

# Bay County Community Health Assessment

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*2021 Report*



# Table of Contents

<a href="#">Purpose</a>	<a href="#">2</a>
<a href="#">Data Limitations</a>	<a href="#">2</a>
<a href="#">County Health Rankings</a>	<a href="#">3</a>
<a href="#">Key Findings</a>	<a href="#">4</a>
<a href="#">Demographics</a>	<a href="#">5</a>
<a href="#">Educational Enrollment</a>	<a href="#">8</a>
<a href="#">Educational Attainment</a>	<a href="#">9</a>
<a href="#">Employment</a>	<a href="#">10</a>
<a href="#">Income</a>	<a href="#">11</a>
<a href="#">Poverty</a>	<a href="#">12</a>
<a href="#">Maternal and Child Health</a>	<a href="#">15</a>
Live Births and Pregnancies .....	15
Maternal Characteristics.....	16
Low Birth Weight .....	17
Infant Characteristics and Mortality .....	18
Child Abuse and Neglect .....	18
Vaccination Rates .....	19
Lead Testing.....	19
Number of Childcare Settings .....	19
<a href="#">General Health</a>	<a href="#">20</a>
Ratio of Patients to Medical, Dental, and Mental Health Care Provider .....	21
<a href="#">Morbidity and Mortality</a>	<a href="#">22</a>
Causes of Hospitalizations .....	22
Preventable Hospitalizations .....	23
Leading Causes of Death.....	24
Deaths by Suicide.....	26
<a href="#">Health Insurance Coverage</a>	<a href="#">27</a>
<a href="#">Health Behaviors</a>	<a href="#">29</a>
Adult Weight and Physical Activity .....	30
Preventative Dental Visits Among Medicaid Enrollees.....	30
Youth Weight, Physical Activity, and Nutrition.....	31
Bullying, Vaping Use, and Youth Depression .....	33
Adult and Youth Smoking .....	34
Adult and Youth Alcohol Use .....	35
Youth Substance Use .....	36
Protective Factors Among Youth .....	38
Domestic Violence, Violent Crime, and Total Crime .....	39
Traffic Crashes .....	40
<a href="#">COVID-19 Vaccinations</a>	<a href="#">42</a>
<a href="#">Next Steps</a>	<a href="#">43</a>
<a href="#">Data Sources</a>	<a href="#">43</a>

## 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, the County Health Rankings, Michigan Incident Crime Reporting, and Michigan State Police Traffic Crash Statistics. 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 collaboration with McLaren Bay Region, local community partners, and the State of Michigan.

## 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 CHNA used 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.

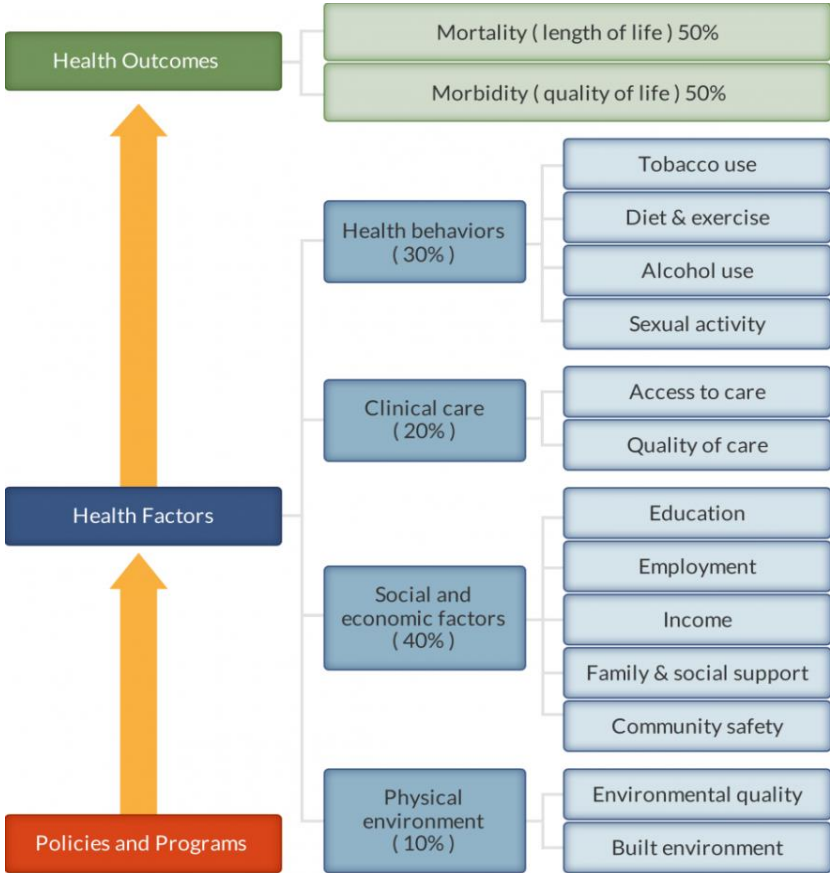
The *Michigan Profile for Healthy Youth* (MiPHY) is an online student health survey offered by the Michigan Departments of Education and Health and Human Services to support local and regional needs assessment. The MiPHY provides student results on health risk behaviors including substance use, violence, 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.

# County Health Rankings

The *County Health Rankings & Roadmaps* program is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The *County Health Rankings* show the rank of the health of nearly every county in the nation and illustrate that much of what affects health occurs outside of the doctor’s office. The *Rankings* help counties understand what influences the health of residents and how long they will live (County Health Rankings, <http://www.countyhealthrankings.org/about-project>). The *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.



*County Health Rankings model ©2012 UWPHI*

Figure 1: Model of Population Health Used by the University of Wisconsin’s Population health Institute. Source: [www.countyhealthrankings.org](http://www.countyhealthrankings.org)

Bay County ranked in the **lower middle range** in Health Factors and **higher middle range** in Health Outcomes of the 82 counties in Michigan. The following table illustrates the breakdown in rankings among the different measures that affect health.

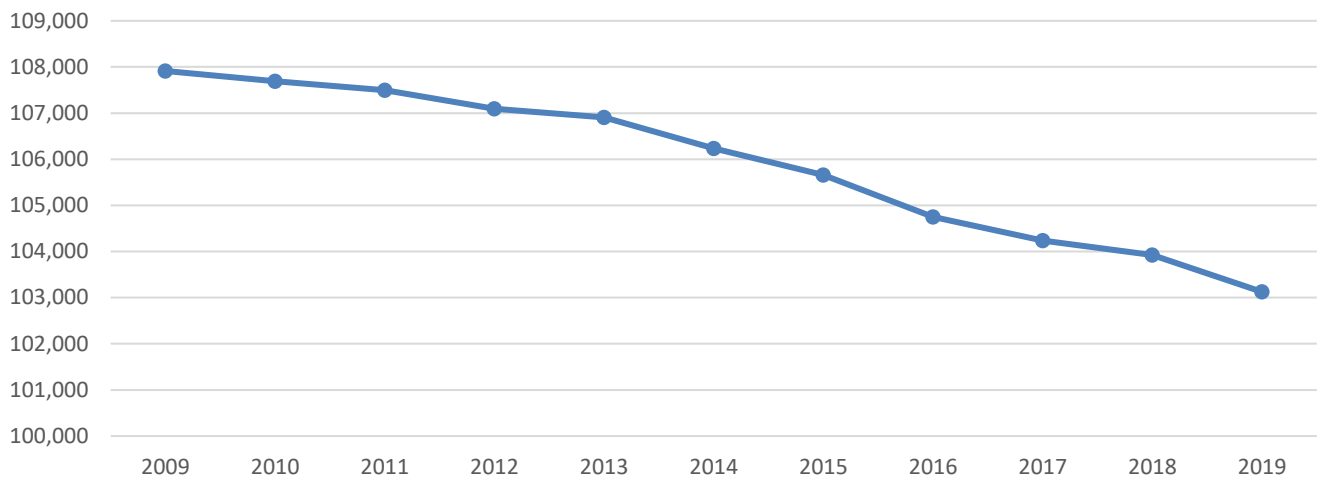
2020 County Health Rankings							
Health Outcomes	Length of Life	Quality of Life	Health Factors	Health Behaviors	Clinical Care	Social/Emotional Factors	Physical Environment
36	48	30	55	52	59	47	46

## Key Findings

- Bay County continues to see a **decline** in overall population with a growing senior (65+) demographic.
- Bay County saw an **increase** among the African American, Hispanic, and Native American populations in 2019.
- There continues to be a **decline** in K-12 school enrollment numbers while educational attainment has remained fairly stable across most categories with slight increases in the Bachelor's degree or higher category.
- While the total population of the labor force has decreased, there were **more people employed** (55%) than in previous years. The unemployment rate was very low (4%) for Bay County in 2019.
- Mean household income, mean family income, and per capita **income continues to rise**.
- The population with the highest percentage of poverty was among female householders (36%), specifically women with children under 5 years of age (60%) and under 18 years of age (49%).
- The number of live births has **gradually decreased** over the past 10 years. More than 50% of pregnant mothers are either overweight or obese, just under half are not married, and about **1 in 5 smoked** while pregnant.
- Infant mortality rates have varied between 1 and 10; low birthweight babies remain low (~8%) over eight years.
- Over the past 10 years, there has been a 73% increase of children in investigated families with a 64% increase in confirmed victims of child abuse and neglect; and 131% increase of children in out-of-home care.
- **1 in 4 adults report poor mental health** even with fairly good mental health care provider ratios (400 to 1).
- There is a HUGE need for primary care physicians in Bay County with a **2420 to 1 ratio** in 2020.
  - The percentage of adults with no routine checkup or primary care provider moderately increased.
- Heart Disease is the leading cause of hospitalization and death in Bay County. However, **deaths from diabetes mellitus have doubled** in the last few years, which is now the #1 preventable hospitalization for those ages 45+.
- The percent of **people uninsured remains very low** (4.8%). Ages 19-25 saw the biggest decrease in uninsured.
- **About 1 and 3 adults are of a healthy weight**. There were **decreases** in both overweight and obese adults.
- Middle and High School students physically active (60+ minutes of the past 7 days) have **gradually decreased**.
  - High School students overweight and obese have gradually increased. Among middle school students, overweight rates have been relatively stable and obese rates have slightly increased.
- Cigarette use significantly decreased while **vaping use increased** among middle and high school students.
- 1 in 4 Middle School students are bullied online while **almost half (44%) are bullied on school property**.
- Domestic violence is 5.8 (**a 5-year low**) while violent crime is 3.8 per 1,000 population in Bay County.
- The number of car crashes **decreased**. Distracted driving is still the #1 cause of crashes, followed by alcohol.
- 63% of Bay County residents received at least one dose of any COVID-19 vaccine. 57% completely vaccinated.

# Bay County Demographics

## Total Population, 10-Year Trend

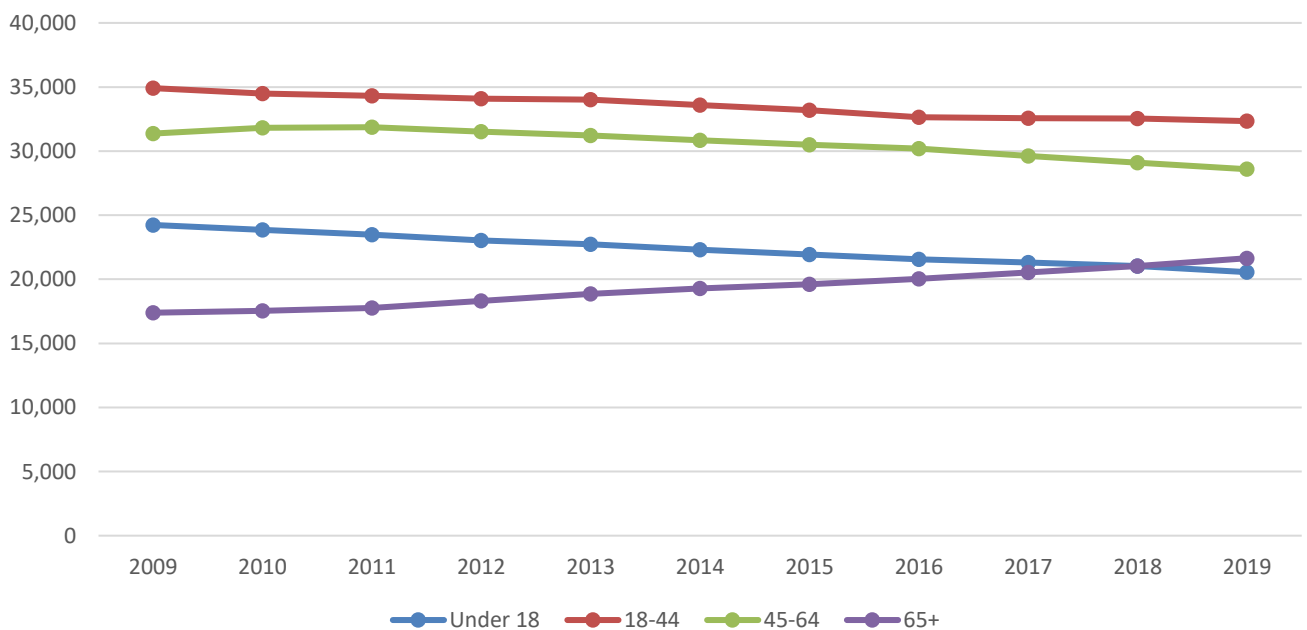


Source: US Census Bureau, 1-year estimates

Bay County has seen a **decline in total population** over last 10 years. More alarmingly, 2% of that decline has occurred over two recent 3-year time spans (2013-2016 and 2016-2019).

The chart below shows moderate declines in the 45-64 and under 18 age groups over the last 10 years. While the 18-44 age group has declined overall, the past few years have remained steady. The only age group that experienced growth was the 65 and older population.

## Total Population Trends, by Age Group

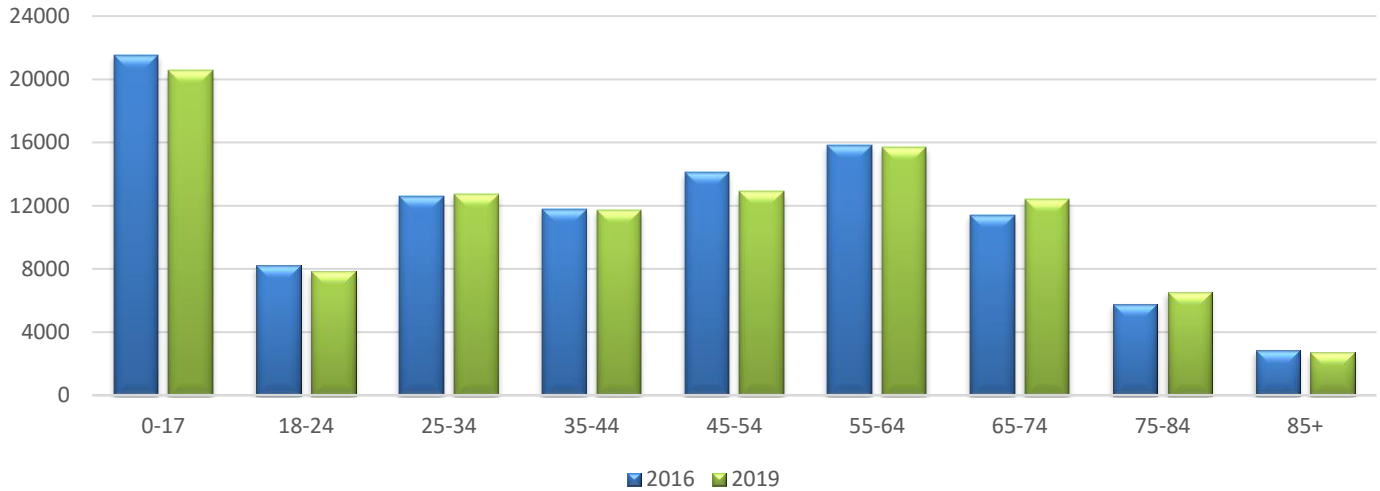


Source: Michigan Department of Health and Human Services Vital Statistics, Population Trends



# Bay County Demographics

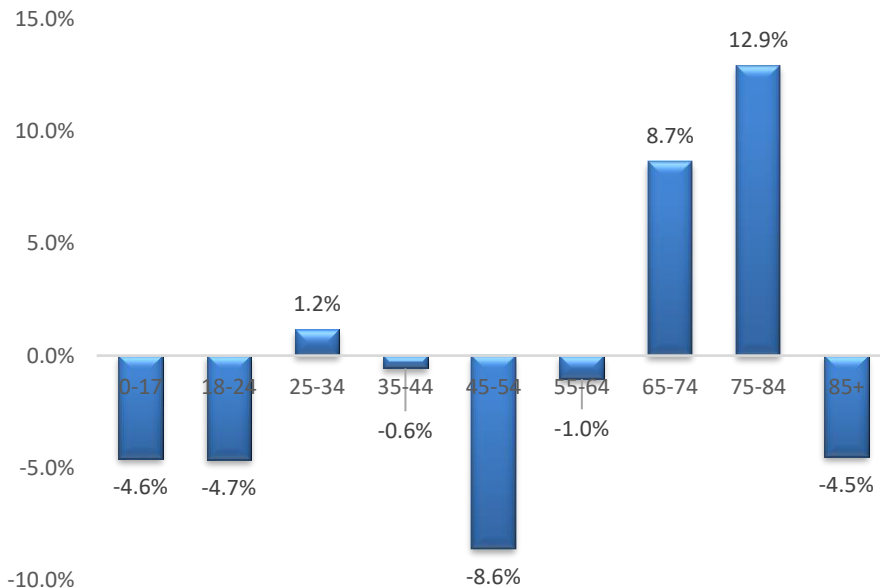
## Total Population, by Selected Age Groups



While Bay County’s total population continues to decline, the senior population continues to rise. 21% of the population is over the age of 65. The greatest increases in population is among the 75-84 age group (12.9%) and 65-74 age group (8.7%). This increase occurred from 2016 to 2019.

Bay County is also experiencing a significant decline in population among ages 45-54 (8.6%) with moderate declines among the 0-17 and 18-24 age groups.

## Percent Population Change Between 2016-2019, by Selected Age Groups



Source (All Tables): Michigan Department of Health and Human Services Vital Statistics,

## Bay County Demographics

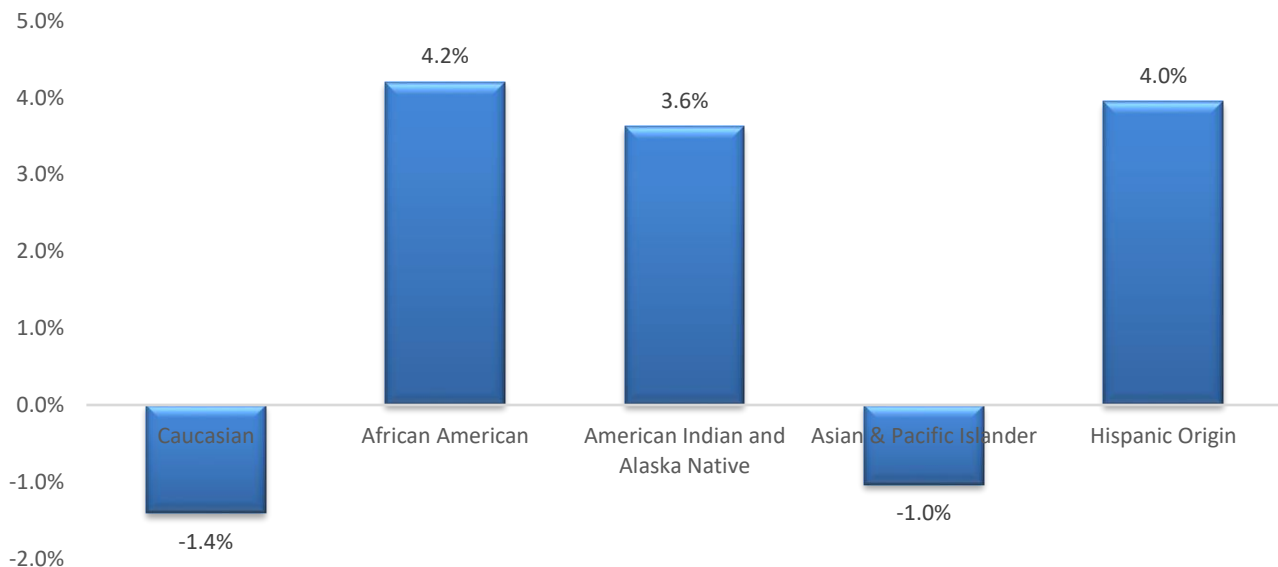
### Percent of Population, by Race

	Caucasian	African American	Hispanic Origin	Asian	American Indian and Alaskan Native
<b>2019</b>	95.8%	2.7%	5.5%	0.7%	0.8%
<b>2018</b>	95.8%	2.7%	5.4%	0.7%	0.8%
<b>2017</b>	95.9%	2.6%	5.4%	0.7%	0.8%
<b>2016</b>	95.9%	2.6%	5.2%	0.7%	0.8%
<b>2015</b>	96.0%	2.5%	5.1%	0.8%	0.8%

Bay County has seen a slight decrease in the Caucasian population and an increase in the African American and Hispanic origin populations. Both the Asian and American Indian and Alaskan Native populations have remained steady.

Bay County continues to see changes in the demographic makeup of the county. Between 2016 and 2019, the African American, American Indian, and Hispanic populations have seen a moderate growth in population.

