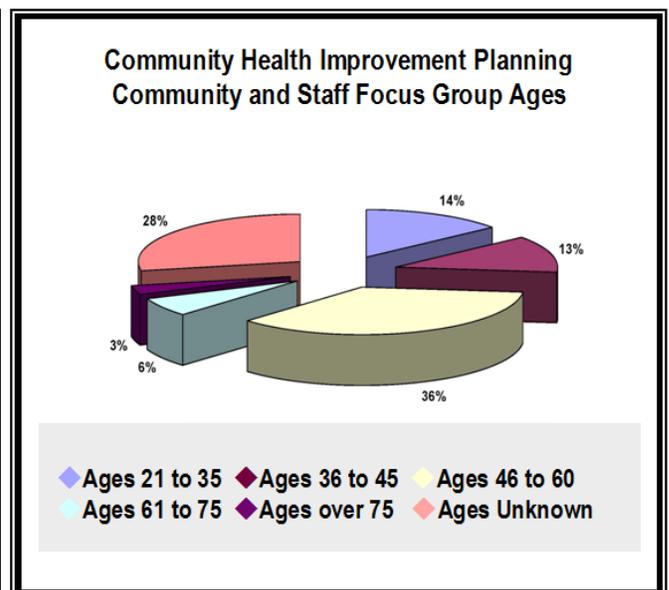
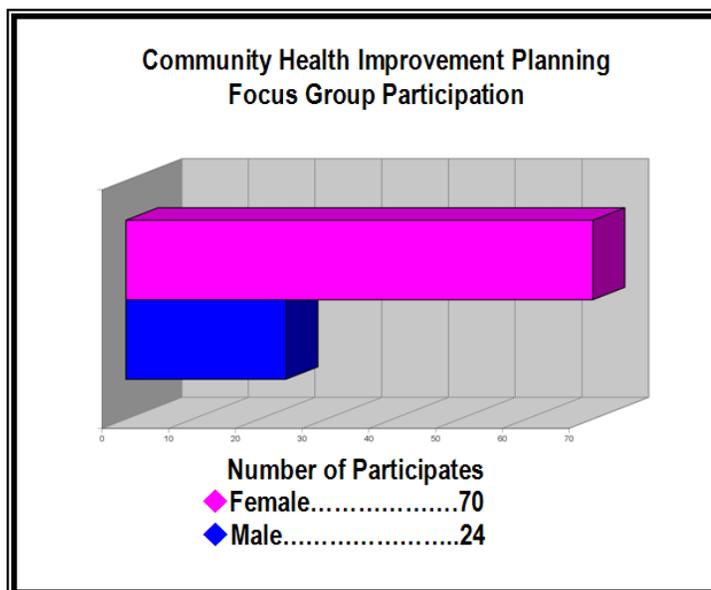
WHEN	WHERE
Tuesday, July 10th 6:00 pm - 8:00 pm	Grace Place 4300 21 <sup>st</sup> Ave. SW
Thursday, July 19th 6:00 pm - 8:00 pm	Sheriff's Training Building 615 3 <sup>rd</sup> Avenue S.
Thursday, July 26th 3:00 pm - 5:00 pm	Health Dept.- Immokalee 419 N. 1 <sup>st</sup> St.

**WHO:** Interested community members.

**WHY:** To share your opinion about issues related to health, the economy and safety in our community.



Caring. Committed. Helping. Dedicated.  
To Make A Difference In Our Community.



Upon completion of the Forces of Change assessment done with the County Health Leadership focus group, perceptions were obtained from the Community and Staff focus groups to attempt to assure that all critical influencing factors had been identified. The threats and opportunities that were associated with the identified Forces of Change will be considered and addressed as the Community Health Improvement Planning process continues.

