# Collier County

# 2016

"Our health is inextricably tied to where we live, learn, work, and play. It is shaped by our access to stable housing, quality schools, clean and safe open spaces, and much more."

- Robert Wood Johnson Foundation



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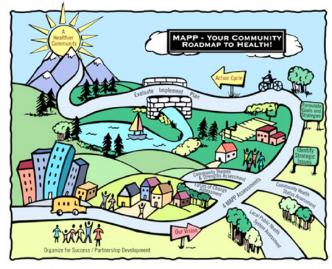
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# INTRODUCTION

The Community Health Assessment (CHA) provides a snapshot in time of the community strengths, needs, and priorities. This report describes the health of the population, identifies area for health improvement, identifies contributing factors that impact health outcomes, and identifies community assets and resources that can be mobilized to improve population health. The CHA serves to inform Collier County community decision making, the prioritization of health problems, and the development, implementation, and evaluation of community health improvement plans.

The process used to identify health issues and assets is the Mobilizing for Action through Planning and Partnerships (MAPP) process. This collaborative process involving community members and partners identify strengths, capacity, and opportunity to better address the many determinants of health. Improving the health of the community is critical to enhancing Collier County resident's quality of life and supporting its future prosperity and well-being. Guided by the MAPP process, this report is the result of a collaborative and participatory approach to community health planning and improvement.



Four MAPP assessments are conducted, providing critical insights into challenges and opportunities throughout the community:

- Community Health Status
- Local Public Health System
- Community Themes and Strengths
- · Forces of Change

The Community Health Status Assessment identifies priority issues related to community health and quality of life.

The Local Public Health System Assessment is a comprehensive assessment of all of the organizations and entities that contribute to the public's health.

The Community Themes and Strengths Assessment provides a deep understanding of the issues residents feel are important.

The Forces of Change Assessment focuses on the identification of forces such as legislation, technology, and other issues that affect the context in which the community and its public health system operates.

# **EXECUTIVE SUMMARY**

## **Overview**

In the past two decades, Collier County has experienced tremendous growth and change in terms of population dynamics and demographics, socioeconomic 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 1995 and 2015, the resident population of Collier County grew at a swift pace of 2.8 percent per year compared with Florida at 1.6 percent and the United States at 1.0 percent during the same period. This tremendous rate of population increase generated unprecedented economic growth and development throughout the county particularly between 1995 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. Ethnic and socioeconomic transition has created a shift in a number of public health indicators at the county level. The latest census bureau data available indicate that in 2014, 53 percent of Collier County residents spoke a language other than English in the home. This is directly correlated with the growth of the Hispanic population. The number of children living in poverty in Collier County increased by 27.3 percent over the past decade.

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 145,000 by the year 2040, 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.

## **Chronic Disease and Mortality**

The leading cause of death in Collier County is cancer, which accounted for 25.5 percent of all mortality in 2014. Collier County has seen a substantial decline in this mortality rate since 2005. Diabetes is the 7th leading cause of death in Collier County. The most significant risk factor for the development of diabetes is overweight and obesity. 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. Community members emphasized the prevalence of unhealthy food options and limited healthy choices at restaurants as well as the need to provide proper nutritional education.

In 2014, the 10 leading causes of death in Collier County by rank order were: cancer, heart disease, Alzheimer's disease, unintentional injuries, chronic lower respiratory disease, cerebrovascular disease, diabetes mellitus, chronic liver disease and cirrhosis, Parkinson's disease and suicide. 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.

# **Communicable and Infectious Diseases**

Between the years 2005 and 2014, the incidence of all communicable diseases increased by 5.5 percent in the county. Chlamydia is the leading communicable disease in Collier County accounting for 58.1 percent of all reported infectious diseases in the county in 2014. Two of the five leading communicable diseases in Collier County are enteric or gastrointestinal related. During 2014, salmonella and campylobacter accounted for 13.3 percent of all reported infectious diseases in the county.

Animal bites from potentially rabid animals have been increasing exponentially in Collier County during the past ten years. Between 2005 and 2014, potential rabies exposures increased by over 97 percent. 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.

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 rainy 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.

# **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 4.6 infant deaths per 1,000 live births in 2014. The Hispanic infant mortality rate in the county (4.0 per 1,000 live births) was 20 percent lower than the non-Hispanic rate (5.0 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 all three indicators related to adequate prenatal care: births with first trimester prenatal care, birth with late or no prenatal care and births with adequate prenatal care. Community focus groups have pointed the need for a good support system for receiving obstetrical care.

# 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. From 2005 to 2014, the major cause of injury deaths have varied by age in Collier County: motor vehicle fatalities between 15 to 34 years of age and 85 years of age and older, falls among the older population 75 years of age and older, unintentional poisonings between the ages of 25 to 54 years and drowning particularly in the 1 to 4 year childhood ages.

# 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. With the recent changes involving the enactment of the new national healthcare law, the uninsured rate in Collier County and in Florida appear to have been reversed. In 2014, 18.7 percent of the total resident population of Collier County was uninsured compared with 23.2 percent in 2010. Of the core working population 18 to 64 years of age in Collier County, 30.7 percent were without health insurance compared with 35.9 percent in 2010, a difference of 5.2 percent. When accounting for race and ethnicity, Hispanics in Collier County are more likely to be uninsured than non-Hispanic whites and blacks. 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, on average, 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. Focus group participants felt that there is a shortage of available health care professionals, particularly those that service Medicare and Medicaid patients and the indigent.

# **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 2013, 20.8 percent of Collier County adults indicated they were obese; this was almost 6 percentage points less than the proportion in Florida. Educational attainment is a protective factor against obesity in Collier County, with only 15.3 percent of adults with a four year college degree or beyond classified as obese compared with 27.6 percent with only a high school diploma.

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, 13.9 percent of the adult population identified themselves as current smokers.

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 was 18.1 percent in 2013. Males in the county engaged in heavy or binge drinking at a much greater rate than females, 22 percent and 14.5 percent, respectively. Overall, Collier County residents are more likely than Florida residents to engage in heavy or binge drinking, 18.1 percent compared with 17.6 percent. Collier County does have a greater proportion of the population 65 years and older engaged in heavy or binge drinking than Florida, 9.8 percent compared to 7.2 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.

Although substance abuse rates have declined among adolescents in Collier County, it is a burden on public health with severe consequences such as increased health care expenditures, accidents and crime. The community has identified substance abuse as an issue that needs a comprehensive plan. While treatment facilities for substance abuse exist, there is a shortage of affordable long-term rehab centers which can fully treat the problem.

# **Mental Health**

Collier County residents experienced remarkably lower percentages of individuals who reported poor mental health with a 7.3 percent in 2013 compared to Florida with a 12.7 percent, a difference of 5.4 percentage points. Females were much more likely to have experienced poor mental health than males. Those in the age group 45 to 64 years of age had the highest incidence of poor mental health, 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, as currently a void exists for various levels of mental healthcare. Public awareness exists on the issue and clearly feels the professional resources are lacking.

# **Oral Health**

Oral health is central to a person's overall health, well-being and quality of life. Between 2002 and 2013, the number of licensed dentists increased by 59.5 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 Florida Department of Health in Collier County, federally qualified health centers and the Naples Children and Education Foundation Dental Center, along with limited services at the Senior Friendship Center and the Neighborhood Clinic. The only dental care option for many low

income people, particularly adults, 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. The availability of dental health services for children was identified by the community as a concern.

# Health of the Older Population

During 2015, within Collier County over 12,000 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 increased need for expanding memory care facilities was identified as the population 65 years of age and over continues to grow at historically high rates. The community perceived that the current market is catering to higher end assisted living facilities despite the increasing need for affordable long-term care and skilled nursing facilities.

# **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 though 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 2014. Health education initiatives and other public health targeted programs are focused to assist in reducing the influence of these actual preventable causes of death.

# Conclusion

Health status analysis combined with the local public health system assessment results and information from community focus groups and community surveys were used to identify key strategic focus areas for Collier County. The strategic issues identified are: Chronic Diseases, Mental Health, Access to Care, Alcohol and Drug Abuse and Obesity. The results of the Community Health Assessment, specific assessment tools utilized and their results may be reviewed as follows.

# **COMMUNITY HEALTH STATUS ASSESSMENT**

# **Community Characteristics**

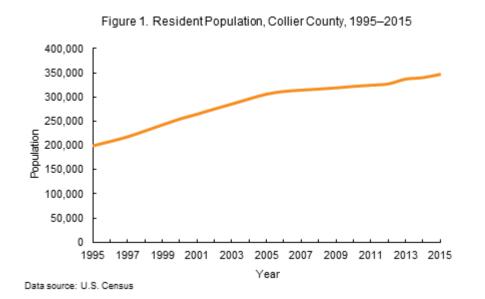
#### **Geography**

Collier County is comprised of the densely 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 to 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 unmet and future health needs in specific sub-groups and vulnerable populations.

Between 1995 and 2015, the resident population of Collier County grew at a swift pace of 2.8 percent per year. This compares to Florida at 1.6 percent and the United States at 1.0 percent during the same time period. Collier County's population increased by 147,533, from 199,272 in 1995 to a total of 346,805 by 2015 (Figure 1). Immokalee comprises approximately 7 percent of the population, while Greater Collier comprises 93 percent of the population.



The annual average growth rate was the greatest between 1990 and 2000 with 5.2 percent. From 2000 to 2015, the annual average growth rate significantly decreased, from 2.5 percent in 2000 to 2010 to 0.8 in 2010 to 2015 (Table 1). The resident population of Collier County is projected to increase by 144,023 from 343,236 in 2015 to over 487,000 in 2040, resulting in a significantly slower annual rate of growth of 1.4 percent (Figure 2).

## **Population**

The resident population of Collier County is projected to increase by 144,023 from 343,236 in 2015 to over 487,000 in 2040, resulting in a significantly slower annual rate of growth of 1.4 percent.

## **Seasonal Population**

In 2014, the number of tourists visiting Collier County was 1,773,900, an increase of 6.3 percent from 2013.

## **Aging Population**

Over the past 20 years there have been dramatic shifts in the age distribution the "baby boomer" reaches retirement age and move to Collier seeking a healthy quality lifestyle.

#### **Determinants of Health**

Social, Economic, Physical and Lifestyle factors influence the health of individuals, families and communities.

#### Income

Median household income in Collier County decreased by 12 percent from \$65,758 to \$58,026.

#### **Poverty**

Children under the age of 18 years living in poverty in Collier increased by over 72 percent from 2005 to 2014, while in Florida the overall increase was 33 percent.

From 2007 to 2012, the number of children receiving food assistance increased by 351 percent, while during the same period the number of adults increased by 335 percent.

Table 1. Population Rate of Growth, Collier County, 1990, 2000 and 2010

	1990 - 2000	2000-2010	2010 - 2015
Annual Rate of Population Growth	5.2	2.5	0.8
Percentage Change	65.3%	27.9%	7.9%
Population	2000 Census - 251,377	2010 Census -321,520	2015 Mld-Year - 346,805

Data source: U.S. Census Bureau. Amual Rates of Population Growth calculated by Epidemiology Program.

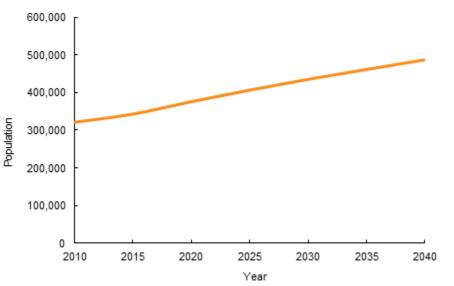


Figure 2. Total Population Projections, Collier County, 2010–2040

Data 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. In 2014, the number of tourists visiting Collier County was 1,773,900, an increase of 6.3 percent from 2013.

#### Age Distribution, Gender and Population Growth

Figure 3 displays the distribution of the Collier's population by age and gender. There have been dramatic shifts in the age distribution over the past 20 years as the "baby boomer" cohort 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 socioeconomic dynamics for Collier County and Florida during the 21st century.