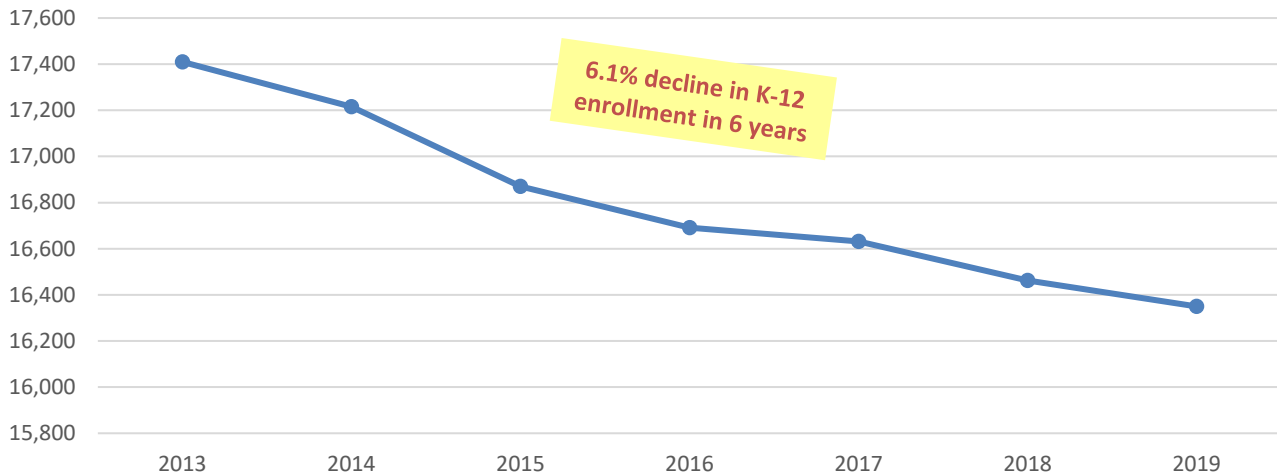
### Percent Population Change Between 2016-2019, by Race





# Bay County Educational Enrollment

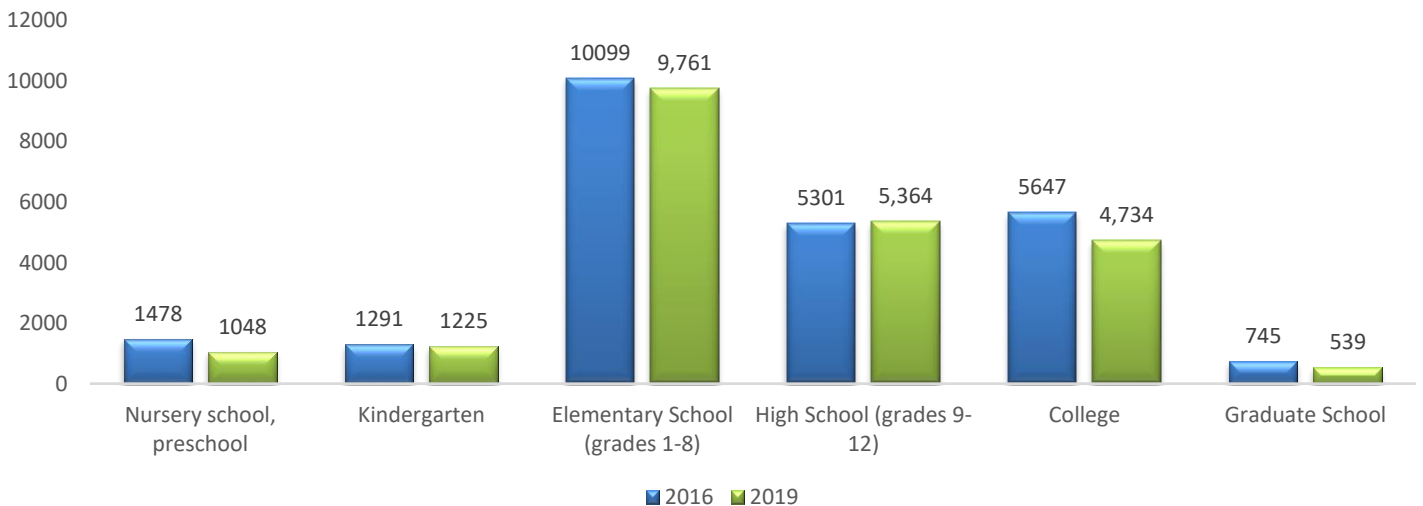
## Total K-12 School Enrollment, 6-Year Trend



Bay County is experiencing a **significant decline in K-12 enrollment**. In the last six years, total enrollment has decreased by 6.1%. Even more alarming, 3% of that decline took place over a 2-year time span (2014-2016).

As shown by the chart below, Bay County has seen decreases in most grade level enrollments with significant declines in preschool, elementary school, and college. High School (grades 9-12) experienced a slight increase in enrollment.

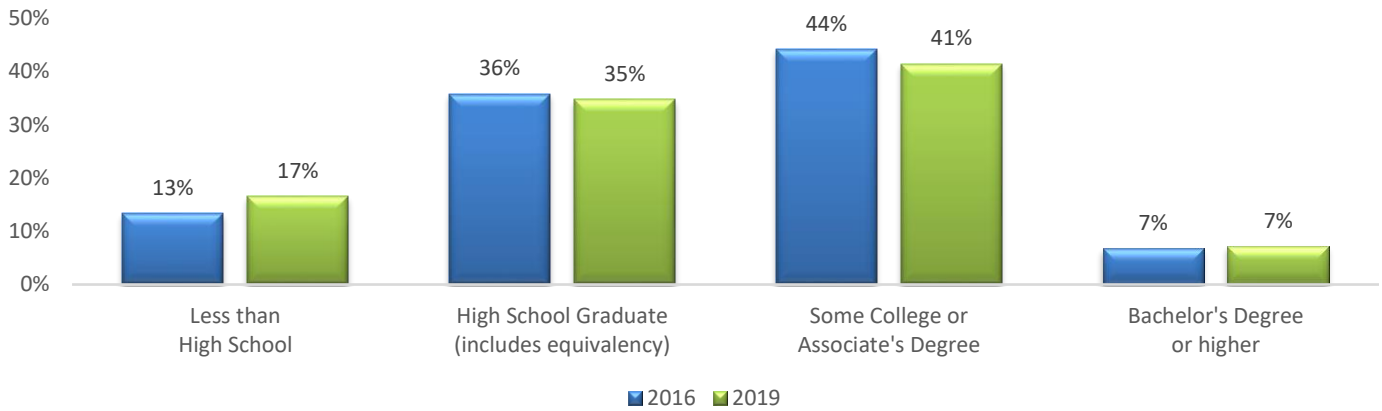
## School Enrollment Numbers, by Grade Level



Source (All Tables): U.S Census Bureau, 5-year estimates, 2013-2019

## Bay County Educational Attainment

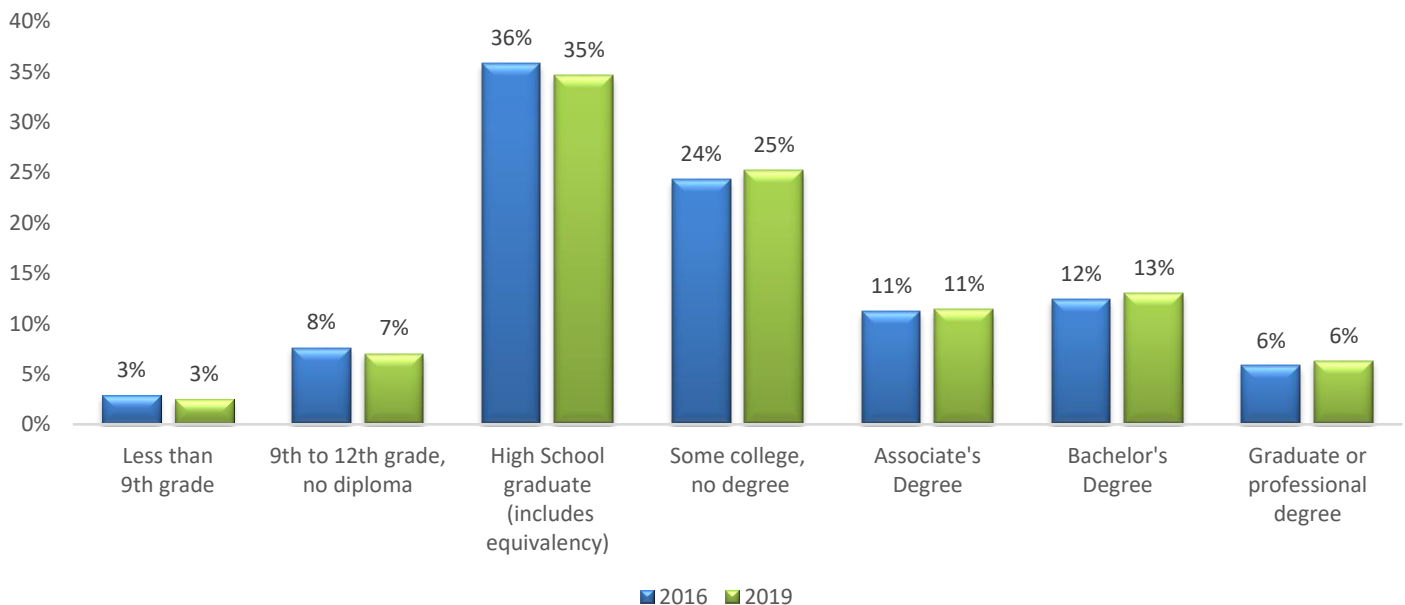
### Educational Attainment - Percent Population Age 18-24



There have been slight decreases in the 18-24 population with some college and a high school graduate educational attainment. Interestingly, there has been an increase in that same population with less than a high school education. Those that have a Bachelor's Degree or higher have remained consistent.

Looking at the chart below, educational attainment for the population aged 25 and older in Bay County has remained relatively steady from 2016 to 2019. There have been **slight increases in all levels of college education**, and thus, slight decreases in high school educational attainment.

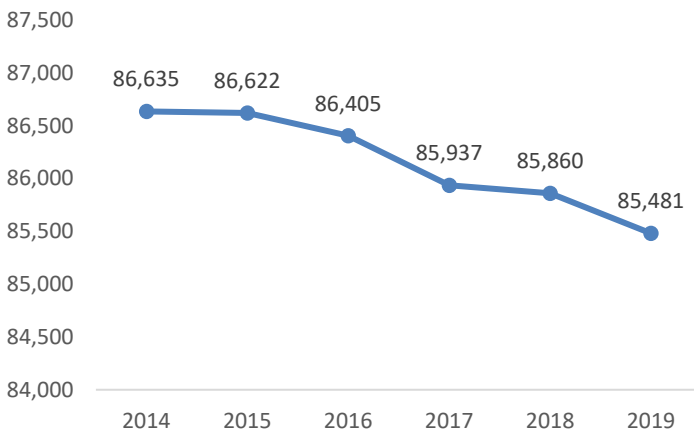
### Educational Attainment - Percent Population Age 25 & Over



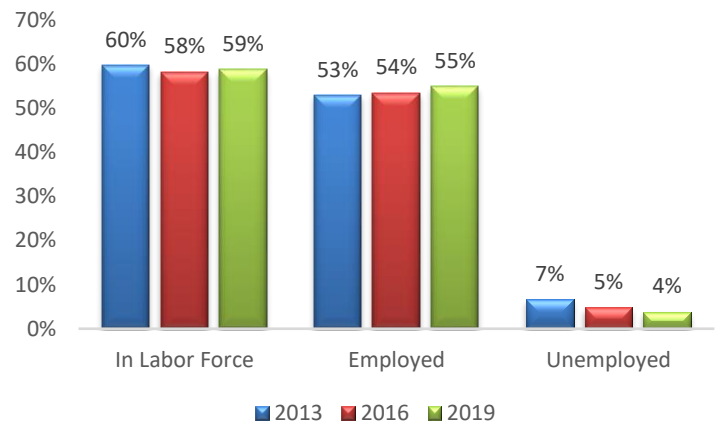
Source (All Tables): U.S Census Bureau, 5-year estimates, 2016; 2019

## Bay County Employment

### Total Population 16 & Over, 5-Year Trend



### Percent Population 16 & Over in Labor Force

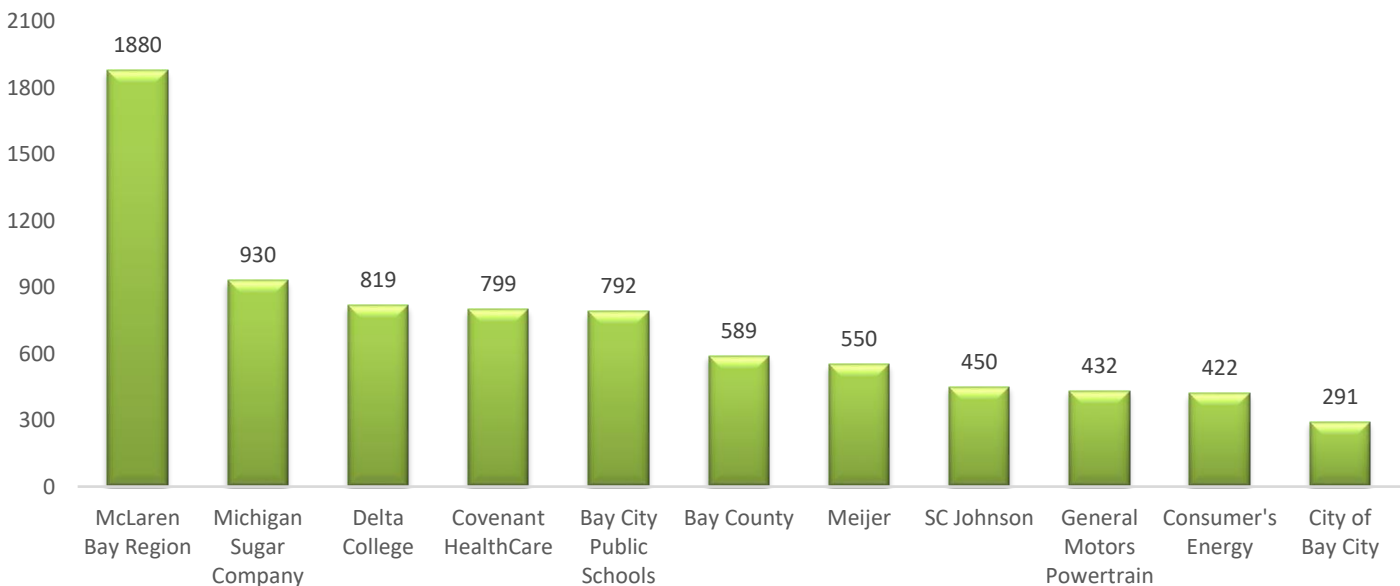


Source (Above Two Charts): U.S Census Bureau, American Community Survey, 5-year estimates, 2014-2019

Over the past five years, there has been a modest decline in the total population who are over the age of 16. As a result, there is a lower percentage of individuals 16 and over in the labor force; however, there has been a **slight increase in those employed** and thus a **decrease in unemployment**.

The chart below shows the largest employers for Bay County in 2020, which were McLaren Bay Region, Michigan Sugar, Delta College, Covenant HealthCare, and Bay City Public Schools.

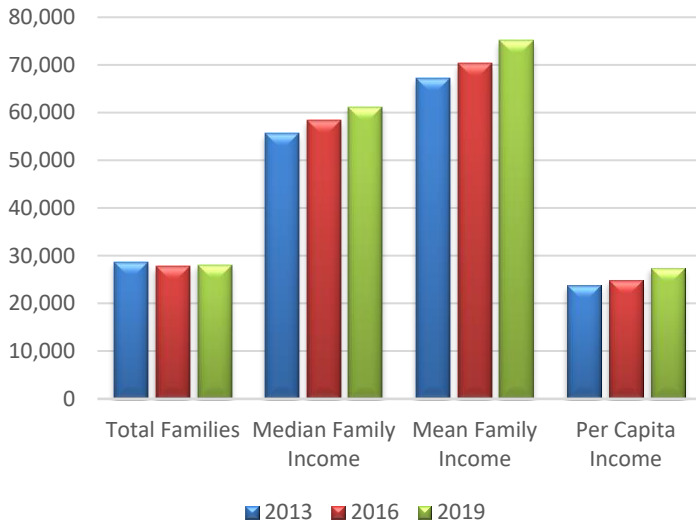
### Largest Employers in Bay County, 2020



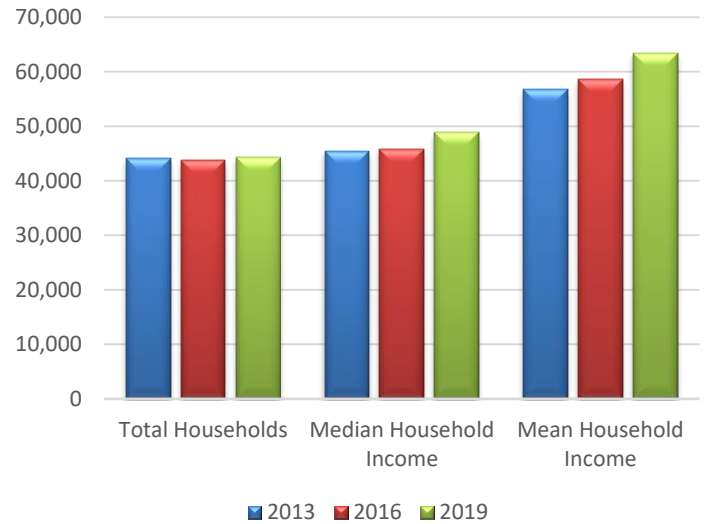
Source: Bay Future, Inc.

## Bay County Income

### Family Income



### Household Income

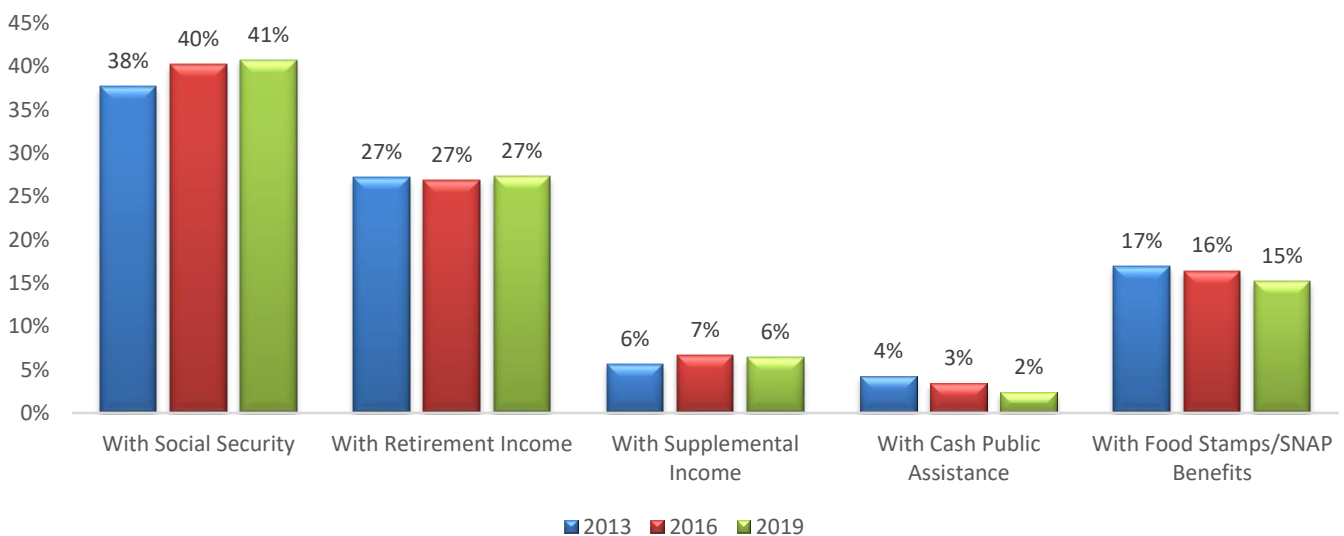


The total number of families in Bay County has slightly decreased. However, the mean and median family incomes saw a 5% and 7% increase, respectively. Per capita income saw an **11% increase** in 2019.

The total number of households in Bay County has remained relatively steady over the last six years. Median and mean household incomes continue to rise with mean household income seeing an **8.3% increase** in 2019.

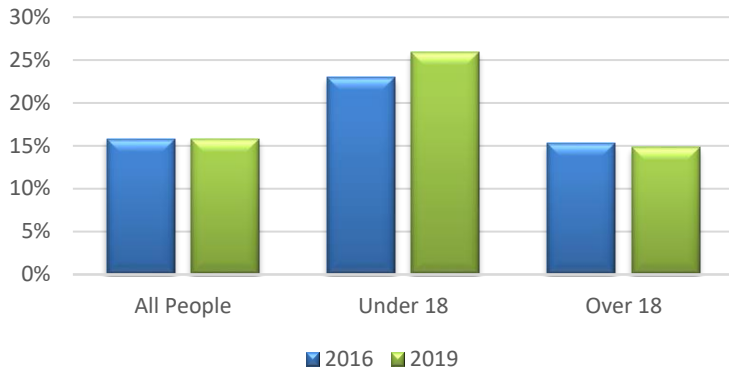
Since 2013, the percentage of households receiving social security has slightly increased. However, the percentage of households receiving cash public assistance, food stamps, and SNAP benefits has gradually decreased.

### Households Receiving Benefits in Bay County



# Bay County Poverty

## Percent of People Below Poverty Level



The graph to the left shows the percent of people living in Bay County who had income below the poverty level in the last 12 months.

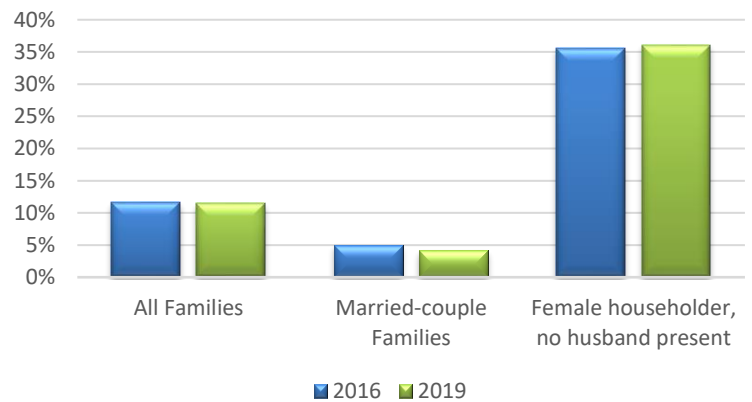
While the percent of people who are living with income below the poverty level has remained steady for all people, there has been a slight increase for those under 18.

The graph to the right depicts the percent of all families living in Bay County that received income below poverty level in the last 12 months.

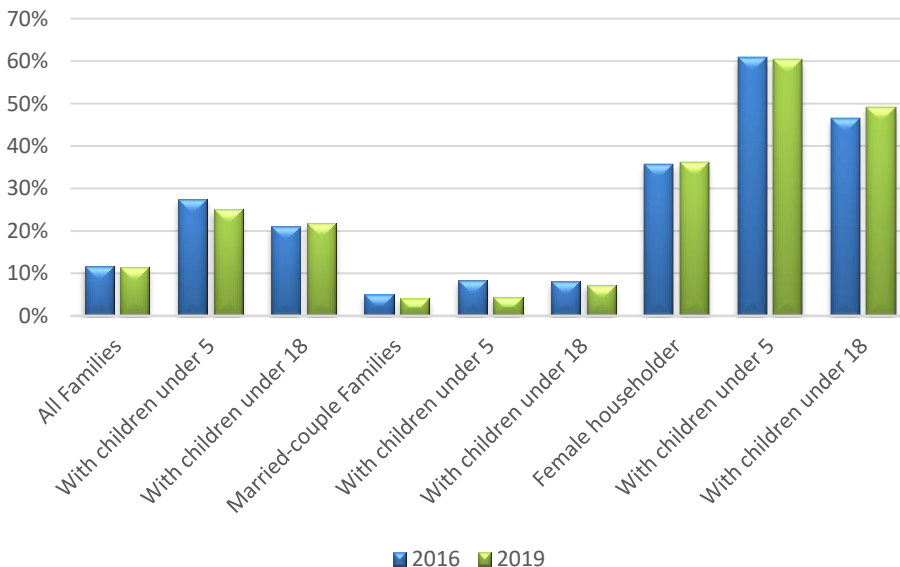
The percent of families who are living with income below poverty level remained steady since 2016, with a slight decrease among married-couple families.

