

2015

Bay County Community Health Assessment

In partnership with McLaren Bay Region, Bay Arenac Behavioral Health Authority, Bay Health Plan, and Health Delivery Inc. Funding also provided by Bay County Community Foundation

10/1/2015



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Purpose

The purpose of the Bay County Community Health Assessment (CHA) is to measure the health status of the community. The CHA is comprised of data collected from various sources including the Michigan Department of Health and Human Services, U.S. Census Bureau, Kids Count Data Center, Michigan Behavioral Risk Factor Surveillance Survey, Michigan Profile for Healthy Youth, and the County Health Rankings. Data collected will be analyzed to identify gaps and needs of the community, and used to create a Community Health Improvement Plan.

The Community Health Assessment was completed in partnership with McLaren Bay Region, Bay Arenac Behavioral Health Authority, and Bay Health Plan. Funding was also provided by the Bay Area Community Foundation and Health Delivery Inc.

Data Limitations

The data represented in this report are from secondary data sources. As such, limitations exist in the interpretation of the data due to small sample sizes and representativeness of the county. Data from such sources may also be collected over a span of time in order to maximize the sample size as is the case with the Michigan Behavioral Risk Factor Survey (MiBRFS).

The **Michigan Behavioral Risk Factor Surveillance System** (MiBRFSS) is composed of annual, state-level telephone surveys of Michigan residents, aged 18 years and older. These annual, state-level surveys, also known as Michigan Behavioral Risk Factor Surveys (MiBRFS) act as the only source of state-specific, population-based estimates of the prevalence of various behaviors, medical conditions, and preventive health care practices among Michigan adults.

The MiBRFS is broken down into multiple reports. The Bay County CHA used the region-specific and local health department-specific prevalence rates of health risk behaviors, preventive health practices, and chronic conditions. This data is computed using a five year combined Michigan BRFSS dataset that maximizes the available sample size

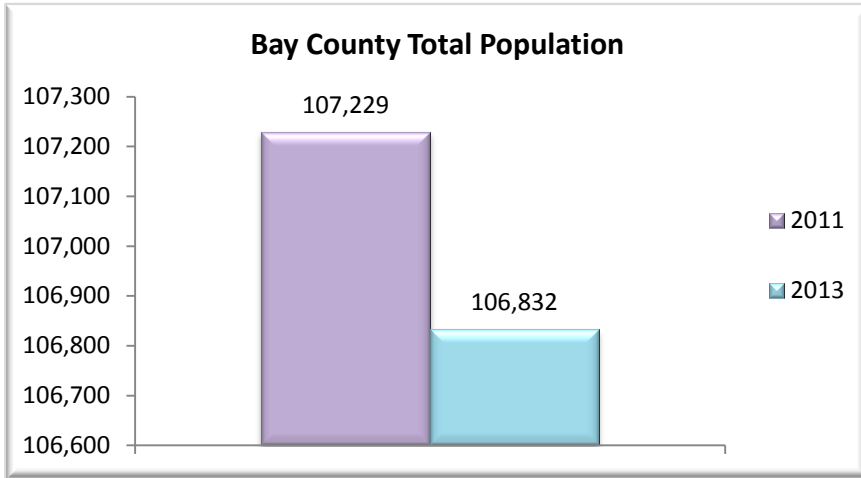
The **Michigan Profile for Healthy Youth** (MiPHY) is an online student health survey offered by the Michigan Departments of Education and Health and Human Services to support local and regional needs assessment. The MiPHY provides student results on health risk behaviors including substance use, violence, physical activity, nutrition, sexual behavior, and emotional health in grades 7, 9, and 11. The survey also measures risk and protective factors most predictive of alcohol, tobacco, and other drug use and violence. MiPHY results, along with other school-reported data, will help schools make data-driven decisions to improve prevention and health promotion programming.

The **County Health Rankings** are based on a model of population health that emphasizes the many factors that, if improved, can help make communities healthier places to live, learn, work and play. Building on the work of America's Health Rankings, the University of Wisconsin Population Health Institute has used this model to rank the health of Wisconsin's counties every year since 2003. The rankings are compiled using county-level measures from a variety of national and state data sources. These measures are standardized and combined using scientific-informed weights.

KIDS COUNT is a project of the Annie E. Casey Foundation to track the well-being of children in the United States. By providing high-quality data and trend analysis through its KIDS COUNT Data Center, the Foundation seeks to enrich local, state and national discussions concerning ways to secure better futures for all children — and to raise the visibility of children's issues through a nonpartisan, evidence-based lens. In addition to including data from the most trusted national resources, the KIDS COUNT Data Center draws from more than 50 KIDS COUNT state organizations that provide state and local data, as well publications providing insights into trends affecting child and family well-being

Population Trends in Bay County

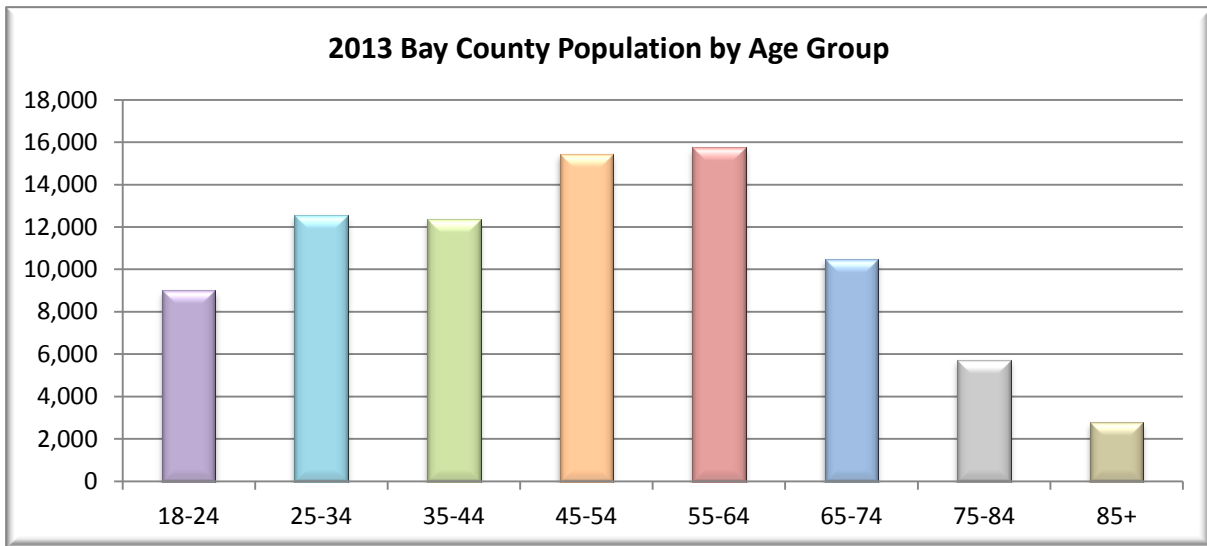
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Bay County continues to see a steady decline in population.

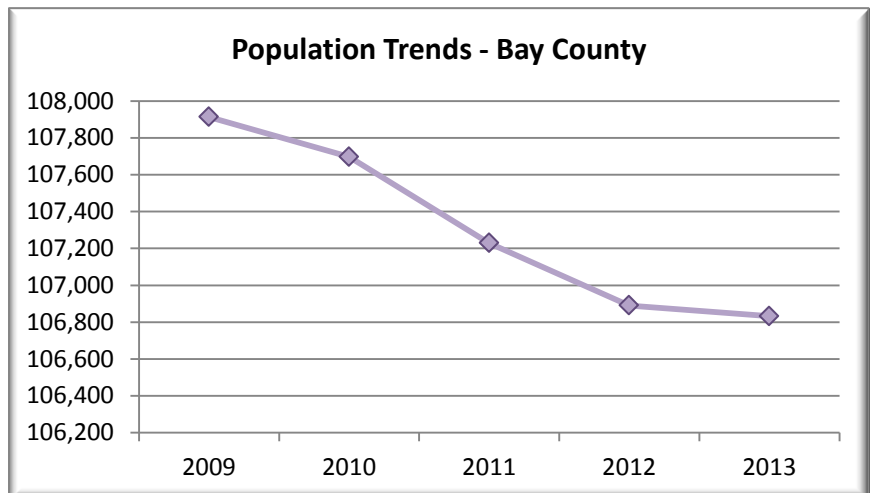
The majority of Bay County residents are between the ages of 45 and 64.

Source: Michigan Department of Health and Human Services, Population Trends



Source: Michigan Department of Health and Human Services, Population Trends

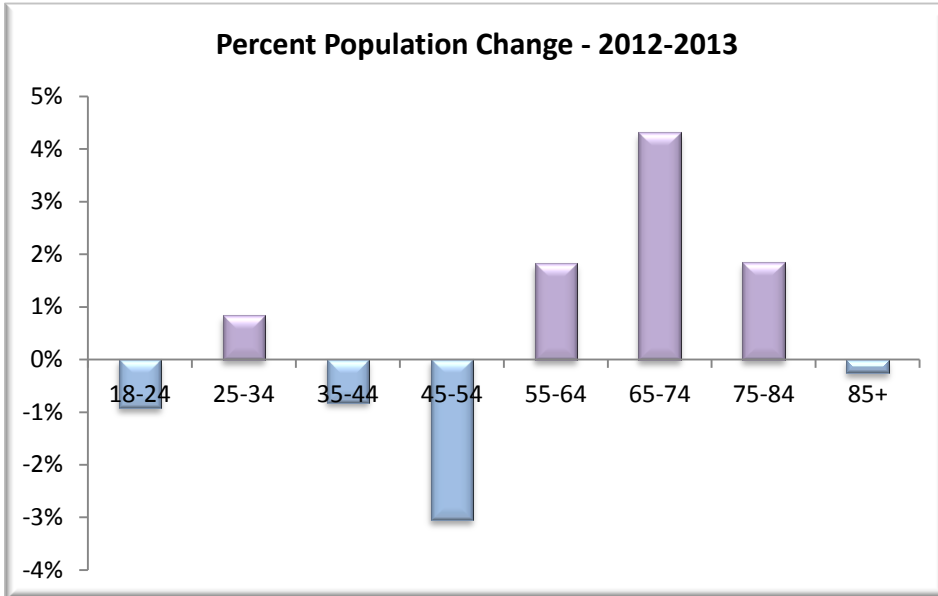
Bay County has seen a 1% decrease in total population since 2009.



Source: Michigan Department of Health and Human Services, Population Trends

Population Trends in Bay County

2015 Bay County Community Health Assessment



Source: Michigan Department of Health and Human Services, Population Trends

Bay County has the highest senior population in the state.

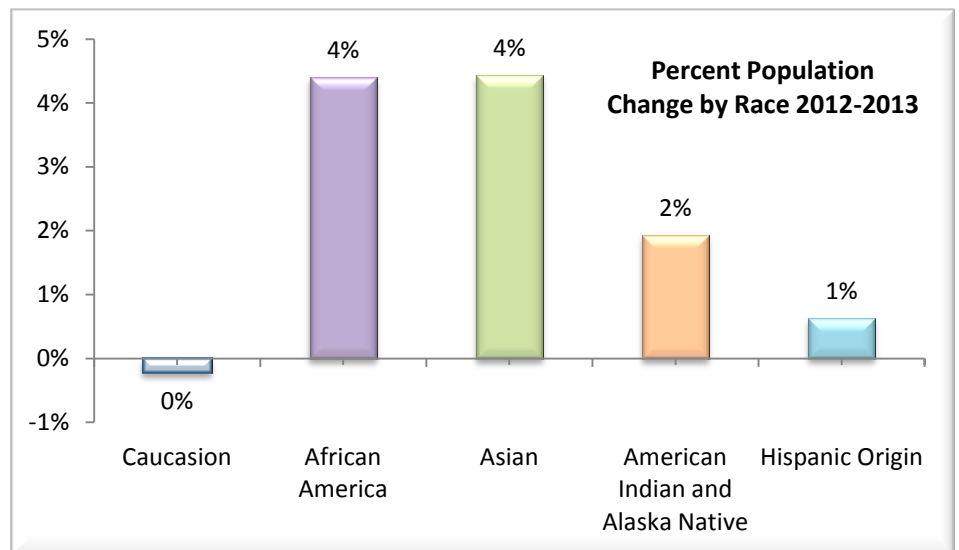
Bay County continues to see a change in its demographic make-up with noticeable increases in the 55-84 year old age group.

65-74 year olds saw the largest increase in population at 4%

The largest decrease in population was among 45-54 year olds at 3%

Bay County also continues to see a slight change in the demographic make up the county.

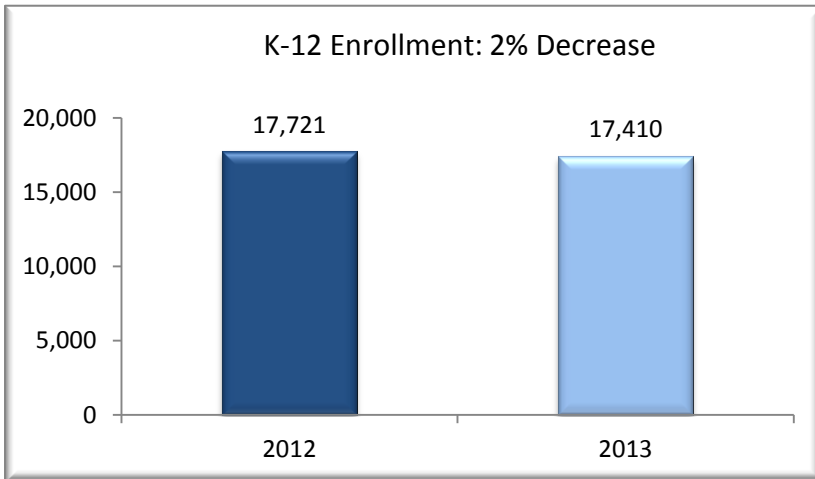
The African American and Asian populations have increased in Bay County by 4% from 2012-2013



Source: Michigan Department of Health and Human Services, Population Trends

Educational Enrollment and Attainment

2015 Bay County Community Health Assessment

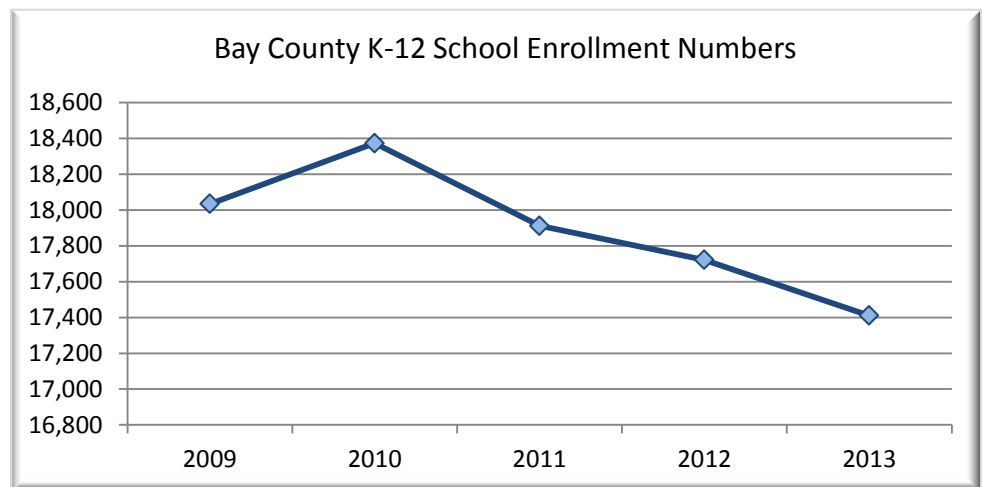


K-12 Enrollment continues to decline in Bay County

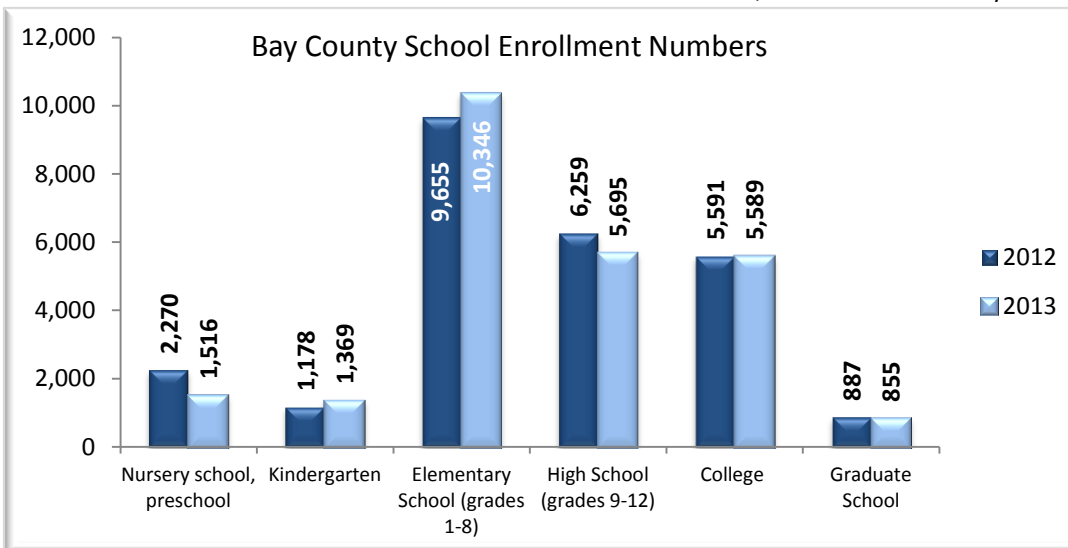
There was a 2% decrease in overall enrollment from 2012-2013

Source: U.S. Census Bureau, American Community Survey, 2009-2013

Even with an overall decrease in enrollment numbers, there has been an increase in numbers in kindergarten and elementary grades 1-8 in the past year.



Source: U.S. Census Bureau, American Community Survey, 2009-2013

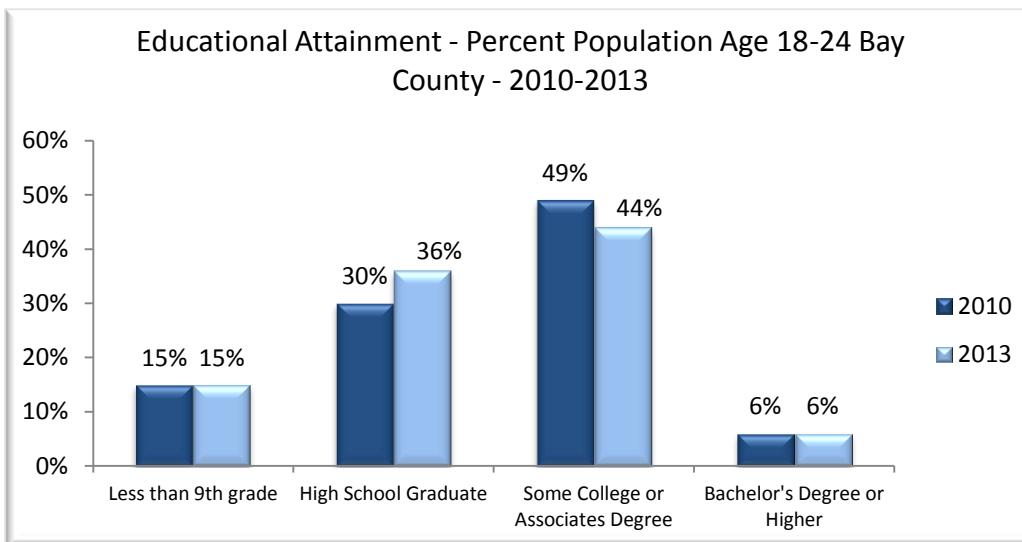


The largest decrease in enrollment was among preschool students.