# IV. Strategic Issues

## Access to Health Care

<p><b>LOCAL PUBLIC HEALTH SYSTEM (LPHS)</b></p> <ul style="list-style-type: none"> <li>• Lacks a process for identifying and engaging key stakeholders for improving access to health care.</li> <li>• The county lacks a broad-based community health improvement committee to direct strategic planning for adult access to health care issues.</li> <li>• Limited ongoing participation by critical stakeholders in the community health assessment process.</li> <li>• There is limited coordination to optimize the access to services for populations who are disenfranchised or who encounter barriers to care.</li> <li>• There has been no formal assessment of the LPHS workforce composition and gaps related to workforce size, skills and experience.</li> </ul>	<p><b>HEALTH STATUS ASSESSMENT</b></p> <p><b>HEALTH INSURANCE</b></p> <ul style="list-style-type: none"> <li>• In 2011 almost 24% of the total resident population was uninsured as compared to 21% for the state of Florida.</li> <li>• Of the core working population 18-64 years of age, 38.5% were without health insurance.</li> <li>• Almost 46% of Hispanics are without health insurance.</li> <li>• Comparing Collier's uninsured population with less than a high school diploma to that of Florida, there exists a significant variance of 20.8%. In 2011 the proportion of the population uninsured with less than a high school education was 54.8%.</li> <li>• Payor source ER discharge data (non-admission) shows a 17% decrease in commercial insurance and a 3.3% increase in Self-Pay / Underinsured and an 8.3% increase in Medicaid between 2003 and 2011.</li> </ul> <p><b>COUNTY HEALTH RANKINGS ACCESS TO CARE INDICATORS</b></p> <ul style="list-style-type: none"> <li>• Primary care provider ratio increased from 1,119 population per primary care provider in 2008 to 1,474 in 2011-2012.</li> <li>• Percent of Medicare enrollees screened for diabetes increased from 81% in 2003-2006 to 86% in 2010.</li> <li>• Preventable hospital stays among Medicare enrollees increased 4.8% between 2005-2006 and 2010.</li> </ul> <p><b>HEALTH CARE RESOURCES</b></p> <ul style="list-style-type: none"> <li>• Between 2002 and 2011, the rate of hospital beds per 100,000 population increased by 24%. The rate of specialty beds declined by 6% during the same period</li> <li>• Total licensed physicians per 100,000 population increased by 89% during the 10 year period 2002-2011.</li> </ul>
<p><b>FORCES OF CHANGE</b></p> <ul style="list-style-type: none"> <li>• U.S. trend in increasing health insurance premiums and declining health insurance coverage.</li> <li>• Over statement of the number of available physicians for primary care due to the increasing numbers of physicians switching to a concierge practice. According to the 2012 <i>A Survey of America's Physicians: Practice Patterns and Perspectives</i>, more than half of American physicians will cut back on patients by decreasing hours, moving to concierge medicine, retiring or taking other steps that will reduce patient access to their services.</li> <li>• Florida's decision not to participate in the Medicaid expansion option of the Affordable Care.</li> <li>• Regulations limiting how ARNP's may practice in Florida.</li> <li>• Continual increases in the amount of uncompensated care that hospitals must provide.</li> <li>• Increased fragmentation and specialization of the health care system.</li> </ul>	<p><b>THEMES AND STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Insufficient primary care resources exist in Collier.</li> <li>• Movement of primary care physicians to concierge practices.</li> <li>• The use of the emergency room for primary care because of its immediate 24 hour availability.</li> <li>• Persons with private insurance can more easily access primary care as opposed to those without insurance or those on Medicaid.</li> </ul>