Female householders experience the greatest incidence of poverty compared to the other family types.

## Percent of Families Below Poverty Level



## Percent of Families Below Poverty Level

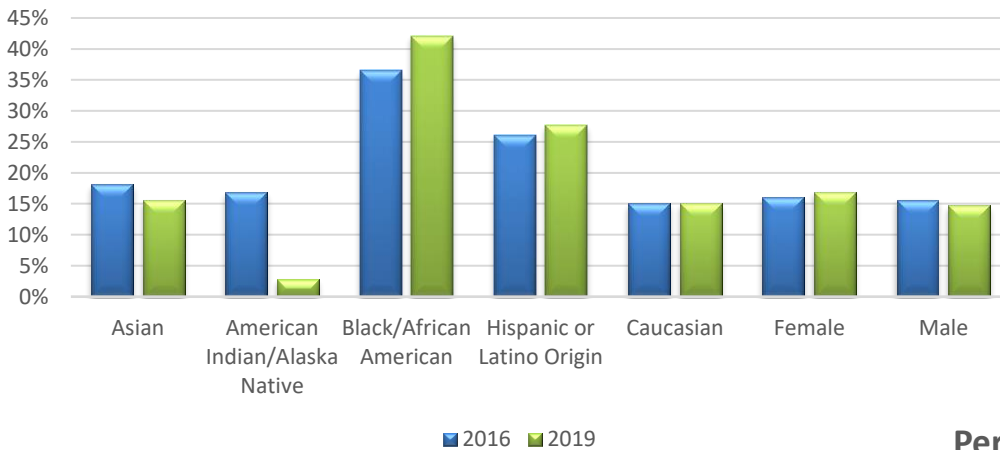


Female householders with children under the age of 5 experience the highest incidence of poverty in Bay County.

In 2019, all family types experienced either steady or slight decreases in having income that falls below the poverty level in the last 12 months.

However, female householders with children under 18 experienced an increase in poverty.

## Percent Below Poverty Level, by Race & Gender

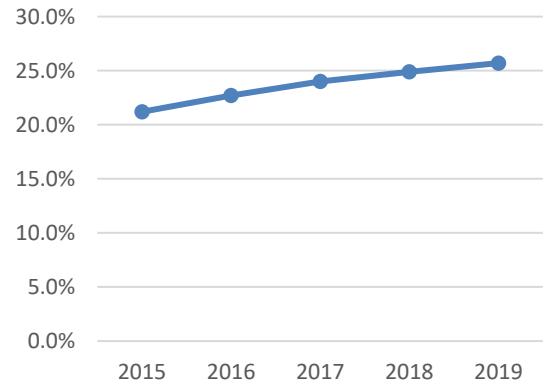


There was a moderate increase in poverty among African Americans and a significant decrease among Native Americans.

While males experienced a decrease, females experienced an increase in poverty.

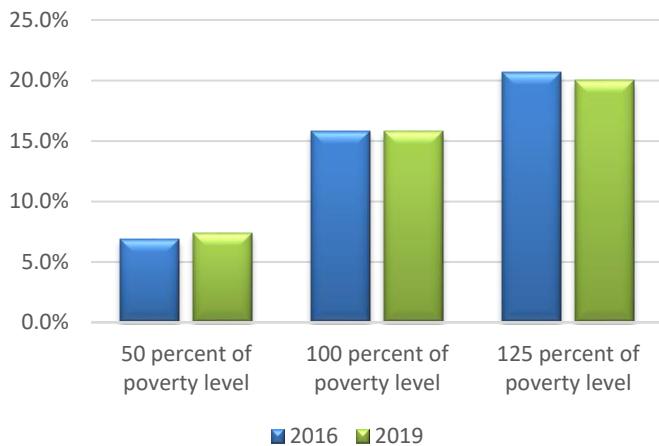
The percentage of children living in poverty has steadily increased over the past several years. Between 2015 and 2019, there was a **15% increase** in the number of Bay County children living in poverty.

## Percent of Children (0-17) Below Poverty Level

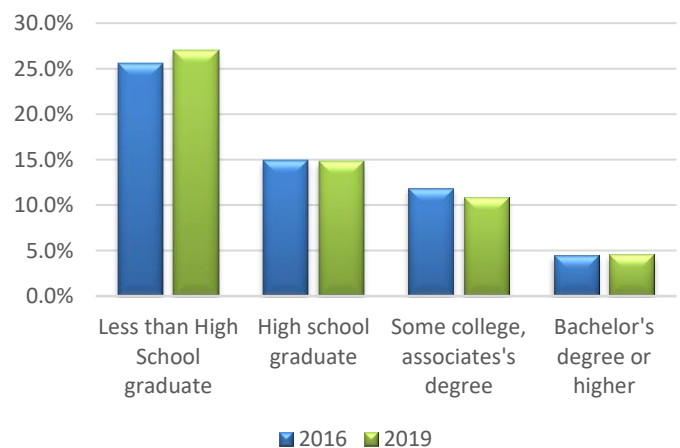


The majority of poverty in Bay County falls 125% below the poverty level. Individuals living in Bay County that did not graduate high school have the highest prevalence of poverty compared to the other educational attainment levels.

## Percent of People Below Poverty Level



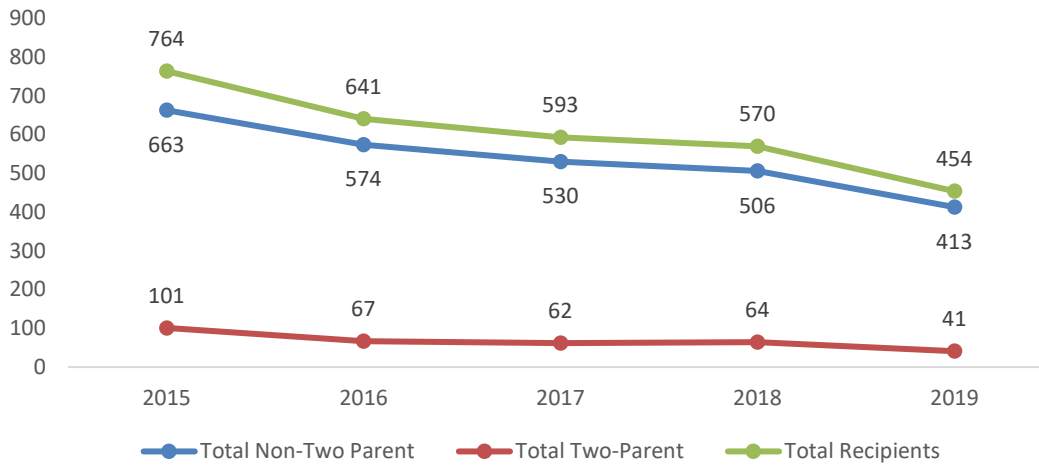
## Percent Below Poverty Level, by Education





# Bay County Poverty

## Total Recipients for Family Independence Programs, by Fiscal Year - Monthly Averages

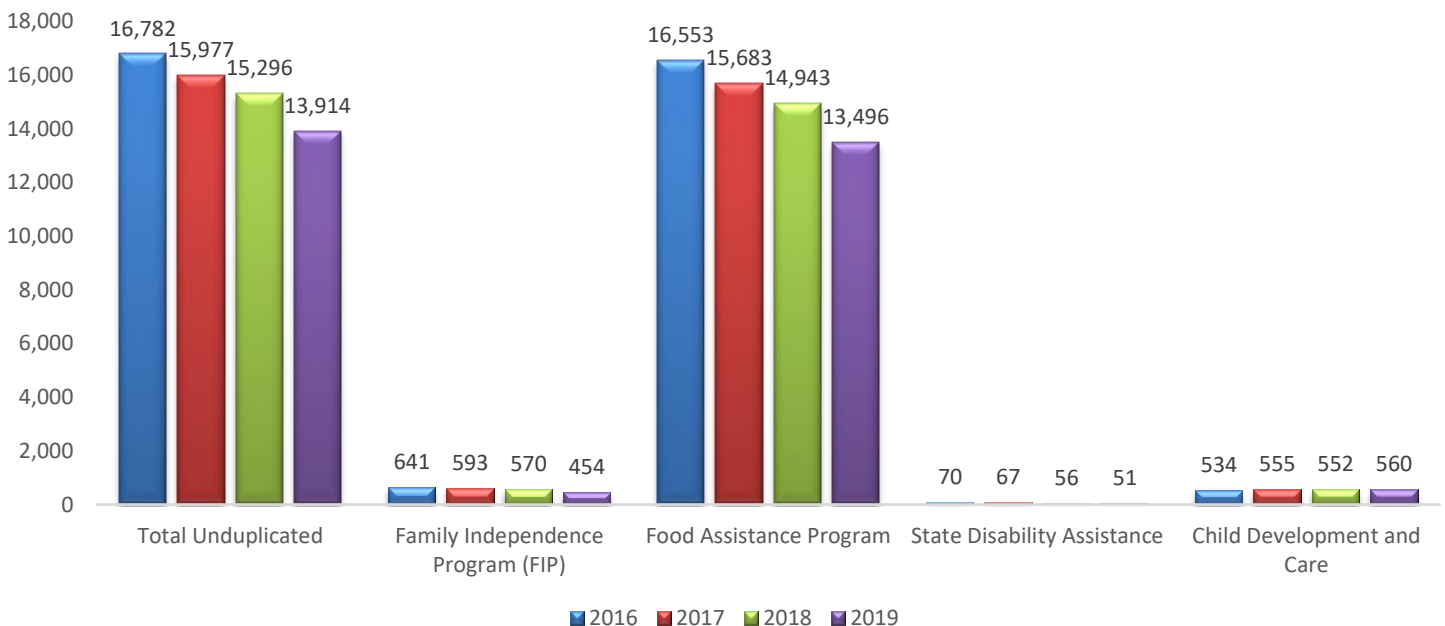


The **Family Independence Program (FIP)** provides temporary cash assistance to families with children and pregnant women to help them pay for living expenses such as rent, heat, utilities, clothing, food and personal care items.

From 2015 to 2019, Bay County has experienced **40.6% decline** in total recipients for family independence programs. Both total non-two parent and total two-parent recipients have declined over the past four years.

The total unduplicated recipients receiving public assistance in Bay County **declined by 17.1%** over the last four years.

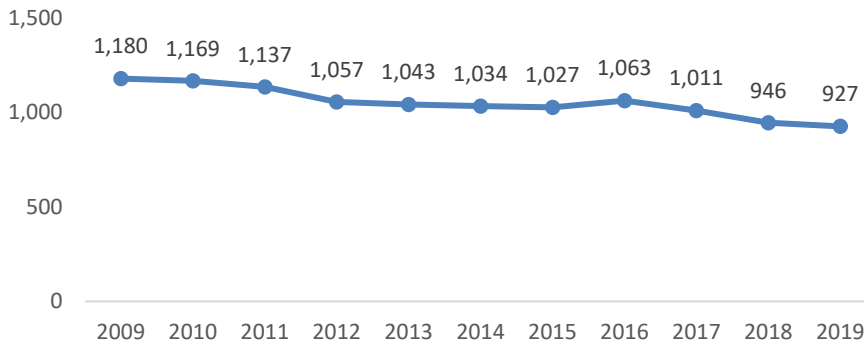
## Total Recipients for Public Assistance in Bay County



Source (All Tables): Michigan Department of Health and Human Services, Trend Reports 2015-2019

# Bay County Maternal and Child Health

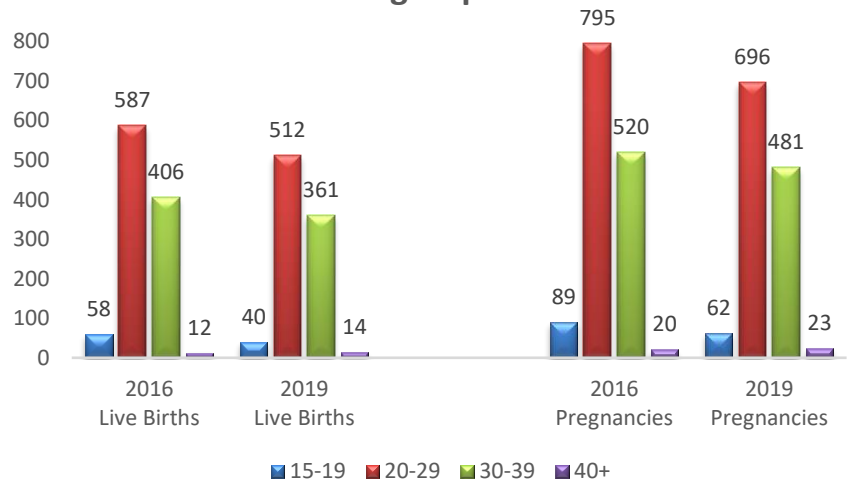
## Live Births in Bay County



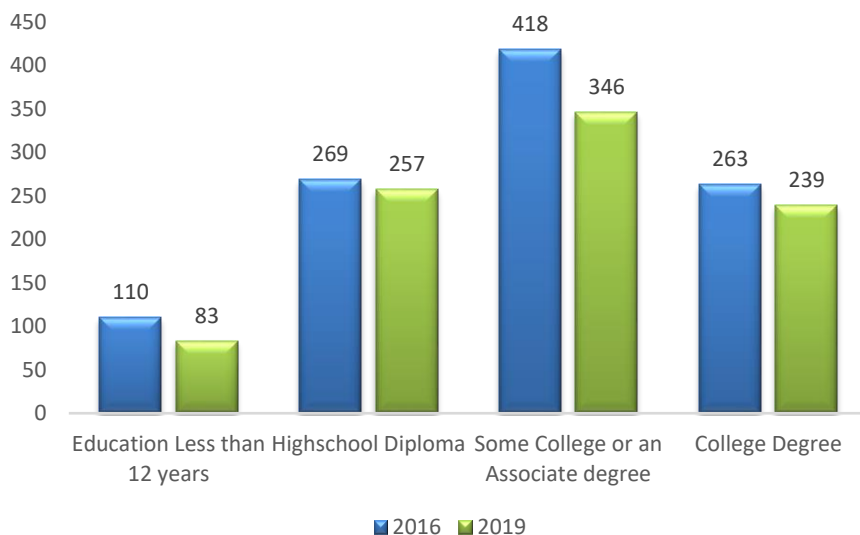
Despite a slight 3.5% increase of live births from 2015 to 2016, Bay County has had a **21.4% decline** of live births over the past 10 years.

## Number of Live births & Pregnancies, by Age group

The number of pregnancies and live births for **all age groups have decreased** except for the 40+ age group.



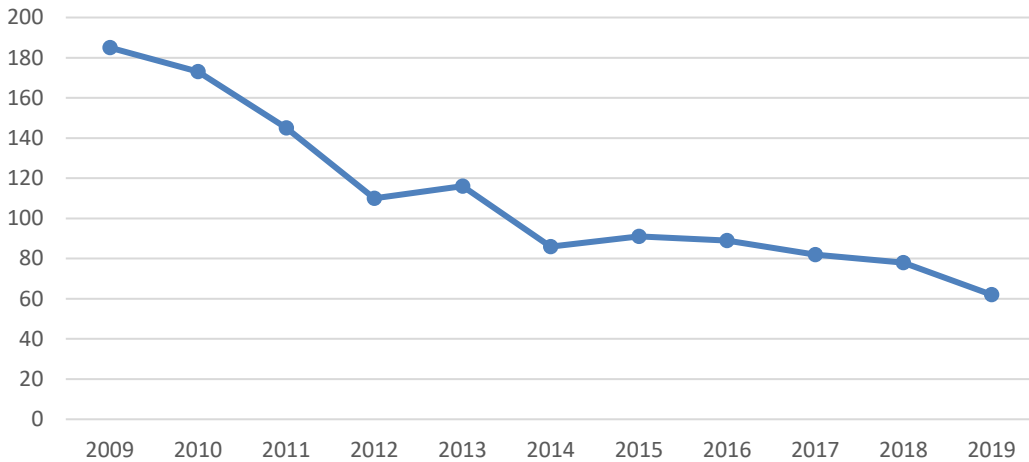
## Number of Live Births, by Educational Level



In 2019, Bay County saw a decrease in the number of live births in **all education levels** of the mother. The most significant decrease was among mothers who have some college or an Associate's degree (17.2%).

## Bay County Maternal and Child Health

### Teen Pregnancy (15-19), 10-Year Trend



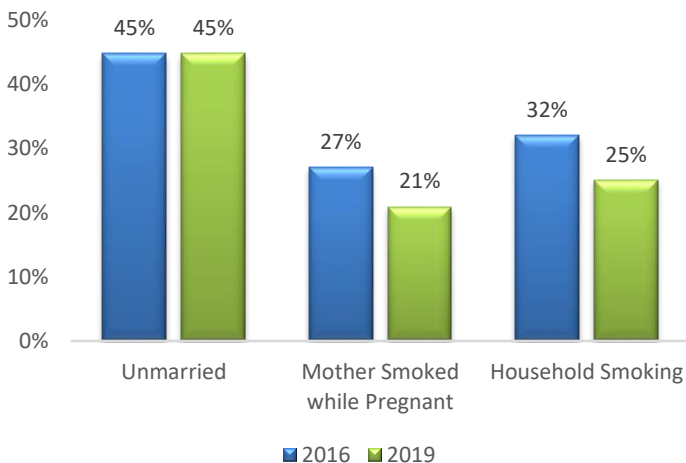
Despite a slight increase in the number of teen pregnancies in 2013, Bay County has seen a **significant decline (67%) in teen pregnancies** over the last 10 years.

The graphs below represent various maternal characteristics of mothers in Bay County during 2016 and 2019.

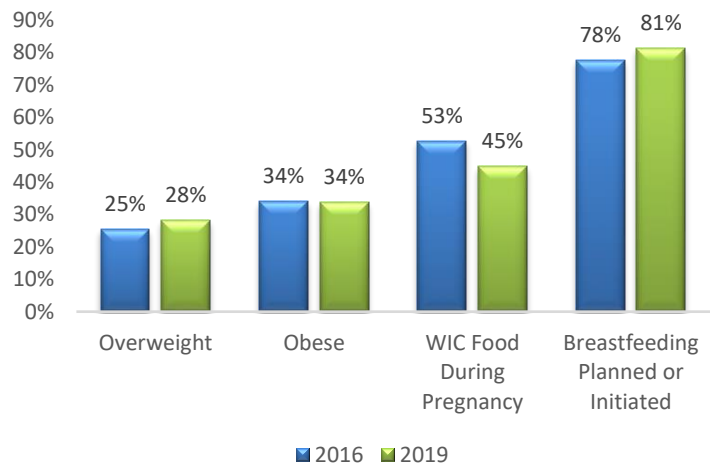
In 2019, there were **decreases** in the number of mothers who received WIC food, smoked, and whether there was any household smoking during their pregnancy. The percentage of Bay County women who **planned to breastfeed or had breastfeeding initiated slightly increased** in 2019 along with the amount who were overweight.

The percentage of live births among unmarried mothers remained unchanged since 2016.

### Maternal Characteristics as a Percentage of Live Births

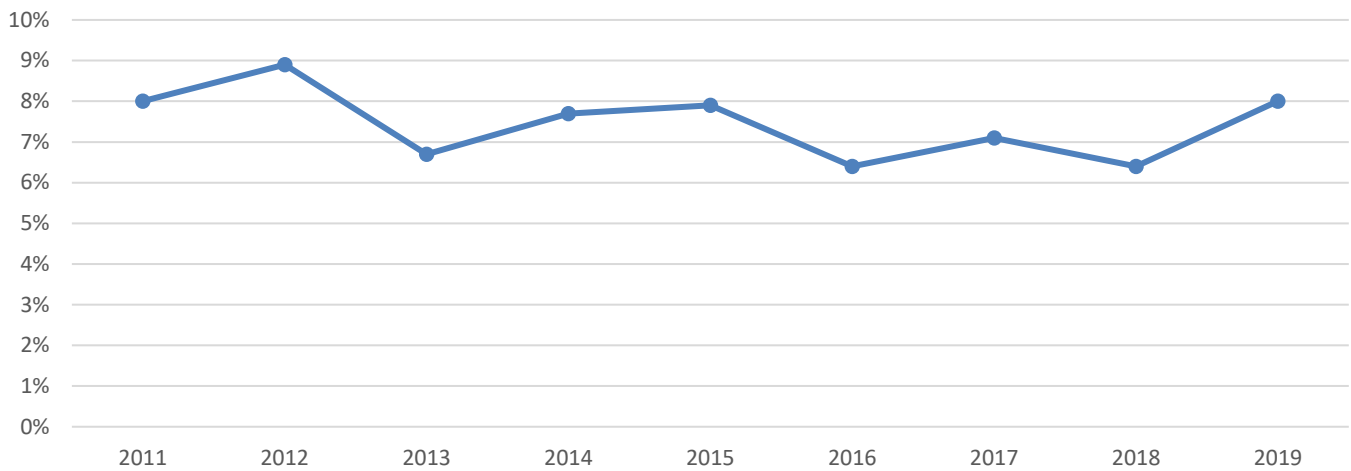


### Maternal Characteristics as a Percentage of Live Births



## Bay County Maternal and Child Health

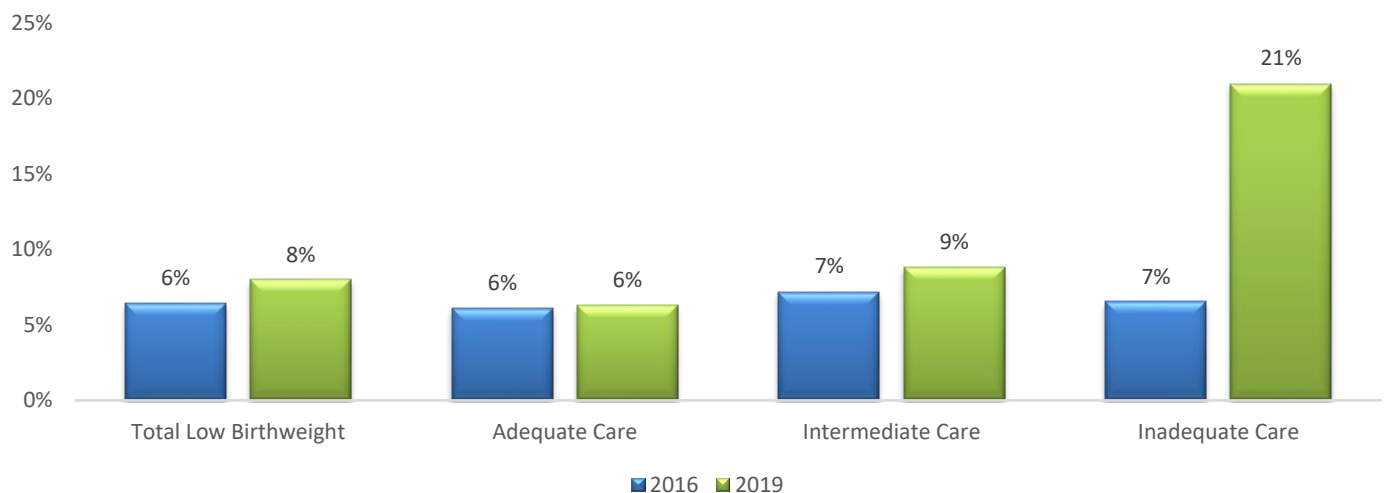
### Low Birthweight Babies, 8-Year Trend



The graph above shows the trend of low birth weight babies born in Bay County has had many fluctuations in gains and losses over the past eight years. Despite a slight overall decrease in low birthweight babies from 2015 to 2018, there was an increase in 2019.