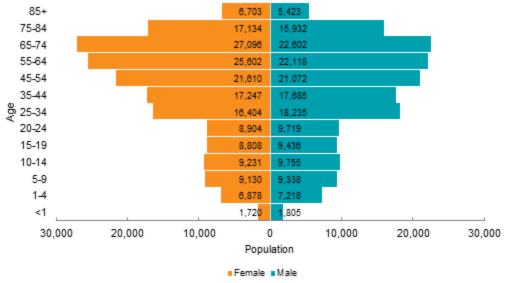


Figure 3. Population by Age Distribution and Gender, Collier County, 2015

Data source: U.S. Census Bureau

#### **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.

#### Race

During the period 1994 and 2014, the black population increased by 152 percent from 9,525 to 24,033, (propelled mostly by Haitian immigration) while the white population decreased to account for 90.0 percent of the population.

#### **Ethnicity**

Between 1990 and 2014, the Hispanic population in Collier grew by 350 percent. While Hispanics constituted less than 14 percent of the population in Collier in 1990, by 2014 the proportion increased to almost 26 percent based on census data. This upward trend is expected to increase at an annual rate of approximately 2.2 percent between 2010 and 2040, when the Hispanic population in Collier County is projected to approximate a minimum of 160,000.

#### Socioeconomic Features

The relationship between socioeconomic 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.

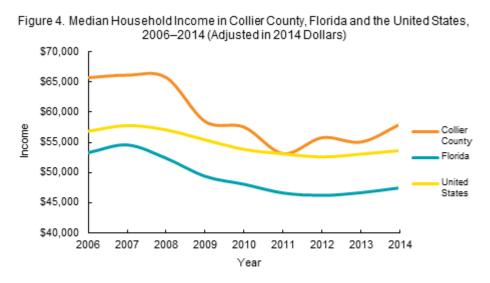
An individual's health does not occur or develop in isolation. Many social, economic, physical and lifestyle factors combine together to influence the health of individuals, families and communities. Together these factors are referred to as "determinants of health". The determinants of health significantly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



#### **Income and Wealth**

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 and become visible in various socioeconomic indicators.

Between 2006 and 2014, median household income decreased in Collier County by 12 percent, from \$65,758 to \$58,026 (Figure 4). The recent recession coupled with increased unemployment between 2007 and 2009 has been a significant driver of the decrease in the adjusted median household income.



Data source: U.S. Census Bureau/American Community Survey

#### **Poverty Indicators**

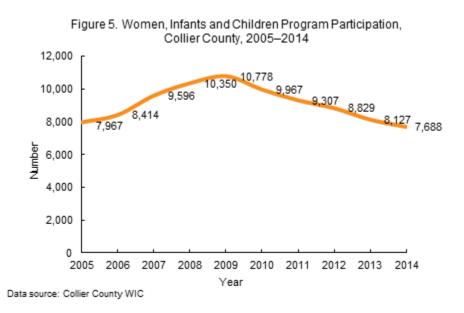
Collier is one of the wealthiest counties in Florida with a per capita income of \$37,236 for 2014 which is 1.4 times that of the state. However, there are pockets of significant poverty. Four Collier communities have per capita incomes ranging from \$10,029 to \$22,416. Immokalee is one of those communities and the other three are in the Greater Naples area (Naples Manor, Golden Gate City and Naples Park).

#### **Children Living in Poverty**

Children under the age of 18 years living in poverty in Collier increased by over 72 percent from 2005 to 2014, while in Florida the overall increase was 33 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 2005 and 2014, the number of WIC participants in Collier County actually slightly declined from 7,967 to 7,688 (about 3.5 percent). However, the number of participants increased by over 35 percent from 2005 to 2009 (Figure 5).



#### **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. From 2007 to 2012, the number of children receiving food assistance increased by 351 percent, while during the same period the number of adults increased by 335 percent. Between 2012 and 2014, the number of children receiving food stamps declined by 28 percent, while the number of adult participants decreased by 19 percent.

#### Homelessness

Between 2007 and 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 2014, this number had declined to 1,418 which is 40 percent above the 2007 admissions.

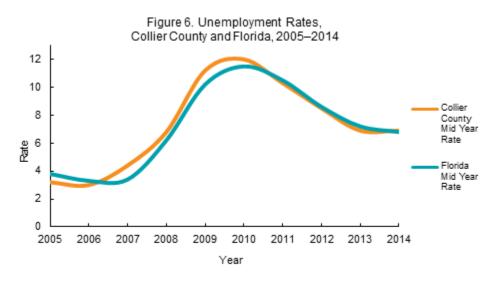
## **Education**

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 2005 and 2014, 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 2005, the percent of persons with a bachelor's degree or higher was 19.3 percent as compared to 21.2 percent in 2014. During this same period, the percent of persons 25 years and older without a high school diploma decreased from 16.3 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 decreasing by more than 40 percent in 2014 (Figure 6).



Data source: US Department of Labor, Bureau of Labor Statistics

# **Chronic Diseases**

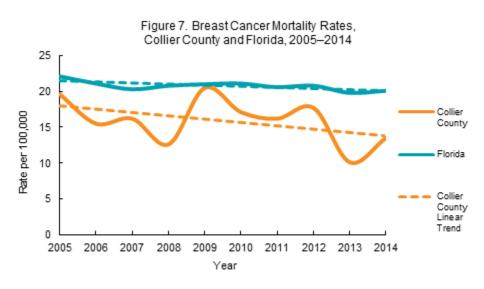
Approximately 1 out of every 2 adults in Florida and Collier County have at least one chronic condition or disease. Most major chronic diseases are caused either directly or indirectly by four contributing factors which are modifiable health risk behaviors: tobacco use, lack of physical activity (resulting 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 is the leading cause of cancer deaths in the United States and Collier County. Lung cancer is the most prevalent high case fatality cancer in the U.S. and in Florida. Both Collier County and the state of Florida rates are decreasing on a parallel trend, although the rate for Collier County is declining slightly faster. In 2005, the lung cancer mortality rate in Collier County was 17 percent less than that of the state of Florida. By 2014, Collier County's rate was 29 percent less than the state's rate.

#### **Breast Cancer**

Between 2005 and 2014, the mortality rate from breast cancer declined by 31 percent in Collier County and by 9 percent in Florida (Figure 7). In every year between 2005 and 2014, Hispanics had lower death rates (excluding 2006) due to breast cancer than Non-Hispanics in Collier County. While both ethnicities have been declining in their mortality rate trend, the rate for Non-Hispanics was 14.4 per 100,000 population in 2014, for Hispanics it was 9.2.



Data source: Florida Department of Health. Bureau of Vital Statistics

#### Cerebrovascular Disease

Cerebrovascular disease, more commonly referred to as stroke, is a leading cause of death in the United States and Collier County. In 2014, stroke accounted for 167 deaths in Collier County or 5.5 percent of

#### **Chronic Disease**

Approximately 1 out of every 2 adults in Florida and Collier County have at least one chronic condition or disease.

Four contributing factors either directly or indirectly the cause most major chronic disease:

- Tobacco use
- Lack of physical activity
- Excessive alcohol consumption
- Poor nutrition.

Chronic disease accounts for approximately 7 out of every 10 deaths among Collier County residents every year.



#### **Obesity**

The most significant risk factor for the development of diabetes is overweight and obesity.

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.

#### Leading Causes of Death

In 2014, the 10 leading causes of death in Collier County by rank order were: cancer, heart disease, Alzheimer's disease, unintentional injuries, chronic lower respiratory disease, cerebrovascular disease, diabetes mellitus, chronic liver disease and cirrhosis, Parkinson's disease and suicide. all deaths. Stroke accounted for about 20 percent more deaths in females than in males in 2014. Historically, mortality due to stroke has been higher among the black population in the United States than among the white population. While whites are showing a steady downward trend over the last ten years, blacks are experiencing an increasing trend in deaths from stroke.

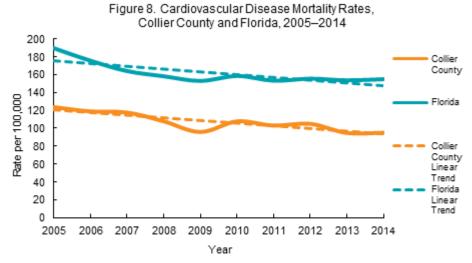
### **Melanoma**

The melanoma mortality rate for Collier County and Florida for the period of 2005 to 2014 has slightly increased. Males and Non-Hispanics in Collier County experienced significantly higher mortality rates from melanoma than their counterparts.

#### Cardiovascular Disease

During the previous decade, cancer replaced cardiovascular disease as the leading cause of death in Collier County and Florida. This cause of death shift in ranking has been attributed to decades of health education targeting heart disease prevention with particular emphasis on cigarette smoking cessation, physical activity promotion and healthy food choices education.

During the period of 2005 to 2014, Collier County and Florida has experienced a fairly consistent reduction in deaths from cardiovascular disease (Figure 8). The age-adjusted death rate for males for heart disease was 56 percent greater than the mortality rate for females. While the death rate decreased by 24 percent for whites over the 10 year period, it increased significantly for the black population.



Data source: Florida Department of Health, Bureau of Vital Statistics

## **Diabetes**

Diabetes is the seventh leading cause of death in Collier County and the sixth leading cause in Florida. The most significant risk factor for the development of diabetes is overweight and obesity. The disease is a significant cause of heart disease, stroke and kidney failure. While the non-Hispanic population mortality trends remain constant, the Hispanic population showed downward diabetes mortality trends from 2005 to 2014 in Collier County.

## Chronic Lower Respiratory Disease (CLRD)

In 2014, CLRD was the fifth leading cause of death in Collier County and Florida. From 2005 through 2014, the mortality rates from CLRD increased slightly in Collier County and in the state of Florida.

#### Leading Causes

Two of the five leading communicable diseases in Collier County are enteric or gastrointestinal related.

Salmonella and campylobacter accounted for 13.3 percent of all reportable conditions in 2014.

#### Vaccine Preventable

Between 2005 and 2014, the number of reported cases of pertussis in Collier County increased by 288 percent.

#### **Animal Bites**

Between 2005 and 2014, potential rabies exposures increased by over 97 percent.

#### **Tuberculosis**

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.

#### Mosquito-borne Disease

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 rainy season.

#### **Sexually Transmitted**

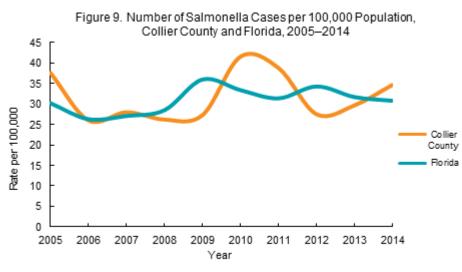
Between 2005 and 2014, the Chlamydia rate increased by 23.7 percent.

# **Infectious Diseases**

In 2014, a total of 1,388 disease cases (or about 408 per 100,000 population) were reported in Collier County. Between the year 2005 and 2014, the incidence of infectious diseases in Collier County increased by 5.5 percent. Two of the five leading communicable diseases in Collier County are enteric or gastrointestinal related. Salmonella and campylobacter accounted for 13.3 percent of all reportable conditions in 2014.

#### **Salmonella**

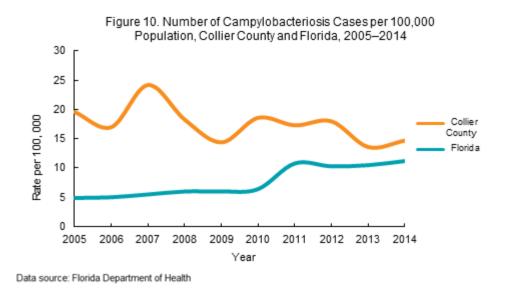
Salmonella is a bacterial infection usually causing diarrhea, fever and abdominal cramps. The incidence in Florida and in Collier County has been increasing over the past 10 years (Figure 9).