Source: U.S. Census Bureau, American Community Survey, 2009-2013

Educational Enrollment and Attainment

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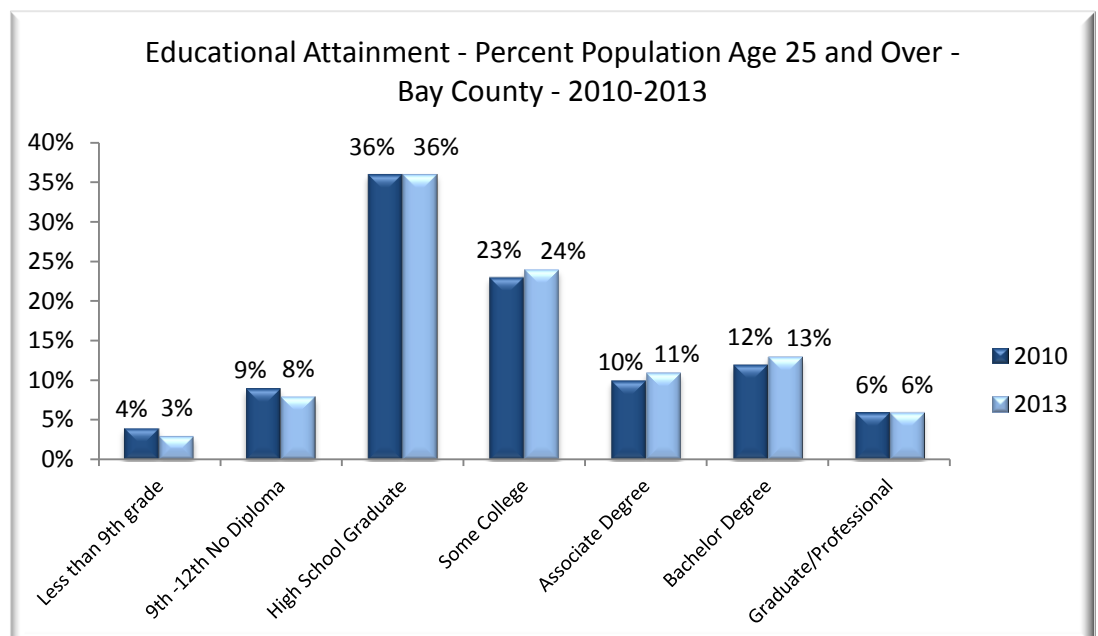


In 2013, Bay County saw an increase in 18-25 year olds who have graduated college.

Yet, those that received an Associate's Degree or attended some college decreased.

Source: U.S. Census Bureau, American Community Survey, 2009-2013

Looking at the population aged 25 and over, Bay County saw slight increases in those attending some college, or receiving an Associates or Bachelors Degree.



Source: U.S. Census Bureau, American Community Survey, 2009-2013

Some College or Associates Degree decreased among both males and females in 2013.

Educational Attainment by Gender – 2010-2013				
	Males - 2010	Males - 2013	Females - 2010	Females - 2013
Less than 9 th grade	19%	14%	11%	16%
High School Graduate	35%	42%	25%	30%
Some College or Associates Degree	43%	42%	56%	45%
Bachelor's Degree or Higher	3%	3%	9%	9%

Source: U.S. Census Bureau, American Community Survey, 2009-2013

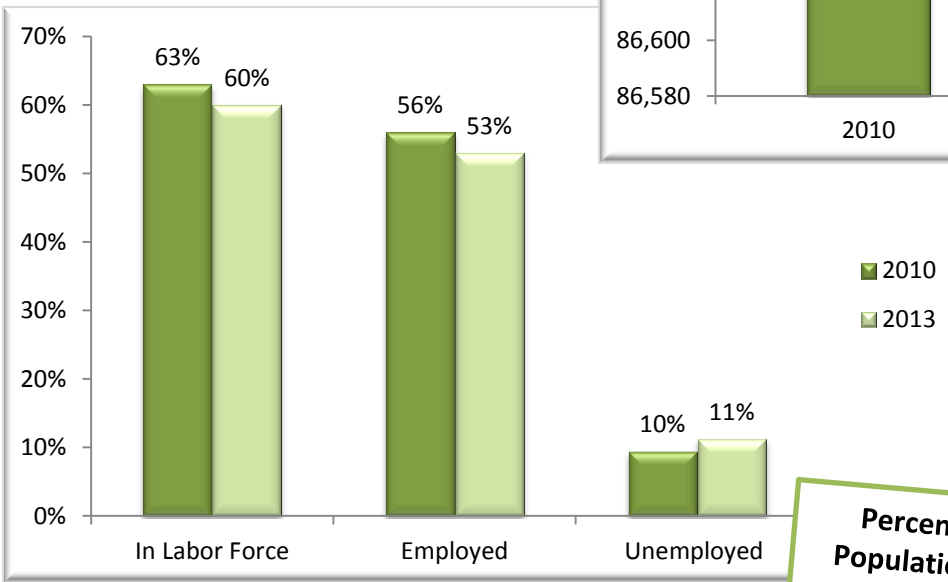
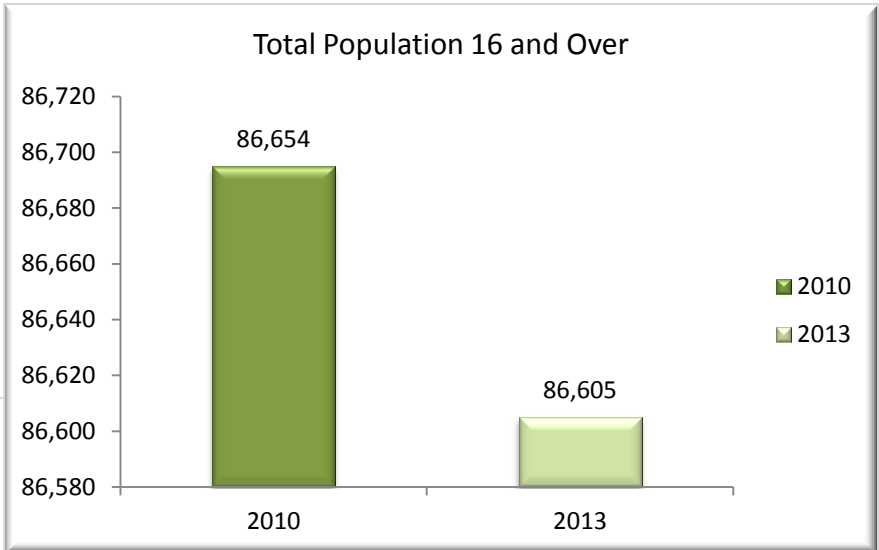
Employment in Bay County

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As is expected with a declining population, the total population 16 and over has also slightly declined, thus lower the percent of people over 16 in the work force

Unemployment remains steady

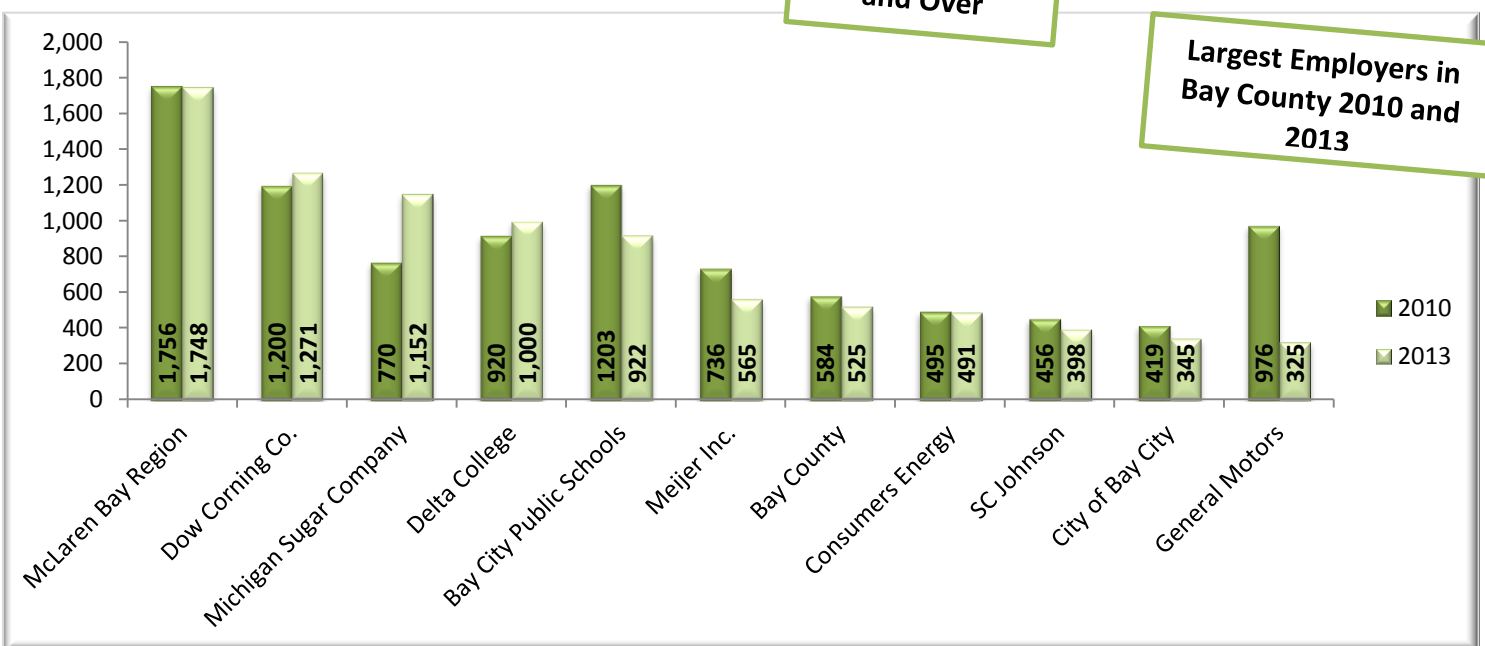


The graph below illustrates the largest employers in Bay County over the last 3 years.

The top three employers for 2013 are as follows, McLaren Bay Region, Dow Corning Company, and Michigan Sugar Company.

Percent of Population 16 and Over

Largest Employers in Bay County 2010 and 2013



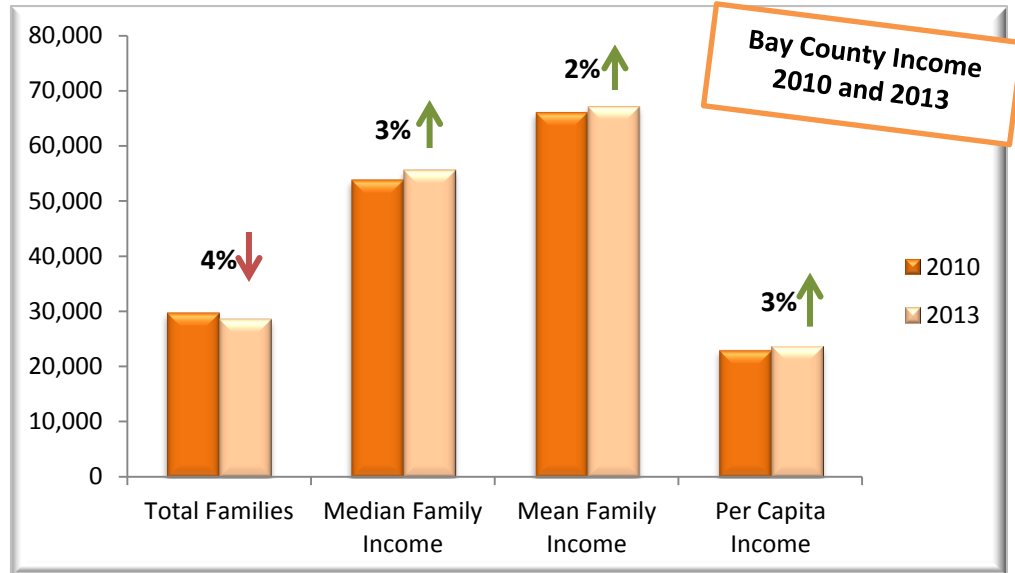
Income in Bay County

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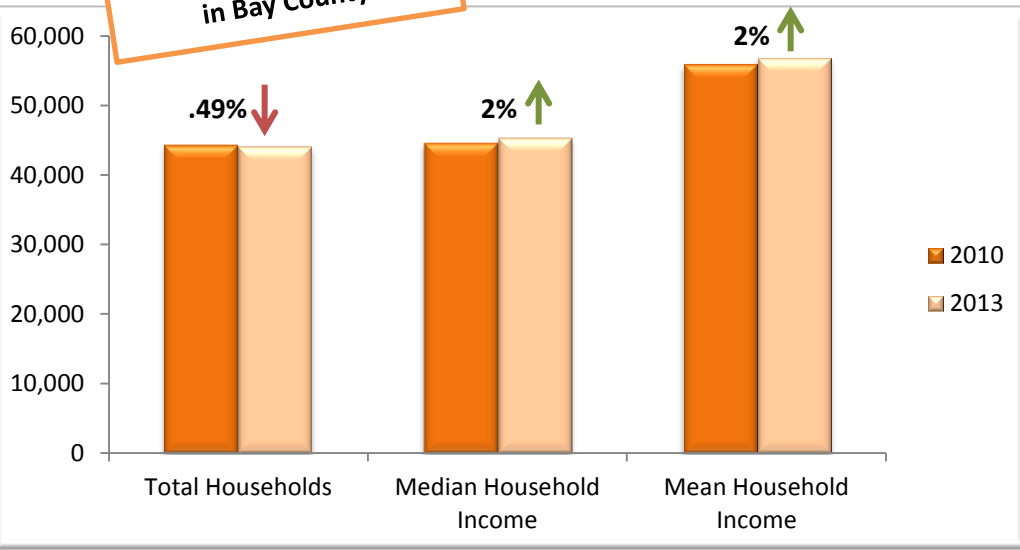


The graph to the right shows the percent change in the number of families in Bay County, as well as the per capita and mean incomes.

Overall, income has slightly increased among families in the last 3 years



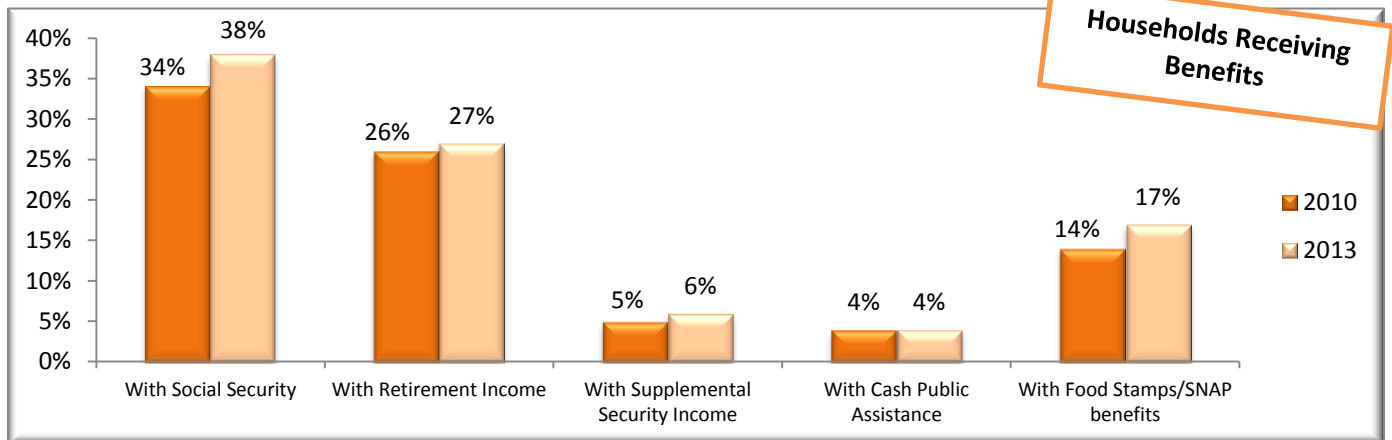
Number of Households in Bay County



The graph to the left illustrates the percent change in the number of households, as well as the mean and median incomes.

The percent of households receiving benefits continues to increase.

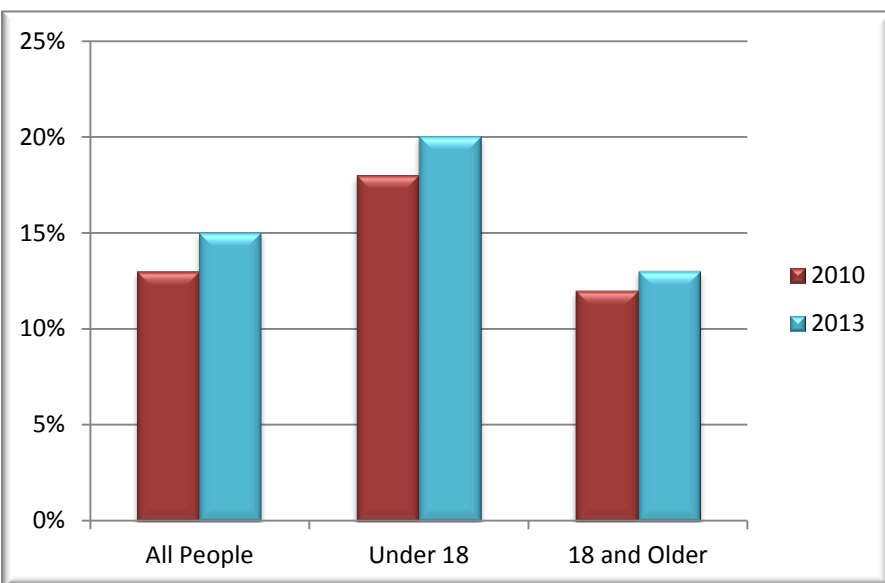
Households Receiving Benefits



All Tables Source: U.S. Census Bureau, American Community Survey, 2009-2013

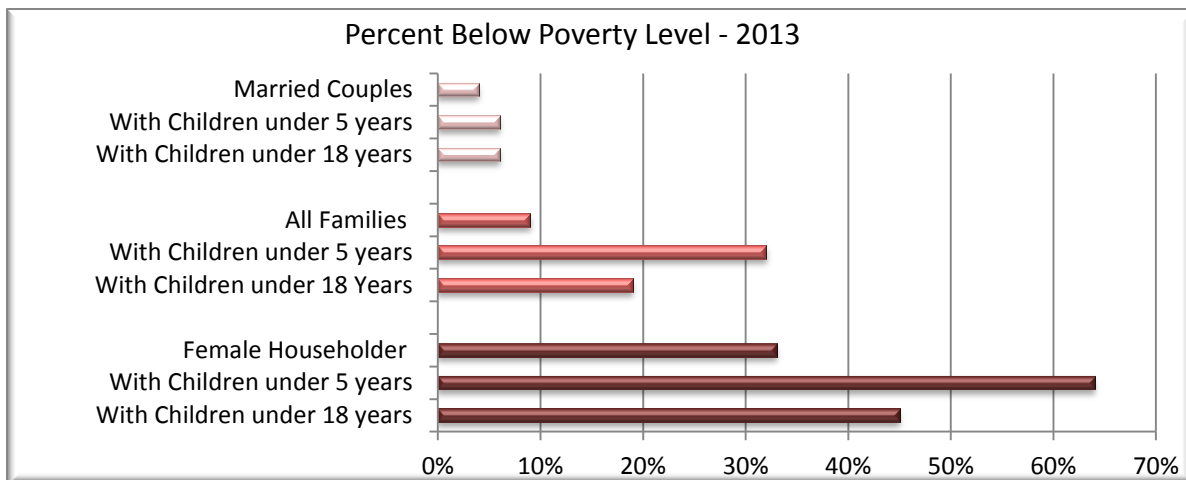
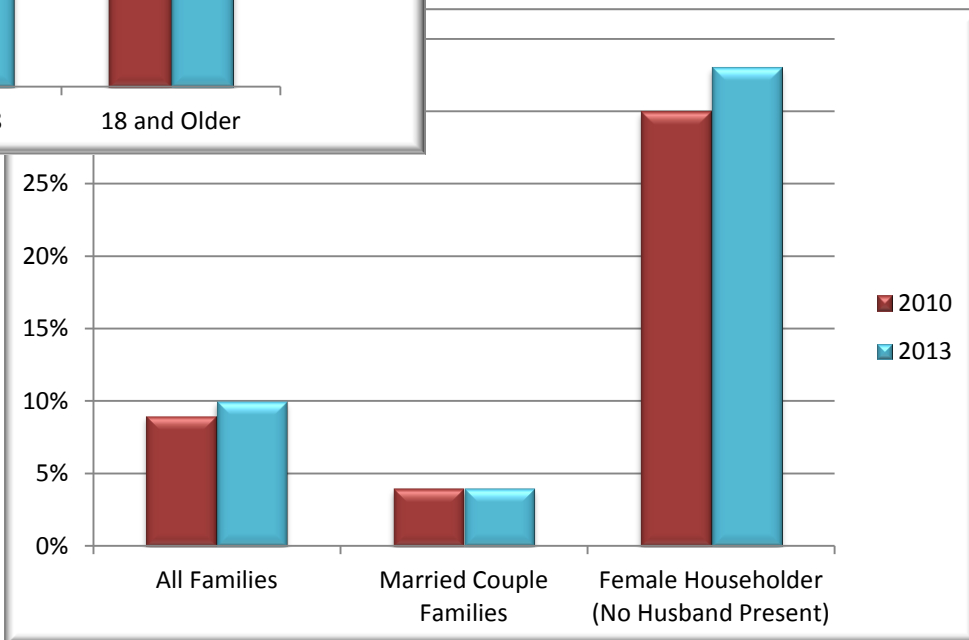
Poverty in Bay County

2015 Bay County Community Health Assessment



These graphs show the percent of all people and families with income below the poverty level in the last 12 months.