# Oral Health

<p style="text-align: center;"><b>LOCAL PUBLIC HEALTH SYSTEM</b></p> <ul style="list-style-type: none"> <li>Limited Health indicators reviewed in order to measure current oral health resources.</li> <li>Insufficient resources to support a coordinated effort to collect and analyze oral health data, particularly for adults.</li> <li>Lack of a comprehensive community plan for addressing oral health issues. Health providers and agencies tend to address health issues in isolation.</li> <li>Limited initiatives for coordination of sparse social services to assure linkage to care for vulnerable populations.</li> <li>There are no established communication mechanisms that provide for ongoing, informed participation in community decision designed to address strategic health issues.</li> <li>Limited number of dentists who accept Medicaid</li> </ul>	<p style="text-align: center;"><b>HEALTH STATUS ASSESSMENT</b></p> <p><b>MEDICAID</b></p> <ul style="list-style-type: none"> <li>In 2011 only 29.1% of Medicaid eligible children received Medicaid dental services compared to 4.1% for adults.</li> <li>In 2012 there were only 4 dental providers in Collier County (including the Health Department and Federally Qualified Health Centers) who accepted Medicaid.</li> </ul> <p><b>ER VISITS and HOSPITALIZATIONS</b></p> <ul style="list-style-type: none"> <li>In 2010, 756 Collier County residents visited hospital emergency rooms for dental conditions considered avoidable with proper preventative dental care.</li> <li>Between 2000 and 2011 there was a 192% increase in hospitalizations from preventable dental conditions for people under 65 years of age.</li> </ul> <p><b>VISITS BY INCOME</b></p> <ul style="list-style-type: none"> <li>During 2010, only 40.6% of individuals making less than \$25,000 per year visited the dentist contrasted by 90.2% of individuals making \$50,000 or more per year.</li> <li>Also during 2010, 53.2% of individuals making less than \$25,000 per year experienced the loss of a permanent tooth as compared to 41.9% of individuals making \$50,000 or more. .</li> <li>Only 38.4% of individuals making less than \$25,000 per year in 2010 had their teeth cleaned in 2010 compared to 89% of individuals making more than \$50,000 per year.</li> </ul>
<p style="text-align: center;"><b>FORCES OF CHANGE</b></p> <ul style="list-style-type: none"> <li>A growing older population, many whom have extensive oral health care needs.</li> <li>Growing low income population with children who have limited access to dental care.</li> <li>Decreased tax base which limits available health and human service funds.</li> <li>Limited job opportunities and extended periods of unemployment result in less oral health insurance coverage.</li> <li>Limited number of private providers accept dental insurance.</li> <li>Extremely limited number of Medicaid providers.</li> <li>Increased attention to oral health care needs of children with philanthropic support.</li> </ul>	<p style="text-align: center;"><b>THEMES AND STRENGTHS</b></p> <ul style="list-style-type: none"> <li>The Edison/University of Florida specialty clinic for children (financially supported by the Naples Children and Education Foundation – NCEF) was viewed as a strength in provision of Children’s dental health care.</li> <li>Dental Care options have expanded for children</li> <li>Adult dental care services for the low income and Medicaid populations are limited largely to emergency care.</li> <li>Undocumented adults have difficulty accessing even emergency services when they cannot produce proof of income.</li> <li>Although community discussions indicated that oral health needed to be addressed, when ranked against ten potential priority areas, dental care ranked number eight.</li> </ul>

# Chronic Disease

## LOCAL PUBLIC HEALTH SYSTEM

- Several health care entities in Collier County are committed to educating and empowering their patients and the community about preventing and, or managing chronic disease. However, there is room for improved collaboration.
- Collier County's nationally recognized EMS, as well as the NCH Healthcare System's Save a Heart cardiac program have significantly reduced cardiac fatalities over the past 15 years.
- The work of the DOH-Collier's Tobacco Control Program over the past 15 years has contributed greatly to the prevention of youth tobacco initiation and to a reduction in adult tobacco use. The 3 free cessation options give everyone an opportunity to quit.
- Safe & Healthy Children's Coalition of Collier County is working to affect the childhood obesity epidemic with their pilot efforts in the Golden Gate area and 95210 Campaign.
- Local pediatricians are addressing obesity with families.
- Breastfeeding subcommittee, of Safe & Healthy Children's Coalition of Collier County, is working to change the breastfeeding culture in hospitals and in obstetric offices. Breastfeeding not only helps reduce obesity in mothers, but also their breastfed children.

## FORCES OF CHANGE

- Health care leaders recommend for greater collaboration between chronic disease prevention and intervention programs because the cost of treating a patient is more expensive than the prevention.
- More than 83% of Collier students receive free and reduced lunch at school.
- Increase in persons without insurance, hence reducing access to prevention and management of chronic diseases.
- The effect of the Affordable Health Care Act on prevention and management of chronic diseases.
- Smart Growth Coalition's focus on health in the built environment and working to promote policy, systems and environmental change to impact the obesity and inactivity epidemics.

