2019 HEALTH STATUS REPORT

ST. MARY'S COUNTY
MARYLAND

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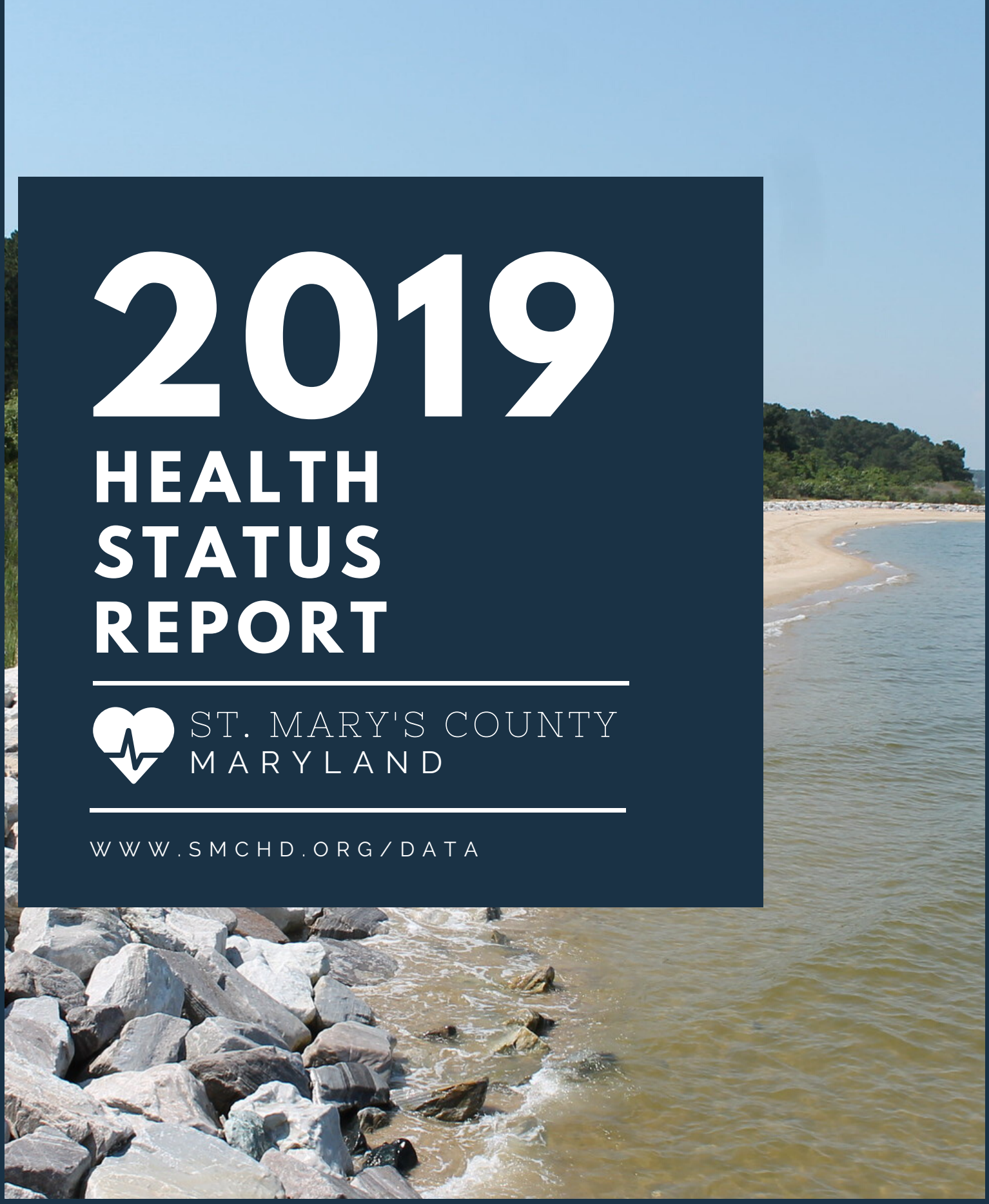

ST. MARY'S COUNTY
HEALTH DEPARTMENT

CONTENTS

ST. MARY'S COUNTY HEALTH DEPARTMENT

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November 2019

Message from the Health Officer:

The St. Mary's County Health Department is so pleased to offer this second edition of the Health Status Report for St. Mary's County, Maryland. This report summarizes key information about the health of our County's population, including various risk factors for disease, illness, and causes of death across our population. We hope this information assists our community partners, residents, and policy-makers in understanding the health of our County's residents.

This County Health Status Report includes publically available quantitative data through the year 2018, and builds upon the information provided in the first edition published in 2017.

Collecting, analyzing, and reporting on population health data is a critical responsibility of public health agencies. Having a comprehensive understanding about our community's health status allows our work to be data-driven and effective. Because health affects multiple aspects of a community – including social well-being, economic stability, individual quality of life, and educational attainment – it is our hope that this report will be a tool for many different community partners and residents in this County.

Sincerely,

Meenakshi G. Brewster, MD, MPH
St. Mary's County Health Officer

1.0 DEMOGRAPHICS/POPULATION CHARACTERISTICS

The distribution of age, race, and ethnicity are characteristics that may influence health outcomes of a population. This section provides an overview of the demographics for St. Mary's County.

1.1 Population

St. Mary's is one of the fastest growing counties in Maryland (Figure 1). Between 2010 and 2018, the population of St. Mary's County increased by 6.5 percent (from 105,764 to 112,664). This change was greater than that observed for Maryland, which experienced a statewide population increase of 4.6 percent (from 5,788,099 to 6,052,177, (U.S. Census Bureau, 2018 American Community Survey 1-Year Estimates). This growth is expected to continue, and by 2020 St. Mary's County's population is projected to reach 125,150. By 2040, the population of the County is projected to be 163,350, a nearly 45 percent increase from the 2018 population estimate (Maryland Department of Planning, July 2014). Despite this growth and the County's small metro classification by the National Center for Health Statistics, 50.4 percent of St. Mary's residents live in rural settings.[1] In contrast, 19.3 percent of the United States population and 12.8 percent of Maryland's population live in rural settings. [U.S Census Bureau 2010-2018 estimates].

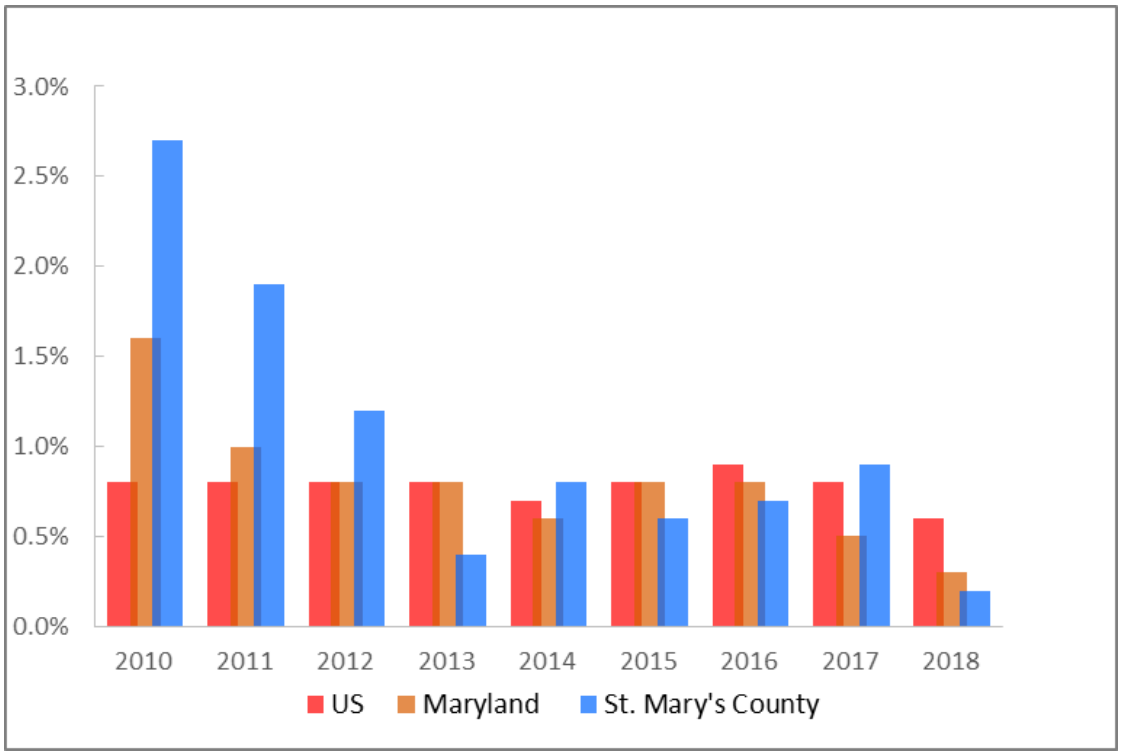


Figure 1. Annual population growth in the United States, Maryland, and St. Mary's County, 2010–2018.
Source: US Census Bureau, American Community Survey.

[1] Rural settings are those outside of urbanized centers or urban clusters, as defined by the Federal Office of Management and Budget

1.2 Age

In 2017, the population of persons under 18 years in St. Mary's County accounted for 24.5 percent of the total population in the County. In Maryland, the population of persons under 18 years in 2017 was 22.3 percent of the state's population (Figure 2). The same population estimates indicate that individuals 65 years and older accounted for 12.6 percent of the St. Mary's population, compared to 15.0 percent of the state's. The median age of persons living in St. Mary's County in 2017 was 36.5, which is younger than the state median age of 38.7 (U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates; See also Appendix 1).

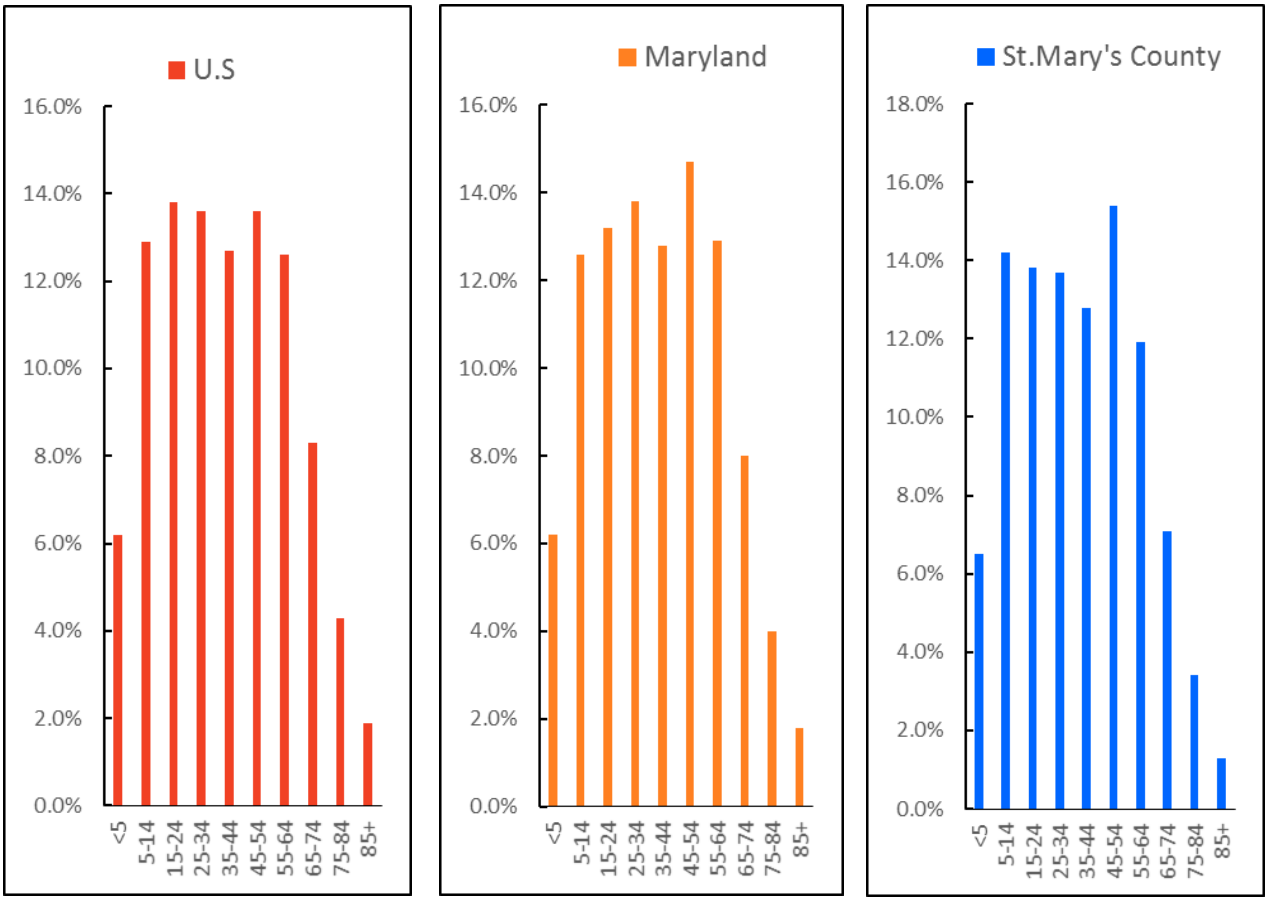


Figure 2. Age distribution of residents in the United States, Maryland, and St. Mary's County, 2012-2017.
Source: US Census Bureau, American Community Survey.

1.3 Race and Ethnicity

While the population of St. Mary's County has grown, the racial makeup of the County has been stable over the six-year period from 2012 to 2017. The County is 81.9 percent white (WHT), which is similar to the United States (75.7 percent), but higher than Maryland as a whole (59.1 percent). Consistent with the United States and Maryland, the next largest population is Black/African American (BLK/AA). However, St. Mary's County's percentage of black/African American residents (14.3 percent) is smaller than the state as a whole (29.7

percent). Asian (ASN, 2.8 percent) and multiracial (Multi, 3.2 percent) residents comprise the next largest populations. Both American Indian/Alaska Natives (AI/AN) and Native Hawaiian/Pacific Islanders (NH/PI) make up less than one percent of the County's population respectively (Figure 3).

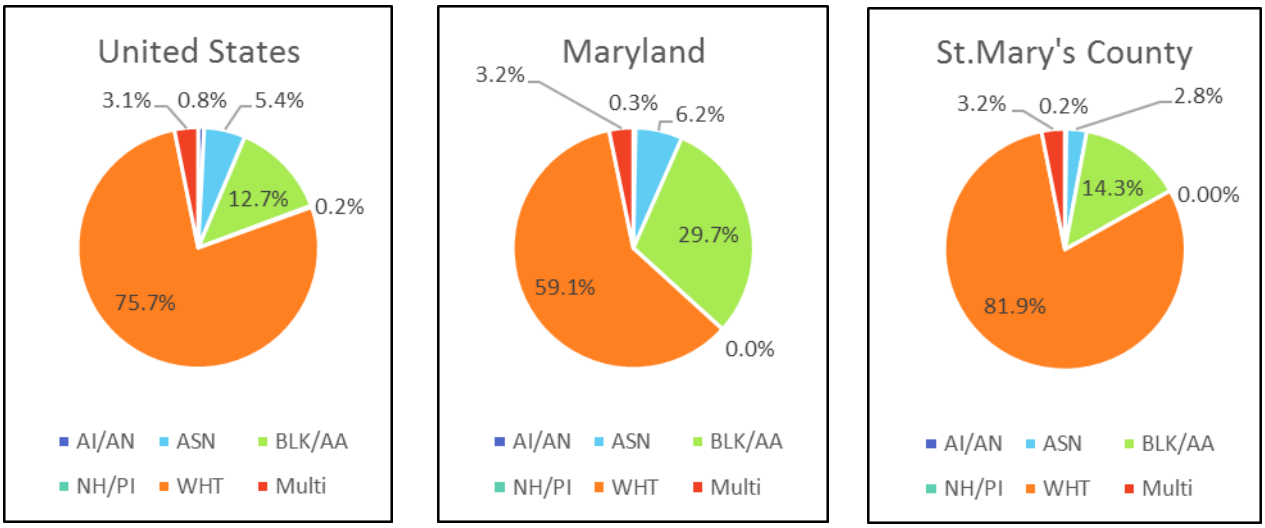


Figure 3. Racial composition of resident population in the United States, Maryland, and St. Mary's County, 2017.
Source: US Census Bureau, American Community Survey

As seen in the United States and Maryland, St. Mary's County saw, in 2017, a small increase (4.8 percent) in the number of residents of any race who identify as being Hispanic or Latino (Figure 4). This is an increase from the percentage in 2010 (3.5 percent), and consistent with increases seen in the United States (1.9 percent) and Maryland (2.1 percent) across the same time period (U.S. Census Bureau 2010-2017 estimates).

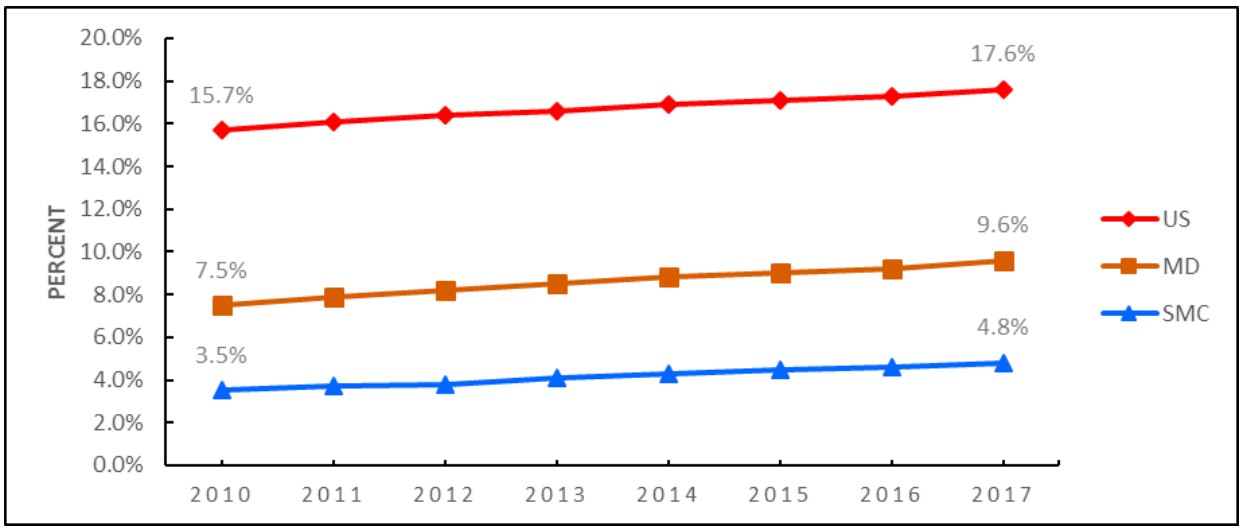


Figure 4. Hispanic proportion of resident population in the United States, Maryland, and St. Mary's County, 2017.
Source: US Census Bureau, American Community Survey.

1.4 Place of Birth

In 2017, foreign-born individuals comprised 5.2 percent of the total population in St. Mary's County (Figure 5). During the same time period, 15.3 percent of the total statewide population and 13.7 percent of the nation's population was foreign-born (U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates).

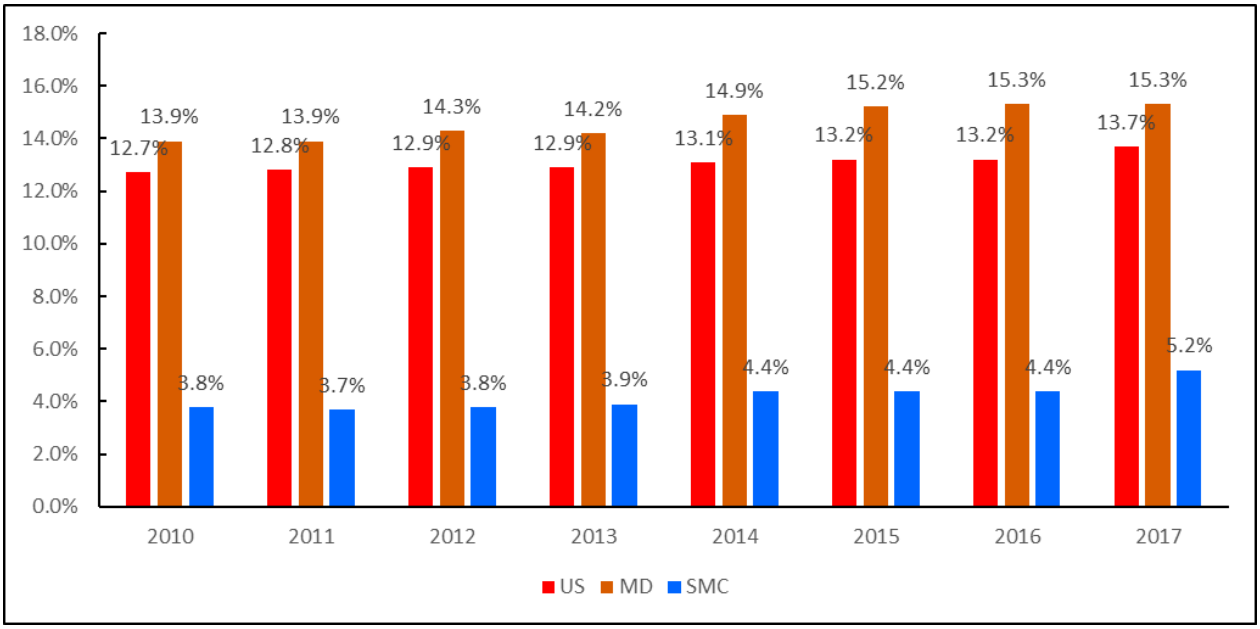


Figure 5. Proportion of foreign-born residents in the United States, Maryland, and St. Mary's County, 2017.
Source: US Census Bureau, American Community Survey.

1.5 Life Expectancy

Life expectancy at birth is the average number of years a newborn is expected to live given current conditions. The life expectancy in the U.S. is the highest in recorded history, thanks to public health interventions such as improvements in sanitation and food safety, development and use of vaccines, and health promotion efforts. Life expectancy for St Mary's residents has generally been lower than the state of Maryland average. However, from 2015-2017, the life expectancy of St. Mary's County residents (79.2) was the same as the life expectancy for the state of Maryland (79.2) (Figure 6).

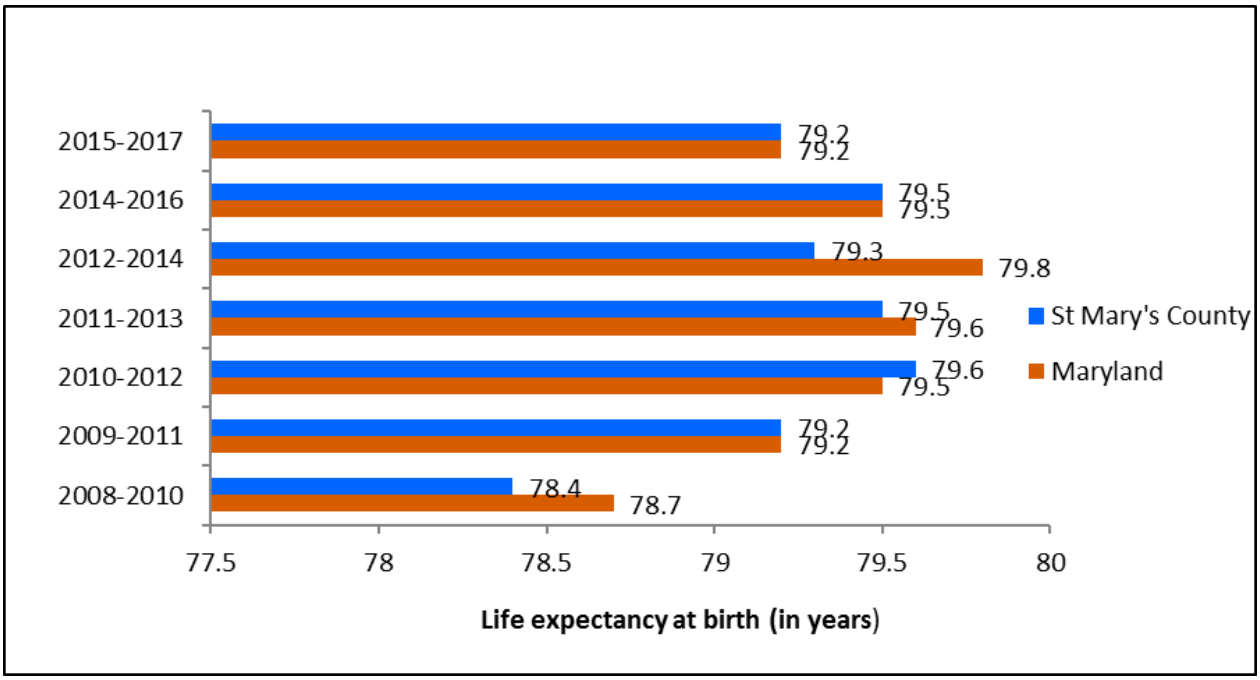


Figure 6. Life expectancy at birth in St Mary's County and Maryland, 2008-2017.
Source: Maryland Vital Statistics Administration.

1.6 Language

The 2017 American Community Survey estimates indicate that 98 percent of the St. Mary's County population 5 years and older speak English "very well". Individuals who speak only English account for 93.1 percent of the population. Among individuals who speak a language other than English, 2.6 percent speak Spanish, 2.2 percent speak Indo-European languages (this includes languages such as French, German, Greek, and Hindi), and 1.7 percent speak Asian and Pacific Island languages (this includes languages such as Chinese, Japanese, Korean and Tagalog). These findings are consistent with the estimates from the 2017 estimates for St. Mary's County. The 2017 estimates for Maryland indicate that 93.3 percent of the state speak English "very well", with 82.0 percent speaking only English. Of Maryland residents who speak a language other than English, 7.8 percent speak Spanish, 4.4 percent speak another Indo-European language, and 3.8 percent speak Asian and Pacific Island languages (U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates).

1.7 Education

Estimates for 2017 indicate that 89.7 percent of St. Mary's residents have received at least a high school diploma or its equivalent (U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates). This is similar to the Maryland estimate of 89.8 percent. Estimates indicate that 30.4 percent of St. Mary's County residents have obtained a bachelor's, graduate, or professional degree, compared to 39.0 percent of residents of Maryland as a whole who have earned a bachelor's, graduate, or professional degree.

1.8 Employment

In 2017, the St. Mary's County unemployment rate was 4.0 percent (Table 1). This was slightly lower than the Maryland unemployment rate of 4.1 percent and the national rate of 4.4 percent (See also Appendix 2). In 2016, St. Mary's County had an estimated 60,734 full- and part-time jobs, which exceeds the County's pre-recession peak. Most jobs in the County are "wage & salary" (79.6 percent), with the remainder being farm (1.0 percent) and non-farm (19.4 percent) proprietors. This reflects an 8.1 percent increase in jobs from the recession of 2008 to 2016 (Maryland Department of Planning, Planning Data Services). Government and government-enterprise jobs account for 27.7 percent of the total jobs in St. Mary's County. This includes federal civilian (15.9 percent), state (1.3 percent) and local (6.3 percent) government positions, as well as military (4.2 percent). Among non-government jobs, leading sectors include professional, scientific and technical services (16.9 percent), retail trade (9.9 percent), healthcare and social assistance (8.3 percent), accommodation and food service (6.5 percent), and construction (5.1 percent) (Table 2; Maryland Department of Planning, NAICS Jobs by place of work, 2016).

Table 1. Unemployment in the United States, Maryland, and St. Mary's County, 2010-2017.

	United States	Maryland	St. Mary's
2017	4.4%	4.1%	4.0%
2016	4.9%	4.4%	4.2%
2015	5.3%	5.1%	4.8%
2014	6.2%	5.8%	5.4%
2013	7.4%	6.6%	6.0%
2012	8.1%	7.0%	6.3%
2011	8.9%	7.2%	6.3%
2010	9.6%	7.7%	6.5%

Source: Bureau of Labor Statistics. Labor Force Statistics from the Current Population Survey.

Table 2. Leading private job sectors in the United States, Maryland, and St. Mary's County, 2016.

	United States	Maryland	St. Mary's
Professional, Scientific, Tech	7.1%	9.9%	16.9%
Retail Trade	10.0%	9.6%	9.9%
Healthcare & Social Services	11.3%	12.0%	8.3%
Accommodation & Food Services	7.4%	6.8%	6.5%
Construction	5.2%	6.3%	5.1%

Source: Maryland Department of Planning, NAICS Jobs by place of work, 2016.

1.9 Income

In 2017, the estimated median household income[2] in St. Mary's County was $86,508, which was higher than the state median income of $78,916 (Table 3; U.S. Census Bureau, American Community Survey 5-year estimates for 2013-2017). These same estimates indicate that household income in St. Mary's County varies dramatically by race and ethnicity. In 2017, median income was highest in Asian households ($145,163) and lowest in African American households ($44,250).

Table 3. Median Household Income in Maryland and St. Mary's County, 2010–2017.

	Maryland Total	St. Mary's County (SMC): Total	SMC: African American	SMC: Asian	SMC: White	SMC: Two or more races	SMC: Hispanic, all races
2017	$78,916	$86,508	$44,250	$145,163	$94,231	$79,167	$68,833
2016	$76,067	$86,810	$50,777	$100,839	$93,259	$71,528	$70,028
2015	$74,551	$86,987	$47,808	$98,570	$92,783	$62,629	$66,250
2014	$74,149	$88,190	$51,392	$98,824	$93,414	$73,636	$68,480
2013	$73,538	$85,672	$51,389	$111,833	$92,021	$85,987	$76,250
2012	$72,999	$85,032	$55,072	$97,120	$89,653	$67,262	$85,284
2011	$72,419	$82,529	$52,244	$101,250	$87,484	$71,442	$80,208
2010	$70,647	$80,053	$54,567	$84,485	$84,906	$68,558	$77,365

Source: Maryland Department of Planning, NAICS Jobs by place of work, 2017.

[2] The value that divides income distribution into two equal groups, half having income above that median, and half having income below.

1.10 Poverty

During 2017, an estimated 8.2 percent of St. Mary's County residents had incomes below the federal poverty level. By comparison, greater percentages of residents statewide (9.7 percent) and nationally (14.6 percent) had incomes below the federal poverty level. St. Mary's County's poverty rate has remained relatively constant over the period from 2013 to 2017 (U.S. Census Bureau, Small Area Income and Poverty (SAIPE) Program, 2017 Poverty and Median/Household Income Estimates – Counties, States, and National).

1.11 Housing

In 2017, an estimated 71.9 percent of St. Mary's County residents lived in a home they owned (Table 4). This is higher than the percentage of owner occupants for Maryland (66.8) and the United States (63.8). Of those in St. Mary's County who owned their home, the median cost of ownership as a percentage of household income was 19.3 percent. For those renting, the median rent as a percentage of household income was 29.8 percent.

Table 4. Selected characteristics related to housing in the United States, Maryland, and St. Mary's County, 2013-2017.

	Owner occupant (total pop.)	Cost of ownership as % of income	Median home value*	Renter (total pop.)	Rent as % of income	Median rent
U.S.	63.80%	18.50%	$193,500	36.20%	30.30%	$982
Maryland	66.80%	19.80%	$296,500	33.20%	30.20%	$1,311
St. Mary's	71.90%	19.30%	$291,500	28.10%	29.80%	$1,288

Source: US Census Bureau, American Community Survey, 5-year estimates 2017.

1.12 Households

The average household size in St. Mary's County in 2017 is estimated to be 2.67 persons; households in the United States (2.65 persons) and Maryland (2.68 persons) were similar. The County has a higher percentage of households with at least one person under the age of 18, 24.8 percent, compared to 22.9 percent in the United States and 22.5 percent in Maryland. The majority of households in St. Mary's County are defined as families (71.2 percent), which is higher than the United States (65.5 percent) and Maryland (66.6 percent). Of the family households in St. Mary's County, 78.1 percent are married-couple family households. This number is higher than Maryland (71.5 percent) and the United States (73.4 percent). (U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates).

Among St. Mary's County households, an estimate of 91.5 percent have computers. This is higher than what is estimated for the United States (90.8 percent) but lower than Maryland (93.0 percent). Among those with computers, 92.0 percent of St. Mary's households have high-speed internet (slightly lower than the Maryland average of 93.7 and slightly higher

than the US average of 91.2 percent). About 0.6 percent have dial-up internet (slightly higher than the Maryland average of 0.2 and the U.S. average of 0.3 percent) and 7.3 percent have no internet subscription (slightly higher than the Maryland average of 6.1 and slightly lower than the U.S. average of 8.4 percent), (U.S. Census Bureau, American Community Survey 2013-2017 5-yr estimates).

1.13 Transportation

Of the St. Mary's County residents who work, 74.2 percent work within the County, and their mean[3] travel time to work is 30.9 minutes. Estimates indicate that of the County residents who work, 82.6 percent commute to their jobs alone, 9.4 percent carpool and 2.2 percent use public transportation. The remaining civilian workers either walk or work from home. The national average for individuals who commute more than 60 minutes to work is 8.9 percent. This value is lower than that of St. Mary's County residents (15.0 percent) and Maryland (15.4 percent). (Bureau of Labor Statistics Local Area Unemployment Statistics, U.S. Census Bureau, American Community Survey, 2013-2017 5-Year estimates).

2.0 SOCIAL DETERMINANTS OF HEALTH

2.1 Access to Healthy Foods and Recreation

Healthy food choices and active living are essential in the prevention and control of chronic diseases like diabetes, cancer, heart disease, and high blood pressure. These chronic diseases contribute to the leading causes of death nationally and here in St. Mary's County.

Living close to sources of healthy food is among the factors associated with better eating habits and decreased risk for obesity and diet-related diseases. Accessing healthy food is a challenge for many families, particularly those living in low-income neighborhoods and rural areas. In 2015, 18.6 percent of St. Mary's County residents had low access to a grocery store. Low access to a grocery store is defined as living more than 1 mile (urban area) or 10 miles (rural area) from a supermarket or large grocery store (Economic Research Service, U.S. Department of Agriculture, Food Environment Atlas).

In 2017, 8.3 percent of all St. Mary's County residents were food insecure. This percentage was lower than the food insecurity rate for the overall Maryland population (10.7 percent). Food insecurity is defined as lack of access, at times, to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods. Among children 18 years and younger in St. Mary's County, 14.8 percent were food

[3] Mean is the arithmetic average

insecure. This percentage was slightly lower than the food insecurity rate for the state as a whole (15.2 percent) (Feeding America. Map the Meal Gap).

In addition to access to healthy food, access to and use of recreational facilities is associated with positive health outcomes. Recent data indicate that 62 percent of St. Mary's County residents have adequate access to parks or recreational facilities for physical activity (County Health Rankings). This percentage is substantially lower than that for the overall Maryland population (93 percent). Adequate access is defined as living in a census block within a half mile of a park, or living within one mile (in urban areas) or three miles (in rural areas) of a recreational facility.

2.2 Environmental Quality

2.2.1 Lead

Lead exposure can cause long-term neurological damage that may be associated with learning and behavioral problems. Children are at greatest risk from birth to age six while their neurological systems are developing. Paint dust or chips from deteriorated lead paint or from renovation of old houses is the major source of lead exposure for Maryland children. At the time this report was developed, Maryland required children to have a blood lead test at ages one and two (greatest likelihood of lead exposure due to mouthing behavior) if they met any of the following criteria:

- Live in an identified "at risk" zip code (areas with a high proportion of pre-1950 housing units). At-risk areas in Maryland include Baltimore City as well as Allegany, Caroline, Dorchester, Frederick, Garrett, Somerset, Washington, Wicomico, and Worcester Counties.
- Participate in Maryland's Medicaid program
- Give a positive response to the "Risk Assessment Questionnaire" conducted at regular medical checkups on children up to six years of age

In March 2012, the Centers for Disease Control and Prevention (CDC) established a blood lead level of 5 μg/dL or higher as the "reference value" at which case management is recommended. Previously, CDC used a blood lead level of 10 μg/dL or higher as the "level of concern." Maryland has implemented recommendations for case management for children with blood lead level 5-9 μg/dL. At blood lead levels ≥10 μg/dL, standard case management, home visits, and environmental inspections are instituted (Maryland Department of the Environment, Lead Poisoning Prevention Program, Childhood Blood Lead Surveillance in Maryland Annual Report 2017).

The percentage of St. Mary's County children, 0–72 months old, who had blood lead level testing declined from 18.8 percent in 2010 to 13.4 percent in 2017 (Maryland Department of the Environment, Lead Poisoning Prevention Program, Childhood Blood Lead Surveillance in Maryland Annual Report 2017). Of the St. Mary's County children tested, the percentage of new elevated blood lead level (≥10 μg/dL) cases has declined since 2005,

from a high of 0.7 percent in 2005 to 0 percent in 2017. Over that time period, the percentages of new elevated blood lead level cases among children 0–72 months old in St. Mary's County were consistently lower than that observed statewide (Figure 7).

2.2.2 Waste Generation and Recycling

St. Mary's County generated 125,609 tons of municipal solid waste and industrial waste in 2013. Through recycling and source reduction credits, the County achieved a waste diversion rate of 37.8 percent, which is lower than the Environmental Protection Agency's target of 45.0 percent. Maryland as a whole achieved a 46.9 percent waste diversion rate. Waste diversion is the prevention and reduction of generated waste through source reduction, recycling, reuse, or composting. Waste diversion generates a host of environmental, financial, and social benefits, including conservation of energy, reduction of disposal costs, and reduction of the burden on landfills and other waste disposal methods (Maryland Solid Waste Management and Diversion Report, 2017, Maryland Department of the Environment).