Data source: Florida Department of Health

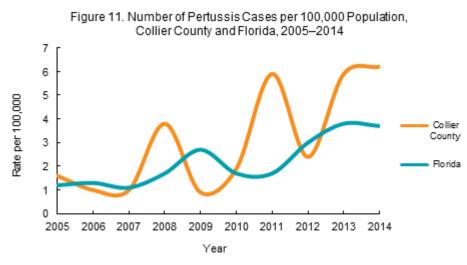
#### Campylobacter

Campylobacter is one of the most common bacterial causes of diarrheal illness in the United States. It is estimated over 1.3 million persons in the country are affected by this disease annually; therefore, the majority of cases go undiagnosed and unreported. Although, historically, the overall campylobacter incidence in Collier has been on average 3 to 4 times higher than that for Florida, the difference has been decreasing in the past few years (Figure 10).



#### **Pertussis**

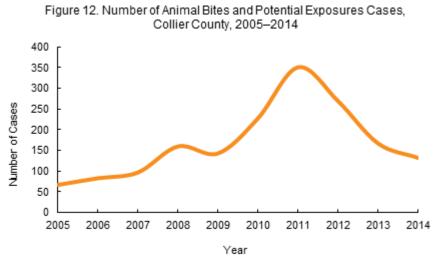
Pertussis or whooping cough remains the major public health problem among children in developing countries. The disease is also endemic within the United States. The incidence of pertussis, a vaccine preventable disease, can be significantly reduced through health education and vaccination. Between 2005 and 2014, the number of reported case of pertussis in Collier County increased by 288 percent (Figure 11).



Data source: Florida Department of Health

#### Animal Bites and Potential Exposures

In Collier County, the fifth leading reportable health condition during 2014 involved animal bites requiring post-exposure prophylaxis (PEP) in order to prevent the potential onset of human rabies. Between 2005 and 2014, potential rabies exposures in Collier County increased by over 97 percent. The number of cases was highest from 2010 to 2012, peaking in 2011 with 351 animal bites and potential exposures (Figure 12).



Data source: Florida Department of Health

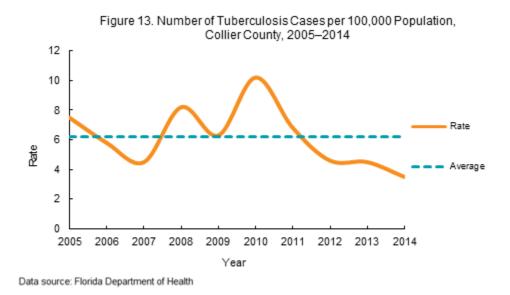
### Mosquito-Borne Disease

Mosquito-borne diseases are an indigenous risk in Southwest Florida due to its geographical location and climate. Collier County's wet and warm season and conditions favor significant breeding and propagation of the mosquito population. There are five major mosquito-borne viruses which may be considered endemic to Florida and, therefore, a potential public health concern in Collier County. While the actual annual risk of a human contracting any mosquito-borne disease in Collier County is low, case fatality rates for these diseases are high in comparison to most other infectious diseases found in Southwest Florida.

In 2014, Collier County reported two imported cases of Dengue fever and two imported cases of Chikungunya fever. No other mosquito-borne disease was reported that year.

## **Tuberculosis**

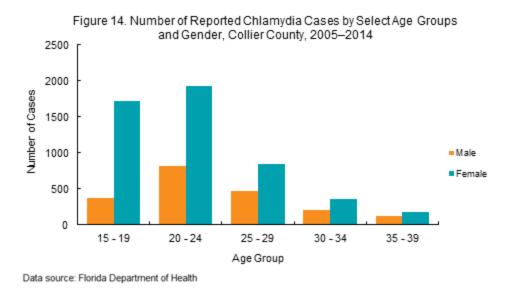
The incidence rate of tuberculosis in Collier County has experienced a significant decline of approximately 53 percent from 2005 to 2014 (Figure 13). Historically, the incidence of tuberculosis in Collier County has been higher than that of the state of Florida. In Florida, medically underserved low income populations, many of who are high-risk social and ethnic minorities, have a high rate of tuberculosis exposure and infection. These population groups disproportionately represent the majority of tuberculosis cases in Collier County and the state.



#### Sexually Transmitted Diseases

Chlamydia is the most frequently reported infectious disease in the United States and Collier County. Between 2005 and 2014, the Chlamydia rate increased by 23.7 percent. During the period of 2005 to 2014, the highest incidence rates of Chlamydia were in the 20 to 24 year age group for both females and males (Figure 14). There has been sevenfold increase in the number of reported cases among those 55 years and older. Almost three times as many cases of Chlamydia are reported in females compared to males in Collier County.

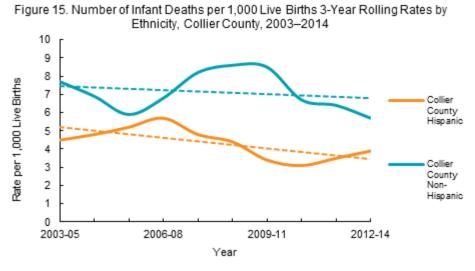
Gonorrhea is the fourth most frequently reported infectious disease in Collier County. The overall gonorrhea reported case rate decreased by 53 percent between 2005 and 2014. Unlike Chlamydia where the risk of disease is on average three times greater for females than males, the risk of acquiring gonorrhea in Collier County appears to be equivalent on average for both males and females.



# **Maternal and Infant Health**

### **Infant Mortality**

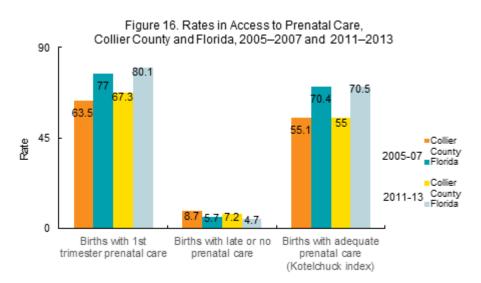
The infant mortality rate for Collier County declined by 21 percent to a new low of 4.9 deaths per 1,000 live births between 2005 and 2014. During this ten year period, the highest rate occurred during 2008 to 2010, 6.6 per 1,000 live births. In Collier County and the state of Florida, the Hispanic infant mortality rate is lower than that of the non-Hispanic population. In 2012 to 2014, the Hispanic infant mortality rate in Collier County was almost 32 percent lower than the non-Hispanic rate, 3.9 compared to 5.7 per 1,000 live births, respectively (Figure 15).



Data source: Florida Department of Health, Bureau of Vital Statistics

#### Prenatal Health and Lifestyle Behaviors

Collier County lags behind Florida for all three indicators related to adequate prenatal care: births with first trimester prenatal care, birth with late or no prenatal care and births with adequate prenatal care (Figure 16).



Data source: Florida Department of Health, Bureau of Vital Statistics

The infant mortality rate for Collier County declined by 21 percent to a new low of 4.9 deaths per 1,000 live births between 2005 and 2014.

Between 2005 and 2014, the percentage of live births with low birthweight (under 2500 grams) increased by 2.9 percent in Collier County.

Between 2006 and 2013, births to overweight mothers increased slightly by 12 percent while over 46 percent of mothers giving birth were either overweight or obese.



#### **Prenatal Care**

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

- Births with first trimester prenatal care
- Births with late or no prenatal care
- •Births with adequate prenatal care

#### **Lifestyle Behaviors**

Only three percent of mothers who gave birth between 2012 and 2014 reported smoking during pregnancy, a decline of almost 30 percent from seven years prior. Between 2006a) and 2013b), births to overweight mothers increased slightly by 12 percent while over 46 percent of mothers giving birth were either overweight or obese. Births to unwed mothers ages 15 to 19 years increased during the eight year time period by over 10 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 three percent of mothers who gave birth between 2012 and 2014 reported smoking during pregnancy, a decline of almost 30 percent from seven years prior.

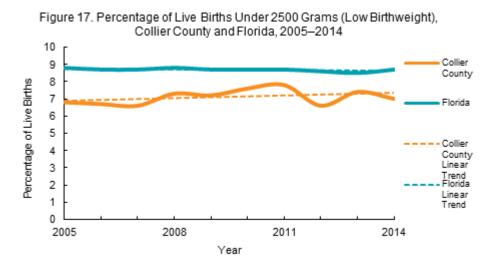
The number of women 15 to 34 years with sexually transmitted diseases per 100,000 population increased by less than 1 percent in Collier County, while in the state of Florida the rate increased by over 23 percent.

a) Indicators are for 2005–2007, b) Indicators are for 2012–2014

#### **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 2005 and 2014, the percentage of live births with low birthweight (under 2500 grams) increased by 2.9 percent in Collier County and remained constant in Florida (Figure 17). This slight trend upwards is mainly attributed to the increase over the past two decades of multiple births.

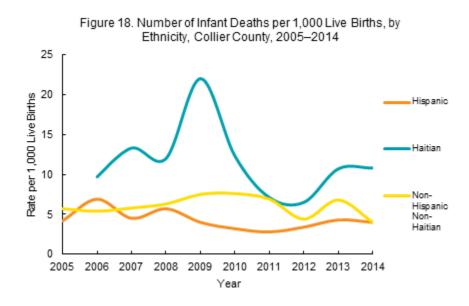


Data source: Florida Department of Health, Bureau of Vital Statistics

## Infant Mortality, Low Birth Weight and Entry into Prenatal Care

With very few exceptions, all population based maternal and infant health outcomes and indicators are associated with the level of education of the mother which inevitably is highly correlated with median income and other socioeconomic status indicators. Maternal health and the trimester of entry into prenatal care is directly related to the education level and the awareness of the pregnant mother regarding healthy behaviors and choices. When analyzed by 1st and 2nd trimester entry into prenatal care, non-Hispanics and non-Haitians achieved 87.1 percent, Hispanics 85 percent and Haitians 82 percent, respectively.

Comparing all ethnic groups, it is clear that the average Haitian infant mortality rate is significantly higher compared with Hispanics and non-Hispanic non-Haitians as well as highly variable (Figure 18). Haitians also have a significantly higher percentage of low birth weight births than the other ethnic entities.



#### **Teenage Births**

Between 2005 and 2014, the teenage birth rate for mothers 15–19 years of age declined by 61 percent in Collier County and by 48 percent in Florida, with blacks and Hispanics experiencing a steeper decline than white teenagers. By race, repeat births to teenage mothers dropped dramatically in Collier County among blacks and whites, minus 25 percent and minus 17 percent, respectively, from 21.4 to 16.1 for whites and from 25.5 to 21.1 for blacks.

#### Maternal Mortality

Between 2005 and 2007, Collier County did not experience any maternal deaths. During 2008, 2009, 2011, 2012, 2013 and 2014 between 1 and 3 maternal deaths occurred annually thereby increasing the rates for those years to very high levels due to the concept of small number random variation.

# Injuries

#### Injuries

Unintentional injury is now the fourth 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 25 to 54 age group
- 2. Falls for older population
- 3. Motor vehicle accidents for all other age groups combined

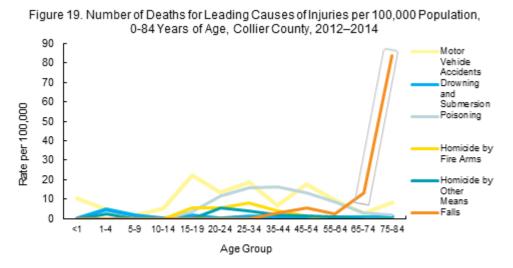


**Falls** From 2005 to 2014, the mortality rate due to falls increased in Collier County by 49 percent and in Florida by 39 percent.

## **Motor Vehicle Crashes**

Between 2005 and 2014, the mortality rate from motor vehicle crashes declined by over 42 percent in Collier County. Injuries affect the entire population regardless of age, gender, ethnicity, race or socioeconomic status. The majority of all injury deaths at every age are unintentional. Unintentional injury is now the fourth leading cause of death in Collier County, accounting for almost 6 percent of all deaths annually.