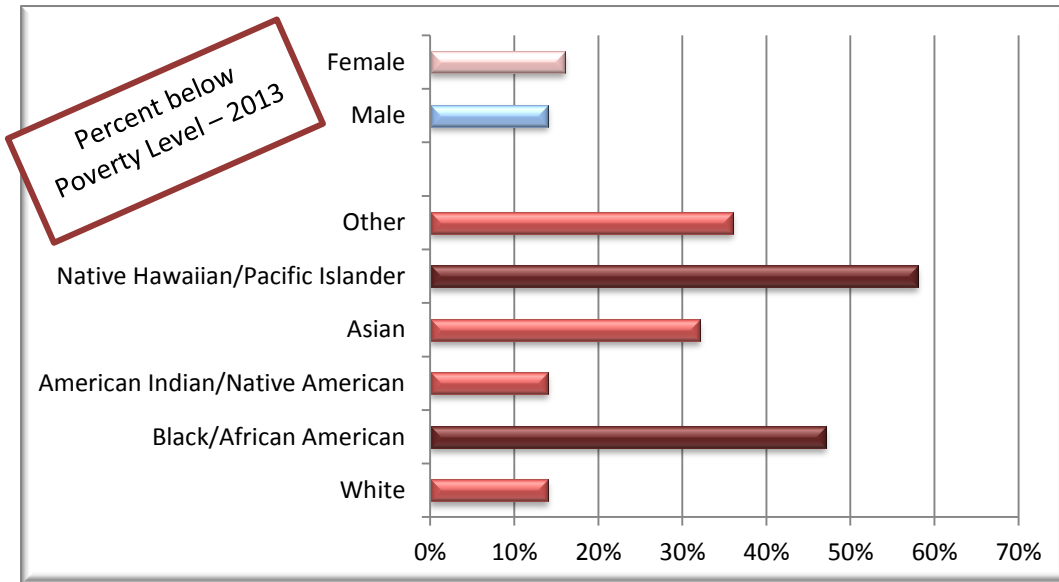
Female householders with children under 5 experience the greatest incident of poverty (64%)



All Tables Source: U.S. Census Bureau, American Community Survey, 2009-2013

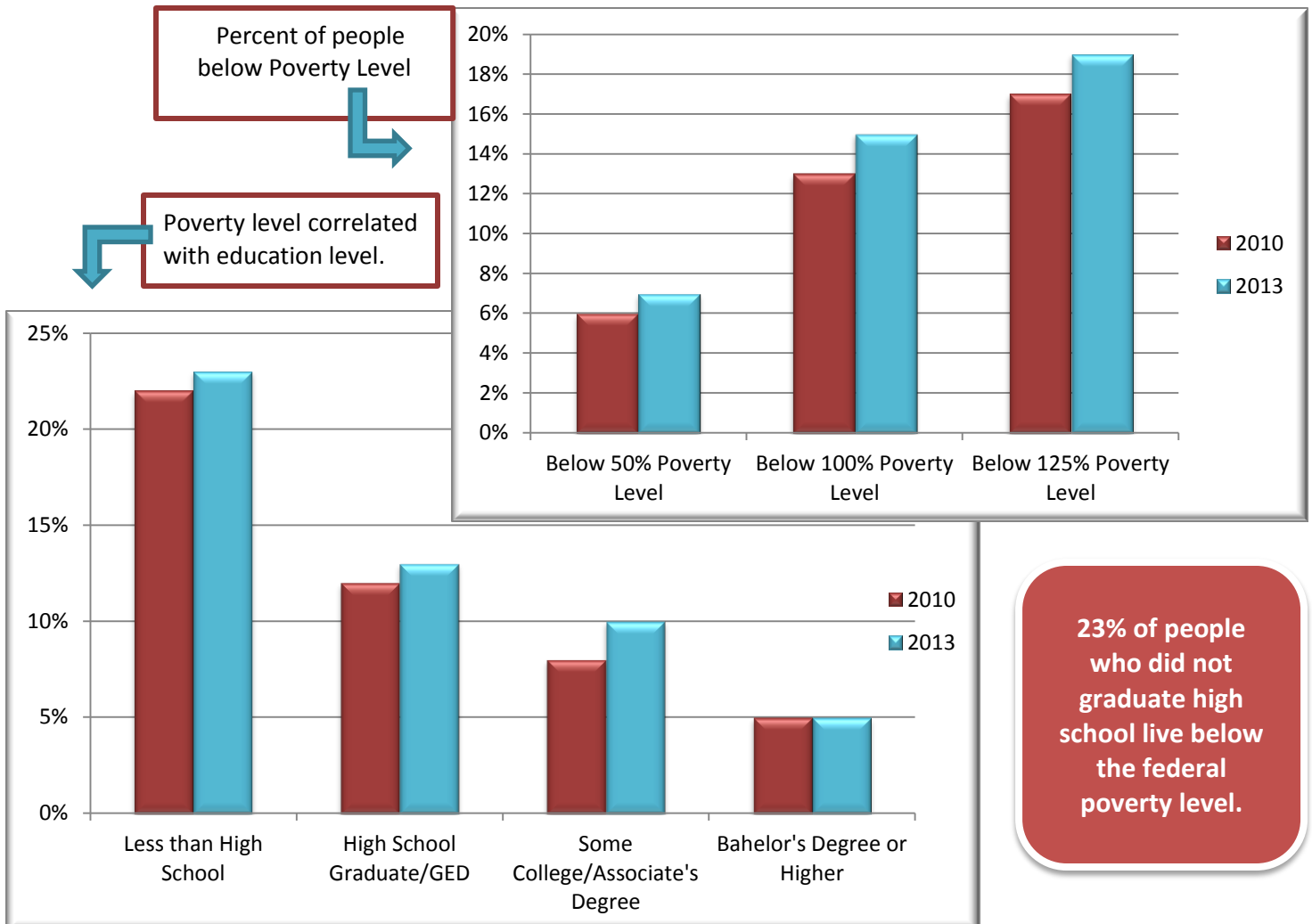
Poverty in Bay County

2015 Bay County Community Health Assessment



Poverty has clearly increased in Bay County over the last 3 years.

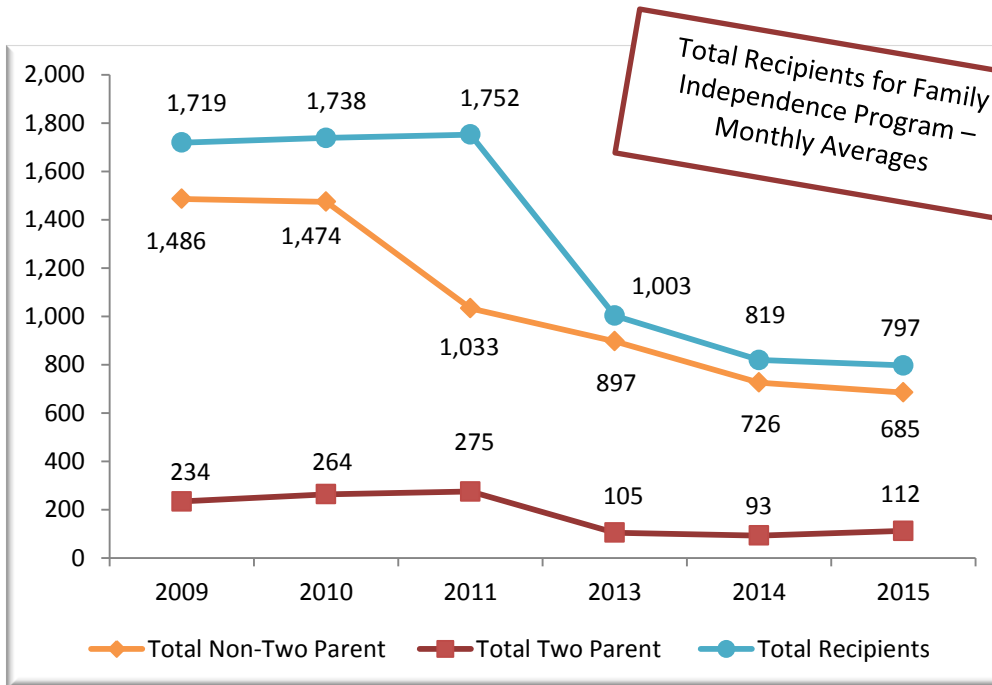
Poverty seems to be correlated with level of education completed and is most prevalent among those that did not graduate high school.



23% of people who did not graduate high school live below the federal poverty level.

Poverty in Bay County

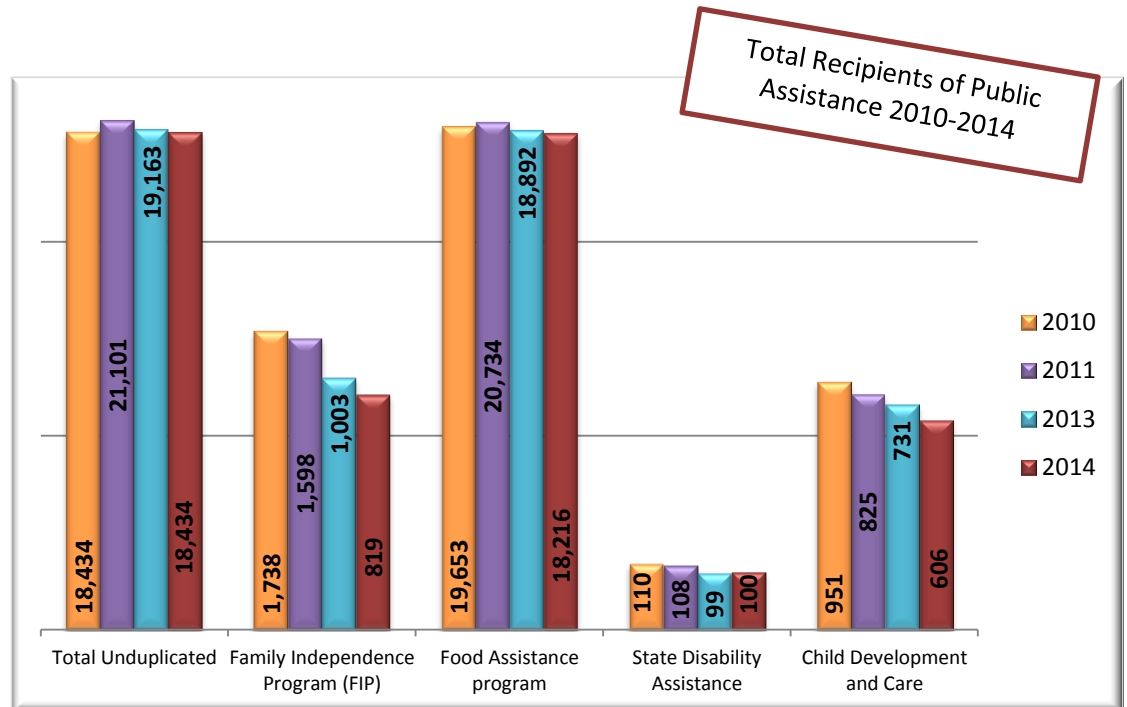
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The Family Independence Program saw a dramatic decrease in total recipients between 2001 and 2013 with a steady decline through 2015.

Again, there were far more recipients from non-two parent families than two-parent families.

Source: Michigan Department of Health and Human Services, Trend Reports



Total recipients of public assistance, in general, have continued to decrease slightly over the years.

Source: Michigan Department of Health and Human Services, Trend Reports

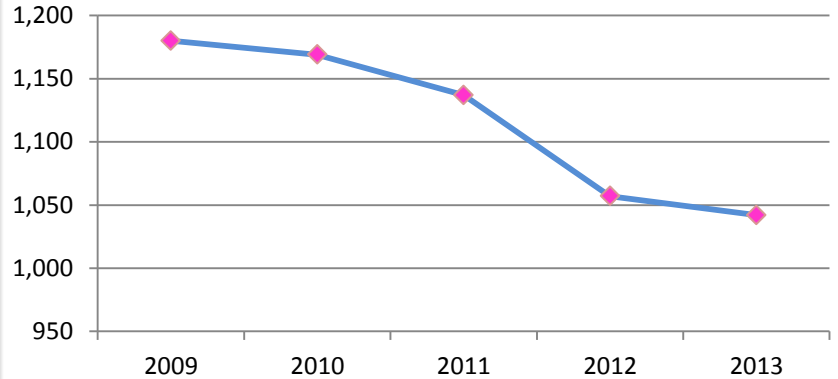
Maternal and Child Health in Bay County

2015 Bay County Community Health Assessment

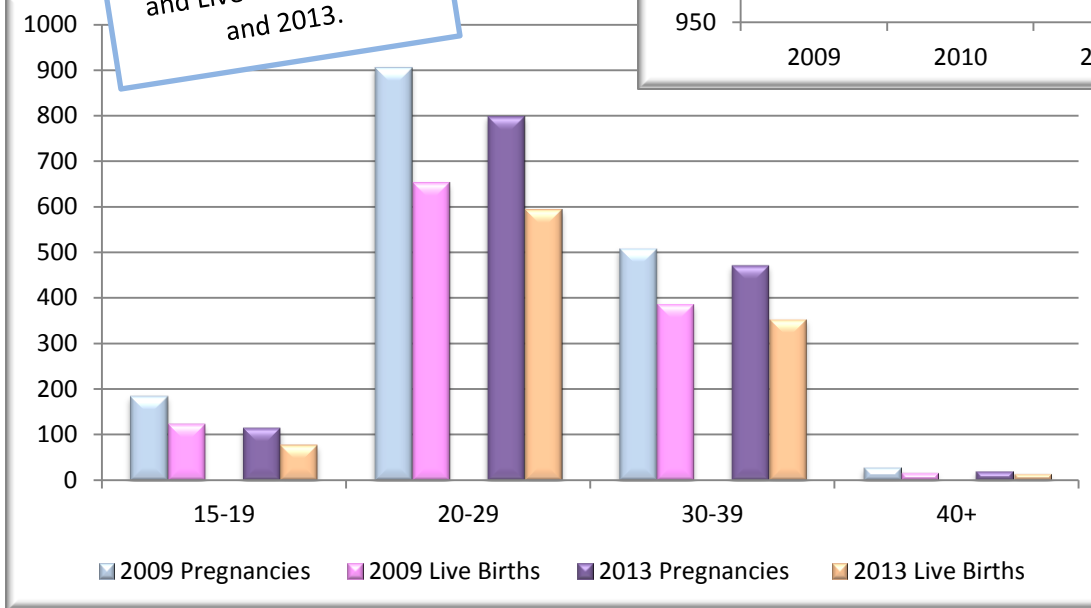


Bay County continues to experience a decline in the number of births.

Live Births - Bay County 2009-2013

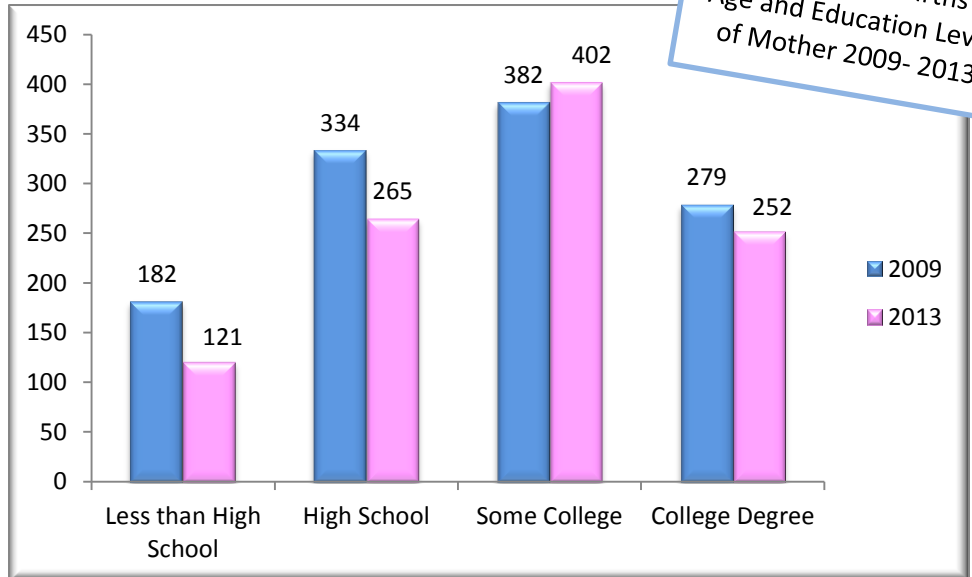


Number of Pregnancies and Live Births in 2009 and 2013.



The graph to the left shows the number of estimated pregnancies and the number of live births. Bay County has seen a decrease in both since 2009 among all age groups.

Number of Live Births by Age and Education Level of Mother 2009-2013



33.5% decrease in babies born to mothers who did not graduate high school

20.6% decrease in Babies born to mothers with only high school diploma

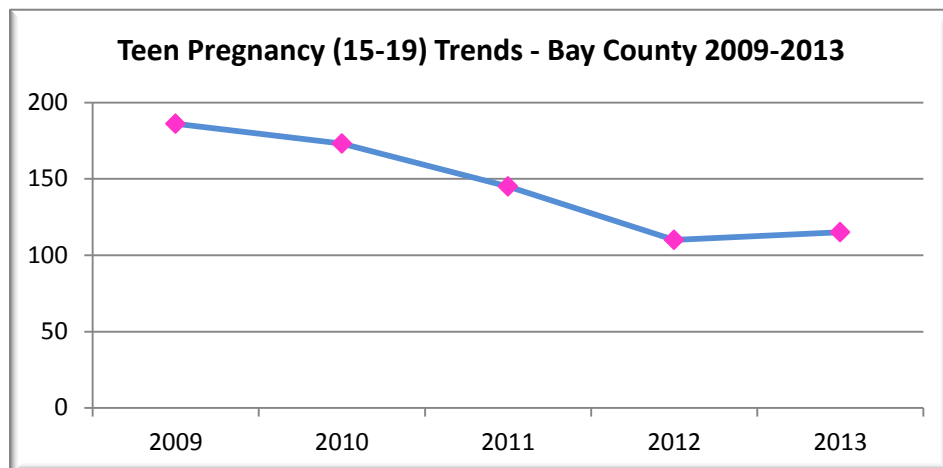
Source (All Tables): MDHHS, Natality and Pregnancy, 2009-2013

Maternal and Child Health in Bay County

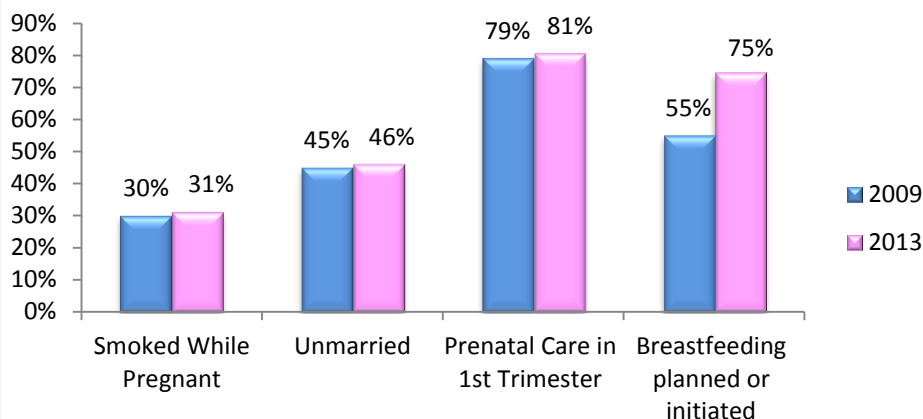
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The teen pregnancy rate has dropped significantly from 2009 with only a slight increase from 2012-2013



Maternal Characteristics as a Percentage of Live Births Bay County 2009-2013



As indicated in the graph to the left, planned or initiated breastfeeding rose 20% in the last 4 years.

31% of mothers report smoking while pregnant

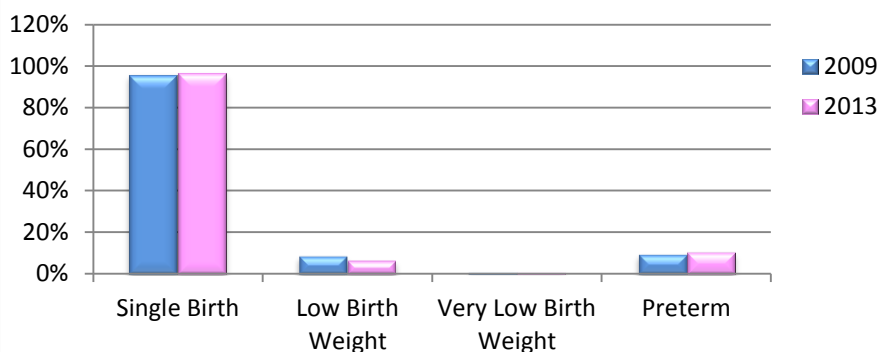
The data in the graph to the right has remained very consistent over the years.