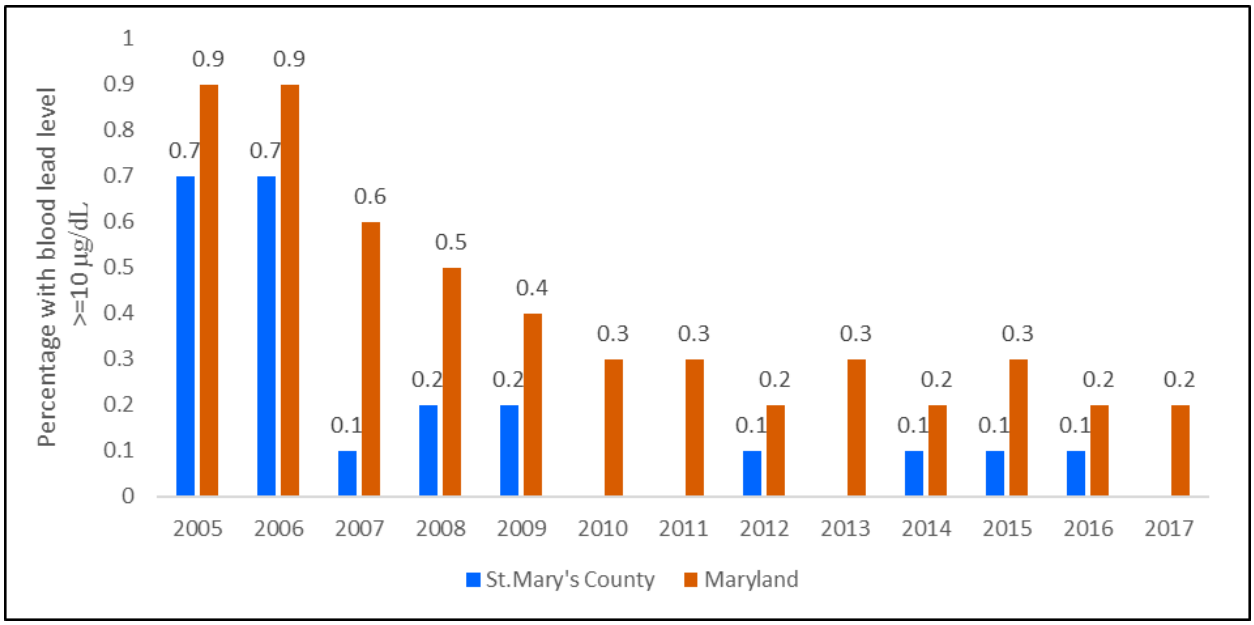


Figure 7. Percentage of incident (new) cases of elevated blood lead levels in children 0-72 months old in St. Mary's County and Maryland, 2005-2017.
Source: Maryland Department of the Environment, Lead Poisoning Prevention Program; Childhood Blood Lead Surveillance in Maryland Annual Report 2005-2017.

2.2.3 Air Quality

Air pollution is a leading environmental threat to human health. As air pollution increases, an increasingly larger percentage of the population is likely to experience increasingly severe adverse health effects.

Particles in the air like dust, dirt, soot, and smoke are one kind of air pollution called particulate matter. Fine mineral, metal, soot, smoke, and dust particles suspended in the air can damage lungs. Tiny airborne particles or aerosols that are less than 100 micrometers

are collectively referred to as total suspended particulate (TSP) matter. For health reasons, inhalable particulate matter less than 10 micrometers in diameter (PM10), and less than 2.5 micrometers in diameter (PM2.5) are of most concern. Particles of these sizes can permanently lodge deep within the lungs, and can aggravate many respiratory illnesses including asthma, bronchitis, and emphysema. High levels of particle pollution have been associated with a higher incidence of heart problems (including heart attacks) and low birth weight.

The national standard for annual PM2.5 levels is 12.0 µg/m3 (micrograms per cubic meter [µg/m3]). When PM2.5 levels are above 12, this means that air quality is more likely to affect human health. In 2014, the annual level of PM2.5 in St. Mary's County was 9.0 µg/m3[4]. The number of days when PM2.5 levels were above the national standard were zero. The average PM2.5 in St. Mary's County has gone down from 1999 (13.7 µg/m3), 2013 (10.1 µg/m3), and it was 9.0 µg/ m3 in 2014. Similarly, the Maryland average was also below 12 µg/m3 in 2014[5].

In addition to particles, specific compounds contribute to air pollution and adverse health outcomes. Environmental carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3) and sulfur dioxide (SO_2), have been demonstrated to impact health. Ozone occurs naturally in the Earth's upper atmosphere where it forms a protective layer that shields the planet from ultraviolet rays emitted by the sun. In the Earth's lower atmosphere, near ground level, ozone is formed when pollutants emitted by cars, industrial facilities, and other sources react chemically in the presence of sunlight. Ozone at ground level is a harmful pollutant that can reduce lung function and aggravate chronic lung conditions such as asthma, chronic bronchitis and emphysema. In 2014, St. Mary's County residents were exposed to unhealthy levels of ozone for 1 day[6]. In comparison, Maryland had 11 days of unhealthy exposure in 2014[7]. In 2018, Maryland as a whole had 16 days of exposure to unhealthy levels of ozone.

2.2.4 Crime and Safety

Overall, rates of violent crime and property crime in St. Mary's County have been consistently lower than what is observed statewide and nationally (Maryland State Police, Federal Bureau of Investigation). Violent crime in the County continues to decline, with the rate decreasing by 35.9 percent in the eight-year period from 2009 to 2017 (Figure 8). During that same period, property crimes have decreased by 12.0 percent in the county, 30.0 percent in Maryland and 22.3 percent in the United States (Figure 9).

[4] https://ephtracking.cdc.gov/DataExplorer/#/
[5] https://mde.maryland.gov/programs/Air/AirQualityMonitoring/Documents/SeasonalReports/SeasonalReport_2018PM.pdf
[6] https://ephtracking.cdc.gov/InfoByLocation/
[7] https://mde.maryland.gov/programs/Air/AirQualityMonitoring/Documents/SeasonalReports/SeasonalReport_2018Ozone.pdf

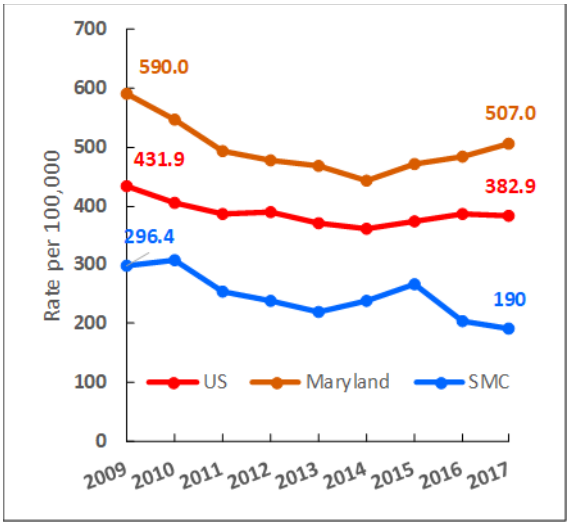


Figure 8. Rates of violent crime, per 100,000 persons in the United States, Maryland, and St. Mary's County (SMC), 2009-2017. *Source: Federal Bureau of Investigation- Uniform Crime Reporting.*

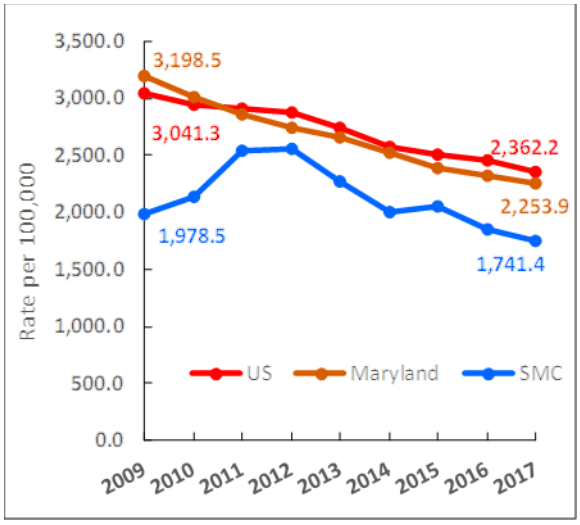


Figure 9. Rates of property crime, per 100,000 persons in the United States, Maryland, and St. Mary's County (SMC), 2009-2017. *Source: Federal Bureau of Investigation- Uniform Crime Reporting.*

2.3. Access to Healthcare

2.3.1 Health Resource Availability

Estimates for 2017 indicate that 6.0 percent of St. Mary's County residents did not have health insurance of any type (Table 5 and Figure 10). This is slightly lower than the state (6.1 percent) and national (8.7 percent) figures. Among County residents under 18 years, 3.0 percent do not have health insurance of any type. This is lower than the state (4.0 percent), and lower than the United States (5.0 percent). The largest portion of uninsured individuals falls within the 18–64 age range. In St. Mary's County, 8.0 percent of residents in this age group are uninsured. The percentages for Maryland (9.0 percent) and national (12.3 percent) are higher.[8]

Table 5. Uninsured residents in St. Mary's County (SMC), by age, 2010-2017.

	SMC :Total	SMC: <18 years	SMC: 18-64 years
2017	6.0%	3.0%	8.0%
2016	9.0%	4.0%	11.0%
2015	9.0%	4.0%	11.0%
2014	9.0%	4.0%	11.0%
2013	7.8%	5.2%	10.3%
2012	9.0%	7.0%	11.2%
2011	9.0%	5.6%	11.8%
2010	8.1%	4.4%	10.8%

Source: US Census Bureau, Small Area Health Insurance Estimates (SAHIE).

[8] This information is not reflective of full implementation of health insurance provisions of the Affordable Care Act

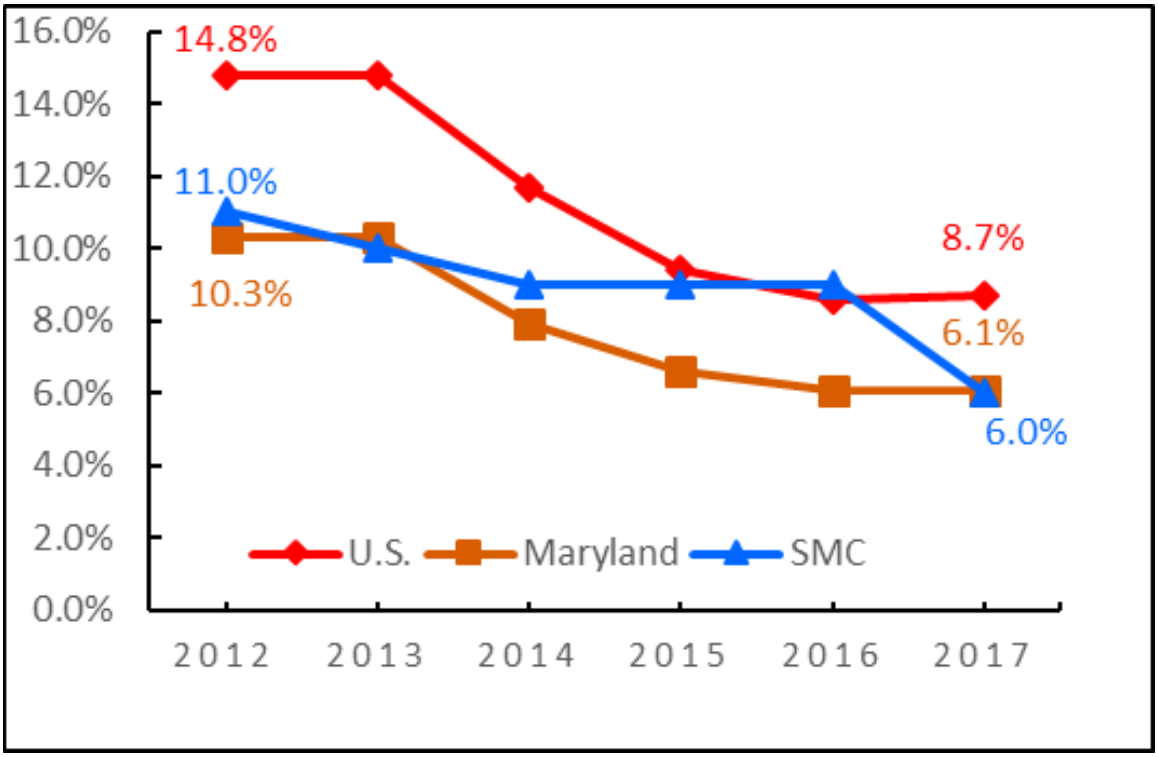


Figure 10. Uninsured residents in the United States, Maryland, and St. Mary's County, 2012–2017.
Source: US Census Bureau, Small Area Health Insurance Estimates (SAHIE).

The majority of insured individuals are covered under employer-based policies (Table 6). Estimates for 2017 indicate that 66.7 percent of St. Mary's County residents have employer-based health insurance. Coverage by Medicare (12.6 percent) and Medicaid (16.5 percent) is lower than what is estimated for Maryland and the United States. The percentage of St. Mary's County residents covered by Military/Tricare insurance (11.7 percent), is higher than what is estimated for Maryland (3.5 percent) and the United States (2.7 percent). [2017 U.S. Census Bureau, American Community Survey 1-year estimates].

Table 6. Health insurance by payer source in the United States, Maryland and St. Mary's County (SMC).

	Employer-based	Direct purchase	Military/ Tricare	Medicare	Medicaid	VA
U.S.	55.0%	13.5%	2.7%	17.3%	20.6%	2.3%
Maryland	63.5%	12.0%	3.5%	16.0%	17.9%	2.0%
SMC	66.7%	8.4%	11.7%	12.6%	16.5%	2.6%

Source: US Census Bureau, 2017 American Community Survey 1-year estimates.

In addition to ability to pay, the number of providers in a community influences access. In 2016, the primary care physician to population ratio in St. Mary's County is 1 per 2,650 residents (was 1:2,169 in 2012). Maryland has a ratio of 1 per 1,140 residents (was 1:850 in 2012) (County Health Rankings 2018; Maryland State Health Improvement Process & from CDC data briefs - NCHS Data Brief No. 151, May 2014[9]).

Areas of St. Mary's County have received designation by the Health Resources and Services Administration (HRSA) as health professional shortage areas (HPSA). The southern portion of the County, including Great Mills, Lexington Park, Park Hall and St. Mary's City, has a geographic designation as a primary care HPSA, which indicates a primary care provider ratio of less than 1 per 3,500 residents (Health Resources and Services Administration [HRSA, 2014]). The entire County has been designated a mental health HPSA. Additionally, the northwestern portion of the County, including the Chaptico and Milestown communities, has been designated a medically underserved area (MUA). An MUA designation indicates that an area has too few primary care providers, high infant mortality, high poverty, or a high elderly population. Additionally, St. Mary's County is home to a Greater Baden Medical Services satellite clinic. Greater Baden is a federally-qualified health center (FQHC). An FQHC is an organization receiving grants under Section 330 of the Public Health Service Act. An FQHC must serve an underserved area or population, offer a sliding fee scale, provide comprehensive health services, and have an ongoing quality assurance program.

Ambulatory Care Sensitive Conditions (ACSC) are conditions for which admissions may be avoided by intervention at the primary care setting, or where early intervention can prevent complications or more severe disease.[10] Rates of admissions for ACSCs are prevention quality indicators (PQI) used as measure of the effectiveness and reach of a community's primary care system. While the measures focus on inpatient admissions, they are typically used to assess engagement and quality in the community setting. Recent trends indicate that discharges for ACSCs among Medicare beneficiaries have been decreasing in St. Mary's County, Maryland and the United States (Table 7). However, data indicates that rates in St. Mary's County remain higher than those observed throughout the state and nationally.

[9] https://www.cdc.gov/nchs/data/databriefs/db151.htm

[10] ACSCs include: bacterial pneumonia, dehydration, pediatric gastroenteritis, urinary tract infection, perforated appendix, low birth weight, angina, congestive heart failure, hypertension, asthma, chronic obstructive pulmonary disease, diabetes, and lower-extremity amputation among individuals with diabetes.

Table 7. Discharge rates for ambulatory-care sensitive conditions per 1,000 Medicare beneficiaries in the United States, Maryland, and St. Mary's County, 2009-2015.

	United States	Maryland	St. Mary's County
2009	68	66	103
2010	67	63	79
2011	65	60	81
2012	59	54	74
2013	54	50	-
2014	50	46	-
2015	50	47	58

Source: The Dartmouth Atlas of Health Care[11].

An additional measure of the dynamic between hospital-based care and preventive and primary care in a community is the readmission rates. In general, a hospital readmission occurs when a patient is admitted to a hospital within a specific period after being discharged from an initial hospitalization. In Medicare, this time frame is defined as 30 days, and includes hospital readmissions to any hospital, not just the one which delivered the initial inpatient care. While the percentage of Medicare 30-day all-cause readmissions has dropped by 5.0 percent in St. Mary's County between 2008 and 2012, it remains higher than what is found in Maryland as a whole and in the United States (Table 8, CMS Medicare Administrative Data).

Table 8. Medicare 30-day readmission (percent), all causes, in the United States, Maryland, and St. Mary's County, 2008–2012.

	United States	Maryland	St. Mary's County
2008	19.3%	22.5%	23.0%
2009	19.3%	22.5%	22.9%
2010	19.2%	21.8%	21.6%
2011	19.1%	21.4%	20.6%
2012	18.6%	20.6%	21.9%

Source: Center for Medicare and Medicaid Services.

[11] http://www.dartmouthatlas.org/data/region/profile.aspx?loc=22&tab=14

3.0 BEHAVIORS THAT INFLUENCE HEALTH

3.1 Nutrition

A healthy lifestyle involves many choices, including choosing a healthy diet. According to the Dietary Guidelines for Americans 2010, a healthy eating plan:

- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products
- Includes lean meats, poultry, fish, beans, eggs, and nuts
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars
- Stays within daily calorie needs

Estimates show that 56.8 percent of St. Mary's County adults report eating fruits one or more times per day (Health Indicators Warehouse). The 2016 Maryland Youth Risk Behavior Survey indicates that only about one in ten (11.3 percent) St. Mary's County high school students reported eating vegetables three or more times per day during the week prior to being surveyed. This statistic was similar to the overall percentage for Maryland high school students (12.0 percent). The 2016 Maryland Youth Risk Behavior Survey indicates that only about one in eight (13.1 percent) St. Mary's County high school students reported eating fruit or drinking 100% fruit juices three or more times per day during the week prior to being surveyed. This statistic was similar to the overall percentage for Maryland high school students (15.8 percent). Also within St. Mary's County, greater percentages of Hispanic/Latino (20.2%) and Non-Hispanic Black (19.1%) students, compared with Non-Hispanic White (14.0%) students, reported eating fruits or drinking 100% fruit juice three or more times during the week. (Maryland Department of Health, Prevention and Health Promotion Administration, 2016).

Sugar-sweetened beverages (SSBs) are the largest source of added sugar and a significant contributor of calories in the U.S. diet. SSBs also tend to have few other nutrients. In 2016, 15.5 percent of St. Mary's County high school students reported drinking a can, bottle, or glass of soda one or more times per day during the week prior to being surveyed. This statistic is slightly higher than the overall percentage for Maryland high school students (14.0 percent).

Within St. Mary's County, greater percentages of Hispanic/Latino (19.1 percent) and Non-Hispanic Black (17.3 percent) students, compared with Non-Hispanic White (15.3 percent) students reported soda consumption (Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey).

3.2 Physical Activity

For 2017 the percentage of physically active adults in St. Mary's County (49.3 percent) was lower than what was reported for Maryland in 2017 (50.4 percent) and the Maryland 2017

goal (50.4 percent). However, the percentage of physically active adults in St. Mary's County (49.3) was greater than the Healthy People 2020 target (47.9 percent). These patterns were similar for St. Mary's County's Non-Hispanic White (47.7 percent) and Non-Hispanic Black (55.0 percent) adults. Physically active is defined as engaging in at least 150 minutes of moderate physical activity or at least 75 minutes of vigorous physical activity per week (Maryland State Health Improvement Process (SHIP) website, Maryland Behavioral Risk Factor Surveillance System).

In 2016, 37 percent of St. Mary's County high school students reported being physically active for a total of at least 60 minutes per day on five or more of the seven days prior to being surveyed (Figure 11). This statistic is nearly equivalent to the overall percentage for Maryland high school students (35.2 percent). Within St. Mary's County, greater percentages of Non-Hispanic White (38.9 percent) and Hispanic/Latino (33.4 percent) students, compared with Non-Hispanic Black (30.8 percent) students, reported being physically active (Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey).

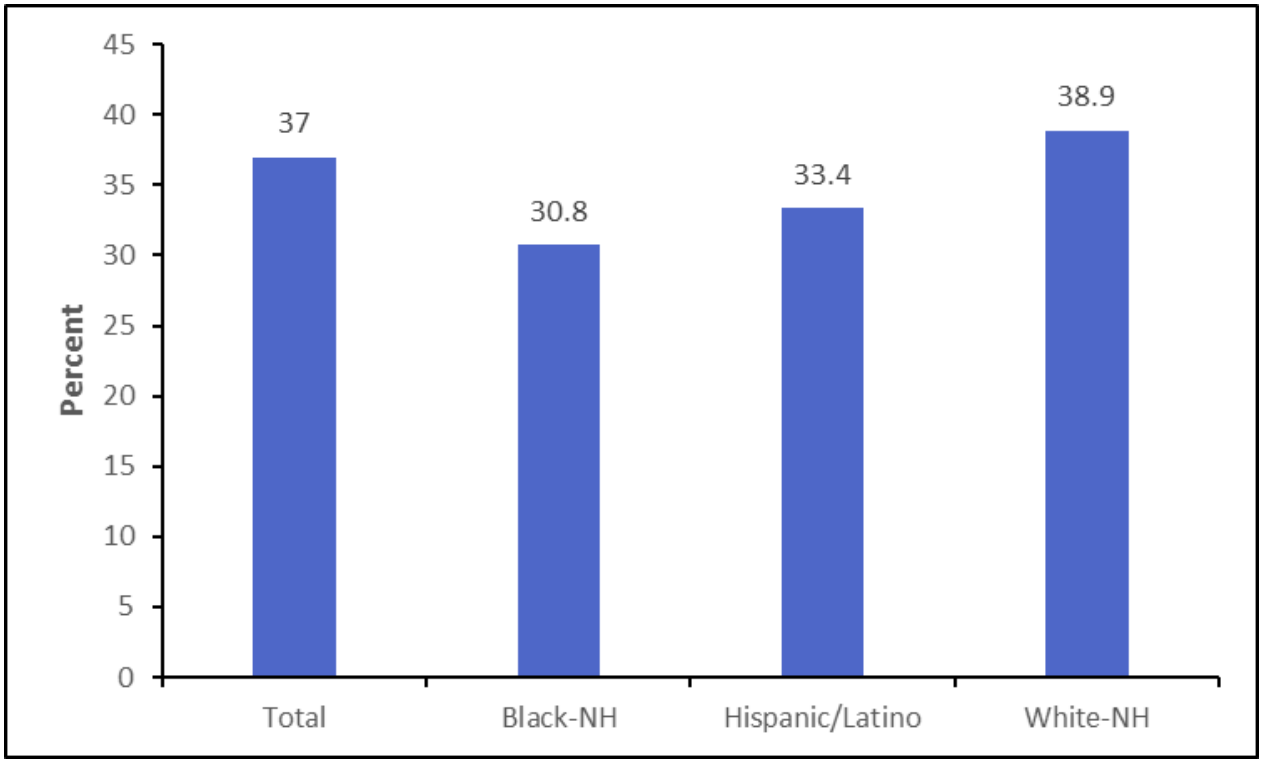


Figure 11. Percentage of St. Mary's County High School Students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days prior to being surveyed in 2016.
Source: 2016 Maryland Youth Risk Behavior Survey.

3.3 Screen Time

In 2016, 22.1 percent of St. Mary's County high school students reported watching three or more hours of television on an average school day (Figure 12). This statistic is consistent

with the overall percentage for Maryland high school students, 22.1 percent. Within St. Mary's County, significantly more Non-Hispanic Black students (36.9 percent) reported this level of television viewing. The percentage of Non-Hispanic Black students reporting this behavior was more than 1.5 times greater than that for Hispanic/Latino Students and nearly two times greater than that for Non-Hispanic White students (Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey).

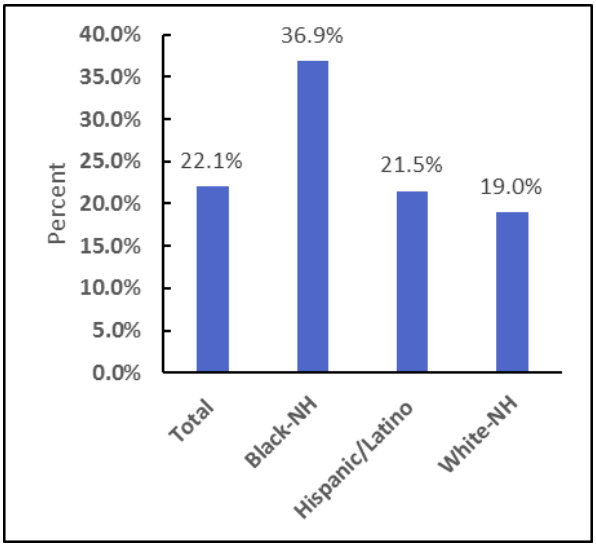


Figure 12. Television viewing, 3+ hours per school day, St. Mary's County High School Students, 2016. *Source: 2016 Maryland Youth Risk Behavior Survey.*

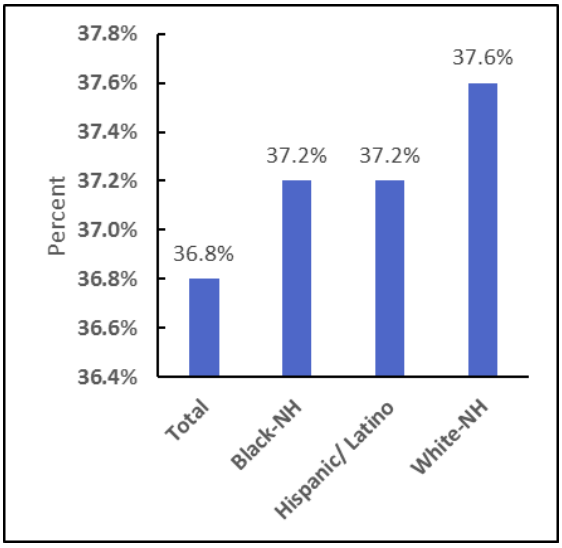


Figure 13. Gaming and non-school computer use, 3+ hours per day St. Mary's County High School Students, 2016. *Source: 2016 Maryland Youth Risk Behavior Survey.*

In 2016, 36.8 percent of St. Mary's County high school students reported three or more hours of video/computer gaming or non-school related computer use on an average school day (Figure 13). This statistic was lower than the overall percentage for Maryland high school students, 38.0 percent. Among St. Mary's County high school students, no significant racial/ethnic differences in video gaming or computer use were observed (Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey).

3.4 Weight

Healthy weight is defined as a body mass index (BMI) of 18.5kg/m^2 to 24.9 kg/m^2. Overweight is defined as a BMI at or above the 85th percentile but below the 95th percentile by age and sex. Obese is defined as a BMI at or above the 95th percentile by age and sex.

For 2017, the percentage of St. Mary's County adults who reported a healthy weight (25.9 percent) was lower than the 2017 Maryland statistic (32.4 percent), the Maryland 2017 goal (36.6 percent), and the Healthy People 2020 target (33.9 percent). Within the County, the percentage of Non-Hispanic White adults (26.1%) who reported a healthy weight was

double that for Non-Hispanic Black adults (12.4%) (Maryland State Health Improvement Process [SHIP] website, Maryland Behavioral Risk Factor Surveillance System [BRFSS].

In 2016, 14.3 percent of St. Mary's County high school students were classified as overweight (based on self-reported height and weight; Figure 14; Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey). This statistic was lower than the overall percentage for Maryland high school students (15.2 percent). Within St. Mary's County, the percentages of Non-Hispanic Black (19.5 percent) students who were classified as overweight was greater than that for Hispanic/Latino students (16.6) and Non-Hispanic White students (12.6). These differences were not statistically different from each other.

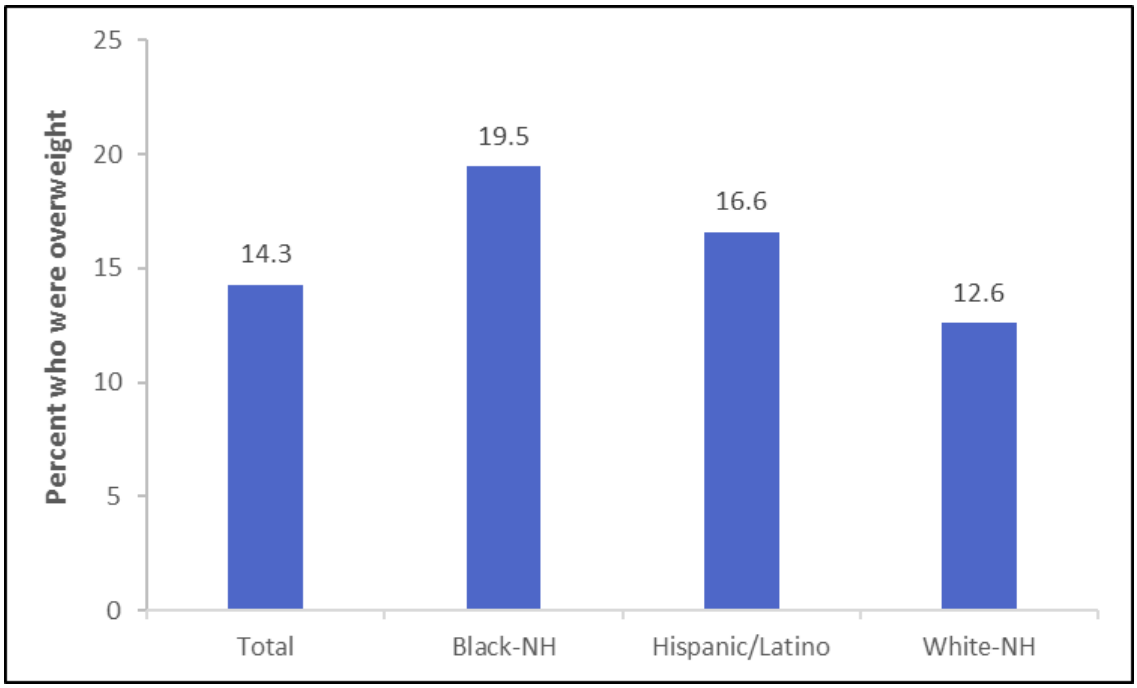


Figure 14. Percentage of St. Mary's County High School Students who were considered overweight in 2016.
Source: Maryland Department of Health, Prevention and Health Promotion Administration (PHPA), 2016 Maryland Youth Risk Behavior Survey[12].

In 2016, 12.9 percent of St. Mary's County high school students were classified as obese (based on self-reported height and weight; Figure 15; Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey). This statistic was slightly higher than the overall percentage for Maryland high school students (12.6 percent). Within St. Mary's County, the percentage of Non-Hispanic White (11.6 percent) who were classified as obese was lower but not statistically significant from that for Non-Hispanic Black (15.8 percent). However, the value for Non-Hispanic White was statistically significantly lower than for the Hispanic/Latino (20.4 percent).

[12] http://phpa.dhmh.maryland.gov/ccdpc/Reports/Pages/yrbs.aspx

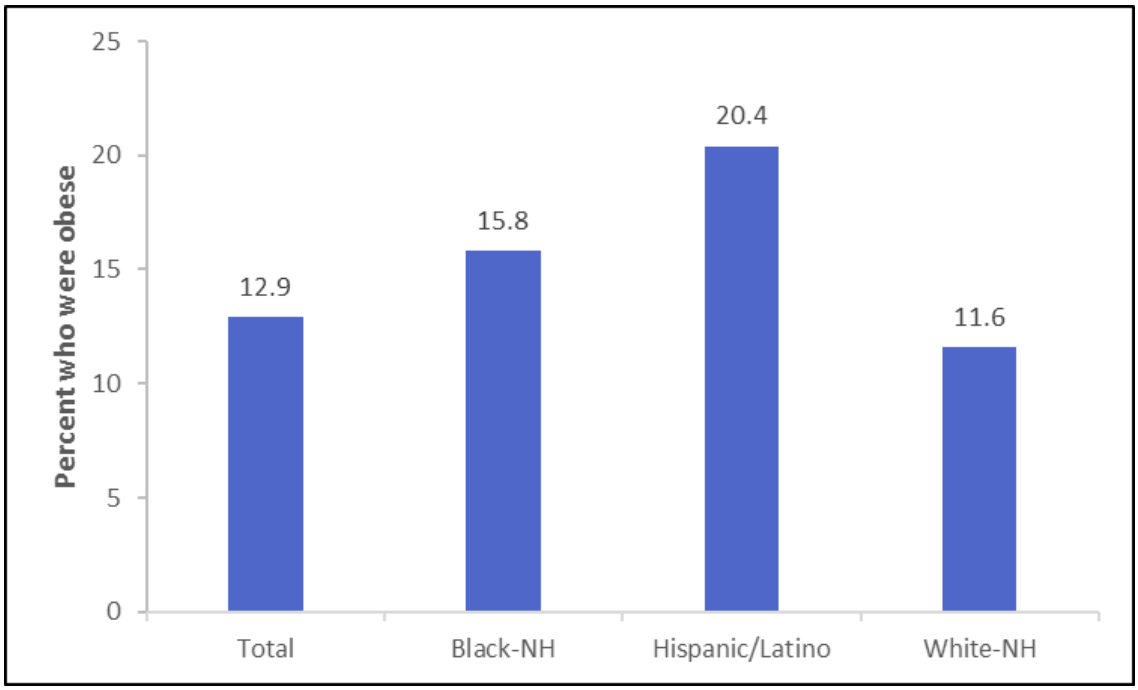


Figure 15. Percentage of St. Mary's County High School Students who were considered obese in 2016.
Source: Maryland Department of Health, PHPA, 2016 Maryland Youth Risk Behavior Survey.

3.5 Health Screenings

The five-year incidence and mortality data for the seven specific cancers that are targeted under the Maryland Cigarette Restitution Fund's Program's Cancer Prevention, Education, Screening and Treatment Program are shown in Table 9. During the five-year period of 2011-2015, the highest incidence rates among St. Mary's County residents were observed for breast (109.3 cases per 100,000 women), prostate (83.5 cases per 100,000 men), and lung/bronchus (65.8 cases per 100,000 persons) cancers. Within St. Mary's County, the five-year mortality rate was greatest for lung/bronchus cancer (52.3 deaths per 100,000 persons). This rate was slightly higher than that observed statewide (41.4 deaths per 100,000 persons).

The rate of screenings for breast, cervical and colon cancer are shown in Figure 16. For 2016, (72.2%) of female St. Mary's County residents, aged 40 years or older, reported having a mammogram in the two years prior to being surveyed. This figure is slightly lower than the statewide percentage (75.5%). In 2016, compared with the statewide statistic (73.1%), a slightly lower percentage (65.7%) of female St. Mary's County residents (aged 18 years or older) reported having a Pap test in the three years before being surveyed. In 2016, the percentage of adults (aged 50 years or older) who reported ever having had a sigmoidoscopy or colonoscopy was higher in St. Mary's County (78.9%) than for Maryland as whole (73.7%)

Table 9. Cancer Incidence and Mortality (age-adjusted to 2000 US Standard population), 2011-2015.

	INCIDENCE RATE*		MORTALITY RATE *	
Cancer Type	St. Mary's County	Maryland	St. Mary's County	Maryland
Breast	109.3	129.6	23.0	22.4
Cervical	6.5	6.3	**	2.0
Colorectal	32.6	36.4	13.3	14.2
Lung and Bronchus	65.8	56.2	52.3	41.4
Melanoma	30.2	22.3	**	2.3
Oral	14.5	10.6	**	2.3
Prostate	83.5	121.6	19.4	20.0

**Per 100,000 population (breast and cervical: per 100,000 women; prostate: per 100,000 men), **Incidence rates based on case counts of 1-15 are suppressed per MDH/Maryland Cancer Registry Data Use Policy. Mortality rates based on death counts of 0-19 are suppressed per MDH/Center for Cancer Prevention and Control Data Suppression Policy. Source: Maryland Department of Health, Center for Cancer Prevention and Control, Cigarette Restitution Fund Program, 2018 Cancer Report.*

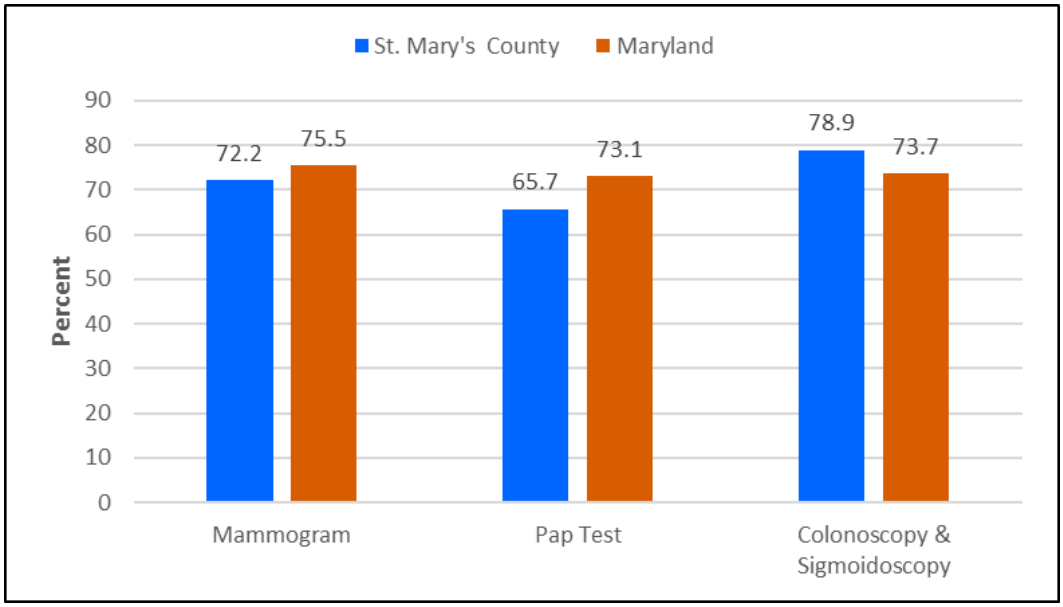


Figure 16. Cancer screenings, St. Mary's County and Maryland, 2016.
**Mammogram: Percentage of women aged 40+ years who reported having a mammogram in the past 2 years.; Pap Test: Percentage of women aged 18+ years who reported having a Pap test in the past 3 years; Colonoscopy /Sigmoidoscopy: Percentage of adults aged 50+ years who reported ever having a colonoscopy/sigmoidoscopy. Source: Maryland Behavioral Risk Factor Surveillance System (BRFSS) 2016[13].*

[13] https://ibis.health.maryland.gov/query/selection/brfss/BRFSSSelection.html

4.0 SOCIAL AND BEHAVIORAL HEALTH

4.1 Overall Social and Behavioral Health

Social and mental factors and conditions influence or reflect overall health status and quality of life, both for the individual and the community as a whole. Additionally, mental health conditions and overall psychological well-being and safety may be influenced by substance use and violence within the home and within the community. In St. Mary's County, adults indicate that they have had an average of 8.4 mentally unhealthy days in the past 30 days (Maryland State Health Improvement Process (SHIP) and Maryland Behavioral Risk Factor Surveillance System [BRFSS]). As a whole, adults in Maryland indicate that they have had an average of 9.0 mentally unhealthy days in the past 30 days, while adults in the United States reported 3.8 days.