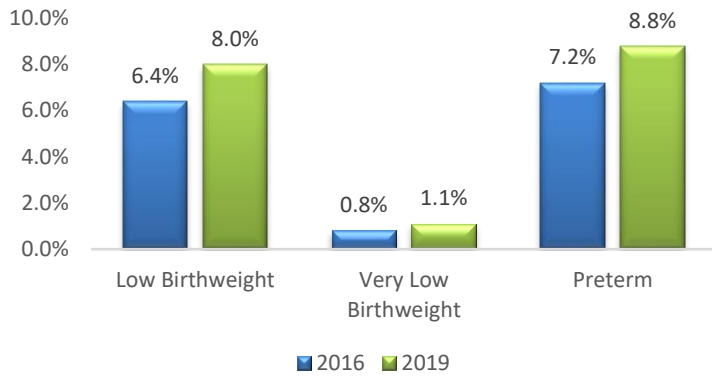
In the graph below, the percentage of low birth weight babies being born increased for all levels of care except for adequate prenatal care, which has remained unchanged. Expecting mothers who received inadequate prenatal care saw a significant increase in low birth weight babies in 2019.

### Percentage of Low Birthweight, by Level of Prenatal Care



# Bay County Maternal and Child Health

## Infant Characteristics as a Percentage of Live Births

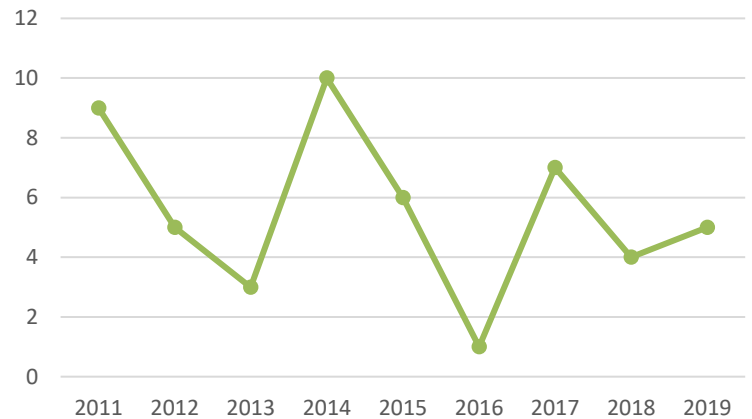


The infant characteristics of live births have all slightly increased over the past three years in Bay County.

Source: Michigan Department of Health and Human Services, Pregnancy and Natality, 2016-2019

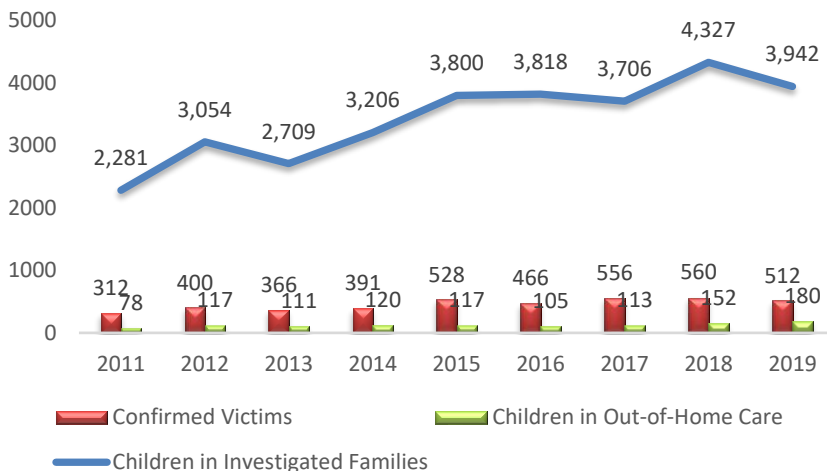
Despite a 10 to 1 drop in the number of infant deaths between 2014 and 2016, there was a sharp increase in 2017. Overall, there have been significant fluctuations in infant mortality.

## Infant Mortality, 8-Year Trend



Source: Michigan Department of Health and Human Services, Pregnancy and Natality, 2016-2019

## Number of Child Abuse & Neglect Cases (0-17), 8-Year Trend



The number of child abuse and neglect cases in Bay County continue to rise. There has been a **73% increase** in the number of children in investigated families over the past eight years.

Children in out-of-home care abuse and neglect cases increased by 131% over the past eight years. However, there was a **decrease** in the number of cases and confirmed victims from 2018 to 2019.

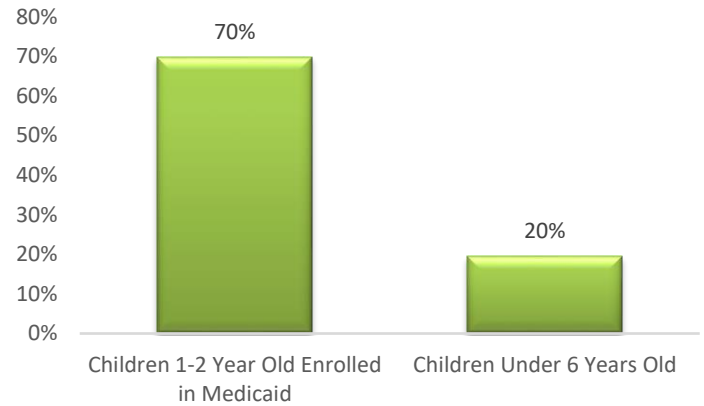
Experiencing **abuse or neglect** as a child is one adverse childhood experience (ACE) that hinders healthy development and outcomes in adulthood.

Source: Kids Count Data, 2011-2019

**Completed the Series of Recommended Vaccines**



**Percentage of Children Tested for Lead Poisoning**

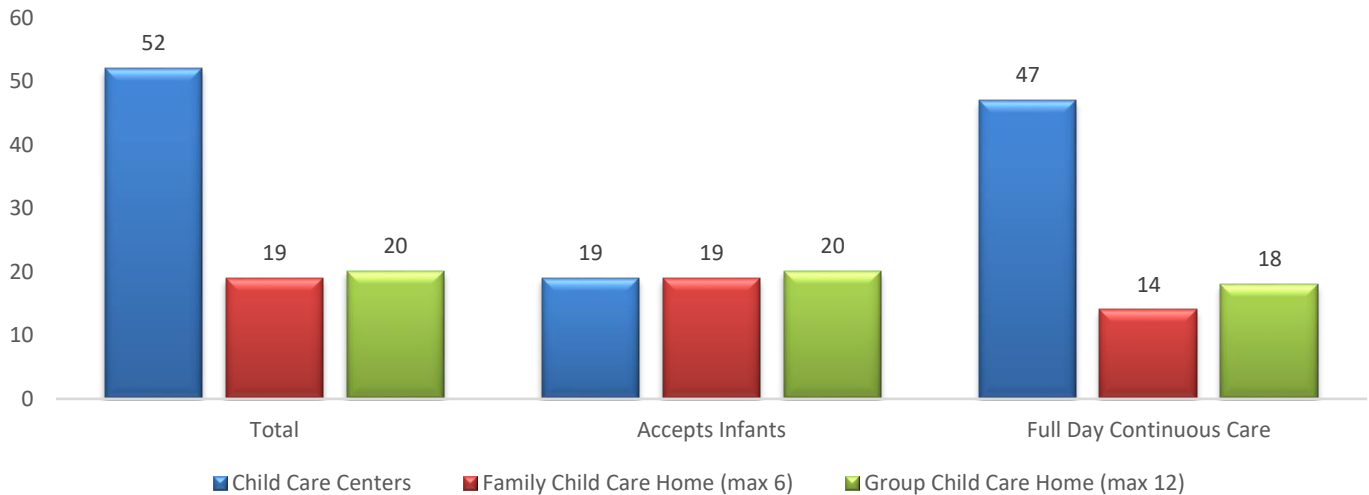


Source (Top Two Tables): Michigan Childhood Immunization Registry, 2019

82% of children age 19-35 months completed the series of recommended vaccinations and 70% of Medicaid enrolled 1-2-year-olds were tested for lead.

There are 52 childcare centers in Bay County. 47 offer full day continuous daycare while only 19 currently accept infants. The total number of child care centers and homes have decreased since 2016.

**Child Care, by Type**

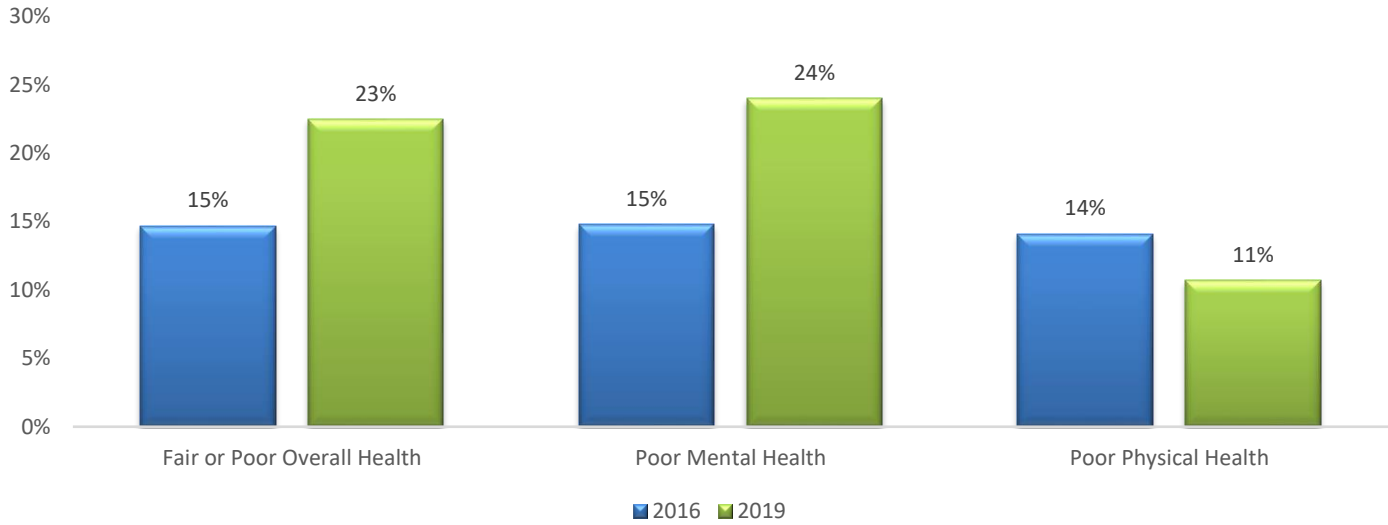


Source: Great Start Collaborative Child Care Capacity Study, 2022



# Bay County General Health

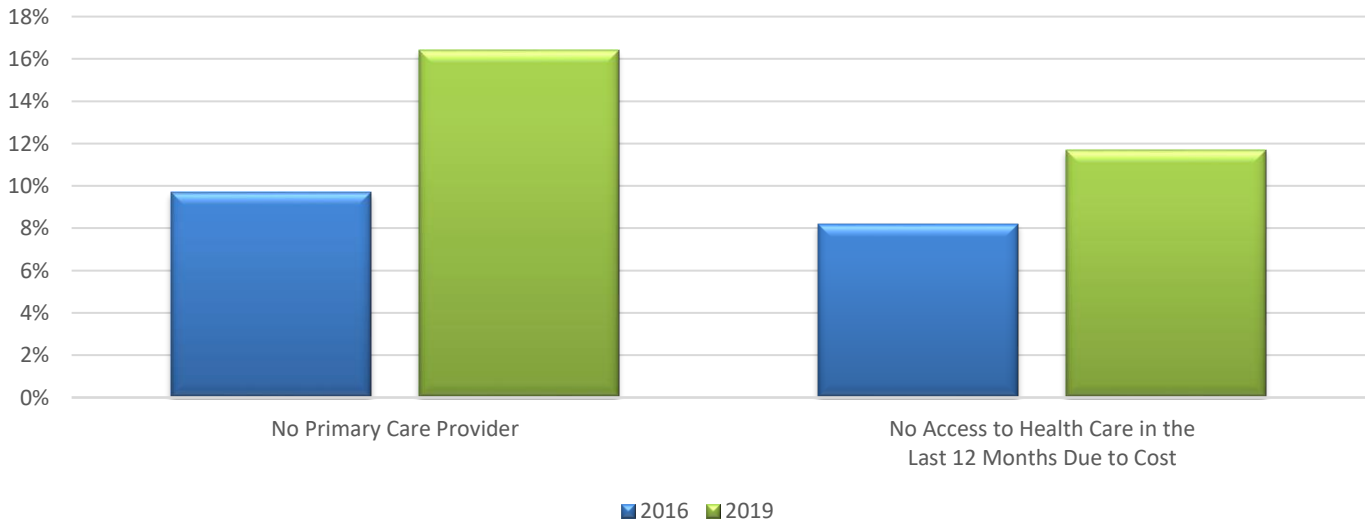
## Health of Bay County Residents



Bay County saw an **increase** in the percentage of adults who have **fair or poor overall health** and who have **poor mental health**, while the percentage of **adults who have poor physical health decreased**.

In the chart below, Bay County experienced an increase in individuals who do not have a primary care provider and that have had no access to health care in the last 12 months due to cost.

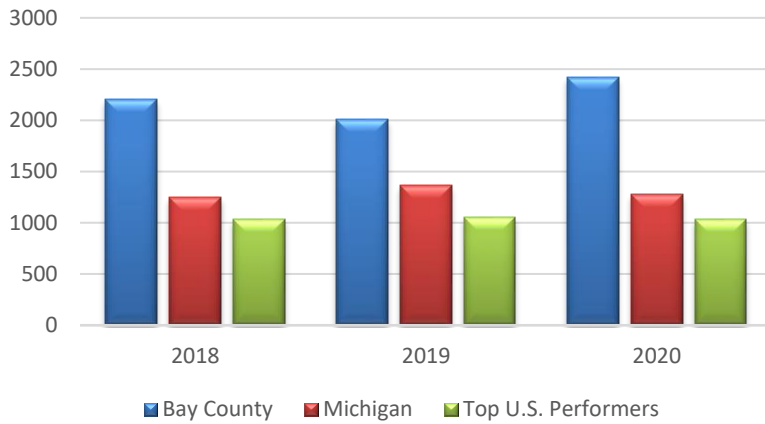
## Primary Care & Access to Health Care



Source (All Tables): MiBRFSS 2014-2016 and 2017-2019, (95% confidence interval)

# Bay County General Health

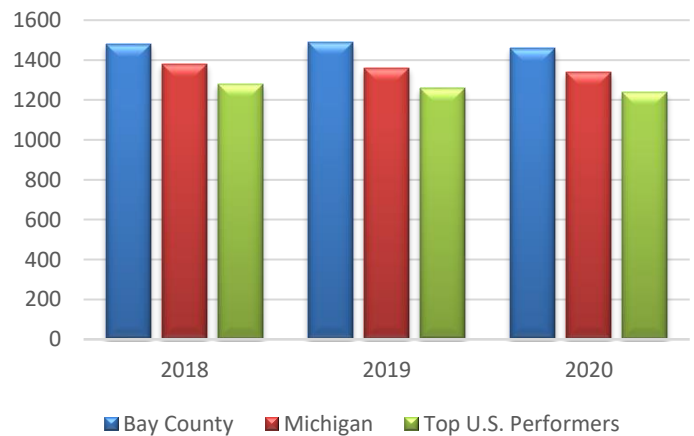
## Patient to Primary Care Physician Ratios



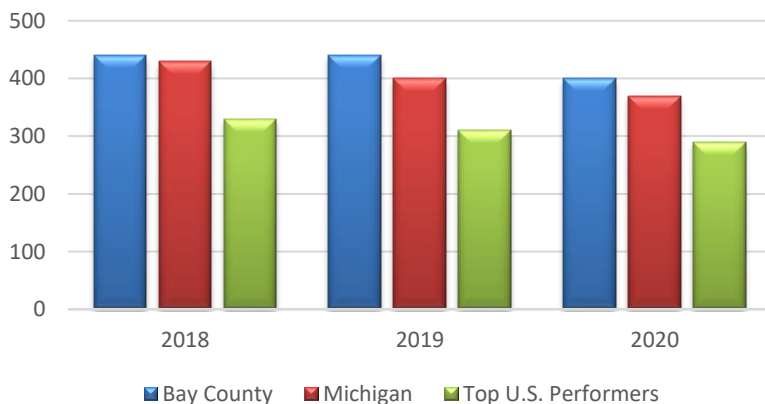
In 2020, Bay County had **2,420 patients to every 1 primary care provider**. Over the past few years, Bay County has consistently performed below the Top U.S. performers and the state of Michigan. Bay County continues to have a huge need for more primary care providers.

In 2020, Bay County had **1,460 patients to every 1 dentist**. Bay County consistently continues to fall behind Michigan and the Top U.S. performers on patient to dentist ratio. Bay County continues to see a need in the number of dentists in the area.

## Patient to Dentist Ratios



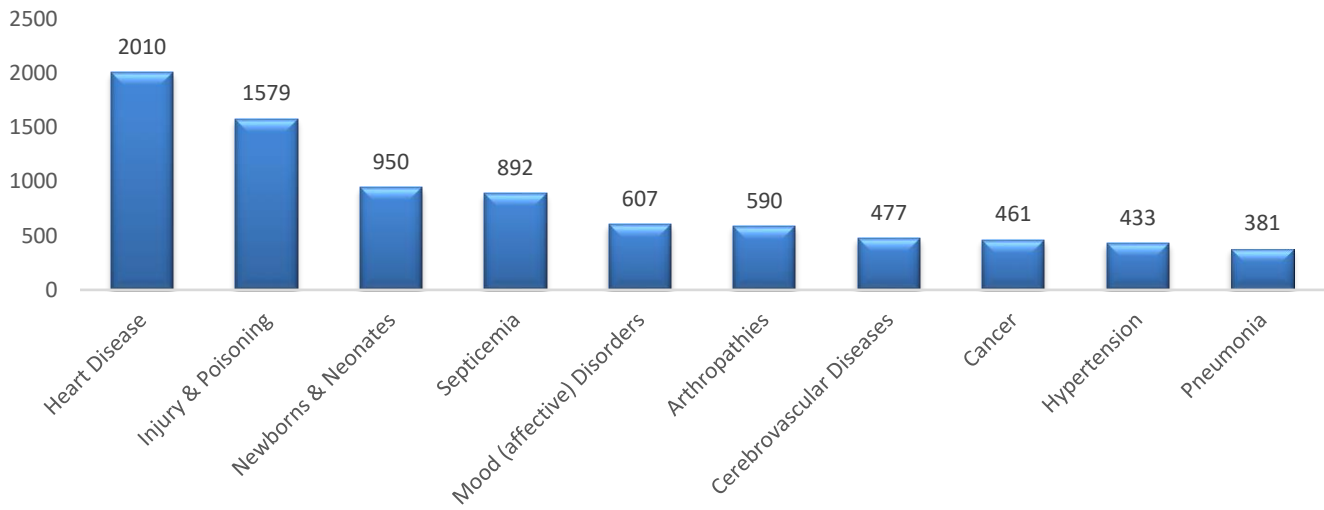
## Patient to Mental Health Care Provider Ratios



In 2020, Bay County had **400 patients to every 1 mental health care provider**. While Bay County needs more mental health care providers, Bay County is performing close to the level of the rest of Michigan.

# Bay County Morbidity and Mortality

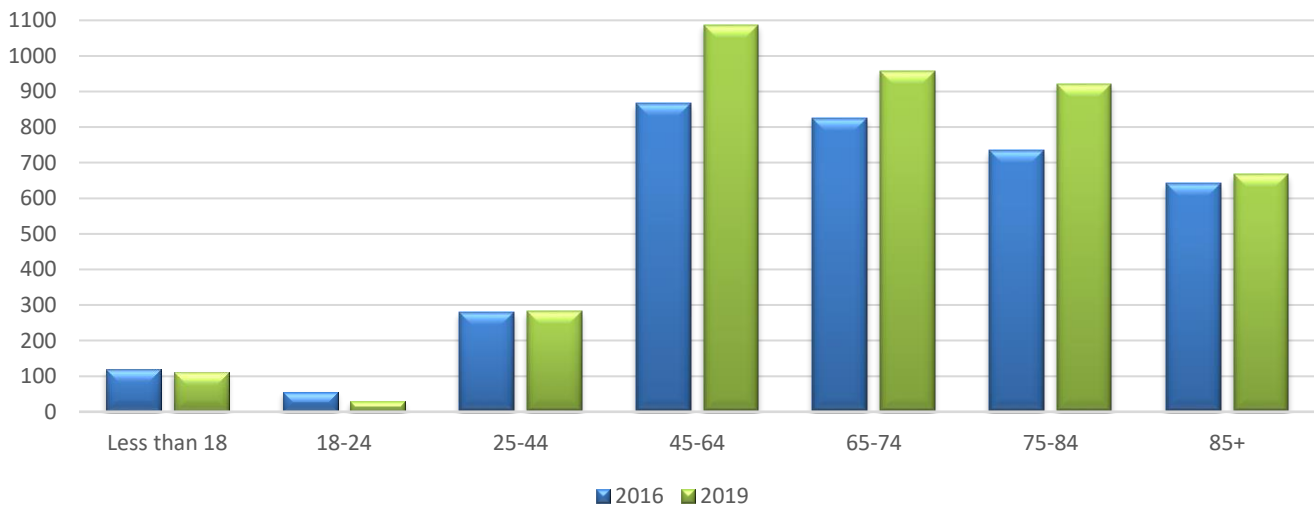
## Leading Causes of Hospitalizations in 2019



Heart Disease is the number one cause of hospitalizations in Bay county, followed by injury and poisoning and newborns.

The table below shows an increase in preventable hospitalizations among the older population with the largest increase (26%) among the 45-64 age group.