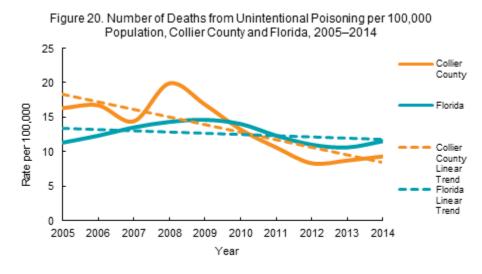
The major causes of injury deaths vary by age; unintentional poisoning for 25 to 54 age group, falls for the older population, and motor vehicle accidents for all other age groups combined (Figure 19). In Collier County, the mortality trend for injuries for males and females has been slowly moving down over the ten year period; however, the trend for males is decreasing at a slightly faster pace than females. Both the Hispanic and the non-Hispanic mortality rates in Collier County have been trending downward since 2005 at parallel slopes, with non-Hispanics having the higher rates.



Data source: Florida Department of Health, Bureau of Vital Statistics

#### **Unintentional Poisoning**

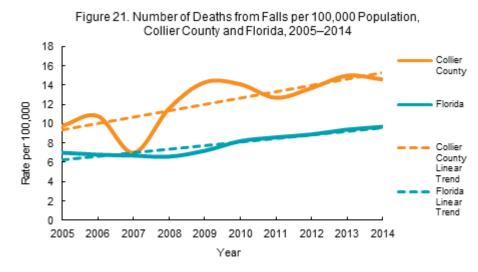
Prior to 2005, there had been dramatic growth in unintentional poisoning deaths for 30 years in Collier County and Florida. Between 2005 and 2014, an evident decrease (42.9 percent decrease) of the death rates from unintentional poisoning was observed in Collier County, whereas the rate in Florida stabilized (Figure 20).



Data source: Florida Department of Health, Bureau of Vital Statistics

#### **Falls**

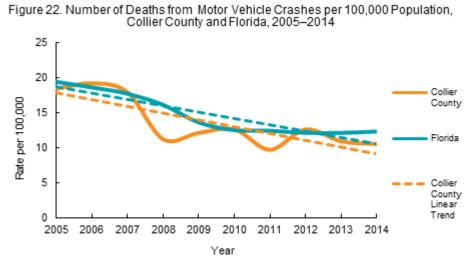
Over the past 10 years, death rates from falls have continued to accelerate for the older populations. From 2005 to 2014, the mortality rate due to falls increased in Collier County by 49 percent and in Florida by 39 percent (Figure 21). In Collier County, the mortality rates from falls are increasing steadily and in parallel for both males and females. The mortality rate from falls was relatively low or non-existent in age groups prior to 64 years of age; however, it experienced an exponential increase beginning at ages 75 and over.



Data source: Florida Department of Health, Bureau of Vital Statistics

#### **Motor Vehicle Crashes**

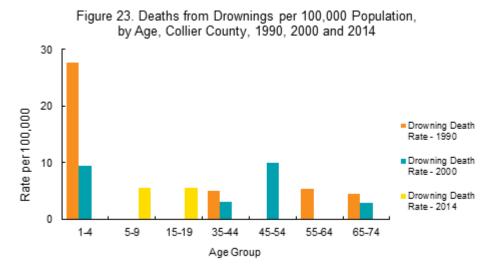
The mortality rate from motor vehicle crashes per 100,000 population for Collier County and Florida for the period 2005 to 2014 is shown in Figure 22. During this ten year period, the death rate in Collier County declined significantly by over 42 percent, and in Florida the rate declined by about 37 percent. Deaths from motor vehicle injuries are highest between the ages of 15 to 34 and 85 years of age and over, particularly with males.



Data source: Florida Department of Health, Bureau of Vital Statistics

#### **Drowning**

Figure 23 shows the age specific death rates for drowning deaths in Collier County for the years 1990, 2000 and 2014. Drownings rank sixth among the leading causes of unintentional injury deaths in America. Among children ages 1 to 4, drownings are the leading cause of injury death.



Data source: Florida Department of Health, Bureau of Vital Statistics

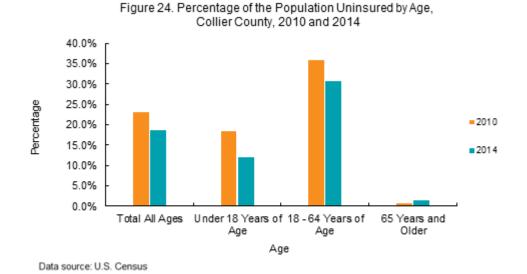
# **Access to Health Care**

Access to health care and health services means the timely availability and use of personal health services 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 assists patients in gaining access into a 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.

#### Health Insurance Coverage in Collier County

In Collier County and the state of Florida, rates of health insurance coverage have declined over the past two decades. This movement downward in insurance coverage was exasperated by the recession beginning in 2007 which pushed the uninsured population to historical heights as unemployment spiraled upwards. Recent changes beginning during 2013 involving the enactment of the new national healthcare law appears to have redirected and reversed the direction of inertia that had been trending over several decades.

In 2010, 23.2 percent of the total resident population of Collier County was uninsured, by 2014 this number declined significantly by 4.5 percentage points to 18.7 percent. By age group, the largest decrease in the uninsured rate in Collier County was for those under 18 years of age from 18.5 percent in 2010 to 12 percent in 2014–a decline of 6.5 points. The population 18 to 64 years of age experienced a decrease of 5.2 percentage points, from 35.9 percent in 2010 to 30.7 percent uninsured in 2014. The uninsured population 65 years and older was the only age group to experience an increase, from 0.8 percent in 2010 to 1.4 percent in 2014 (Figure 24).



**Access to Health Care** 

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 2010, 23.2 percent of the total resident population of Collier County was uninsured, by 2014 this number declined significantly by 4.5 percentage points to 18.7 percent.

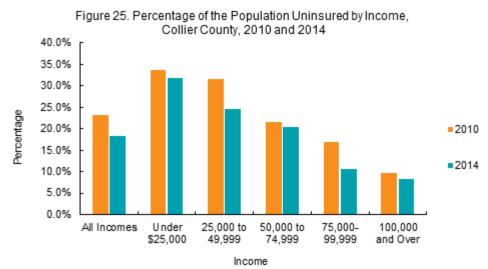
By age group, the largest decrease in the uninsured rate in Collier County was for those under 18 years of age from 18.5 percent in 2010 to 12 percent in 2014.

The uninsured population 65 years and older was the only age group to experience an increase, from 0.8 percent in 2010 to 1.4 percent in 2014.

When accounting for race and ethnicity, Hispanics in Collier County are more likely to be uninsured than non-Hispanic whites and blacks.

Focus group participants felt that there is a shortage of available health care professionals, particularly those that service Medicare and Medicaid patients and the indigent. As expected for both Collier County and Florida, as the educational level increases, the percentage of the uninsured population decreases, a classic inverse correlation. Between 2010 and 2014, the percentages of the uninsured decreased for all but one level of education. The percentage of uninsured with less than high school education increased from 48.1 percent in 2010 to 52.6 percent in 2014, a 9.4 percent increase.

The same correlation exists between income level and the probability of having health insurance as with the inverse correlation between education level and the uninsured population. While the percentage of the uninsured decreased for every income level between 2010 and 2014, the most significant changes in the rate occurred among those earning \$25,000 to \$49,999 and those earning \$75,000 to \$99,999, with reductions of 7.0 and 6.1 percentage points (Figure 25).



Data source: U.S. Census

#### **Obese and Overweight**

In 2013, 20.8 percent of Collier County adults indicated they were obese; this was almost 6 percentage points lower than the proportion in Florida.

In Collier County, the 45 to 64 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.

#### Tobacco Use

In Collier County, at least 18 percent of all deaths, or one in five deaths, are associated with cigarette smoking. In 2013, the percent of adults who were currently smoking in Collier County was significantly lower than the proportion throughout the state of Florida, 13.9 percent compared with 16.8 percent.

#### **Alcohol Use**

The proportion of Collier County adult residents who engaged in heavy or binge drinking was 18.1 percent in 2013.

A strong statistical association exists between alcohol consumption and alcohol impaired driving. 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.

#### Adolescent Substance Abuse

Results from the 2014 Florida Youth Substance Abuse Survey for Collier County shows the state of Florida has a higher rate of substance use than Collier County for seven out of the nine types of drugs.

# **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 Behavioral Risk Factor Surveillance System (BRFSS) randomly selected scientific sample survey, are statistically valid and are representative of the community and population of Collier County.

Due to a new survey methodology, comparisons of the latest countylevel BRFSS data (2013) to any previous results (2002–2010) are not statistically compatible.

#### **Obese and Overweight**

In 2013, 20.8 percent of Collier County adults indicated they were obese; this was almost 6 percentage points lower than the proportion in Florida (Figure 26). Males are much more likely to be obese than females, both in Collier County and throughout the state. Less than one in five women in Collier County were obese, while in Florida the ratio was more than one in four. Hispanics in Collier County were more than twice as likely to be obese than non-Hispanics, 34.8 percent compared with 16.0 percent, respectively. In Florida, the opposite prevailed, 29.7 percent of non-Hispanics were obese compared with 26.4 percent of Hispanics.

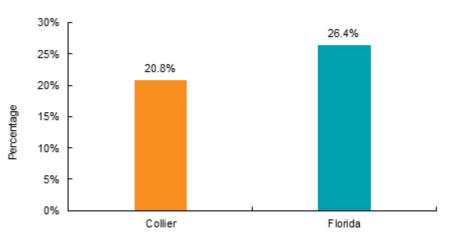


Figure 26. Percent of Adults Who Are Obese, Collier County and Florida, 2013

Data Source: Behavioral Risk Factor Surveillance System, 2013

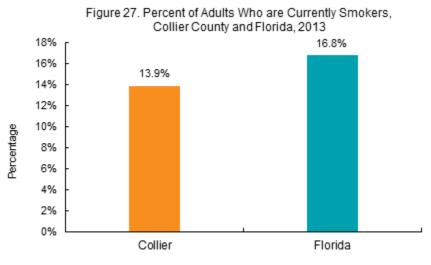
Education is a protective factor with 15.3 percent of obese adults in Collier County with a four year college degree or beyond, compared with 27.6 percent with only a high school degree or college. Income level of a population is statistically correlated with prevalence of obesity. In Collier County, the 45 to 64 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. The correlation between educational attainment and overweight prevalence appears to persist at the county and state level although not as strong an association as that found with obesity prevalence. 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, or one in five deaths, are associated with cigarette smoking. In 2013, the percent of adults who were currently smoking in Collier County was significantly lower than the proportion throughout the state of Florida, 13.9 percent compared with 16.8 percent, respectively (Figure 27). 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. Adults 45 to 64 years old and unmarried individuals are more likely to smoke.

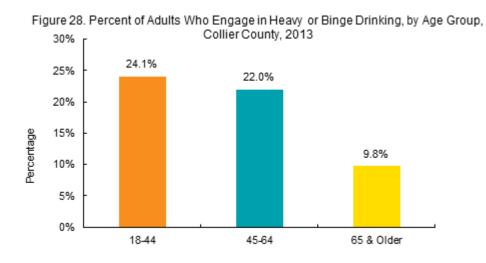
In Collier County, the percentage of the population that are former smokers is consistently gradually increasing over time, as the cohorts of the 18 to 44 and the 45 to 64 year age groups cease the habit cumulatively. Females are much more likely to have never smoked among Collier County and Florida residents. Also, in both Collier County and Florida, more than 60 percent of those 18 to 44 years of age have never smoked. Based on historical trends these percentages are at all time high levels.



Data Source: Behavioral Risk Factor Surveillance System, 2013

## Alcohol Use

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. 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. Figure 28 shows the percent of adults who engage in heavy or binge drinking in Collier County and Florida for 2013. The proportion of Collier County adult residents who engaged in heavy or binge drinking was 18.1 percent in 2013. Males engaged in heavy or binge drinking at a significantly higher rate than females in both Collier County and Florida. Income levels are correlated with the proportion of the population engaging in heavy or binge drinking. For both Collier County and Florida, the younger the age (18 to 44 years of age), the higher the prevalence of heavy or binge drinking. 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 lifestyle and responsibility.