In 2016, 10% of St. Mary's County adults indicated that they had 1 to 2 days in the past 30 days where their physical health was not good. 8.4% of St. Mary County adults indicated that they had 1 to 2 days in the past 30 days where their mental health was not good. 6.8% of St. Mary's County adults indicated that they had 1 to 2 days in the past 30 days where poor physical or mental health kept them from usual activities.

A survey of the middle school youth showed that 24.7% of the students reported feeling sad or hopeless at some time during the year and 20.7% having had suicidal thoughts (Figure 17). This trend remained the same among high school youth with 29.9% of the students reporting having been depressed sometime during the year and 19.3% having considered suicide (Figure 18).

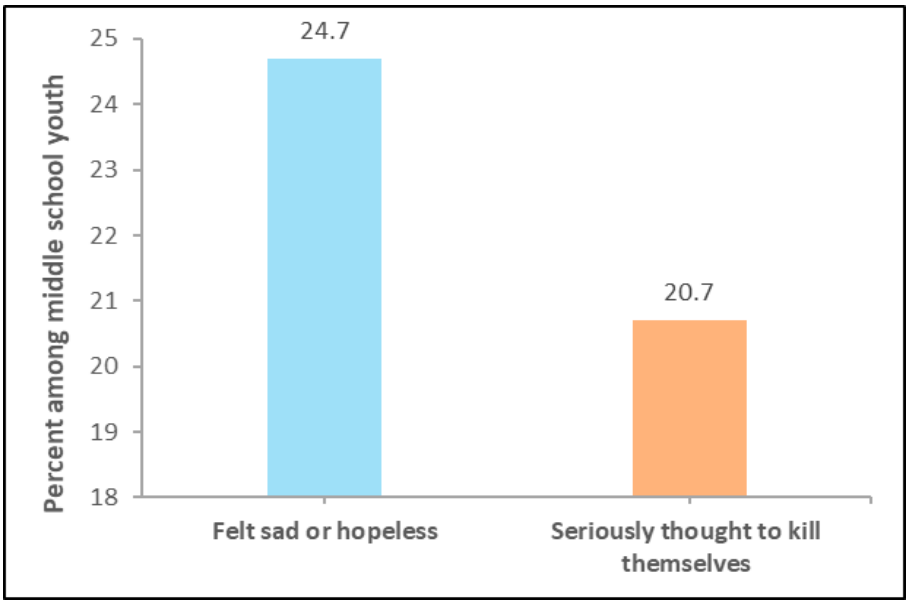


Figure 17. Depression symptoms and suicide thoughts among middle school youth in St Mary's County, 2016. *Source: Maryland Youth Risk Behavior Survey 2016.*

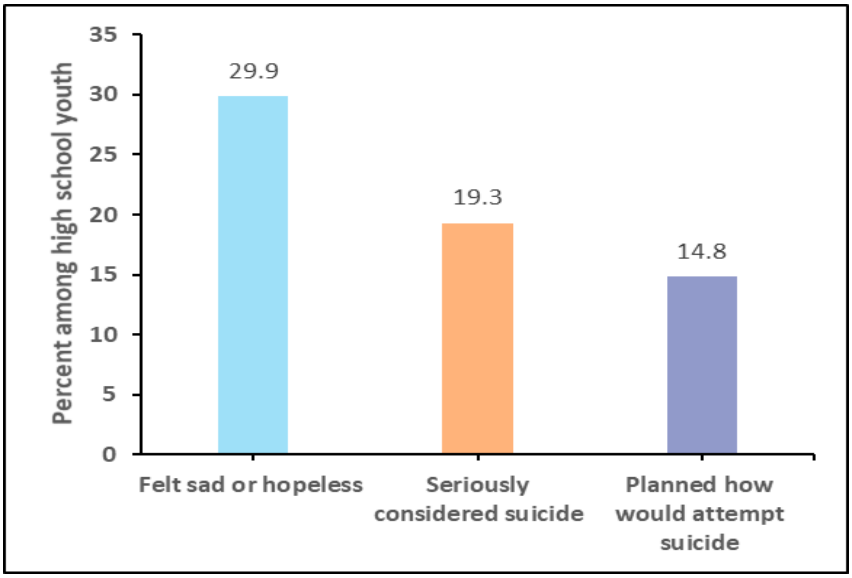


Figure 18. Depression symptoms and suicide thoughts among high school youth in St Mary's County, 2016.
Source: Maryland Youth Risk Behavior Survey 2016.

Mental health problems can place a heavy burden on the healthcare system, particularly when persons in crisis utilize emergency departments instead of other sources of care when available. Such conditions include adjustment disorders, anxiety disorders, attention deficit disorders, disruptive behavior disorders, mood disorders, personality disorders, schizophrenia and other psychotic disorders, suicide and intentional self-inflicted injury and miscellaneous mental disorders. In 2017, the rate of emergency department visits for mental health conditions in St Mary's County was 6173.1 visits per 100,000 population (Figure 19) - this was a 28.1% increase from 2010. The state of Maryland saw a higher increase (54.3%) from 2010 to 2017. This reflects a trend of increased use of the emergency department for mental health services in the County.

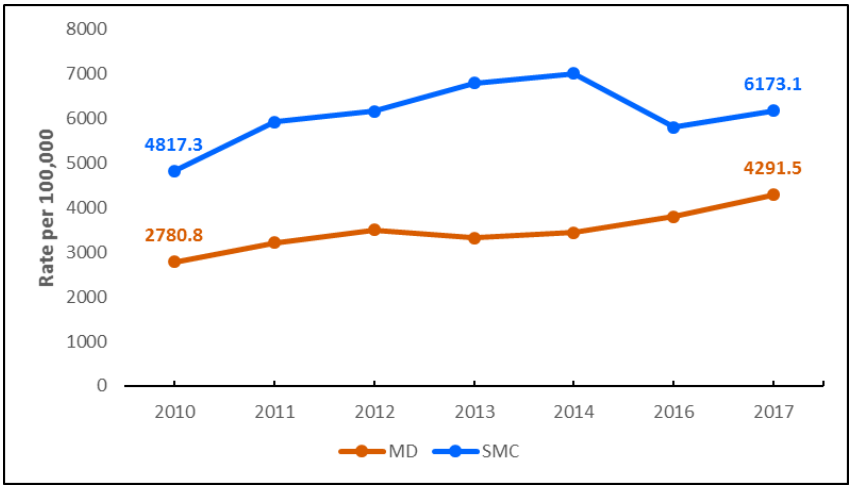


Figure 19. Emergency Department visits for mental health conditions in St Mary's County and Maryland.
Source: Maryland Health Services Cost Review Commission (HSCRC).

4.2 Substance Use

4.2.1 Substance Use in Adults

Binge drinking is defined as having 5 or more drinks (men) or 4 or more drinks (women) on one or more occasions during the previous 30 days. Binge drinking among adults in St Mary's County was higher than the average for the state in 2015 (Figure 20). A similar trend was also noted for excessive drinking (Figure 21). Excessive drinking is defined as either chronic high alcohol consumption - drinking more than two drinks per day on average (for men) or more than one drink per day on average (for women) - or binge drinking (Maryland State Health Improvement Process (SHIP).

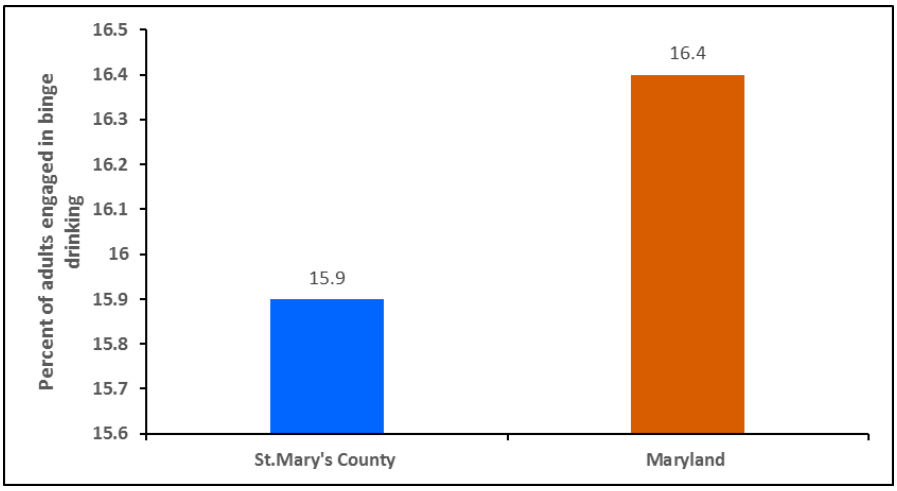


Figure 20. Percentage of adults in Maryland and St. Mary's County who engaged in binge drinking during the period 2017. *Source: 2017 Behavior Risk Factor Surveillance Survey (BRFSS).*

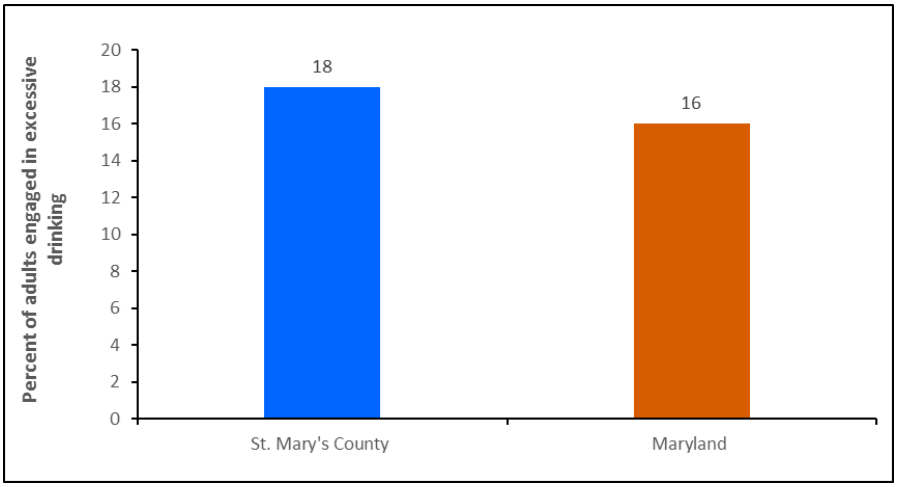


Figure 21. Percentage of adults in Maryland and St. Mary's County who engaged in excessive drinking, 2015
Source: 2017 Behavior Risk Factor Surveillance Survey (BRFSS).

In 2017, the percentage of St. Mary's County adults (19.8%) who reported current smoking (i.e., smoking cigarettes some days or every day) is greater than that observed statewide (14.2%) and exceeds the Healthy People 2020 target of 12.0% (Figure 22, Maryland State Health Improvement Process (SHIP) and Maryland Behavioral Risk Factor Surveillance System (BRFSS)).

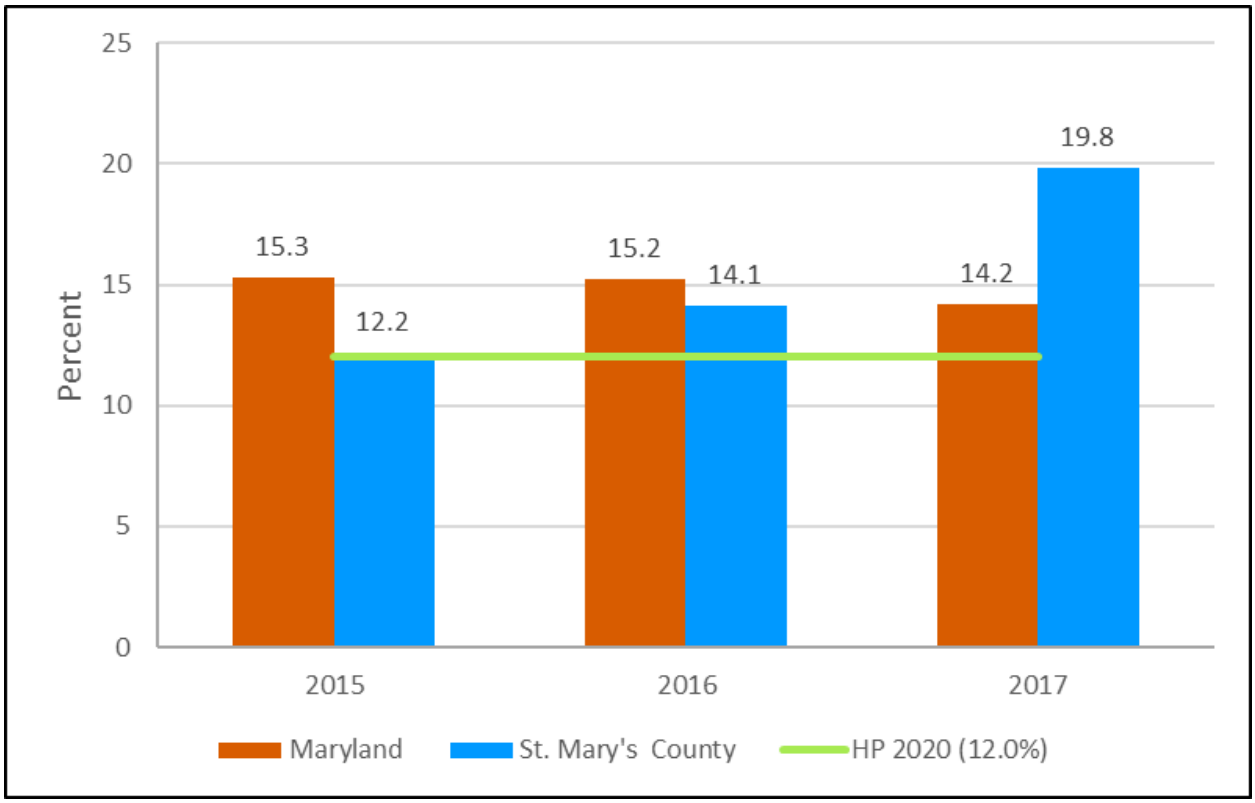


Figure 22. Current cigarette use among adults, St. Mary's County and Maryland (2015-2017).
Source: Maryland State Health Improvement Process (SHIP); Maryland Behavioral Risk Factor Surveillance System (BRFSS)[14].

Drug arrests may be used as an indicator for drug use. The total number of arrests for drug possession, within St. Mary's County, has declined by about one-fifth (18.1%), from 525 arrests in 2010 to 430 arrests in 2017 (Figure 23). Over the eight-year period of 2009-2017, possession of marijuana consistently accounted for the majority (ranging from 61.2% to 75.9%) of all drug possession arrests (Figure 24). Between 2009 and 2016, possession of opium or cocaine derivatives, as a percentage of all drug possession arrests, declined by 4% (from 16.2% in 2009 to 12.1% in 2017). However, during this same time period, possession of synthetic narcotics increased by about three-fold (from 7.4% to 20.1% of all drug possession arrests).

[14] https://ibis.health.maryland.gov/query/selection/brfss/BRFSSSelection.html

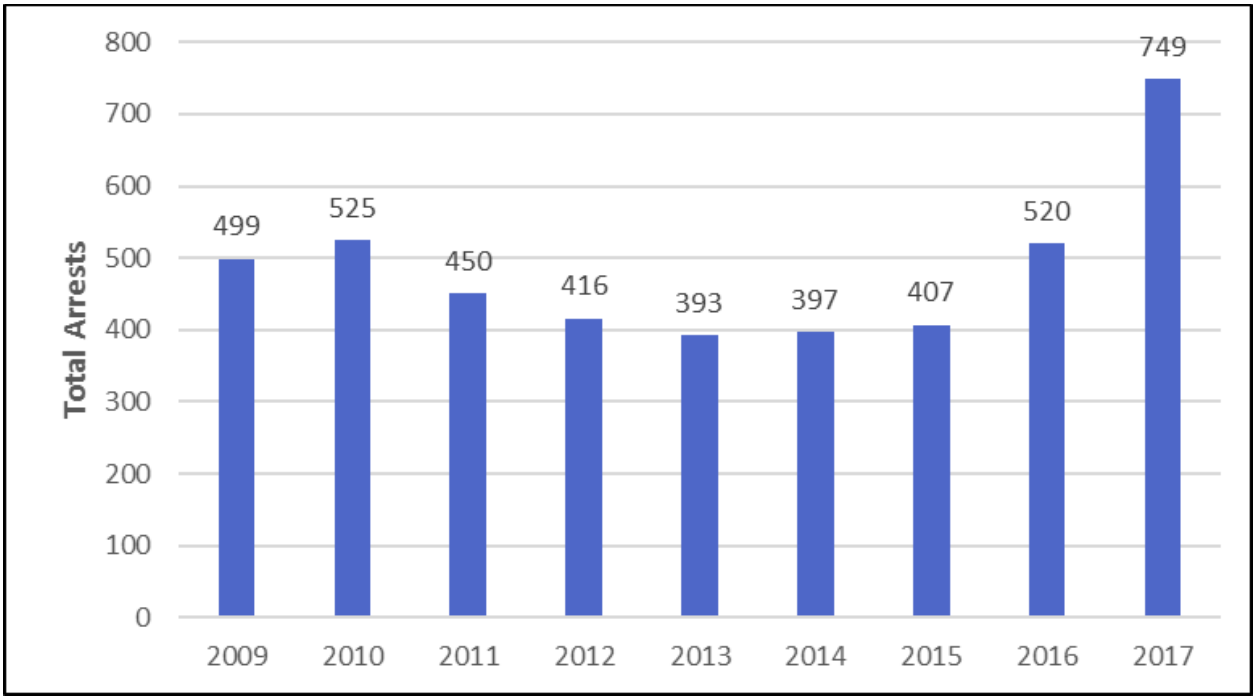


Figure 23. Drug possession arrests, St. Mary's County, 2009-2017.
Source: Maryland State Police, Crime in Maryland Report.

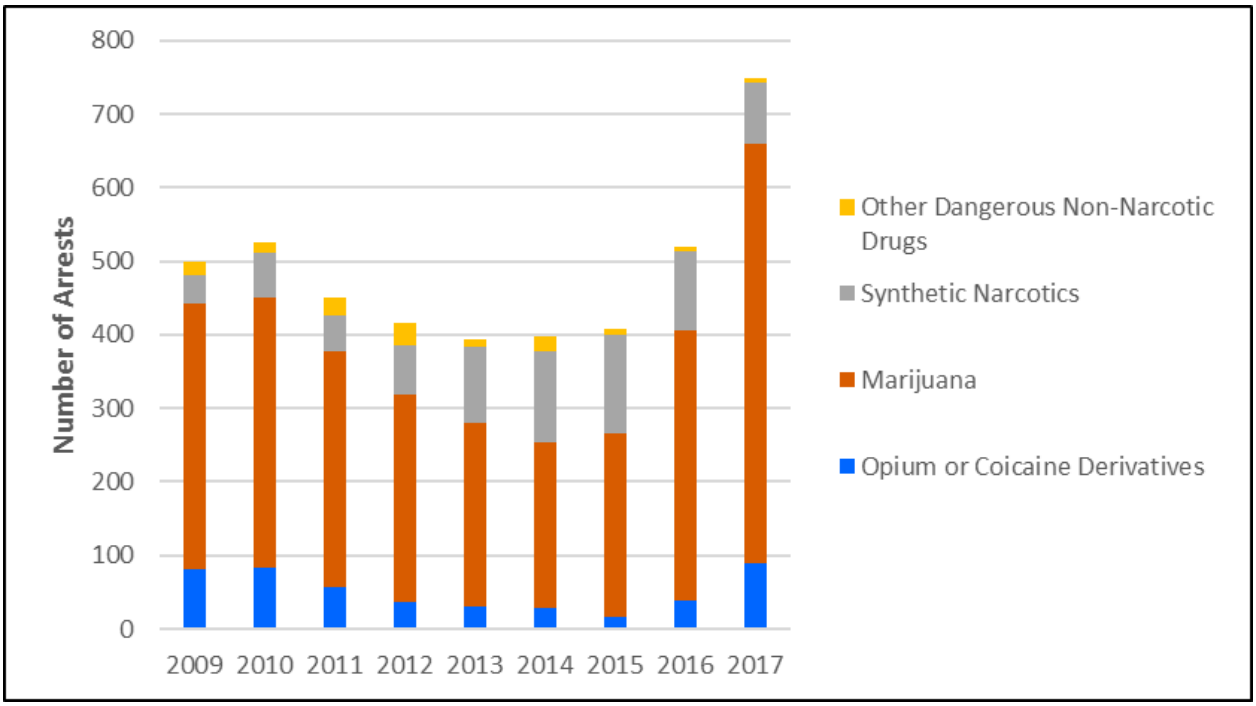


Figure 24. Drug possession arrests, by drug category, St. Mary's County, 2009-2017.
Source: Maryland State Police, Crime in Maryland Report.

4.2.2 Substance Use in Youth

Overall, slightly greater percentages of St. Mary's County high school students reported having at least one drink (32.6%) and binge drinking at least once (17.7%) during the 30 days before being surveyed than all Maryland high school students (25.5% and 13.0%, respectively, Figure 25). There were significant racial/ethnic disparities in current alcohol use among St. Mary's County high school students. Compared with Maryland Hispanic/Latino high school students (23.5%), a significantly greater percentage (30.4%) of St. Mary's County Hispanic/Latino students reported having at least one drink during the 30 days prior to the survey. Within St. Mary's County, both Hispanic/Latino (30.4%) and non-Hispanic White students (34.7%) reported a significantly higher frequency of having at least one drink and binge drinking during the past 30 days than non-Hispanic Black students (24.5%).

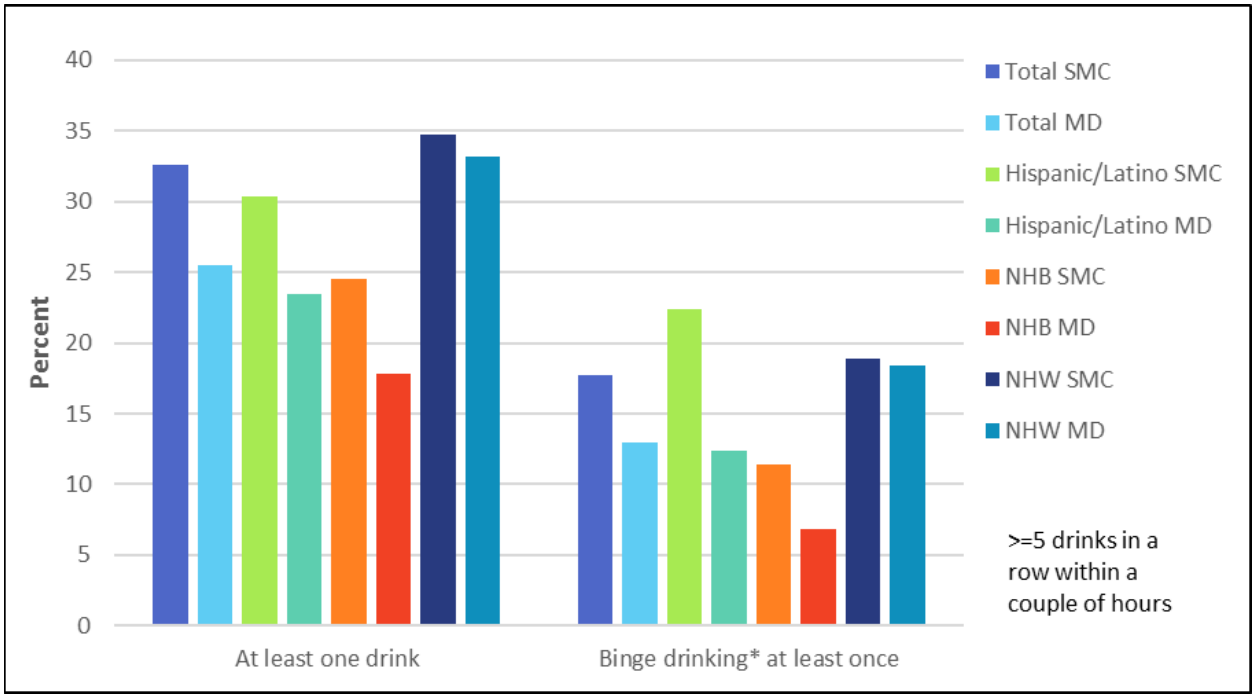


Figure 25. Current (during past 30 days) alcohol use among youth, St. Mary's County and Maryland, 2016.
Source: Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey.

Overall, the percentage of St. Mary's County high school students reporting current use (i.e., during the 30 days prior to the survey) of any tobacco products is similar to that for Maryland high school students as a whole (St. Mary's County: 27.0%, Maryland: 21.6%, Figure 26). There were significant racial/ethnic disparities in current tobacco use among St. Mary's County high school students. The percentage of St. Mary's County Hispanic/Latino students (33.5%) reporting current tobacco use is significantly greater than that for

Maryland Hispanic/Latino students (23.9%) and those for other racial/ethnic groups of students within St. Mary's County (non-Hispanic Black: 31.4%, non-Hispanic White: 24.9%).

The reported current marijuana use (i.e., during the 30 days before being surveyed) is slightly lower among St. Mary's County (18.0%) than Maryland (18.4%) high school students (Figure 27). Within St. Mary's County, the percentage of Hispanic/Latino students (23.8%) reporting current marijuana use is significantly greater than that for non-Hispanic White students (16.4%).

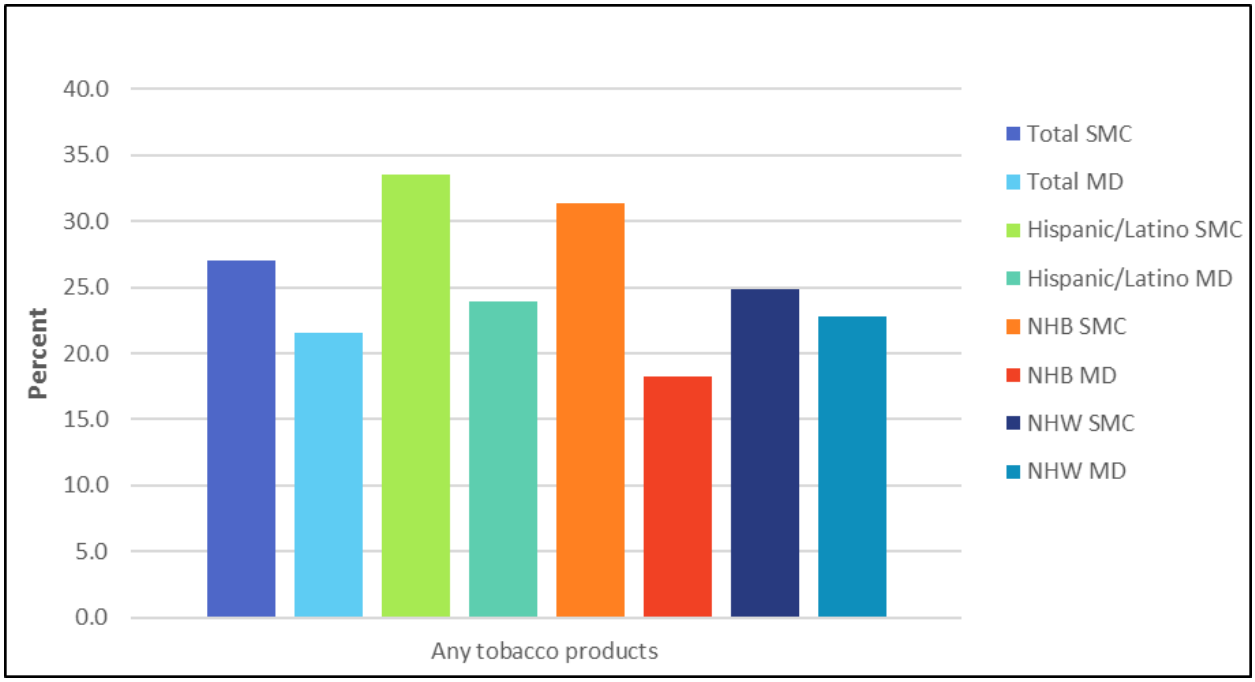


Figure 26. Current (during past 30 days) tobacco use among youth, St. Mary's County and Maryland, 2016. *Source: Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey.*

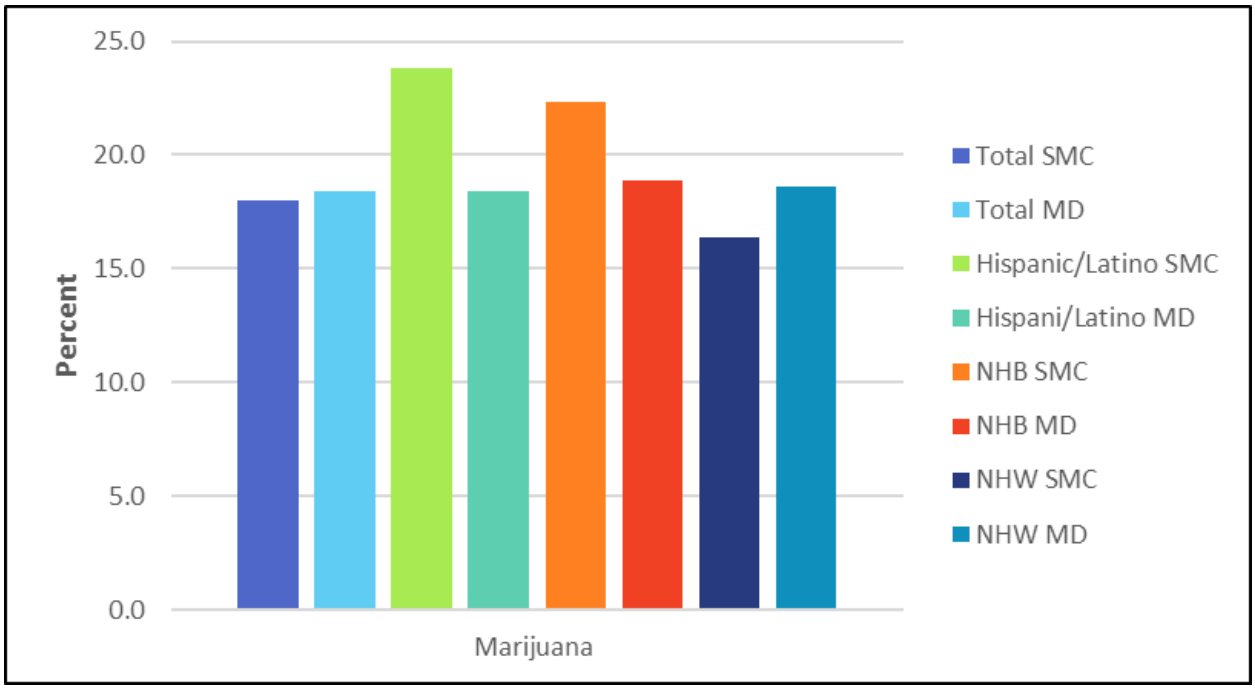


Figure 27. Current (during past 30 days) marijuana use among youth, St. Mary's County and Maryland, 2016. *Source: Maryland Department of Health, Prevention and Health Promotion Administration, 2016 Maryland Youth Risk Behavior Survey.*

The percentages of St. Mary's County high school students reporting history (i.e., one or more times during their lives) of cocaine, heroin, methamphetamine, or ecstasy use are similar to those for high school students throughout Maryland (Figure 28). However, substantially greater percentages (by two- to six-fold) of St. Mary's County Hispanic/Latino high school students reported history of cocaine (17.5%), heroin (12.5%), methamphetamine (11.2%), or ecstasy (13.4%) use than Hispanic/Latino students statewide and other racial/ethnic groups of students within St. Mary's County.

There are no overall significant differences in reported past use (i.e., one or more times during their lives) of inhaled products between St. Mary's County and Maryland high school students (Figure 29). However, greater percentages of Hispanic/Latino (18.8%) and non-Hispanic Black (10.0%) high school students reported past use of inhaled products, compared to non-Hispanic White students (7.4%), within St. Mary's County.

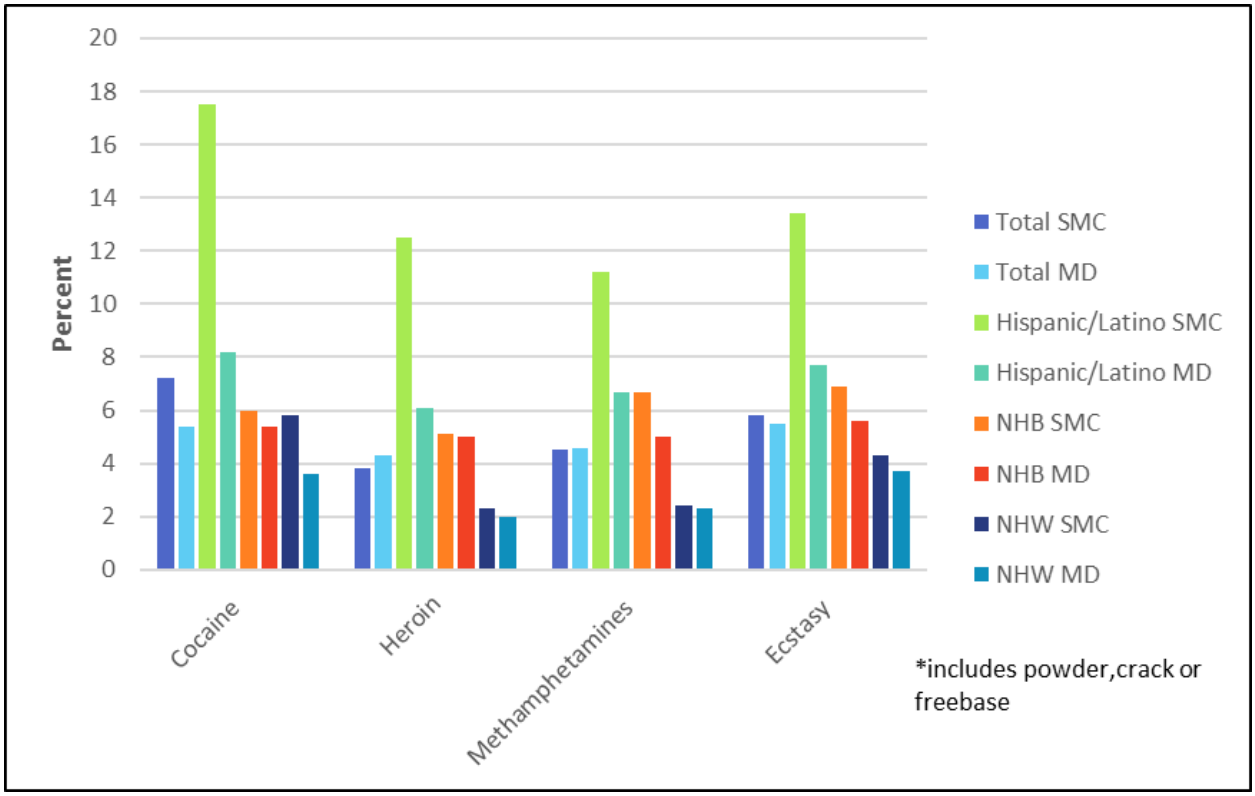


Figure 28. History of illegal drug use, 1or more times during life, among youth, St. Mary's County and Maryland, 2016. *Source: 2016 Maryland Youth Risk Behavior Survey.*

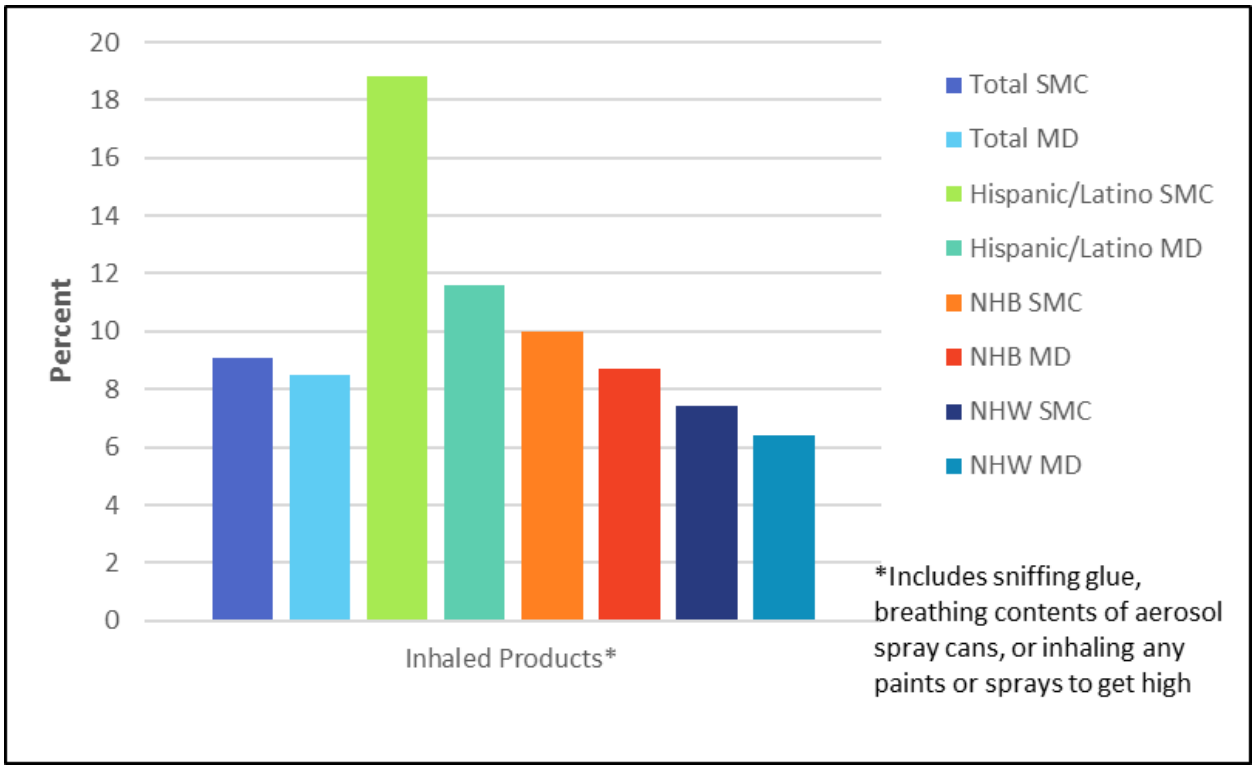


Figure 29. History of inhaled product use, 1 or more times during life, youth, St. Mary's County and Maryland, 2014. *Source: 2014 Maryland Youth Risk Behavior Survey.*

Overall, there are no significant differences in reported history of steroid and prescription drug use between St. Mary's County and Maryland high school students (Figure 30). However, St. Mary's County Hispanic/Latino high school students more frequently reported past use of steroids or prescription drugs. The percentages of St. Mary's County Hispanic/Latino high school students reporting history of steroid (10.2%) and prescription drug (25.1%) use were higher than Hispanic/Latino students statewide (by nearly two-fold) as well as other racial/ethnic groups of students within St. Mary's County (by approximately two- to five-fold).