The majority of births in Bay County are single births.

Only 7% of live births in Bay County have a low birth weight.

11% of babies born in 2013 were preterm.

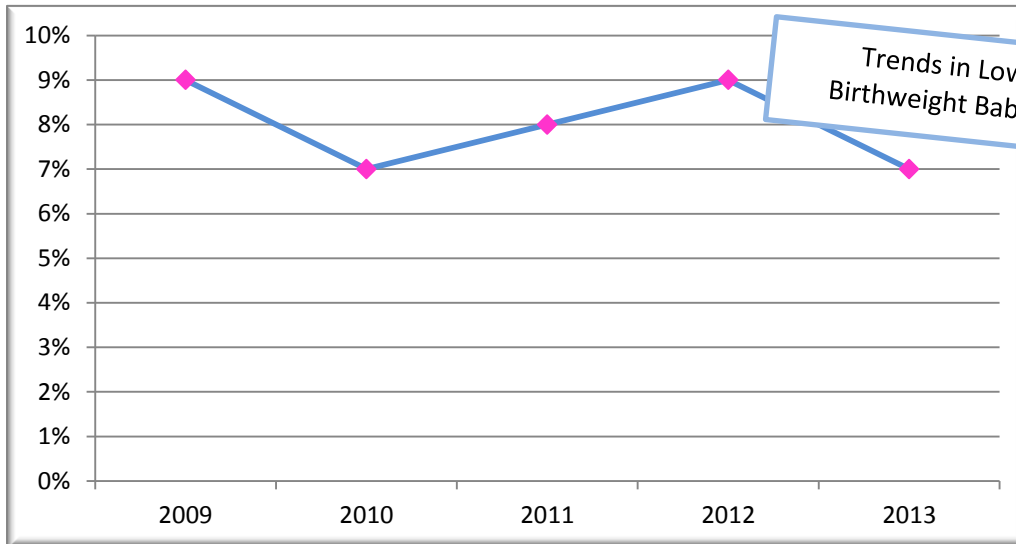
Infant Characteristics as a Percentage of Live Births 2009 and 2013



Source (All Tables): MDHHS, Natality and Pregnancy, 2009-2013

Maternal and Child Health in Bay County

2015 Bay County Community Health Assessment



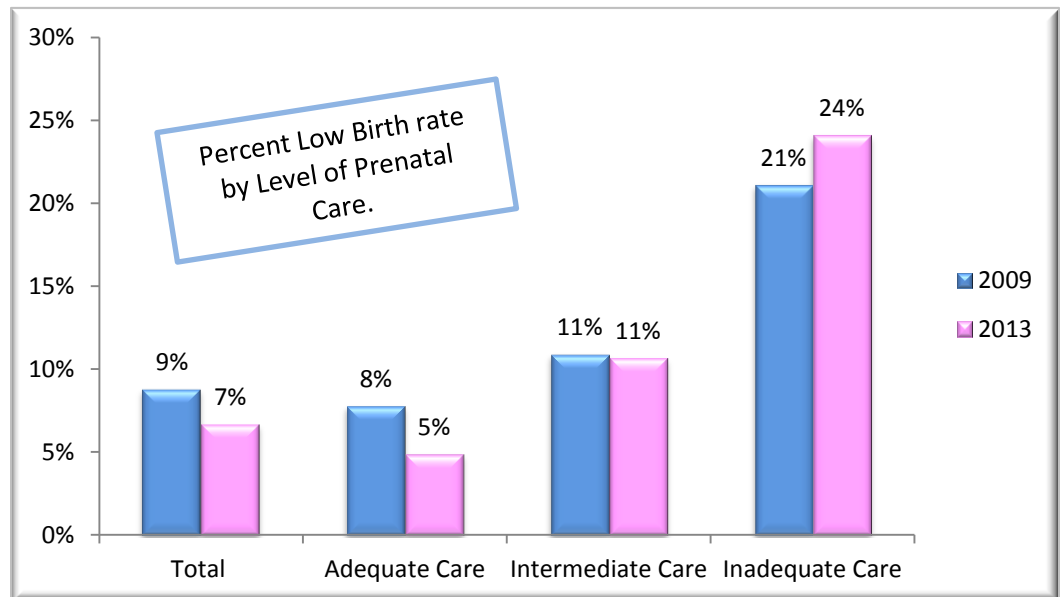
From 2010 – 2012, Bay County experienced and steady increase in low birth weight babies.

However, in 2013 Bay County experienced a 2% decrease in low birthweight babies.

Source: MDHHS, Natality and Pregnancy, 2009-2013

24% of low birth rate babies received inadequate prenatal care during pregnancy

Even though the percent of babies with low birth rate has decreased, the percent of babies born with a low birthrate that had inadequate prenatal care increased and those with adequate care decreased.



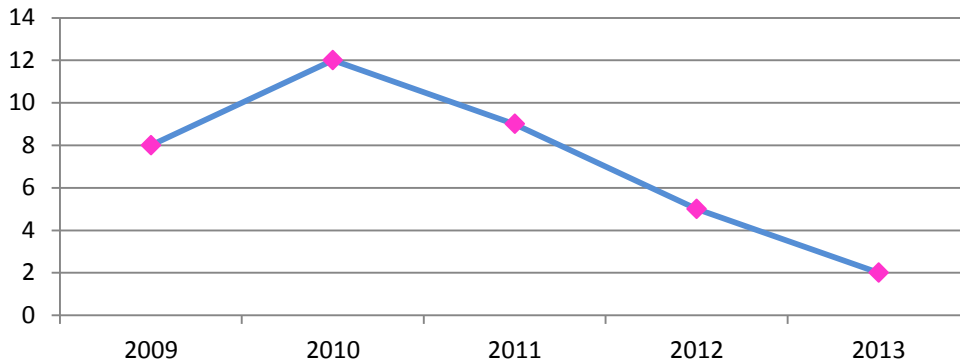
Source (All Tables): MDHHS, Natality and Pregnancy, 2009-2013

Maternal and Child Health in Bay County

2015 Bay County Community Health Assessment



**Infant Mortality Trends in Bay County
2009-2013**



The number of infant deaths has drastically decreased since 2010

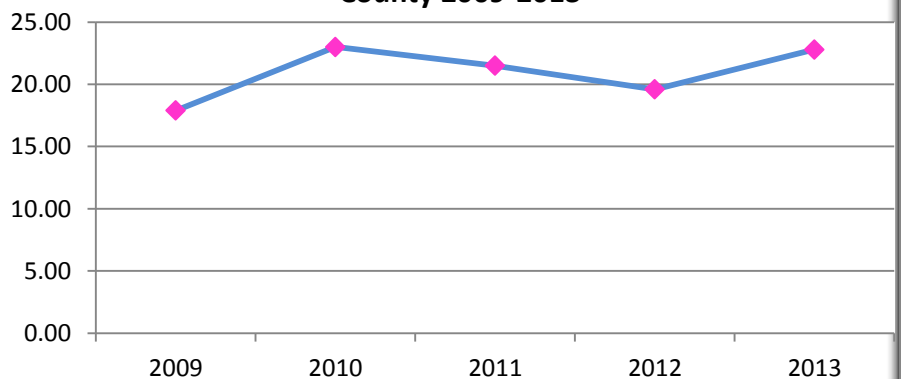
(From 12 deaths to 2 deaths)

Source (All Tables): MDHHS, Infant Mortality, 2009-2013

From 2010-2012 the number of children living in poverty slightly decreased.

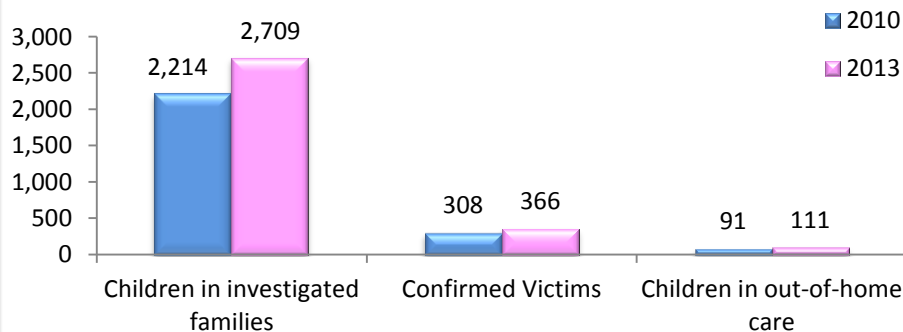
In 2013 Bay County experienced a **3% increase** in children living in poverty.

Percentage of Children (0-17) Living in Poverty Bay County 2009-2013



Source: Kids Count Data, 2009-2013

**Number of Child Abuse and Neglect Cases (0-17 yo)
Bay County – 2010 and 2013**



The numbers of child abuse and neglect cases are continuing to rise in Bay County.

22% increase in the number of families investigated.

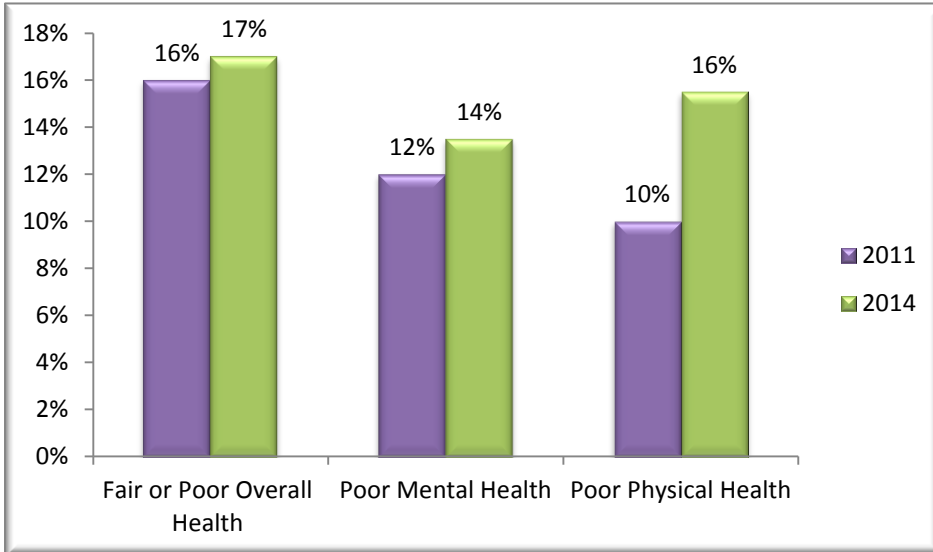
19% increase in confirmed victims.

21% increase in out-of-home care

Source: Kids Count Data- 2009-2013

General Health in Bay County

2015 Bay County Community Health Assessment



Bay County saw increases in the percentage of adults who have poor mental and physical health, and fair or poor overall health

14% of adults report poor mental health

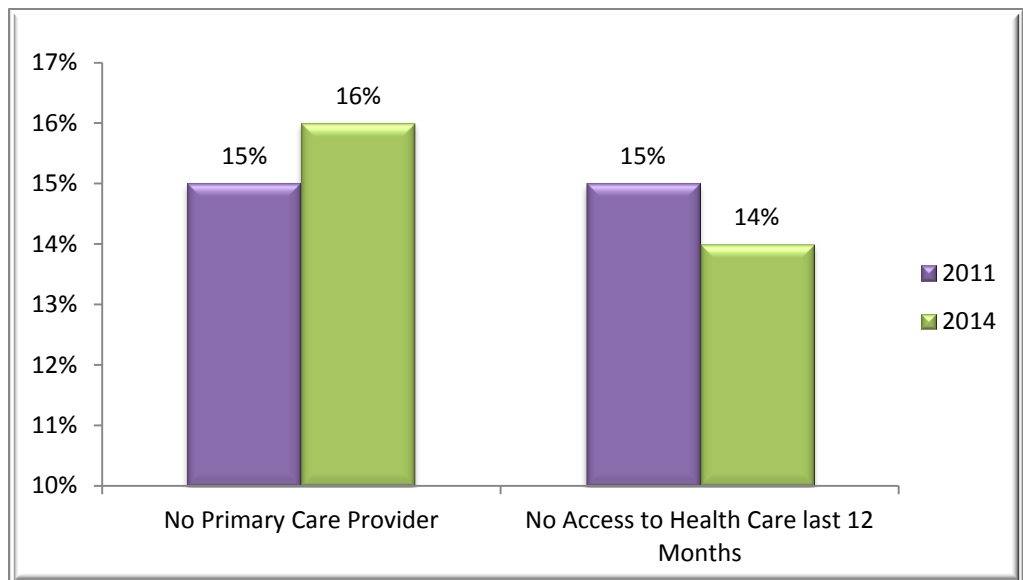
16% of adults report poor physical health

Source: MiBRFSS, 2008-2010 & 2012-2014 (There is a 95% Confidence Interval)

Even with the Healthy Michigan Plan, Medicaid and the Health Exchange, many individuals still have no health care coverage.

Those reporting they have no primary care provider also increased slightly.

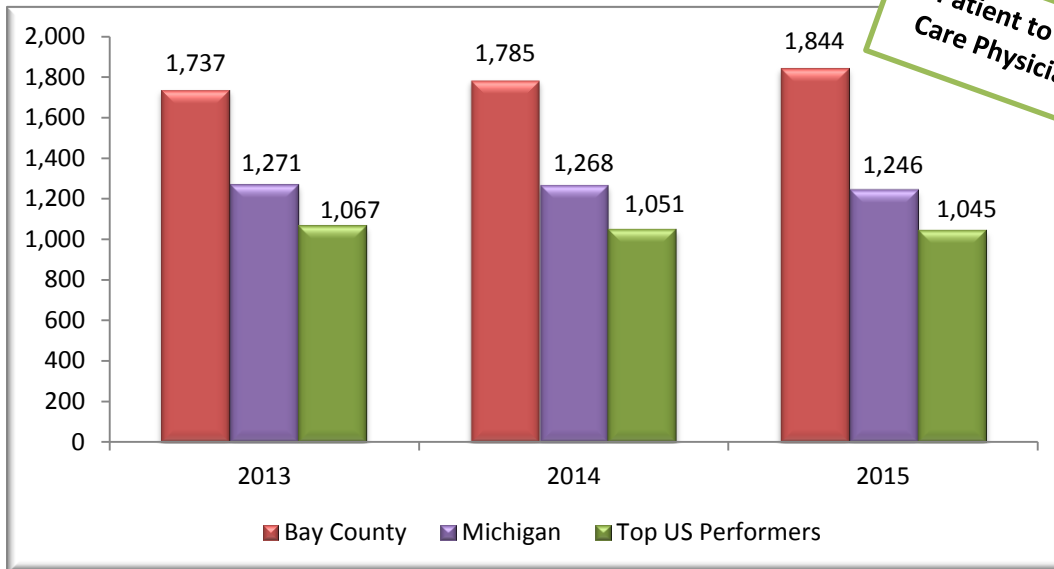
17% of adults report poor no health care coverage. (Increase from 15% in 2011)



Source: MiBRFSS, 2008-2010 & 2012-2014 (There is a 95% Confidence Interval)

General Health in Bay County

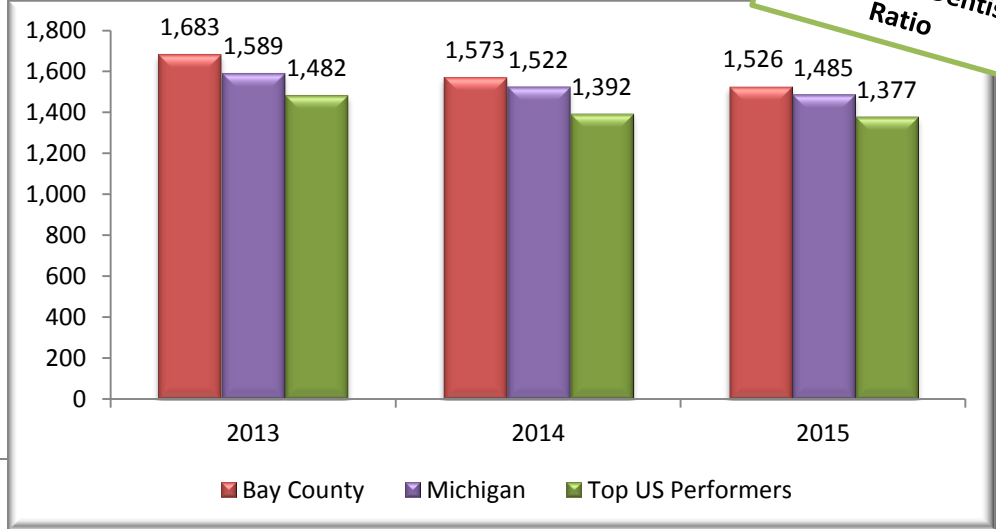
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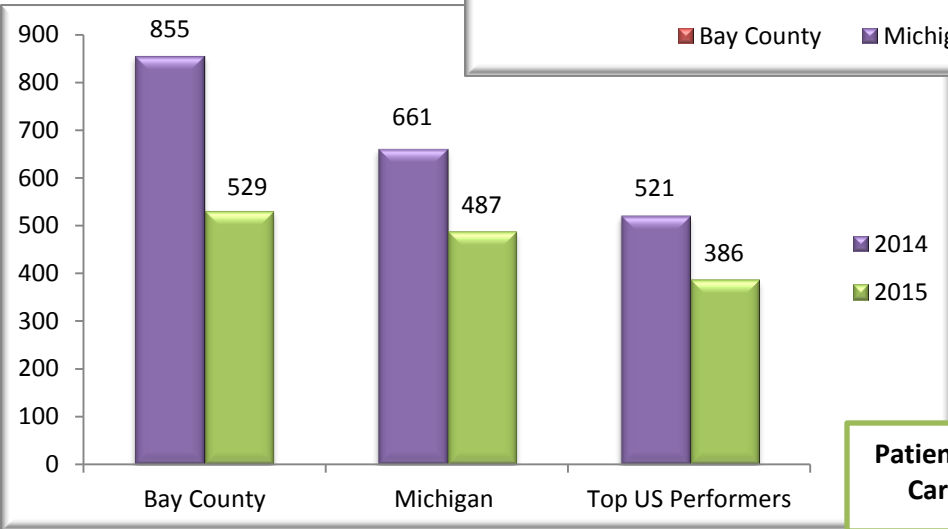
Patient to Primary Care Physician Ratio

1,844 people to every 1 primary care provider

These graphs illustrate the number of patients to provider ratios. As the graphs indicate, Bay County clearly has a need for more Primary Care Physicians, Dentists and Mental Health providers to adequately address the need in Bay County. Bay County falls well behind Michigan and the top US performers.



Patient to Dentist Ratio



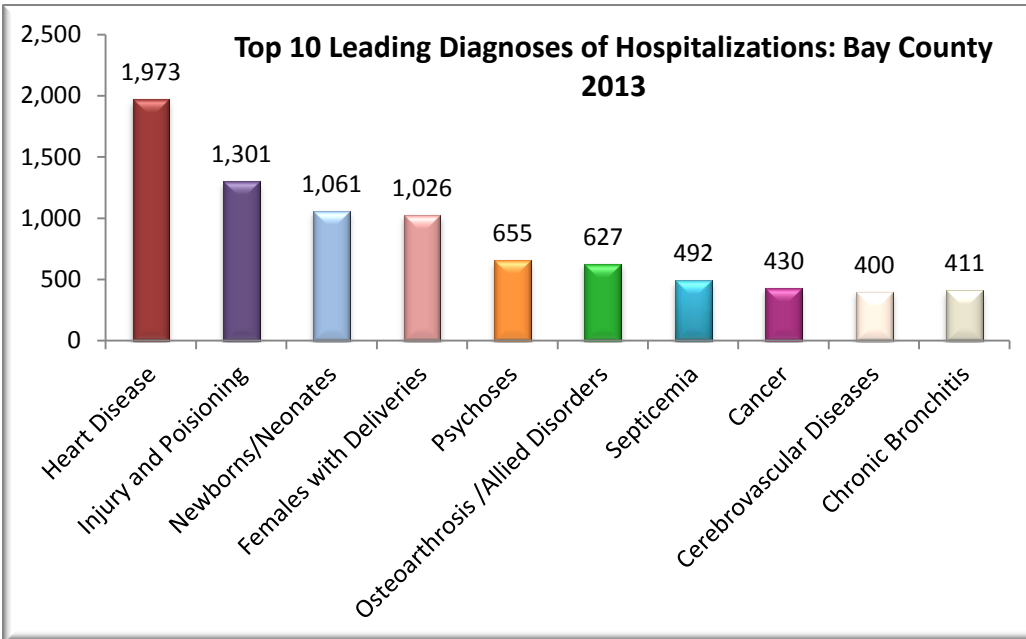
Patient to Mental Health Care Provider Ratio

529 people for every 1 mental health provider

Source (All Tables): County Health Rankings

Morbidity and Mortality

2015 Community Health Assessment



Heart Disease continues to be the leading cause of hospitalizations followed closely by injury and poisoning in Bay County.