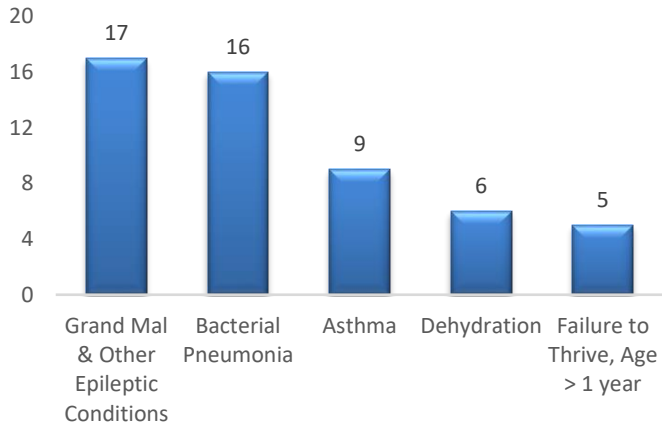
## Preventable Hospitalizations, by Age Group



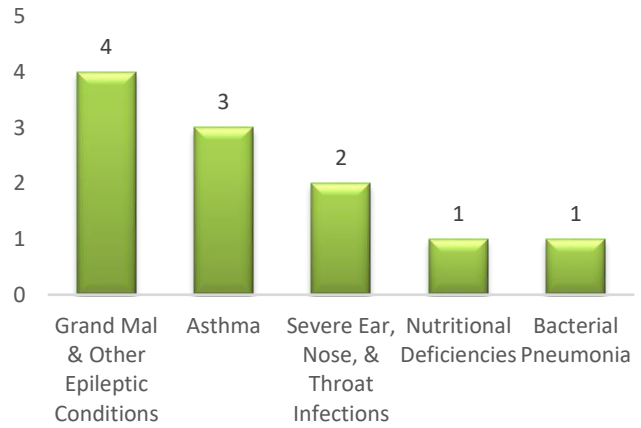
Source (All Tables): Michigan Department of Health & Human Services Health Care Statistics, 2016 and 2019

# Bay County Morbidity and Mortality

**Preventable Hospitalizations, Less than 18 yo.**



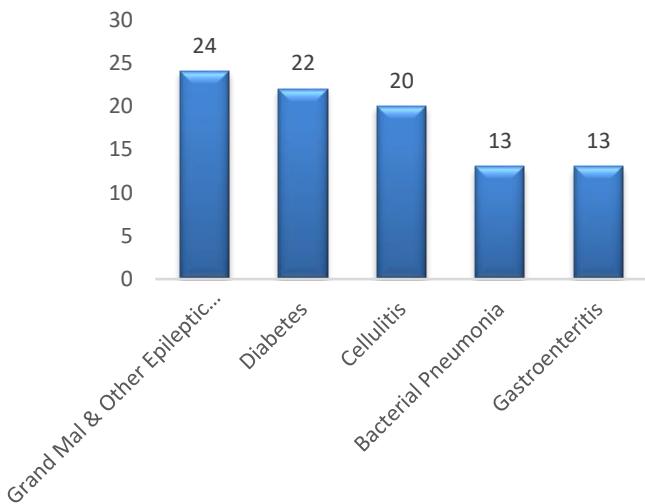
**Preventable Hospitalizations, 18-24 yo.**



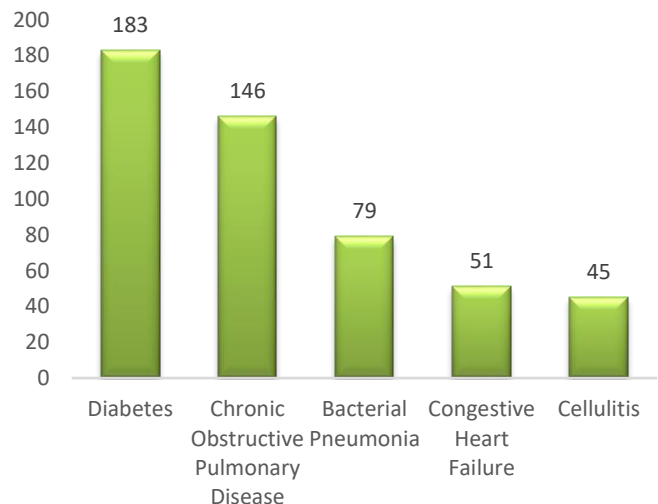
Grand Mal & Other Epileptic Conditions were the leading preventable hospitalization for those 0-24 years of age. Bacterial Pneumonia was a close second for those less than 18 and Asthma among ages 18-24.

Among ages 25-44, Grand Mal was the number one cause of hospitalizations followed closely by diabetes. Among those 45-64 years of age, diabetes was the leading preventable hospitalization followed by COPD.

**Preventable Hospitalizations, 25-44 yo.**



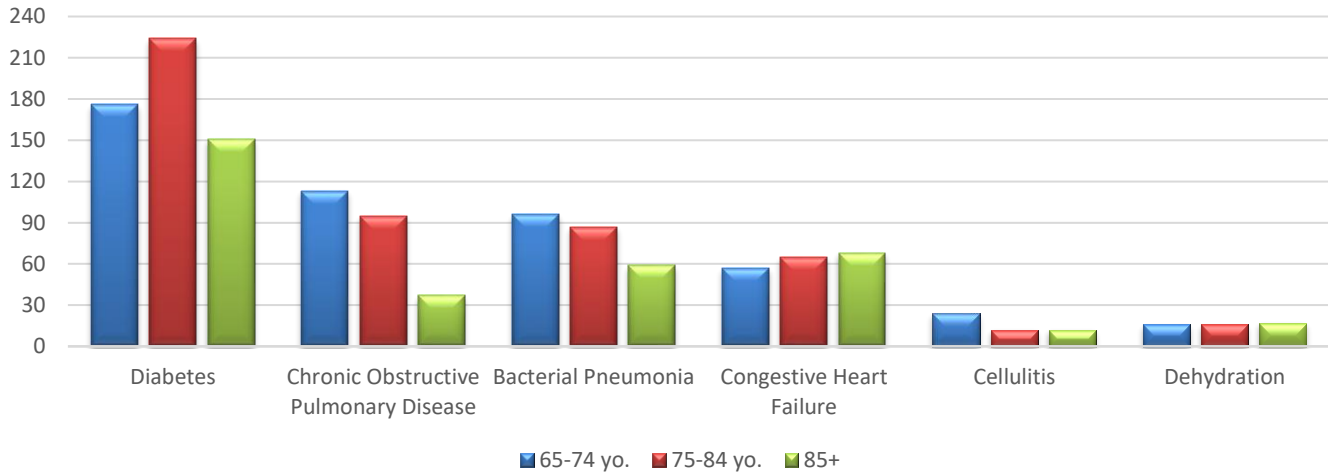
**Preventable Hospitalizations, 45-64 yo.**



Source (All Tables): Michigan Department of Health & Human Services Health Care Statistics, 2019

## Bay County Morbidity and Mortality

### Preventable Hospitalizations, 65-85+ yo.

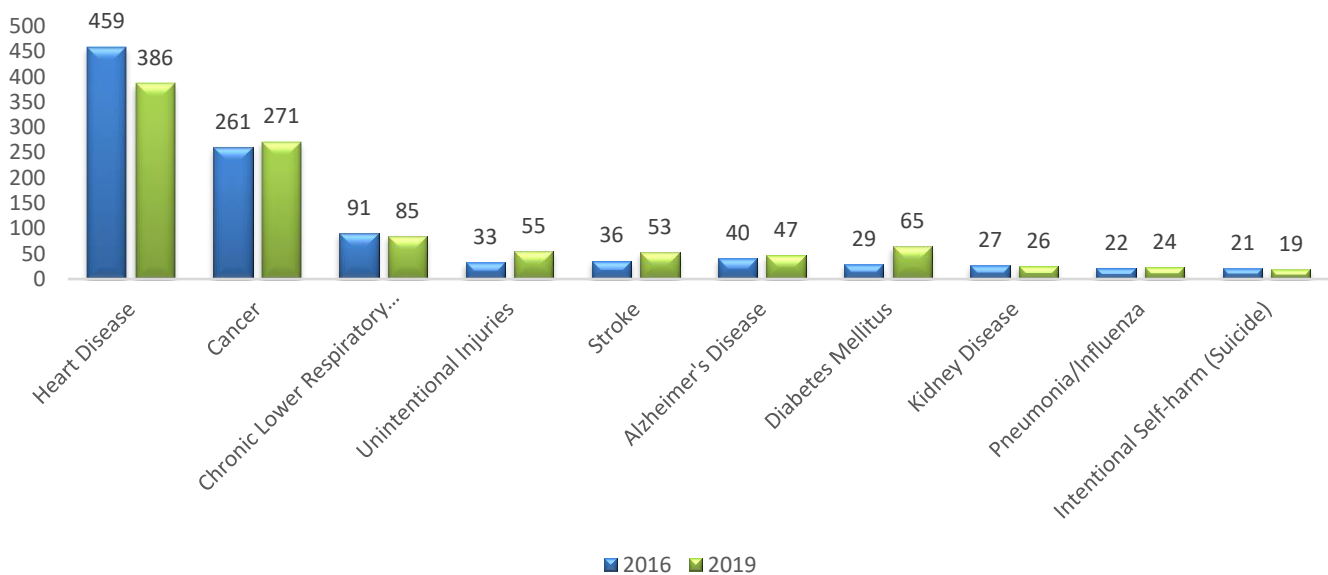


**Diabetes was the leading cause of preventable hospitalizations** in Bay county, over-taking COPD, Bacterial Pneumonia, and even Heart Disease.

However, the graph below indicates that **the leading cause of death for Bay County is still Heart Disease**, which begins to show up in preventable hospitalizations in the 45-64 age group.

While Heart Disease deaths have decreased from 2016, there have been increases in cancer, unintentional injuries, stroke, Alzheimer's disease, and diabetes. The number of **Diabetes deaths more than doubled** in 2019.

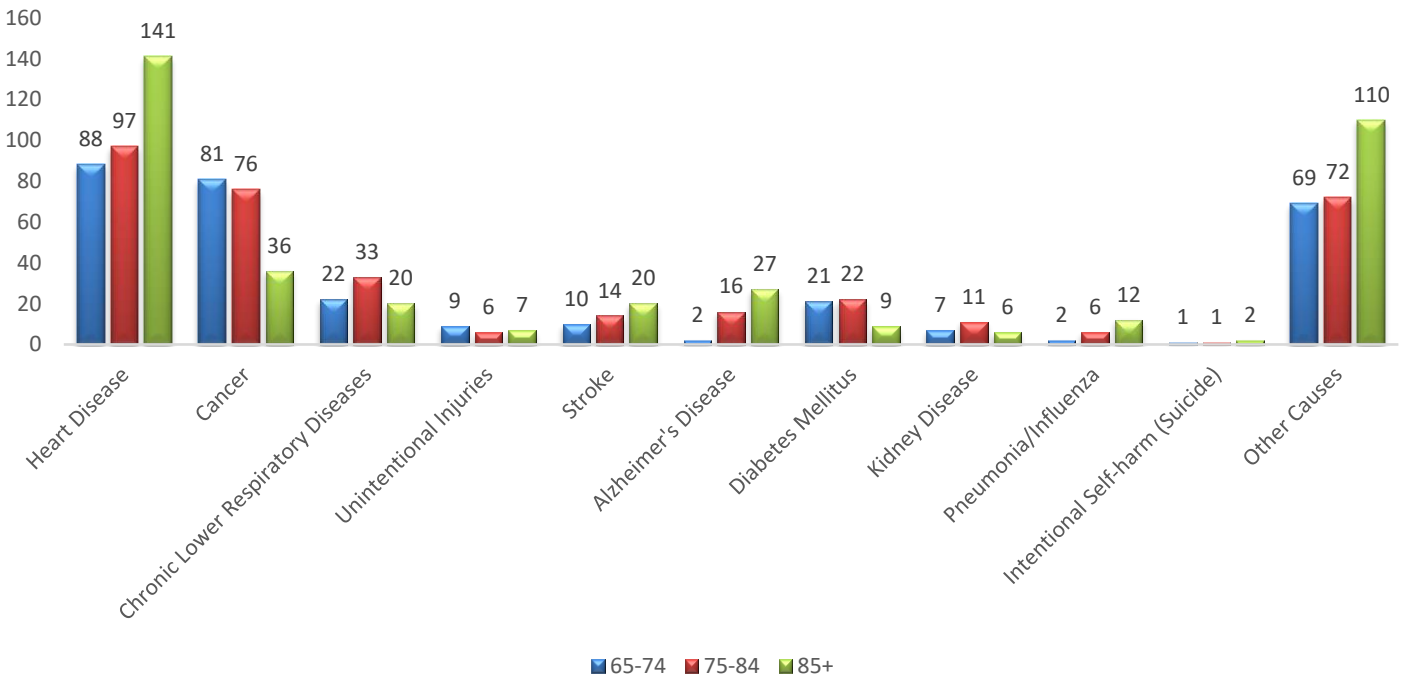
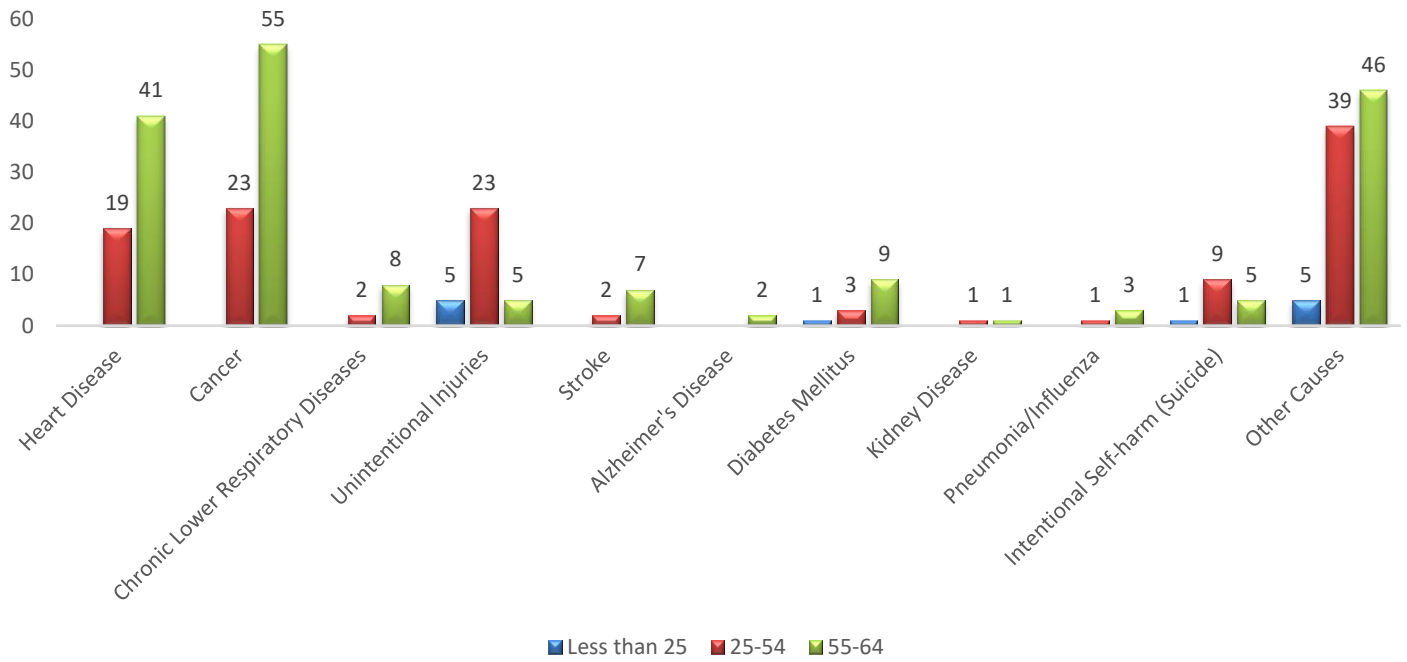
### Leading Causes of Death in Bay County



Source (All Tables): Michigan Department of Health & Human Services Health Care Statistics, 2019

# Bay County Morbidity and Mortality

## Leading Causes of Death, by Age Group in 2019

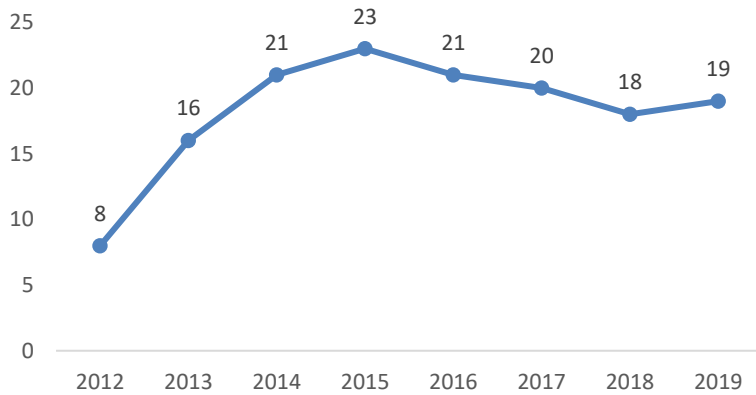


Source (All Tables): Michigan Department of Health & Human Services Health Care Statistics, 2019



# Bay County Morbidity and Mortality

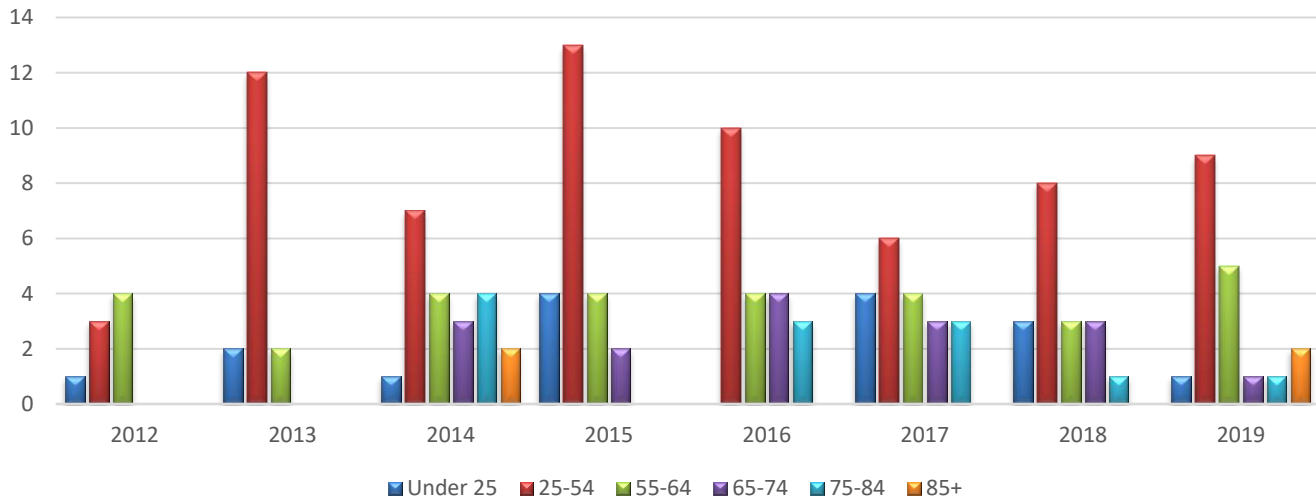
## Suicide, 7-Year Trend



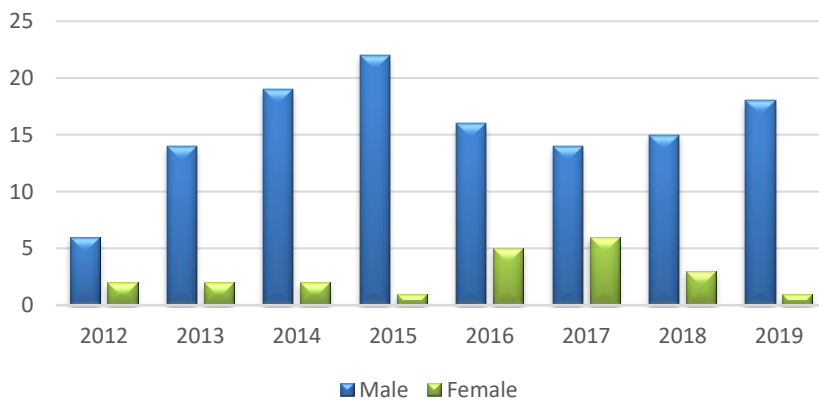
While suicides have increased over the past seven years, Bay County is starting to see a slight decline in the number of deaths by suicide since the high in 2015.

The majority of deaths by suicide continue to be among the 25-54 age group.

## Suicide, 7-Year Trend, by Age Group



## Suicide, by Gender

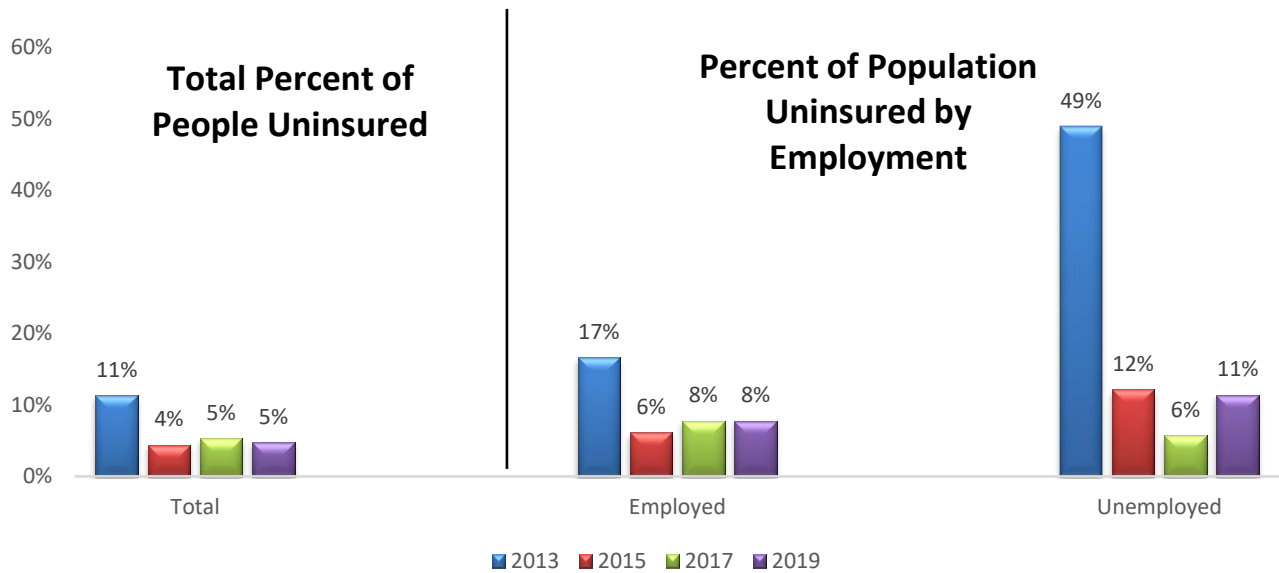


Deaths by suicide seem to be more common among men than women.