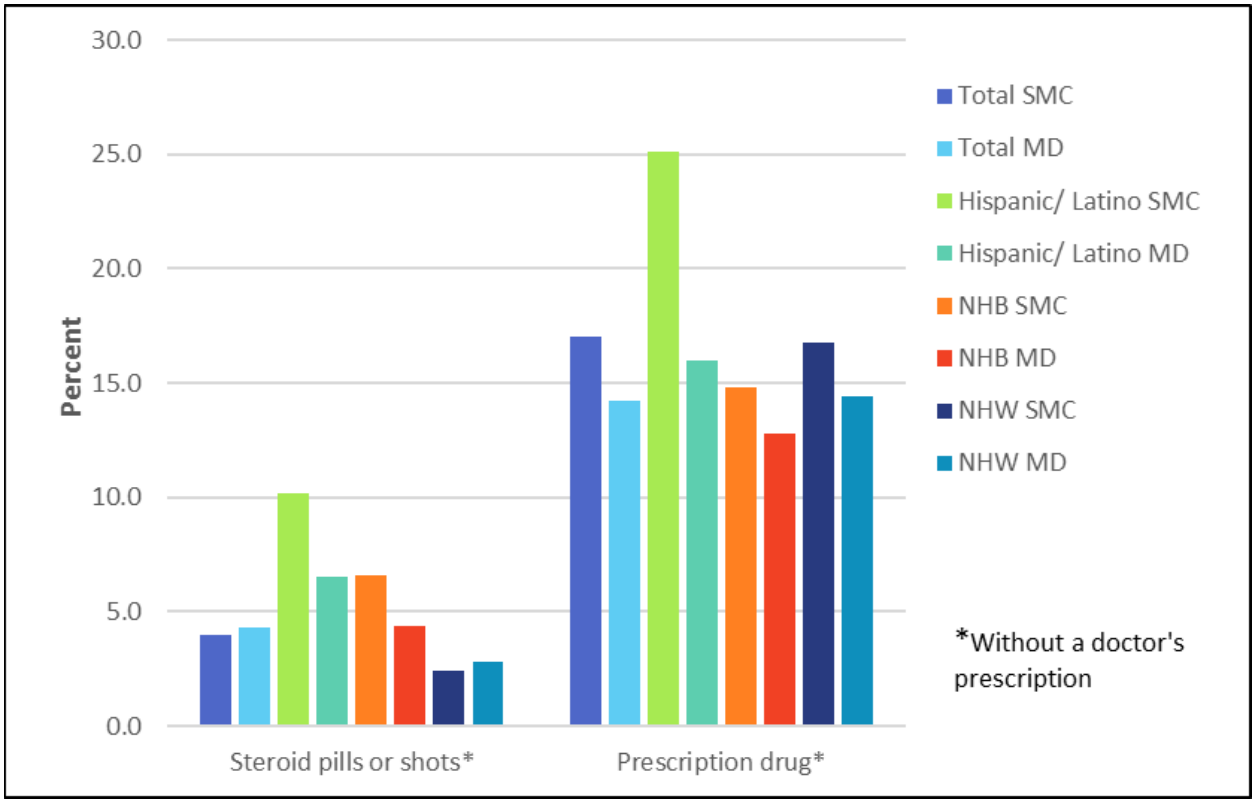


Figure 30. History of steroid and prescription drug use, 1 or more times during life, among youth, St. Mary's County and Maryland, 2014. *Source: 2014 Maryland Youth Risk Behavior Survey.*

4.3 Domestic Violence

Domestic violence contributes greatly to the morbidity and mortality of St. Mary's County residents. Criminal justice data indicate that up to 40 percent of violent juvenile offenders witnessed domestic violence at home, and 63 percent of homeless women and children have been victims of intimate partner violence (Maryland Uniform Crime Reporting Program). Data from 2017 indicates 768.6 reported domestic violence crimes per 100,000 population in St. Mary's County. For the same period, Maryland reported 537.1 cases of domestic violence crimes per 100,000 population (Maryland Uniform Crime Reporting Program, 2017 Report).

4.4 Child Abuse and Neglect

Child abuse or neglect can result in physical harm, developmental delays, behavioral problems, or death. Information from the Maryland Department of Human Services was used to develop a child maltreatment rate, which indicates the rate of children who are maltreated (reported cases of physical and sexual abuse, mental injury-abuse, neglect, or mental injury-neglect). In 2017, the maltreatment rate for St. Mary's County was 4.2 per 1,000 population under the age of 18, while the rate for Maryland was 7.1 (Maryland Department of Human Services, 2017).

4.5 Behavioral Health and Overall Mortality

Mental health can contribute significantly to mortality. Homicides, suicides and death induced by alcohol and drugs can all result from mental health conditions. While these mortality rates will be placed in a larger context in the overall mortality section of this report, the following table summarizes death rates due to homicide, suicide, alcohol and drugs (Table 10). Whereas, compared to the state of Maryland, the rate (per 100,000 population) of alcohol-induced deaths was higher in St Mary's County (7.5 versus 4.9). The suicide rate (per 100,000 population) was higher in St. Mary's County than the state of Maryland (10.6 versus 9.4). The rate of drug-induced deaths was lower in St. Mary's County as compared to the state of Maryland (20.8 versus 25.0).

Table 10. Age-adjusted mortality per 100,000 population from selected causes, 2013–2017: United States, Maryland and St. Mary's County.

	United States	Maryland	St. Mary's County
Homicide	5.7	8.9	*
Suicide	13.3	9.4	10.6
Alcohol-induced	9.0	4.9	7.5
Drug-induced(excluding alcohol)	18.2	25.0	20.8

**Unstable rate. Source: CDC Wonder[15].*

Mental health disorders and/or substance use have been found in the great majority of people who have died by suicide. The trend, overtime, for deaths due to suicide is shown in Figure 31. Suicide rates in St Mary's County have consistently remained higher than the average in Maryland.

[15] https://wonder.cdc.gov

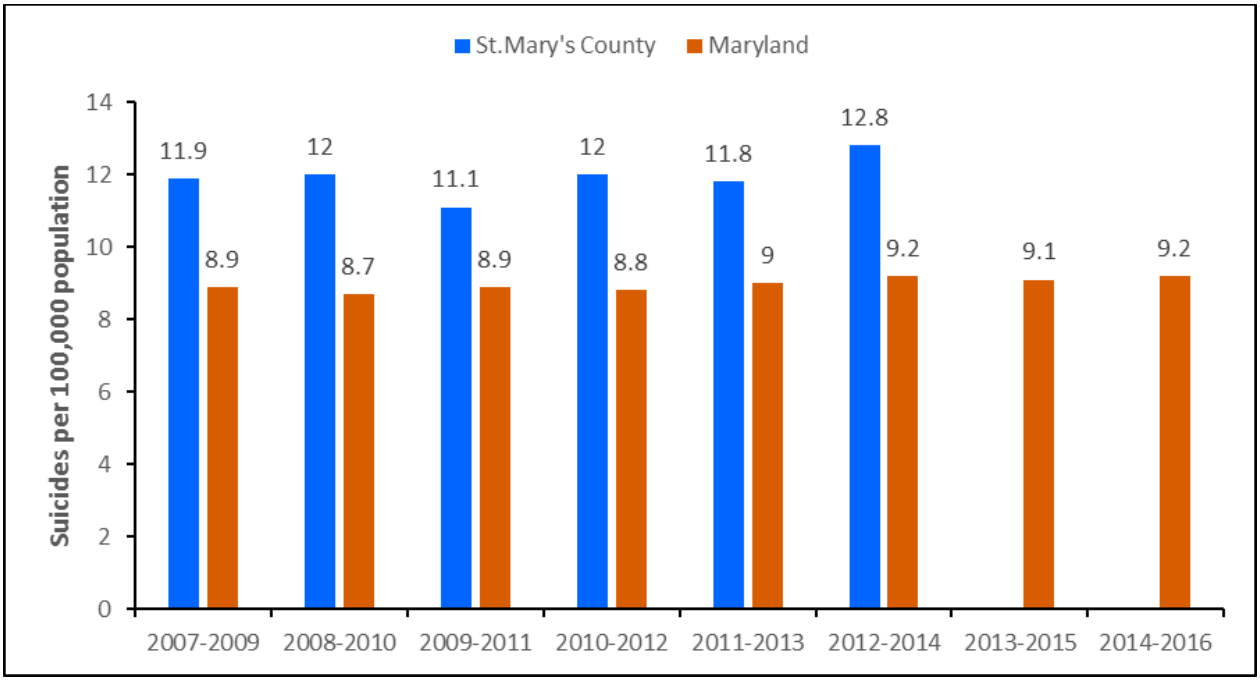


Figure 31. Suicide rates (per 100, 000 population) in St Mary's County and Maryland, 2007-2016. **St. Mary's County data for 2013-2015 and 2014-2016 unavailable. Source: Maryland Vital Statistics Administration.*

5.0 MATERNAL AND CHILD HEALTH

5.1 Prenatal Care

Overall, within St. Mary's County, there has been a general downward trend in the percentage of women receiving late or no prenatal care, from 7.8 percent in 2010 to 7.5 percent in 2017 (Figure 32). However, the highest percentages of late or no prenatal care were observed among Hispanic females in St. Mary's County. For 2017, the percentage of Hispanic women (10.1 percent) receiving late or no prenatal care was higher than the figures among non-Hispanic White (NHW, 7.4 percent) and non-Hispanic Black (NHB, 6.9 percent) women.

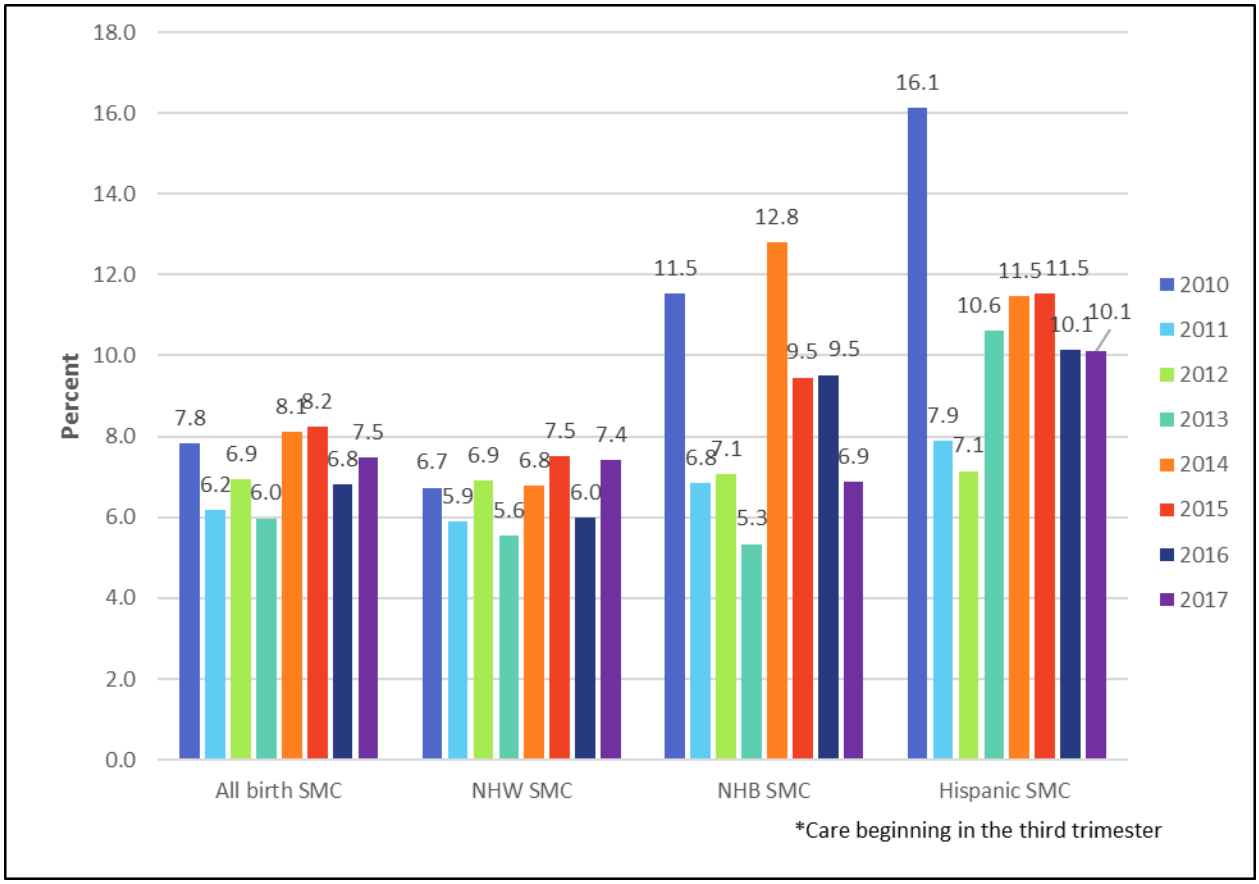


Figure 32. Births to women receiving late (care beginning in third trimester) or no prenatal care, St. Mary's County, 2010-2017. **All Births: For 2010, includes races categorized as 'other.' For 2011-2013, includes races categorized as 'unknown' or 'other.' *Hispanic: Includes all births to mothers of Hispanic origin of any race. Source: Maryland Department of Health, Vital Statistics Administration Maryland Vital Statistics Annual Report.*

5.2 Births

There were, in 2017, 1351 live births to residents of St. Mary's County. Within the County, birth rates have decreased from 14.4 births per 1,000 population in 2009 to 12.0 births per 1,000 population in 2017 (Figure 33). In Maryland, the birth rate has dropped from 13.2 births per 1,000 population in 2009 to 11.8 births per 1,000 population in 2017. General decline of birth rates have been observed across racial/ethnic groups. In St. Mary's County, the most pronounced decrease (20.5 percent) occurred among Hispanic residents, from 19.0 births per 1,000 population in 2009 to 15.1 births per 1,000 population in 2017. Despite this sharp decline, over the five-year period of 2009–2017, the highest birth rates in St. Mary's County were observed among Hispanic residents.

Compared with Maryland as a whole, birth rates among St. Mary's County non-Hispanic white (NHW) residents (11.5 births per 1,000 population) and non-Hispanic Black (NHB) residents (12.6) were higher than those observed for these groups statewide (9.7 and 12.4 births per 1,000 population respectively). By contrast, birth rates among County Hispanic

residents (15.1 births per 1,000 population) were lower than those observed for Hispanic residents statewide (19.9 births per 1,000 population).

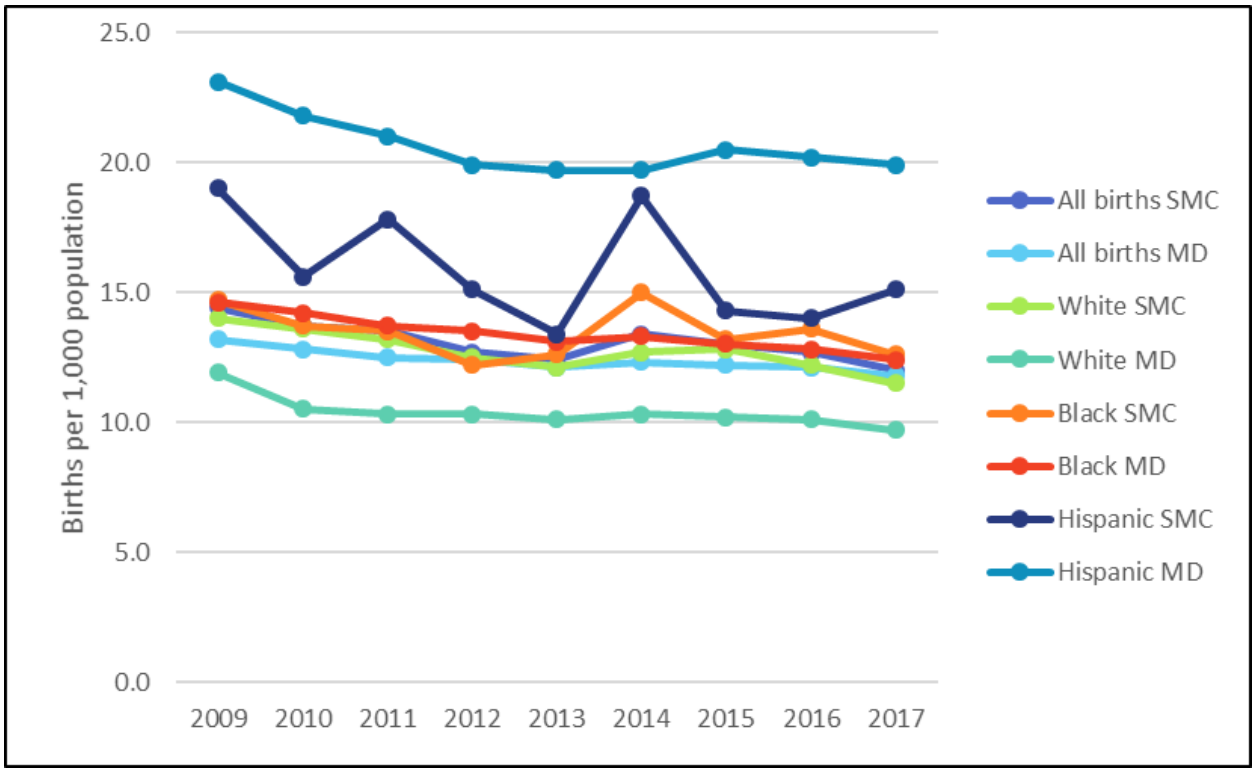


Figure 33. Birth rates, St. Mary's County and Maryland, 2009-2017. **All Births: For 2009 and 2010, includes races categorized as 'other.' For 2011-2013, includes races categorized as 'unknown' or 'other.' Hispanic: Includes all persons of Hispanic origin of any race. Source: Maryland Department of Health, Vital Statistics Administration Maryland Vital Statistics Annual Report.*

Within St. Mary's County, there has been a downward trend in overall birth rates among females aged 15-19 years (Figure 34). During 2010-2017 these rates fell by 63.9 percent, from 24.9 live births per 1,000 females aged 15-19 years in 2010 to 9.0 live births in 2017. Similar general declines in teen birth rates have been observed across racial/ethnic groups, with the most pronounced decrease (55.0 percent) occurring among non-Hispanic Black (NHB) teens, with a drop from 49.1 live births per 1,000 females aged 15-19 years in 2010 to 22.1 live births in 2017. In 2017, the Hispanic black teen birth rate, 27.5 live births per 1,000 females aged 15-19 years was the highest compared to all other races.

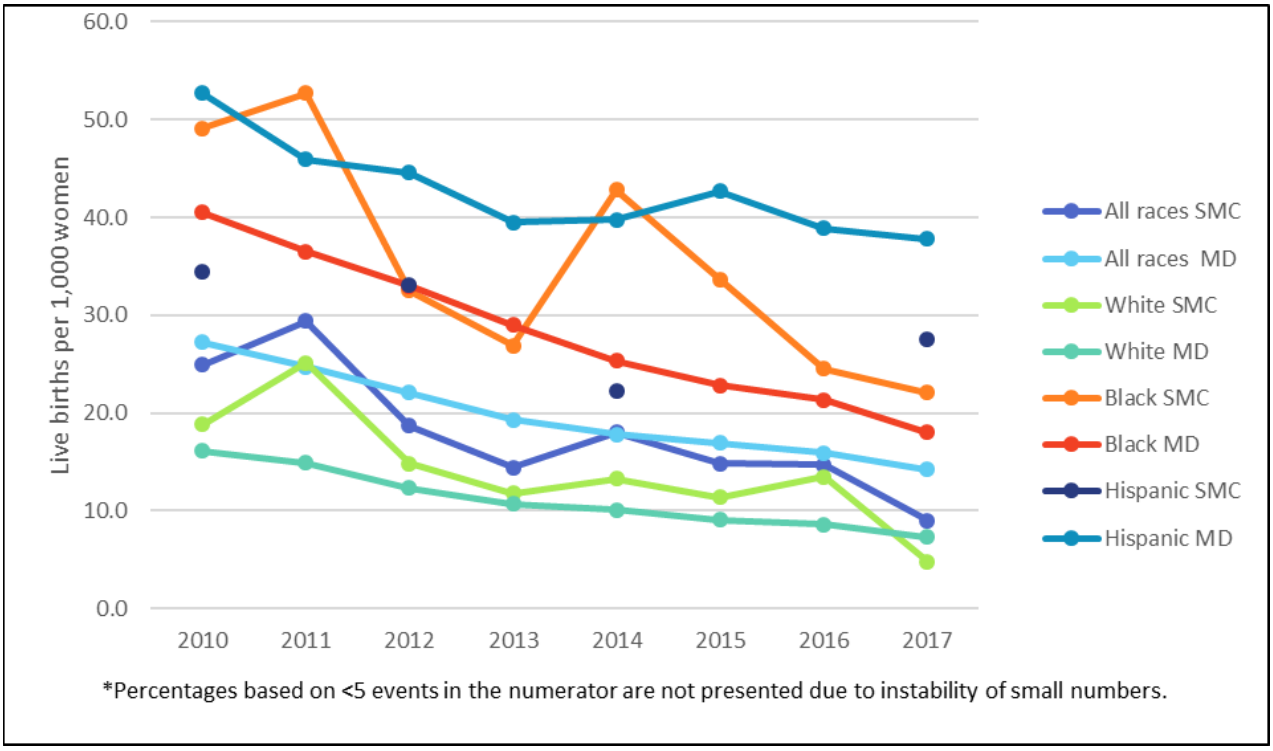


Figure 34. Birth rates for females aged 15-19 Years, St. Mary's County and Maryland, 2010-2017
Source: Maryland Department of Health, Vital Statistics Administration Maryland Vital Statistics Annual Report.

5.3 Low Birthweight

Low birthweight (less than 2,500 grams or 5.5 pounds) is a critical factor influencing infant mortality. Those who survive are at increased risk for health problems ranging from neurodevelopmental disabilities to respiratory disorders. Over the nine-year period from 2009–2017, the overall percentage of low birth weight infants in St. Mary's County has remained relatively stable and lower than that observed statewide (Figure 35). In 2017, low birth weight infants comprised 6.4 percent of all St. Mary's County births, compared with 8.9 percent statewide. Within the County, the percentage of low birth weight infants has been highest among non-Hispanic black (NHB) births. In 2017, the percentage of low birth weight infants was more than two times greater among non-Hispanic black births (11.5 percent) than non-Hispanic white (NHW) births (5.6 percent). Furthermore, there has been an upward trend in the percentage of non-Hispanic black low birth weight infants, from 8.3 percent in 2010 to 11.5 percent in 2017.

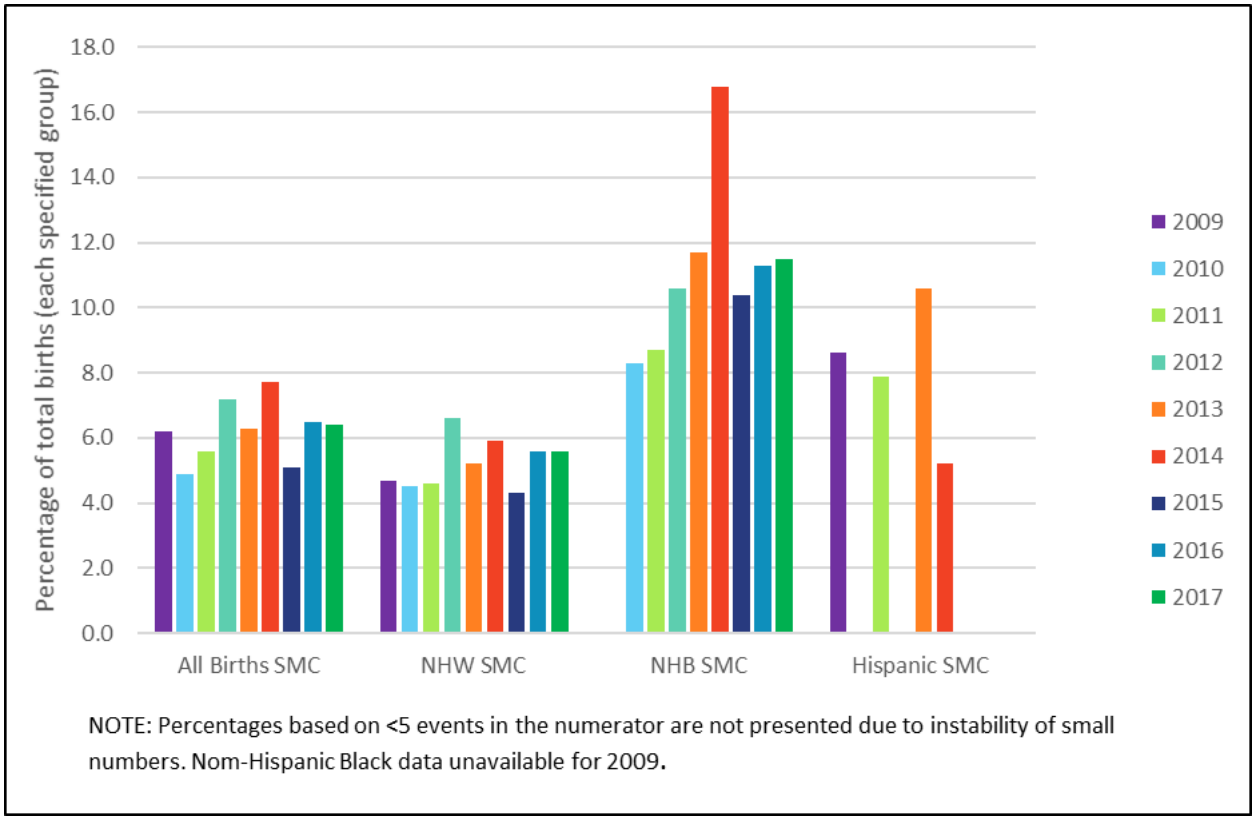


Figure 35. Low birth weight infants (weighing 2499 g or less), St. Mary's County, 2009-2017

**All Births: For 2009 and 2010, includes races categorized as 'other.' For 2011-2013, includes races categorized as 'unknown' or 'other.' Hispanic: Includes all births to mothers of Hispanic origin of any race. Source: Maryland Department of Health, Vital Statistics Administration Maryland Vital Statistics Annual Report.*

5.4 Infant Mortality

Over the past decade, the average infant mortality rate in Maryland has declined by 6.5 percent (Table 11). An increase has been observed in St. Mary's County. Between the monitoring periods 2008–2012 and 2013–2017, the County's average infant mortality rate increased by 22.2 percent, from 5.7 infant deaths per 1,000 live births to 6.9 infant deaths per 1,000 live births.

Table 11. Infant mortality, St. Mary's County and Maryland, 2008-2012 and 2013-2017.

	Number of Infant Deaths		Average Infant Mortality Rate*		Percent Change**
	2008 -2012	2013-2017	2008-2012	2013-2017	
St. Mary's County	41	49	5.7	6.9	22.2***
Maryland	*2,605*	*2,381*	*7.0*	*6.5*	*-6.5****

**Per 1,000 live births. **Percent change is based on the exact rates, not the rounded rates presented here. ***Rates for 2008–2012 and 2013–2017 differ significantly (p<0.05). Source: Maryland Department of Health, Vital Statistics Administration Infant Mortality in Maryland, 2017.*

6.0 INFECTIOUS DISEASES

In 2017, leading notifiable conditions for St. Mary's County included chlamydia, animal bites, gonorrhea, Lyme disease, streptococcal invasive disease (Group B), and salmonellosis (Table 12). The highest rates were reported for chlamydia (358.6 cases per 100,000 population) and animal bites (338.2 cases per 100,000 population). County rates for animal bites and Lyme disease were both 1.9 times greater than the corresponding statewide rates. Of note, County rates for chlamydia and gonorrhea were substantially lower (by approximately one-half) than those observed statewide. Additional case counts and rates (St. Mary's County and Maryland), for selected notifiable conditions, over the nine-year period of 2009-2017 are presented in Appendix 3.

Table 12. Leading notifiable conditions, St. Mary's County, 2017.

Condition	St. Mary's County		Maryland	
	Number of Cases	Rate (per 100,000)	Number of Cases	Rate (per 100,000)
Chlamydia	404	358.6	33,416	552.1
Animal Bites	381	338.2	10,941	180.8
Gonorrhea	95	84.3	10,978	181.4
Lyme Disease	67	59.5	1,887	31.2
Streptococcal Invasive Disease, Group B	11	9.8	616	10.2
Salmonellosis*	15	13.3	894	14.8

**Other than typhoid fever. Source: Maryland Department of Health. Prevention & Health Promotion Administration. Infectious Disease Bureau. Office of Infectious Disease Epidemiology & Outbreak Response. Center for Surveillance, Infection Prevention & Outbreak Response.*

6.1 Childhood Vaccines

High percentages (about 98%) of St. Mary's County kindergarteners and 1st through 12th graders have received the recommended vaccine series. Appendix 4 contains more detailed childhood immunization coverage data, for St. Mary's County and Maryland, by vaccine type. In general, over the nine-year period of 2009-2017, the percentages of St. Mary's County students (kindergarteners and 1st through 12th graders) with medical and religious exemptions to vaccination were below 1.0 %. From 2009 to 2017, the percentages of kindergarteners with medical and religious exemptions decreased to 0.4% and 0.7% respectively. In 2017, the percentage of County kindergarteners with medical exemptions to vaccination (0.4%) was 1.5 times lower than that observed for kindergarteners statewide (0.6%, Figure 36). In 2017, the percentage of County kindergarteners with religious

exemptions to vaccination (0.7%) was less than that observed for kindergarteners statewide (0.9%, Figure 37).

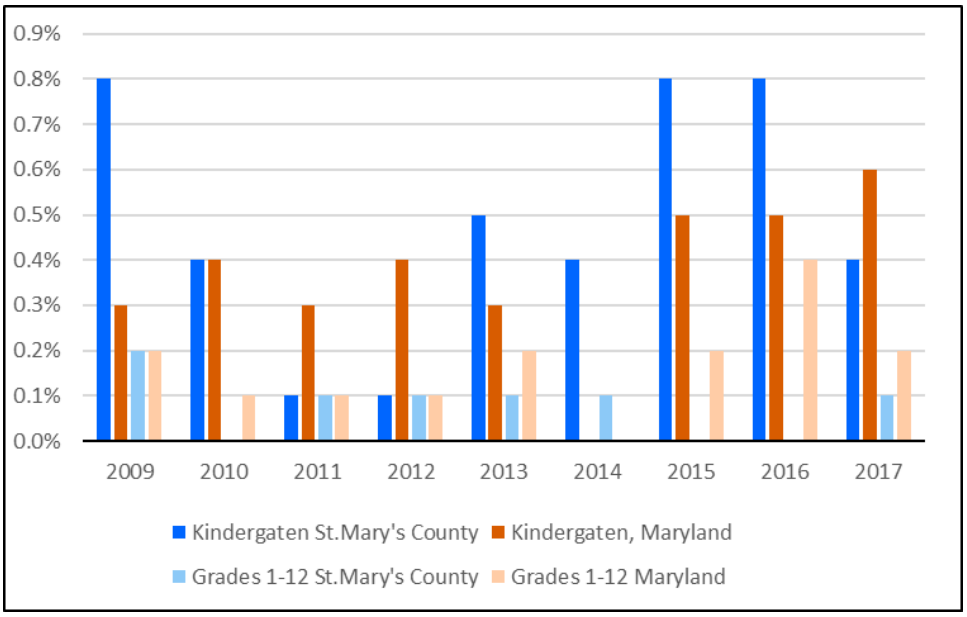


Figure 36. Students with medical exemptions to vaccination, St. Mary's County and Maryland, 2009-2017. **Data provided by private and public schools that respond to a MDH annual survey. *Includes data for all Kindergarten students. **Includes data for new 1st through 12th grade students only. Source: Maryland Department of Health, Center for Immunization*

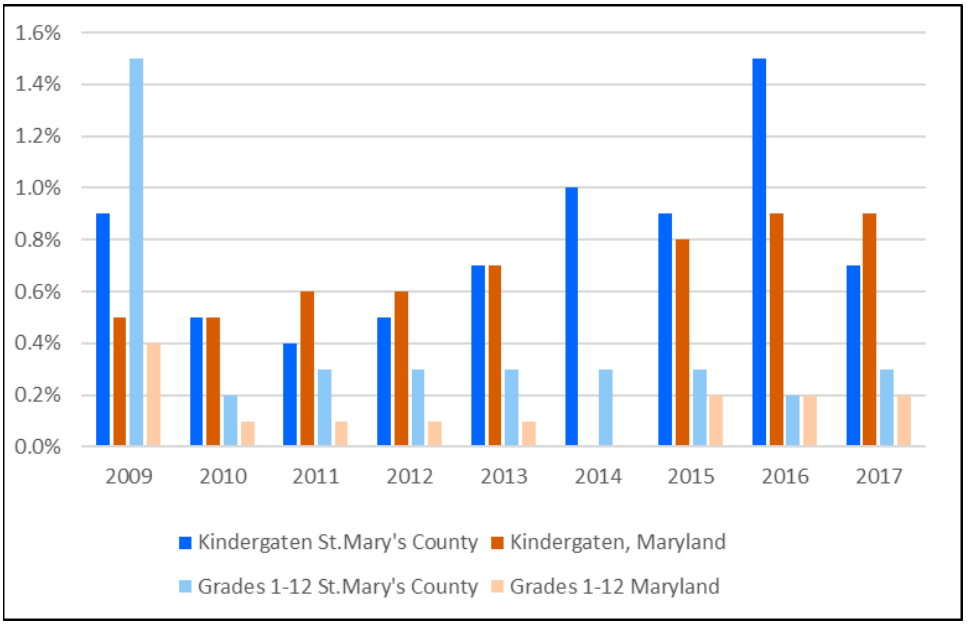


Figure 37. Students with religious exemptions to vaccination, St. Mary's County and Maryland, 2009-2017. **Data provided by private and public schools that respond to a MDH annual survey. *Includes data for all Kindergarten students. **Includes data for new 1st through 12th grade students only. Source: Maryland Department of Health, Center for Immunization*

6.2 Human Immunodeficiency Virus (HIV) Disease

At the end of 2018, there were a total of 167 adults and adolescents living with HIV in St. Mary's County. This figure represents a County rate of 179.7 living HIV cases per 100,000 population, a rate which was nearly four-fold lower than that observed statewide (611.7 cases per 100,000, Figure 38).

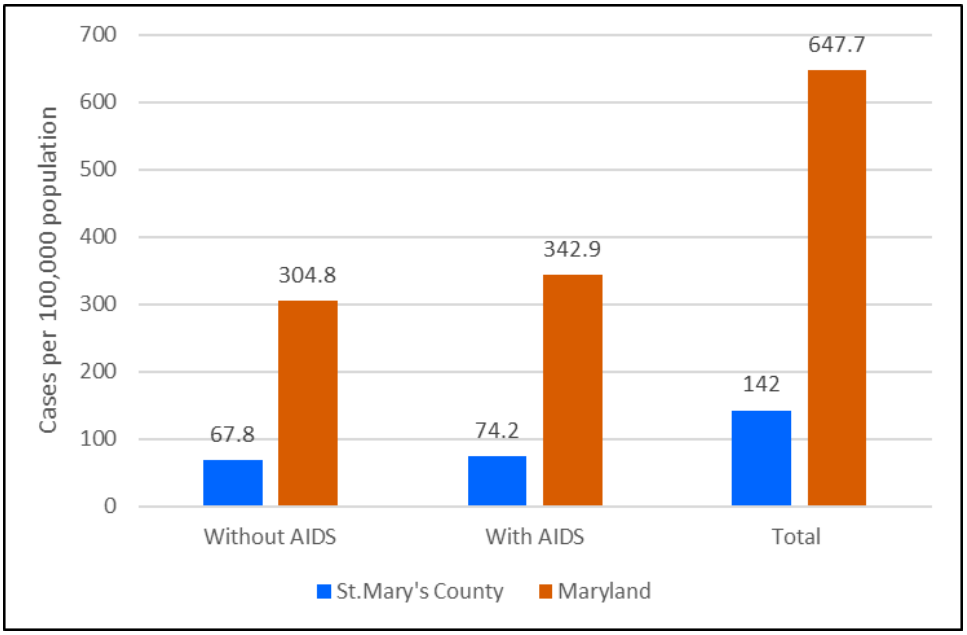


Figure 38. Adult/adolescent living HIV cases, St. Mary's County and Maryland, Reported through December 31, 2018. *Source: Maryland HIV/AIDS Quarterly Update, Fourth Quarter 2018. Center for HIV Surveillance, Epidemiology and Evaluation, Infectious Disease Bureau, Prevention and Health Promotion Administration, Maryland Department of Health. December 2018.*

6.3 Rabies

In St. Mary's County, there was an upward trend in the number of laboratory-confirmed rabid animals through 2012 when 15 such animals were identified. From 2013 to 2015, there was a decrease. However, in 2016, there was an increase to 14 rabid animals. In 2018, 5 rabid animals were laboratory-confirmed, marking a substantial increase from the previous year (Table 13). By contrast, over the four-year period of 2009-2012, there was a general statewide decline in the number of laboratory-confirmed rabid animals through 2012, with a subsequent increase to 375 rabid animals in 2013. There was a decline in the number of laboratory-confirmed rabid animals from 2014 to 2017.