Data Source: Behavioral Risk Factor Surveillance System, 2013

#### Adolescent Substance Abuse

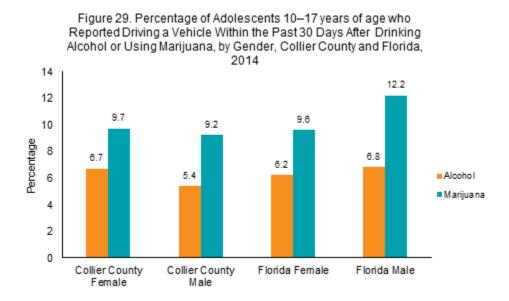
Results from the 2014 Florida Youth Substance Abuse Survey for Collier County shows the state of Florida has a higher rate of substance use than Collier County for seven out of the nine types of drugs (Table 2). While the use of the various types of substances in Collier County was lower for these drugs than for Florida, the largest variance was only about one percent less in difference.

Table 2. Percentage of Adolescents 10-17 years of age who Reported Having Used
Various Drugs in their Lifetime, Collier County and Florida, 2014

	Collier County	Florida
Alcohol	41.7	42.6
Cigarettes	17.2	17.6
Marijuana or Hashish	21.6	22.6
Synthetic Marijuana	8.7	8.8
Cocaine or Crack Cocaine	3.2	1.9
Heroin	0.8	0.6
Prescription Pain Relievers	5.1	5.5
Over-the-Counter Drugs	4.9	5
Any Illicit Drug	29	30

Data source: Florida Youth Substance Abuse Survey, 2014

Substance use for all categories declined in Collier County among adolescents during the ten year period. The most significant decrease was with tobacco with a 57 percent decrease, followed by prescription pain relievers with a 54 percent decrease, and alcohol with only a 34 percent decrease. In both the county and the state adolescents drivers were more likely to have used marijuana than alcohol. In Collier County, a larger proportion of female adolescents were more likely to have driven a vehicle after using alcohol or marijuana than males. The reverse is the case for Florida, where males were much more likely to drive after having used marijuana than females, and slightly more likely to have driven 29).

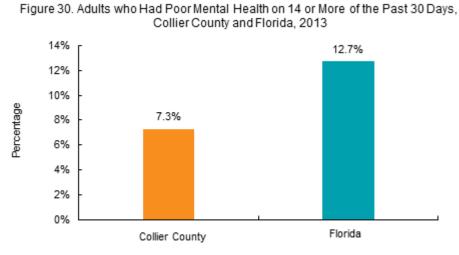


Data source: Florida Youth Substance Abuse Survey, 2014

# **Mental Health**

Mental illnesses are defined as those health conditions that change a person's behavior, feelings or thinking and cause the person distress and difficulty in performing daily life functions. Mental health is important at every stage of life and includes social, emotional and psychological well-being. Collier County residents are surveyed about their mental health status in the Behavioral Risk Factor Surveillance System (BRFSS) Survey.

Collier County residents experienced remarkably lower percentages of individuals who reported poor mental health with a 7.3 percent in 2013 compared to Florida with a 12.7 percent, a difference of 5.4 percentage points (Figure 30). Females were much more likely to have experienced poor mental health than males. Adults in the 45 to 65 age group had the highest percentages of those who report poor mental health days, whereas the lowest percentages were in the older population with 5 percent.



Data Source: Behavioral Risk Factor Surveillance System, 2013

The highest percentage of people reporting poor mental health days was in the less than \$25,000 income group with 11.4 percent, and the lowest percentage was in the \$50,000 or more income group with 4.7 percent (Figure 31). When analyzing by education, the percentage of people reporting poor mental health days was higher for those with a high school diploma or GED than for those with more than a high school diploma.

#### **Mental Health**

Collier County residents experienced remarkably lower percentages of individuals who reported poor mental health with a 7.3 percent in 2013 compared to Florida with a 12.7 percent.

Adults in the 45 to 65 age group had the highest percentages of those who report poor mental health days, whereas the lowest percentages were in the older population with 5 percent.

In 2014, suicide was ranked as the 10th leading cause of death in Collier County.

In Collier County, between 2005 and 2014, there was a slight decrease in suicide deaths, from 9.8 deaths per 100,000 population to 9.3 deaths per 100,000 population. The 45 to 64 age group suicide death rate increased by 7.4 percent, from 18.9 deaths per 100,000 population in 2005 to 20.3 deaths per 100,000 population in 2014.

The higher the income and the more education both translated into improved mental health status.

Public awareness exists on the issue and clearly feels the professional resources are lacking



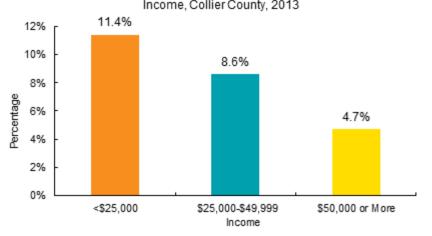


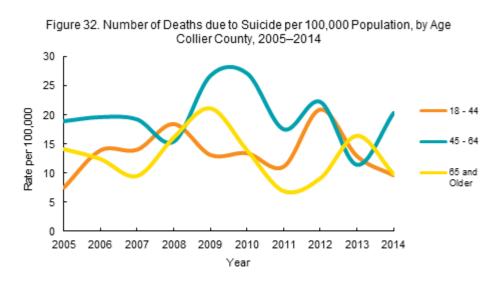
Figure 31. Adults Who Had Poor Mental Health on 14 or More of the Past 30 Days, by Income, Collier County, 2013

Data Source: Behavioral Risk Factor Surveillance System, 2013

#### Suicide

Suicide is a significant preventable public health problem in the United States. It is now the second leading cause of death among persons aged 10 to 34 years, and the fourth leading cause of death among person aged 35 to 54 years. In 2014, suicide was ranked as the 10th leading cause of death in Collier County. Several risk factors including history of depression or other mental illnesses, family history of suicide and previous suicide attempts can increase the likelihood of someone attempting or dying from suicide.

In Collier County, between 2005 and 2014, there was a slight decrease in suicide deaths, from 9.8 deaths per 100,000 population to 9.3 deaths per 100,000 population. For Florida, during the same time period, suicide deaths increased by 13 percent, from 12.3 deaths per 100,000 to 13.9 deaths per 100,000 population. In Collier County, death rate from suicide for males was 5 times higher than females in 2014. The death rate from suicide for non–Hispanics in Collier County was 4.3 times the rate of Hispanics in 2014. The 45 to 64 age group suicide death rate increased by 7.4 percent, from 18.9 deaths per 100,000 population in 2005 to 20.3 deaths per 100,000 population in 2014 (Figure 32).



Data source: Bureau of Vital Statistics. Florida Department of Health

## **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 201 treatment beds for these services (Table 3).

Table 3. Number of S	ubstance Abuse/Psychiatric Bed	s by Facility,	Collier County, 2014
		/ / -	

Facility	Substance Abuse Beds	Psychiatric Beds	Dual Use Beds	Total Beds
Hazelden	47	-	-	47
The Willough of Naples	5	82	-	87
David Lawrence Center	30	24	-	54
Naples Community Hospital	-	-	13	13

Data source: Fibrida Department of Health In Collier County, Epidemiology Program

### **Oral Health**

#### **Oral Health**

In 2012, 79.8% of Collier County residents received optimally fluoridated water compared to 76.6% for all Florida residents.

The only dental care option for many low income people who lack access to preventative dental services is hospital emergency rooms. In 2014, 628 Collier County residents visited hospital emergency rooms for dental conditions considered avoidable with proper preventative dental care.



Persons without private insurance receive care at the Florida Department of Health in Collier County, federally qualified health centers and the Naples Children and Education Foundation Dental Center, along with limited services at the Senior Friendship Center and the Neighborhood Clinic.

The availability of dental health services for children was identified by the community as a concern.



Oral health is essential to a person's overall health, well-being and quality of life. Significant improvements in oral health in the United States over the past 50 years have been primarily due to effective treatment and prevention efforts, which includes community water fluoridation. However, despite major improvements, accessibility to oral health care in those with lower levels of income and education is a challenge.

### **Collier County Specifics**

An individual's ability to access dental care is a major factor in achieving optimal oral health. In Collier County, between 2002 and 2013, the number of dentists increased by 59.5 percent. The majority of dental care in Collier County is provided by dentists in private practice. Individuals with private insurance or those who can afford to pay out of pocket choose providers in private practice to get dental care. Low reimbursement rates discourage the vast majority of private practice dental providers from accepting Medicaid. People without private insurance and who cannot afford out-of-pocket expenses receive care at the DOH–Collier or federally qualified health centers. In 2015, there were only 6 dental centers in Collier County who accepted Medicaid.

The only dental care option for many low income people who lack access to preventative dental services is hospital emergency rooms. In 2014, 628 Collier County residents visited hospital emergency rooms for dental conditions considered avoidable with proper preventative dental care. The total cost of all these visits was \$833,256. Between 2012 and 2014, dental emergency room visits in Collier County decreased by 7.5 percent while the associated cost per dental emergency room visit increased by 40 percent (Table 4). The highest number of emergency room dental visits were among those 20 to 34 years old with more than 500 visits each year.

Table 4. Emergency Room Dental Visits and Associated Hospital Charges, Collier County, 2012 and 2014

	2012	2014
Number of ER Dental Visits	679	628
Total Associated Charges	\$842,537	\$833,256
Cost per ER Dental Visit	\$946	\$1,327

Data source: Agency for Health Care Administration

### Community Water Fluoridation

Community water fluoridation is the adjustment of the existing fluoride level in the drinking water to a level (0.7-1.2 parts per million) recommended by the U.S. Public Health Service. The American Dental Association endorses community water fluoridation as a safe and effective way of preventing tooth decay. In 2012, 79.8% of Collier County residents received optimally fluoridated water compared to 76.6% for all Florida residents.

### **Dental Care Resources**

There are a number of dental care resources which mainly serve low income residents in Collier County. Most high volume sites 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 DOH–Collier, Healthcare Network of Southwest Florida, Ronald McDonald Care Mobile and the Naples Children and Education Foundation Pediatric Dental Center.

The DOH–Collier Dental Clinic currently has 13 full-time staff including three dentists, one hygienist, seven dental assistants and two clerks. The clinic also has a part-time dental hygienist in the tooth fairy program which provides oral health education to Collier County children. In 2015, the clinic served a total of 2,954 dental patients.

The Healthcare Network of Southwest Florida provides dental care services to low income children and families at locations in Immokalee and East Naples and its mobile office, the Health & Smiles Mobile. The Ronald McDonald Care Mobile is a partnership between the Healthcare Network of Southwest Florida and Ronald McDonald House Charities of Southwest Florida. It visits locations throughout Collier County and provides medical and dental care to low income children. The Naples Children Education Foundation (NCEF) Dental Center is a collaborative effort between University of Florida College of Dentistry, Florida SouthWestern State College, and NCEF with 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. DOH–Collier provides emergency services to adults on a daily basis but has limited appointment availability for preventative and restorative work. The Senior Friendship Center and the Neighborhood Health Clinic provide dental care for adults but have limited hours and days of operation.

### 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 146,000 by the year 2040, 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 stressors placed on the families of the aging population group.

### **Population**

In 2040, the population of 65 years of age and older in Collier County is projected to be 1.6 times greater than it was in the year 2014, growing from 92,752 in 2014 to 145,893 in 2040 (Table 5). In 2040, the population of 65 years and above will consist of approximately 30 percent of the total county population.

Table 5. F	Population by Age Di	stribution, Collier (	County, 2014, 2020, 2	2030 and 2040
Age Group	2014	2020	2030	2040
< 65	244,031	247,738	262,999	289,531
65+	92,752	95,498	113,143	145,893
65–74	48,510	49,515	54,897	68,051
75-84	32,754	33,900	42,618	52,347
85+	11,488	12,083	15,628	25,495

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

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

#### Leading Causes of Death of the Older Population

Cancer remains the leading cause of death in Collier County and Florida, with heart disease and Alzheimer's disease as close second and third leading causes of death, respectively. While Alzheimer's disease was the seventh 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 fifth leading cause of death in that age group. In 2014, Alzheimer's disease became the third leading cause of death in this population. By 2030, utilizing conservative population estimates, almost 18,700 Collier residents 65 years of age and over will be diagnosed with

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The increased need for expanding memory care facilities was identified as the population 65 years of age and over continues to grow at historically high rates.