## HEALTH STATUS ASSESSMENT

### CHRONIC DISEASE, OBESITY & HEALTH BEHAVIORS

- Approximately, 1 out of every 2 adults in Florida and in Collier County has at least one chronic condition or disease.
- Chronic disease accounts for approximately 7 out of 10 deaths in Collier County residents annually.
- Most chronic diseases are caused either directly or indirectly by four contributory factors: tobacco use; lack of physical activity; poor nutrition and/ or excessive alcohol consumption.
- In 2010, 22.4% of Collier County adults indicated they were obese. Men are more likely to be obese than females in both Collier County and Florida.
- It is estimated, obesity and overweight in the general population accounts for approximately 17% of all annual deaths or about 1 out of every 6 deaths in Collier County.
- In Collier County, at least 18% of all deaths (1 in 5) are associated with cigarette smoking.
- Between 2002-2010, the proportion of Collier adult residents who engaged in heavy or binge drinking increased by over 2 percentage points to 19.2 %.
- Collier County has a higher proportion of older adults engaged in heavy or binge drinking than Florida.

## THEMES AND STRENGTHS

- Lack of safe places to walk and bike in many areas of the county, creates a barrier toward exercise.
- School gardens are beneficial to promoting healthy eating in our local youth.
- Despite educational outreach regarding chronic diseases and obesity, some cultures do not see being overweight as a problem.
- Focus group results showed although some chronic disease prevention and intervention programs exist, community awareness of these programs is insufficient.
- Limited funding for prevention programs.

# Mental Health

## LOCAL PUBLIC HEALTH SYSTEM

- Scarcity of relevant health indicators, health needs and resource data on persons with mental health (MH) and substance abuse (SA) health problems.
- Insufficient resources to support a coordinated effort to collect and analyze mental health and substance abuse data at the county level.
- Limited number of licensed adult mental health and substance abuse beds: Hazelden (47 SA beds); Willough (63 MH and 36 SA beds); David Lawrence (20 MH and 15 SA beds) and Naples Community Hospital (19 dual diagnosis beds).
- Lack of a comprehensive planning process for addressing strategic mental health and substance abuse health issues. Limited initiatives for coordination of sparse social services to assure linkage to care for vulnerable populations with mental health and substance abuse problems.
- There is no established communication mechanism to provide ongoing, informed participation in community decision making process designed to address strategic health issues.
- Limited detox and treatment programs for substance abuse.

## FORCES OF CHANGE

- Increased criminal activity from drug seekers.
- Decreased tax base which limits available health and human service funds.
- Increase in persons without health insurance and the uncertainty of mental health and substance abuse coverage through the federal health exchanges.
- Increasing number of drug addicted persons seeking drugs through the ER's and urgent care centers.
- Increased criminal activity related to drug seeking and mental health disorders (18.4% of jail inmates have a substance abuse or alcohol related diagnosis)
- Limited job opportunities and extended periods of unemployment resulting in increased stress.
- Increases in uncompensated care provided by the hospitals resulting in less funds available to address long term health care solutions.
- Extremely limited number of Medicaid providers.

## HEALTH STATUS ASSESSMENT

### POOR MENTAL HEALTH DAYS (PMHD)

- In 2010 the Behavioral Risk Factor Surveillance System (BRFSS) showed a 70% increase in the number of residents reporting 14 or more days of poor mental health in the proceeding 30 days as compared to the 2007 BRFSS.
- Demographic factors related to an increase in PMHD's in the 2010 BRFSS were: gender (male); age (18-44 age group); income (\$25,000 to \$49,999) and lower education level.

### SUICIDE

- The suicide rate decreased 22% in the ten year period 2000 to 2010. However, the suicide death rate for the 45 – 64 age group increased 22% during the same period.
- Additional factors associated with increased suicides were gender (male) and ethnicity (non-Hispanic).

### ALCOHOL USE

- On average, 54 residents are killed annually in motor vehicle crashes with about 25% attributed to alcohol use.
- Between 2002 and 2010, the proportion of residents who engage in heavy or binge drinking increased over 2 percentage points to 19.2%.
- The highest prevalence of heavy or binge drinking is in the younger population (18 – 44 years).
- In 2011 three of the top ten diagnoses for males age 25-44 seen and admitted in the ER were alcohol related.