Included among the 35 laboratory-confirmed rabid animals for the three-year period of 2017-2019 were 1 raccoon (14.3%), 5 foxes (71.4%), and 1 cat (14.3%) (Maryland Department of Health, Center for Zoonotic and Vector-borne Diseases). Statewide, over the same three-year period, raccoons comprised the majority (62. 6%) of laboratory-confirmed rabid animals.

Table 13. Laboratory-confirmed animal rabies, St. Mary's County, 2009-2019.

	Maryland	St. Mary's County	Percent (of Maryland total)
Year	Number	Number	
2009	384	10	2.6%
2010	354	10	2.8%
2011	305	12	3.9%
2012	324	15	4.6%
2013	375	8	2.1%
2014	344	5	1.5%
2015	342	5	1.5%
2016	335	14	4.2%
2017	147	0	0.0%
20018	268	5	1.9%
2019 Jun	119	2	1.7%

Source: Maryland Department of Health, Center for Zoonotic and Vectorborne Diseases.

6.4 Outbreaks

Over the nine-year period of 2009-2017, a total of 81 disease outbreaks were addressed by St. Mary's County Health Department, with over one-fifth (18 outbreaks) reported in 2017 (Table 14). Most of the reported outbreaks occurred in long-term care facilities (nursing homes: 72.0%, assisted living facilities: 11.0%, Figure 39). Respiratory (50.0%) and gastrointestinal (28.0%) outbreaks comprised the majority of the nine-year total (Figure 40).

Table 14. Outbreaks Reported to St. Mary's County Health Department, 2009-2017.

Year	Number of Outbreaks
2009	6
2010	1
2011	5
2012	5
2013	8
2014	9
2015	13
2016	16
2017	18

Source: Maryland Department of Health Division of Outbreak Investigation.

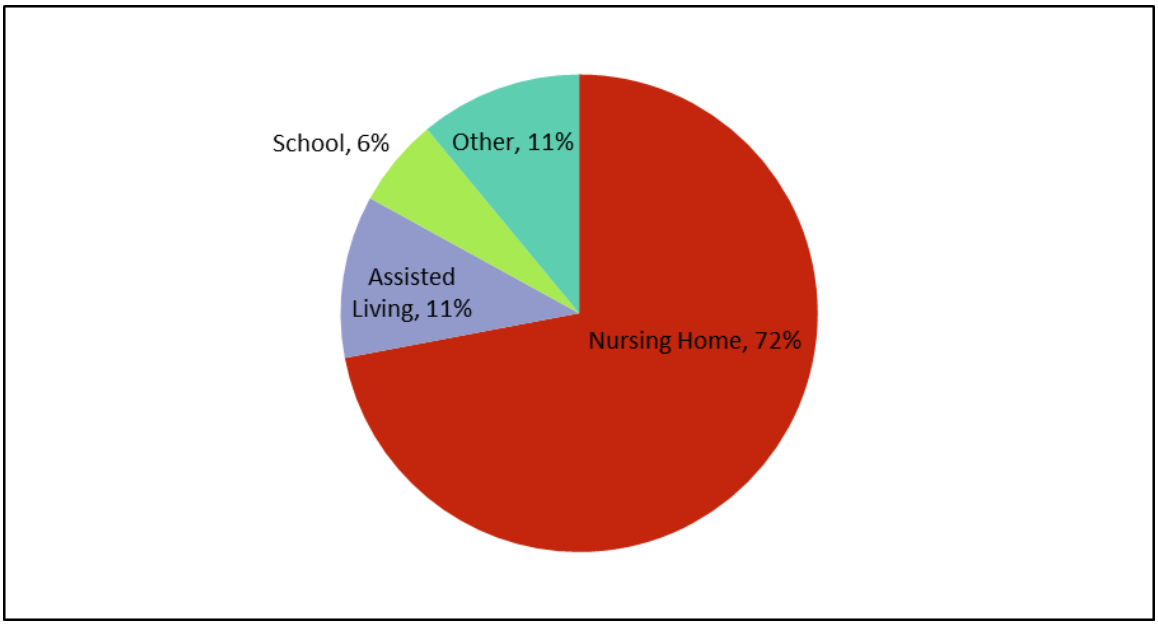


Figure 39. Outbreaks, by location, reported to St. Mary's County Health Department, 2017.
Source: Maryland Department of Health - Division of Outbreak Investigation.

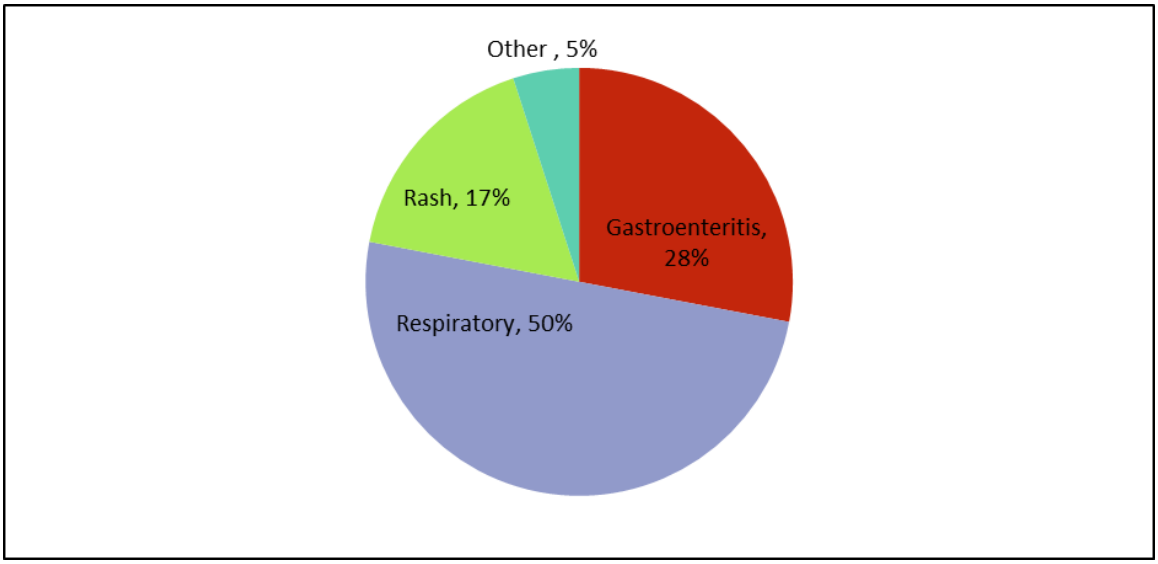


Figure 40. Outbreaks, by type of illness, reported to St. Mary's County Health Department, 2017.
Source: Maryland Department of Health - Division of Outbreak Investigation.

7.0 CHRONIC ILLNESSES

Chronic illnesses are the leading causes of death, disability and health care costs in Maryland (Chronic disease in Maryland: Facts and Figures, Maryland Department of Health, Family Health Administration, Office of Chronic Disease Prevention). The major chronic illnesses in St Mary's County and in the state of Maryland include heart disease, cancer, stroke, Chronic Obstructive Pulmonary Disease (COPD) and diabetes.

7.1 Heart Disease and Stroke

Heart disease and stroke are 2 major cardiovascular illnesses. Heart disease is the 2nd leading cause of death in St Mary's county and the leading in the state of Maryland (Maryland vital statistics annual report 2017). Stroke (cerebrovascular disease) is the 5th leading cause of death in St Mary's County and the 3rd in the state of Maryland. The most common heart disease in the United States is ischemic heart disease (coronary heart/artery disease, CHD). The prevalence of heart disease (coronary heart disease and/or heart attack) decreased from 5.8% in 2016 to 3.9% in 2017 (Figure 41).

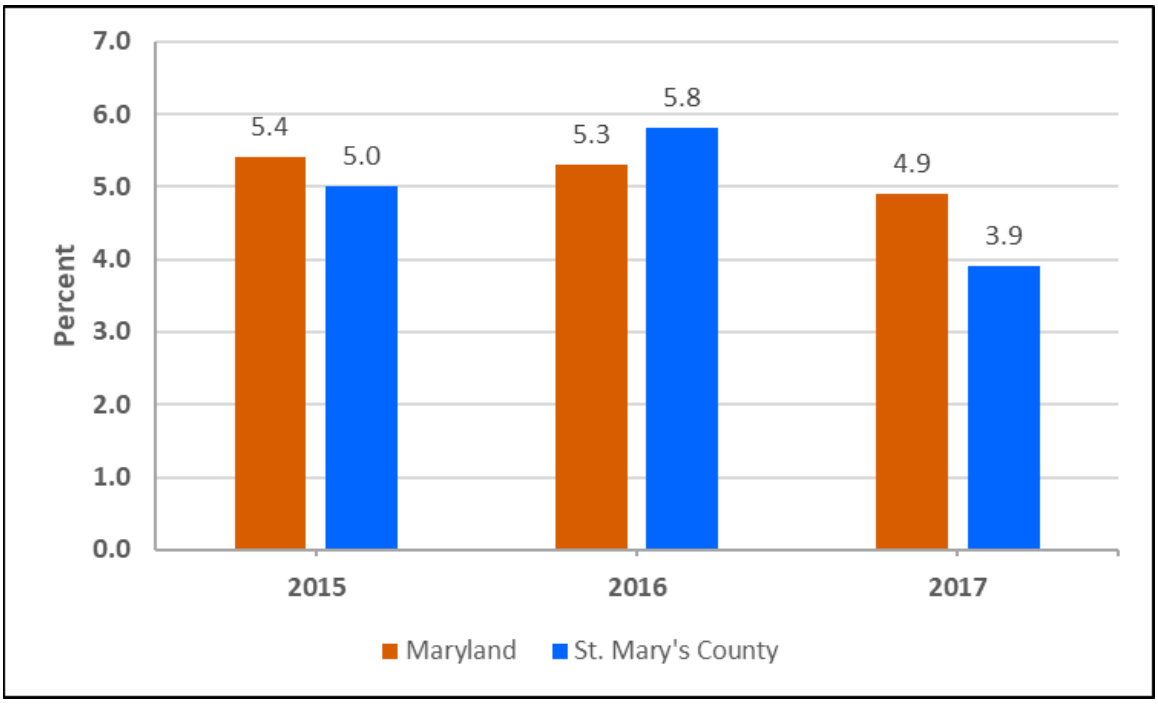


Figure 41. Prevalence (percent) of heart disease (coronary heart disease and/or heart attack) in adults (18 years and above) in St. Mary's County and Maryland, 2015-2017.
Source: Maryland Behavioral Risk Factor Surveillance System.

Closely related to cardiovascular disease is hypertension (high blood pressure) whose control can prevent heart disease and stroke. These two conditions contribute about 30% of all deaths in Maryland. St Mary's County has had consistently higher (than the state) rates of emergency department visits for primary diagnosis of hypertension in Maryland (Figure 42).

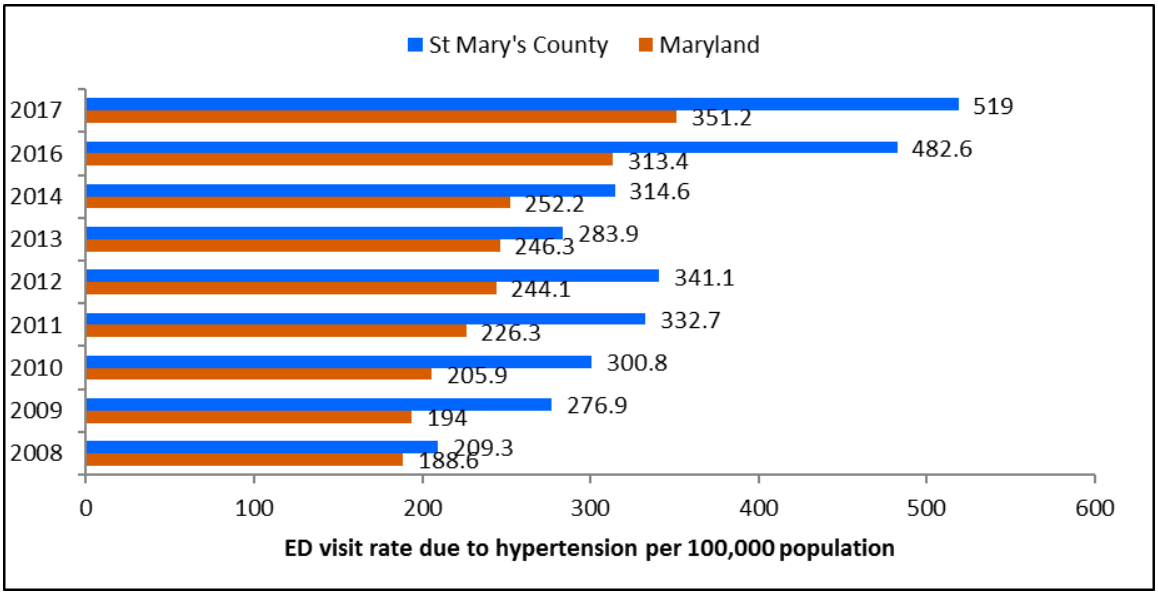


Figure 42. Emergency department visit rate due to hypertension in Maryland and St Mary's County, 2008-2017. *Source: Maryland Health Services Cost Review Commission (HSCRC).*

7.2 Cancer

Cancer is the second leading cause of death (after heart disease) in the state of Maryland (Maryland Vital Statistics Annual Report 2017). The number of people who get cancer every year is called the cancer incidence. Although the cancer incidence rate in St Mary's County is lower compared to the average for the state of Maryland (Figure 43), incidence rate, compared to the state of Maryland average, for specific cancers seems to vary. For the 2011-2015 period, the incidence rate for St Mary's County was higher than the state of Maryland for only lung cancer (Figure 44). The incidence rates for the rest of the major cancers (pancreatic, cervical, colorectal, breast, prostate, non-Hodgkin's lymphoma and leukemia) in St Mary's County were lower than or about the same as the averages for the state of Maryland (Figures 45-51).

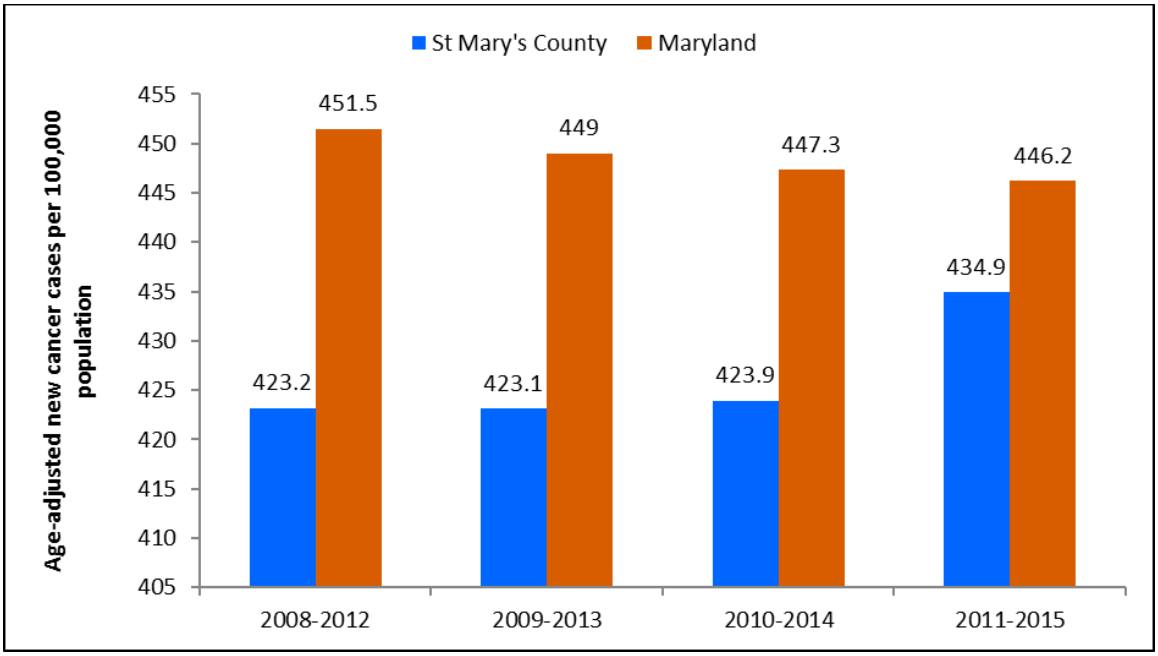


Figure 43. Age-adjusted cancer incidence rate (per 100,000 population) in St Mary's County and Maryland, 2008-2015. *Source: CDC, SEER[16] and Maryland State Health Improvement Process (SHIP).*

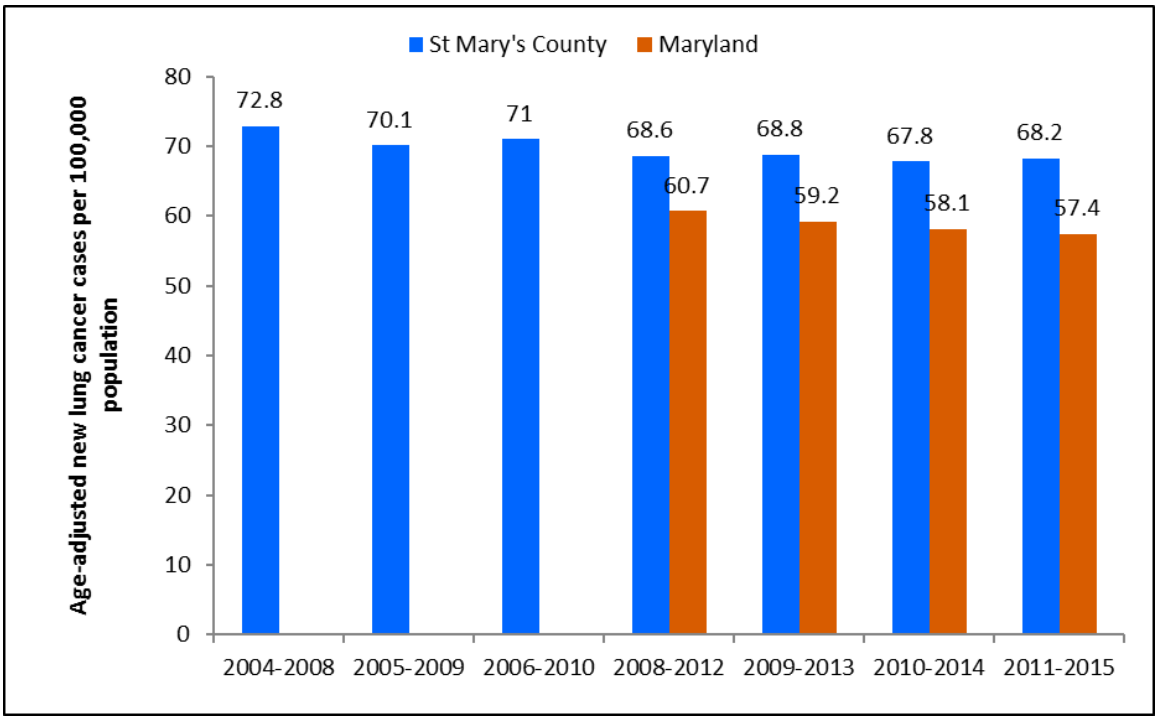


Figure 44. Age-adjusted lung cancer incidence rate (per 100,000 population) in St Mary's County and Maryland, 2004-2015. *Source: CDC, SEER and Maryland SHIP.*

[16] http://www.seer.cancer.gov/stdpopulations/stdpop.19ages.html

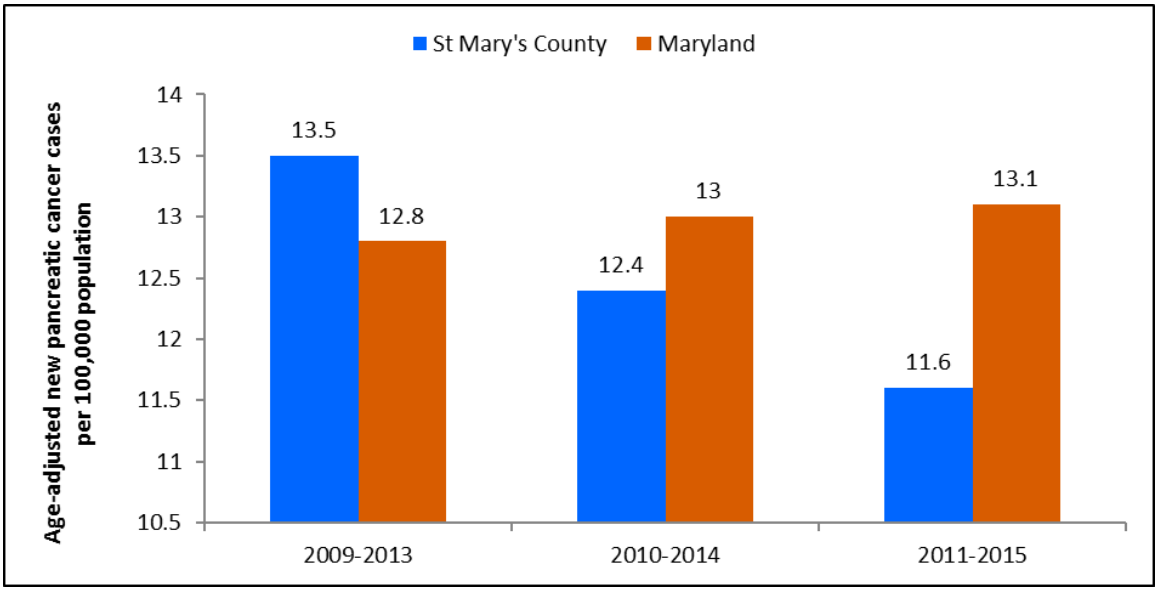


Figure 45. Age-adjusted pancreatic cancer incidence rate (per 100,000 population) in St Mary's County and Maryland, 2009-2015. *Source: CDC, SEER and Maryland State Health Improvement Process (SHIP).*

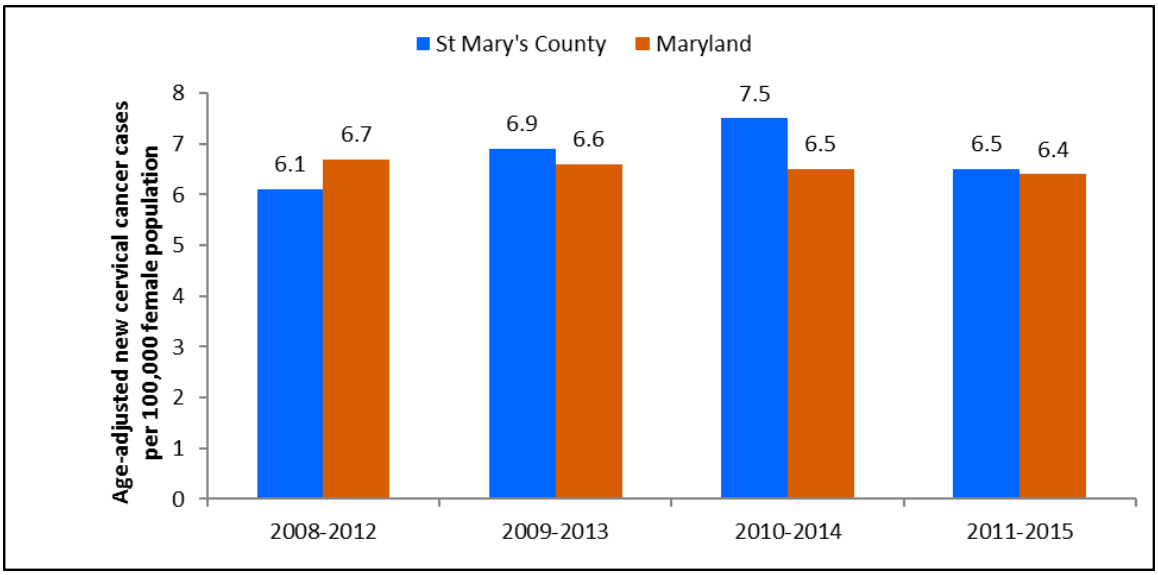


Figure 46. Age-adjusted cervical cancer incidence rate (per 100,000 female population) in St Mary's County and Maryland, 2008-2015. *Source: CDC, SEER and Maryland SHIP.*

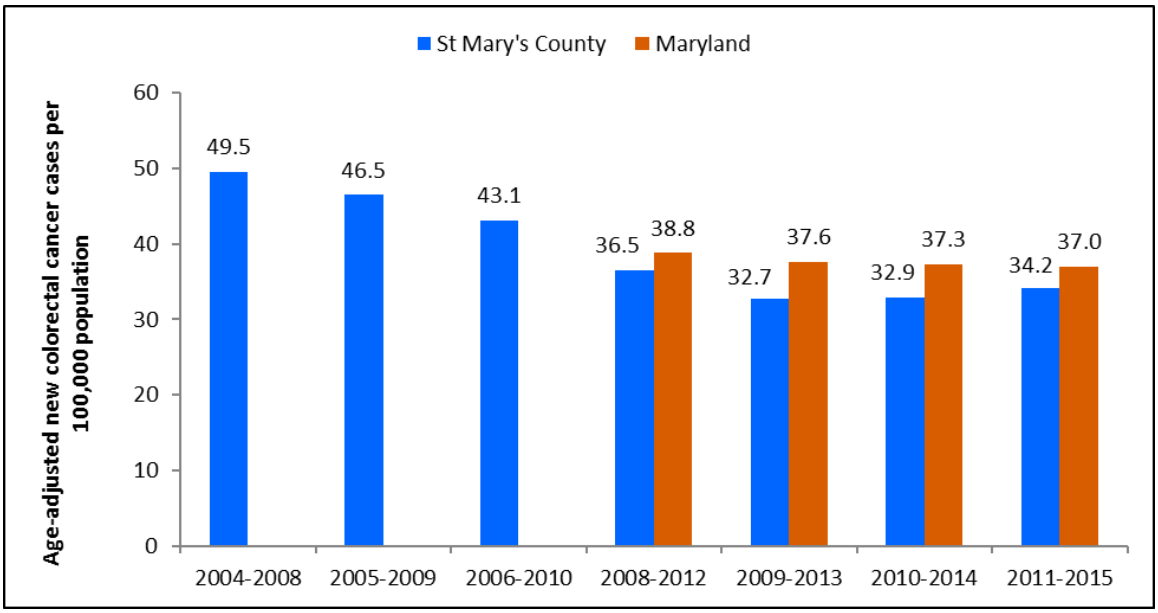


Figure 47. Age-adjusted colorectal cancer incidence rate (per 100,000 population) in St Mary's County and Maryland, 2004-2015. *Source: CDC, SEER and Maryland State Health Improvement Process (SHIP).*

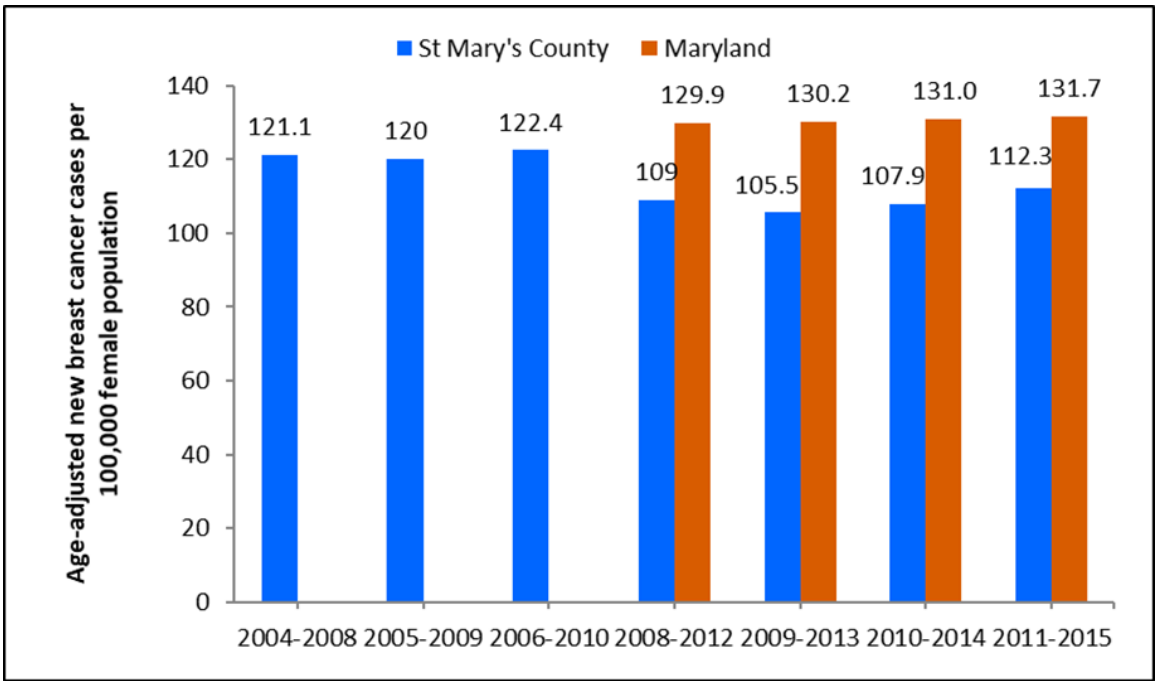


Figure 48. Age-adjusted breast cancer incidence rate (per 100,000 female population) in St Mary's County and Maryland, 2004-2015. *Source: CDC, SEER and SHIP.*

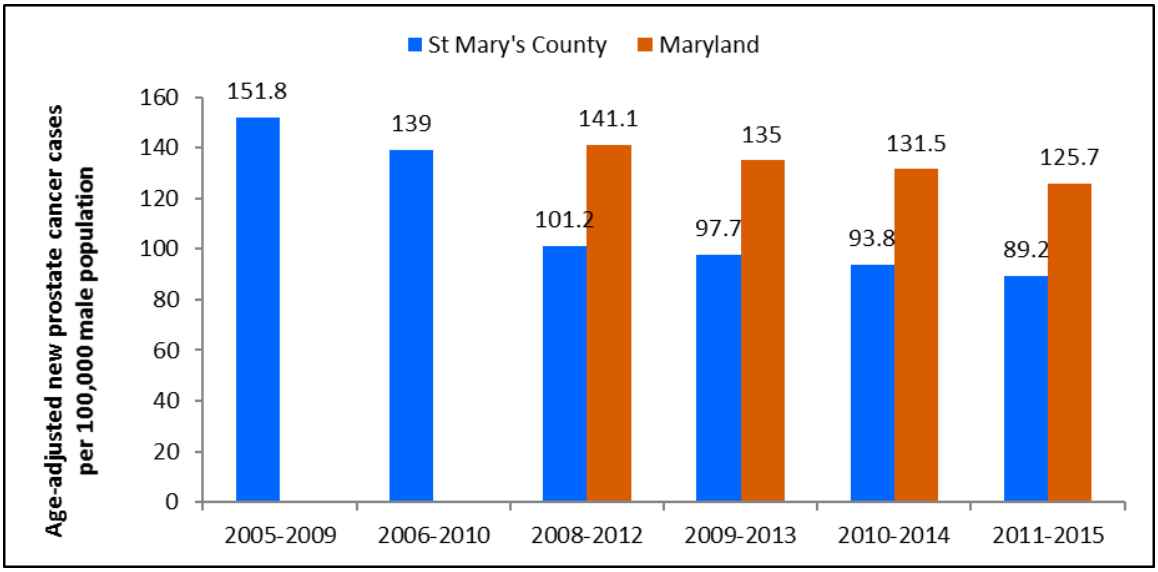


Figure 49. Age-adjusted prostate cancer incidence rate (per 100,000 male population) in St Mary's County and Maryland, 2005-2015. *Source: CDC, SEER and Maryland State Health Improvement Process (SHIP).*

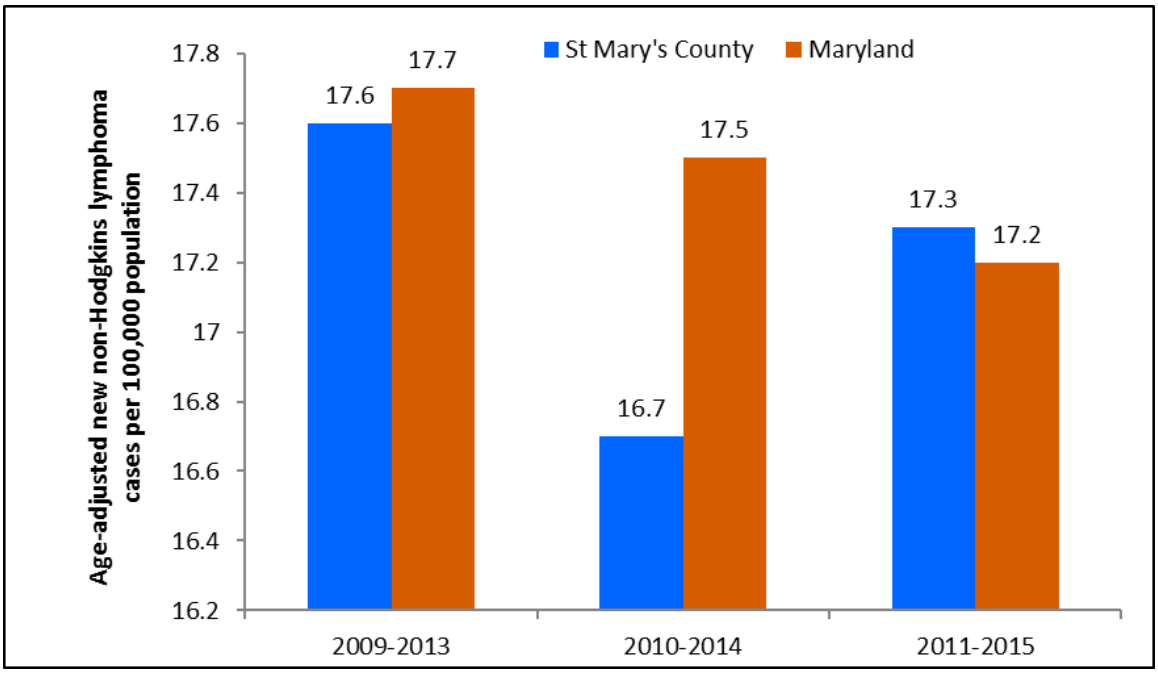


Figure 50. Age-adjusted Non-Hodgkin's lymphoma incidence rate (per 100,000 population) in St Mary's County and Maryland, 2009-2015. *Source: CDC, SEER and Maryland SHIP.*

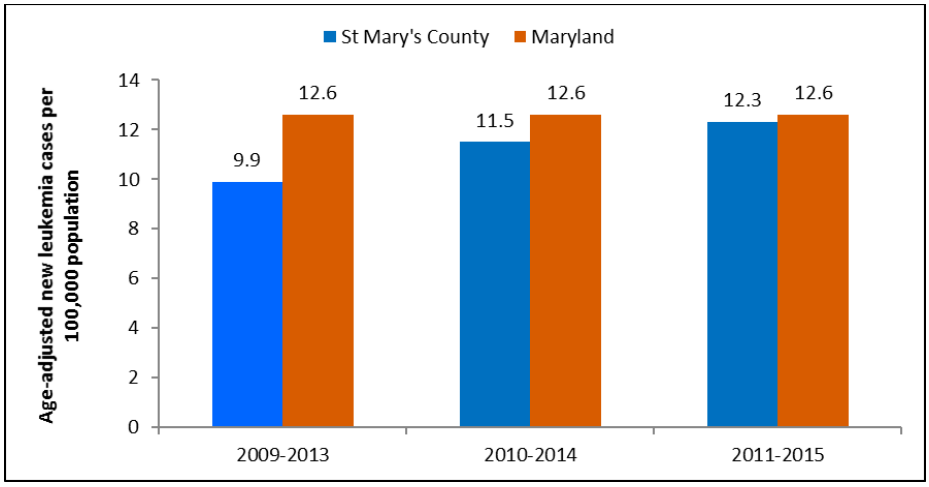


Figure 51. Age-adjusted leukemia incidence rate (per 100,000 population) in St Mary's County and Maryland, 2009-2015. *Source: CDC, SEER and Maryland State Health Improvement Process (SHIP).*

7.3 Chronic Obstructive Pulmonary Disease (COPD)

Chronic Obstructive Pulmonary Disease (COPD) refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma. Chronic lower respiratory disease, primarily COPD, was the fourth leading cause of death in the United States in 2016. In the period 2015-2017, COPD was the fourth leading cause of death in St Mary's County but fifth in the state of Maryland (Maryland vital statistics annual report 2017). The percent of St. Mary's County residents who have COPD decreased from 5.9% in 2015 to 4.1% in 2017 (Figure 52).