In 2013 there were 1,973 hospitalizations for heart disease

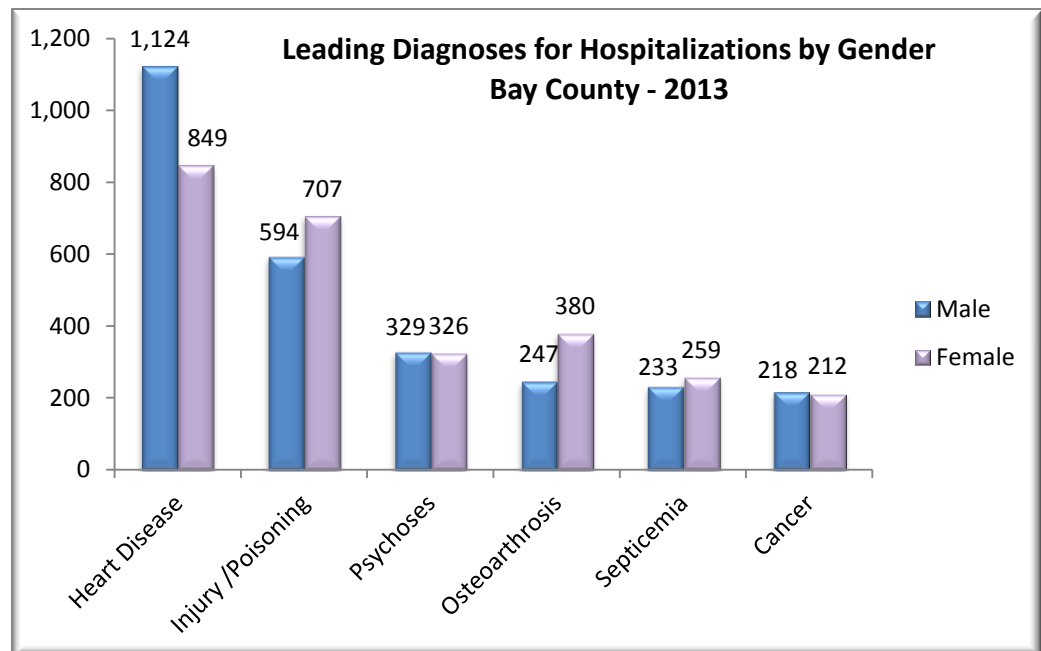
Source: MDHHS, 2013

Hospitalizations are inpatient hospital stays as measured by stays that were completed during the specified year. The number of hospitalizations is often greater than the number of persons hospitalized since some persons are hospitalized more than once

Males tend to be hospitalized for heart disease more than females, where more females are hospitalized for injury and poisoning.

1,124 Males hospitalized for heart disease

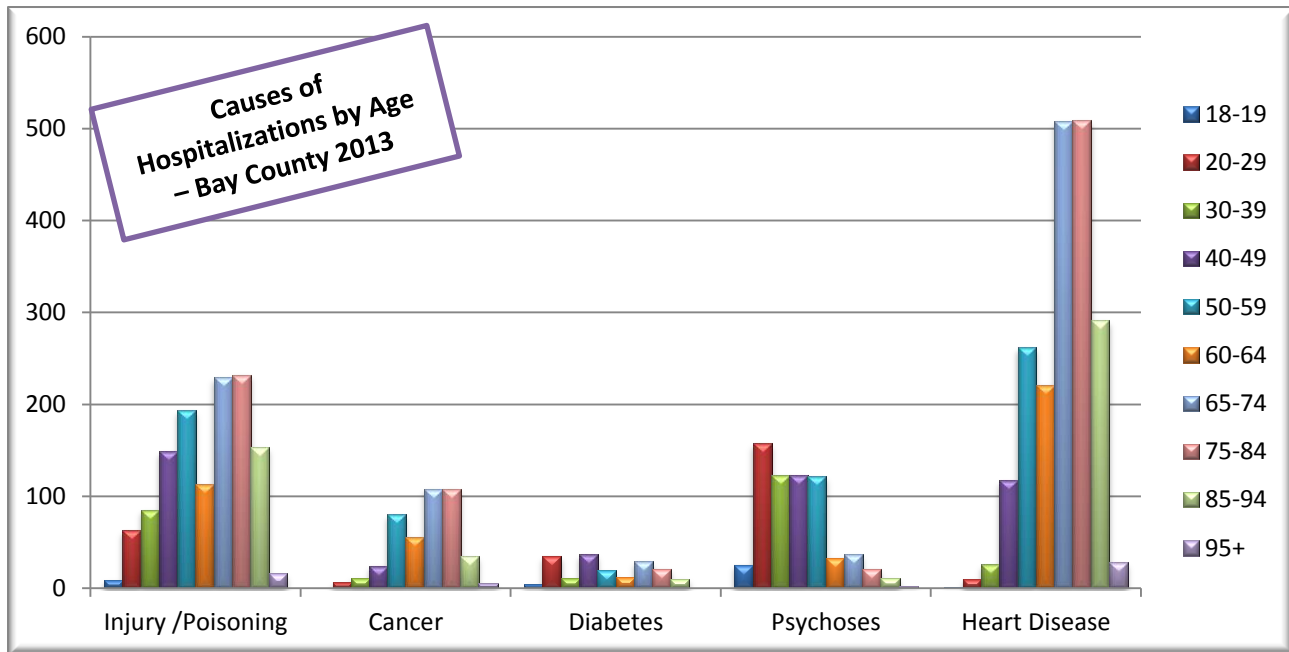
707 females were hospitalized for injury or poisoning.



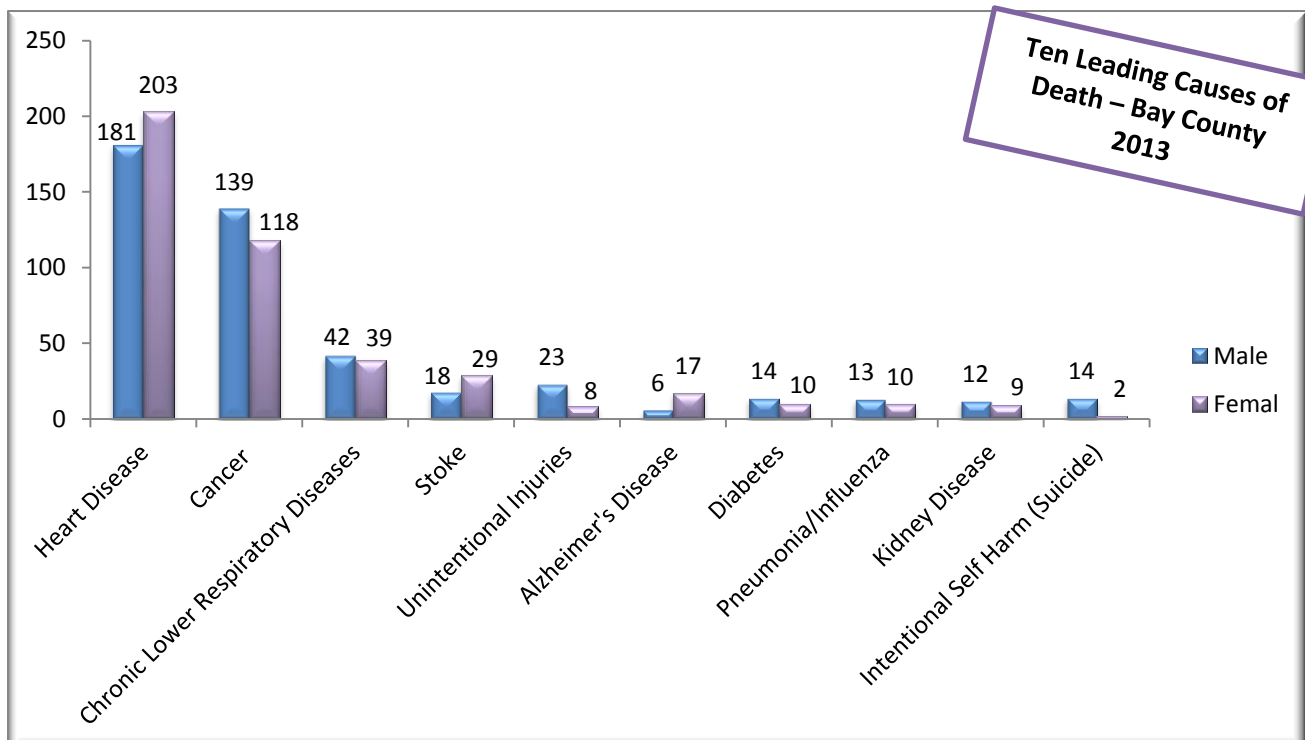
Source: MDHHS, 2013

Morbidity and Mortality

2015 Community Health Assessment

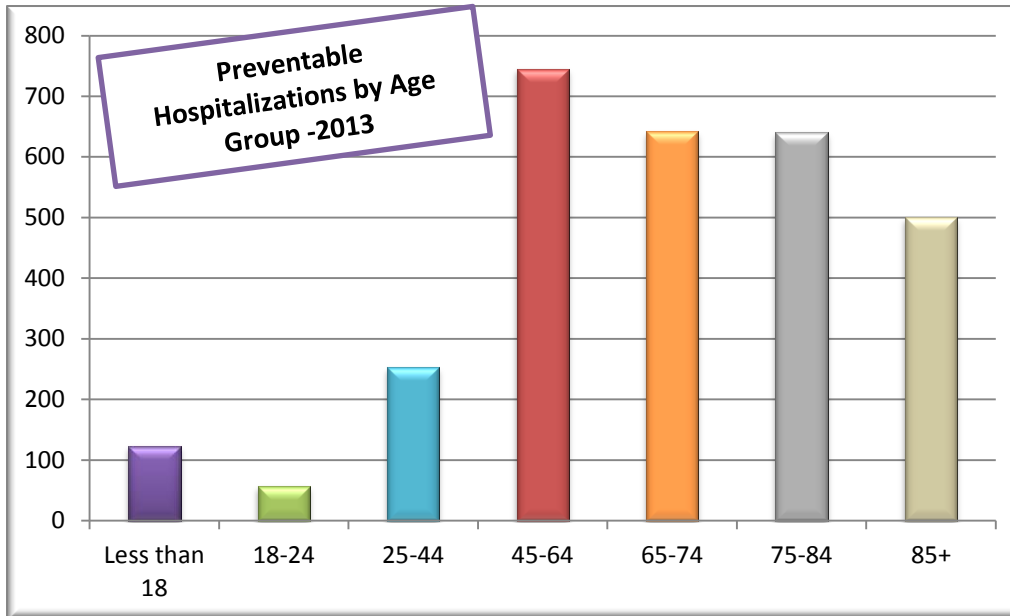


These graphs show the correlation between the number of hospitalizations and cause of death. The most hospitalizations occur for heart disease especially for those 50 and over, and subsequently the leading cause of death in Bay County continues to be heart disease.



Morbidity and Mortality

2015 Community Health Assessment



Ambulatory Care Sensitive (ACS) Hospitalizations are those that are potentially preventable.

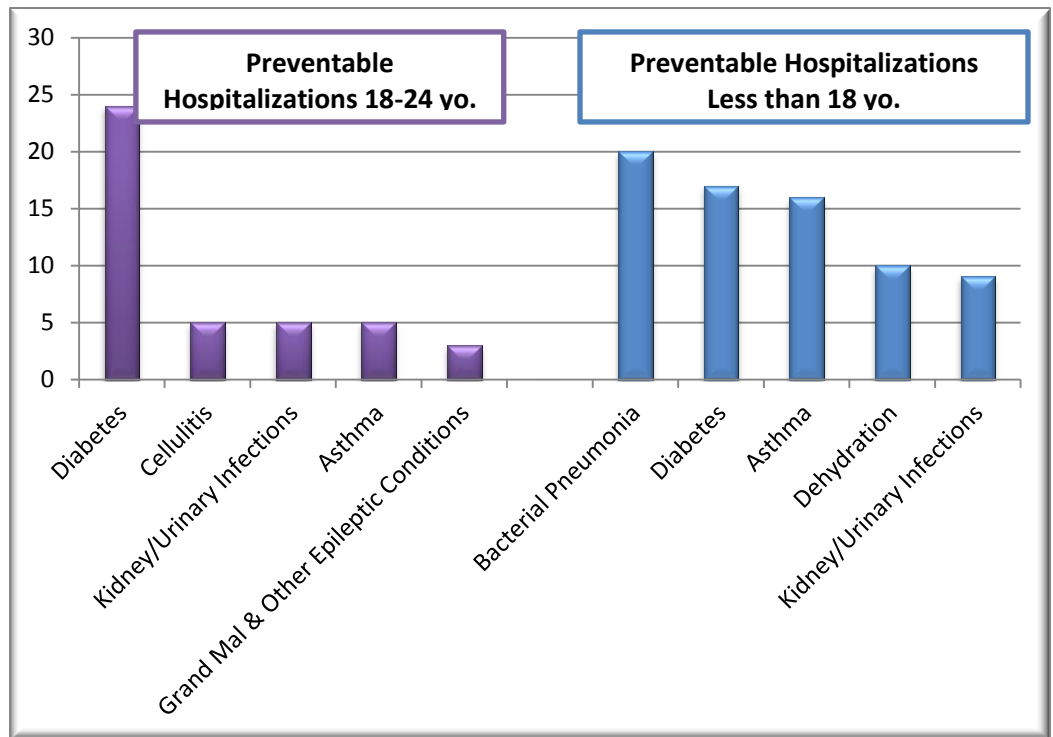
IN 2013 there was a total of 2,960 ACS hospitalizations with the majority occurring among 45-64 year olds and the least occurring among 18-24 year olds.

Source: MDHHS, 2013

745 ACS hospitalizations among 45-64 year olds

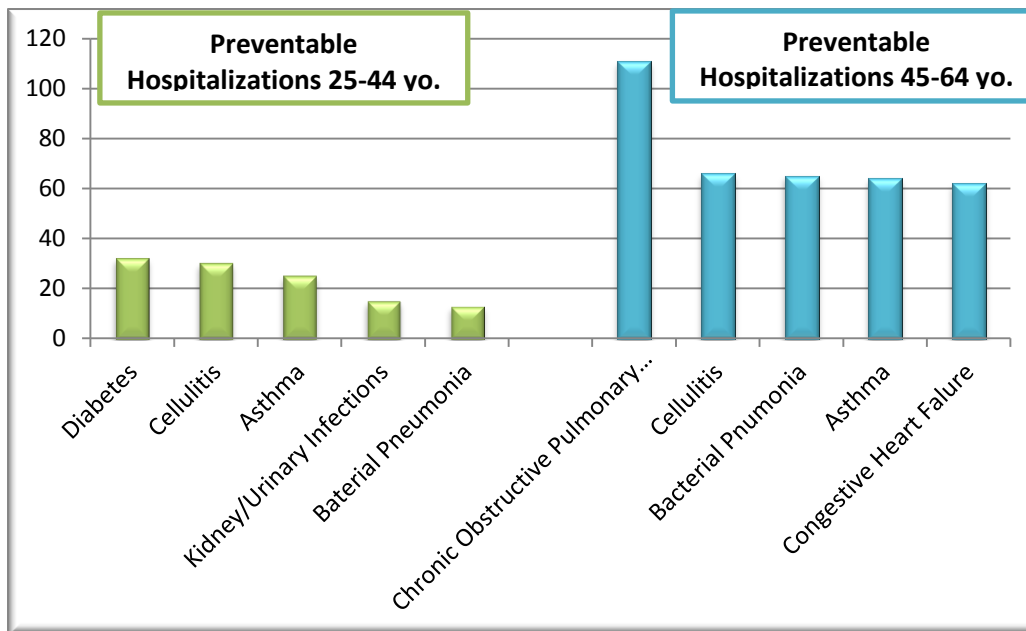
Among 18-24 year olds most (42%) ACS hospitalizations were diabetes related.

Among those younger than 18 years old, bacterial pneumonia (16%) was the main cause of ACS hospitalizations



Source: MDHHS, 2013

Morbidity and Mortality 2015 Community Health Assessment



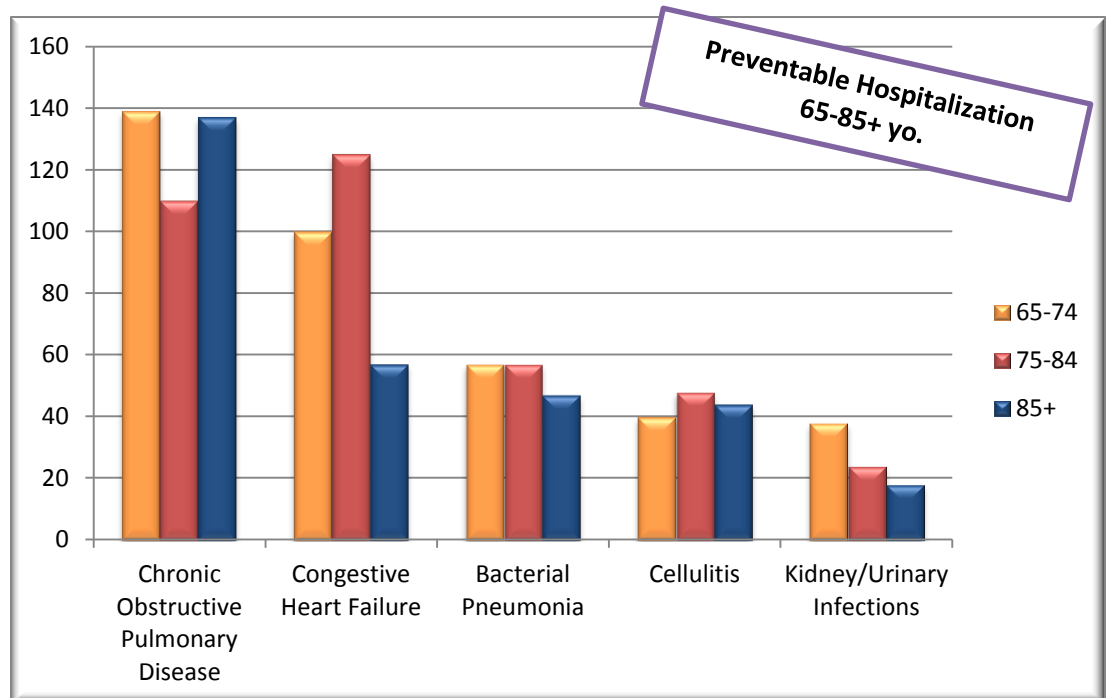
24-44 year olds had 253 total ACS Hospitalizations in 2013. There was no one illness that was more prominent over another.

However, most of the hospitalizations were diabetes related (13%) followed closely by Cellulitis (12%).