## THEMES AND STRENGTHS

- David Lawrence Center was identified as a source of inpatient and outpatient mental health services in Naples and Immokalee which provides services based on a sliding fee scale.
- Local churches host many support groups that are easily accessed by the community.
- Undocumented adults cannot access substance abuse and mental health services.
- Alcohol / Drug Use and Mental Health ranked 4<sup>th</sup> and 5<sup>th</sup>, respectively, by survey participants as priority health issues. However, health care provider respondents ranked Alcohol and Substance Abuse as the number 2 priority health issue.
- Drinking (alcohol consumption) is a cultural norm in Collier.
- Prescription drugs are freely available in parents' and grandparents' medicine cabinets.

# Health of the Older Population

## LOCAL PUBLIC HEALTH SYSTEM

- Scarcity of relevant health indicators, health needs and resource data on the older adult population.
- Minimal initiatives for communication of health promotion information designed for the health needs of older adults given the growth in this population.
- There is the start of a movement in the community to develop partnerships to identify and address the needs of the older population which needs to be nurtured and expanded.
- Tendency for agencies and providers to work in isolation on common health issues rather than in tandem with a unified focus on the health issue.
- Laws and regulations do not readily support the timely addition of needed facilities for caring for the frail older population.
- Lack of a system for linking the frail and/or under insured adults to needed health services.
- No locus of responsibility for assessing the adequacy and quality of services.
- Few focused activities aimed at identifying best practices and disseminating research findings on maintaining the health and independence of the aging population.
- Limited number of gerontologists (0.92 / 100,000 population as of April 2012).
- There are 5.5 Alzheimer/Dementia beds per 1,000 population and account for 18.8% (483) of all long term care beds.

## FORCES OF CHANGE

- While Collier is a wealthy and generous community there has been a decrease in charitable giving due to downturn in economics.
- The movement of physicians to concierge medicine accessible only to the wealthy.
- Prevailing local view that healthcare is not a "right" which limits the perceived urgency to address unmet healthcare needs.
- Naples is a desirable destination for retirement.
- The rising cost of health care combined with the increase in uncompensated care may provide the impetus to focus more on prevention activities, particularly for the aging population.
- Nationally, caregivers of persons with Alzheimer's had nearly \$8 billion in increased healthcare costs in 2010.
- The growth of the population age 65 and over affects many aspects of society, challenging us to meet the needs of aging individuals.

## HEALTH STATUS ASSESSMENT

### ALZHEIMERS

- In 2011, Alzheimers accounted for 5.8% of the deaths among persons 65 years and over and was the 5<sup>th</sup> leading cause of death as compared to the 9<sup>th</sup> leading cause of death in 1990. It increases to 8.31% for persons 85 years and over.
- People 65 years of age and older with Alzheimer's survive an average of 4 to 8 years post diagnosis which can exact tremendous physical, emotional and financial toll on family and friends.
- Hospital admissions for Alzheimer have increased 84% in the period 2003 to 2011.

### CLOSTRIDIUM DIFFICILE

- This is an inflammatory disease of the intestines of particular concern for older patients and residents in hospitals and long term care facilities.
- The age adjusted mortality rate for persons 65 years of age and older increased from 1.5 to 20.7 per 100,000 population between 2001 and 2011. Aggressive preventive measures should be implemented to minimize current growth of this illness.

### ALCOHOL USE

- Collier has a higher proportion of the older population engaged in heavy or binge drinking than in Florida.

### INJURIES

- Unintentional injuries are the 5<sup>th</sup> leading cause of death. Death from falls has increased 52% between 200 and 2011.
- The dramatic increase in the mortality rate from falls in the 75 – 84 age group is highly significant as is the mortality rate in the 85 years of age and older age group.
- Closed fracture of the hip is one of the top ten ranked diagnosis for ER admits for women age 65 and older for 2011.

## THEMES AND STRENGTHS

- The lack of affordable housing and subsidized housing for persons on fixed incomes.
- Lack of affordable and accessible primary care.
- Insufficient numbers and choice of long term care beds.