While there have been fluctuations in the number of women dying by suicide in Bay County, the past two years have seen a decrease.

Source (All Tables): Michigan Department of Health & Human Services Health Statistics - Mortality, 2012-2019

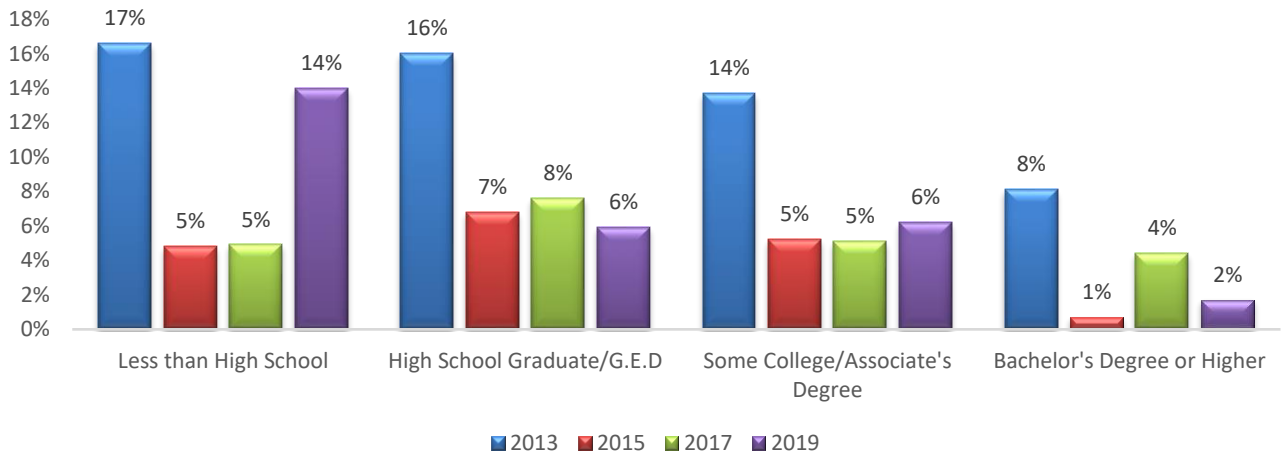
## Bay County Health Insurance Coverage



Since 2013, the total percentage of uninsured individuals in Bay County has decreased. Being uninsured is typically higher among those who are unemployed in Bay County.

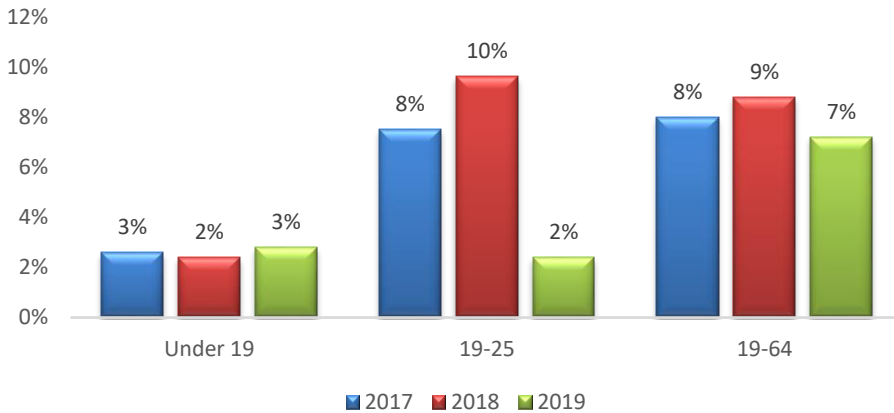
In the chart below, the lower an individual's education level; the more likely they are to be uninsured. Interestingly, there was a significant increase in the percentage of individuals who are uninsured among those with less than a high school education.

### Percent of Population (26+ yo.) Uninsured by Education Level



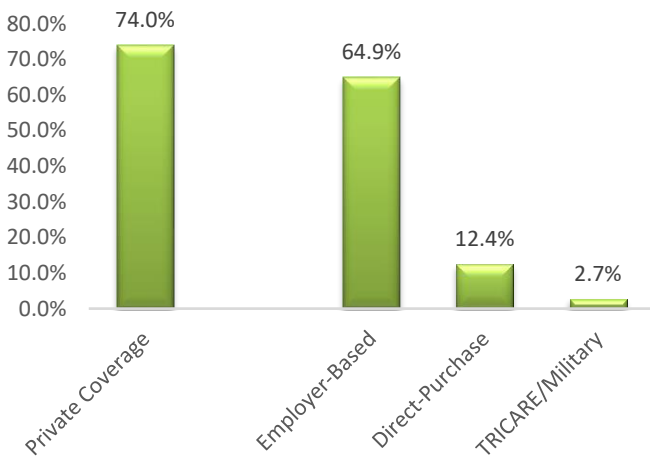
# Bay County Health Insurance Coverage

## Percent of Population Uninsured, by Age

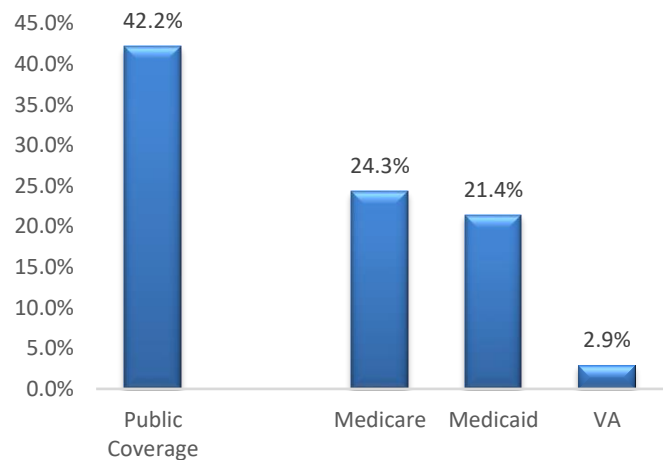


The percentage of 19-25-year-olds in Bay County that are uninsured significantly decreased in 2019.

## Type of Private Health Insurance Coverage, Alone or in Combination



## Type of Public Health Insurance Coverage, Alone or in Combination

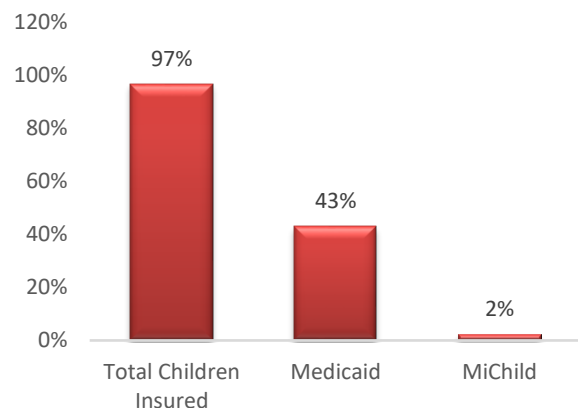


The majority of insurance coverage in Bay County is private insurance (74%).

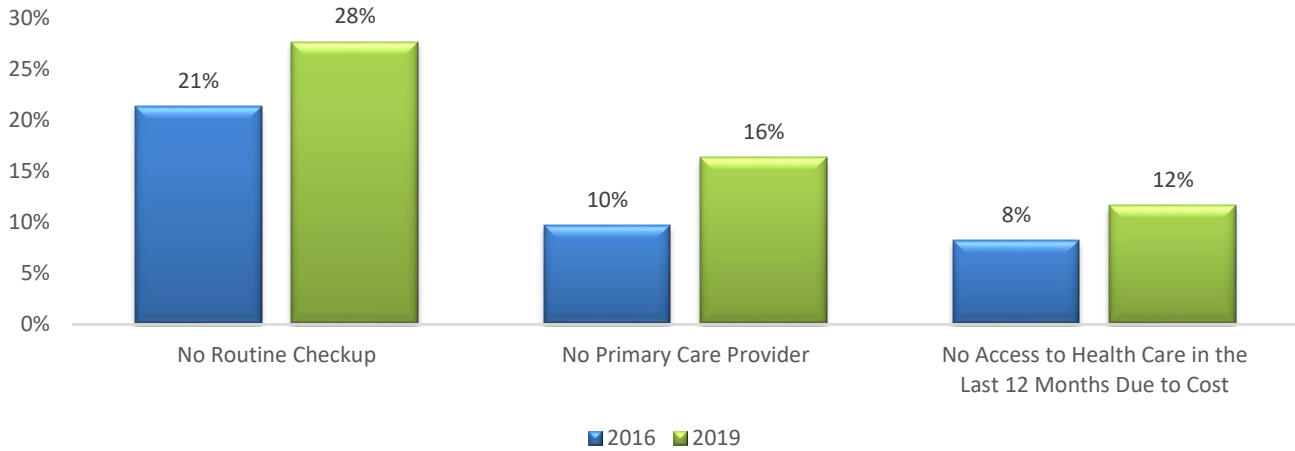
Of those in Bay County that have public health insurance, the majority (24.3%) receive Medicare.

97% of children (0-18) are insured in Bay County and among those insured, 43% receive Medicaid.

## Percentage of Children Insured (0-18)



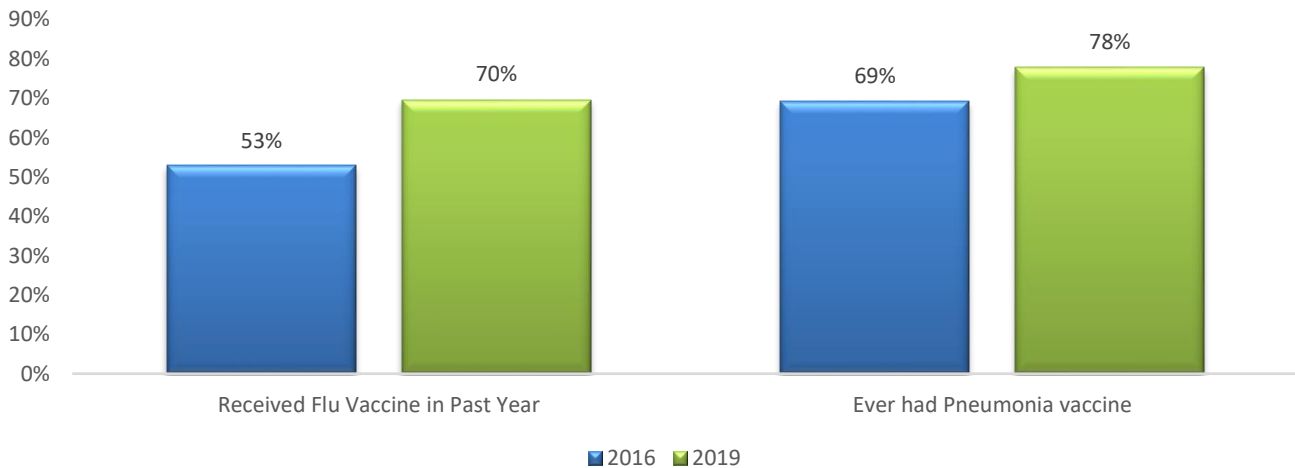
## Healthcare Access



Between 2016 and 2019, there seems to be a **troubling trend in increases** in all three categories of healthcare access in Bay County: no routine checkup, no primary care provider, and no access to health care in the last 12 months due to cost.

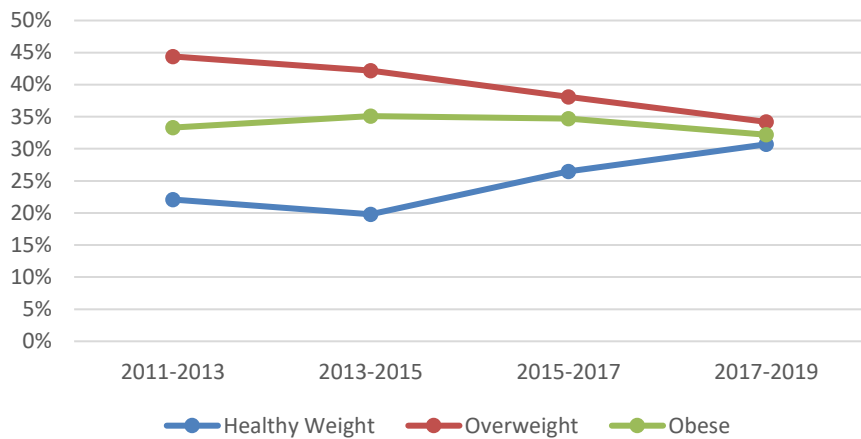
**70%** of Bay County residents reported having received a flu shot (compared to 53% in 2016) and **78%** of residents reported that they have ever received a pneumonia vaccination (compared to 69% in 2016).

## Vaccinations



# Bay County Health Behaviors

## Weight Trends Among Adults

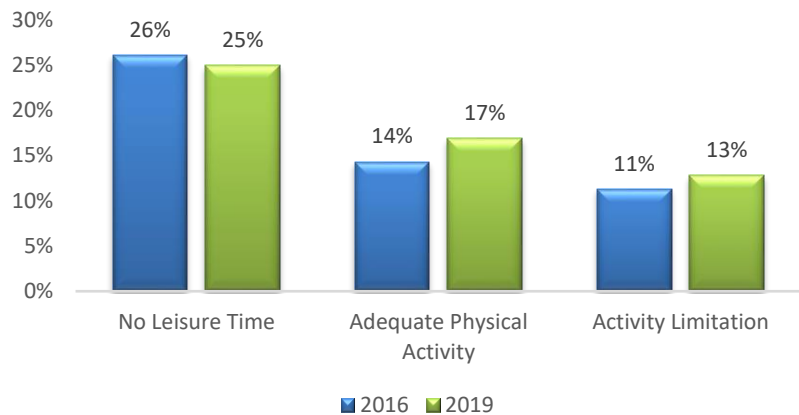


The obese and overweight rates of adults in Bay County have moderately decreased over the past few years.

The percentage of **healthy weight adults** has significantly increased.

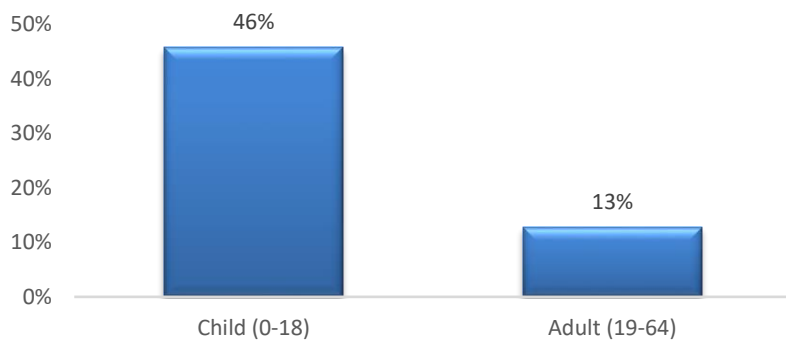
## Physical Activity Among Adults

More adults report getting adequate physical and have slightly more leisure time.



Source (Above Two Tables): MiBRFSS, 2011-2019, 95% Confidence Interval

## Percentage of Preventive Dental Visits Among Medicaid Enrollees

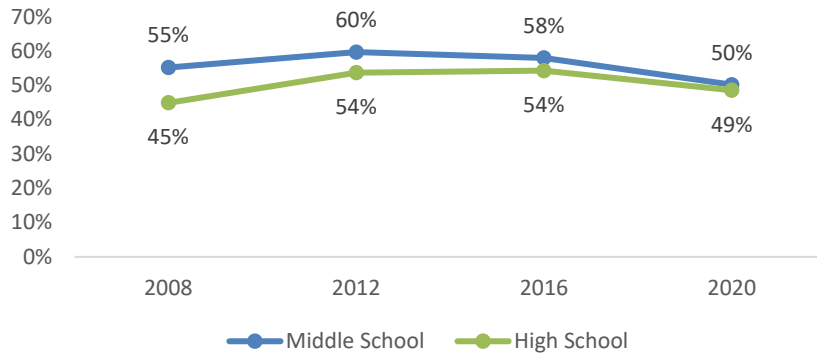


Less than half of Medicaid enrolled children received 1+ preventive dental visits while only 13% of Medicaid enrolled adults received 1+ preventive dental visits in 2019.

Source: MDHHS Oral Health Care Rates, Michigan Medicaid by County, 2019

# Bay County Health Behaviors

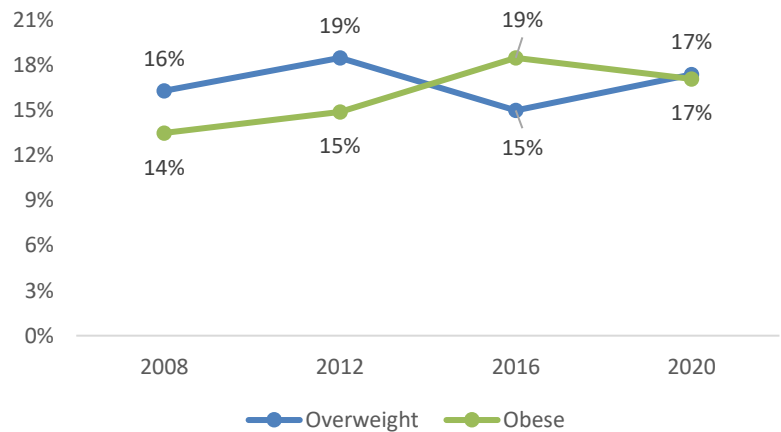
## Youth Physically Active for at Least 60 Minutes or More of the Past Seven Days



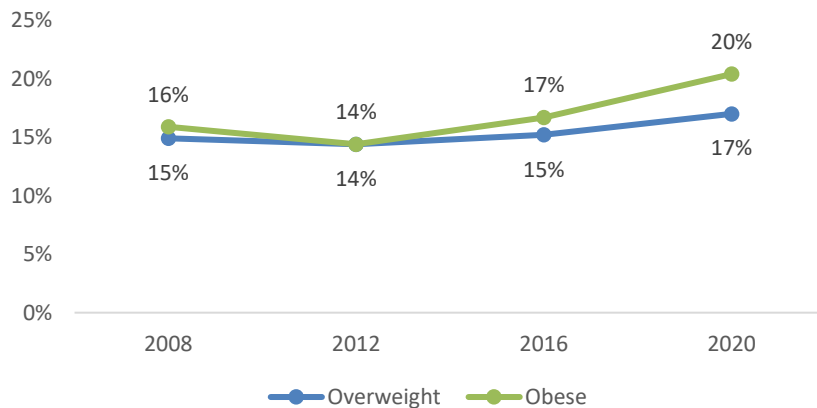
Only about **50%** of Bay County middle and high schoolers are getting the recommended amount of physical activity.

The percentage of overweight middle school students remained relatively consistent. The percentage of obese middle school students in Bay County increased over the last decade.

## Middle School Students Obese or Overweight



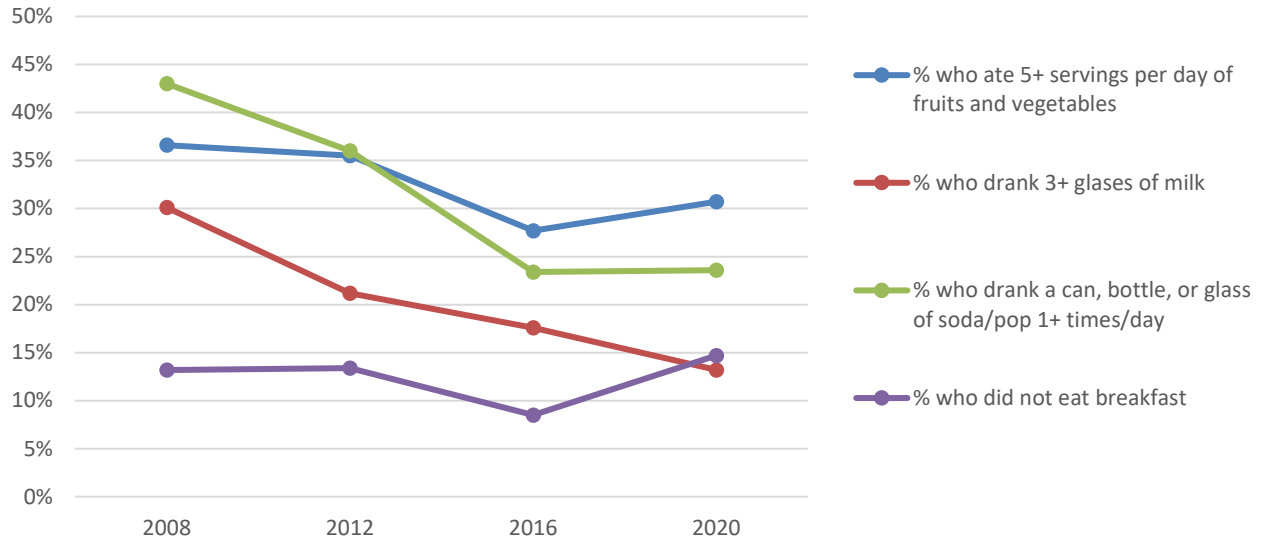
## High School Students Obese or Overweight



The percentage of obese and overweight high school students **gradually increased** over the past eight years.

Source (All Tables): Michigan Profile for Healthy Youth, 2008-2020

## Middle School Students - Nutrition

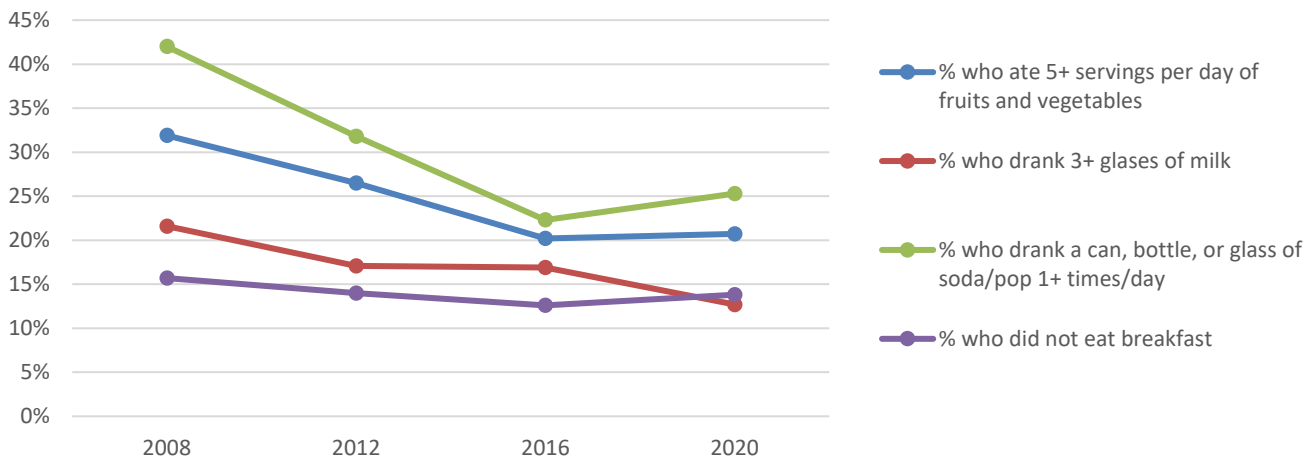


Among middle and high school students, there have been **significant decreases** in the percentage of students who drank a can, bottle, or glass of soda/pop 1+ times/day over the past decade.