Source: MDHHS, 2013

Chronic Obstructive Pulmonary Disease was the leading cause of ACS hospitalizations among 45-64 year olds, 65-74 year olds, and 85 and over in 2013

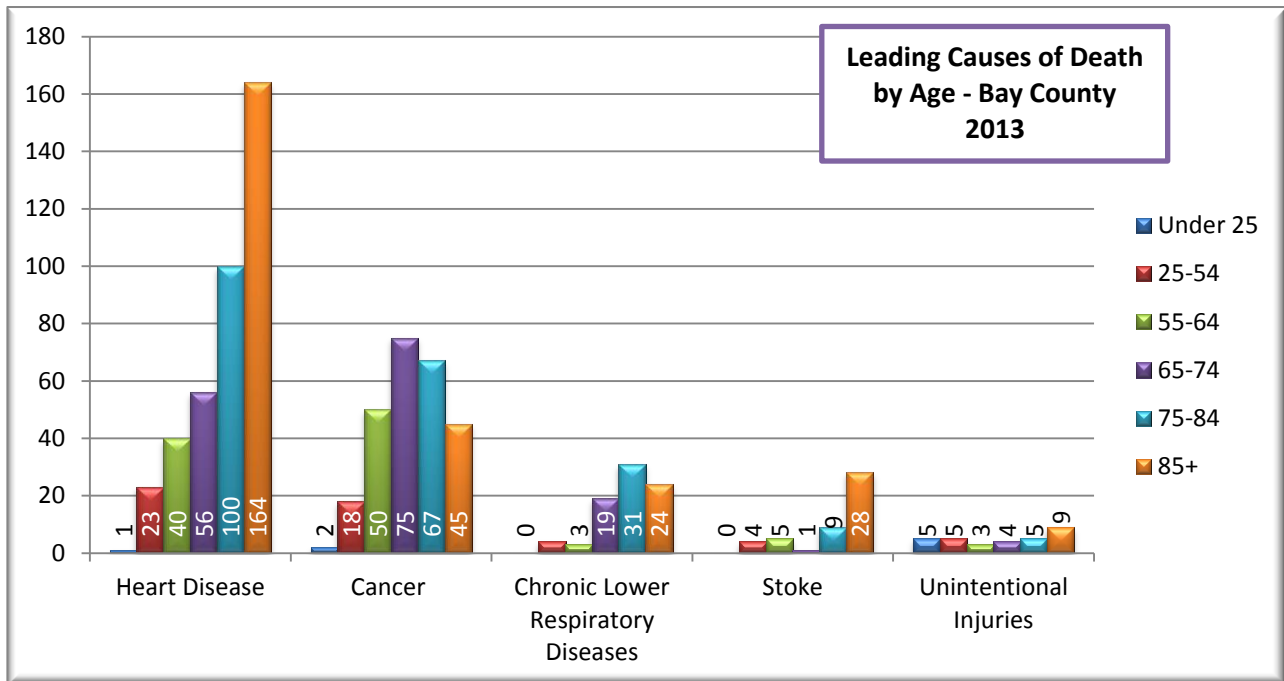
Congestive Heart Failure is the leading cause of ACS Hospitalizations among 75-84 year olds (20%)



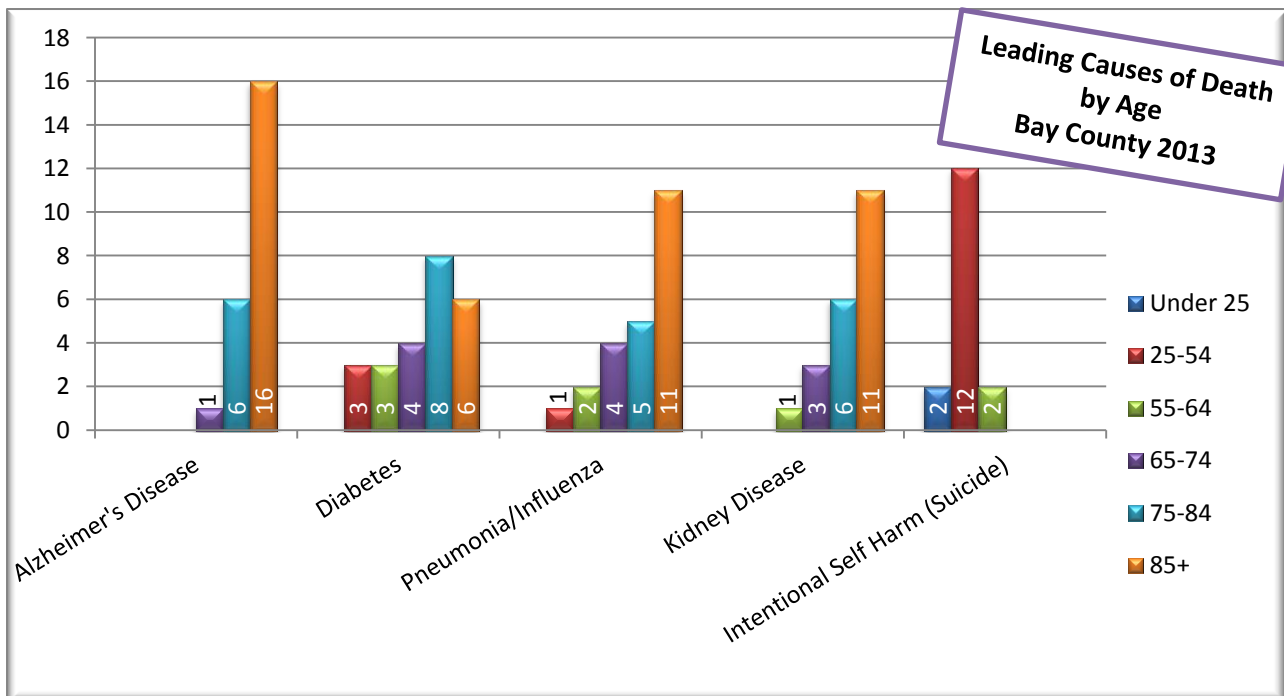
Source: MDHHS, 2013

Morbidity and Mortality

2015 Community Health Assessment



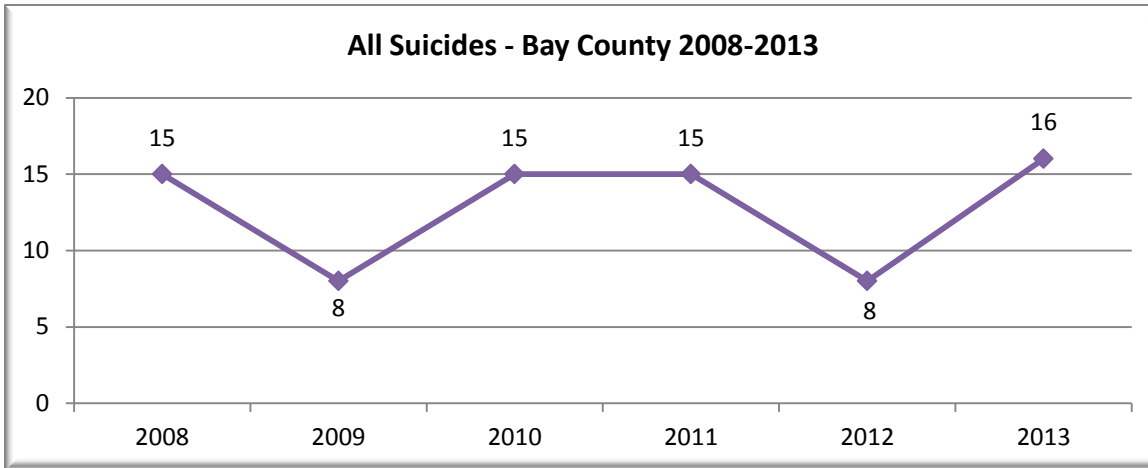
Heart Disease is the leading cause of death among 75 + year olds.
 Cancer is the leading cause of death among 55-74 year olds.
 Suicide is the leading cause of death among 25-54 year olds is suicide.



Source (All Tables): MDHHS, 2013

Morbidity and Mortality

2015 Community Health Assessment

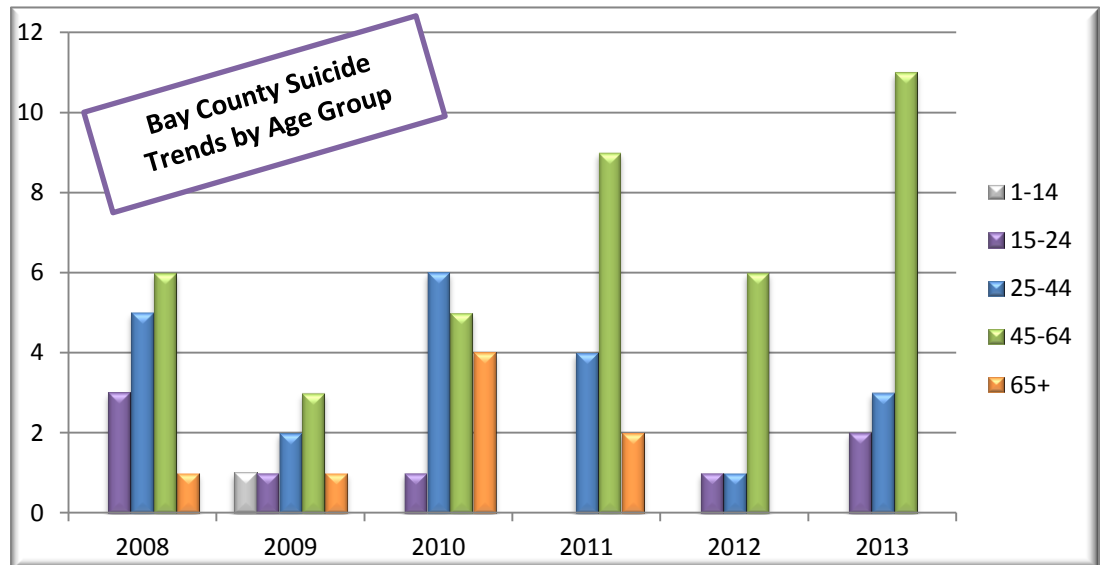


In 2013, the number of Suicides in Bay County doubled.

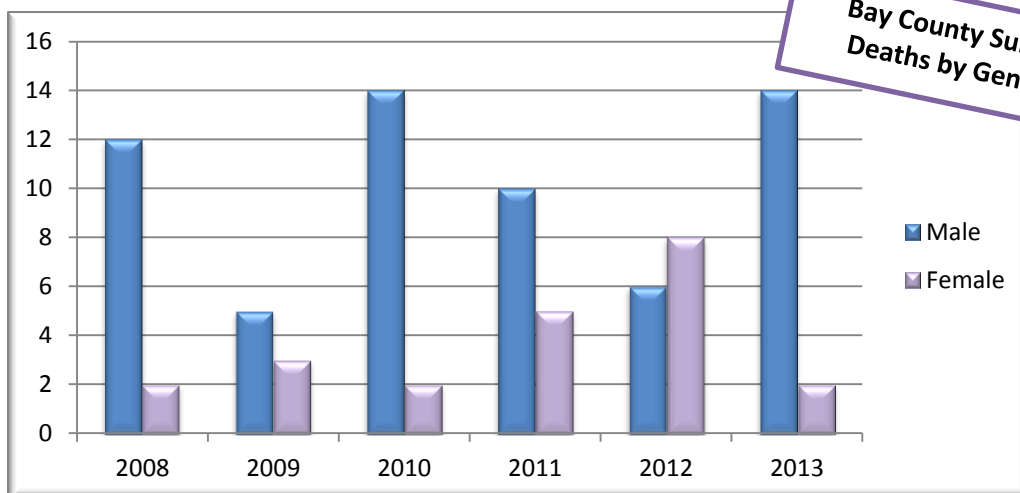
Source: MDHHS, 2013

In 2013, 69% of suicides were among 45-64 year olds.

Suicides have consistently been highest among this age group with the exception of 2010.



Source: MDHHS, 2013

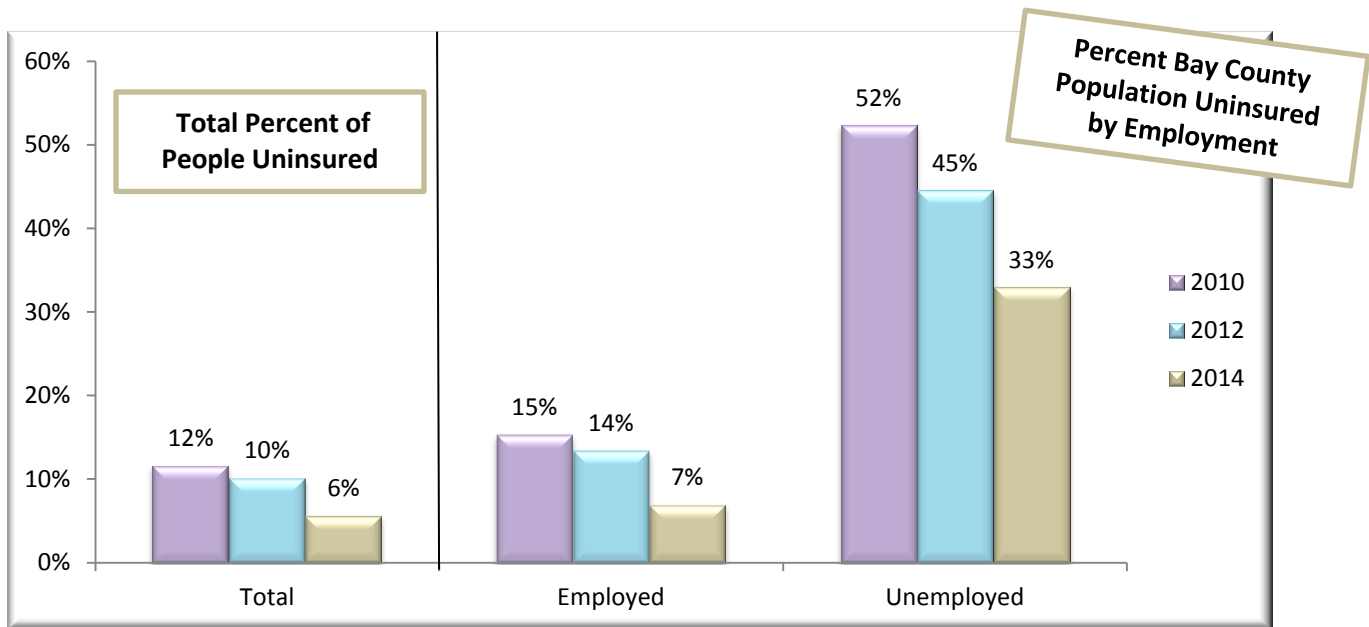


In Bay County, Suicide is more common among Males.

Source: MDHHS, 2013

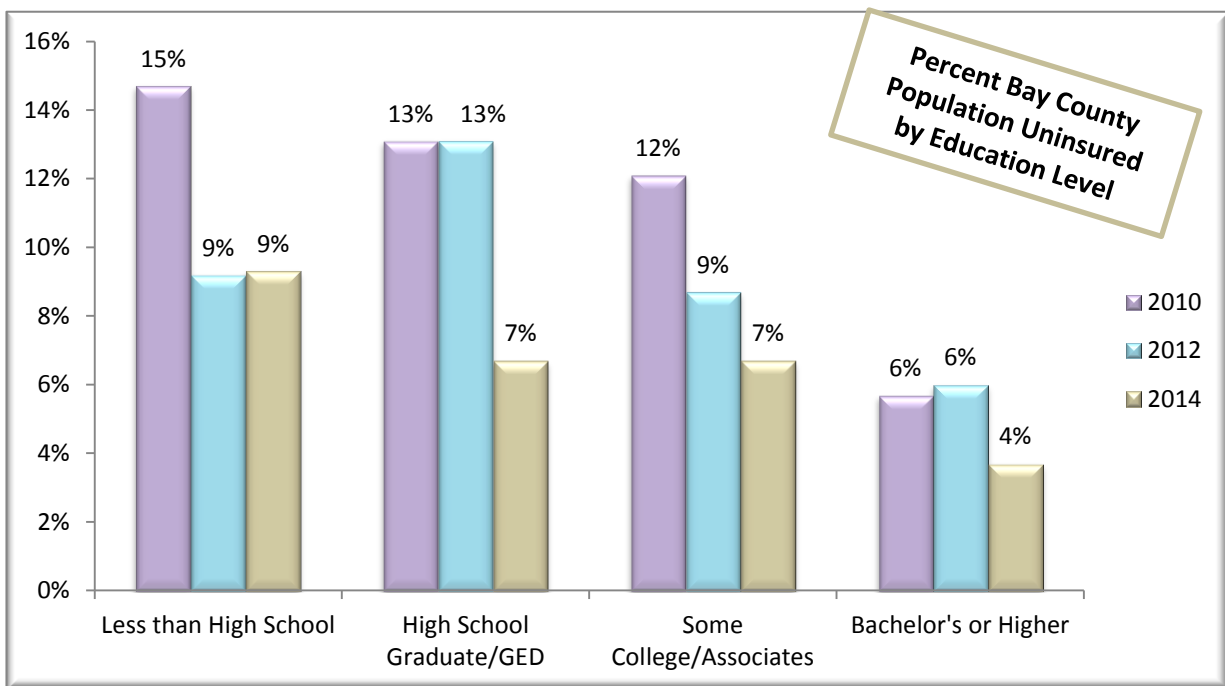
Health Insurance Coverage in Bay County

2015 Community Health Assessment



Source: US Census, American Community Survey (1 year estimates)

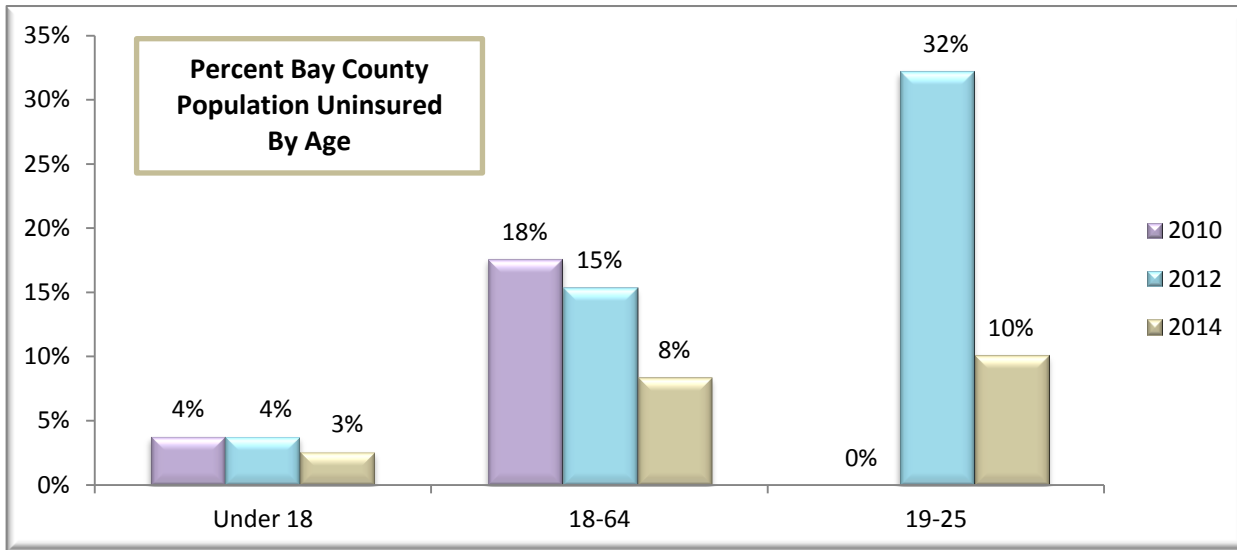
These graphs show the correlation between employment and education, and being uninsured. Being uninsured is significantly higher among those that are unemployed. The lower an individual's education level the greater the chance they will be uninsured.



Source: US Census, American Community Survey (1 year estimates)

Health Insurance Coverage in Bay County

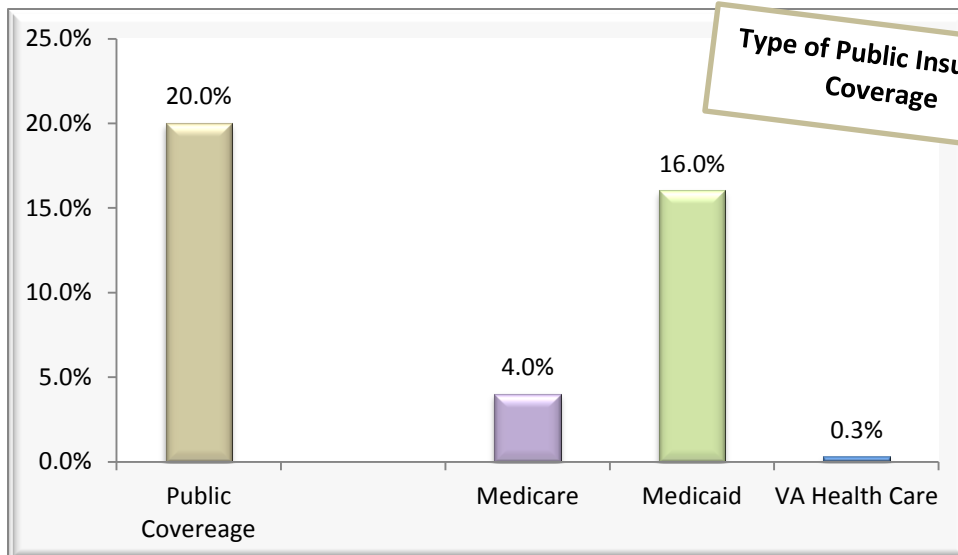
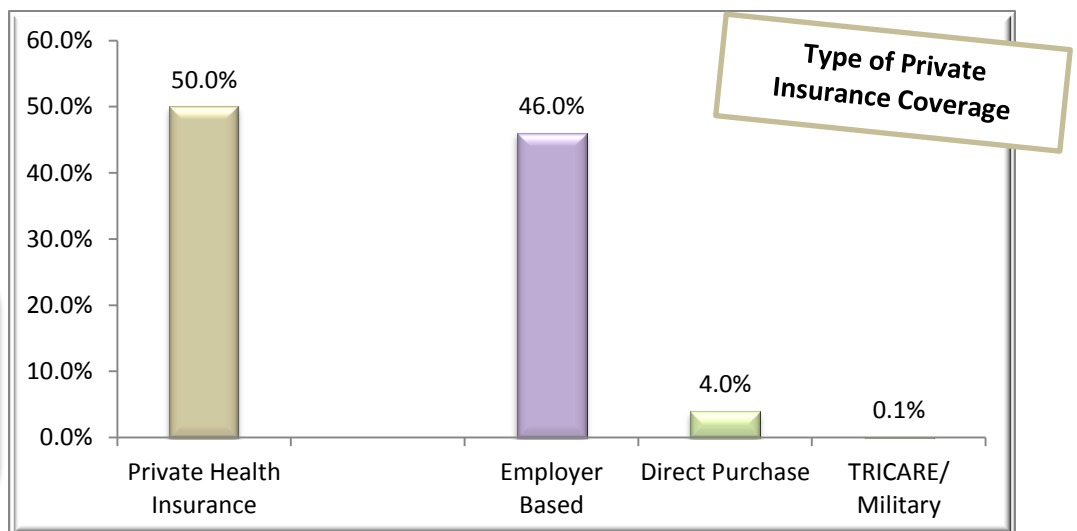
2015 Community Health Assessment



Of those that have private health insurance, the majority (**61%**) receives insurance through their employer.