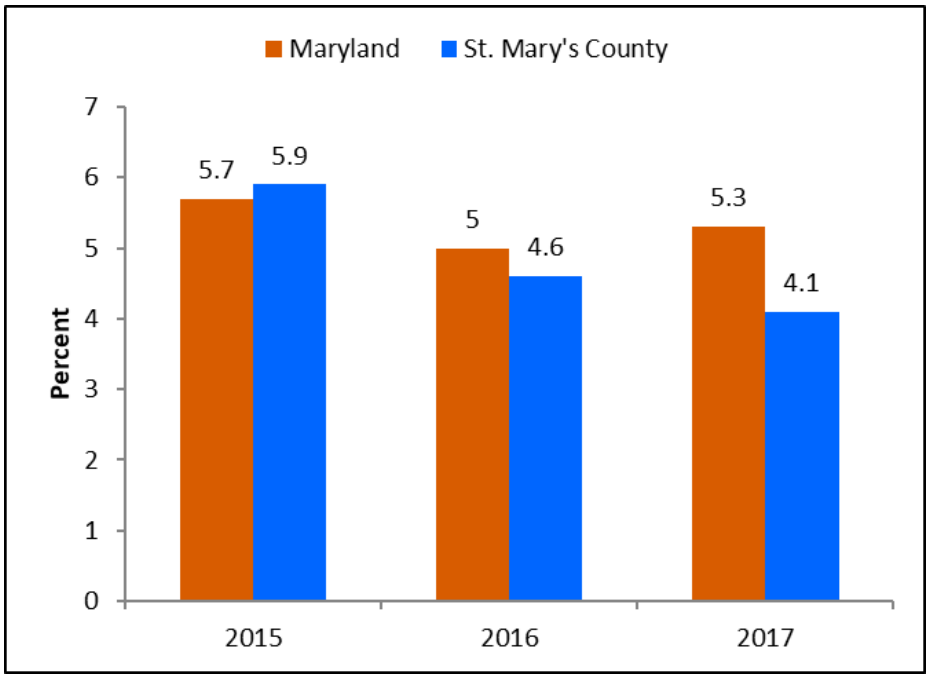


Figure 52. Percentage of adults (18 years and above) who have chronic obstructive pulmonary disease in St Mary's County & Maryland, 2015-2017. *Source: Maryland Behavioral Risk Factor Surveillance System.*

7.4 Asthma

Asthma is a chronic health condition which causes very serious breathing problems. It causes repeated episodes of wheezing, breathlessness, chest tightness, and night-time or early morning coughing. Asthma is a leading chronic illness among children and adolescents in the United States. It is also one of the leading causes of school absenteeism. On average, in a classroom of 30 children, about three are likely to have asthma. Low-income populations, minorities, and children living in inner cities experience more emergency department visits, hospitalizations, and deaths due to asthma than the general population [According to the American Lung Association, Epidemiology and Statistics Unit, Research and Program Services (Trends in Asthma Morbidity and Mortality, January 2009]. The percentage of St Mary's County adults with asthma is higher compared to the state of Maryland average (Figure 53). The St. Mary's County percentage is higher in high school students (25.6%) than in adults (17.9%).

Asthma can be controlled by taking medicine and avoiding the triggers that can cause an attack. When properly controlled through close outpatient medical supervision, individuals and families can manage their asthma without costly emergency intervention. The rates of emergency department visits due to asthma in St Mary's County have been generally lower than the state of Maryland rates (Figure 54).

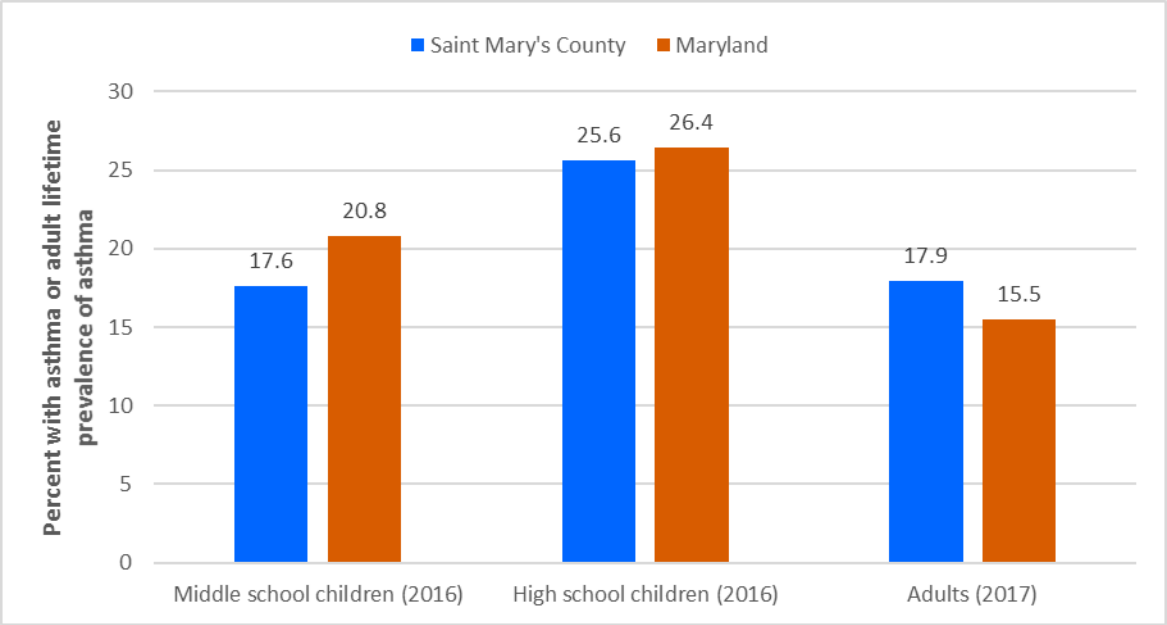


Figure 53. Percentage of children with asthma or the average lifetime prevalence of asthma in youth and adults in St Mary's County and Maryland. *Source: Maryland Youth Risk Behavior Survey (YRBS) 2016, Maryland Behavioral Risk Factor Surveillance System (BRFSS) 2017 and CDC's National Asthma Control Program.*

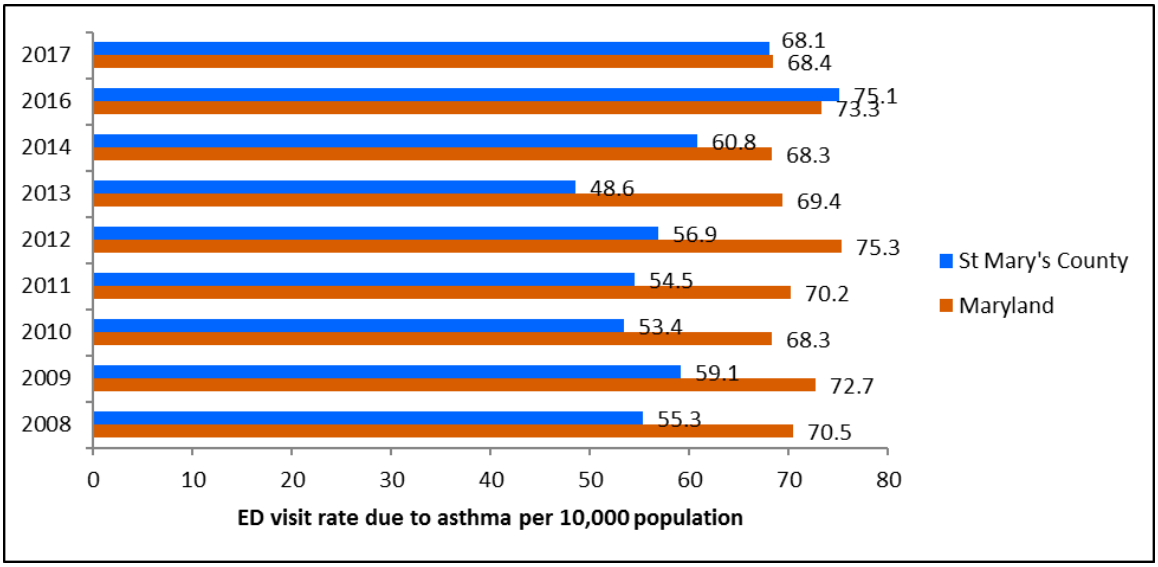


Figure 54. Emergency department visit rate due to asthma in Maryland and St Mary's County, 2008-2017.
Source: Maryland Health Services Cost Review Commission (HSCRC).

7.5 Diabetes

Diabetes is a disease in which blood glucose levels are above normal. Diabetes can lead to blindness, heart and blood vessel disease, stroke, kidney failure, amputations, nerve damage, pregnancy complications and birth defects. Diabetes is the sixth leading cause of death in St Mary's County and in the state of Maryland. The prevalence (percentage of adults that have ever been diagnosed with diabetes) in St Mary's County grew from 7.2% in 2004 to 10.4% in 2013 (Figure 55). This is perhaps a reflection of the increasing number of new cases that are diagnosed every year (Figure 56).

Emergency Department visit rates due to diabetes in St Mary's County, from 2009-2017, have consistently been higher than those for the state of Maryland (Figure 57). Emergency department visits for diabetes-related complications may signify that the disease is uncontrolled.

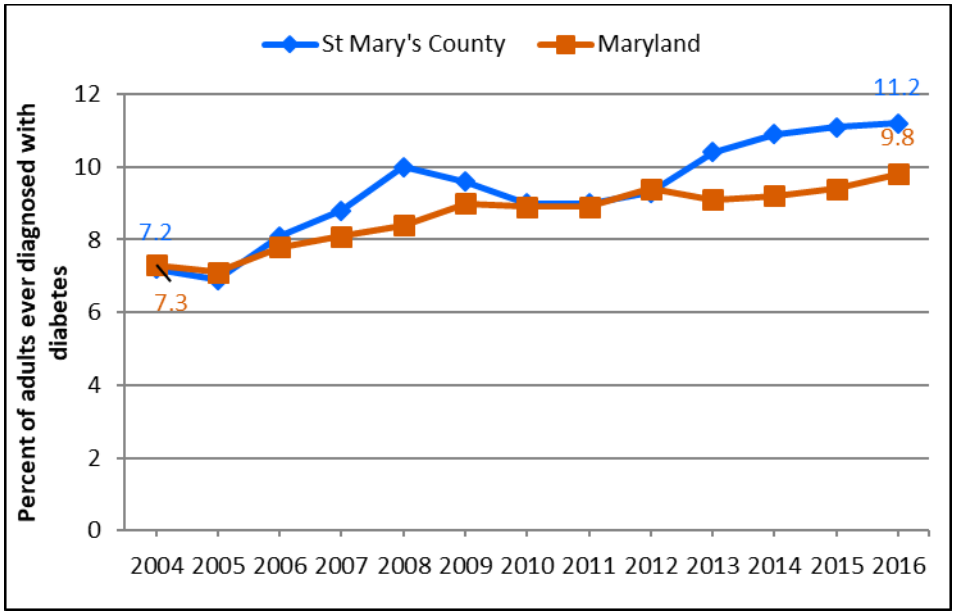


Figure 55. Diabetes age-adjusted prevalence (percentage of adults that have ever been diagnosed with diabetes) among adults in St Mary's County and Maryland, 2004-2016. *Source: Maryland State Health Improvement Process (SHIP), Centers for Disease Control and Prevention. Diabetes Interactive Atlas.*

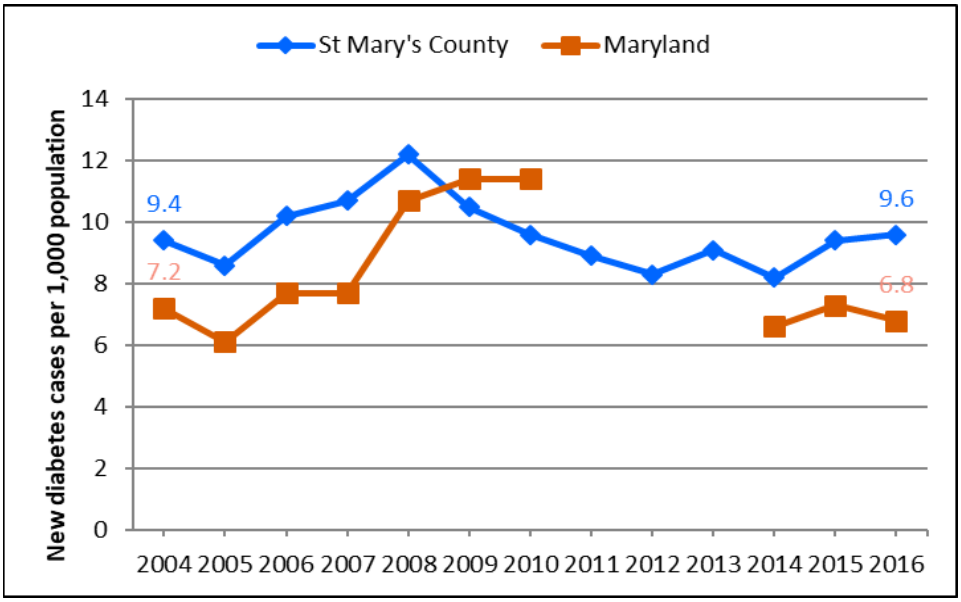


Figure 56. Diabetes age-adjusted incidence (new cases of diabetes per 1,000 adult population) among adults in St Mary's County and Maryland 2004-2016. Data for Maryland from 2011-2013 not available. *Source: Maryland SHIP. Centers for Disease Control and Prevention. Diabetes Interactive Atlas*[17]*.*

[17] https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html#

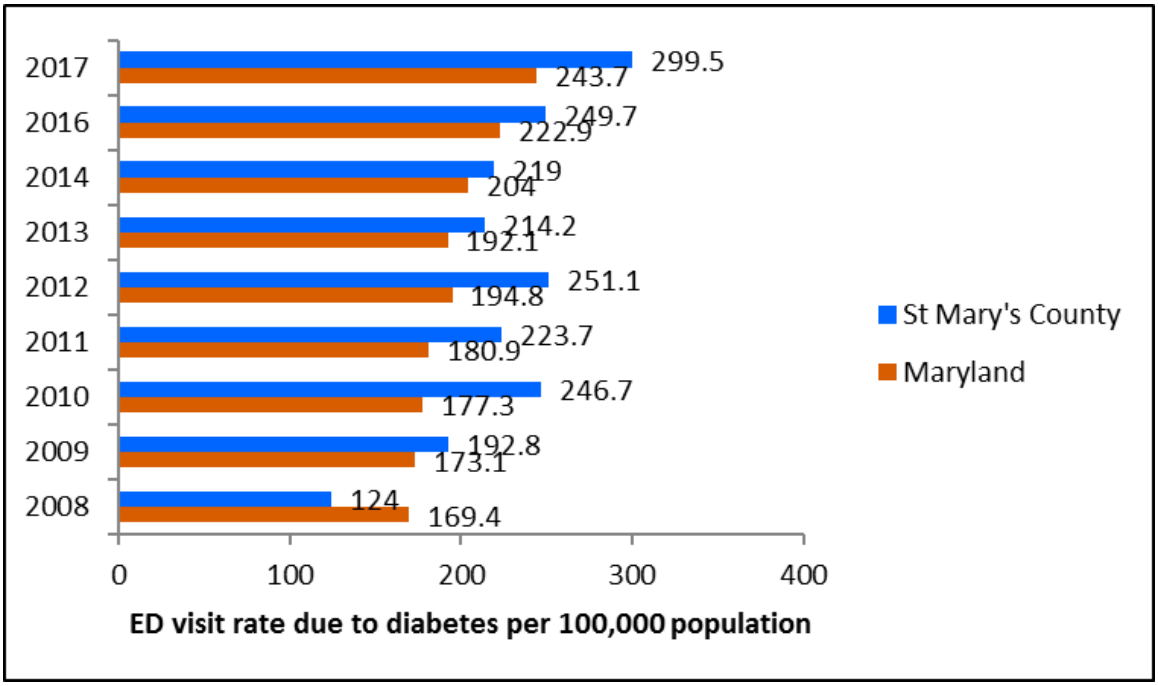


Figure 57. Emergency department visit rate due to diabetes in St Mary's County and Maryland, 2008-2017. *Source: Maryland Health Services Cost Review Commission (HSCRC).*

8.0 DISABILITY AND DEATHS

8.1 Disability

Over the five-year period of 2013-2017, an estimated 11.6% of St. Mary's County's civilian noninstitutionalized population reported a disability (Figure 58). This figure is significantly higher than that reported in 2011-2013 (10.4%) (U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates). As might be expected, disability percentages increased with age. Among County residents aged 65 years and over, 36% report a disability. Between 2011-2013 and 2013-2017, the percentage of County residents aged 65 years and over with a reported disability rose (from 29.6% to 36%) (U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates). Compared with corresponding statewide figures, lower percentages of County residents under 5 years (0.4% for SMC vs 0.6 for MD) reported a disability. A greater percentage of county residents aged 18 to 64 years (56%) reported a disability as compared to the state (50.6%).

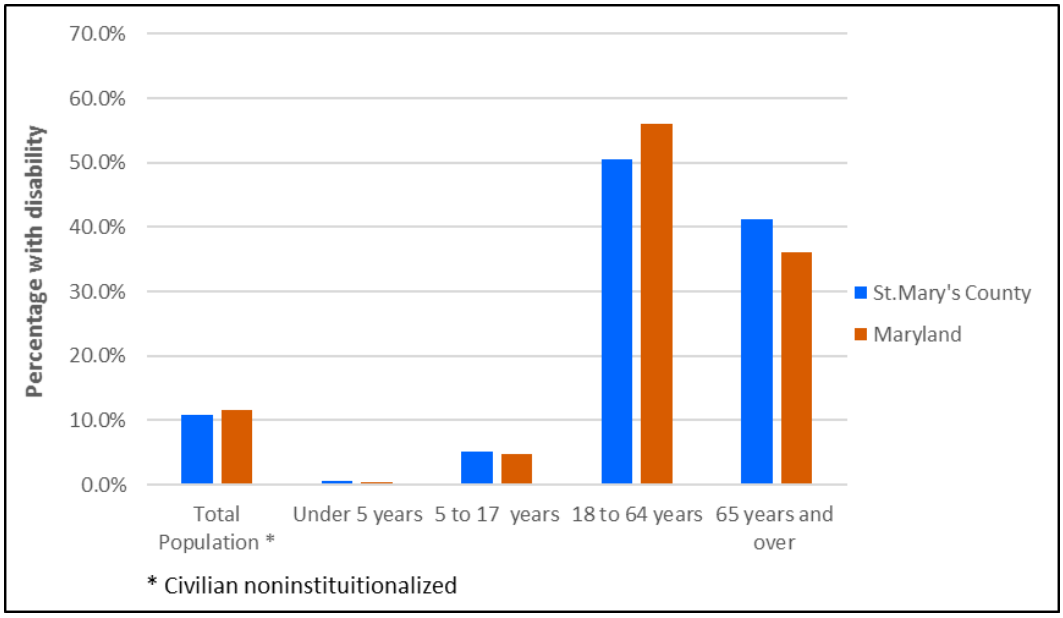


Figure 58. Disabilities by age group, St. Mary's County and Maryland, 2013-2017.
Source: U.S. Census Bureau, 2013-2017 5-Year American Community Survey.

Among persons aged under-5 years, the percentage of St. Mary's County residents reporting vision difficulties was greater than those observed statewide (Figure 59). The percentage of County residents, aged under-5 years, with a reported hearing difficulty (0.2%) was less than that reported statewide (0.3 %).

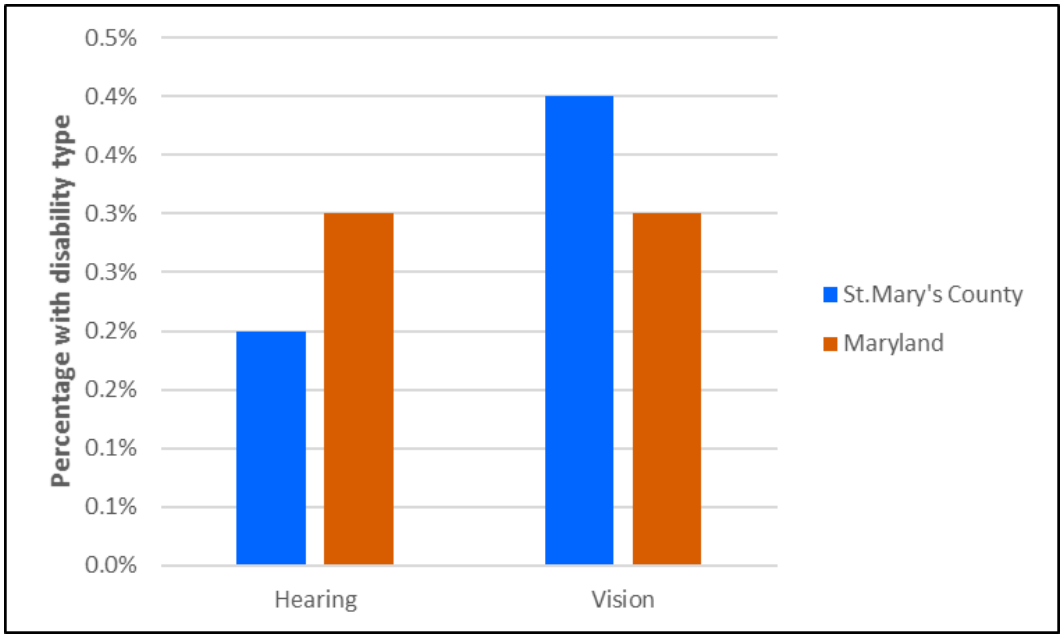


Figure 59. Disability type among under-5-years old, St. Mary's County and Maryland, 2013-2017.
Source: U.S. Census Bureau, 2013-2017 5-Year American Community Survey.

Among St. Mary's County residents aged 5 to 17 years, the most frequently reported disabilities were serious difficulty concentrating, remembering or making decisions (cognitive difficulty [2.8%]) (Figure 60). The percentage of County residents, aged 5 to 17 years, with a reported vision difficulty (1.3%) was double that reported statewide (0.7%) among this age group.

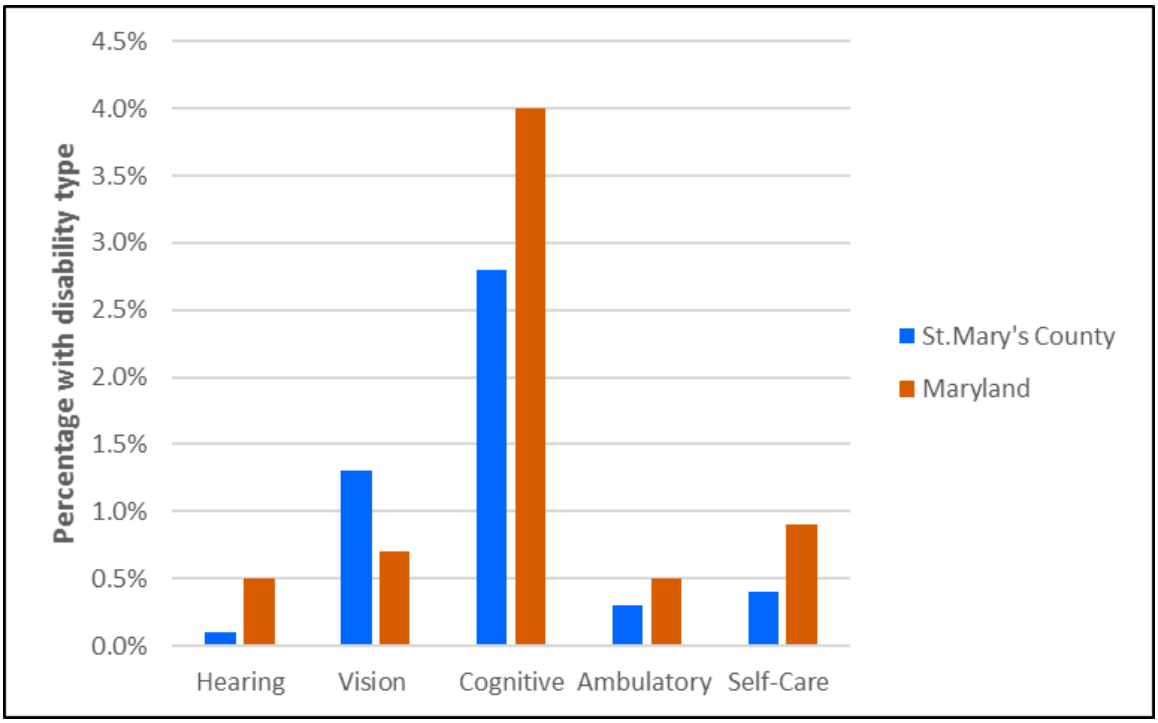


Figure 60. Disability types among 5 to 17 years old, St. Mary's County and Maryland, 2013-2017.
Source: U.S. Census Bureau, 2013-2017 5-Year American Community Survey.

Among St. Mary's County residents aged 18 to 64 years, the most frequently reported disabilities were serious difficulty walking or climbing stairs (ambulatory difficulty, 4.1%) and cognitive difficulty (3.7%) (Figure 61). The County percentages, for these disability types, were slightly higher than corresponding statewide figures. The percentage of County residents, aged 18 to 64 years, with a reported hearing difficulty (3.0%) was 2 times greater than that reported statewide (1.5%) among this age group.

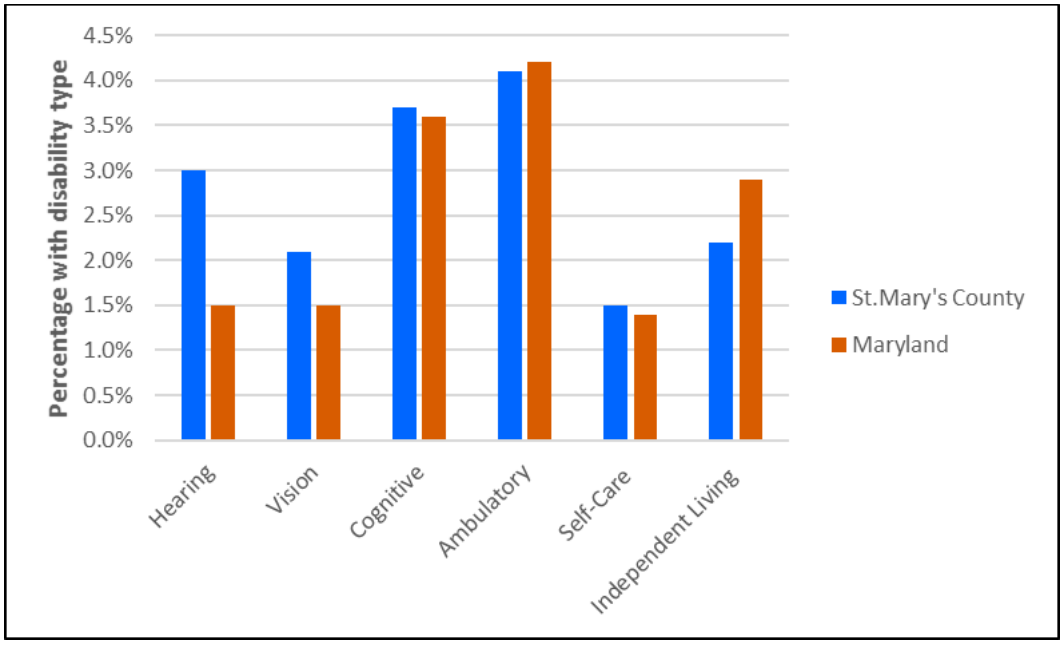


Figure 61. Disability types among18 to 64 years old, St. Mary's County and Maryland, 2013-2017.
Source: U.S. Census Bureau, 2013-2017 5-Year American Community Survey.

Among St. Mary's County residents aged 65 years and over, the most frequently reported disabilities were ambulatory difficulty (19.9%), hearing difficulty (14.7%), and difficulty doing errands alone such as visiting a doctor's office or shopping (independent living difficulty [11.5%]) (Figure 62).

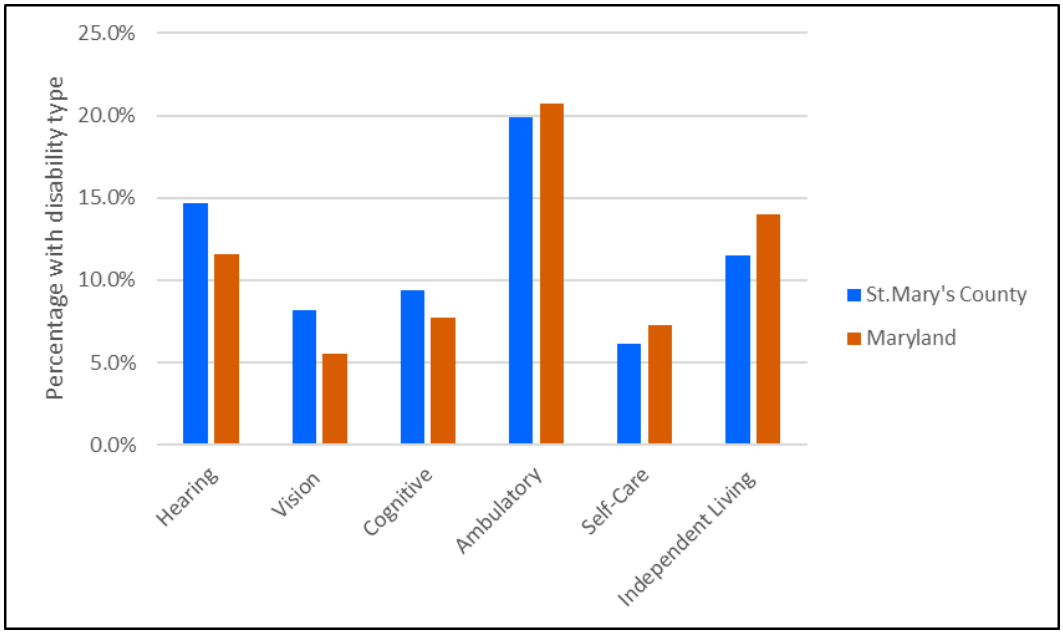


Figure 62. Disability types among 65 and over years old, St. Mary's County and Maryland, 2013-2017.
Source: U.S. Census Bureau, 2013-2017 5-Year American Community Survey.

8.2 Deaths

In St. Mary's County, the age-adjusted death rate, from all causes, has declined by 11% (from 806.2 deaths per 100,000 population during 2007-2009 to 729 deaths per 100,000 population during 2015-2017 (Figure 63). However, during 2013-2015, there was a slight increase in the County's death rate to 745.3 deaths per 100,000 population. Between the time periods of 2007-2009, 2011-2013, 2012-2014 and 2013-2015, the County's death rates were slightly above those reported statewide.

Chronic illnesses [including heart disease, cancer, stroke, Chronic Obstructive Pulmonary Disease (COPD) and diabetes] and accidents are the leading causes of death in Maryland and the USA (Figure 64; Chronic disease in Maryland: Facts and Figures, Maryland Department of Health, Family Health Administration, Office of Chronic Disease Prevention). In 2015-2017 period, the leading causes of death in St Mary's County and in the state of Maryland included these chronic conditions (heart disease, cancer, stroke, Chronic Obstructive Pulmonary Disease (COPD) and diabetes) in addition to accidents (Figure 65 and 66; Maryland vital statistics annual report 2016).

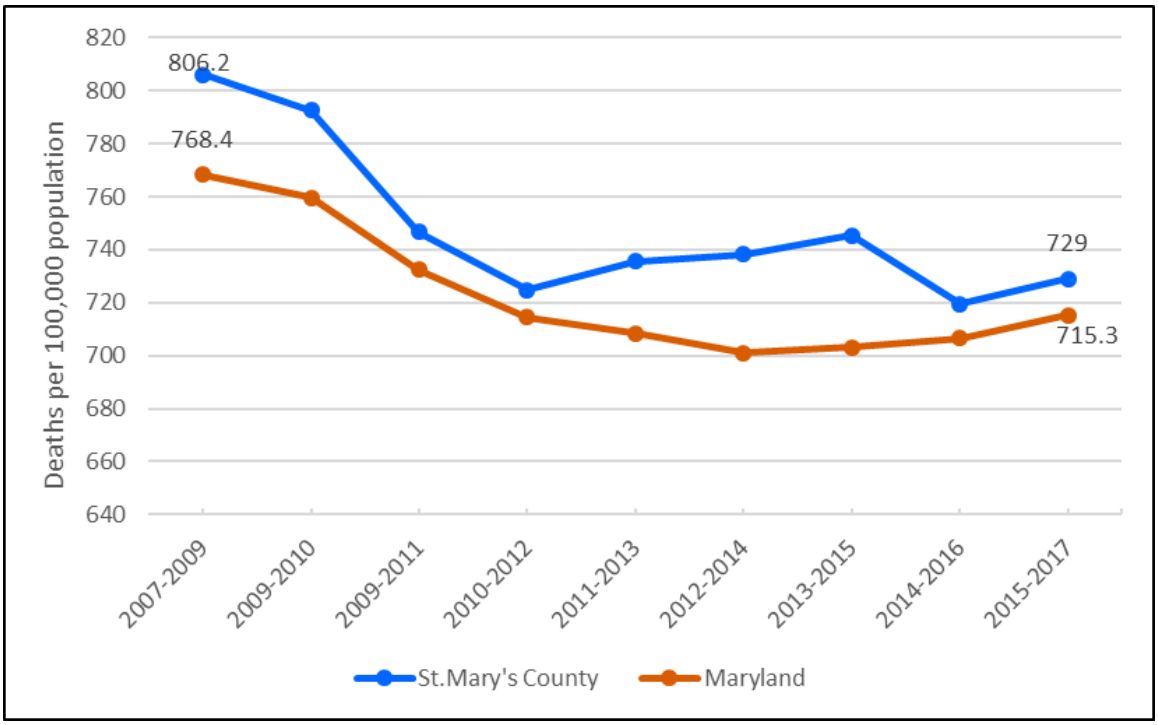


Figure 63. Age-adjusted death rates, all causes, St. Mary's County and Maryland, 2007-2017.
**Adjusted to the standard U.S. 2000 population by the direct method. Source: Maryland Department of Health, Vital Statistics Administration Maryland Vital Statistics Annual Report.*

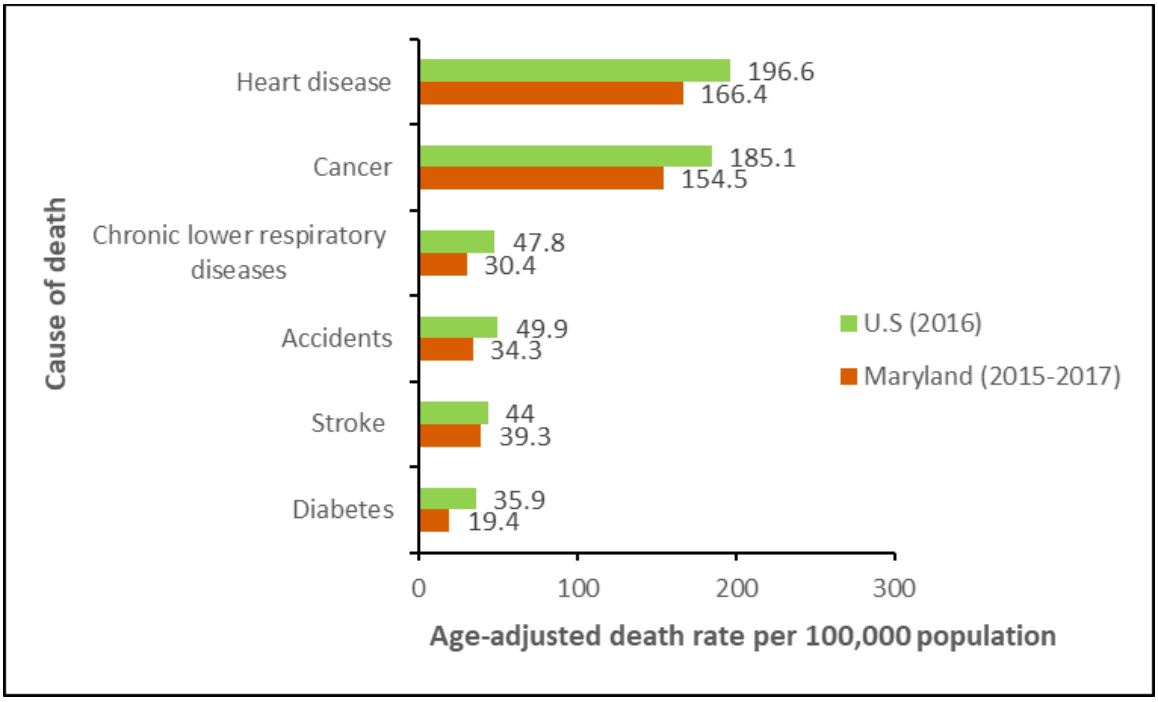


Figure 64. Leading causes of death in Maryland (2015-2017) and the United States (2016).
Source: Maryland Department of Health, Family Health Administration, Office of Chronic Disease Prevention. Center for Disease Control and Prevention (CDC).

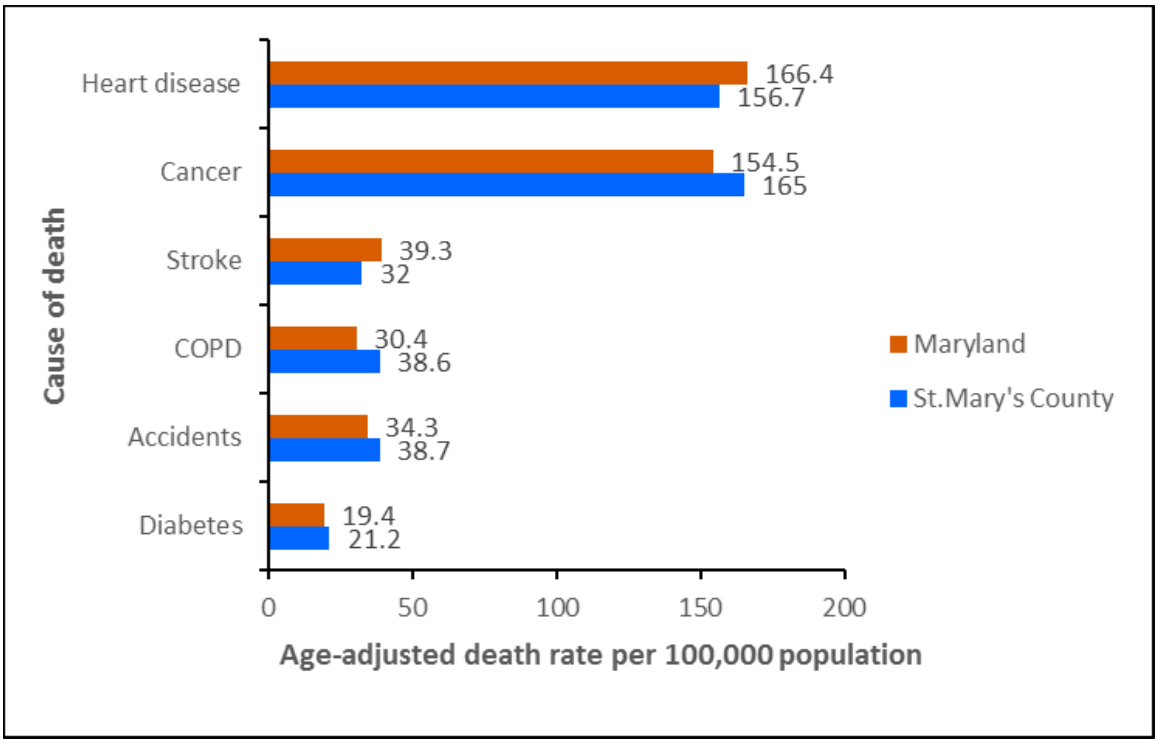


Figure 65. Leading causes of death in St Mary's County and Maryland, 2015-2017.
Source: Maryland vital statistics annual report 2017.