While overall there was a decrease in the percentage of students who ate 5+ servings per day of fruits and vegetables, there was a modest increase in 2020 among middle school students and no change among high school students from 2016 to 2020 (about 1 in 5).

The percentage of students who did not eat breakfast continues to remain at or below 15%.

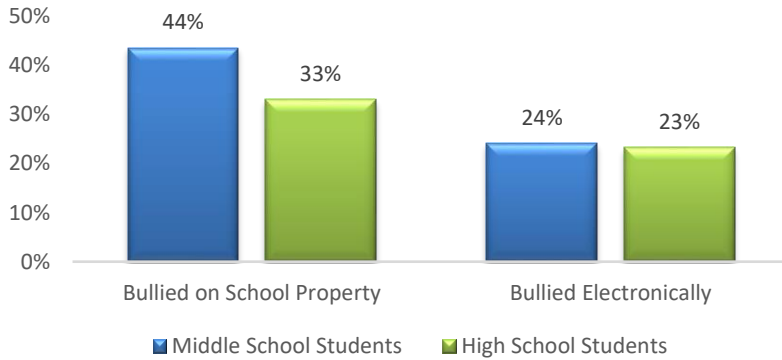
## High School Students - Nutrition



Source (All Tables): Michigan Profile for Healthy Youth, 2008-2020

# Bay County Health Behaviors

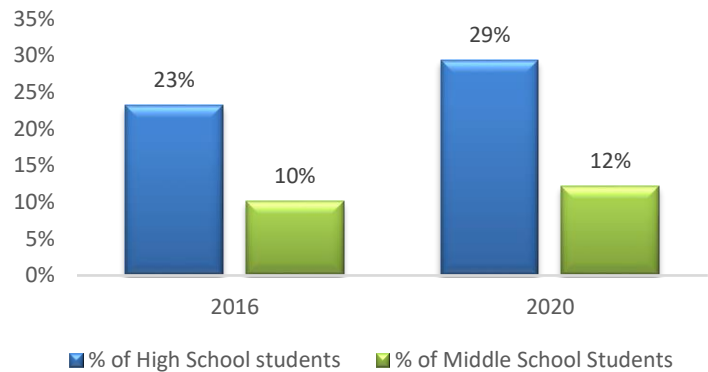
## Students Who Were Bullied in the Last 12 Months



Bullying occurs more frequently amongst middle school students than high school students in Bay County.

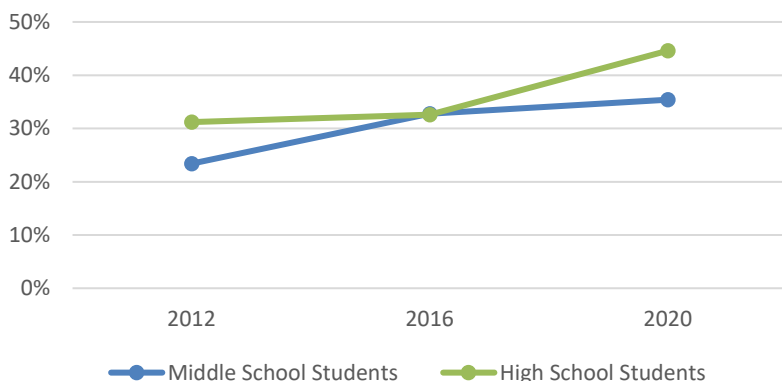
Majority of bullying occurs on school property for both middle and high school students.

## Youth Vaping Use During the Past 30 Days



While there has been a slight increase in the percentage in middle school students using a vapor product in the past 30 days, the percentage of high school students has been more significant.

## Percentage of Students Who Felt Sad/Hopeless Almost Every Day for 2 Weeks or More

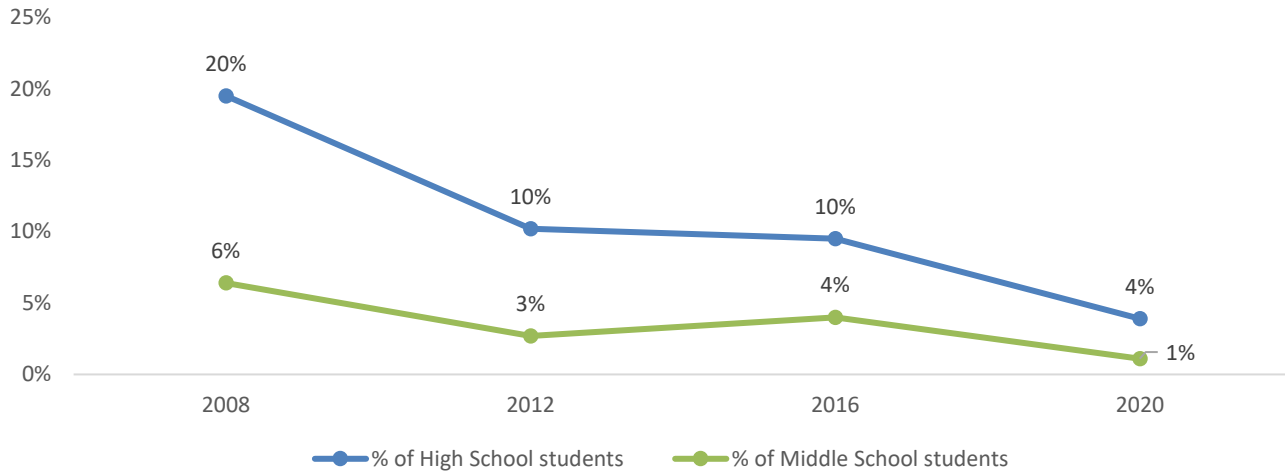


There has been an **increase** in the percentage of middle and high school students who have been depressed over the past eight years.



## Bay County Health Behaviors

### Youth Cigarette Smoking in the Past 30 Days

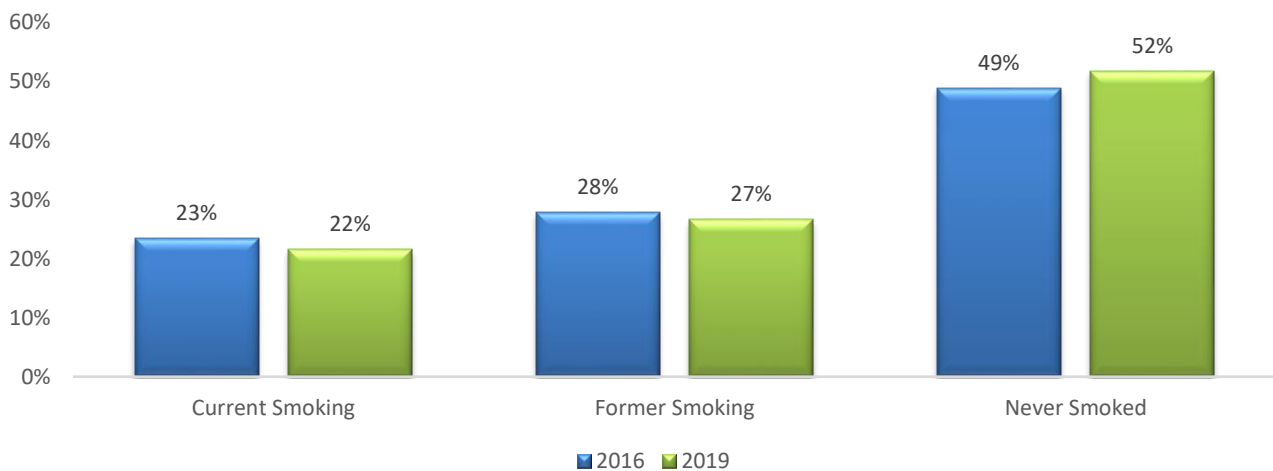


Source: Michigan Profile for Healthy Youth, 2008-2020

The percentage of middle and high school students in Bay County that have smoked cigarettes in the past 30 days continues to decline over the past decade.

Current adult smoking in Bay County has slightly decreased while the percentage who have never smoked increased in 2019.

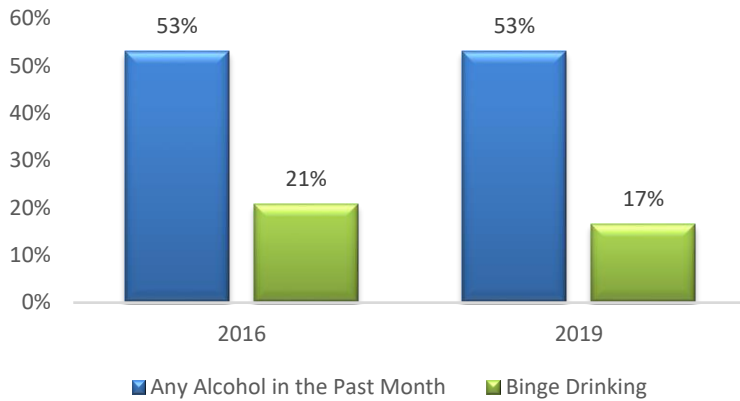
### Cigarette Smoking Among Adults



Source: MiBRFSS 2016-2019, 95% Confidence Interval

# Bay County Health Behaviors

## Alcohol Use Among Adults

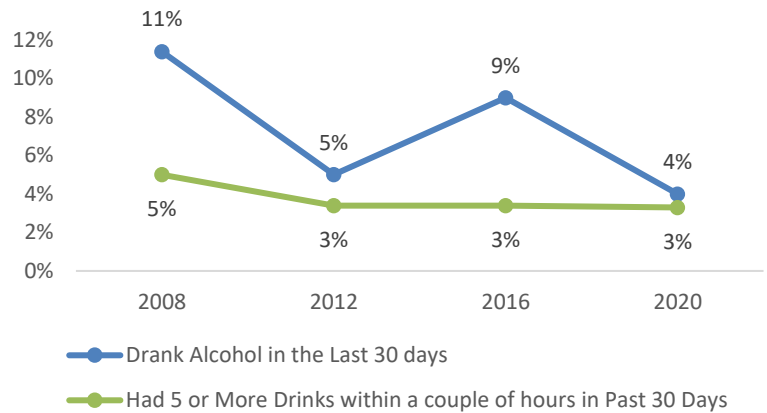


There was no change in any drinking in the past month between 2016 and 2019. However, binge drinking in Bay County slightly decreased among adults.

Source: MiBRFSS 2016-2019, 95% Confidence Interval

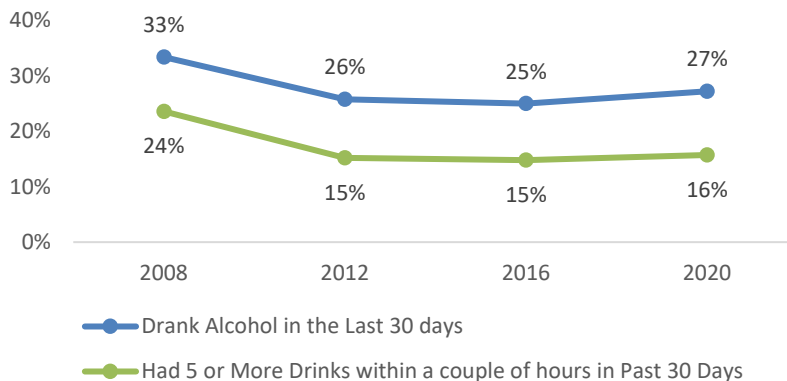
## Alcohol Use Among Middle School Students

Over the past decade, there have been fluctuations in alcohol use among middle school students who report drinking alcohol in the last 30 days.



Source: Michigan Profile for Healthy Youth, 2008-2020

## Alcohol Use Among High School Students

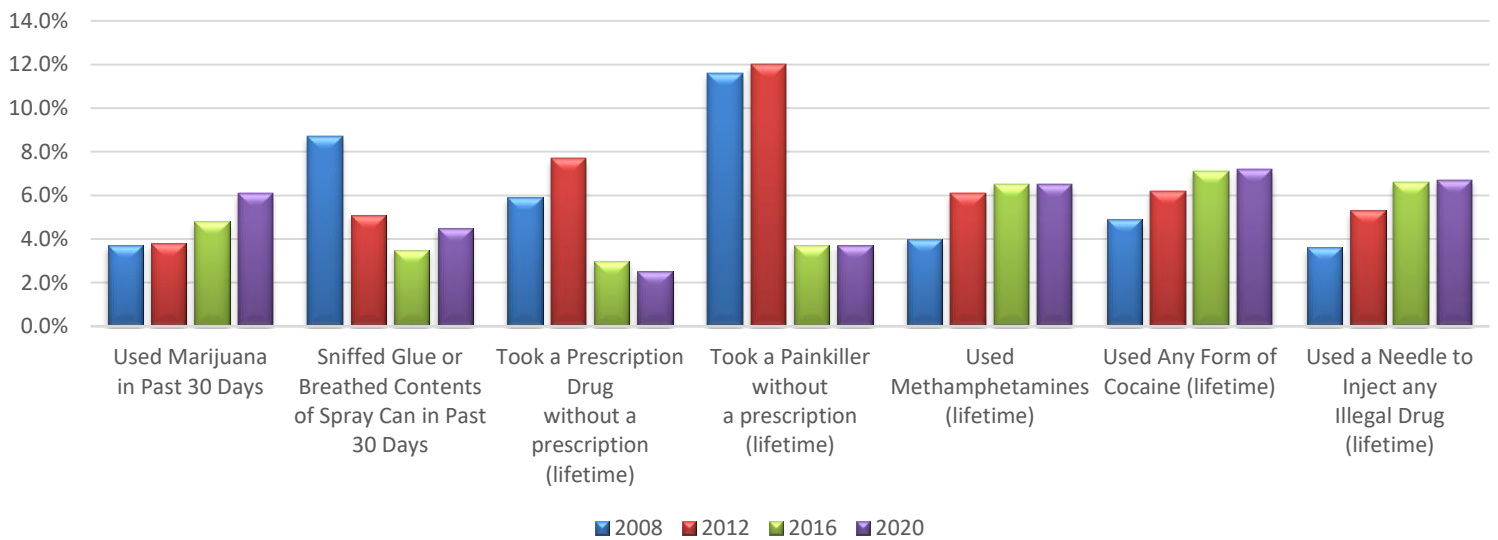


Overall, the percentage of high school students in Bay County that have used alcohol decreased, but from 2016-2020 there was a slight increase.

Source: Michigan Profile for Healthy Youth, 2008-2020

# Bay County Health Behaviors

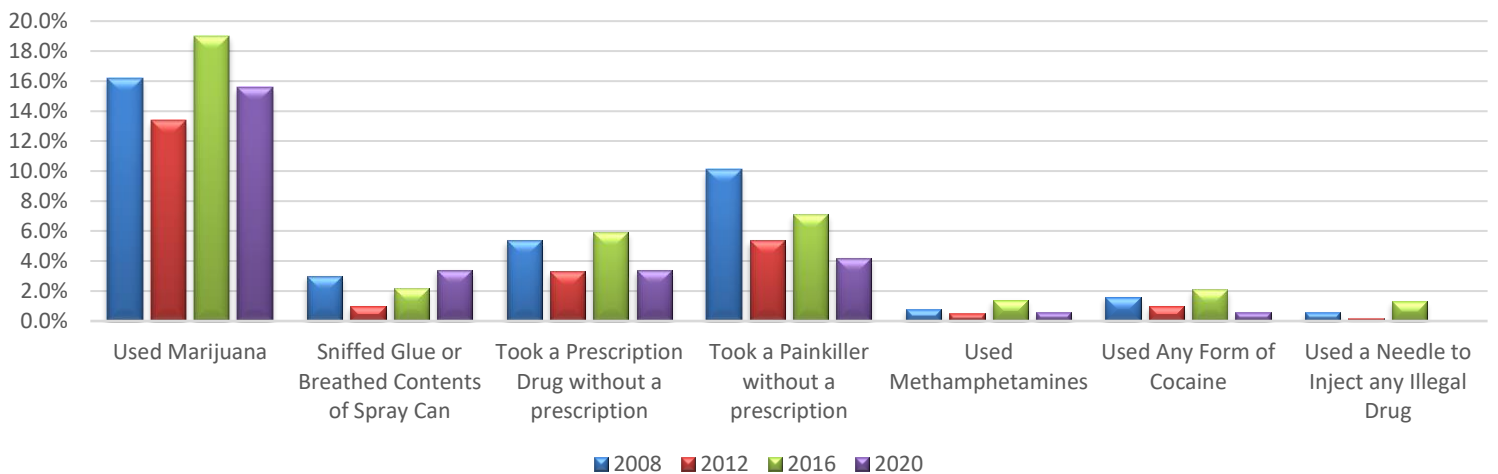
## Other Drug Use Among Middle School Students



Among middle school students, the most commonly used drug ever in 2019 was any form of cocaine, followed closely by using a needle to inject any illegal drug and methamphetamines.

Among high school students in Bay County, the most frequently used drug in the past 30 days was marijuana.

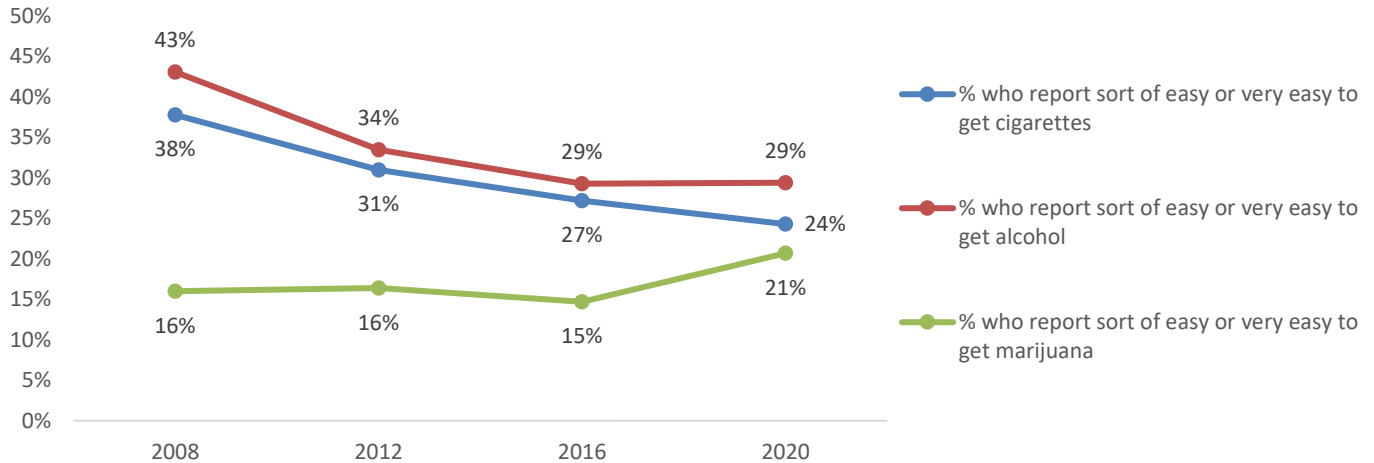
## Other Drug Use Among High School Students, in Past 30 Days



Source (All Tables): Michigan Profile for Healthy Youth, 2008-2020

## Bay County Health Behaviors

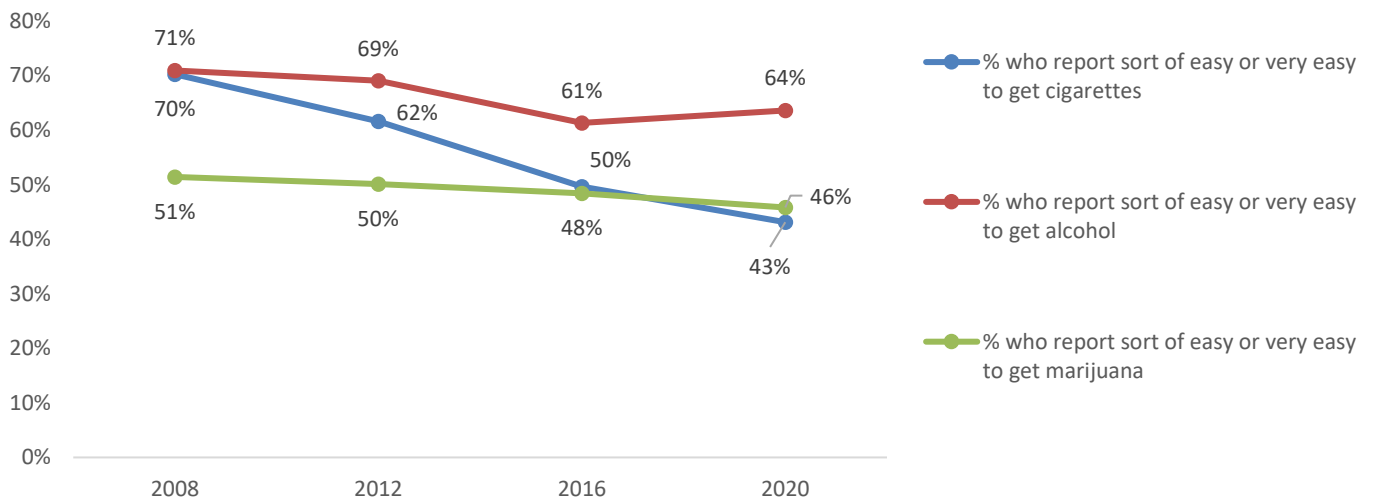
### Availability of Alcohol, Tobacco, and Marijuana Among Middle School Students



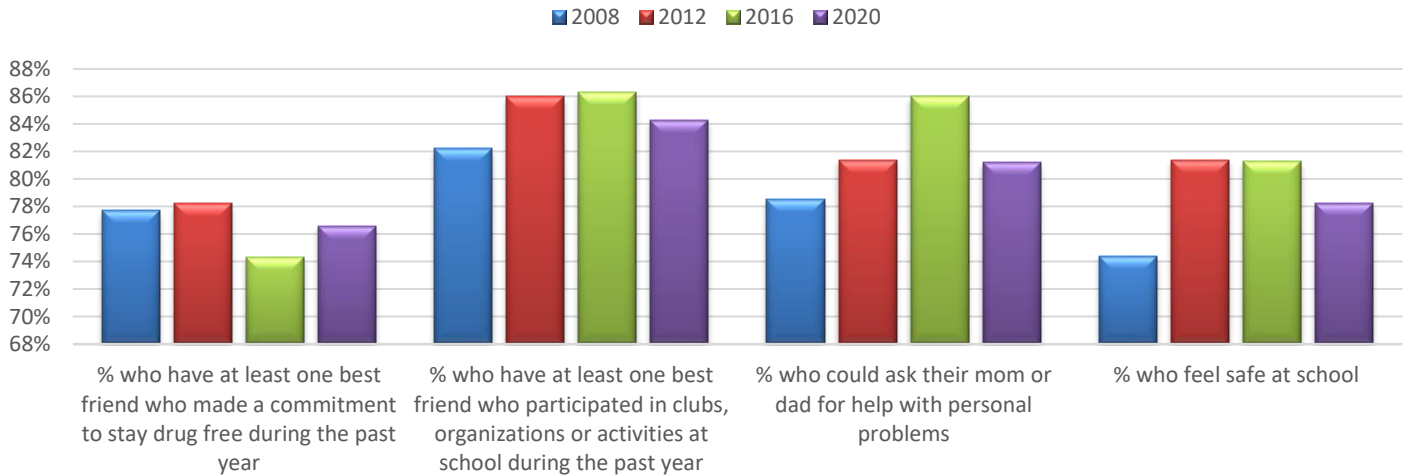
There have been moderate declines in alcohol and tobacco availability among middle school students. However, marijuana availability increased in 2020.