The community perceived that the current market is catering to higher end assisted living facilities despite the increasing need for affordable long-term care and skilled nursing facilities.



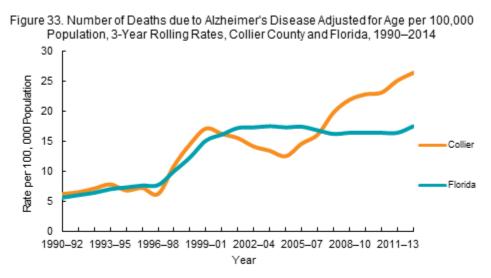
Alzheimer's. Approximately 47 percent of these cases are 65 to 84 years of age, and 53 percent or almost 10,000 residents are 85 years and older. Between 2015 and 2030, the number of residents 85 years and older with Alzheimer's in Collier County will increase by 84 percent (Table 6).

1	able o. Projections o	ftne Number of R	esidents with A	zneimers Disea	se by Age, Collie	County, 2015
		Age Group	65 and Over	65-84	85+	
		2015	12,204	6,804	5,400	
		2020	14,428	7,818	6,610	
		2025	16,096	7,479	8,617	
		2030	18,672	8,712	9,960	

Table 6. Projections of the Number of Residents with Alzheimer's Disease by Age, Collier County, 2015-2030

Data source: U.S. Department of Health and Human Services, Florida Legislative Office of Economic and Demographic Research

The age-adjusted death rate for Alzheimer's disease in Collier County increased by 146 percent between 1995 and 2014. The death rate for Florida during the same time period increased by 167 percent (Figure 33).



Data source: U.S. Census Bureau, Bureau of Vital Statistics

### Mortality

#### **Life Expectancy**

In Collier County, we have the distinction of having the second highest female life expectancy at birth among all of the 3,143 counties in the country.

Between 1990 and 2014, life expectancy in Collier County increased by 6 years, exceeding the national average significantly by 7 percent.

### Leading Causes of Death

In 2014, the 10 leading causes of death in Collier County were cancer, heart disease, Alzheimer's disease, unintentional injuries, chronic lower respiratory disease, cerebrovascular disease, diabetes mellitus, chronic liver disease and cirrhosis, Parkinson's disease and suicide.

During the period between 2000 and 2014, mortality from heart disease declined significantly accounting for 21 percent of all deaths in 2014. This decrease has placed cancer as the leading cause of death in Collier County while heart disease has shifted to the second leading cause. Alzheimer's disease now ranks as the third leading cause, accounting for just over 6 percent of all deaths.

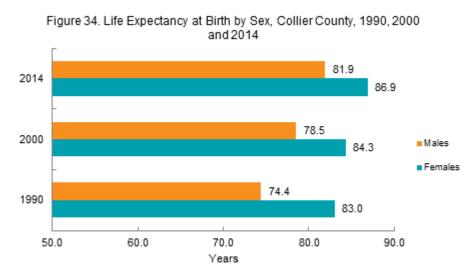
### Actual Causes of Death

Over 48 percent of all deaths in Collier County are potentially preventable. Tobacco has remained the leading cause of preventable mortality. Poor diet and physical inactivity may overtake tobacco as the leading actual cause of death in the near future.

### Life Expectancy

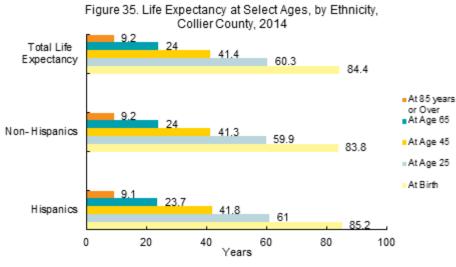
In Collier County, we have the distinction of having the second highest female life expectancy at birth among all of the 3,143 counties in the country. Males in Collier County also have a very high level of life expectancy when compared nationally, only surpassed by ten other counties in the United States.

Between 1990 and 2014, life expectancy in Collier County increased by 6 years, exceeding the national average significantly by 7 percent. Males in Collier County experienced a greater rate of life expectancy increase than females during the 24 year period; however, females continued to maintain a significantly higher level of life expectancy at birth than males, 86.9 years compared to 81.9 years, respectively (Figure 34). This dominance in longevity levels by females has been a biological reality historically throughout the world since life expectancy calculations were first developed during the 1600s.



Data source: U.S. Census Bureau, Bureau of Vital Statistics

The Hispanic population in Collier County on average lived almost 1.5 years longer than the non-Hispanic over the course of a lifetime (Figure 35). This trend of higher life expectancy levels among the Hispanic population is in agreement with national United States data for the country. The most recent health statistics for the United States indicate that the Hispanic population has a life expectancy advantage at birth of 2.7 years over the non-Hispanic white population. The statistical force driving a healthier Hispanic population are multi-faceted; it encompasses the important social determinants of family support, education and the lifestyle behaviors, including very low levels of tobacco use and drug and alcohol abuse particularly within the female Hispanic population.



Data source: U.S. Census Bureau, Bureau of Vital Statistics

#### Leading Causes of Death

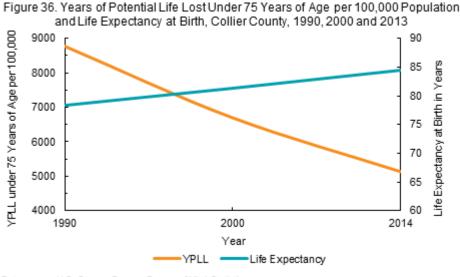
In 2014, the 10 leading causes of death in Collier County were cancer, heart disease, Alzheimer's disease, unintentional injuries, chronic lower respiratory disease, cerebrovascular disease, diabetes mellitus, chronic liver disease and cirrhosis, Parkinson's disease and suicide. These 10 causes accounted for approximately 77 percent of all deaths occurring in the county.

During the period between 2000 and 2014, mortality from heart disease declined significantly accounting for 21 percent of all deaths in 2014. This decrease has placed cancer as the leading cause of death in Collier County while heart disease has shifted to the second leading cause. Alzheimer's disease now ranks as the third leading cause, accounting for just over 6 percent of all deaths. Deaths from Alzheimer's disease are increasing annually as the population in Collier County and the country continues to age.

Diabetes remained the stationary seventh leading cause of death in the county during 2000 and 2014. While cerebrovascular disease was the third leading cause of death in 2000, in 2014, it fell to 6th place. Unintentional injuries was the 5th leading cause in 2000, in 2014 it became the 4th leading cause of death. Chronic liver disease and cirrhosis remained the 8th leading cause of death in 2014, just as in 2000.

### Years of Potential Life Lost

Compared to mortality rates, Years of Potential Life Lost (YPLL) places an emphasis on the processes or catalysts underlying premature mortality in a geographical area. YPLL supplements the mortality rate of a population by placing priority on and quantifying deaths in a county and state which are considered preventable. YPLL, by definition in public health, may be interpreted as a measure of preventable mortality for causes particularly those that are associated with lifestyle choices and behavioral risks. The level of YPLL within a geographical area is correlated with the educational and income level of the population as well as the public health prevention and planning strategies and priorities of a community. YPLL may be thought of as an inverse measure of life expectancy. As YPLL decreases over time life expectancy at birth and at other ages increases on a relative basis (Figure 36).



Data source: U.S. Census Bureau, Bureau of Vital Statistics

While suicide and homicide are not among the leading causes of death, these two causes create a heavy burden on public health, particularly among males in the local community, than other causes such as chronic lower respiratory disease, diabetes and cerebrovascular disease. At the same time select violent causes of death tend to occur at younger otherwise healthier ages thus subtracting years from an otherwise expected average life expectancy.

#### Actual Causes of Death

Since the early 1990s, the public health and medical community of the United States has been placing emphasis and public importance on the major external and modifiable influences and factors that contribute overwhelmingly to mortality in our communities. These lifestyle and behavioral factors may not contribute to every single death; however, they are associated and correlated with a plurality, if not a majority, of all deaths in every county and state in the United States annually.

Over 48 percent of all deaths in Collier County are potentially preventable. Tobacco has remained the leading cause of preventable mortality (Table 7). Poor diet and physical inactivity may overtake tobacco as the leading actual cause of death in the near future. Tobacco use has declined over the latter part of the 20th through the 21st century, while the prevalence of poor diet and physical inactivity, which lead to obesity, is continuing to increase at a consistent pace.

#### Table 7. Actual Preventable Causes of Death, Collier County, 2014

	Estimated Number	Percentage Distribution
Tobacco	554	18.1
Poor Diet and Physical Inactivity	508	16.6
Alcohol Consumption	107	3.5
Infectious Diseases	95	3.1
Toxic and Chemical Agents	70	2.3
Motor Vehicle Crashes	55	1.8
Firearms	40	1.3
Sexual Behavior	25	0.8
Illicit Drug Use	22	0.7
Actual Total Preventable Causes of Death	1,476	48.2

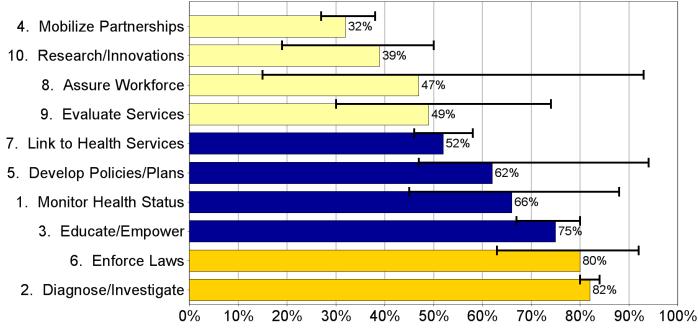
Source: Bureau of Vital Statistics. Calculations performed by FDOH - Collier County, Epidemiology Program

The recent decline in life expectancy levels for select demographic population groups throughout the United States support the urgent need to continue to provide preventive education and strategies within the public health system related to exercise and physical activities as well as dietary choices and habits.

## LOCAL PUBLIC HEALTH SYSTEM ASSESSMENT

In March of 2012, the Collier County Health Department led the second Local Public Health System Assessment (LPHS) 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. This assessment is generally completed every five years, the next local public health system assessment is planned for 2017.

### **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).

### **COMMUNITY THEMES AND STRENGTHS ASSESSMENT**

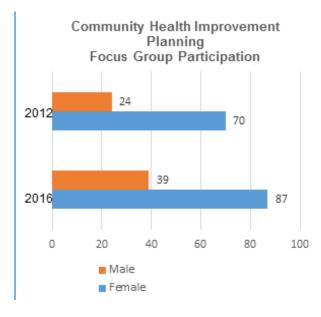
### **Overview**

During the months of January 2016 through April 2016, the Florida Department of Health in Collier County, in partnership with NCH Healthcare System, obtained community input regarding health and quality of life issues for those residing in Collier County via completion of a community health survey and twelve focus group discussions.

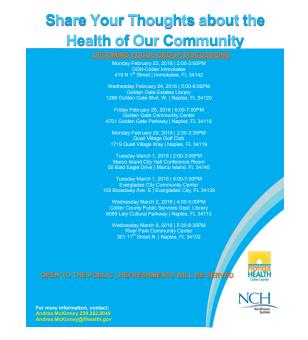
Between January 15, 2016 and February 3, 2016, preliminary data was obtained via an initial electronic survey request of community leaders and community health care partners. 124 responses to the electronic survey request were received from representatives of Collier County Public Schools, Collier County Sheriff's Office, Drug Free Collier, Early Learning Coalition of Southwest Florida, Florida Department of Health in Collier County, Florida Gulf Coast University, Grace Place, Healthcare Network of Southwest Florida, Naples Alliance for Children, Naples City Manager's Office, NCH Healthcare System, Physician's Regional Healthcare System and Youth Haven.