# V. Community Resources related to Strategic Issues

## Licensed Health Providers (2011)

Rate per 100,000	County	Florida
Physicians	268.2	342.0
OB/GYNs	12.9	12.0
Pediatricians	14.8	25.7
Dentists	68.4	63.0

## Facilities

Rate per 100,000	County	Florida
Total Hospital Beds	292.2	319.2
Acute Care Beds	246.3	262.9
Specialty Beds	45.9	56.3
Nursing Home Beds	279.9	438.0

## County Health Department

Rate per 100,000	County	Florida
Health Department FTE	58.1	63.1
Health Department Expend.	\$3,703.910	\$4,204,239

## Health Insurance

Rate per 100,000	County	Florida
With Insurance*	248,274 (76.1 percent)	14,840,913 (79.1 percent)
No Insurance*	78,121 (23.9 percent)	3,911,381 (20.9 percent)

\*civilian noninstitutionalized population

## Older Population Support

Leadership Coalition on Aging
Collier Housing Authority
Collier County Services for Seniors
Dr. Piper Center for Social Services
Hope HealthCare Services
Senior Choices
The League Club
Palliative Care through local hospice (Avow & Vitas)
Shelter for Abused Women-Elder Abuse
Alzheimer's Support Network
Care Club of Collier County – Adult day care and respite care
Alienated Grandparents Anonymous
Assisting Hands Home Care
Brookdale Center for Healthy Aging and Rehab
Catholic Charities
Friendship Health Clinic
Harry Chapin Food Bank
Lighthouse of Collier CHD Retired and Senior Volunteer Program (RSVP)

## Mental Health and Substance Abuse

Facility	Specifics
Hazelden	47 licensed SA beds, Inpatient and outpatient treatment
The Willough	99 total beds, 64 psychiatric, 36 SA treatment inpatient and outpatient
David Lawrence	Mental Health Beds (20 adult and 4 child), SA Beds (12, will increase to 15 end of June 2013), inpatient and outpatient treatment
NCH Downtown Psychiatric Unit	13 licensed beds, dual diagnosis, no outpatient

## Oral Health

Facility	Specifics
HealthCare Services of SW FL	12 chairs (Immokalee)* 12 chairs (Countryside) 2 chairs (Ronald McDonald Mobile Clinic)* <sub>Adults only</sub>
NCEF/University of Florida Clinic	12 chairs (complicated treatment for children)
DOH-Collier County	7 chairs (children and adults)
Senior Friendship Center	2 chairs (adults 50 and over)
Neighborhood Health Clinic	1 chair (working adults)
James Lorenzo Walker/ St. Matthews Dental Clinic (D.O.C.)	2 chairs
Collier County Dental Association	Dental Volunteers

## Chronic Disease and Obesity

NCH Healthcare System Wellness Centers
Collier County Parks & Recreation
Various fitness facilities
Nutrition counseling through outpatient services at local hospitals
Diabetes Self-Management programs at local hospitals
Smart Growth Coalition (DOH-Collier)
Safe & Healthy Children's Coalition of Collier County
Local health care providers
Tobacco Control Program and Tobacco Free Partnership (DOH-Collier)

## General

Health Planning Council of Southwest Florida- Southwest Florida Resource Link  
([www.SWFLResourceLink.com](http://www.SWFLResourceLink.com))



# OUR MISSION

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.

# OUR VISION

To be the Healthiest State in the Nation

# OUR VALUES

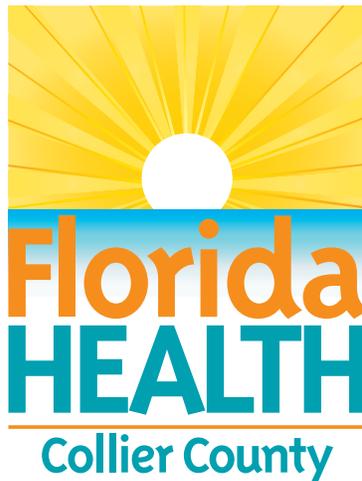
**Innovation:** We search for creative solutions and manage resources wisely.

**Collaboration:** We use team work to achieve common goals & solve problems.

**Accountability:** We perform with integrity & respect.

**Responsiveness:** We achieve our mission by serving our customers & engaging our partners.

**Excellence:** We promote quality outcomes through learning & continuous performance improvement.



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The 2013 Collier County Community Health Assessment was submitted June 28, 2013.

For additional information on the features highlighted in the 2013 Community Health Assessment, please visit our website at <http://www.CollierHealthDept.org>