11% directly purchase health insurance

2% receive TRICARE or Military insurance



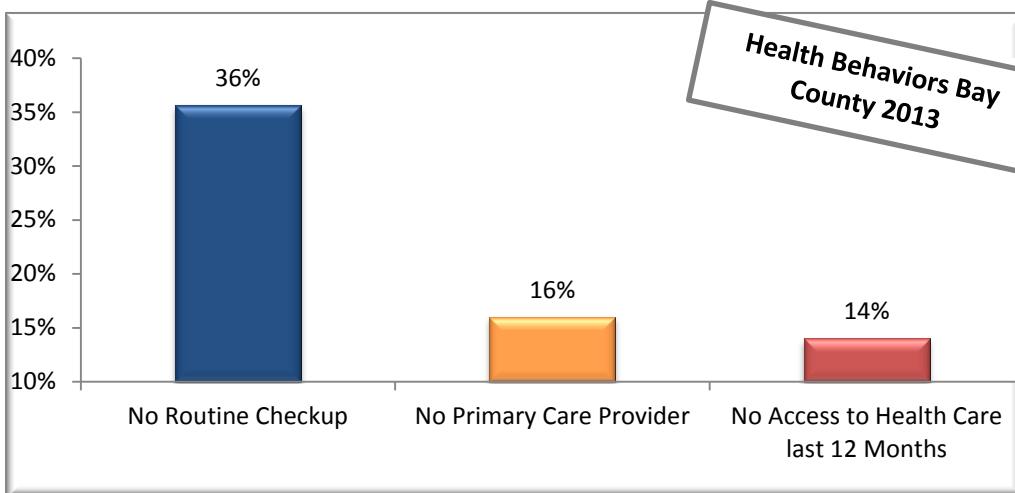
Of those that have public health insurance, the majority (**16%**) receives Medicaid.

Only .3% receive VA insurance

Health Behaviors in Bay County

Preventive Care - Adults

2015 Community Health Assessment



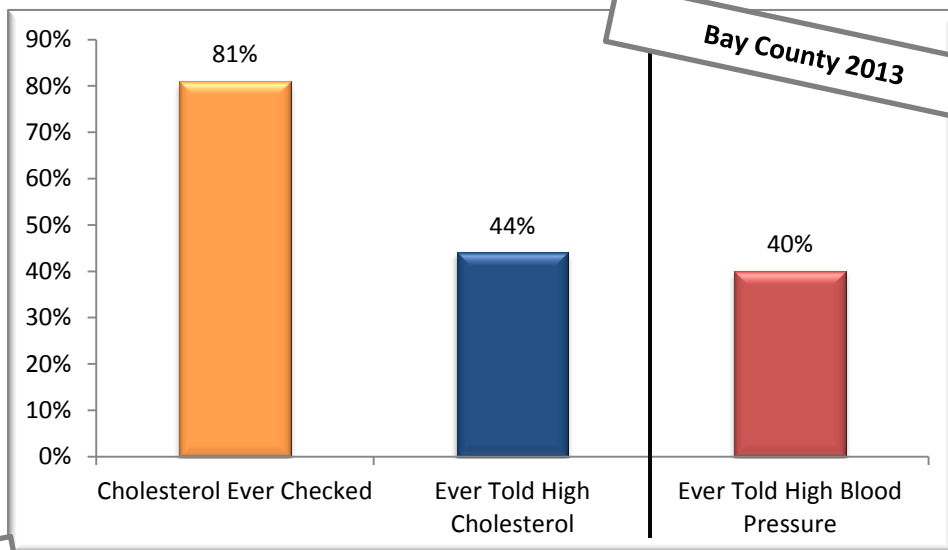
Health Behaviors Bay County 2013

Nearly 1 in 4 residents of Bay County **Did Not** receive a routine checkup in 2013.

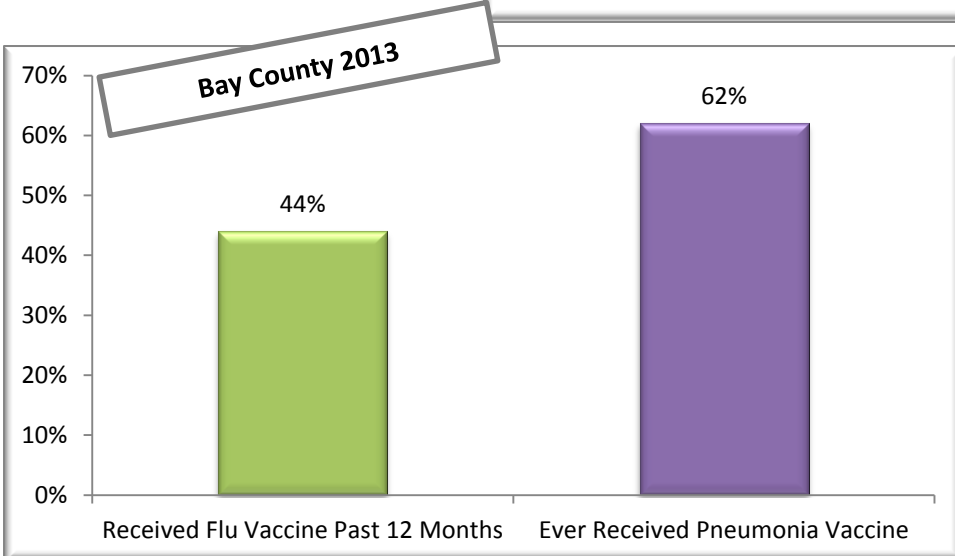
Even with the Health Exchange, 16% report not having a primary care provider and 14% report not having access to health care

81% of adults surveyed reported they have had their cholesterol checked.

Over half of adults who have had their cholesterol checked were told they had high cholesterol and 40 were told they had high blood pressure.



Bay County 2013



Nearly half of adults surveyed reported receiving the flu vaccine.

62% reported receiving the pneumonia vaccine.

Source (All Tables): Michigan Behavioral Risk Factor Surveillance Report, 2013 (There is a 95% Confidence Interval)

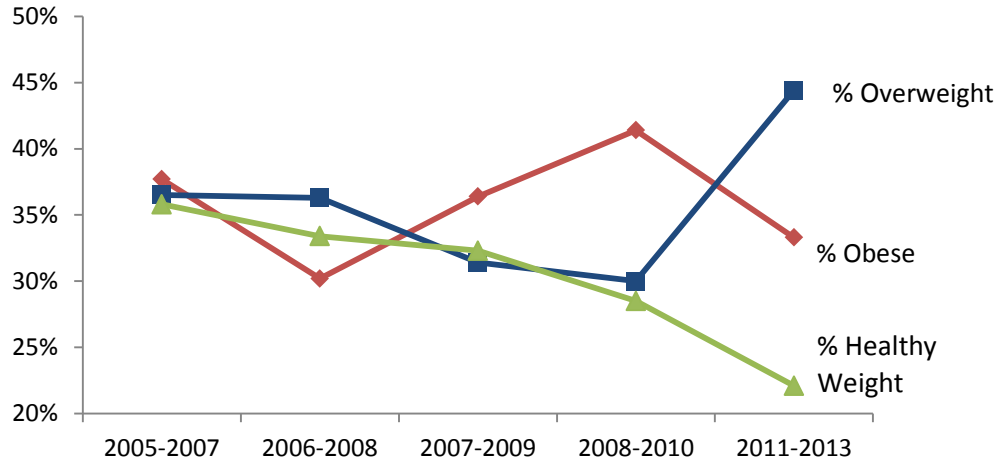
Health Behaviors in Bay County

Weight and Physical Activity

2015 Community Health Assessment



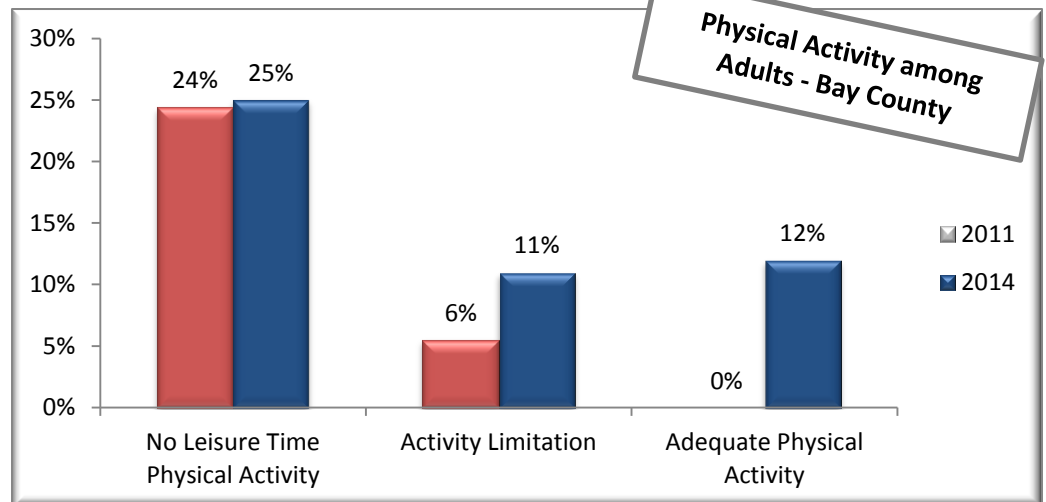
Measure of Weight Among Bay County Adults



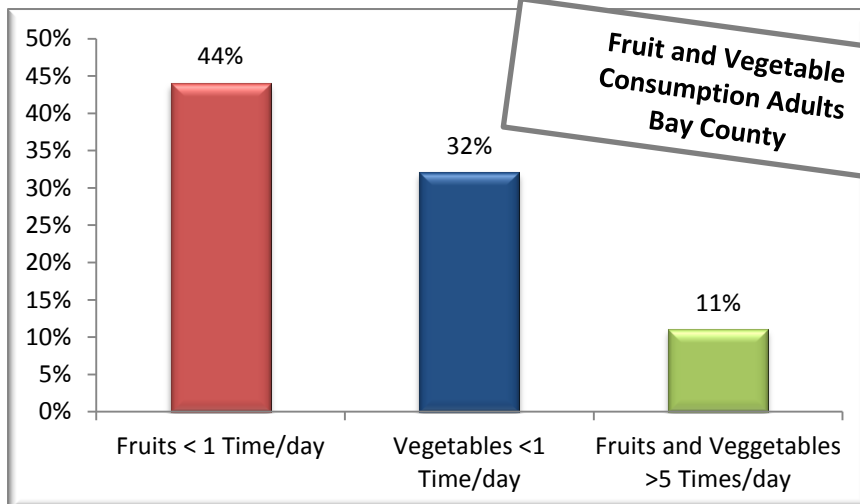
The percent of **overweight** adults has increased by **14%** over the last three years.

Over the last few years the trend has shifted somewhat. Obesity rates among adults have decreased while the percent of overweight adults has increased.

Adults reporting no leisure time physical activity has remained the same while those with activity limitations have slightly increased.



Physical Activity among Adults - Bay County



Fruit and Vegetable Consumption Adults Bay County

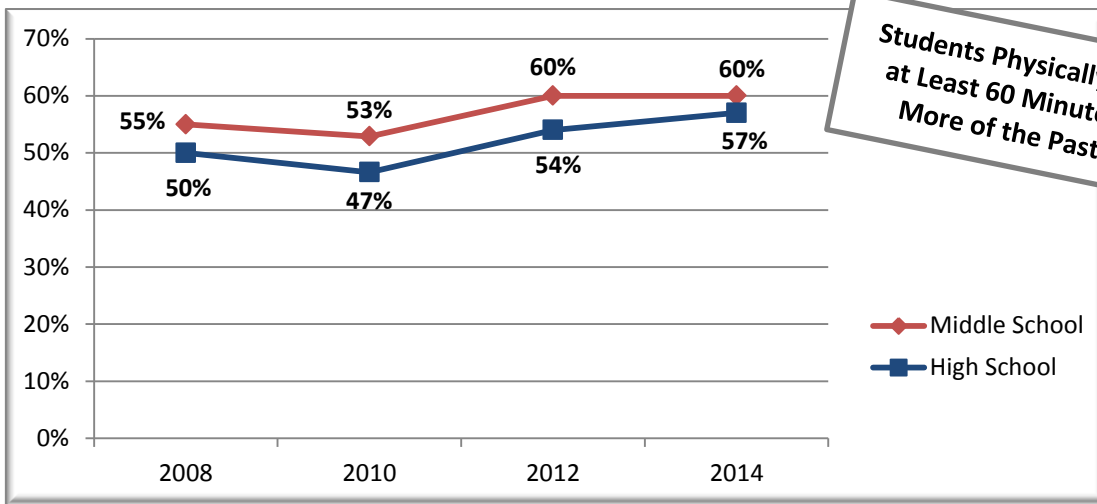
Only **11%** of adults report they are getting the recommended amount of fruits and vegetables

Source (All Tables): Michigan Behavioral Risk Factor Surveillance Report, 2013 (There is a 95% Confidence Interval)

Health Behaviors in Bay County

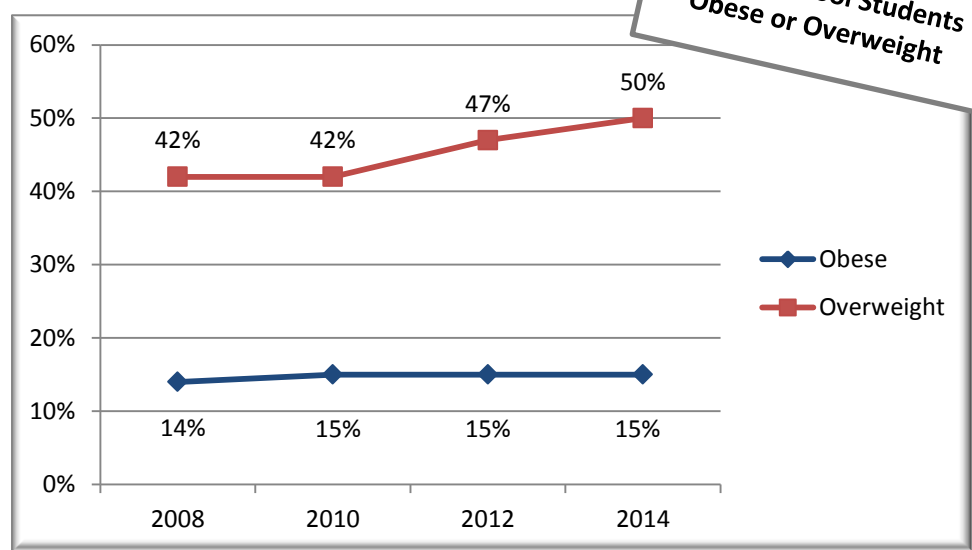
Weight and Physical Activity

2015 Community Health Assessment

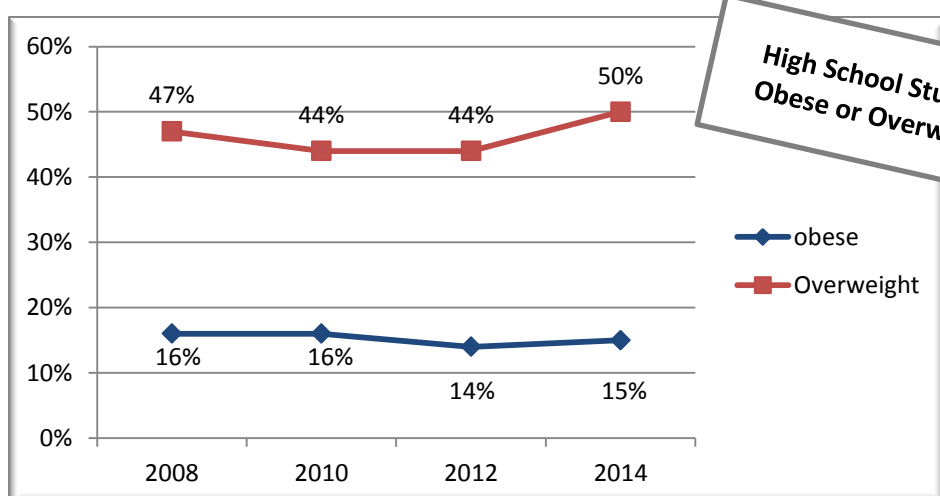


Students Physically Active for at Least 60 Minutes on 5 or More of the Past 7 Days

60% of middle and 57% of high school students report they are getting the recommended amount of physical activity in a day



Middle School Students Obese or Overweight



High School Students Obese or Overweight

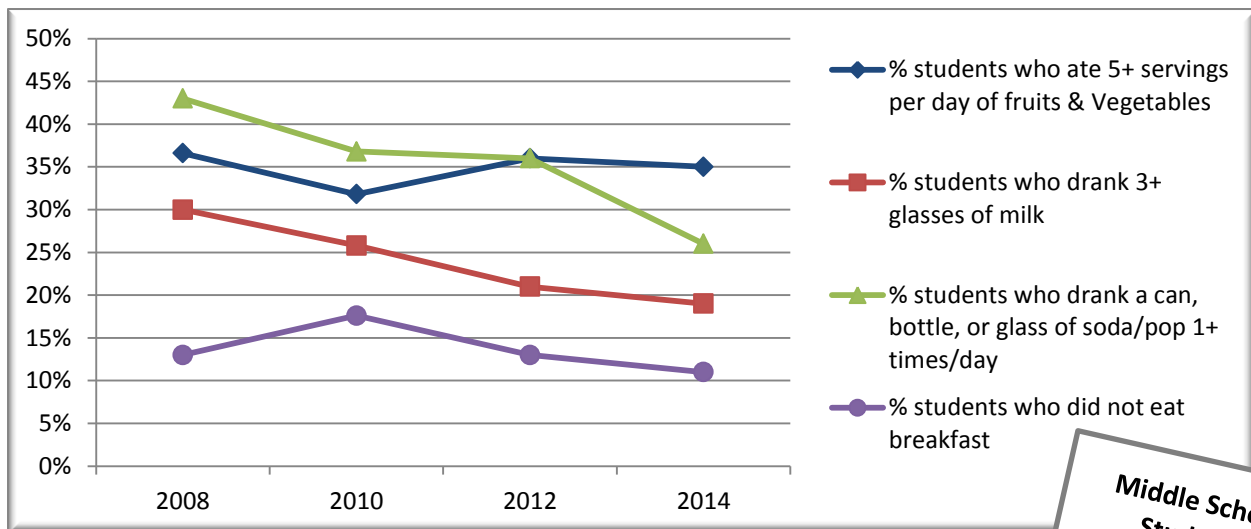
Although 60% of middle and 57% of high school students report they are getting the recommended amount of physical, 50% are overweight and 15% are obese.