Electronic Survey Results: The identified problem areas and percentage of respondents that did not believe the affirmative statements to be true are listed below in order of level of disagreement.

<u>[</u>	)isaqree
There is a problem with drug and alcohol abuse in the county (Agree)	90.3%
Residents of Collier County have access to affordable housing	86.3%
Roadways are safe for bicyclists and pedestrians	72.6%
There are sufficient job employment and economic opportunities	69.4%
There are enough choices/ available beds in community for long term care	66.9%
There is access to affordable, healthy foods in people's neighborhoods	63.7%
There are networks of support (including mental health)	58.9%
There are enough dental services for children	55.6%
There are enough dental services for adults	55.6%



Between February and April 2016, twelve focus group discussions were held. Communities throughout Collier County were represented and included East Naples, Everglades City, Golden Gate Estates, Immokalee, Marco Island, City of Naples, Naples Senior Center, and North Naples. In 2016, focus group participation increased by approximately 34 percent from 2012. Participation from females continues to outnumber males, although the male participation rate did increase by approximately 5 percent in 2016. In order to better reflect the composition of the county, deliberate efforts were made to solicit input from seniors including focus groups at gated communities catering to retired residents in East Naples and North Naples, as well as hosting a focus group discussion at the Naples Senior Center. As a result, focus group participation for those over age 60 increased from 9 percent in 2012 to 40 percent in 2016.



Focus group participants also were asked to prioritize ten different healthcare related areas. For each community health assessment focus group, the ten public health categories were ranked by their order of importance for Collier County as perceived by the attendees. Subsequently, the summation of totals for the ten categories were obtained by summing up the priority cumulative ranking for all participants. This technique results in a lower cumulative total score for those categories ranking the highest. The lower the cumulative score, the higher the relative importance of the public health category.

All Focus Groups	September, 2012	Chronic Diseases 1	Access to Care 2	Obesity 3	Alcohol & Drug Abuse 4	Mental Health 5	Health of the Elderly 6	Communicable Diseases 7	Dental Health 8	Disabilities 9	Unintentional Injuries 10
(Combined)	April, 2016	Chronic Diseases 1	Mental Health 2	Access to Care 3	Alcohol & Drug Abuse 4	Obesity 5	Health of the Elderly 6	Communicable Diseases 7	Disabilities 8	Dental Health 9	Unintentional Injuries 10

Results Top Five Priority Health Rankings

- 1) Chronic Diseases (heart disease, diabetes, cancer)
- 2) Mental Health
- 3) Access to Care
- 4) Alcohol & Drug Abuse
- 5) Obesity

## FORCES OF CHANGE ASSESSMENT

On April 1, 2016, the Florida Department of Health in Collier County hosted a Greater Leadership focus group to discuss the results of the Community Themes and Strengths Survey and the survey's implications for the community. In addition, community leaders brainstormed in small groups to develop a comprehensive list of trends, events, and factors that affect the health of the community and/or the local public health system. The results of the Forces of Change identification are documented below:

FORCE	THREATS POSED	OPPORTUNITIES CREATED			
Social					
Large undocumented population	Cultural Barriers     Fear of arrest/deportation     Lack of trust	<ul> <li>Develop new partnerships to address their healthcare needs</li> </ul>			
Growing older population	<ul> <li>Lack of skilled nursing facilities</li> <li>Increased need for memory care facilities</li> <li>Car dependent community designs may limit future access and mobility</li> <li>Increasing use of medical and emergency resources/capacity</li> </ul>				
Disproportionate # of retirees	Strain on services-Medicare providers     Long term care facility shortage     Lack of locally available Medicaid beds	Community partnerships     Collaboration with neighboring     counties/communities			
Influx of young families	Services not available where needed and at right capacity     Lack of community involvement	<ul> <li>Workers to support economic expansion</li> <li>Opportunity to engage via coalitions, community partnerships</li> </ul>			
Changing values/breakdown of nuclear family structure	· Less physical activity · Less parental supervision	Instill healthy habits at young age     Use of technology to provide     education and encourage     participation in community events			
Extreme variance in income levels (very poor to extremely wealthy)	Market caters to very wealthy and poor but sometimes neglects middle class	· Charitable giving			
Elitism Blue Zones Project	Needs of poor/underserved are ignored     Resistance from a vocal minority	Community outreach/education     Community Partnerships     Improved health outcomes     Decreased medical expenditures     Improved longevity & quality of life			
Alcohol use accepted/encouraged	<ul> <li>Increased mental health issues</li> <li>Associated expenses medical/insurance</li> </ul>	Provide alternative choices, healthier activities			
Economic					
Improving economy	<ul> <li>Increased automobile pollution</li> <li>Roads become less safe for drivers,</li> </ul>	<ul> <li>Increasing pay and employment opportunities</li> <li>Healthcare coverage as employee</li> </ul>			
	bicyclists, and pedestrians	benefit · Increased tax revenue			
New construction boom	Catering to wealthy clientele     Lack of space for new/ affordable homes for working families     Strain on infrastructure, healthcare and park capacity, especially during season	<ul> <li>Increased employment in construction, real estate and associated jobs as population increases</li> </ul>			
Large seasonal/tourist influx	<ul> <li>Unsafe roads with drivers from out of state/ country unfamiliar with local laws</li> <li>Seasonal jobs vs full time positions</li> </ul>	· Economic driver for local businesse			

FORCE	THREATS POSED	OPPORTUNITIES CREATED
Increasing housing costs/lack	· Increased commute times for working class	· Community redevelopment
of affordable housing	· Shortage of public services sector employees	opportunities to provide
	(teachers, sheriff, police, ems)	affordable housing and eliminate/
	· Hard to recruit/retain	prevent blight
Insurance premium increases	· Increase in uninsured	· Healthcare exchanges
	· Use of ER as primary care	
Deduced funding for Medicere	· 70% of local population are Medicare clients	
Reduced funding for Medicare		
	Financial impact on service providers	
Delayed as the assess	Medicare provider shortage	lah akada a
Delayed retirement	· Generational competition for limited # of jobs	· Job sharing
	· Increased unemployment, delayed employment	· Partial retirement
	<ul> <li>Reduced access to healthcare employment benefits</li> </ul>	Mentoring opportunities
	· Lack of youth employment opportunities	
25% of children living in poverty	Improper nutrition/obesity	
	· Neglected dental care	
Political/Legal		
Marijuana legalization	· Leads to social acceptance of drug use	· Treatment for medicinal purposes
	· Easier access for kids	<ul> <li>Economic benefits if legalized (tax revenue)</li> </ul>
Affordable Care Act	· Uncertain future	Access regardless of pre-existing conditions
	· Rapidly increasing premiums/inadequate	· Innovation opportunities regarding
		access to care
	· Federal role in local healthcare decisions	
	Reduced ability to customize local healthcare	
Increasing legislative	Shift to concierge medicine	
	Reduced acceptance of Medicare patients	
requirements/complexity for		
Medicare	· Increasing administrative expense	Eron an da dura della <i>ta</i> rica ta
Civic involvement/inclusion		Expanded public/private
		community partnerships
		· Community design improvements
Anti-immigrant atmosphere	· Reduced integration/assimilation	· Focused community engagement
	· Community isolation	opportunities to address issues of
		undocumented community
Technological/Scientific		
Electronic health information	· Not interconnected	· Improve efficiency/reduce errors
exchange	· Fragmented care	
Tele-medicine	· Quality/level of care concerns	<ul> <li>Increased access, affordability,</li> </ul>
		and availability
Science, Technology,	· Local candidate shortage	· Education focus
Engineering and Mathematics (STEM) jobs		· Internship opportunities
Environmental		
Habitat preservation	· Impact on wildlife, water quality, tourism industry	· Expanded preservation efforts
Water and air quality concerns/	· Lead and bacterial contamination of water supply	· Modernize infrastructure
Aging Infrastructure	· Inadequate testing of wells	· Expanded well testing program
	· Increase in chronic disease and developmental	· Employment opportunities
	issues	<ul> <li>Expanded use of electric/hybrid vehicles</li> </ul>
Warming environment/climate	L Emerging infections/discases	
<b>u</b>	· Emerging infections/diseases	
change	· Increase in volatile weather	Nove to also also as
Improper disposal of medication	· Environmental impact on water supply	· New technology
		<ul> <li>Educational opportunities</li> </ul>

FORCE	THREATS POSED	OPPORTUNITIES CREATED
Pesticide exposure to agricultural	<ul> <li>Increase in chronic disease and</li> </ul>	<ul> <li>Education regarding proper</li> </ul>
workers	developmental issues	application, exposure mitigation and
	· Exposure testing concerns	testing
Mosquito Control/infectious disease	Increase in Zika and other diseases	· Collaborations with various agencies
Medical		
Lack of sufficient county-wide	<ul> <li>Senior and mobility challenged population</li> </ul>	<ul> <li>New transportation partnerships</li> </ul>
medical transportation services	cannot access healthcare	<ul> <li>Expand neighborhood clinics</li> </ul>
Increase in Concierge Medicine	<ul> <li>Shortage of accessible/affordable care</li> </ul>	· Establish local residency program
Provider shortage	<ul> <li>Shortage of accessible/affordable care</li> </ul>	· Establish local residency program
_		<ul> <li>Import physicians from other</li> </ul>
		locations/market SWFL
Funding/reimbursement challenges	<ul> <li>Shift to concierge services</li> </ul>	
	· Refusal to accept Medicare patients	
Access to care	<ul> <li>Untreated illness and chronic disease</li> </ul>	
	<ul> <li>Increase in future medical outlays</li> </ul>	
	· Strain on emergency services	
Ethical		
End of life decisions	· Abuse/neglect of older population	
	· Family stress	
	· Adverse financial outcomes	
Genetic screening/engineering	· Discrimination	· Reduce/prevent genetic disorders in
		newborns
	· Increased insurance cost/inability to obtain	· Treatment innovations
	coverage	
	· Selective reproduction	
Access for poor and underserved	· Reduced integration/assimilation	· Community education regarding
communities		existing support programs
	· Community isolation	· Expanded private/public partnerships
	· Negative health outcomes	Community outreach
Undocumented population is often	· Reduced integration/assimilation	· Focused community engagement
left out, discarded	<ul> <li>Community isolation</li> </ul>	opportunities to address issues of
	<ul> <li>Negative health outcomes</li> </ul>	undocumented community
Economic inequity	Inefficient service mix	
	<ul> <li>Service provider gaps</li> </ul>	
	· Community impact	

### Conclusion

The Forces of Change Assessment results were also reviewed by the DOH-Collier leadership team to assure that all critical influencing factors are identified. The threats and opportunities identified during this assessment will be considered and addressed as the Community Health Improvement Planning process continues.