Availability of alcohol and marijuana remained relatively consistent among high school students in Bay County while the availability of cigarettes have significantly decreased over the last decade.

### Availability of Alcohol, Tobacco, and Marijuana Among High School Students



## Protective Factors Among Middle School Students



Among middle school students, the most noticeable change is a **decrease in the percentage who can ask their parents for help with their personal problems** and also a **decrease in those who feel safe at school**.

Among high school students, there was a moderate decrease in the percentage who have friends involved in school activities and a **significant decrease in the percentage who feel safe at school**.

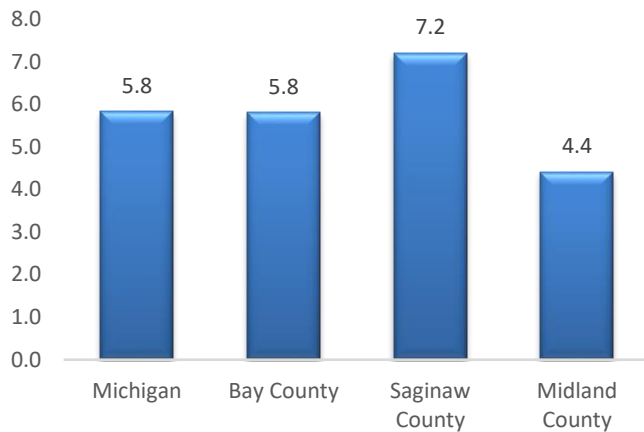
## Protective Factors Among High School Students



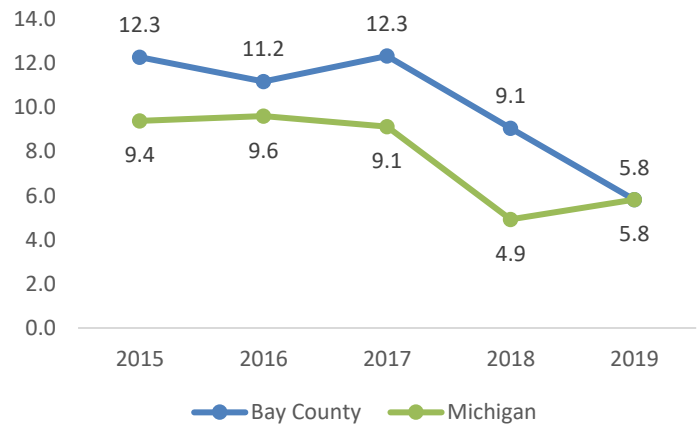
Source (All Tables): Michigan Profile for Healthy Youth, 2008-2020

## Bay County Health Behaviors

### Domestic Violence, Rate per 1,000 Population



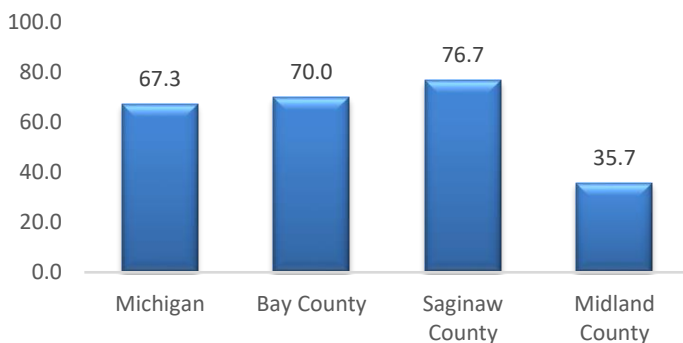
### Domestic Violence, Rate per 1,000 Population, 5-Year Trend



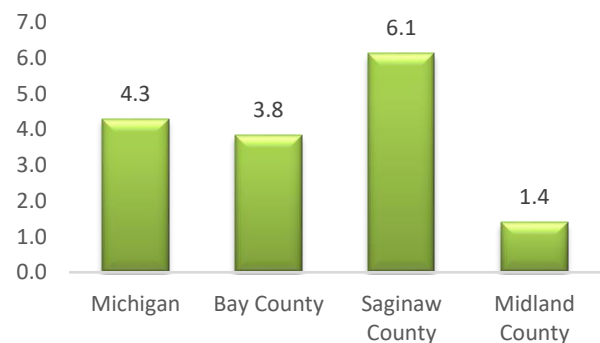
Bay County has a moderately lower domestic violence rate compared to Saginaw County, but slightly higher than Midland County. While Bay County had higher rates of domestic violence compared to Michigan, the rates of both decreased and were the same in 2019.

Bay County has a slightly lower violent crime rate compared to Michigan and moderately lower than Saginaw County; however, a slightly higher total crime rate than Michigan and moderately lower than Saginaw County.

### Total Crime, Rate per 1,000 Population



### Violent Crime, Rate per 1,000 Population

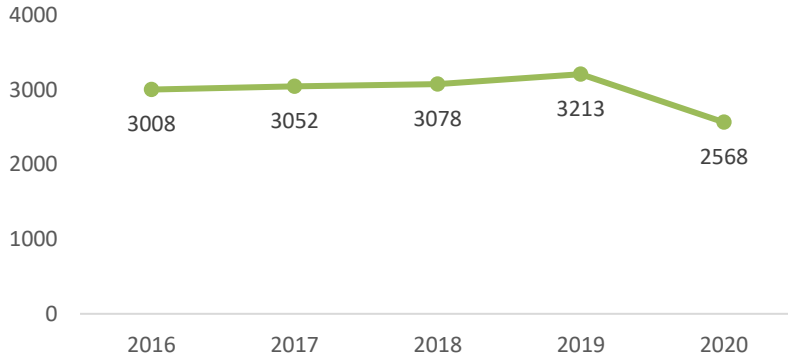


Total crimes include all of Part 1 Crimes that are referred to as the "crime index" (i.e., violent crime, property crime, and arson) and Part 2 Crimes, which represent 'less severe' crime classifications.

Violent crimes consist of murder, rape, robbery, and aggravated assault. All violent crimes involve force or threat of force.

# Bay County Health Behaviors

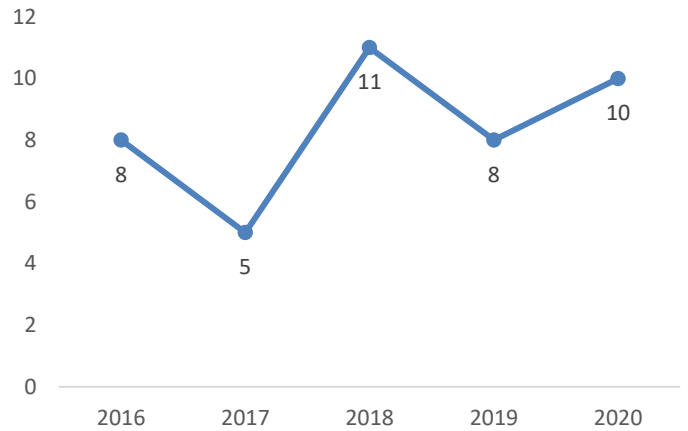
## Total Crashes, 5 Year Trend



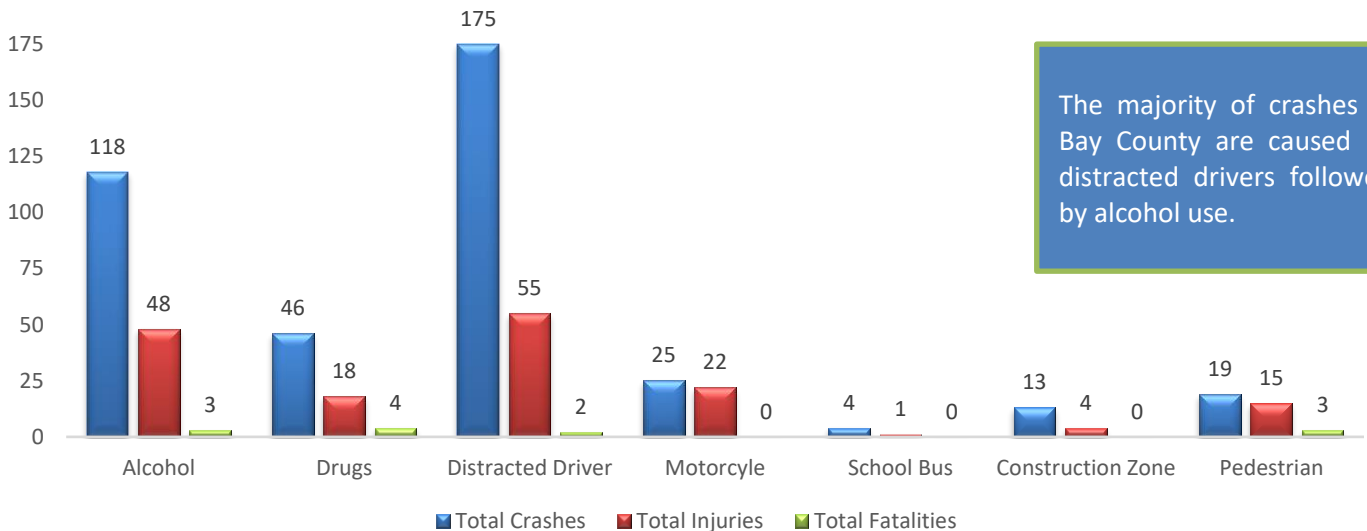
While the number of total traffic crashes in Bay County had been steadily increasing, **2020** saw a significant decrease.

The number of total fatal crashes in Bay County has dramatically fluctuated over the past four years.

## Total Fatal Crashes, 5 Year Trend



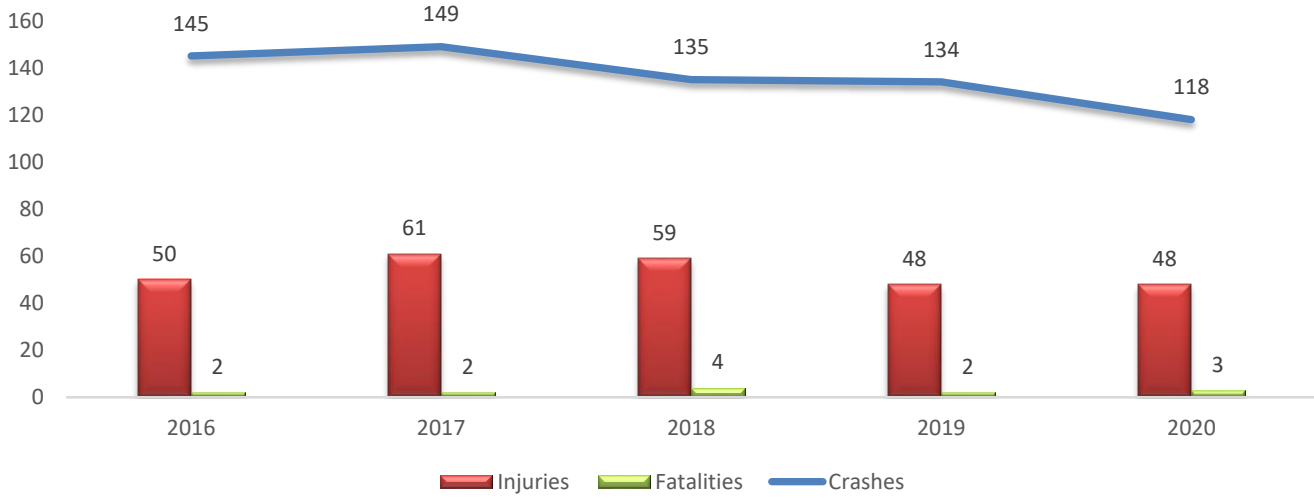
## Crash Characteristics by Type



The majority of crashes in Bay County are caused by distracted drivers followed by alcohol use.

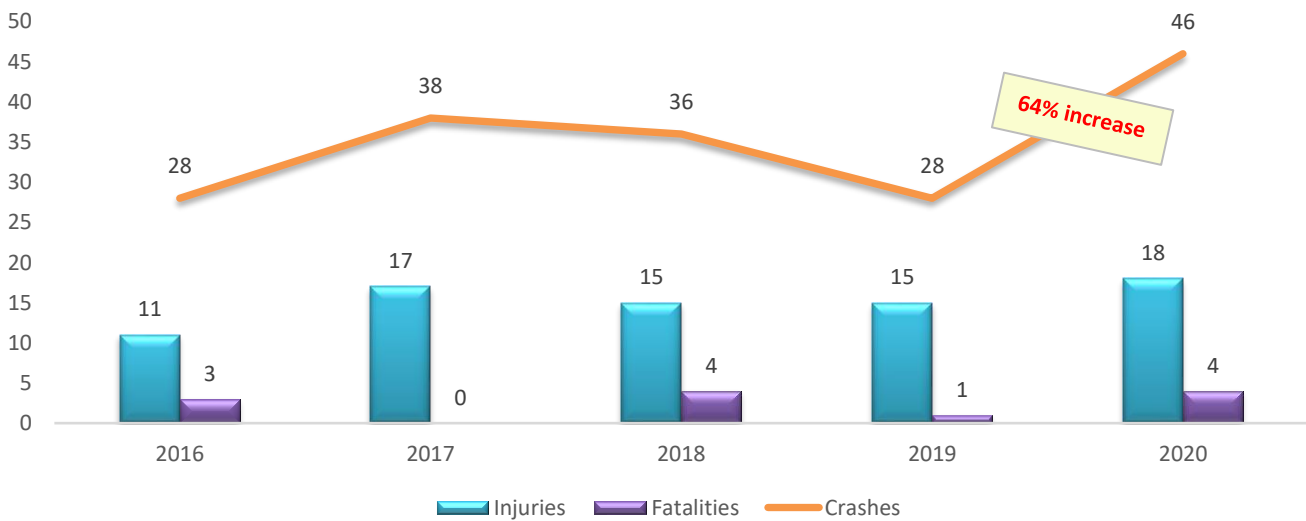
# Bay County Health Behaviors

## Crashes Involving Alcohol, 5-Year Trend



There are **over twice as many crashes involving alcohol compared to drugs**. The number of **crashes involving alcohol gradually decreased** over the past four years while the number of **crashes involving drugs increased**, with a significant increase from 2019 to 2020.

## Crashes Involving Drugs, 5-Year Trend



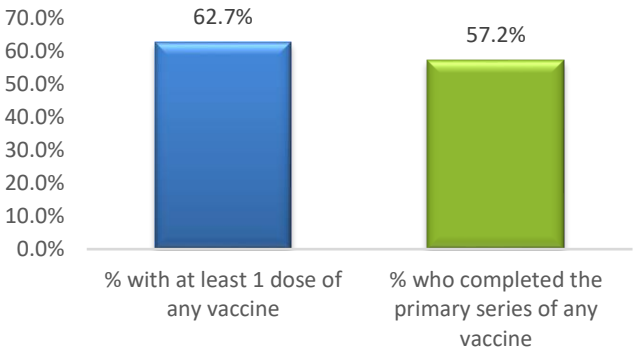
Drugs: driver or non-motorist involved in the crash suspected by law enforcement to have used drugs (consist of any presence of a drug).

Source (All Tables): Michigan State Police Traffic Crash Statistics, 2016-2020



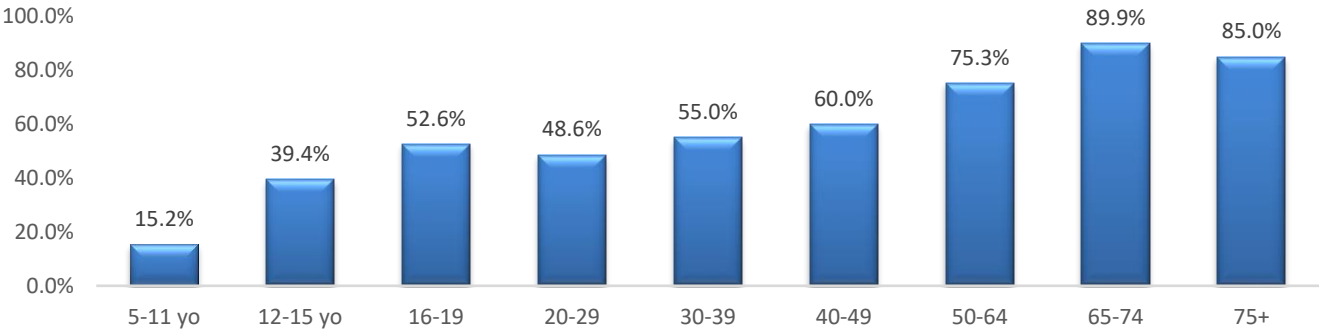
# Bay County COVID-19 Vaccinations

## Percent of Residents either Partial or Fully Vaccinated



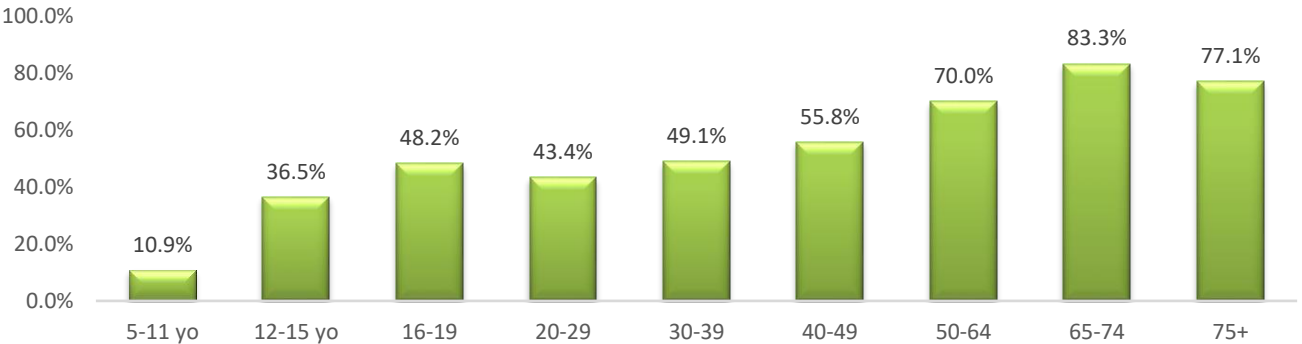
Over half of Bay County residents completed the primary series of either the Pfizer, Moderna, or J&J vaccines.

## Percentage who Received at Least 1 Dose of any Vaccine, by Age Group



6 out of 9 of the selected age groups have over 50% of their population with at least 1 dose of any vaccine. The highest percentage who completed the primary series of any vaccine were age 50 and over.

## Percentage who Completed the Primary Series of any Vaccine, by Age Group



Source (All Tables): MDHHS COVID-19 Vaccine Dashboard, 12/1/2020 – 12/31/2021

## Next Steps

The Bay County Health Department will work with partnering organizations to determine health priority areas based on the findings of the health assessment. Once the priorities are identified, the group will develop a Community Health Improvement Plan to address each priority area.

## Data Sources

1. **County Health Rankings (2018-2020)**  
(<http://www.countyhealthrankings.org/app/michigan/2020/overview>)
2. **Kids Count Data Center (2011-2019)**  
(<https://datacenter.kidscount.org/>)
3. **Michigan Behavioral Risk Factors Surveillance Survey (2011-2013; 2013-2015; 2015-2017; 2017-2019)**  
([http://www.michigan.gov/mdhhs/0,5885,7-339-71550\\_5104\\_5279\\_39424-134707--,00.html](http://www.michigan.gov/mdhhs/0,5885,7-339-71550_5104_5279_39424-134707--,00.html))
4. **Michigan Department of Human and Human Services – COVID-19 Vaccine Dashboard (2020-2021)**  
([https://www.michigan.gov/coronavirus/0,9753,7-406-98178\\_103214-547150--,00.html](https://www.michigan.gov/coronavirus/0,9753,7-406-98178_103214-547150--,00.html))
5. **Michigan Department of Health and Human Services – Green Book Key Program Statistics (2019)**  
([https://www.michigan.gov/mdhhs/0,5885,7-339-73970\\_61179\\_10830---,00.html](https://www.michigan.gov/mdhhs/0,5885,7-339-73970_61179_10830---,00.html))
6. **Michigan Department of Health and Human Services – Health Statistics and Reports (2016-2019)**  
([http://www.michigan.gov/mdhhs/0,5885,7-339-73970\\_2944---,00.html](http://www.michigan.gov/mdhhs/0,5885,7-339-73970_2944---,00.html))
7. **Michigan Department of Human and Human Services – Lead Data and Reports (2019)**  
([https://www.michigan.gov/mileadsafe/0,9490,7-392-104591\\_84214---,00.html](https://www.michigan.gov/mileadsafe/0,9490,7-392-104591_84214---,00.html))
8. **Michigan Department of Health and Human Services – MI Environmental Public Health Tracking (2019)**  
(<https://mitracking.state.mi.us/>)
9. **Michigan Incident Crime Reporting – Annual Reports (2019)**  
([https://www.michigan.gov/msp/0,4643,7-123-72297\\_24055-556722--,00.html](https://www.michigan.gov/msp/0,4643,7-123-72297_24055-556722--,00.html))
10. **Michigan Profile for Healthy Youth (2008-2020)**  
(<https://mdoe.state.mi.us/schoolhealthsurveys/ExternalReports/CountyReportGeneration.aspx>)
11. **Michigan State Police Traffic Crash Statistics (2016-2020)**  
([https://www.michigan.gov/msp/0,4643,7-123-1586\\_3501\\_4626---,00.html](https://www.michigan.gov/msp/0,4643,7-123-1586_3501_4626---,00.html))
12. **U.S. Census Bureau, American Community Survey (2011-2019)**  
(<https://data.census.gov/cedsci/profile?g=05000000US26017>)