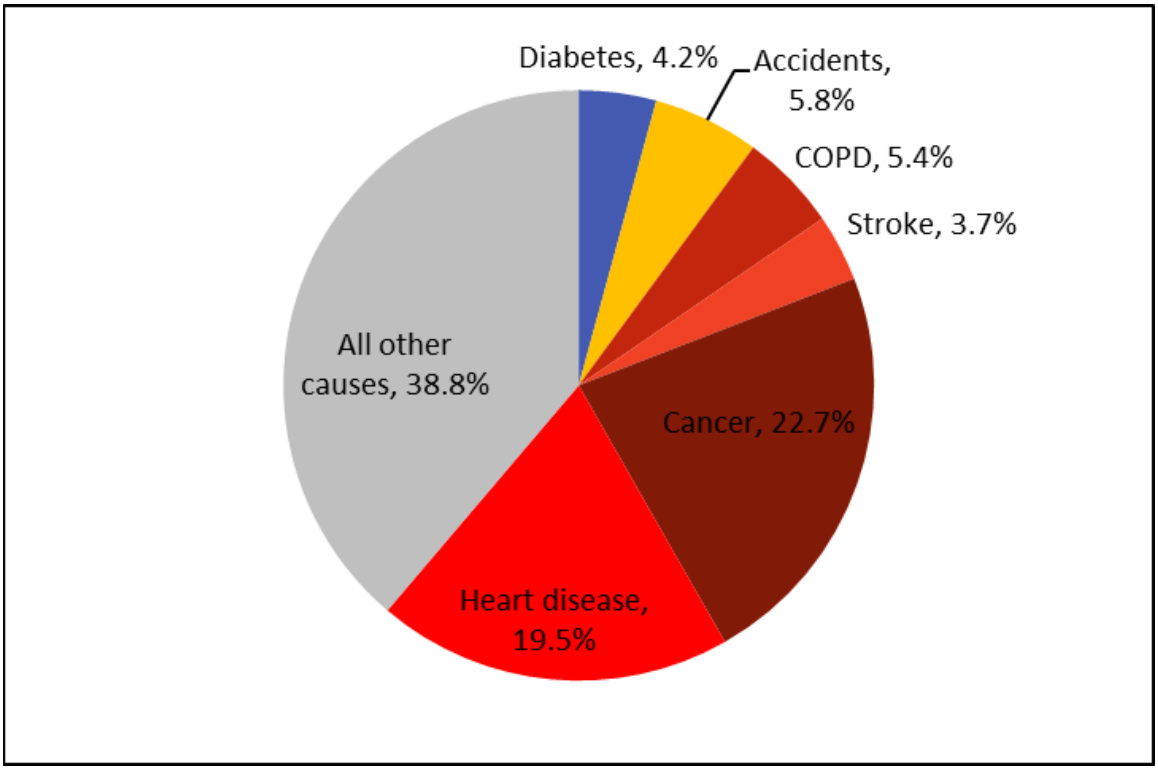


Figure 66. Causes of death, St. Mary's County, 2017. *Source: Maryland Department of Health & Mental Hygiene, Vital Statistics Administration, Maryland Vital Statistics Annual Report 2017.*

8.2.1 Deaths Due to Heart Disease

Heart disease is the 2nd leading cause of death in St Mary's County, accounting for 19.5% of all deaths. Death rates from heart disease in St Mary's County have been falling following the pattern of the state. However, rates in the County in the preceding years up to 2013 had consistently been higher than the state of Maryland rates (Figure 67). By 2017, the County rates were less than those for the state (156.7 versus 166.4 deaths per 100,000 population in the County and State, respectively).

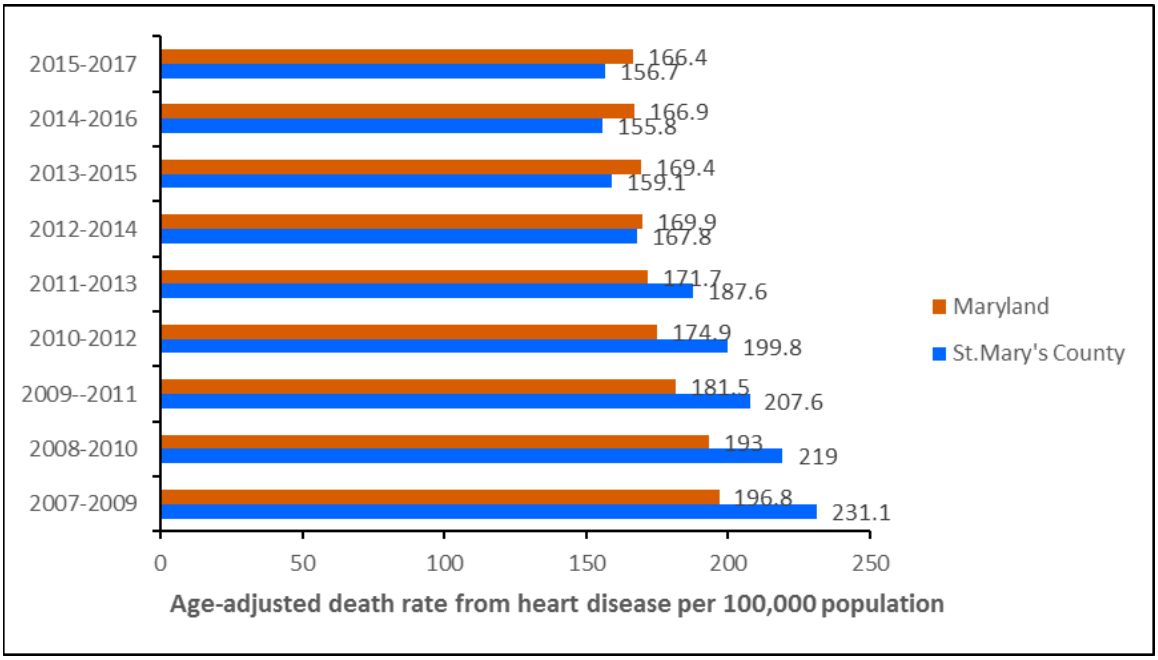


Figure 67. Death rate from heart diseases in Maryland and St Mary's Count, 2007-2017.
Source: Maryland Health Services Cost Review Commission (HSCRC), Maryland vital statistics annual report 2017.

The rates of deaths from stroke in both St Mary's County and the state of Maryland have been slowly coming down over the years (Figures 68 and 69). The death rate during the period of 2015-2017 due to stroke in St Mary's County was lower (32.0) than the state of Maryland average of 39.3 deaths per 100,000 population.

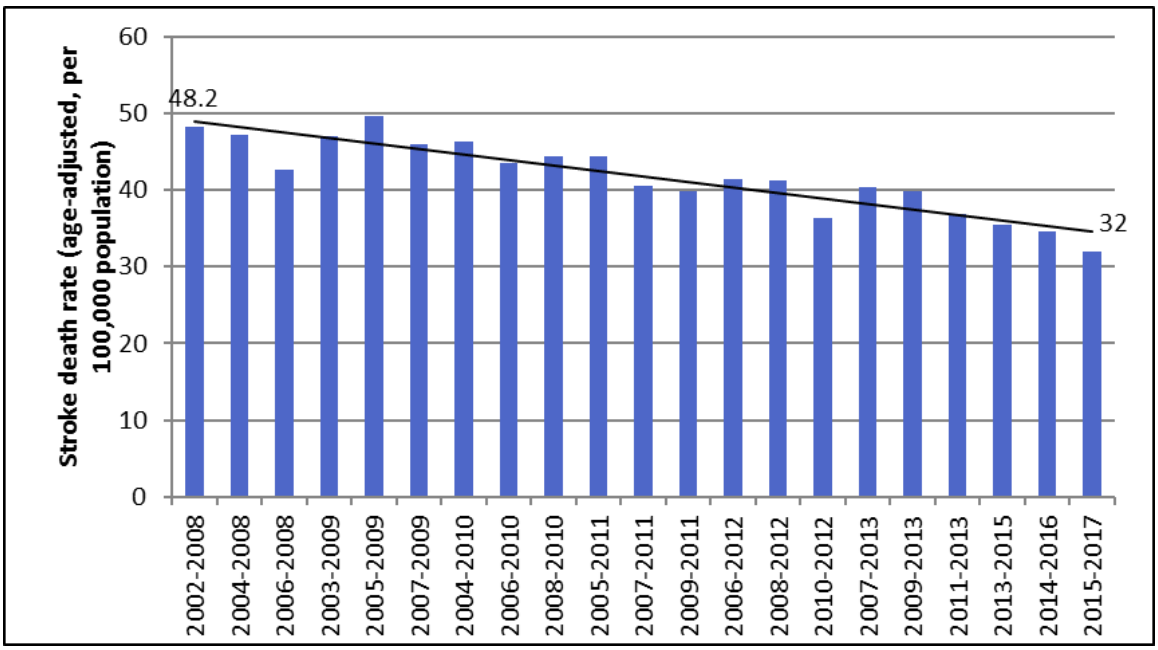


Figure 68. Death rate from stroke in St Mary's County, 2002-2017.
Source: Maryland Vital Statistics Administration.

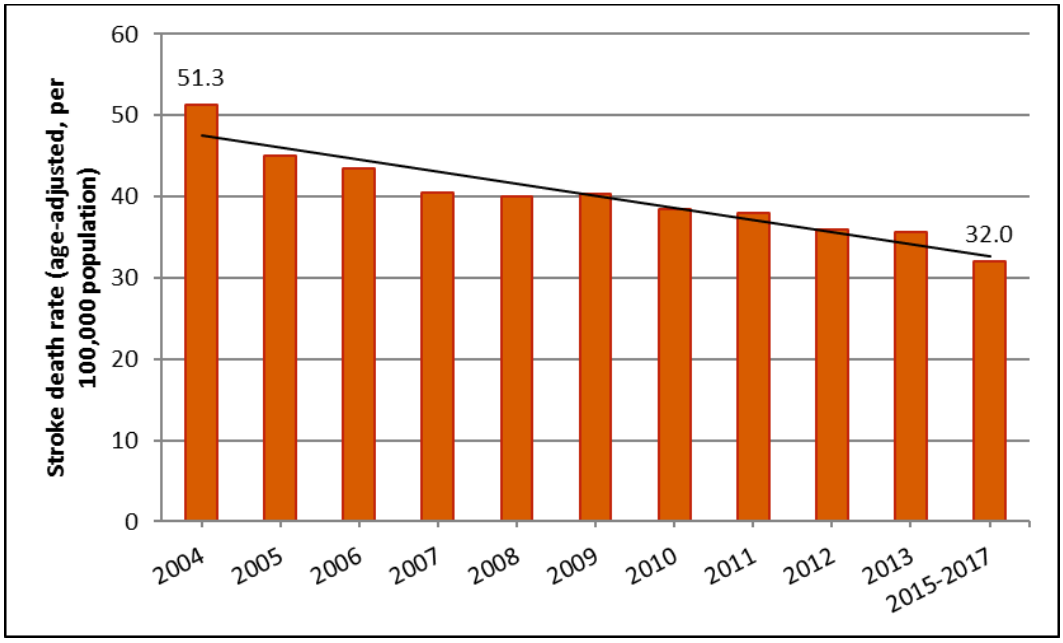


Figure 69. Death rate from stroke in Maryland, 2004-2013, 2015-2017.
Source: Maryland Vital Statistics Administration.

8.2.2 Deaths Due to Cancer

Cancer is the second leading cause of death (after heart disease) in the state of Maryland. Maryland's age adjusted cancer mortality rate is higher than the US cancer mortality rate. Whereas the death rates due to cancer in the state of Maryland have been going down, the death rates in St Mary's County have been consistently higher from 2010-2017 (Figure 70). The St Mary's County and state of Maryland rates for the period of 2015-2017 were 165 and 154.5 per 100,000 population, respectively.

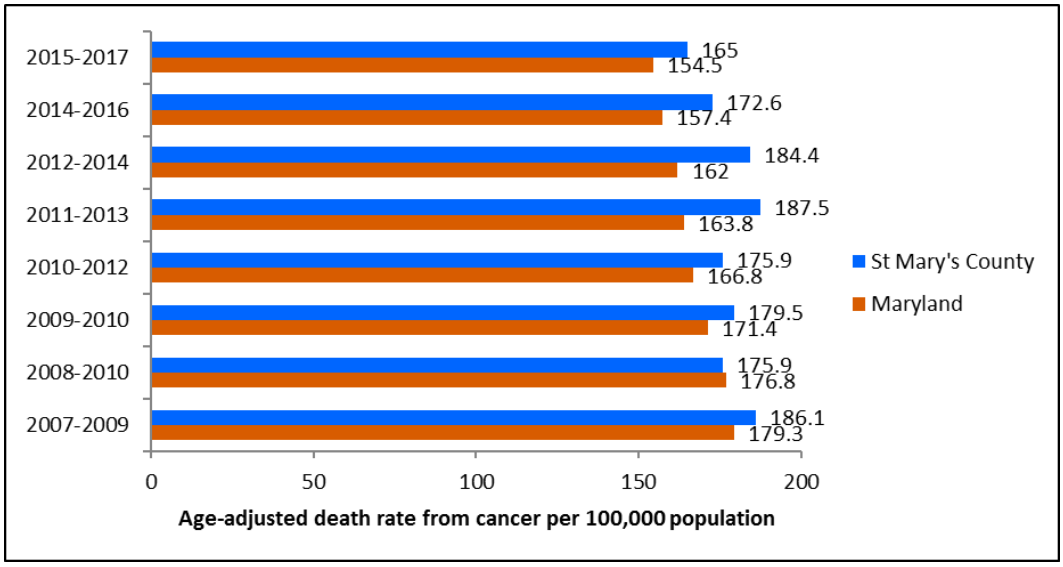


Figure 70. Death rates from cancer in St Mary's County and Maryland, 2007-2017.
Source: Maryland Annual Vital Statistics Report 2017.

About 58% of the cancer deaths in St Mary's County in 2013, were due to the following main cancers: cancer of the lung (31% of all cancer deaths), pancreas, colorectum, breast, and leukemia (Figure 71). The percentages due to lung cancer, leukemia and Non-Hodgkin's lymphoma were higher than the corresponding average values for the state of Maryland (Figures 72-74).

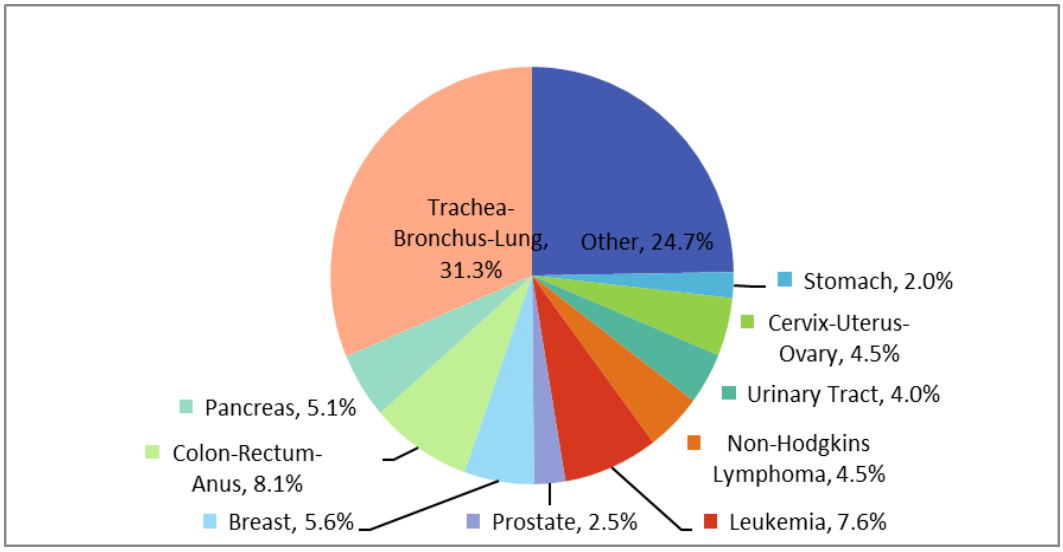


Figure 71. Percent of cancer deaths due to the different cancer types in St Mary's County, 2017. *Source: Maryland Vital Statistics Administration (VSA).*

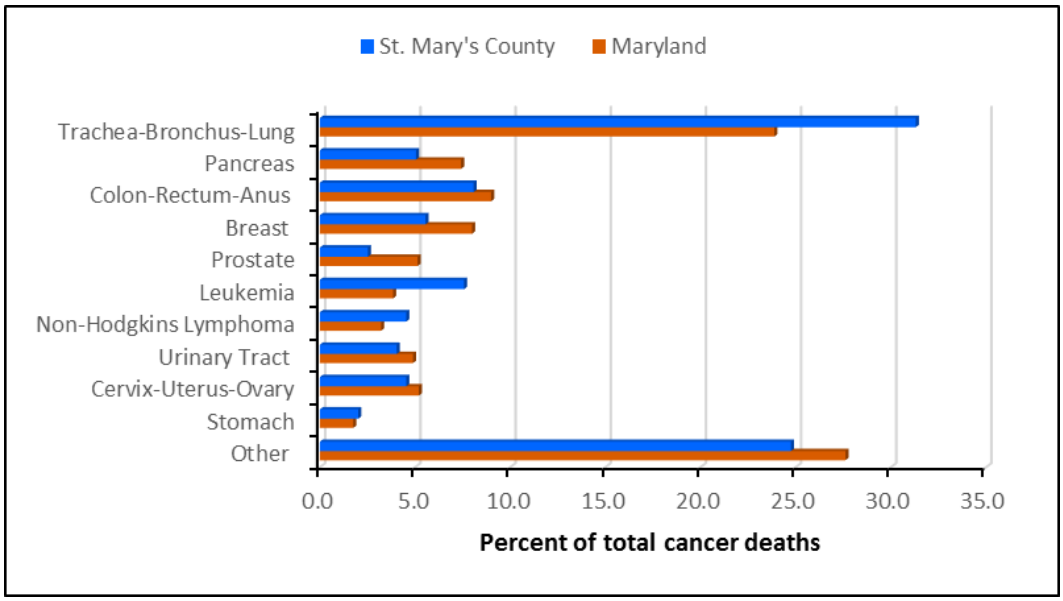


Figure 72. Percent of cancer deaths due to the different cancer types in St Mary's County and Maryland, 2017. *Source: Maryland Vital Statistics Administration (VSA).*

Lung cancer death rates for St Mary's County versus those of the state of Maryland, for the 2011-2015 period, were 52.9 versus 41.4 deaths per 100,000 population, respectively

(Figure 73). Death rates from pancreatic cancer, for the 2011-2015 period, were 11.0 versus 11.6 deaths per 100,000 population, for St Mary's County and state of Maryland respectively (Figure 74). Death rates for the rest of the main cancers in St Mary's County (cancers of the colorectum and prostate) remained lower than the averages for the state of Maryland during the 2011-2015 period (Figures 75-77).

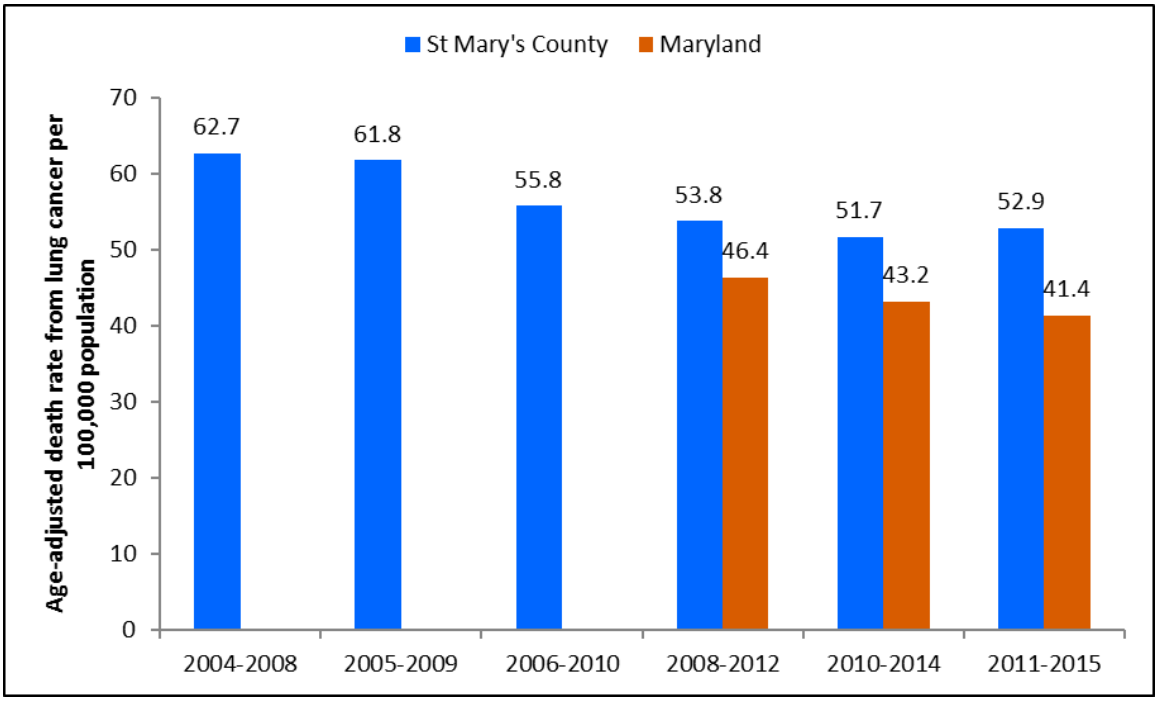


Figure 73. Death rates from lung cancer in St Mary's County and Maryland, 2004-2015.
Source: National Cancer Institute's SEER (Surveillance, Epidemiology, and End Result Program).

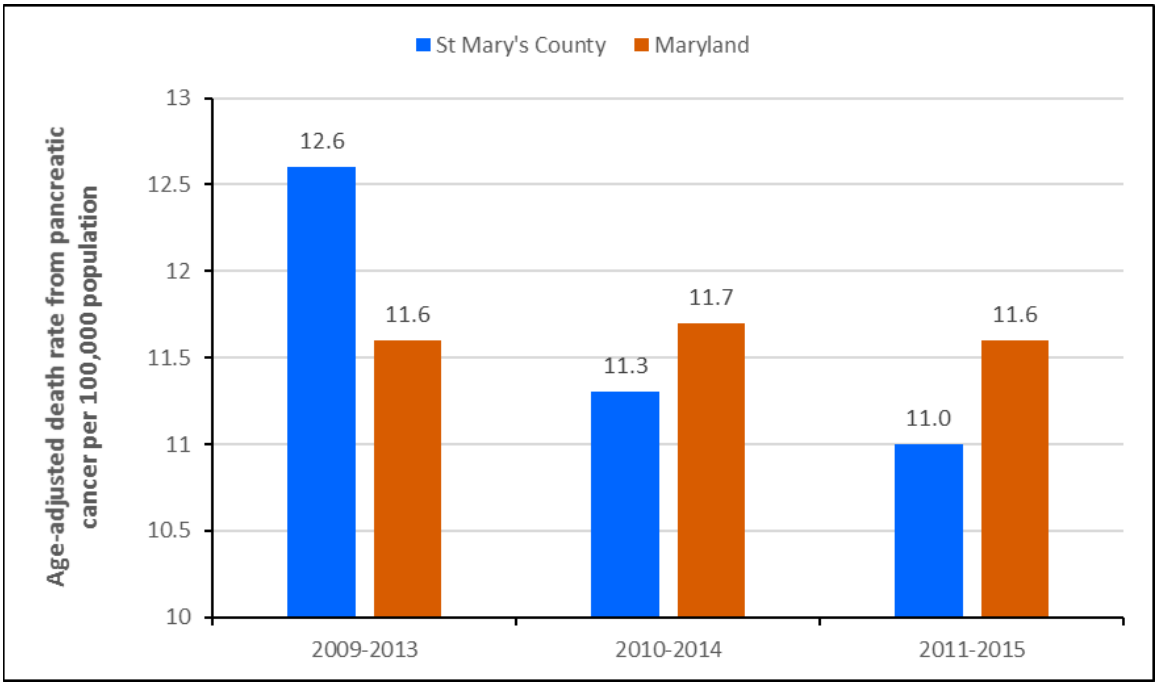


Figure 74. Death rates from pancreatic cancer in St Mary's County and Maryland, 2009-2015 period.
Source: National Cancer Institute's SEER (Surveillance, Epidemiology, and End Result Program).

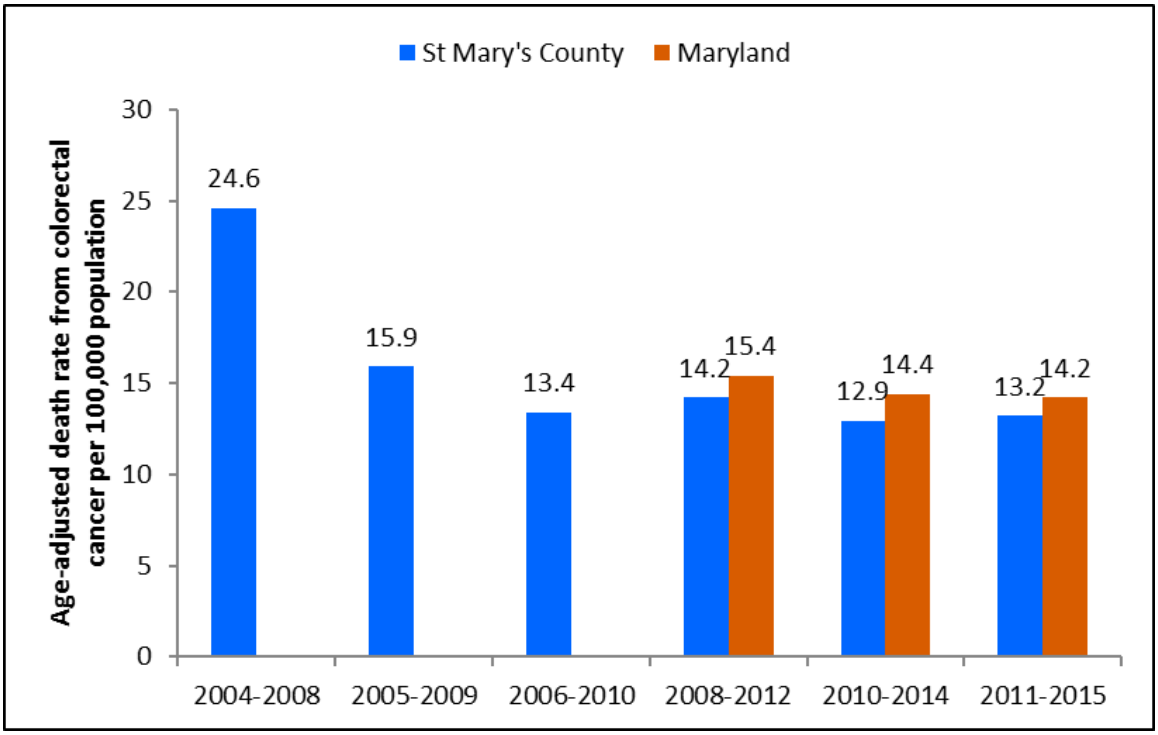


Figure 75. Death rates from colorectal cancer in St Mary's County and Maryland, 2004-2015.
Source: National Cancer Institute's SEER (Surveillance, Epidemiology, and End Result Program).

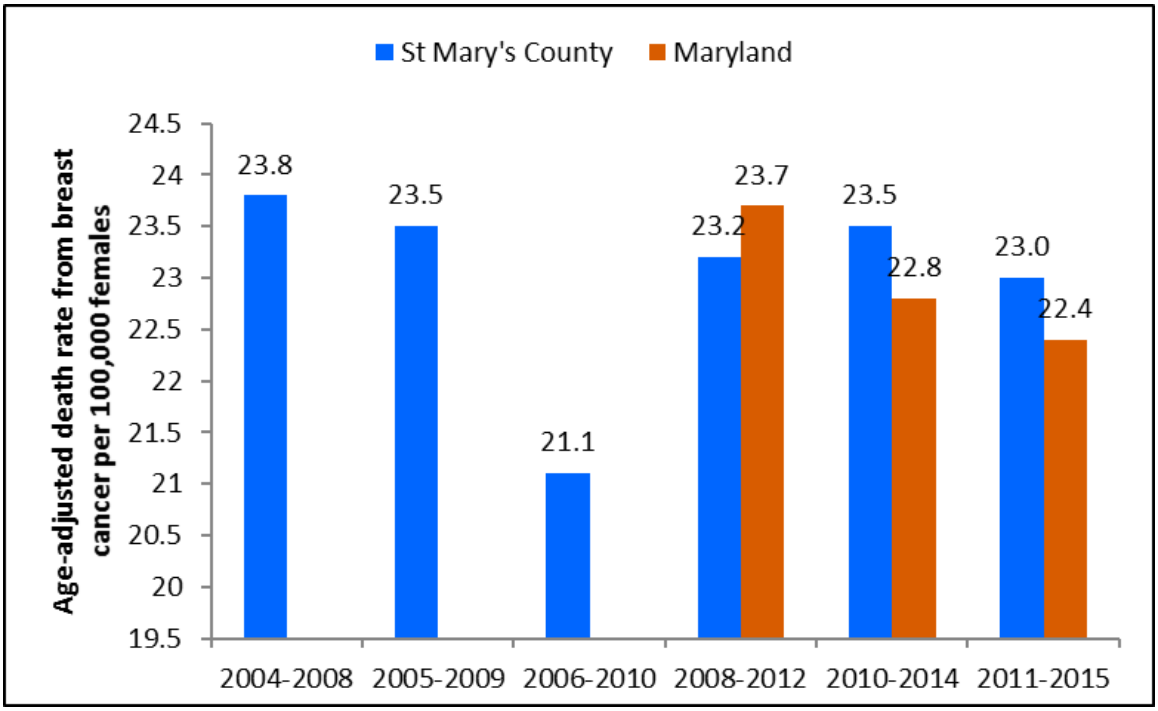


Figure 76. Death rates from breast cancer in St Mary's County and Maryland, 2004-2015.
Source: National Cancer Institute's SEER (Surveillance, Epidemiology, and End Result Program).

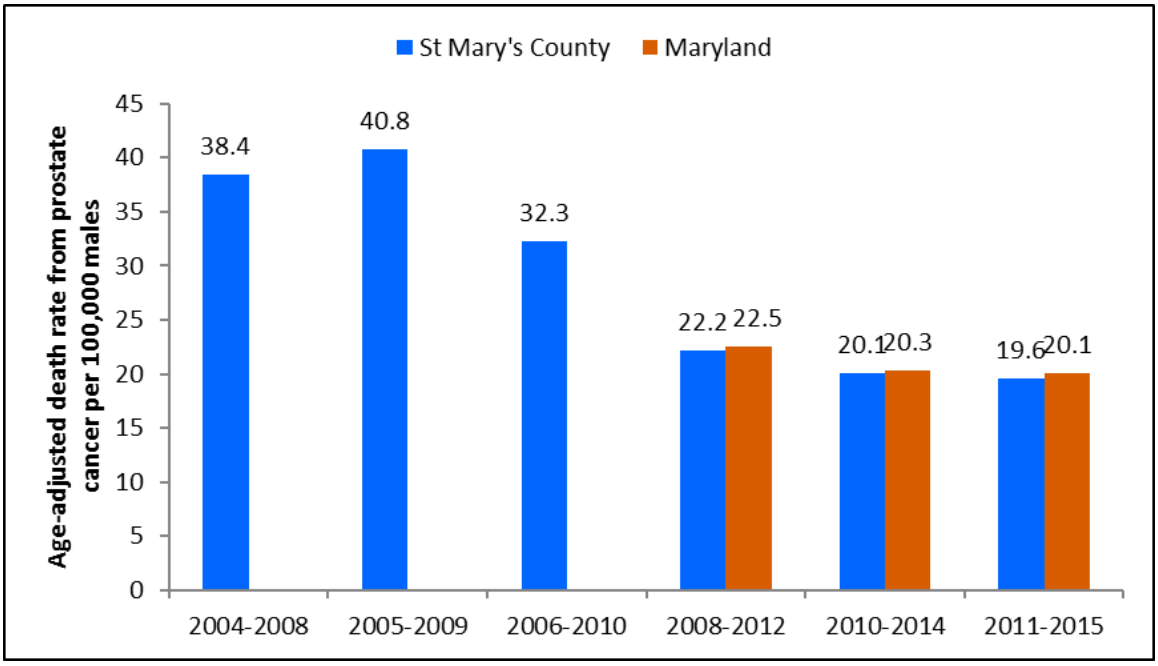


Figure 77. Death rates from prostate cancer in St Mary's County and Maryland, 2004-2015.
Source: National Cancer Institute's SEER (Surveillance, Epidemiology, and End Result Program).

8.2.3 Deaths Due to COPD

Chronic lower respiratory disease, primarily COPD, was in 2017 the 4th leading cause of death in St Mary's County although 5th in the state of Maryland (Maryland vital statistics annual report 2017). Death rates from COPD and other chronic lower respiratory diseases have remained high (between 38-40 deaths per 100,000 population) with a slight upward trend over the years (Figure 78). However, there was a decrease in the period from 2014 to 2016. By 2017, the rate was 38.6 which was higher than the Maryland rate of 30.4 deaths per 100,000 population.

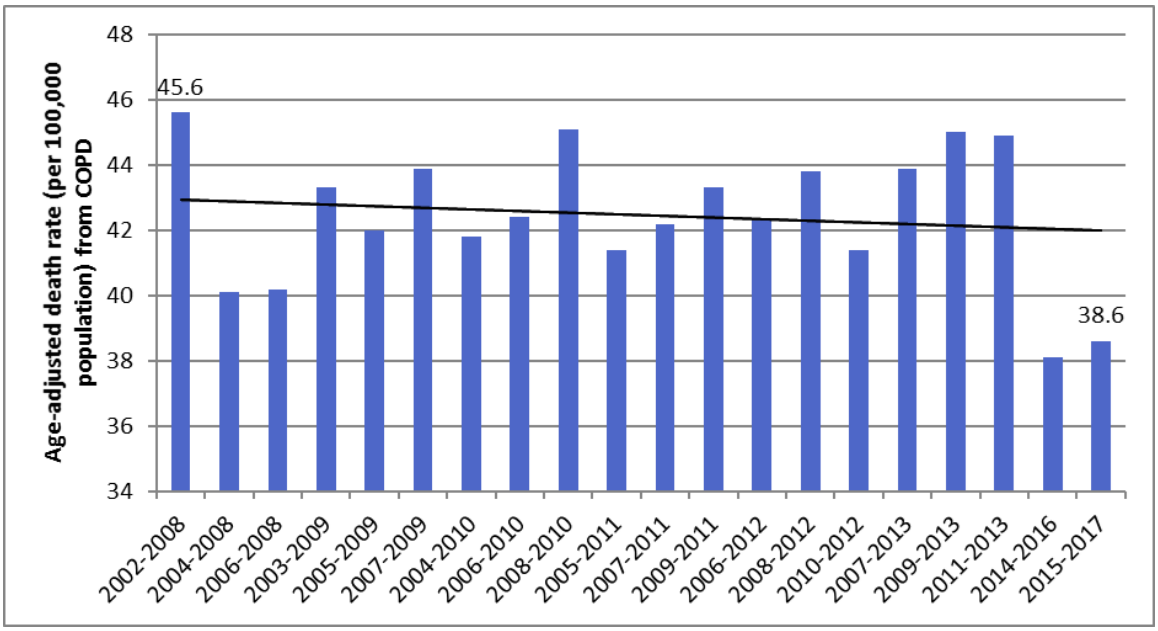


Figure 78. Chronic lower respiratory disease age-adjusted death rate (per 100,000 population) in St Mary's County, 2002-2017. *Source: Maryland Vital Statistics Administration (VSA)*

8.2.4 Deaths Due to Injuries

In the United States, "injuries, including all causes of unintentional and violence-related injuries combined, account for 59% of all deaths among people ages 1-44 years of age in the U.S. and that is more deaths than non-communicable diseases and infectious diseases combined. Injuries killed more than 199,800 in 2014 - one person every three minutes" (CDC's Injury Prevention and Control Center[18]).

Overall, the rate of death (per 100,000 population) due to homicides in St. Mary's County is lower compared to the rate for Maryland. (Figure 79). Death rate due to homicides in St. Mary's County was in 1999-2008 was 3.0 (Maryland was 10.0) and for 2008-2017 it was 2.4 for St Mary's (Maryland was 8.4) (Figure 79).