# **STRATEGIC ISSUES**

## Access to Healthcare

LUCAL PUBLIC HEALTH STSTEM	HEALIH STATUS ASSESSMENT
<ul> <li>LOCAL PUBLIC HEALTH SYSTEM</li> <li>Lack of a process for identifying and engaging key stakeholders for improving access to health care.</li> <li>Lack of 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>Limited coordination to optimize the access to services for populations who are disenfranchised or who encounter barriers to care.</li> <li>No formal assessment of the LPHS workforce composition and apper related to workforce size skills and experience.</li> </ul>	<ul> <li>HEALTH STATUS ASSESSMENT</li> <li>HEALTH INSURANCE</li> <li>In 2014, 18.7% of the total resident population was uninsured as compared to 16.6% for the state of Florida.</li> <li>In 2014, the core working population 18-64 years of age, 30.7% were without health insurance in Collier.</li> <li>Almost 39.2% of Hispanics are without health insurance.</li> <li>Between 2010 and 2014, both males and females uninsured experienced a greater than 4% reduction in their uninsured rates.</li> <li>In 2014 the uninsured Collier County population with less than a high school education was 52.6%.</li> <li>COUNTY HEALTH RANKINGS ACCESS TO CARE</li> </ul>
gaps related to workforce size, skills and experience.	<ul> <li>COUNTY HEALTH RANKINGS ACCESS TO CARE INDICATORS</li> <li>Primary care provider ratio decreased from 1,474 population per primary care provider in 2011 to 1,433 in 2013.</li> <li>Percent of Medicare enrollees screened for diabetes increased from 86% in 2010 to 87% in 2013.</li> <li>HEALTH CARE RESOURCES</li> <li>Between 2005 and 2014, the rate of total hospital beds per 100,000 population increased by 31%. The rate of specialty</li> </ul>
<ul> <li>FORCES OF CHANGE</li> <li>Affordable Care Act increasing health insurance premium.</li> <li>Reduced funding for Medicare will cause a provider shortage which reduces access to affordable care.</li> <li>Increasing legislative requirements and complexity to Medicare</li> </ul>	<ul> <li>beds increased between 2005 and 2014, by 7%. During the same period the rate of acute case beds increased by 37%.</li> <li>Total licensed physicians per 100,000 population increased by 33% between 2005-2014.</li> <li>Between 1995 and 2014, the population 75 years and overgrew by 119% and the population 65 years of age and overgrew by 82%.</li> </ul>
<ul> <li>reduce acceptance of Medicare patients.</li> <li>Growing senior population in need of more affordable skilled nursing.</li> <li>Influx of young families, services not available where needed and at the right capacity.</li> <li>Cultural barriers for large undocumented population.</li> <li>Disproportionate # of retirees causes a strain on services and Medicare providers.</li> <li>Shift to concierge medicine has reduced patient access to their services.</li> <li>Electronic Health Information exchanges not interconnected causing fragmented care.</li> <li>Limited # of pediatric acute care beds.</li> </ul>	<ul> <li>THEMES AND STRENGTHS</li> <li>Shortages of healthcare professionals specifically those that service Medicare/Medicaid.</li> <li>Need for more health care providers in Everglades City and Immokalee.</li> <li>Transportation barriers to accessing health care.</li> <li>Administrative and regulatory burdens of Medicare reducing the number of primary care providers.</li> <li>Movement of primary care physicians to concierge providers.</li> <li>Long wait times for appointments especially in season.</li> <li>Shortage of sufficient Medicaid beds make placement in long-term care facilities challenging.</li> <li>Establishment of Collier County Senior Centers</li> <li>Market for the wealthy with construction of numerous high end assisted living facilities, despite an increasing need for affordable long term care and skilled nursing facilities.</li> <li>The use of emergency room for primary care because of its immediate 24 hour availability.</li> <li>Limited access to women's reproductive healthcare options.</li> </ul>

## **Chronic Disease and Obesity**

LOCAL PUBLIC HEALTH SYSTEM	HEALTH STATUS ASSESSMENT
<ul> <li>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.</li> <li>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 17 years.</li> <li>The work of DOH-Collier's Tobacco Prevention Program over the past 17 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.</li> <li>Local pediatricians are addressing obesity with families.</li> <li>The State of Breastfeeding Committee is working to change the breastfeeding culture in hospitals and in obstetric offices. Breastfeeding culture in hospitals and in obstetric offices. Breastfeeding culture in hospitals and in obstetric offices.</li> <li>25% of children live in poverty have improper nutrition and neglected dental care.</li> <li>Changing family structure, less supervision and physical activity for children.</li> <li>Healthy Communities Coalition and Blue Zones Project to promote policy, systems and environmental change to impact obesity and inactivity epidemics.</li> <li>Use of technology to provide education and encourage participation in community events.</li> </ul>	<ul> <li>CHRONIC DISEASE, OBESITY &amp; HEALTH BEHAVIORS</li> <li>Approximately 50% of all adults in Collier County have at least one chronic condition or disease.</li> <li>Chronic disease accounts for 70% of all deaths in Collier County or 5.5% of all deaths.</li> <li>During the decade 2005-2014, the death rate from all cancers declined by 19 % in Collier County and by 11% in Florida</li> <li>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.</li> <li>In 2013, 20.8% of Collier County adults indicated they were obese. Males are more likely to be obese than females in both Collier County and Florida.</li> <li>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.</li> <li>In Collier County, at least 18% of all deaths (1 in 5) are associated with cigarette smoking.</li> <li>In 2013, 13.9% of adults in gaged in heavy or binge drinking in Collier County.</li> <li>THEMES AND STRENGTHS</li> <li>Unhealthy food is often cheaper, easier to access and easier to prepare compared to healthy alternatives.</li> <li>Lack of worksite wellness programs and onsite fitness facilities.</li> <li>Many Parks and Recreational opportunities.</li> <li>Community design is car-centric and discourages walking and biting.</li> <li>Community ducation programs focus on proper nutrition to prevent chronic disease.</li> <li>Exposure to tobacco, vaping and flavored nicotine advertisements.</li> <li>Lack of comprehensive community health coalition to address problems.</li> </ul>

### Mental Health and Alcohol & Drug Abuse

LOCAL PUBLIC HEALTH SYSTEM	HEALTH STATUS ASSESSMENT
LOCAL FODLIC HEALTH STOTEM	HEALTH STATUS ASSESSMENT
<ul> <li>LOCAL PUBLIC HEALTH SYSTEM</li> <li>Scarcity of relevant health indicators, health needs and resource data on persons with mental health (MH) and substance abuse (SA) health problems.</li> <li>Insufficient resources to support a coordinated effort to collect and analyze mental health and substance abuse data at the county level.</li> <li>Limited number of licensed adult mental health and substance abuse beds 2014: Hazelden (47 SA beds); Willough (82 MH and 5 SA beds); David Lawrence (24 MH and 30 SA beds) and Naples Community Hospital (13 dual diagnosis beds).</li> <li>Limited initiatives for coordination of sparse social services to assure linkage to care for vulnerable populations with mental health and substance abuse problems.</li> <li>There is no established communication mechanism to provide ongoing, informed participation in community decision making process designed to address strategic health issues.</li> <li>Limited detox and treatment programs for substance abuse.</li> </ul>	<ul> <li>In 2013 the Behavioral Risk Factor Surveillance System (BRFSS) showed 92.7% of residents reporting having good mental health, about 5% points higher then the portion in Florida.</li> <li>About 7.3% of residents reporting having poor mental health on 14 or more of the past 30 days compared.</li> <li>Demographic factors related to an increase in PMHD's in the 2013 BRFSS were: gender (female); age (45-64 age group); income (under \$25,000) and lower education level.</li> <li>SUICIDE</li> <li>In 2013, the suicide rate slightly decreased from 9.8 to 9.3 deaths per 100,000 population in the ten year period 2005 to 2014.</li> <li>Additional factors associated with increased suicides were gender (male) and ethnicity (Hispanic).</li> <li>ALCOHOL &amp; DRUG USE</li> </ul>
FORCES OF CHANGE	<ul> <li>In 2013, the proportion of residents who engage in heavy or binge drinking is 18.1%.</li> </ul>
<ul> <li>• Lack of mental health and substance abuse coverage through the federal health exchanges.</li> <li>• Decreased tax base which limits available health and human service funds.</li> <li>• National marijuana legalization trend leads to social acceptance of drug use.</li> <li>• Lack of mental health facilities for children and adults.</li> <li>• Limited number of Medicaid providers.</li> </ul>	<ul> <li>The highest prevalence of heavy or binge drinking is in the younger population (18 – 44 years).</li> <li>David Lawrence Center provided services to 3,580 adults in 2014, 28% were treated for substance abuse.</li> <li>NCH Healthcare System had 116,478 emergency room visits in 2014, 739 were admitted for alcohol intoxication and/or drug overdose.</li> <li>Intoxication of overdose was identified as the 6th most common cause of death among juveniles.</li> </ul>
<ul> <li>Increasing risk as users switch from prescription opioid pills to less regulated and cheaper street drugs.</li> <li>Increased mental health issues and limited mental health beds for youth and adults.</li> </ul>	<ul> <li>THEMES AND STRENGTHS</li> <li>Distance and transportation barriers to receiving care.</li> <li>Mental health stigma discourages accepting care and diagnosis.</li> <li>Alcohol and drug users treated criminally rather than as an illness.</li> <li>Lack of comprehensive community health coalition to address problems.</li> <li>Drinking (alcohol consumption) is a cultural norm in Collier.</li> <li>Prescription opioid drugs are freely available in parents' and grandparents' medicine cabinets.</li> <li>Lack of educational programs focusing on preventing drug and alcohol use.</li> </ul>

## **COMMUNITY RESOUCES RELATED TO STRATIGIC ISSUES**

Rate per 100,000	County	Florida
Physicians	271.2	275.7
OB/GYNs	13.2	10.2
Pediatricians	14.1	18.7
Dentists	75.3	59.5

### Licensed Health Providers (2014)

### Facilities

Rate per 100,000	County	Florida
Total Hospital Beds	287.2	317.3
Acute Care Beds	240.5	260.3
Specialty Beds	46.7	57
Nursing Home Beds	266.9	426.7

### **County Health Department**

Rate per 100,000	County	Florida
Health Department FTE	48.2	51.1
Health Department Expend.	\$34.53	\$37.21

### Health Insurance

Rate per 100,000	County	Florida
With Insurance*	281,847 (81.3 percent)	16,338,196 (83.4 percent)
No Insurance*	64,995 (18.7 percent)	3,245,161 (16.6 percent)

\*Civilian non-institutionalized population

### **Older Population Support**

Alzheimer's Support Network	Alienated Grandparents Anonymous
Area Agency on Aging in SWFL	Assisting Hands Home Care
Brookdale Center for Healthy Aging and Rehab	Care Club of Collier County
Catholic Charities	Adult daycare and respite care
Collier County Legal Aid	Collier Housing Authority
Collier Senior Resources	Collier County Services for Seniors
Friendship Health Clinic	Dr. Piper Center for Social Services
SHINE (Serving Health Insurance Needs of Elders)	PASFI Parkinson's Association of South Florida, Inc.
Harry Chapin Food Bank	Golden Gate Senior Center
The League Club	Hope HealthCare Services
Leadership Coalition on Aging	Palliative Care (Avow, Vitas, & NCH Inpatient/Outpatient)
Shelter for Abused Women-Elder Abuse	Sanitasole-Marco Island-Adult Day Health Services
Lighthouse of Collier CHD Retired and Senior Vol- unteer Program (RSVP)	Jewish Family and Community Services Naples Senior Center Senior Outreach and Support Services

### Mental Health and Substance Abuse

Facility	Specifics
Hazelden	47 licensed SA beds, Inpatient and outpatient treatment
The Willough	87 total beds, 82 psychiatric, 5 SA treatment inpatient and outpatient
David Lawrence	54 total beds, 24 Mental Health Beds (20 adult and 4 child), SA Beds 30, inpatient and outpatient treatment
NCH Downtown Psychiatric Unit	13 licensed beds, dual diagnosis, no outpatient

### **Oral Health**

Facility	Specifics
HealthCare Network of SWFL	12 chairs (Immokalee)*
	12 chairs (Countryside)
	6 chairs (new clinic near Neapolitan)
	(DOC's clinic to be held at this facility)
	2 chairs (Health & Smile Mobile Clinic)
	2 chairs (Ronald McDonald Mobile Clinic)
	*Adults only
NCEF/University of Florida Clinic	17 chairs (complicated treatment for children)
DOH-Collier County	7 chairs (children and adults)
Friendship Center	3 chairs (adults 50 and over)
Neighborhood Health Clinic	2 chairs (working adults)
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
Healthy Communities Coalition (DOH-Collier)
Safe & Healthy Children's Coalition of Collier County
Local health care providers
Tobacco Control Program and Tobacco Free Partnership (DOH-Collier)
Healthy Pathways / Blue Zones Project

### General

Health Planning Council of Southwest Florida - Southwest Florida Resource Link (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 problemAccountability: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<br/>improvement.



Florida Department of Health in Collier County 3339 East Tamiami Trail, Ste. 145 Naples, Florida 34112-4961 239-252-8200

The 2016 Collier County Community Health Assessment was submitted July 29, 2016.

For additional information on the features highlighted in the 2016 Community Health Assessment, please visit our website at http://collier.floridahealth.gov