Source (All Tables): Michigan Profile for Healthy Youth

Health Behaviors in Bay County

Weight and Physical Activity

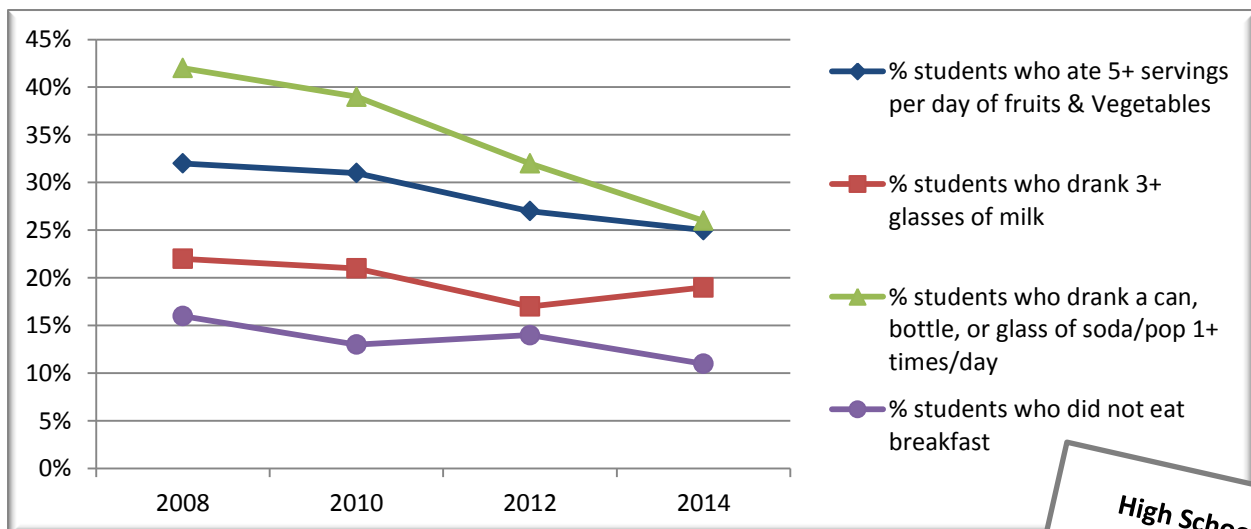
2015 Community Health Assessment



Middle School Students

Among both age groups consumption of fruits and vegetables has decreased. Drinking 3 or more glasses of milk decreased among middle school students but increased slightly among high schoolers.

Pop consumption has decreased among both age groups, but so has the percentage of youth who eat breakfast.

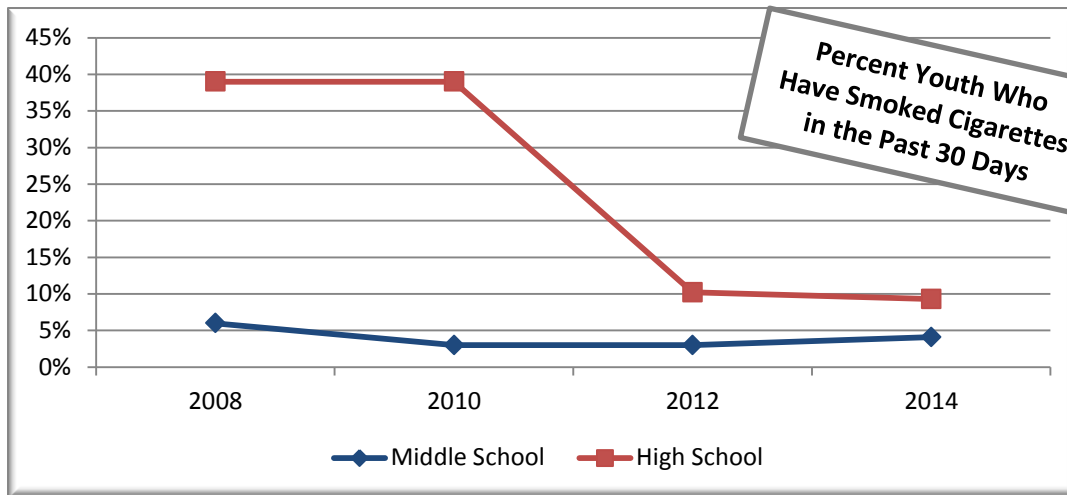


High School Students

Source (All Tables): Michigan Profile for Healthy Youth

Health Behaviors in Bay County

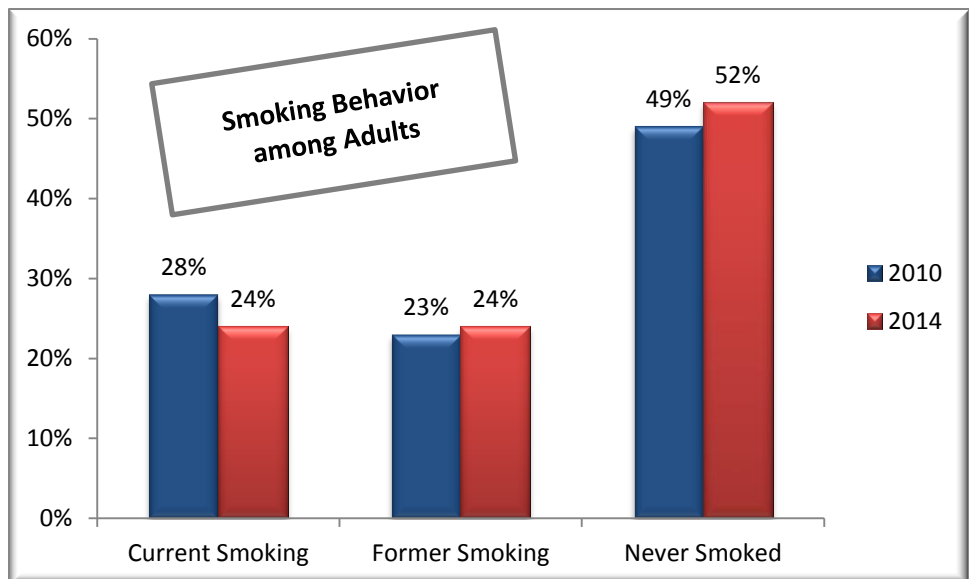
Alcohol, Tobacco and Other Drug Use 2015 Community Health Assessment



The percent of youth who smoke cigarettes continues to remain low for both middle and high school students.

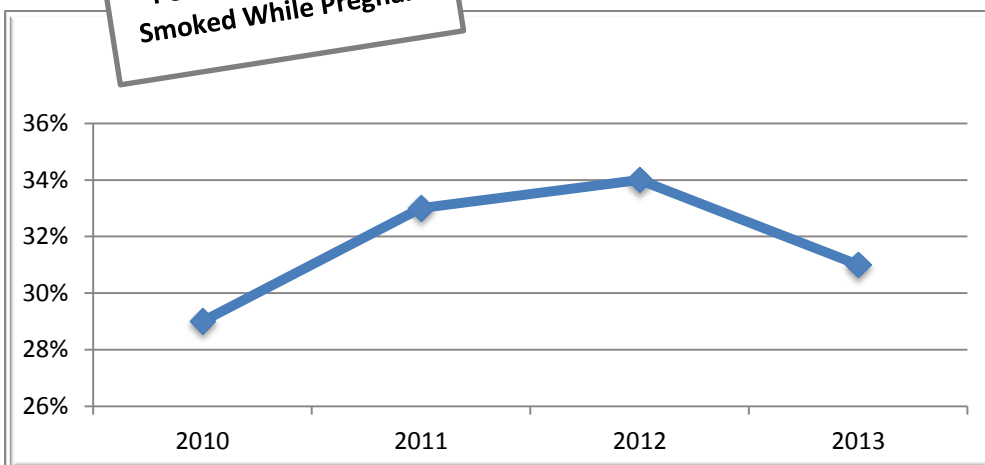
Source (All Tables): Michigan Profile for Healthy Youth

The percent of adults who smoke cigarettes decreased slightly by 4%.



Source: Michigan Behavioral Risk Factor Surveillance System

Percent Women who Smoked While Pregnant



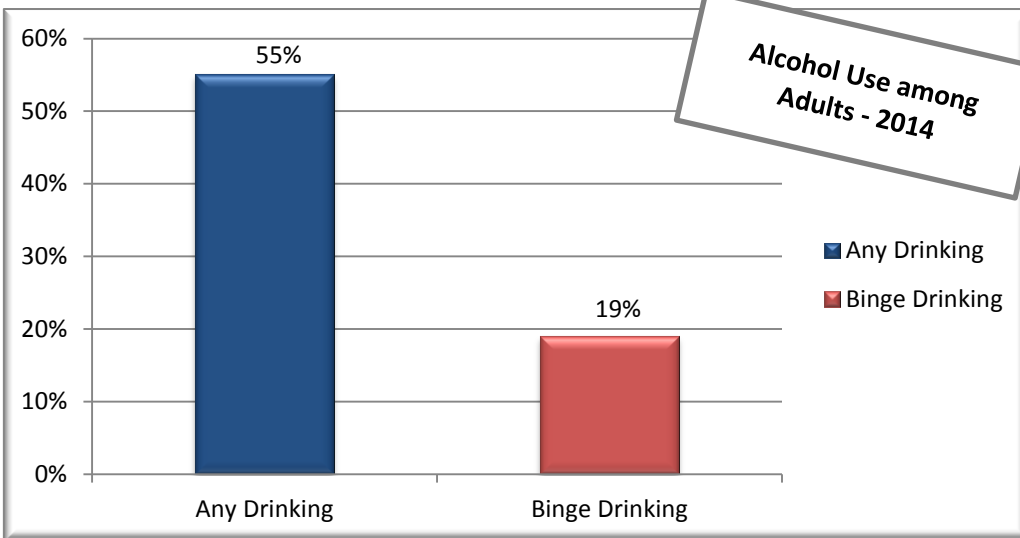
However, the percent of women who report smoking cigarettes during pregnancy continues to increase.

Source : MDHHS, Vital Statistics, Birth Characteristics

Health Behaviors in Bay County

Alcohol, Tobacco and Other Drug Use

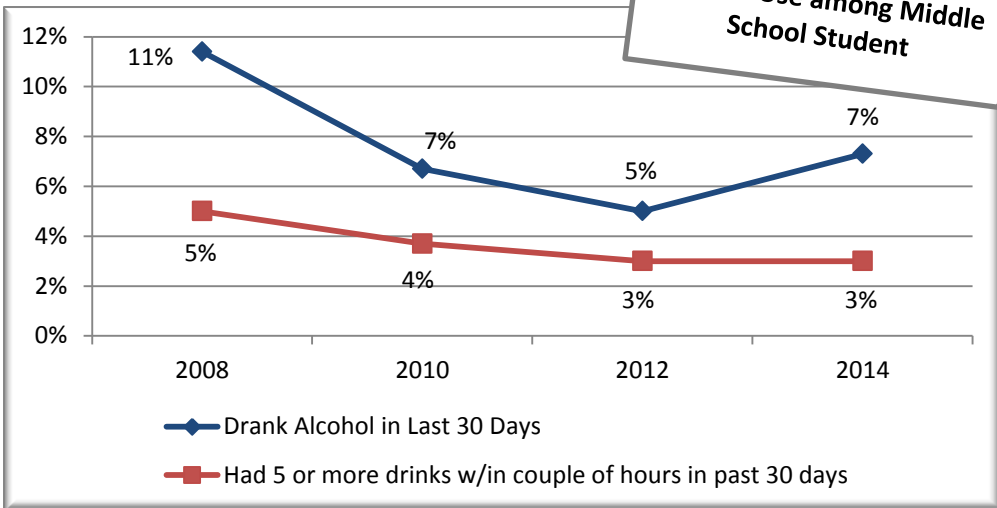
2015 Community Health Assessment



55% of adults report using alcohol with 19% report binge drinking

Source: Michigan Behavioral Risk Factor Surveillance System

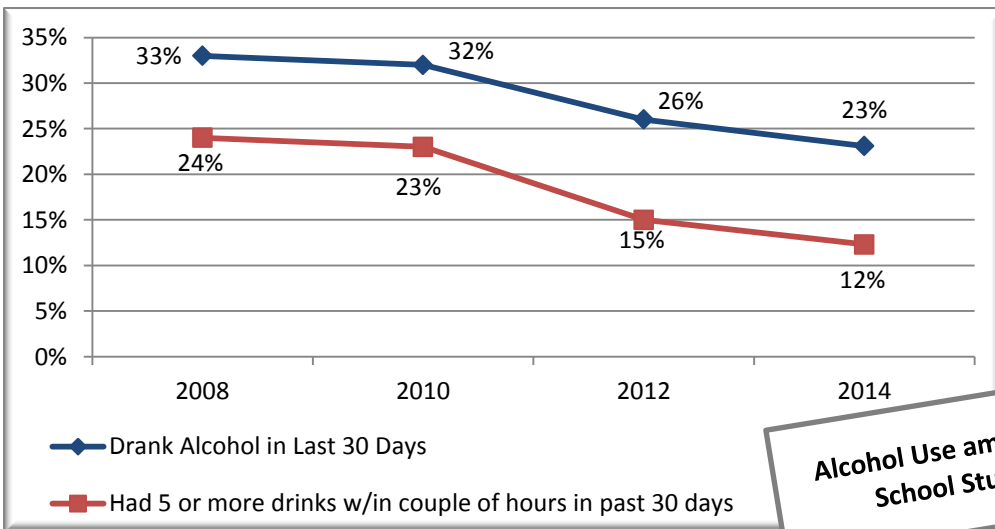
Alcohol Use among Middle School Student



7% of middle school students report using alcohol. This is a slight increase in from 2012-2014.

Source: Michigan Profile for Healthy Youth

From 2008 - 2014, alcohol use among high school students has continued to decrease.



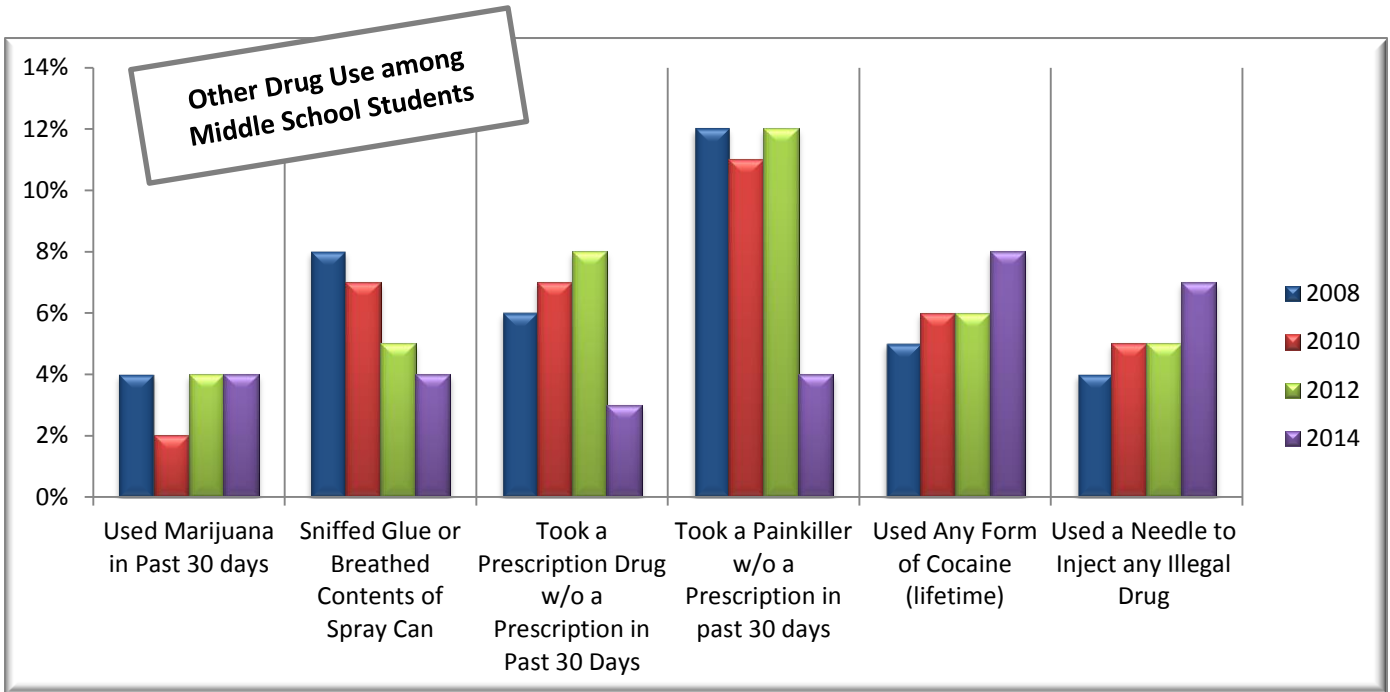
Alcohol Use among High School Student

Source: Michigan Profile for Healthy Youth

Health Behaviors in Bay County

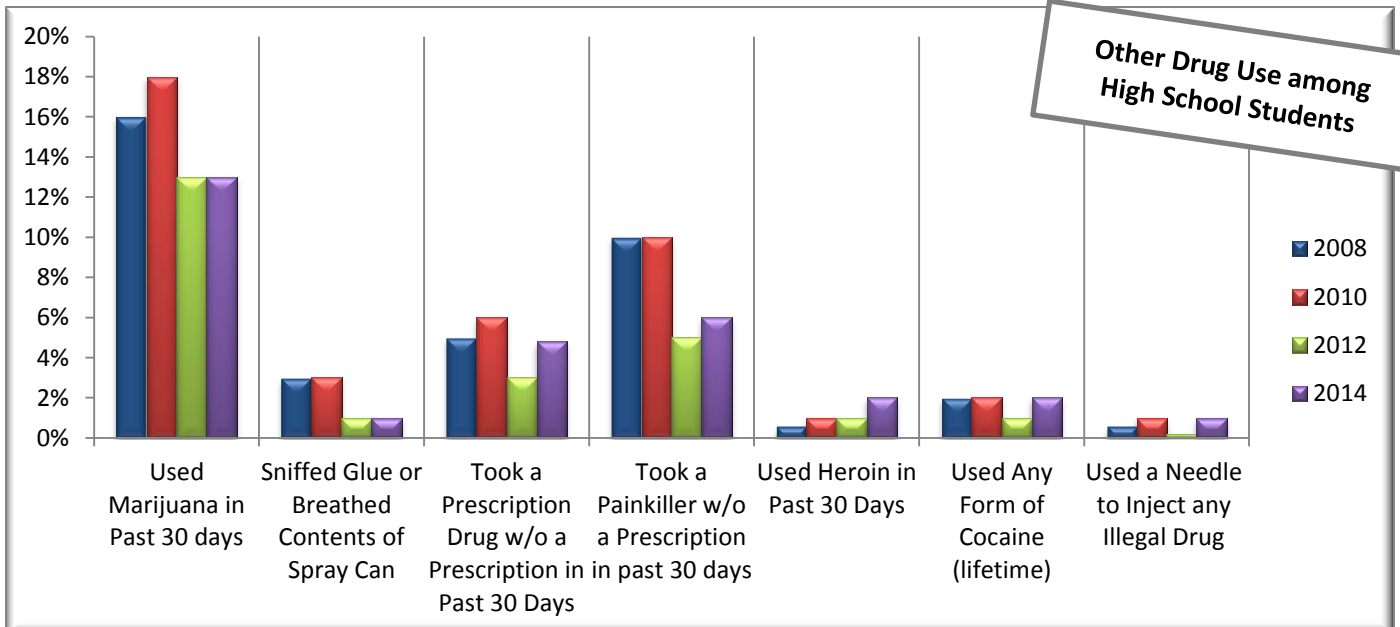
Alcohol, Tobacco and Other Drug Use

2015 Community Health Assessment



Looking at other drug use, the drug most frequently used among middle school students from 2008-2012 was painkillers followed closely by inhalants and prescription drugs; however in 2014 it was any form of cocaine.

Among high school students the drug most frequently used is marijuana followed by painkillers.



Source (All Tables): Michigan Profile for Healthy Youth

Data Sources

1. County Health Rankings 2013-2015
(<http://www.countyhealthrankings.org/app/michigan/2016/overview>)
2. Kids Count Data Center (<http://datacenter.kidscount.org/>)
3. Michigan Behavioral Risk Factors Surveillance Survey
(http://www.michigan.gov/mdhhs/0,5885,7-339-71550_5104_5279_39424-134707--,00.html)
4. Michigan Department of Health and Human Services – Health Statistics and Reports
(http://www.michigan.gov/mdhhs/0,5885,7-339-73970_2944--,00.html)
5. Michigan Profile for Healthy Youth
(<https://mdoe.state.mi.us/schoolhealthsurveys/ExternalReports/CountyReportGeneration.aspx>)
6. U.S. Census Bureau, American Community Survey, 2009-2013
(http://factfinder.census.gov/faces/nav/jsf/pages/guided_search.xhtml)