[18] https://www.cdc.gov/injury/wisqars/overview/cost_of_injury.html

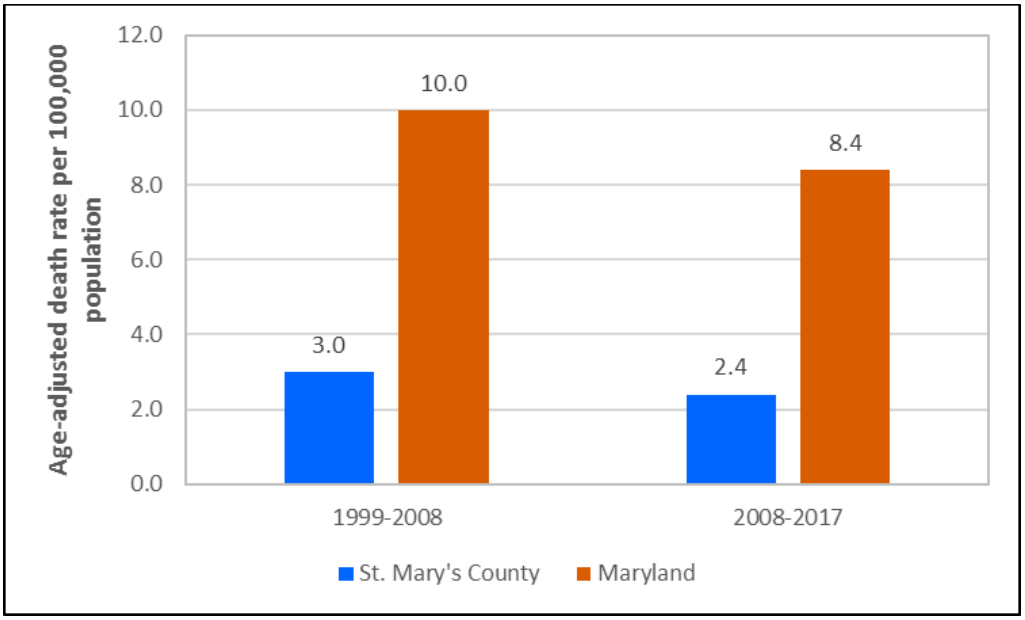


Figure 79. Age-adjusted death rates due to homicide (per 100,000 population) in St Mary's County, 1999-2017. *Source: Maryland State Health Improvement Process (SHIP) and Maryland Department of Health & Mental Hygiene, Vital Statistics Administration - Maryland Vital Statistics Annual Report 2017.*

At the same time, death rates due to accidents (unintentional injuries) had decreased in St Mary's County from 28.7 in 2007-2009 period to 25 in the 2012-2014 period (Figure 80). However, there was an increase in the 2014-2016 period (30.9) and 2015-2017 period (38.7).

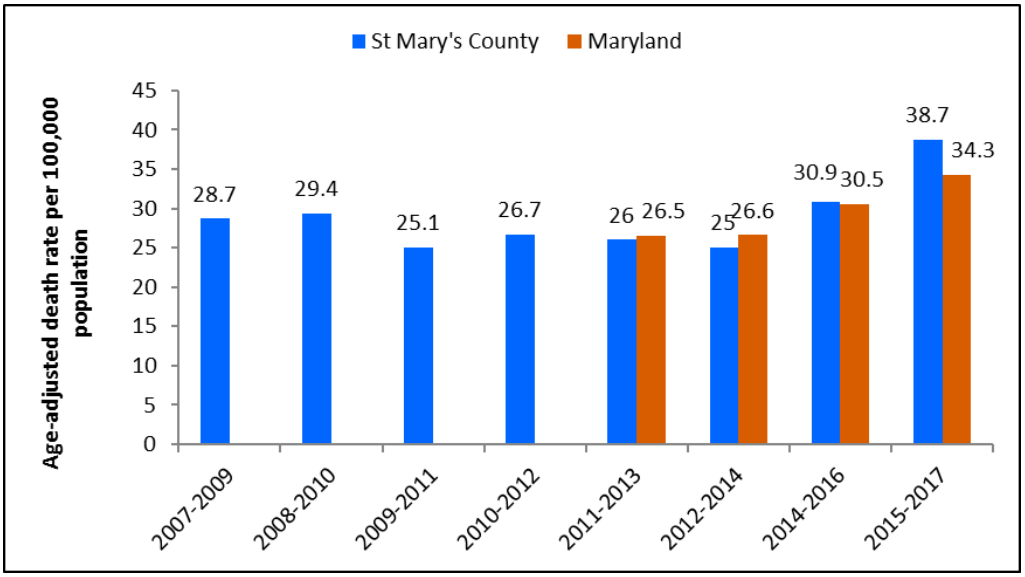


Figure 80. Age-adjusted death rates due to accidents/unintentional injuries (per 100,000 population) in St Mary's County and Maryland, 2007-2017. *Source: Vital Statistics Administration – 2017 Maryland Vital Statistics Annual Report.*

8.2.5 Deaths Due to Diabetes

Death rates due to diabetes have been decreasing in St Mary's County and Maryland (Figure 81). By the 2015 - 2017 period, the rates were 21.2 and 19.4 deaths per 100,000 population in St Mary's County and Maryland respectively.

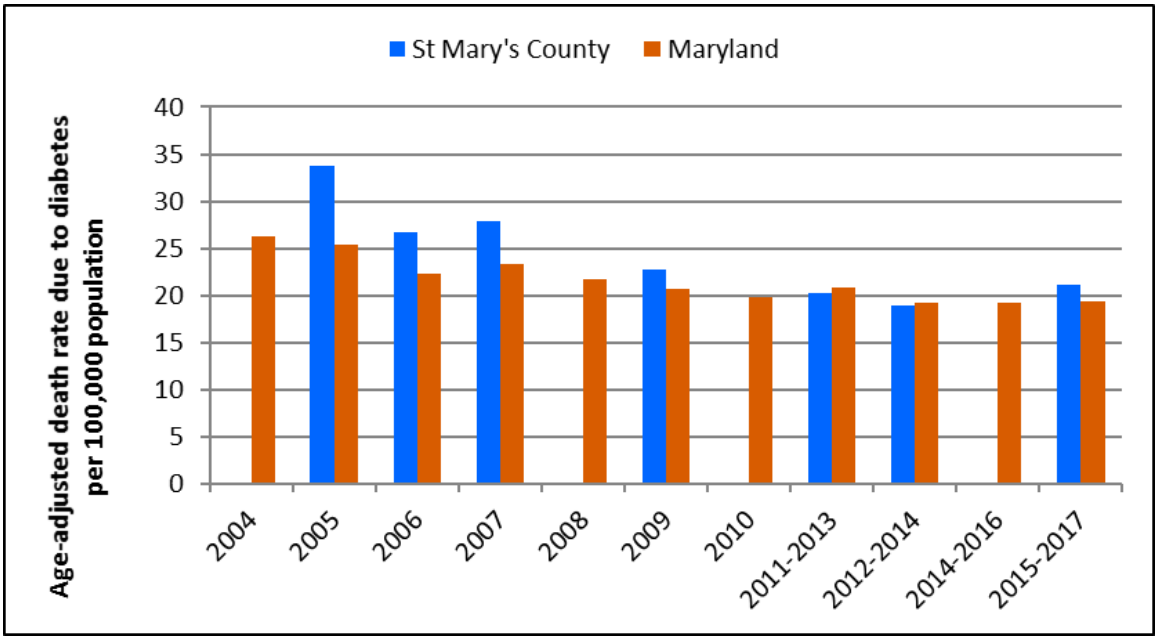
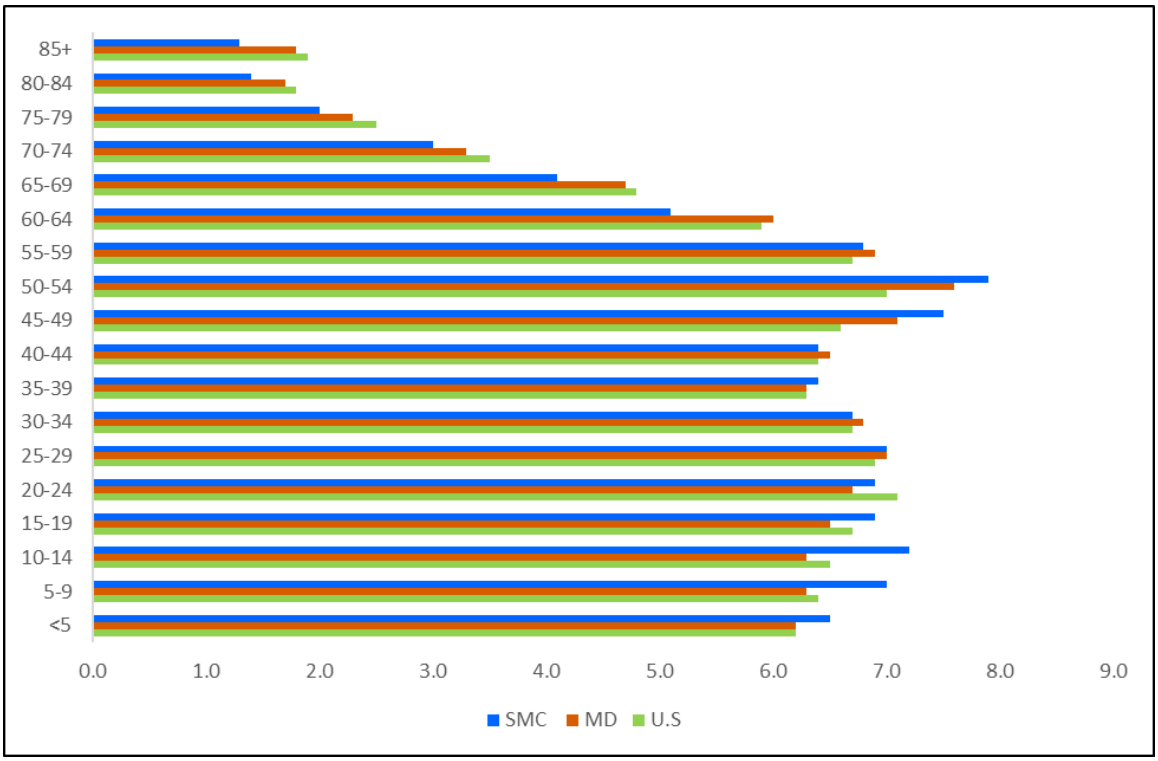


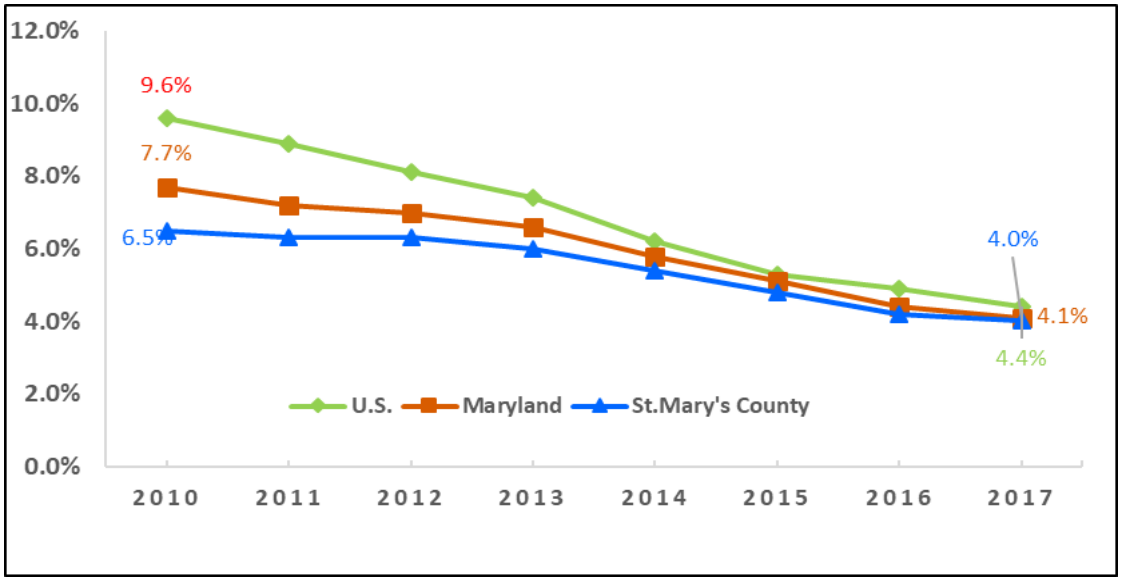
Figure 81. Age-adjusted death rates due to diabetes (per 100,000 population) in St Mary's County and Maryland, 2004-2017. Missing values for St Mary's County are suppressed because of low numbers.
Source: Vital Statistics Administration – 2017 Maryland Vital Statistics Annual Report.

9.0 APPENDICES

Appendix 1: Age distribution of residents: United States, Maryland, and St. Mary's County, 2012-2016. *Source: US Census Bureau, American Community Survey, 5-year estimates 2016.*



Appendix 2: Unemployment rates in St Mary's County, Maryland and the United States, 2010-2017. *Source: United States Department of Labor, Bureau of Labor Statistics.*



Appendix 3a: Selected Notifiable Conditions

Cases of Selected Notifiable Conditions Reported in St. Mary's County, 2009-2013

Condition	2009 Count (Rate)*	2010 Count (Rate)*	2011 Count (Rate)*	2012 Count (Rate)*	2013 Count (Rate)*
Animal Bites	237 (230.1)	200 (190.2)	270 (251.2)	315 (289.0)	261 (237.0)
Campylobacteriosis	3 (2.9)	6 (5.7)	1 (0.9)	2 (1.8)	5 (4.5)
Chlamydia	377 (366.0)	355 (337.6)	288 (267.9)	302 (277.1)	292 (265.2)
Giardiasis	3 (2.9)	3 (2.9)	2 (1.9)	1 (0.9)	2 (1.8)
Gonorrhea	69 (67.0)	88 (83.7)	68 (63.3)	49 (45.0)	55 (50.0)
Hepatitis C (Acute-Symptomatic)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (4.5)
Lyme Disease	68 (66.0)	30 (28.5)	12 (11.2)	13 (11.9)	47 (42.7)
Mycobacteriosis-Other Than TB & Leprosy	5 (4.9)	8 (7.6)	5 (4.7)	2 (1.8)	5 (4.5)
Pertussis	5 (4.9)	5 (4.8)	1 (0.9)	2 (1.8)	7 (6.4)
Salmonellosis-Other Than Typhoid Fever	14 (13.6)	17 (16.2)	10 (9.3)	13 (11.9)	11 (10.0)
Spotted Fever Rickettsiosis	NR	1 (1.0)	0 (0.0)	0 (0.0)	3 (2.7)
Strep Group A-Invasive Disease	1 (1.0)	0 (0.0)	1 (0.9)	1 (0.9)	3 (2.7)
Strep Group B-Invasive Disease	4 (3.9)	5 (4.8)	11 (10.2)	7 (6.4)	17 (15.4)
Strep Pneumoniae-Invasive Disease	6 (5.8)	1 (1.0)	2 (1.9)	5 (4.6)	4 (3.6)
Syphilis-Primary & Secondary	1 (1.0)	0 (0.0)	2 (1.9)	3 (2.8)	1 (0.9)
Tuberculosis	2 (1.9)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.9)
Vibriosis (Non-Cholera)	1 (1.0)	0 (0.0)	1 (0.9)	2 (1.8)	1 (0.9)

**Per 100,000 population. NR = Not reported. From 1944 to 2009, Rocky Mountain Spotted Fever was designated as a nationally notifiable condition. In 2010, all spotted fever rickettsioses became nationally notifiable. Source: Maryland Department of Health and Mental Hygiene. Prevention and Health Promotion Administration. Infectious Disease Bureau. Office of Infectious Disease Epidemiology and Outbreak Response. Center for Surveillance, Infection Prevention and Outbreak Response.*

Appendix 3a (continued): Selected Notifiable Conditions

Cases of Selected Notifiable Conditions Reported in St. Mary's County, 2014-2017

Condition	2014 Count (Rate)*	2015 Count (Rate)*	2016 Count (Rate)*	2017 Count (Rate)*	2018 Count (Rate)*
Animal Bites	311 (281.5)	253 (227.9)	479 (428.4)	381 (338.2)	365(324.0)
Campylobacteriosis	3 (2.7)	6 (5.4)	11(9.8)	7 (6.2)	9(8.0)
Chlamydia	287 (259.8)	351 (316.2)	308 (275.5)	404 (358.6)	504(447.3)
Giardiasis	2 (1.8)	2 (1.8)	0 (0.0)	1 (0.9)	1(0.9)
Gonorrhea	48 (43.4)	38 (34.2)	127 (113.6)	95 (84.3)	165(146.5)
Hepatitis C (Acute-Symptomatic)	3 (2.7)	4 (3.6)	1 (0.9)	0 (0.0)	1(0.9)
Lyme Disease	44 (39.8)	53 (47.7)	53 (47.4)	67 (59.4)	30(26.6)
Mycobacteriosis-Other Than TB & Leprosy	13 (11.8)	11 (9.9)	13 (11.6)	20 (17.8)	12(10.7)
Pertussis	5 (4.5)	4 (3.6)	2 (1.8)	0 (0.0)	9(8.0)
Salmonellosis-Other Than Typhoid Fever	25 (22.6)	21 (18.9)	20 (17.9)	15 (13.3)	16(14.2)
Spotted Fever Rickettsiosis	0 (0.0)	2 (1.8)	0 (0.0)	4 (3.6)	15(13.3)
Strep Group A-Invasive Disease	3 (2.7)	6 (5.4)	3 (2.7)	5 (4.4)	3(2.7)
Strep Group B-Invasive Disease	15 (13.6)	15 (13.5)	11 (9.8)	11 (9.8)	7(6.2)
Strep Pneumoniae-Invasive Disease	8 (7.2)	9 (8.1)	8 (7.2)	9 (8.0)	6(5.3)
Syphilis-Primary & Secondary	2 (1.8)	3 (2.7)	1 (0.9)	3 (2.7)	5(4.4)
Tuberculosis	2 (1.8)	2 (1.8)	0 (0.0)	2 (1.8)	0(0.0)
Vibriosis (Non-Cholera)	1 (0.9)	1 (0.9)	2 (1.8)	1 (0.9)	2(1.8)

**Per 100,000 population. NR = Not reported. From 1944 to 2009, Rocky Mountain Spotted Fever was designated as a nationally notifiable condition. In 2010, all spotted fever rickettsioses became nationally notifiable. Source: Maryland Department of Health and Mental Hygiene. Prevention and Health Promotion Administration. Infectious Disease Bureau. Office of Infectious Disease Epidemiology and Outbreak Response. Center for Surveillance, Infection Prevention and Outbreak Response.*

Appendix 3b: Selected Notifiable Conditions

Cases of Selected Notifiable Conditions Reported in Maryland, 2009-2013

Condition	2009 Count (Rate)*	2010 Count (Rate)*	2011 Count (Rate)*	2012 Count (Rate)*	2013 Count (Rate)*
Animal Bites	9,557 (167.7)	9,733 (168.6)	10,210 (175.2)	10,399 (176.7)	10,829 (182.7)
Campylobacteriosis	501 (8.8)	532 (9.2)	615 (10.6)	629 (10.7)	645 (10.9)
Chlamydia	23,747 (416.7)	26,192 (453.7)	27,212 (466.9)	26,534 (450.9)	26,723 (450.7)
Giardiasis	277 (4.9)	262 (4.5)	291 (5.0)	239 (4.1)	228 (3.8)
Gonorrhea	6,395 (112.2)	7,413 (128.4)	6,458 (110.8)	5,686 (96.6)	5,989 (101.0)
Hepatitis C (Acute-Symptomatic)	23 (0.4)	24 (0.4)	35 (0.6)	39 (0.7)	53 (0.9)
Lyme Disease	2,026 (35.5)	1,617 (28.0)	1,352 (23.2)	1,650 (28.0)	1,198 (20.2)
Mycobacteriosis-Other Than TB & Leprosy	449 (7.9)	360 (6.2)	386 (6.6)	504 (8.6)	556 (9.4)
Pertussis	148 (2.6)	139 (2.4)	123 (2.1)	369 (6.3)	213 (3.6)
Salmonellosis-Other Than Typhoid Fever	803 (14.1)	1,086 (18.8)	1,010 (17.3)	951 (16.2)	862 (14.5)
Spotted Fever Rickettsiosis	NR	48 (0.8)	29 (0.5)	9 (0.2)	8 (0.1)
Strep Group A-Invasive Disease	188 (3.3)	137 (2.4)	210 (3.6)	128 (2.2)	168 (2.8)
Strep Group B-Invasive Disease	493 (8.6)	430 (7.4)	604 (10.4)	511 (8.7)	572 (9.6)
Strep Pneumoniae-Invasive Disease	662 (11.6)	522 (9.0)	587 (10.1)	426 (7.2)	492 (8.3)
Syphilis-Primary & Secondary	314 (5.5)	328 (5.7)	452 (7.8)	431 (7.3)	456 (7.7)
Tuberculosis	219 (3.8)	220 (3.8)	233 (4.0)	224 (3.8)	178 (3.0)
Vibriosis (Non-Cholera)	34 (0.6)	45 (0.8)	35 (0.6)	53 (0.9)	57 (1.0)

**Per 100,000 population. NR = Not reported. From 1944 to 2009, Rocky Mountain Spotted fever was designated as a nationally notifiable condition. In 2010, all spotted fever rickettsioses became nationally notifiable. Source: Maryland Department of Health and Mental Hygiene. Prevention and Health Promotion Administration. Infectious Disease Bureau. Office of Infectious Disease Epidemiology and Outbreak Response. Center for Surveillance, Infection Prevention and Outbreak Response.*

Appendix 3b. (continued): Selected Notifiable Conditions

Cases of Selected Notifiable Conditions Reported in Maryland, 2014-2017

Condition	2014 Count (Rate)*	2015 Count (Rate)*	2016 Count (Rate)*	2017 Count (Rate)*	2018 Count (Rate)*
Animal Bites	10,085 (203.8)	10,604 (176.5)	10,844 (180.2)	10,941 (180.8)	10,208(168.9)
Campyloteriosis	713 (11.9)	789 (13.1)	821 (13.6)	886 (14.6)	938(15.5)
Chlamydia	27,424 (458.9)	27,450 (457.0)	30,658 (509.6)	33,416 (552.1)	35,482(587.2)
Giardiasis	268 (4.5)	251 (4.2)	233 (3.9)	168 (2.8)	165(2.7)
Gonorrhea	6,108 (102.2)	6,858 (114.2)	9,523 (158.3)	10,978 (181.4)	10,305(170.5)
Hepatitis C (Acute-Symptomatic)	42 (0.7)	38 (0.6)	36 (0.6)	42 (0.7)	38(0.6)
Lyme Disease	1,372 (23.0)	1,733 (39.0)	1,874 (31.1)	1,887 (31.2)	1,384(22.9)
Mycobacteriosis-Other Than TB & Leprosy	673 (11.3)	714 (11.9)	789 (13.1)	884 (14.6)	872(14.4)
Pertussis	203 (3.4)	134 (2.2)	135(2.2)	44 (0.7)	117(1.9)
Salmonellosis-Other Than Typhoid Fever	894 (15.0)	960 (16.1)	897 (14.9)	894 (14.8)	967(16.0)
Spotted Fever Rickettsiosis	6 (0.1)	3 (0.5)	1 (0.0)	62 (1.0)	106(1.8)
Strep Group A-Invasive Disease	198 (3.3)	213 (3.5)	252 (4.2)	365 (6.0)	443(7.3)
Strep Group B-Invasive Disease	612 (10.2)	636 (10.6)	667 (11.1)	616 (10.2)	664(11.0)
Strep Pneumoniae-Invasive Disease	428 (7.2)	411 (6.8)	450 (7.5)	486 (8.0)	484(8.0
Syphilis-Primary & Secondary	449 (7.5)	509 (8.5)	509 (8.5)	573 (9.5)	737(12.2)
Tuberculosis	198 (3.3)	176 (2.9)	221 (3.7)	207 (3.4)	208(3.4)

**Per 100,000 population. NR = Not reported. From 1944 to 2009, Rocky Mountain Spotted fever was designated as a nationally notifiable condition. In 2010, all spotted fever rickettsioses became nationally notifiable. Source: Maryland Department of Health and Mental Hygiene. Prevention and Health Promotion Administration. Infectious Disease Bureau. Office of Infectious Disease Epidemiology and Outbreak Response. Center for Surveillance, Infection Prevention and Outbreak Response.*

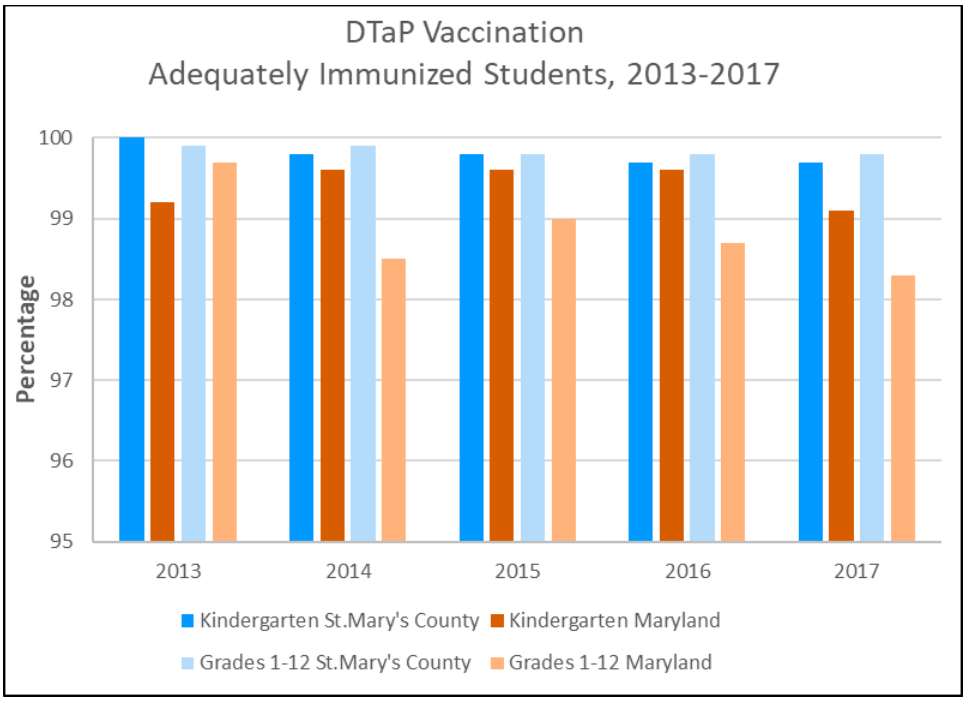
Appendix 4: Vaccination coverage levels among private and public school students, by vaccine type, St. Mary's County and Maryland, 2009-2013

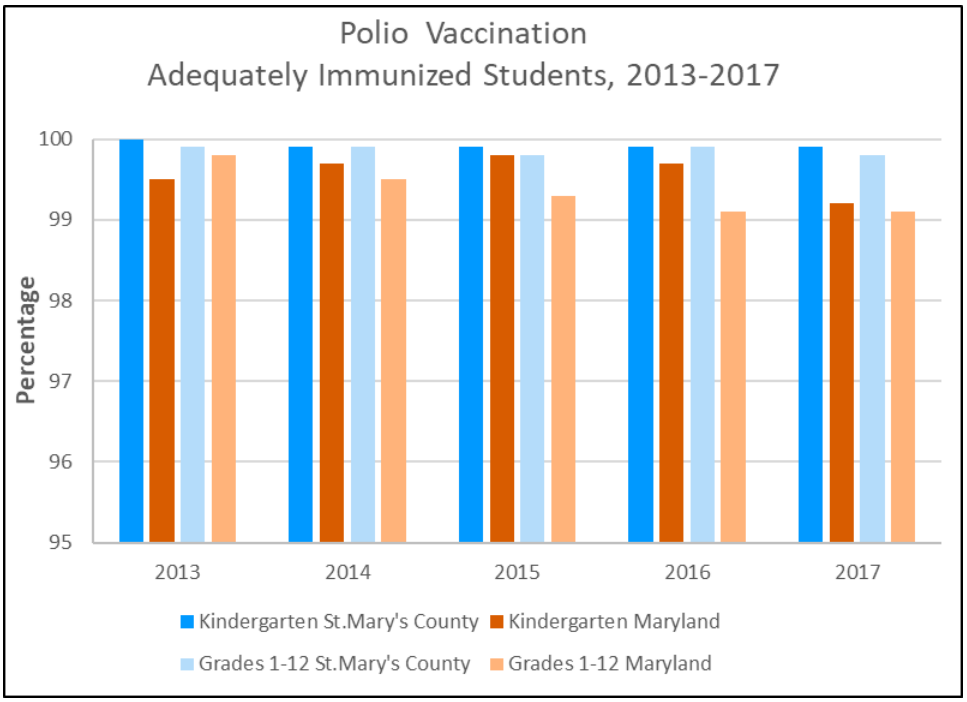
Source: Maryland Department of Health, Center for Immunization

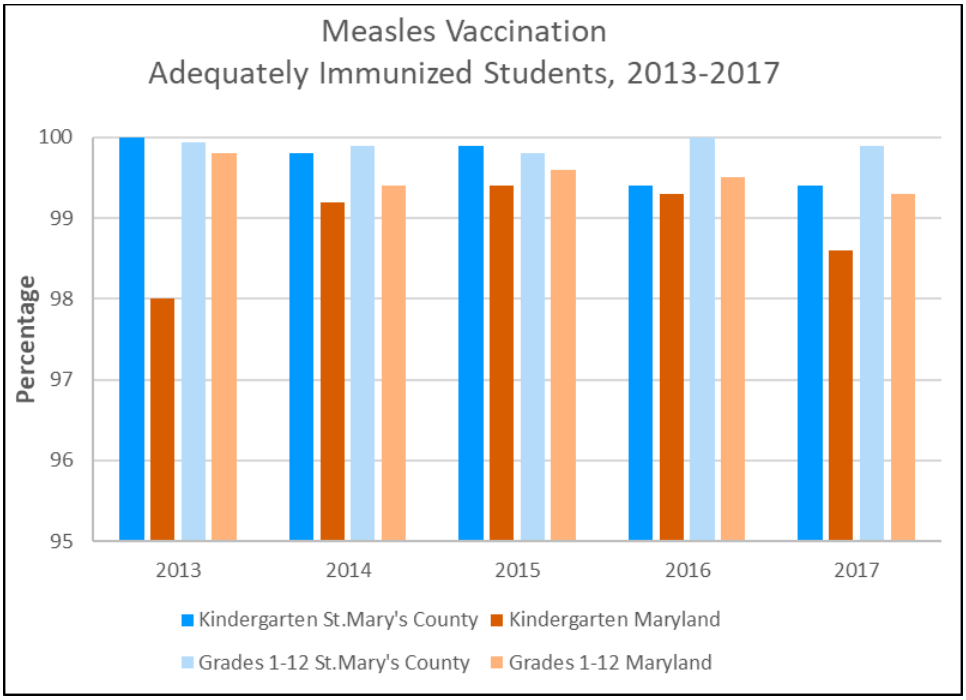
Data provided by private and public schools that respond to a DHMH annual survey

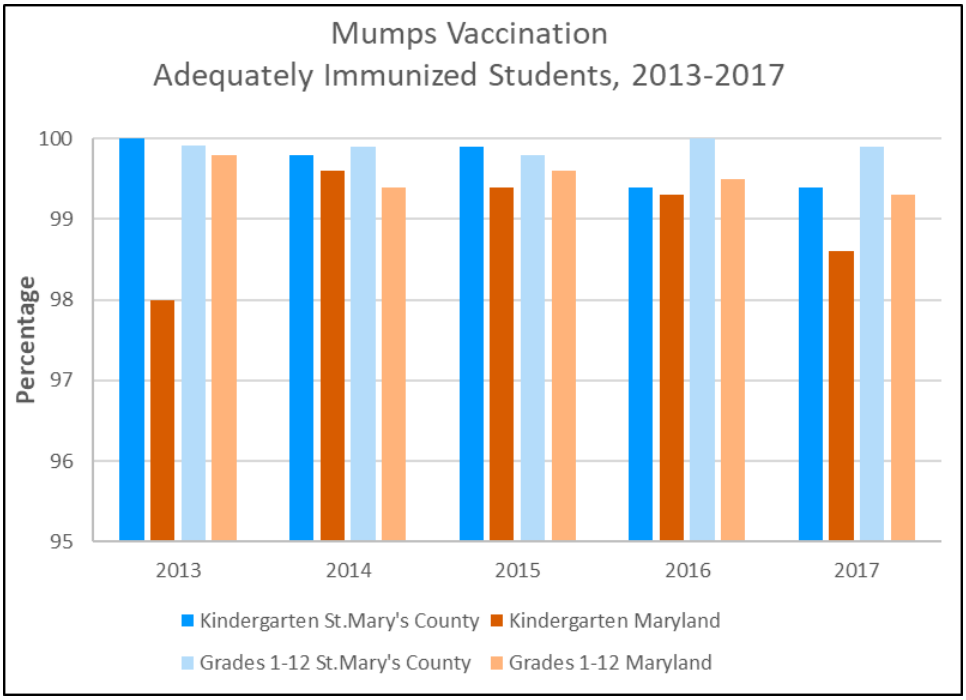
**Includes data for all Kindergarten students*

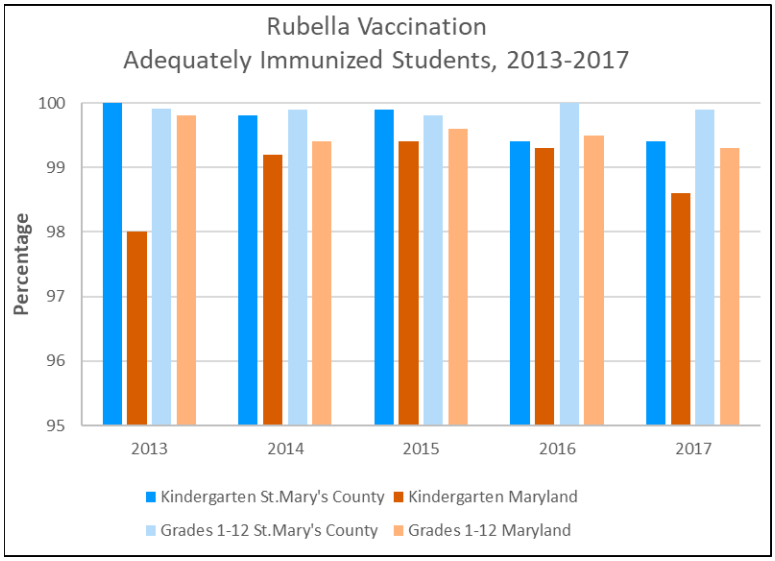
***Includes data for new 1st through 12th grade students only*

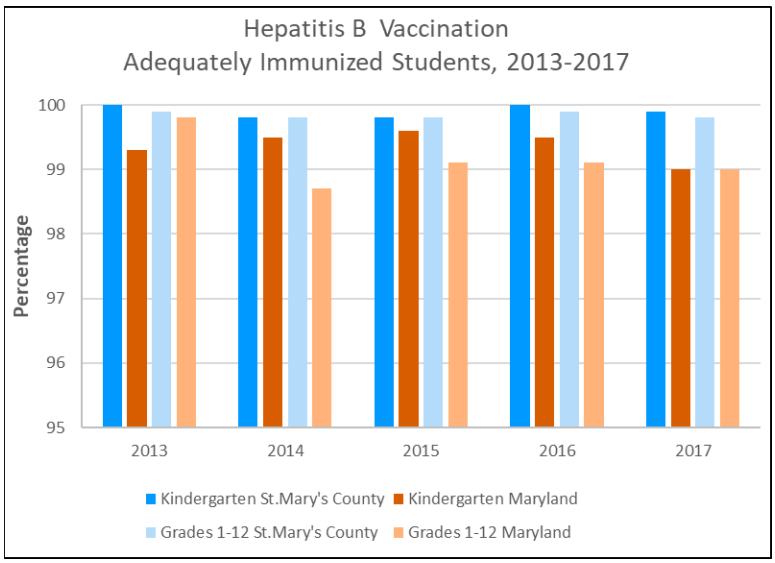


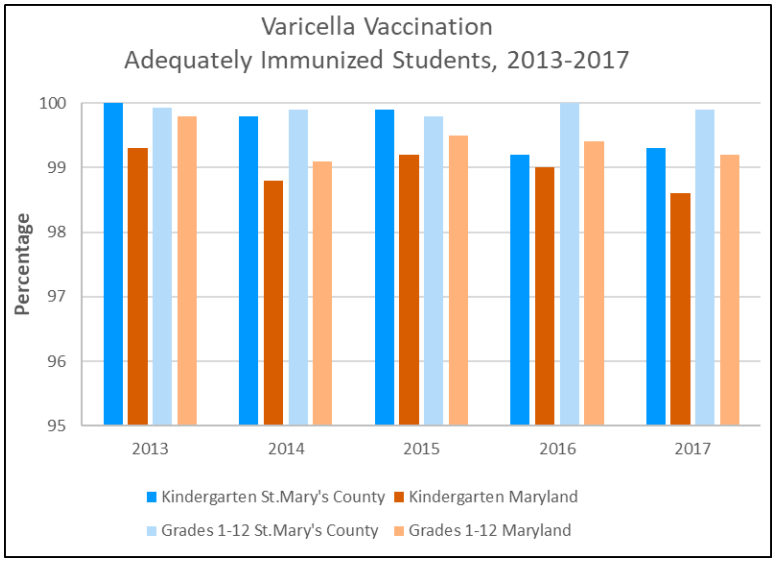



Measles Vaccination
Adequately Immunized Students, 2013-2017
Percentage
100
99
98
97
96
95
2013
2014
2015
2016
2017
Kindergarten St.Mary's County
Kindergarten Maryland
Grades 1-12 St.Mary's County
Grades 1-12 Maryland


Mumps Vaccination
Adequately Immunized Students, 2013-2017
Percentage
100
99
98
97
96
95
2013
2014
2015
2016
2017
Kindergarten St.Mary's County
Kindergarten Maryland
Grades 1-12 St.Mary's County
Grades 1-12 Maryland


Rubella Vaccination
Adequately Immunized Students, 2013-2017
Percentage
100
99
98
97
96
95
2013
2014
2015
2016
2017
Kindergarten St.Mary's County
Kindergarten Maryland
Grades 1-12 St.Mary's County
Grades 1-12 Maryland


Hepatitis B Vaccination
Adequately Immunized Students, 2013-2017
Percentage
100
99
98
97
96
95
2013
2014
2015
2016
2017
Kindergarten St.Mary's County
Kindergarten Maryland
Grades 1-12 St.Mary's County
Grades 1-12 Maryland


Varicella Vaccination
Adequately Immunized Students, 2013-2017
Percentage
100
99
98
97
96
95
2013
2014
2015
2016
2017
Kindergarten St.Mary's County
Kindergarten Maryland
Grades 1-12 St.Mary's County
Grades 1-12 Maryland

ST. MARY'S COUNTY
HEALTH DEPARTMENT

2019 HEALTH STATUS REPORT

ST. MARY'S COUNTY, MARYLAND

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